Revised 5/14/2026

Oregon Board of Forestry

Wednesday, June 3, 2026
Public Meeting Agenda

Public Meeting Information

The meeting will be open to the public, allowing for both in-person and virtual attendance. An opportunity for the public to provide live testimony will be available. Instructions to sign up for a live testimony slot can be found on our website: https://www.oregon.gov/odf/board/Pages/bofmeetings.aspx.Written testimony may be submitted by emailing the following address: boardofforerestry@odf.oregon.gov. Testimony will be accepted prior to the meeting date and up to two weeks after the meeting has ended. Submissions should include meeting date and agenda item number/topic header with the written submission.

In-Person Location:
Oregon Department of Forestry
2600 State St., Tillamook Room
Salem, OR 97310

Virtual Meeting Link:
https://www.youtube.com/c/OregonDepartmentofForestry

June 3, 2026, Agenda

Consent Agenda

A. 2026 Q2 Financial Dashboard Report (February, March, April, May)
James Short (Chief Financial Officer)
The purpose of this agenda item is to provide the Board with an executive financial report as captured monthly to ensure the Board of Forestry has up-to-date information for oversight of the Department's financial condition. This report will include the financial and budgetary status of the Department as well as other ancillary topics as appropriate. This is an information item.

B. Agency Director Financial Transactions, Fiscal Year 2025
James Short (Chief Financial Officer)
The purpose of this agenda item is to meet the requirements of statewide policy by having the Board review and approve transactions submitted by State Forester Mukumoto and Interim State Forester Skinner for Fiscal Year 2025. This is a decision item.

C. Committee for Family Forestlands Appointments and Reappointments
Mike Kroon (Deputy Chief, Forest Resources Division)
The Committee for Family Forestlands is an advisory committee to the Board of Forestry and the Oregon Department of Forestry. This agenda item requests the reappointment of a voting member to serve as the Northwest Oregon Landowner Representative and requests the appointment of a committee Chair and Vice-Chair. This is a decision item.

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Oregon Board of Forestry

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D. Proposed Final Order- Mark Wildfang
Greg Wagenblast (Policy Analyst/Civil Penalty Administrator, Forest Resources Division)
The purpose of this agenda item is for the Board to consider issuing a Final Order related to Mark Wildfang for violation of the Forest Practices Act. A contested case hearing has occurred and an Administrative Law Judge has issued a proposed order. Per rule the Board may only receive arguments from a party if they filed exceptions to the proposed order and exceptions were not filed. This is a decision item.

E. Proposed Final Order- Ernest A. Bussman
Greg Wagenblast (Policy Analyst/Civil Penalty Administrator, Forest Resources Division)
The purpose of this agenda item is for the Board to consider issuing a Final Order related to Ernest A. Bussman for violation of the Forest Practices Act. A contested case hearing has occurred and an Administrative Law Judge has issued a proposed order. Per rule the Board may only receive arguments from a party if they filed exceptions to the proposed order and exceptions were not filed. This is a decision item.

F. Proposed Final Order- Scott Churchill
Greg Wagenblast (Policy Analyst/Civil Penalty Administrator, Forest Resources Division)
The purpose of this agenda item is for the Board to consider issuing a Final Order related to Scott Churchill for violation of the Forest Practices Act. A contested case hearing has occurred and an Administrative Law Judge has issued a proposed order. Per rule the Board may only receive arguments from a party if they filed exceptions to the proposed order and exceptions were not filed. This is a decision item.

G. Rangeland Fire Protection Association Budgets
Boone Zimmerlee (Wildfire Prevention and Policy Manager)
The purpose of this agenda item is to obtain Board approval of the annual budgets of the Rangeland Fire Protection Associations currently operating in Eastern Oregon. This is a decision item.

H. Facilities Capital Management and Radio Communications
Laura Al Omrani (Director, Facilities Capital Management Program)
The purpose of this agenda item is to provide the board with the Current Facilities Capital Management Status and Radio Communications planning report. This is an information item.

I. Equipment Pool Update, ORS 526.144 Overview
Justin Hallett (Agency Administration Division Chief)
The purpose of this agenda item is to provide the Board with an update on the Department's Equipment Pool, and an overview of ORS 526.144. This is an information item.

J. Deputy State Forester, Appointment
Kacey KC (Oregon Department of Forestry, State Forester)
The purpose of this agenda item is to obtain Board approval for the State Forester appointment of Deputy State Forester, Kate Skinner. This is a decision item.

Revised 5/14/2026

Oregon Board of Forestry

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Action and Information

8:30 a.m.	**1. Opening Comments** *Chair Kelly, State Forester Kacey KC, Members of the Board* This item serves as an opportunity for the State Forester and Board Chair to offer introductory comments, housekeeping tips and best practices, and for Board Members to provide introductions. This is an information item.
8:35 a.m.	**2. Consent Agenda Items** *Chair Jim Kelly, Members of the Board* This item serves as an opportunity to review and consider items presented on the Consent Agenda. This is a decision item.
8:45 a.m.	**3. Public Forum** *Member of the Public* Sign-up instructions for providing public comments are posted on the Board's meeting webpage. Comments are limited to three minutes or less and are reserved for remarks on information items and topics off the agenda. This is an information item.
9:15 a.m.	**4. Board Governance Committee Work** *Ben Deumling, Member of the Board* The Board will hear from Board Governance subcommittee members on recommendations to ratify edits brought forth to the Board at the March 2026 Board meeting. The Board is accepting testimony on this item. 15 minutes of time will be dedicated to live testimony. Instructions for sign-up and submission are listed on the Board's meeting webpage. This is a decision item.
9:30 a.m.	**BREAK**
9:45 a.m.	**5. Western Oregon State Forests Management Plan** *Nick Palazzotto (State Forests Deputy Division Chief), Justin Butteris (State Forests Policy Analyst)* The State Forests Division staff will present the final draft Forest Management Plan and provide information on process for final adoption and plan implementation. This is an information item.
11:00 a.m.	**6. Wildfire Outlook and Readiness** *Michael Curran (Protection Division Chief), Ron Graham (Protection Division Deputy Chief)* The Protection Division will provide an update to the Board on the 2026 wildfire season outlook and readiness. This is an information item.
11:30 a.m.	**LUNCH**
12:30 p.m.	**7. Forest Protection Association Budgets** *Michael Curran (Protection Division Chief), James Short (Chief Financial Officer)* The Protection Division will present the annual report for the approval of the Forest Protection Districts' fiscal year budgets and rates to the Board. The Board is accepting testimony on this item. 15 minutes of time will be dedicated to live testimony. Instructions for sign-up and submission are listed on the Board's meeting webpage. This is a decision item.
1:30 p.m.	**8. Closing Comments** *Board Chair Kelly, State Forester Kacey KC* This item serves as an opportunity for the Board Chair to address any outstanding work. This is an information item.

Oregon Board of Forestry

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1:45 p.m.	**9. Acknowledgement of Chair Jim Kelly** Cake and refreshments immediately following the meeting. Community interaction with Jim.
2:00 p.m.	**Adjourn Meeting**

NOTE: Times listed on the agenda are approximate. At the discretion of the chair, the time and order of agenda items—including the addition of breaks—may change to maintain meeting flow. The board will hear public testimony [*excluding marked items] and engage in discussion before proceeding to the next item. * A single asterisk preceding the item number marks a work session, and public testimony/comment will not be accepted.

PUBLIC TESTIMONY: The Board of Forestry places great value on information received from the public. The Board will only hold public testimony at the meeting for decision items. The Board generally accepts written comments on all agenda items except consent agenda items, other items specifically identified in the agenda, and Work Session items [see explanation below]. Those wishing to testify or present information to the Board are encouraged to:

- Provide written summaries of lengthy, detailed information.
- Remember that the value of your comments is in the substance, not length.
- For coordinated comments to the Board, endorse rather than repeat the testimony of others.
- To ensure the Board will have an opportunity to review and consider your testimony before the meeting, please send comments no later than 72 hours before the meeting date. If submitted after this window of time the testimony will be entered into the public record but may not be viewed by the Board until after the meeting.
- To provide oral comments at an in-person meeting, register in advance using the information in the meeting agenda and sign in at the information table in the meeting room when you arrive. For virtual meetings, follow the signup instructions provided in the meeting agenda.
- Commenters have two to three minutes to make their comments. Comment on decision items is limited to 30 minutes per decision item.

Written comments for public testimony provide a valuable reference and may be submitted before, during, or up to two weeks after the meeting for consideration by the Board. Send to boardofforestry@odf.oregon.gov. All comments to the Board will become part of the official record of the meeting and made available to the public on the Board's webpage.

WORK SESSIONS: Certain agenda topics may be marked with an asterisk indicating a "Work Session" item. Work Sessions provide the Board with an opportunity to receive information and/or make decisions after considering previous public comments and staff recommendations. No new public comment will be taken. However, the Board may choose to ask questions of the audience to clarify issues raised.

GENERAL INFORMATION: For regularly scheduled meetings, the Board's agenda is posted on the web at https://www.oregon.gov/odf/board/Pages/bofmeetings.aspx two weeks before the meeting date. During that time, circumstances may dictate a revision to the agenda, either in the sequence of items to be addressed or in

Oregon Board of Forestry

Wednesday, June 3, 2026
Public Meeting Agenda

the time of day the item is to be presented. The Board will make every attempt to follow its published schedule and requests your indulgence when that is not possible.

If you are experiencing technical issues or require accommodations, email boardofforestry@odf.oregon.gov or contact the Board Support Office at (503) 302-6344.

To provide the broadest range of services, lead-time is needed to make the necessary arrangements for offsite locations. If special materials, services, or assistance is required, such as a sign language interpreter, assistive listening device, or large print material, please contact our Public Affairs Office at least seven working days before the meeting via telephone at 503-945-7200 or fax at 503-945-7212.

Agenda Item No:	A
Work Plan:	Administrative
Topic:	Financial Dashboard
Presentation Title:	Department Financial Report for February 2026 to May 2026
Date of Presentation:	June 3, 2026
Contact Information:	James D. Short, Department Chief Financial Officer (503) 302-8478, james.short@odf.oregon.gov

SUMMARY AND CONTEXT

An executive financial report and summary will be submitted monthly to ensure the Board of Forestry (Board) receives current information to support its oversight of the Department's financial condition. The report will include the Department's financial and budgetary status, along with relevant ancillary topics as appropriate.

BACKGROUND AND ANALYSIS

This consent item formalizes the transparent publishing of the Department's monthly financial reports to the Board of Forestry. While executive-level in scope, the financial report provides information on topics that are either directly related to, or have a measurable impact on, the agency's financial status and other administrative functions during a given month.

The agency has already made several updates to the financial report to improve clarity, usability, and transparency. These enhancements include refined formatting, clearer narrative explanations, and more structured presentation of key financial indicators. As the agency continues to strengthen its internal processes and leverage available data, the financial report will be further refined to provide greater insight into both financial performance and operational trends.

NEXT STEPS

The Board will receive the Department's Financial Report during the third week of each month, regardless of whether a Board meeting is scheduled. This timing allows the Department to report on the prior month's activity while ensuring the fiscal month-end close process has been completed.

ATTACHMENTS

1) Department of Forestry Financial Report for February 2026
2) Department of Forestry Financial Report for March 2026
3) Department of Forestry Financial Report for April 2026
4) Department of Forestry Financial Report for May 2026

Oregon
Tina Kotek, Governor

Department of Forestry
State Forester's Office
2600 State St
Salem, OR 97310-1336
503-945-7200
www.oregon.gov/ODF

March 2, 2026

Sen. Kate Lieber, Co-Chair
Rep. Tawna Sanchez, Co-Chair
Joint Committee on Ways and Means
900 Court St. NE, H-178
Salem, OR 97301

Re: Oregon Department of Forestry - Monthly financial condition report

Dear Co-Chairs,

The Oregon Department of Forestry (ODF) remains committed to protecting Oregon's forests and communities while maintaining strong financial stewardship. With fire season costs paid and county assessment revenues received, the agency's cash flow has stabilized as it continues its work during the February 2026 Legislative session. As ODF transitions into winter season operations and prepares for the next fire season, the agency continues to focus on completing all remaining fire-season financial reconciliations. ODF's financial position remains stable, supported by cost-containment measures and a continued emphasis on readiness. The agency also looks forward to welcoming new State Forester Kacey KC, who will begin in March, providing leadership continuity as ODF advances its operational and financial priorities.

Cash and General Fund balances

As of February 2026, ODF's principal cash account balance was $41.5 million, and the AY27 Protection Division General Fund appropriation balance was $8.9 million. Estimated January payroll totaled $10.0 million, including $7.5 million from the Forestry Main Cash Account, $1.1 million from the Protection General Fund, and $1.4 million from the Forest Resources General Fund. The third-quarter county distribution is estimated at $7.0 million. Additionally, the $7.0 million in Landscape Resiliency General Fund will be transferred to the Landscape Resiliency Fund in accordance with the budget bill and is not available for cash flow purposes.

Funds as of 2/24/2026 6:34:32 AM

Fund	Fund Title	Balance
02000	FORESTRY CASH ACCOUNT	$41,579,607.87
11000	FOREST LAND PROTECTION FUND - EFCC	$23,864,752.81
56000	URBAN FORESTRY	$30,826.43
58000	FOREST RESOURCE TRUST	$1,145,686.78
70000	FACILITIES MANAGEMENT	$13,813,913.15

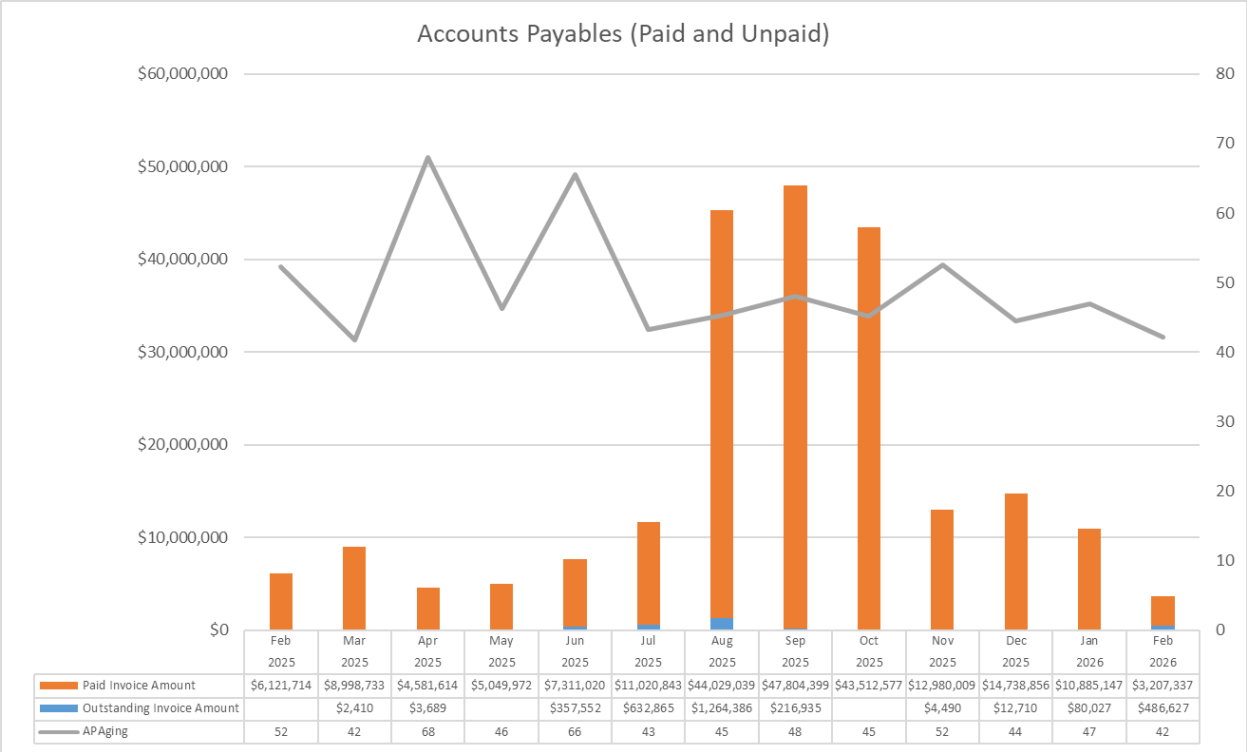
General Fund appropriations for AY2027 as of 2/24/2026 6:31:55 AM

Appn	Appn Title	Balance
89016	SFISH PROGRAM FUND	$2,000,000.00
89905	FOREST RESOURCES	$26,400,062.41
89908	ADMINISTRATION	$654,176.43
89915	GRAZING ACRES LANDOWNER OFFSETS	$1,500,000.00
89916	STATEWIDE LANDOWNER OFFSETS	$7,500,000.00
89920	PROTECTION FROM FIRE	$8,870,974.33
89931	RANGELAND FPA VEHICLE FUND - GF	$500,000.00
89995	LANDSCAPE RESILIENCY GF	$7,000,000.00

Accounts payable

Department-wide expenditure has decreased since the last reporting period (Figure 2), represented by normal expenditures for post-season operations. At the same time, the agency's vendor accounts show an average age at close to the 45-day mark.

Figure 2 - Accounts Payable as of February 23, 2026

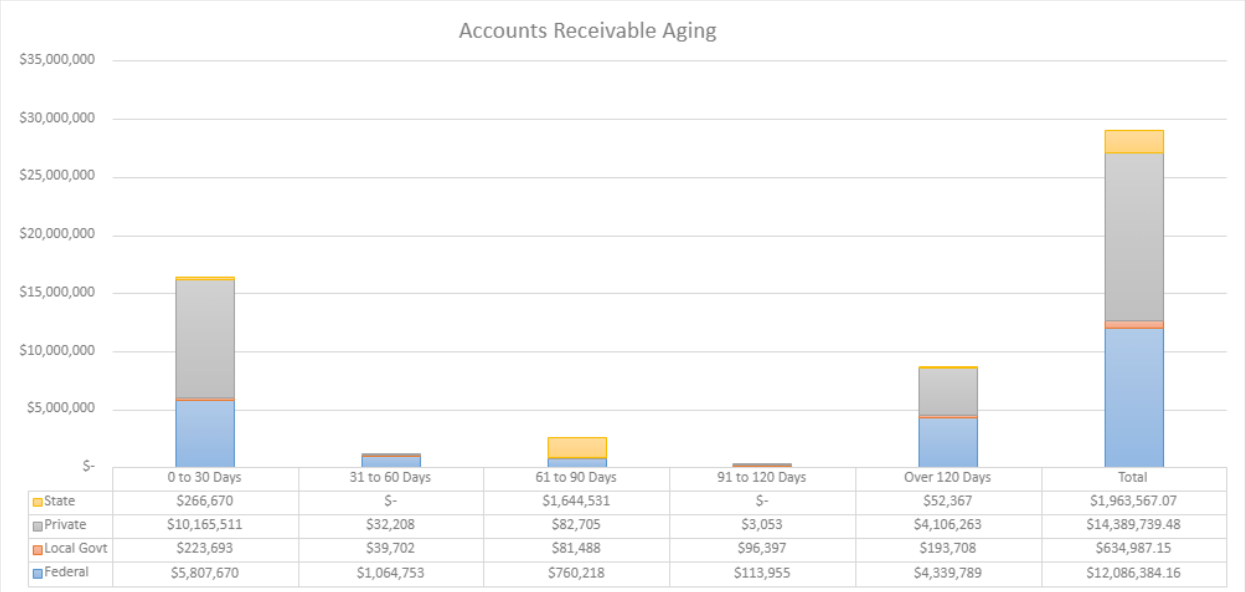


	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025	Oct 2025	Nov 2025	Dec 2025	Jan 2026	Feb 2026
Paid Invoice Amount	$6,121,714	$8,998,733	$4,581,614	$5,049,972	$7,311,020	$11,020,843	$44,029,039	$47,804,399	$43,512,577	$12,980,009	$14,738,856	$10,885,147	$3,207,337
Outstanding Invoice Amount		$2,410	$3,689		$357,552	$632,865	$1,264,386	$216,935		$4,490	$12,710	$80,027	$486,627
AP Aging	52	42	68	46	66	43	45	48	45	52	44	47	42

Accounts receivable

In the third quarter of FY26, the agency invoiced $31.2 million and collected $38.2 million. Outstanding invoices increased from the prior period, totaling 771; however, 23.5% are now more than 120 days past due, representing a 1.5% decrease from the previous period.

Figure 3 – Accounts Receivable Aging as of February 20, 2026



	0 to 30 Days	31 to 60 Days	61 to 90 Days	91 to 120 Days	Over 120 Days	Total
State	$266,670	$-	$1,644,531	$-	$52,367	$1,963,567.07
Private	$10,165,511	$32,208	$82,705	$3,053	$4,106,263	$14,389,739.48
Local Govt	$223,693	$39,702	$81,488	$96,397	$193,708	$634,987.15
Federal	$5,807,670	$1,064,753	$760,218	$113,955	$4,339,789	$12,086,384.16

Fire Protection Division financial status

Outstanding Fire Protection assets and liabilities information

In addition to monitoring current agency-wide accounts payable and accounts receivable, the department tracks estimated outstanding assets and liabilities associated with the Fire Protection Division. Due to the complexity of large wildfire incidents and cooperative agreements, such as when ODF provides resources outside its protection jurisdiction, reimbursement for costs initially paid by ODF may take several years to be received. Similarly, delays can occur in receiving federal billings for resources initially covered by federal partners, as well as in completing final cost-share reconciliations that may result in amounts owed by ODF. The table below summarizes the estimated outstanding assets and liabilities, representing accounts receivable and payable that have not yet been invoiced to or from ODF.

Figure 4– Estimated Outstanding Assets and Liabilities as of February 11, 2026

Summary of Estimated Outstanding Assets and Liabilities (Costs that have not been fully reconciled or billed)		
Category	**Assets (AR)**	**Liabilities (AP)**
Coop Billable	$37,029,617	$0
Large Fire - Non-Cost Share	$240,765	$3,684,430
Large Fire - Cost Share	$91,679,678	$31,154,604
TOTAL	**$128,950,060**	**$34,839,034**

Notable updates since the last report include a decrease of $4.7 million in AR due to billable incidents being received and cost shares being reconciled with our federal counterparts. Through fire season 2025, there are 52 cost shares (decrease of 3 from the last report) left to reconcile with our federal counterparts back to FY23.

FEMA information

FEMA Public Assistance (PA) grants are awarded to the Oregon Department of Emergency Management (ODEM), which then distributes the funds to ODF. In contrast, FEMA Fire Management Assistance Grants (FMAG) are awarded directly to ODF, providing more immediate access to funds once they are obligated. The FEMA reimbursement process can take several years to fully complete. ODF strives to submit all suppression claims to FEMA and/or ODEM within one year of an eligible incident's conclusion. Once submitted, claims undergo detailed audits by FEMA and/or ODEM before final payments are issued. Administrative claims take longer to process, as all suppression-related costs must be paid in full before ODF can submit expenses tied to administrative and financial work required by FEMA.

The table below outlines the status of claims by fire year and provides an update on payment progress for each.

Figure 5– FEMA/Public Assistance Outstanding Balances as of February 11, 2026

Summary of Outstanding FEMA FMAG/PA						
Fire Year	**Claim Type**	**Estimate to Invoice to FEMA**	**Pending Review by FEMA**	**Amount Obligated by FEMA**	**Payment Amount Requested**	**Grand Total Due to ODF**
2019	Admin - FMAG	$0	$215,943	$0	$0	$215,943
2020	Admin - FMAG	$85,250	$0	$0	$0	$85,250
2020	Admin - PA	$17,017	$0	$0	$0	$17,017
2020	Fire - PA	$0	$297,219	$0	$0	$297,219
2021	Admin - FMAG	$43,950	$0	$0	$0	$43,950
2022	Admin - FMAG	$12,000	$0	$0	$0	$12,000
2023	Admin - FMAG	$32,500	$0	$0	$0	$32,500
2023	Fire - FMAG	$1,490,000	$0	$0	$0	$1,490,000
2024	Fire - FMAG	$24,248,900	$1,187,069	$0	$0	$25,435,968
2024	Fire - PA	$17,780,827	$35,343,625	$0	$0	$53,124,452
2025	Fire – FMAG	$11,673,768	$0	$0	$0	$11,673,768
TOTAL		**$55,384,211**	**$37,043,856**	**$0**	**$0**	**$92,428,067**

Since the last report, there have been minimal changes to FEMA claim amounts. ODF's FEMA finance team continues to be focused on auditing and submitting claims as soon as possible. We are on pace with the remaining fire season 2024 (FMAG and PA) claims submitted by the

end of February 2026. Previous fire season administrative claims will be next to submit final claims for, followed by starting the final compliance review and claim work for fire season 2025.

Fire season costs information

The 2025 fire season resulted in $129.9 million in gross suppression costs, with $57.3 million in net costs remaining after anticipated federal reimbursements and cost recoveries were applied. To close out the season, the Department of Forestry requested $57,295,787 in General Fund to cover net large fire costs, $73,600,000 in Other Funds expenditure limitation to allow for payment processing of gross fire-related obligations, and $12,167,370 in General Fund from the Emergency Board Special Purpose Appropriation to cover the state's share of severity program costs. These requests were incorporated into a budget reconciliation bill for consideration during the 2026 legislative session.

State Forests Division financial status

Fiscal year 2026 (FY26) through December revenues from State Forests timber sales added $36.5 million to the ODF cash account, $23.1 million of which will be distributed for county payments. State Forests expenses are $21.2 million which leaves a negative net operating income of $7.8 million. The Forest Development Operating Fund balance is $14 million, which is below the prudent balance of 6 months operating expenses. Volume harvested through December is 80.8 MMbf which is a positive 9% change from FY25. The lumber market is still experiencing uncertainty, with declining prices driven by weakening demand for residential construction. These declining prices are continuing to be reflected in bids offered by purchasers of State Forests timber sales, with bids coming in closer to the minimum appraised bid compared to recent years. State Forests timber sales continue to sell at auction, but a continued weak market could result in timber sales that do not successfully auction, due to bids that do not meet minimum bid requirements.

Forest Resources Division financial status

Through February 2026, the Forest Products Harvest Tax distribution from the Department of Revenue totaled $5,337,660, which is $586,258 below projections. Through January, the Forest Resources Division expended $4,024,156. In addition, the prorated share (seven months) of the Administrative Prorate transfer totals $1,423,790. If Forest Products Harvest Tax revenues continue at projected levels, the Division is expected to cover expenditures for the biennium. The Division continues to closely monitor Oregon's harvest volumes and spending patterns and will provide updates as needed.

The Oregon Department of Forestry remains in a stable financial position as it completes reconciliation of the 2025 fire season and prepares for the upcoming fire season. Cash flow has stabilized with the receipt of county assessment revenues and legislative support, and the agency continues to prioritize timely vendor payments, cost-share reconciliations, and submission of federal reimbursement claims. While large fire cost recovery and FEMA

reimbursements will continue over multiple years, current financial indicators show the agency is meeting its obligations and managing fiscal risk responsibly. ODF will continue to closely monitor revenues, expenditures, and federal reimbursements to ensure ongoing financial stability and readiness to support Oregon's forests and communities.

Sincerely,

Kate Skinner
Interim State Forester

c:
Board of Forestry
Governor's Office
Chief Financial Office
Legislative Fiscal Office
Oregon State Treasury

Oregon
Tina Kotek, Governor

Department of Forestry
State Forester's Office
2600 State St
Salem, OR 97310-1336
503-945-7200
www.oregon.gov/ODF

April 1, 2026

Sen. Kate Lieber, Co-Chair
Rep. Tawna Sanchez, Co-Chair
Joint Committee on Ways and Means
900 Court St. NE, H-178
Salem, OR 97301

Re: Oregon Department of Forestry - Monthly financial condition report

Dear Co-Chairs,

The Oregon Department of Forestry (ODF) welcomed new State Forester Kacey KC in March, providing leadership as the agency advances its operational and financial priorities. With fire season costs wrapped up, the agency's cash flow has stabilized with General Fund support received during the February 2026 Legislative session. As ODF transitions into spring operations and prepares for the upcoming fire season, the agency remains focused on completing remaining fire-season financial reconciliations. ODF's financial position remains stable, supported by continued fiscal discipline and an emphasis on operational readiness.

Cash and General Fund balances

As of March 24, 2026, ODF's principal cash account balance was $50 million, and the AY27 Protection Division General Fund appropriation balance was $6.8 million. Estimated February payroll totaled $10.6 million, including $7.7 million from the Forestry Main Cash Account, $1.3 million from the Protection General Fund, and $1.5 million from the Forest Resources General Fund. The third-quarter county distribution is estimated at $11 million. Additionally, the $7.0 million in Landscape Resiliency General Fund will be transferred to the Landscape Resiliency Fund in accordance with the budget bill and is not available for cash flow purposes.

Funds as of 3/24/2026 6:34:33 AM

Fund	Fund Title	Balance
02000	FORESTRY CASH ACCOUNT	$50,168,524.55
11000	FOREST LAND PROTECTION FUND - EFCC	$23,990,795.87
56000	URBAN FORESTRY	$30,921.95
58000	FOREST RESOURCE TRUST	$1,149,236.84
70000	FACILITIES MANAGEMENT	$13,729,678.81

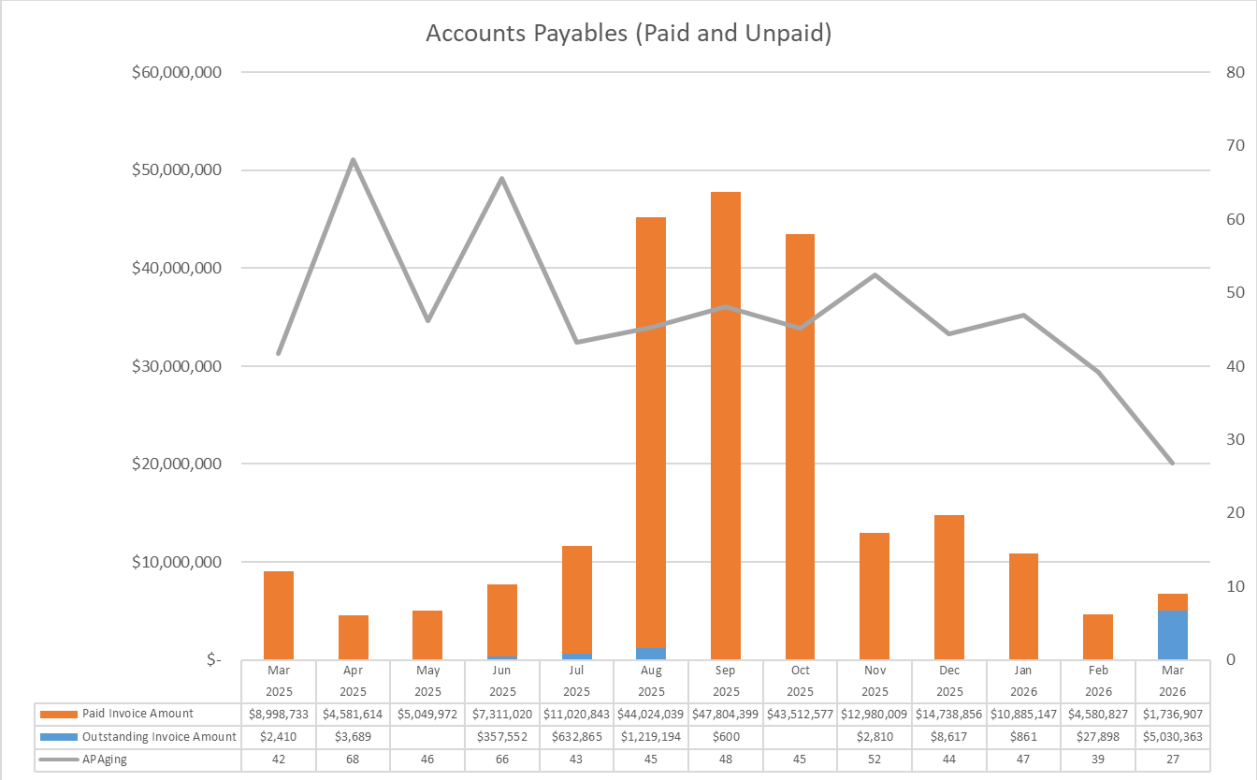
General Fund appropriations for AY2027 as of 3/24/2026 6:31:54 AM

Appn	Appn Title	Balance
89016	SFISH PROGRAM FUND	$2,000,000.00
89905	FOREST RESOURCES	$24,399,056.36
89908	ADMINISTRATION	$635,096.48
89915	GRAZING ACRES LANDOWNER OFFSETS	$1,500,000.00
89916	STATEWIDE LANDOWNER OFFSETS	$7,500,000.00
89920	PROTECTION FROM FIRE	$6,789,893.43
89931	RANGELAND FPA VEHICLE FUND - GF	$500,000.00
89995	LANDSCAPE RESILIENCY GF	$7,000,000.00

Accounts payable

Department-wide expenditure has slightly increased since the last reporting period (Figure 2), represented by normal expenditures for post-season operations. At the same time, the agency's vendor accounts show an average age at close to the 30-day mark.

Figure 2 - Accounts Payable as of March 23, 2026

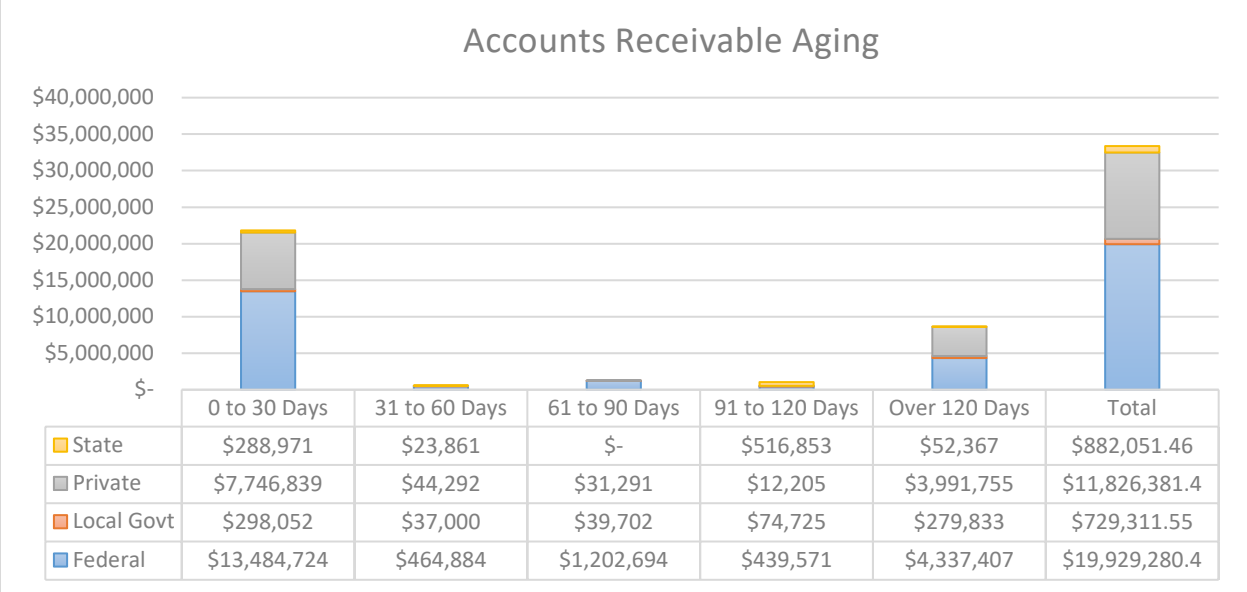


	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025	Oct 2025	Nov 2025	Dec 2025	Jan 2026	Feb 2026	Mar 2026
Paid Invoice Amount	$8,998,733	$4,581,614	$5,049,972	$7,311,020	$11,020,843	$44,024,039	$47,804,399	$43,512,577	$12,980,009	$14,738,856	$10,885,147	$4,580,827	$1,736,907
Outstanding Invoice Amount	$2,410	$3,689		$357,552	$632,865	$1,219,194	$600		$2,810	$8,617	$861	$27,898	$5,030,363
AP Aging	42	68	46	66	43	45	48	45	52	44	47	39	27

Accounts receivable

In the third quarter of FY26, the agency invoiced $47.5 million and collected $58.2 million. Outstanding invoices decreased from the prior period, totaling 626; however, 29.4% are now more than 120 days past due, representing a 5.9% increase from the previous period.

Figure 3 – Accounts Receivable Aging as of March 20, 2026



	0 to 30 Days	31 to 60 Days	61 to 90 Days	91 to 120 Days	Over 120 Days	Total
State	$288,971	$23,861	$-	$516,853	$52,367	$882,051.46
Private	$7,746,839	$44,292	$31,291	$12,205	$3,991,755	$11,826,381.4
Local Govt	$298,052	$37,000	$39,702	$74,725	$279,833	$729,311.55
Federal	$13,484,724	$464,884	$1,202,694	$439,571	$4,337,407	$19,929,280.4

Fire Protection Division financial status

Outstanding Fire Protection assets and liabilities information

In addition to monitoring current agency-wide accounts payable and receivable, the department tracks estimated outstanding assets and liabilities associated with the Fire Protection Division. Due to the complexity of large wildfire incidents and cooperative agreements, such as when ODF provides resources outside its protection jurisdiction, reimbursement for costs initially paid by ODF may take several years to be received. Similarly, delays may occur in receiving federal billings for resources initially covered by federal partners, as well as in completing final cost-share reconciliations that may result in amounts owed by ODF. The table below summarizes these estimated outstanding assets and liabilities, representing receivables and payables that have not yet been invoiced to or from ODF.

Figure 4– Estimated Outstanding Assets and Liabilities as of March 18, 2026

Summary of Estimated Outstanding Assets and Liabilities (Costs that have not been fully reconciled or billed)		
Category	**Assets (AR)**	**Liabilities (AP)**
Coop Billable	$35,606,503	$0
Large Fire - Non-Cost Share	$300,471	$2,826,053
Large Fire - Cost Share	$91,902,446	$29,498,274

TOTAL	**$127,809,420**	**$32,324,327**

Notable updates since the last report include a decrease of $1.1 million in AR and a decrease in AP of $2.5 million due to billable incidents being invoiced to other agencies or billings received for ODF to pay. Up to fire season 2025, there are 52 cost shares left to reconcile with our federal counterparts back to FY23.

FEMA information

FEMA Public Assistance (PA) grants are awarded to the Oregon Department of Emergency Management (ODEM), which then distributes the funds to ODF. In contrast, FEMA Fire Management Assistance Grants (FMAG) are awarded directly to ODF, providing more immediate access to funds once they are obligated. The FEMA reimbursement process can take several years to fully complete. ODF strives to submit all suppression claims to FEMA and/or ODEM within one year of an eligible incident's conclusion. Once submitted, claims undergo detailed audits by FEMA and/or ODEM before final payments are issued. Administrative claims take longer to process, as all suppression-related costs must be paid in full before ODF can submit expenses tied to administrative and financial work required by FEMA.

The table below outlines the status of claims by fire year and provides an update on payment progress for each.

Figure 5– FEMA/Public Assistance Outstanding Balances as of March 18, 2026

Summary of Outstanding FEMA FMAG/PA						
Fire Year	**Claim Type**	**Estimate to Invoice to FEMA**	**Pending Review by FEMA**	**Amount Obligated by FEMA**	**Payment Amount Requested**	**Grand Total Due to ODF**
2019	Admin - FMAG	$0	$0	$215,943	$0	$215,943
2020	Admin - FMAG	$85,250	$0	$0	$0	$85,250
2020	Admin - PA	$17,017	$0	$0	$0	$17,017
2020	Fire - PA	$0	$35,651	$0	$261,568	$297,219
2021	Admin - FMAG	$43,950	$0	$0	$0	$43,950
2022	Admin - FMAG	$12,000	$0	$0	$0	$12,000
2023	Admin - FMAG	$32,500	$0	$0	$0	$32,500
2023	Fire - FMAG	$1,490,000	$0	$0	$0	$1,490,000
2024	Fire - FMAG	$24,234,458	$1,187,069	$0	$0	$25,421,527
2024	Fire - PA	$17,871,536	$27,842,664	$0	$7,500,961	$53,215,161
2025	Fire – FMAG	$11,673,768	$0	$0	$0	$11,673,768
TOTAL		**$55,460,479**	**$29,065,384**	**$215,943**	**$7,762,529**	**$92,504,335**

Since the last report, there has been progress on claim amounts associated with Public Assistance claims finalized through ODEM. There has been limited movement on FMAG claim

amounts due to a Department of Homeland Security shutdown, which has prevented access to required systems for claim submission.

The agency is prepared to submit the remaining fire season 2024 claims once system access is restored. Following this, staff will complete final administrative claims for prior fire seasons, then begin final compliance review and claim processing for the 2025 fire season.

The Oregon Department of Forestry remains in a stable financial position as it completes reconciliation of the 2025 fire season and prepares for the upcoming season. Cash flow has stabilized with support provided during the most recent legislative session. While recovery of large fire costs and FEMA reimbursements will continue over multiple years, current financial indicators demonstrate that the agency is meeting its obligations and managing fiscal risk responsibly. ODF will continue to closely monitor revenues, expenditures, and federal reimbursements to maintain financial stability and ensure readiness to support Oregon's forests and communities.

Sincerely,

Kacey KC
State Forester

c:
Board of Forestry
Governor's Office
Chief Financial Office
Legislative Fiscal Office
Oregon State Treasury

Oregon
Tina Kotek, Governor

Department of Forestry
State Forester's Office
2600 State St
Salem, OR 97310-1336
503-945-7200
www.oregon.gov/ODF

May 1, 2026

Sen. Kate Lieber, Co-Chair
Rep. Tawna Sanchez, Co-Chair
Joint Committee on Ways and Means
900 Court St. NE, H-178
Salem, OR 97301

Re: Oregon Department of Forestry - Monthly financial condition report

Dear Co-Chairs,

The Oregon Department of Forestry (ODF) continues to carry out its mission of protecting, managing, and promoting Oregon's forests while maintaining a stable and disciplined overall financial position. As the agency moves through the fiscal year, operations across fire protection, state forests, and forest resources programs remain active and aligned with core priorities. The State Forests Division continues to operate and generate revenue to support agency functions and county distributions, while current conditions reflect softer timber markets, reduced net operating income, and fund balances trending below target levels, areas the agency is continuing to monitor closely. Across all programs, ODF remains focused on sustaining essential services, supporting partnerships, and preparing for seasonal demands while managing financial resources responsibly.

Cash and General Fund balances

As of April 20, 2026, ODF's principal cash account balance was $46.7 million, and the AY27 Protection Division General Fund appropriation balance was $88.8 million. Estimated April payroll totaled $10 million, including $7.5 million from the Forestry Main Cash Account, $1.1 million from the Protection General Fund, and $1.4 million from the Forest Resources General Fund. The third-quarter county distribution is estimated at $16.5 million. Additionally, the $7.0 million in Landscape Resiliency General Fund will be transferred to the Landscape Resiliency Fund in accordance with the budget bill and is not available for cash flow purposes.

Funds as of 4/20/2026 6:34:39 AM

Fund	Fund Title	Balance
02000	FORESTRY CASH ACCOUNT	$46,708,340.58
11000	FOREST LAND PROTECTION FUND - EFCC	$24,474,334.49
56000	URBAN FORESTRY	$30,063.52
58000	FOREST RESOURCE TRUST	$1,147,733.60
70000	FACILITIES MANAGEMENT	$14,038,686.15

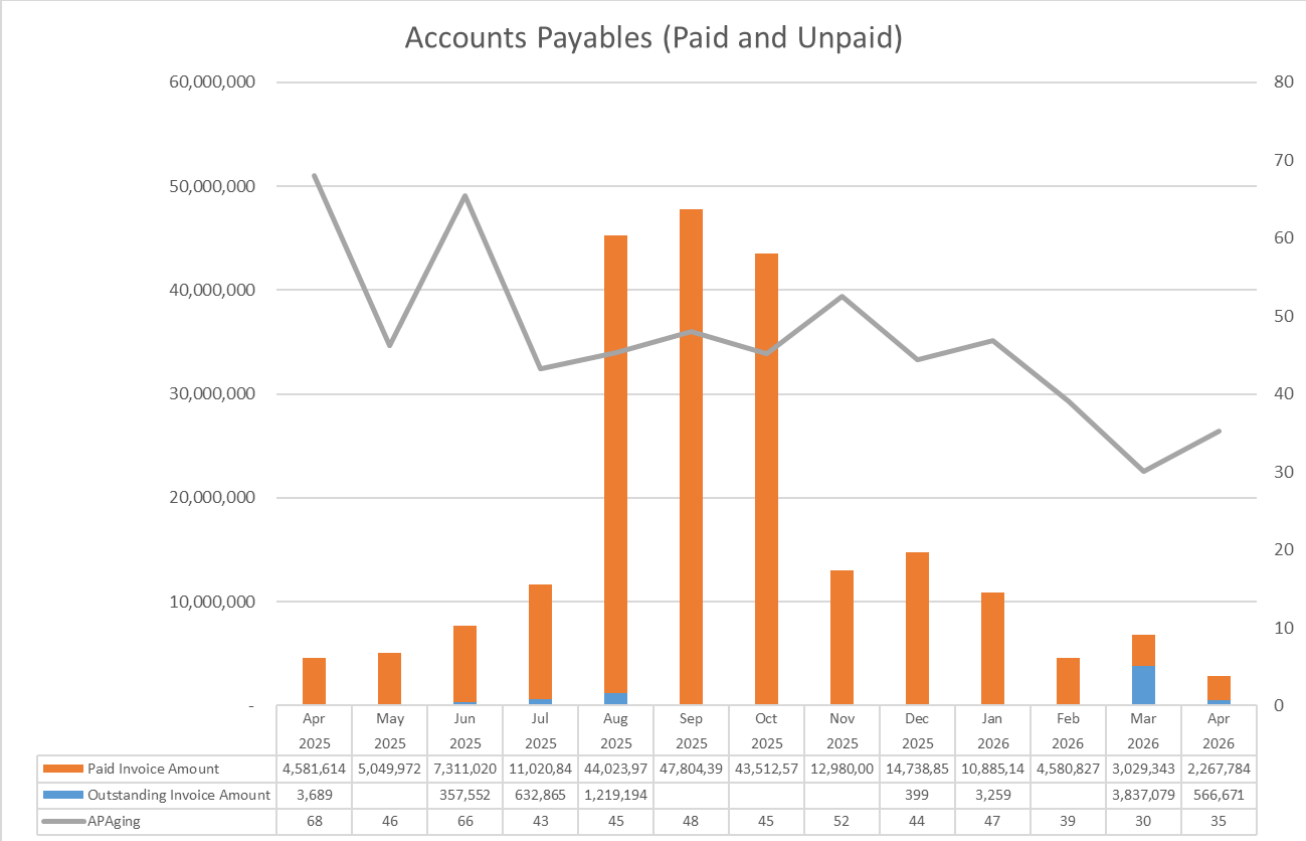
General Fund appropriations for AY2027 as of 4/20/2026 6:32:01 AM

Appn	Appn Title	Balance
89016	SFISH PROGRAM FUND	$2,000,000.00
89905	FOREST RESOURCES	$24,857,287.30
89908	ADMINISTRATION	$682,477.87
89915	GRAZING ACRES LANDOWNER OFFSETS	$1,500,000.00
89916	STATEWIDE LANDOWNER OFFSETS	$7,500,000.00
89920	PROTECTION FROM FIRE	$88,791,003.26
89931	RANGELAND FPA VEHICLE FUND - GF	$500,000.00
89995	LANDSCAPE RESILIENCY GF	$7,000,000.00

Accounts payable

Department-wide expenditure has slightly decreased since the last reporting period (Figure 2), represented by normal expenditures for post-season operations. At the same time, the agency's vendor accounts show an average age at close to the 35-day mark.

Figure 2 - Accounts Payable as of April 20, 2026

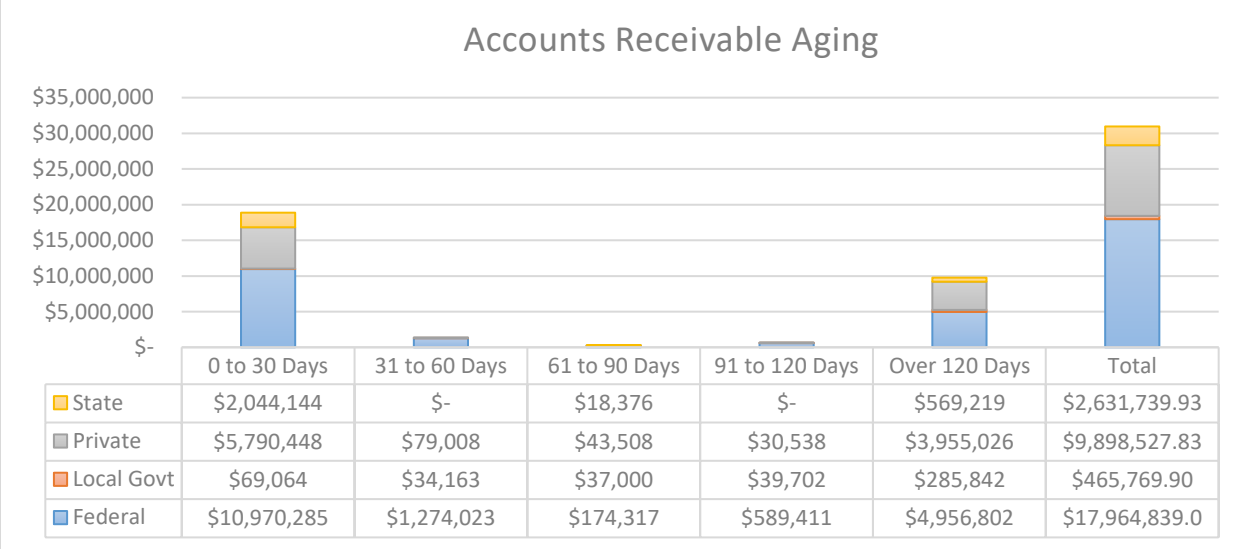


	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025	Oct 2025	Nov 2025	Dec 2025	Jan 2026	Feb 2026	Mar 2026	Apr 2026
Paid Invoice Amount	4,581,614	5,049,972	7,311,020	11,020,84	44,023,97	47,804,39	43,512,57	12,980,00	14,738,85	10,885,14	4,580,827	3,029,343	2,267,784
Outstanding Invoice Amount	3,689		357,552	632,865	1,219,194				399	3,259		3,837,079	566,671
APAging	68	46	66	43	45	48	45	52	44	47	39	30	35

Accounts receivable

In the third quarter of FY26, the agency invoiced $56 million and collected $67 million. Outstanding invoices decreased from the prior period, totaling 571; however, 41.7% are now more than 120 days past due, representing a 12.3% increase from the previous period.

Figure 3 – Accounts Receivable Aging as of April 20, 2026



	0 to 30 Days	31 to 60 Days	61 to 90 Days	91 to 120 Days	Over 120 Days	Total
State	$2,044,144	$-	$18,376	$-	$569,219	$2,631,739.93
Private	$5,790,448	$79,008	$43,508	$30,538	$3,955,026	$9,898,527.83
Local Govt	$69,064	$34,163	$37,000	$39,702	$285,842	$465,769.90
Federal	$10,970,285	$1,274,023	$174,317	$589,411	$4,956,802	$17,964,839.0

State Forests Division financial status

Fiscal year 2026 (FY26) through January revenues from State Forests timber sales added $46.7 million to the ODF cash account, $29.6 million of which will be distributed for county payments. State Forests expenses are $28.0 million which leaves a negative net operating income of $10.9 million. The Forest Development Operating Fund balance is $11.0 million, which is below the prudent balance of 6 months operating expenses. Volume harvested through January is 95.8 MMbf which is a negative 1% change from FY25. The lumber market remains uncertain entering 2026, with prices declining through late 2025 and into early 2026 due to reduced demand in residential construction. Higher interest rates and housing affordability challenges have slowed new homebuilding, contributing to softer lumber prices. These conditions are reflected in State Forests timber sale auctions, where bids are generally closer to minimum appraised values than in recent years. While most timber sales continue to sell, ongoing market weakness may result in some sales not meeting minimum bid requirements. Market conditions are expected to remain variable in the near term, with the potential for gradual improvement later in 2026 as housing activity stabilizes.

Fire Protection Division financial status

Outstanding Fire Protection assets and liabilities information

In addition to monitoring current agency-wide accounts payable and receivable, the department tracks estimated outstanding assets and liabilities associated with the Fire Protection Division. Due to the complexity of large wildfire incidents and cooperative agreements, such as when ODF provides resources outside its protection jurisdiction, reimbursement for costs initially paid by ODF may take several years to be received. Similarly, delays may occur in receiving federal billings for resources initially covered by federal partners, as well as in completing final cost-share reconciliations that may result in amounts owed by ODF. The table below summarizes these estimated outstanding assets and liabilities, representing receivables and payables that have not yet been invoiced to or from ODF.

Figure 4– Estimated Outstanding Assets and Liabilities as of April 09, 2026

Summary of Estimated Outstanding Assets and Liabilities (Costs that have not been fully reconciled or billed)		
Category	**Assets (AR)**	**Liabilities (AP)**
Coop Billable	$34,366,933	$0
Large Fire - Non-Cost Share	$300,702	$826,053
Large Fire - Cost Share	$91,600,209	$26,672,221
TOTAL	**$126,267,844**	**$27,498,274**

Notable updates since the last report include a decrease of $1.5 million in AR and a decrease in AP of $4.8 million due to billable incidents being invoiced to other agencies or billings received for ODF to pay. Up to fire season 2025, there are 51 cost shares left to reconcile with our federal counterparts back to FY23.

FEMA information

FEMA Public Assistance (PA) grants are awarded to the Oregon Department of Emergency Management (ODEM), which then distributes the funds to ODF. In contrast, FEMA Fire Management Assistance Grants (FMAG) are awarded directly to ODF, providing more immediate access to funds once they are obligated. The FEMA reimbursement process can take several years to fully complete. ODF strives to submit all suppression claims to FEMA and/or ODEM within one year of an eligible incident's conclusion. Once submitted, claims undergo detailed audits by FEMA and/or ODEM before final payments are issued. Administrative claims take longer to process, as all suppression-related costs must be paid in full before ODF can submit expenses tied to administrative and financial work required by FEMA.

The table below outlines the status of claims by fire year and provides an update on payment progress for each.

Figure 5– FEMA/Public Assistance Outstanding Balances as of April 09, 2026

Summary of Outstanding FEMA FMAG/PA						
Fire Year	**Claim Type**	**Estimate to Invoice to FEMA**	**Pending Review by FEMA**	**Amount Obligated by FEMA**	**Payment Amount Requested**	**Grand Total Due to ODF**
2020	Admin - FMAG	$85,250	$0	$0	$0	$85,250
2020	Admin - PA	$17,017	$0	$0	$0	$17,017
2020	Fire - PA	$0	$35,651	$0	$261,568	$297,219
2021	Admin - FMAG	$43,950	$0	$0	$0	$43,950
2022	Admin - FMAG	$12,000	$0	$0	$0	$12,000
2023	Admin - FMAG	$32,500	$0	$0	$0	$32,500
2023	Fire - FMAG	$1,490,000	$0	$0	$0	$1,490,000
2024	Fire - FMAG	$24,234,458	$1,187,069	$0	$0	$25,421,527
2024	Fire - PA	$9,797,289	$35,890,640	$0	$7,500,961	$53,188,890
2025	Fire – FMAG	$11,673,768	$0	$0	$0	$11,673,768
TOTAL		**$47,386,232**	**$37,113,360**	**$0**	**$7,762,529**	**$92,262,121**

Since the last report, the 2019 FMAG administrative claim of $215,943 has been paid. Additionally, $8 million from the 2024 fire season Public Assistance claim has been submitted to ODEM for review. Movement on FMAG claims has been limited due to a Department of Homeland Security shutdown, which has restricted access to required submission systems. The agency is prepared to submit the remaining 2024 fire season claims once access is restored. Following that, staff will complete final administrative claims for prior fire seasons and begin compliance review and claim processing for the 2025 fire season.

ODF remains focused on maintaining financial stability and operational readiness as it prepares for the upcoming fire season. While some financial elements, including large fire cost recovery and timber market conditions, will continue to evolve, the agency is actively monitoring these areas and managing resources accordingly. ODF will continue to prioritize sound fiscal practices, support core programs, and ensure it is well-positioned to meet its responsibilities to Oregon's forests and communities.

Sincerely,

Kacey KC
State Forester

c: Board of Forestry
Governor's Office
Chief Financial Office
Legislative Fiscal Office
Oregon State Treasury

Board of Forestry
Public Meeting

Placeholder for Department of Forestry Financial Report for May 2026

Agenda Item No.:	B
Work Plan:	Administrative
Topic:	Administrative Processes
Presentation Title:	Approval of Agency Director Financial Transactions, Fiscal Year 2025
Date of Presentation:	June 3, 2026
Contact Information:	James D. Short, Chief Financial Officer (503) 302-8478 james.short@odf.oregon.gov

SUMMARY

The purpose of this agenda item is to meet the requirements of statewide policy by having the Board review and approve transactions submitted by the State Forester, Cal Mukumoto and Interim State Forester Kate Skinner for Fiscal Year 2025.

CONTEXT

Oregon Department of Administrative Services policy 10.90.00 regarding internal controls requires the review and approval of certain financial transactions of the State Forester.

The financial transactions involved include:

- The director's monthly time report (including use of leave time).
- Travel expense reimbursement claims.
- Purchase card use approvals.
- Requests for vacation leave payoff.

As provided in the policy, by previous action, the Board has delegated the day-to-day review and approvals of these transactions to the Deputy State Forester, with an annual review by the Board of Forestry.

RECOMMENDATION

The Department recommends the Board of Forestry review and approve the travel expense transactions and the leave usage transactions submitted by the State Forester, Cal Mukumoto and Interim State Forester Kate Skinner for Fiscal Year 2025, as summarized in Attachment 1, State Forester's Travel Claims Summary, and Attachment 2, State Forester's Leave Usage Summary.

There were no purchase card transactions in this time period. The State Forester will also have transactions reported in the following fiscal year.

ATTACHMENTS

(1) State Forester's Travel Claims Summary, Fiscal Year 2025
(2) State Forester's Leave Usage Summary, Fiscal Year 2025

State Forester's Travel Claims Summary Fiscal Year 2025
July 1, 2024 through June 30, 2025

Traveler	Destination	Claim Total ($)	Depart Date	Return Date	Purpose of Trip
Calvin Mukumoto	Sunriver, OR	73.66	10/13/2024	10/14/2024	Wildfire Funding WG
Calvin Mukumoto	Pendleton, OR	277.73	10/14/2024	10/17/2024	Board of Forestry Meeting
Calvin Mukumoto	Portland, OR	21.42	10/22/2024	10/22/2024	Meeting with WA St Forester George Geissler and Jacque Buchanan (USFS)
Calvin Mukumoto	Buxton, OR	31.92	10/31/2024	10/31/2024	STIA Meeting
Kate Skinner	Salem, OR	29.40	01/23/2025	01/23/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR	29.40	01/27/2025	01/31/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR	131.40	02/03/2025	02/06/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR	148.40	02/10/2025	02/12/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR	29.40	02/18/2025	02/18/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR	199.40	02/25/2025	02/27/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR	216.40	03/03/2025	03/05/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR	199.40	03/10/2025	03/12/2025	Interim State Forester Assignment
Kate Skinner	Seaside, OR	21.00	03/17/2025	03/17/2025	Interim State Forester Assignment, IMT Training Conference
Kate Skinner	Salem, OR	29.40	03/18/2025	03/18/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR Portland, OR	335.40	03/24/2025	03/28/2025	Interim State Forester Assignment, International Mass Timber Conference
Kate Skinner	Salem, OR	29.40	04/01/2025	04/01/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR	199.40	04/07/2025	04/10/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR	182.40	04/14/2025	04/16/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR	114.40	04/22/2025	04/23/2025	Interim State Forester Assignment, Board of Forestry Meeting
Kate Skinner	Salem, OR	131.40	05/01/2025	05/02/2025	Interim State Forester Assignment

Kate Skinner	Salem, OR Burns, OR	298.72	05/05/2025	05/08/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR	131.40	05/27/2025	05/28/2025	Interim State Forester Assignment
Kate Skinner	Salt Lake City, UT	294.22	05/12/2025	05/16/2025	Interim State Forester Assignment, CWSF Conference
Kate Skinner	Salem, OR	267.40	06/02/2025	06/05/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR	267.40	06/09/2025	06/12/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR	114.40	06/16/2025	06/17/2025	Interim State Forester Assignment
Kate Skinner	Salem, OR	131.40	06/23/2025	06/24/2025	Interim State Forester Assignment

*These expenditures do not include direct payment to vendors by the Department of Forestry for travel and lodging.

Leave Usage Summary, Fiscal Year 2025
July 1, 2024 through June 30, 2025
Cal Mukumoto

	Discretion Leave | Time Off Plan	Leave Without Pay | Time Off Plan	Paid Administrative Leave | Time Off Plan	Personal Business | Time Off Plan	Sick Leave | Time Off Plan	Special Day | Time Off Plan	Straight Time | Time Off Plan	Vacation Leave | Time Off Plan	MONTHLY SUMMARY
July	-	-	-	-	-	-	-	31.00	31.00
August	-	-	-	-	-	-	-	-	-
September	-	-	-	2.50	-	-	-	-	2.50
October	-	-	-	-	6.50	-	-	-	6.50
November	-	-	-	-	-	-	-	40.00	40.00
December	-	-	-	5.50	8.00	8.00	-	32.00	53.50
January	-	-	-	4.00	-	4.00	-	5.75	13.75
February	-	-	-	-	-	-	-	-	-
March	-	-	-	-	-	-	-	-	-
April	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	12.00	14.50	12.00	-	108.75	147.25

Leave Usage Summary, Fiscal Year 2025
July 1, 2024 through June 30, 2025
Kate Skinner

	Discretion Leave | Time Off Plan	Leave Without Pay | Time Off Plan	Paid Administrative Leave | Time Off Plan	Personal Business | Time Off Plan	Sick Leave | Time Off Plan	Special Day | Time Off Plan	Straight Time | Time Off Plan	Vacation Leave | Time Off Plan	MONTHLY SUMMARY
July	-	-	-	12.00	-	-	-	-	12.00
August	-	-	-	4.00	-	-	-	-	4.00
September	-	-	-	4.50	-	-	-	-	4.50
October	-	-	-	-	-	-	-	-	-
November	-	-	-	-	-	-	-	-	-
December	-	-	-	-	-	-	-	48.00	48.00
January	-	-	-	-	-	-	-	8.00	8.00
February	-	-	-	-	4.00	-	-	8.00	12.00
March	-	-	-	-	-	-	-	-	-
April	-	-	-	-	-	8.00	-	-	8.00
May	-	-	-	-	-	-	-	48.00	48.00
June	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	20.50	4.00	8.00	-	112.00	144.50

STAFF REPORT

Agenda Item No.:	C
Work Plan:	Forest Resources Division
Presentation Title:	Committee for Family Forestlands Appointment
Date of Presentation:	June 3, 2026
Contact Information:	Mike Kroon, Deputy Division Chief, Forest Resources Division, mike.e.kroon@odf.oregon.gov

SUMMARY

The Committee for Family Forestlands (CFF) is an advisory committee to the Board of Forestry (Board) and the Oregon Department of Forestry (Department). This agenda item requests the reappointment of a voting member to serve as the Northwest Oregon Landowner Representative and requests the appointment of a committee Chair and Vice-Chair. This is a decision item.

BACKGROUND & ANALYSIS

Oregon Revised Statute 526.016 provides the Board the authority to establish standing committees. Per the CFF charter, the purpose of the committee is to advise the Board and the Department in matters relating to family forestlands. This includes but is not limited to advising on maintaining a viable family forestland base, maintaining and enhancing the contributions that family forestland owners make, timber availability, the protection and enhancement of watersheds and fish and wildlife habitat and the impact of forest policies have on family forestland owners.

The committee is comprised of seven voting members. Four family forestland owners; one from each Department regional area and one at-large, one forest industry representative, one environmental community representative and one citizen-at-large. Voting members are appointed by the Board and serve three-year terms with a maximum of two consecutive terms. The committee also includes up to six ex-officio members whom are appointed by the committee for two-year terms with no maximum number of terms. More information on the committee can be found on the committee's webpage of the Department website here.

David Bugni currently fills the voting, Northwest Oregon Landowner Representative. His first term expires June 30, 2026. At their January 14, 2026, meeting, the CFF voted to request his reappointment to the committee and that he be appointed committee Chair. His biography is included as Attachment 1 and a letter of recommendation from the current CFF Chair is included as Attachment 2.

At their March 11, 2026, meeting, the CFF voted to request Kate McMichael be appointed committee Vice-Chair. Kate McMichael serves as the voting, Landowner at Large Representative and was first appointed to the CFF in June 2021. Her biography is included as Attachment 3.

RECOMMENDATIONS

(1) The Department recommends the Board reappoint David Bugni.
(2) The Department recommends the Board appoint David Bugni as the CFF Chair.
(3) The Department recommends the Board appoint Kate McMichael the CFF Vice-Chair.

ATTACHMENTS

(1) Letter of Recommendation for chair appointment from current CFF Chair
(2) David Bugni's Biography
(3) Kate McMichael's Biography

Wendy R. Gerlach
Chair, Committee for Family Forestlands
Date: February 4, 2026

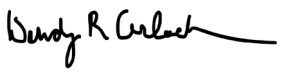
To the Board of Forestry,

It is my pleasure to recommend, on behalf of the Committee of Family Forestlands, David Bugni as chair of the Committee. The Committee discussed the recommendation at its meeting of January 14, 2026, and unanimously agreed to put David forward as the Committee's chair, to start with the Committee's June meeting. (I will be stepping off the Committee at that time, having served the maximum of two three-year terms.)

David is well known in the Small Forestland Owner community, as an engaged and informed landowner who has taken leadership positions with groups including Oregon Small Woodlands Association and Oregon Tree Farm System. He has received awards for his stewardship of land and water on his family's forest near Estacada. As the northwest landowner member of the Committee, he is unfailingly generous with his time and ideas.

We appreciate David's stepping forward to act as chair, and recommend that the Board appoint him as chair of the Committee for Family Forestlands.

Best regards, and with thanks for your service to the State,



Wendy Gerlach

David Bugni



David Bugni graduated from Oregon State University with a BS in Civil Engineering (1983) and a MS in Structural Engineering and Mechanics from the University of California, Berkeley (1984). David began his OSU studies in forest science then forest engineering prior to transferring to civil engineering in his senior year. He practiced structural engineering for over 30 years, owning his own business from 1996 - 2016 until retiring in 2016.

The Bugni family has been small woodland owners for 34 years on 101 acres in rural Estacada, Oregon. David and his wife have two grown children. David wrote the family's forest management plan in 2013 (updated in 2023). The family was the 2020 Clackamas County Woodland Farmer of the Year and the 2022 State of Oregon Outstanding Tree Farmer of the Year. The Bugni's last commercial logging project, by contract, was a 20-acre thinning of 50 year old timber in 2014. Another commercial thinning is scheduled in about 2030. In 2023, the family entered into a 60-year contract with Forest Carbon Works to set aside their property for carbon storage and sequestration and is participating in the voluntary carbon market. Additionally, the Bugni family was awarded the joint ODF/ODFW "Fish & Wildlife Steward Award – Forest Lands" for 2019 for the Northwest Oregon region, Non-Industrial Forestlands category. In 2021, David received the Partnership Award from the Pacific Northwest Region of the US Forest Service for "example-setting land stewardship and outreach in aquatic restoration." David is also a Master Woodland Manager (OSU Extension Service).

David currently serves as Chair of the Oregon Tree Farm System, is on the board of the Clackamas County Farm Forestry Association (Secretary/Treasurer), is the Past Board Chair of the Clackamas River Basin Council, the President of the Friends of the Estacada Public Library and the past chair of the Estacada School Board (term ended in 2005). David is active on the Governmental Affairs Team of the Oregon Small Woodlands Association (OSWA). In 2022 he also served on the OSWA Riparian sub-committee that assisted ODF during the drafting of rules for the Private Forest Accord and is currently a member of the ODF Adaptive Management Program Committee (AMPC).

The Bugni family has been active for many years in voluntary riparian area improvements and fish habitat restoration activities within, and adjacent to, the creek (a medium, type SSBT) that flows through their property and has been successful in receiving over $1,000,000 in grants in support of such work on their property and adjacent neighbors' lands. In late 2021, David wrote a $294,000 grant to the ODF Small Forestland Grant (SFG) program and was subsequently awarded funds for extensive fuels reduction work within his community under funding from SB 762.

When David is not participating in these activities, he is often found walking through the family's property enjoying the beauty of the surrounding forestland.

Committee for Family Forestlands – Kate McMichael Bio



Kate is a retired high school world religions and ethics teacher, who became a small woodland owner when she (and wife, Theresa) purchased 39 acres in Vida in 2019. Knowing that decades of loving and backpacking through forests did not automatically translate into understanding forest health or stewardship, they reached out to their ODF Stewardship Forester and local Extension Forester. They took classes, went on forest tours, drafted a management plan, and joined the Oregon Small Woodlands Association. When the Holiday Farm Fire tore through their property, their focus shifted to restoration and reforestation. Gratitude for the outpouring of post-fire assistance and ongoing support from the forestry and timber community has been a source of comfort, but also a call to action. When not working on the myriad activities that are part and parcel of “experiments in post-fire reforestation in a changing climate” on their still battered McKenzie woodland, Kate has found her former and current lives coming together in a growing commitment to science-based forestry education and forest literacy. This has led her to become more widely involved in the natural resource community, both locally and statewide. She is active in the Women Owning Woodlands Network, Oregon Women in Timber, Lane Families for Farms and Forests, the McKenzie Watershed Stewardship Group, the Oregon Tree Farm System and Oregon Small Woodlands Association, both in Lane County and statewide. She and Theresa are now Master Woodland Managers. Kate recently joined the board of the Upper Willamette Soil and Water Conservation District and has become a regular at McKenzie Watershed Council meetings. Since joining CFF, she has become increasingly interested in the intersection of forest policy and forest stewardship. In her role as Landowner at Large on the CFF, Kate sees her “niche” as speaking from the perspective of new, very small woodland owners who have been impacted by wildfire or other catastrophic disturbance. When not attending meetings or battling invasive vegetation, she dreams of the day when today’s struggling seedlings become a healthy and resilient forest.

Agenda Item No.:	D
Work Plan:	Forest Resources Division
Presentation Title:	Proposed Final Order- Mark Wildfang
Date of Presentation:	June 3, 2026
Contact Information:	Greg Wagenblast, Civil Penalties Administrator, Forest Resources Division, greg.wagenblast@odf.oregon.gov, 541-525-6462 Scott Swearingen, Field Support Manager, Forest Resources Division, Scott.Swearingen@odf.oregon.gov, 541-580-7485

SUMMARY

The purpose of this agenda item is to consider the hearing record for contested civil penalty notice involving seven forest practices violations by Mark Wildfang and to make a decision on the final order regarding the matter. The Department issued a Notice of Civil Penalty to Mr. Mark Wildfang for seven FPA violations, 1. Failing to retain all trees within 20 feet of the high water level for a Type F stream, 2. Failed to file a notification for a type F stream crossing and working within 100 feet of a type F stream, 3. Failed to submit a statutory written plan for operation near a Type F stream, 4. Failed to submit a statutory written plan for a fill over 15 feet deep, 5. Failed to provide a drainage system as necessary to minimize development of gully erosion or the road prism or slopes below the road, 6. Failed install a stream crossing that is a correctly sized culvert to pass a peak flow corresponding to the 50 year return interval, 7. Failed to install a stream crossing to allow fish passage.

Mr. Wildfang contested the Notice of Civil Penalty. The matter was referred to the Office of Administrative Hearings for a contested hearing. Senior Administrative Law Judge Kate Triana conducted the hearing, resulting in a ruling in favor of the Department. ALJ Triana issued a proposed order upholding the Department's Civil Penalties. The Board is now called upon to consider issuance of a Final Order.

CONTEXT

The *VISION FOR OREGON'S FORESTS* priority and goal for Resilient Forests to reduce the vulnerability of Oregon's forests from a myriad of catastrophic climate driven disturbances, ODF will direct its policy, management and educational actions to enable and promote all forestland managers to make intentional decisions that increase adaptive capacity of forest ecosystems. ODF's Forest Resources Division is responsible for several key areas of operation that contribute to sustainable, healthy forests. One of these key areas involves the administration of the Forest Practices Act, which is a cornerstone of natural resource protection in Oregon that encourages sound management of forestlands. Citations, repair orders and civil penalties for violations of forest regulations are part of an effective enforcement program that meets these objectives by changing behaviors to comply with best management practices designed to promote a multitude of forest outputs and benefits.

BACKGROUND

ODF Case No. 21-W0014, 21-W0015, 21-W0016, 21-W0017, 21-W0018, 21-W0020, 21-W0021

Mr. Wildfang was the owner of land and timber, approximately 7 acres (T7S R4W Sections 23,24,25,26), in Polk County in the West Salem hills area. In September 2020, Operator Bridger

Hasbrouck filed a Notification for a planned timber harvest (commercial thinning/ selective cutting) on Mr. Wildfang's land (NOAP 2020-552-10979).

ODF received a complaint with concerns about the harvesting activity on the Wildfang property. Stewardship Forester Jennifer Erdmann (ODF Dallas office) completed a site inspection to investigate and determined there were several violations in the operation area.

ODF issued seven citations with orders to cease further violation and orders to repair for this operation. These enforcement documents were not contested and became final orders. Repairs were completed by Mr. Wildfang.

A civil penalty notice (CPN) was issued to Mr. Wildfang in August of 2025, at which time he contested the civil penalties totaling $7,150.00 for the seven violations. In October ODF issued an amended CPN which reduced the total civil penalty to $5,275.00. A hearing was held by Office of Administrative Hearings (OAH) on February 11, 2026 in Salem, Oregon. Administrative Law Judge (ALJ) Triana presided over the hearing and then issued a proposed order with finding of facts related to the case.

Please review attachment 1 - Proposed Order for ODF Case No. 21-W0014, 21-W0015, 21-W0016, 21-W0017, 21-W0018, 21-W0020, and 21-W0021 Civil Penalty for full details on Finding of Facts, Conclusion of Law, Opinion and Proposed Order.

EXCEPTIONS

The Administrative Procedures Act allows parties to make objections to proposed orders, in the form of "exceptions." ORS 183.460; OAR 137-003-0650. Consistent with the Department's rules, the Proposed Order explained that "exceptions shall be confined to factual and legal issues which are essential to the ultimate and just determination of the proceeding." OAR 629-001-0040(1). Exceptions "shall be based only on grounds that

(A) A necessary finding of fact is omitted, erroneous, or unsupported by the preponderance of the evidence on the record;
(B) A necessary legal conclusion is omitted or is contrary to law or the board's policy; or
(C) Prejudicial procedural error occurred." OAR 629-001-0040(2)(a).

In addition, the Proposed Oder explained that exceptions must specify the disputed finding, opinions, or conclusions. The party submitting exceptions must specify the nature of the suggested error and provide alternative or corrective language. OAR 629-001-0040(2)(b).

The Proposed Order set a deadline for filing exceptions of seven days after the date of the filing of the proposed order. The deadline for filing exceptions by mail would be March 9, 2026, counting seven calendar days after March 2, 2026.

No exceptions were received from Mr. Wildfang.

RECORD OF PROCEEDING

The record of the proceedings is available for Board members to review prior to the Board of Forestry meeting through a weblink to hearing documents by contacting Greg Wagenblast at (541) 525-6462 or greg.wagenblast@odf.oregon.gov. A hardcopy binder with all hearing documents will be available the day of the Board of Forestry meeting too.

The Board's decision must be based on the record established through the contested case hearing process. ORS 183.482(7). Any information about the facts at issue that Board members acquire from other sources may be ex parte communication. Ex parte communication is defined as "an oral or written communication to an agency decision maker during its review of the contested case not made in the presence of all parties to the hearing, concerning a fact in issue in the proceeding." OAR 137-003-0660(1). However, this definition specifically excludes "any communication from agency staff or counsel about legal issues or about facts in the record." OAR 137-003-0660(1). If a Board member receives an ex parte communication during their review of the contested case, the Board member must give all parties notice of the substance of the communication or a copy of the communication, and provide the other party with an opportunity to rebut the substance of the ex parte communication. ORS 183.462; OAR 137-003-0660(2).

BOARD'S ALTERNATIVES

Upon review of the proposed order and record presented in this case, pursuant to OAR 629-001-0045(3) the Board can:

1. Entertain written and/or oral argument from the State Forester and any party that filed exceptions to the proposed order if the board determines it is necessary or appropriate to assist the board in the proper disposition of the case. If allowed, oral argument will be limited to matters raised in written exceptions and shall be presented under time limits determined by the board chair; or
2. Remand the matter to the administrative law judge for further hearing on such issues as the Board specifies and to prepare a revised proposed order as appropriate under OAR 137-003-0655(2); or
3. Enter a final order adopting the recommendations (proposed order) of the administrative law judge; or
4. Enter an amended proposed order or final order that modifies or rejects the recommendations of the ALJ. If the board decides to modify or reject the proposed order, the board must comply with OAR 137-003-0655 and 137-003-0665.

RECOMMENDATION

The Department recommends that the Board approve Alternative 3 and issue a Final Order adopting the ALJ's proposed order. A draft Final Order is included as Attachment 02.

ATTACHMENTS

(1) Ruling on Motions for Summary Determination and Proposed Order for for ODF Case No. 21-W0014, 21-W0015, 21-W0016, 21-W0017, 21-W0018, 21-W0020, and 21-W0021 Wildfang

(2) Draft Final Order for ODF Case No. 21-W0014, 21-W0015, 21-W0016, 21-W0017, 21-W0018, 21-W0020, and 21-W0021 Wildfang

BEFORE THE OFFICE OF ADMINISTRATIVE HEARINGS
STATE OF OREGON
for the
OREGON DEPARTMENT OF FORESTRY
PRIVATE FORESTS

IN THE MATTER OF:	)	**PROPOSED ORDER**
	)	
MARK WILDFANG	)	OAH Case No. 2025-ABC-07433
	)	Agency Case No. 21-W0014, 21-W0015, 21-
	)	W0016, 21-W0017, 21-W0018, 21-W0020,
	)	21-W0021

HISTORY OF THE CASE

On August 19, 2025, the Oregon Department of Forestry, Private Forests (ODF or the Department), on behalf of the Board of Forestry, issued a Notice of Proposed Order and Opportunity to Request a Hearing (Civil Penalty Notice) to Mark Wildfang, proposing a civil penalty of $7,150 for seven citations issued to Mr. Wildfang. On September 9, 2025, Mr. Wildfang requested a hearing.

On October 8, 2025, the Department issued an Amended Notice of Proposed Order and Opportunity to Request a Hearing (Amended Civil Penalty Notice) to Mr. Wildfang, reducing the proposed civil penalty to $5,275.

On October 20, 2025, the Department referred the hearing request to the Office of Administrative Hearings (OAH) for a hearing on Mr. Wildfang's challenges to the Civil Penalty Notice. The OAH assigned Senior Administrative Law Judge (ALJ) Triana to preside at hearing.

On December 4, 2025, ALJ Triana convened a prehearing conference by telephone. Assistant Attorney General (AAG) Matt Devore participated for the Department along with Department representative Greg Wagenblast. Mr. Wildfang participated without counsel. During the phone conference, the parties agreed to an in-person hearing at the Salem OAH Office, to be held on February 11, 2026.

ALJ Triana convened the hearing as scheduled on February 11, 2026. Mr. Wildfang appeared without counsel and did not testify. AAG Devore represented the Department. The following witnesses testified at the hearing: Jennifer Erdmann, ODF Unit Forester for Polk County; and Greg Wagenblast, ODF Policy Analyst and Civil Penalty Administrator. The record closed at the conclusion of the hearing on February 11, 2026.

ISSUE

Whether the Department may impose a civil penalty totaling $5,275 against Mr. Wildfang for seven violations of the Forest Practices Act (FPA), ODF Case Nos. 21-W0014, 21-W0015, 21-W0016, 21-W0017, 21-W0018, 21-W0020, and 21-W0021.

EVIDENTIARY RULING

Department Exhibits A1 through A11 and A13 through A39 were admitted into the record without objection.[1]

FINDINGS OF FACT

1. At all relevant times, Mr. Wildfang was the owner of land and timber at T7S R4W Section 24 and 25, located approximately one mile west of Salem, Oregon. (Ex. A1 at 2; test. of Erdmann.) McNary Creek, a type F stream,[2] runs through the property. (Exs. A1 at 4, A7 at 1.)

2. On September 29, 2020, Operator Bridger Hasbrouck filed a Notification of Operations/Permit to Operate Power-Driven Machinery (NOAP) with the Department for a planned timber harvest (commercial thinning/selective cutting) on Mr. Wildfang's land. (Ex. A2 at 1, 4.) That same day, Ms. Erdmann issued a formal comment on the NOAP, indicating "You have an assumed fish stream within your operation area. Please call the stewardship forester to discuss." (*Id.* at 2.) She provided a phone number where she could be reached. (*Id.*) The comment was viewable by the Operator Hasbrouck and the landowner, Mr. Wildfang. Neither the operator nor Mr. Wildfang contacted Ms. Erdmann to discuss the planned operation prior to starting work on the land. (Test. of Erdmann.)

3. On or around January 11, 2021, the Department received a complaint about the operation on Mr. Wildfang's land from a neighbor. (Test. of Erdmann.)

4. On or around January 11, 2021, Ms. Erdmann conducted a site visit to Mr. Wildfang's land. (Test. of Erdmann; Ex. A3.) During the visit, Ms. Erdmann observed several violations of the FPA resulting from the timber harvest operations. (Test. of Erdmann.) She noted that approximately 300 feet of the Riparian Management Area (RMA) along McNary Creek had been removed (including trees and understory vegetation) within 20 feet of the high water level of the creek. (*Id.*; Ex. A1 at 2.) She further noted that Mr. Wildfang had failed to notify the Department that work on a stream crossing would be performed within 100 feet of a type F stream or submit a Statutory Written Plan for Operations near a type F stream. (Ex. A1 at 13, 24.) She also noted that Mr. Wildfang had not submitted a Statutory Written Plan for fill over 15 feet over a type F stream. (*Id.* at 35.) She saw that the road throughout the operation area did not have drainage, causing gully erosion and sediment delivery to waters of the state. (*Id.* at 46.) She saw that a stream crossing constructed over McNary Creek had more than 15 feet of fill present. (*Id.* at 57.) The fill included organic materials (such as logs and tree stumps). Ms.

[1] The Department did not submit an Exhibit A12.

[2] Type F streams are streams that are or could be fish-bearing. (Test. of Erdmann.)

Erdmann also observed that the culvert running under the crossing was composed of two pipes, approximately 12-inches in diameter. (Test. of Erdmann.) She determined that the culvert capacity was inadequate which allowed for the ponding of water higher than the top of the culverts. The inadequate drainage d resulted in erosion of the fill material, sediment delivery to the creek, and degradation of the culverts. The culverts were inadequately sized to meet the 50-year flood flow and did not allow for the migration of adult and juvenile fish. (Ex. A1 at 57, 68.)

5. On May 5, 2021, ODF issued Mr. Wildfang a Notice of Violation/Citation, Order to Cease Further Violation, and Order to Correct Unsatisfactory Condition Caused by Violation (Violation Notices) in ODF Case numbers 21-W0014, 21-W0015, 21-W0016, 21-W0017, 21-W0018, 21-W0020, and 21-W0021. ODF also sent Mr. Wildfang a copy of Forest Practices Note 7, a document describing ODF's civil penalties process. (Ex. A1.)

6. In Case 21-W0014, ODF alleged that as of January 11, 2021, "300 feet of the Riparian Management Area (RMA) of McNary Creek has been removed since 2016 [and] fir tree stumps are also present along the RMA above the stream crossing within 20 feet of the high water level of the type F stream," in violation of OAR 626-642-0100(2)(b) (July 1, 2017), causing an unsatisfactory condition of cutting and/or removing the riparian management area of McNary Creek for 0 to 50 feet. (Ex. A1 at 2.) ODF ordered Mr. Wildfang to cease further violations and directed him to take specific actions (set out in the Repair Order) to repair damage and correct the unsatisfactory conditions resulting from the violation. (*Id.* at 3.) Specifically, ODF ordered Mr. Wildfang to plant commercially acceptable and site suited tree species along the RMA of McNary Creek on a 10 foot by 10 foot spacing, on or before May 1, 2022. (*Id.*)

7. In Case 21-W0015, ODF alleged that on January 11, 2021, Mr. Wildfang "failed to notify [ODF] for a type F stream crossing and working within 100 feet of a type F stream," in violation of ORS 527.670(6), resulting in an unsatisfactory condition because it did not allow "the State Forester to provide an opportunity to discuss resource protection and damage prevention." (Ex. A1 at 13.) ODF ordered Mr. Wildfang to cease further violations. (*Id.* at 14.)

8. In Case 21-W0016, ODF alleged that on January 11, 2021, Mr. Wildfang "failed to submit a Statutory Written Plan [to ODF] for Operations near a type F stream," in violation of OAR 629-605-0170(2) (July 1, 2017), resulting in an unsatisfactory condition because it "den[ied] the State Forester the opportunity to provide comments on how the resource will be protected during the operation." (Ex. A1 at 24.) ODF ordered Mr. Wildfang to cease further violations. (*Id.* at 25.)

9. In Case 21-W0017, ODF alleged that on January 11, 2021, Mr. Wildfang "failed to submit a Statutory Written Plan [to ODF] for a fill over 15 feet" which was used over a type F stream to facilitate logging operations, in violation of OAR 629-625-0320(1)(b)(B) (January 1, 2006), resulting in sediment delivery to waters of the state because it did not include any means of surface erosion control. (Ex. A1 at 35.) ODF further alleged that the fill included organic materials in the form of stumps and woody debris. ODF ordered Mr. Wildfang to cease further violations. (*Id.* at 36.)

10. In Case 21-W0018, ODF alleged that on January 11, 2021, Mr. Wildfang "failed to

provide drainage in the road system throughout the operation area," in violation of OAR 626-625-0330(6) (January 1, 2003), causing gully erosion throughout the road prism and resulting in sediment delivery to waters of the state. (Ex. A1 at 46.) ODF ordered Mr. Wildfang to cease further violations and directed him to take specific actions (set out in the Repair Order) to repair damage and correct unsatisfactory conditions resulting from the violation. (*Id.* at 47.) The Repair Order provided:

> Roads must first be graded to minimize the amount of erosion that has already occurred. Once the roads are graded use grade reversals, surface sloping, ditches, culverts, and/or waterbars to provide adequate drainage for the road prism. Also ensure that any draining water has a chance to filter out before it can reach waters of the state. This work must be done at a time that the ground is dry enough to prevent any further erosion of the road prism. Refer to the enclosed Forest Practices notes 4 for guidance on road maintenance.
>
> Such action is to be completed on or before August 31, 2021.

(*Id.*)

11. In Case 21-W0020, ODF alleged that on January 11, 2021,[3] Mr. Wildfang "failed to size the culvert correctly to pass a 50-year return interval [and] capacity is insufficient to meet the 50-year flow," in violation of OAR 626-625-0320(2)(a) (January 1, 2006), causing ponding of water higher than the top of the culverts on the inlet end of the creek, unnecessary erosion of the fill, sediment delivery to the creek, and degradation of the installed culverts. (Ex. A1 at 57.) ODF ordered Mr. Wildfang to cease further violations and directed him to take specific actions (set out in the Repair Order) to repair damage and correct unsatisfactory conditions resulting from the violation. (*Id.* at 58.) The Repair Order provided:

> Removal of the undersized culverts must be completed. If you wish to replace the culverts then it must be fish passable and pass the 50-year return interval. This operation will require you to submit a Notification of Operations, a Statutory Written Plan, and you must adhere to the in-water work period set forth by the Oregon Department of Fish and Wildlife. The in-water work period for this stream is July 1 to October 15. If no culvert is being reinstalled care must be taken to stabilize the material left behind to minimize the sediment delivery of waters of the state. The stabilization requirements set for in the repair order for the violation of 629-625-0320(1)(b)(B) [(January 1, 2006)] 21-W0018 will be sufficient to meet the requirements for this repair order.
>
> A Notification of Operations and a Statutory Written Plan must be submitted prior to replacing this stream crossing.

[3] The Notice of Violation/Citation for ODF Case No. 21-0020 listed the date of violation as "1 th DAY OF January, 2021." The use of the "th" after the numeral one, in conjunction with the context of all the other violations being dated January 11, makes it appear that, more likely than not, ODF intended that the date on the citation actually read January 11, 2021. (*See*, Ex. A1 at 57.)

Such action is to be completed on or before October 15, 2021.

(*Id.*)

12. In Case 21-W0021, ODF alleged that on January 11, 2021, Mr. Wildfang "failed to install a stream crossing to allow the migration of adult and juvenile fish upstream and downstream during conditions when fish movement in that stream normally occurs," in violation of OAR 626-625-0320(2)(b) (January 1, 2006), resulting in a man-made barrier to fish use. (Ex. A1 at 68.) ODF ordered Mr. Wildfang to cease further violations and directed him to take specific actions (set out in the Repair Order) to repair damage and correct unsatisfactory conditions resulting from the violation. (*Id.* at 69.) The Repair Order indicated that the repairs required by the Repair Order for Case 21-W0020 would satisfy the repair required for this violation, and that all work was to be completed on or before October 15, 2021. (*Id.*)

13. The Violation Notices included information about Mr. Wildfang's right to a hearing on each citation and the consequences for failing to request a hearing in a timely manner, as follows:

> **Right to Hearing**
> You have a right to a hearing on the Notice of Violation, Order to Cease Further Violation and Order to Repair. To request a hearing, you must make a written request for a hearing within 30 days of the date of service or mailing of this Notice and Orders. The request for a hearing shall be in writing and must include a specific statement as to the reasons for disputing the State Forester's order, including but not limited to disagreement with any findings leading to the order. In addition, the request for hearing shall state what relief from the order is sought. OAR 629- 672-0200. If you request a hearing, the request must be made to:
>
> **Oregon State Forester**
> **Attn: Civil Penalty Administrator**
> **2600 State Street**
> **Salem, Oregon 97310**
>
> **Default Final Order**
> If you fail to request a hearing within the time provided or if you request a hearing but then fail to appear at that hearing, you will have waived your right to a hearing and the Notice and Orders will become Final Orders by Default. The record of the proceeding to date, including information in ODF ' s file and all materials submitted by any party, will automatically become part of the record upon default for the purpose of proving a prima facie case.

(Ex. A1 at 4, 15, 26, 37, 48, 59, 70; emphasis in original.)

14. The Department sent the Violation Notices and supporting documentation to Mr.

Wildfang via certified and regular mail to his address of record, PO Box 6123, Salem, Oregon 97304. (Ex. A1 at 11, 22, 33, 44, 55, 66, 77.)

15. Mr. Wildfang did not request a hearing on any of the seven citations issued on May 5, 2021, by the June 4, 2021 deadline. (Test. of Wagenblast.)

16. On July 2, 2021, ODF sent Mr. Wildfang a courtesy letter by regular mail to his address of record, advising that the citations in ODF Case Nos. 21-W0014, 21-W0015, 21-W0016, 21-W0017, 21-W0018, 21-W0020, and 21-W0021 were now final orders by operation of law. The letter stated, in pertinent part:

> You were issued a Notice of Violation, Cease Order and Repair Order on May 5, 2021. You failed to request a hearing on this Notice. As a result, the Notice became a Final Order by Default on June 5, 2021. * * *
>
> This letter confirms that a Final Order by Default has been entered for Case Nos. 21-W0014, 21- W0015, 21-W0016, 21-W0017, 21-W0018, 21-W0020 and 21-W0021. Please take note that the Department will next consider issuance of civil penalties, pursuant to ORS 527.685 and OAR 629- 670-0000 to 0315. If you have any questions regarding this matter or the administration of civil penalties, please call this office at (503) 945-7382.

(Ex. A6 at 1.)

17. After receiving the Violation Notices, Mr. Wildfang began working with the Department on a plan to complete all required repairs. Mr. Wildfang was very cooperative and responsive when working with Mr. Erdmann and the Department to plan and complete the repairs. (Test. of Erdmann.)

18. On July 28, 2021, Mr. Wildfang submitted a Statutory Written Plan to the Department for the removal of the fill over McNary Creek. (Ex. A7 at 1.) It indicated that Mr. Wildfang would use an excavator to remove the fill and culverts, starting on the outlet side of the creek to prevent as much water and dirt mixing as possible. It further indicated that the removed fill material would be placed at least 50 feet from the creek, compacted with a sheep's foot roller, and a boulder would be placed between the fill and the creek. It indicated that the banks of the creek would be returned to their original slope and, if needed, seeded. The creek would be returned to "free flowing," with no culvert, and, if needed, lined with small rocks. (*Id.*)

19. On August 4, 2021, Mr. Wildfang filed a NOAP with the Department for the road reconstruction required by the Violation Notices. (Ex. A8 at 1-4.)

20. On or around April 11, 2022, Ms. Erdmann performed a final inspection of the site. She noted that Ash trees had been planted along the creek. She found that Mr. Wildfang had completed all repairs outlined in the Violation Notices "in a satisfactory manner." (Ex. A9 at 1.)

21. The Department determined that Mr. Wildfang had little or no prior knowledge of

the FPA before the citations in this matter were issued. (Test. of Wagenblast.)

22. If left unrepaired, the damage from the cutting of trees and removal of understory vegetation in the creek's RMA could take up to 10 years to self-restore. While the replanting performed by Mr. Wildfang mitigated some of the damage done, some damage could not be remedied and some future damage could not be prevented. (Test. of Wagenblast.)

23. If left unrepaired, the damage to the site that caused the delivery of sediment into the waters of the state could take five to eight years to self-restore. (Test. of Wagenblast.) Ms. Erdmann estimated the amount of sediment delivered to waters of the state to be approximately 5.88 cubic yards from the operation at the site. (Ex. A13 at 1.) The sediment already delivered to waters of the state could not be remedied, but Mr. Wildfang's repairs limited future damage. (Test. of Wagenblast.)

24. If left unrepaired, the lack of proper fish passage and the undersized culverts in the creek could have taken 10 or more years to self-restore. The undersized culverts and lack of fish passage were present for a relatively short period of time, and their removal reduced future damage to the site. (Test. of Wagenblast.)

CONCLUSION OF LAW

The Department may impose a civil penalty totaling $5,275 against Mr. Wildfang for seven violations of the FPA, ODF Case Nos. 21-W0014, 21-W0015, 21-W0016, 21-W0017, 21-W0018, 21-W0020, and 21-W0021.

OPINION

The Department has proposed assessing a civil penalty against Mr. Wildfang in the amount of $5,275 based on seven violations of the FPA, occurring in or around January of 2021. The Department has the burden of establishing by a preponderance of the evidence that it is entitled to assess against Mr. Wildfang the civil penalty proposed in the Amended Notice. ORS 183.450(2) ("The burden of presenting evidence to support a fact or position in a contested case rests on the proponent of the fact or position"); *Dixon v. Board of Nursing*, 291 Or App 207 (2018) (the standard of proof that generally applies in agency proceedings, including license-related proceedings, is the preponderance of the evidence standard); *Metcalf v. AFSD*, 65 Or App 761, 765 (1983) (in the absence of legislation specifying a different standard, the standard of proof in an administrative hearing is preponderance of the evidence). Proof by a preponderance of the evidence means that the fact finder is persuaded that the facts asserted are more likely than not true. *Riley Hill General Contractor v. Tandy Corp*., 303 Or 390, 402 (1987).

Applicable Law

ORS 527.680(1) authorizes the State Forester to issue a citation to any operator whenever the State Forester determines the operator has committed a violation of the FPA. An "operator" is any landowner or timber owner who conducts any commercial activity relating to the establishment, management, or harvest of forest trees. ORS 527.620(13), (14). As pertinent to

this matter, a "violation" occurs when an "unsatisfactory condition exists, and (A) Damage has resulted; or (B) The State Forester has determined that it is not feasible for the operator, by timely corrective action, to eliminate the consequences of the unsatisfactory condition[.]" OAR 629-670-0010(10) (January 1, 2006[4]). An "unsatisfactory condition," as defined in OAR 629-670-0010(9) (January 1, 2006), means the failure to comply with a practice specified in a forest practice statute or rule that applies to the type of operation conducted.

When issuing a citation for a violation of the FPA, the State Forester must also issue an order directing the operator or landowner cease further violation. ORS 527.680(2)(a). The State Forester may also issue an order directing the operator or landowner, where practical and economically feasible, to make reasonable efforts to repair the damage or correct the unsatisfactory condition specified in the citation within a period specified by the State Forester. ORS 527.680(2)(b); OAR 629-670-0130(2). Pursuant to ORS 527.683, ODF may not impose a civil penalty for a violation of the FPA until the operator or landowner incurring the penalty has received notice of the violation in writing from the State Forester specifying the violation. Civil penalties are authorized by ORS 527.992 and OAR 629-670-0200 (July 1, 2002). Any person who fails to comply with the provisions of the FPA or any rule or standard adopted thereunder is subject to a civil penalty in the amount adopted under ORS 527.685. The State Forester will assess the civil penalty after the citation and notice of violation is issued and after the Department's civil penalty administrator reviews the citation and circumstances of the violation to determine the penalty amount. OAR 629-670-0200(3) (July 1, 2002). Except for circumstances not pertinent to this matter, a civil penalty may not exceed $5,000 per violation. ORS 527.685(1) (2007).

When imposing a civil penalty authorized by ORS 527.685 (2007), the State Forester may consider the following factors:

> (a) The past history of the person incurring a penalty in taking all feasible steps or procedures necessary or appropriate to correct any violation.
>
> (b) Any prior violations of statutes, rules, orders and permits pertaining to the Oregon Forest Practices Act.
>
> (c) The gravity and magnitude of the violation.
>
> (d) Whether the violation was repeated or continuous.
>
> (e) Whether the cause of the violation was an unavoidable accident, negligence or an intentional act.
>
> (f) The size and type of ownership of the operation.
>
> (g) Any relevant rule of the board.

[4] Some of the Oregon Revised Statutes (ORS) Oregon Administrative Rules (OAR) cited in this order have been amended since the violations in this matter occurred. All citations in the order are to the version of the ORS or OAR in effect at the time of the violations.

(h) The cooperativeness of the person incurring the penalty and the person's efforts, if any, to correct the violation.

OAR 629-670-0210 (January 1, 2006) sets out the formula for determining the civil penalty amount and provides, in pertinent part, as follows:

(1) The amount of civil penalty per violation shall be the lesser of $5000 or the amount determined by the formula $B(C x P) + ($B x D x R) where:

(a) $B is a base fine established by type of violation in section (2) of this rule;

(b) C is cooperation;

(c) P is prior knowledge or prior violations;

(d) D is damage to protected resources; and

(e) R is the extent of damage that cannot be corrected, or prevented in the future, even though repairs are made.

(2) The base penalty value ($B) shall be established as follows:

(a) A base penalty of $100 shall be applied to violations of a type where the operator fails to notify the State Forester of intent to operate or fails to submit a required written plan or obtain written approval of a plan for an alternate practice.

(b) A base penalty of $250 shall be applied to:

(A) Violations of any rule or statute which requires or sets standards for accomplishing reforestation.

(B) Violations involving a failure to comply with the terms or conditions of any order of the State Forester issued in accordance with ORS 527.680.

(C) Violations of a type where the operator fails to comply with any term or condition of an approved plan for an alternate practice.

(D) Violations where the State Forester determines that an operator has intentionally failed to notify the State Forester of intent to operate, notwithstanding subsection (2)(a) of this rule.

(E) All other violations of forest practice rules or statutes not specifically described in section (2) of this rule.

* * * * *

(3) The cooperation value (C) shall be determined by the State Forester after reviewing whether the operator is taking all feasible steps or procedures necessary or appropriate to correct the violation for which the penalty is being assessed. The value shall be assigned as follows:

(a) A value of 0.5 shall be assigned when, in the judgment of the State Forester, the operator takes substantial initiative to correct the damage or problem that led to the violation. Substantial initiative may include, but is not limited to, reporting the violation before it is discovered, initiating effective repairs without having to be directed, or making substantive changes in operating procedures designed to identify and avoid potential recurrences.

(b) A value of 1 shall be assigned when the operator cooperates in following the direction of the State Forester by immediately ceasing further violation and taking prompt action to repair damage or correct any unsatisfactory condition where deemed feasible by the State Forester.

* * * * *

(4) The prior knowledge value (P) shall be determined by the State Forester after reviewing department records of citations, operation notification or operation inspections. A value from 0.5 through 10 shall be assigned as follows:

(a) A value of 0.5 is appropriate when the operator has little or no prior knowledge of the Oregon Forest Practices Act but has cooperated in ceasing violation and correcting unsatisfactory conditions.

* * * * *

(5) The damage value (D) shall be determined by the State Forester as a measure of extent or relative adverse effect of damage. The specific value applied shall be based on the pre-operation condition of the site, if known, the severity and extent of damage associated with the violation, and any potential economic gain to any involved operators. The damage value should be consistent with the policy of deterring future violations. A value from 0 through 20 shall be assigned. The following shall guide the State Forester's determination:

(a) A value of zero shall be assigned when the violation has not resulted and will not result in resource damage.

(b) A value of 1 shall be assigned when the adverse effects of the violation left uncorrected are minor and the affected resources will naturally self-restore

within one year.

Example: Siltation from exposed soil flows into the upper reaches of a stream, but the site will naturally revegetate within the next growing season, preventing further siltation.

(c) A value from 2 to 5 shall be assigned when the damage from the violations left uncorrected is more serious than described in subsection (b) of this section, but the affected resources will self-restore naturally within five years.

Examples: A small volume debris avalanche is caused by road construction material placed in an unstable location and the debris comes to rest in a fish-bearing or domestic use water; or logs are skidded across a stream without an adequate temporary crossing leaving ruts and disturbed soil areas that will flow muddy water directly into the stream.

(d) A value from 5 through 10 shall be assigned when the damage from the violation left uncorrected is major in relative effect, with natural self-restoration taking up to 10 years. A consideration in selecting a value from 5 to 10 may include, but is not limited to the size of the area affected.

Examples: Failure to reforest five acres may be assigned no less than a 5, while failure to reforest 50 acres may be assigned a 10. Removal of understory vegetation along 500 feet of a small stream may be assigned a 10.

(e) A value from 5 through 20 shall be assigned when damage is the result of harvest or destruction of trees or snags required to be maintained; or when the damage from the violation left uncorrected is major in relative effect, with self-restoration taking more than 10 years.

Example: Severe riparian management area soil disturbance, combined with the total harvest or destruction of what had been a fully stocked stand of trees required to be maintained, along more than 500 feet of a small stream may be assigned a factor of 20.

(6) The repair value (R) shall be assigned by the State Forester as a measure of the relative extent of the damage that is corrected or prevented through timely corrective action. The value shall be set by the State Forester between 0 and 1, inclusive and expressed as a decimal. The decimal indicates the degree of damage that already occurred and future damage that cannot be prevented, even after the repairs are completed as directed in the repair order.

Example: A tractor crossed a stream with no temporary structure, breaking the stream banks down, leaving exposed skid trails which eroded, creating turbidity, and leaving visible sediment in the stream. With no repairs, the stream bank and skid trails would revegetate in 4 years. The landowner

performed all repairs as ordered, including mulching, placing rip-rap, and building waterbars. In the State Forester's judgement, compliance with the repair order will prevent all but 20% of the potential damage expected over the next 4 years. Therefore R equals 0.20. If repairs are not feasible or are not completed, R equals 1.0.

The Violations

Ms. Erdmann visited the site on January 11, 2021, and observed numerous unsatisfactory conditions. Trees had been removed from the RMA along McNary Creek, a crossing had been constructed over the creek that included undersized culverts, and fill and sediment from the construction and operations had drained into McNary Creek. Ms. Erdmann subsequently issued the Violation Notices, including the Cease Orders and Repair Orders. Mr. Wildfang immediately began working with the Department to complete the required repairs.

As set out in the findings above, in Case 21-W0014, ODF alleged that on January 11, 2021, Mr. Wildfang removed trees in the RMA, in violation of OAR 629-642-0100(2)(b) (July 1, 2017). In Case 21-W0015, ODF alleged that on January 11, 2021, Mr. Wildfang failed to notify ODF of a stream crossing and work within 100 feet of a type F stream, in violation of ORS 527.670(6). In Case 21-W0016, ODF alleged that on January 11, 2021, Mr. Wildfang failed to submit a Statutory Written Plan for operations near at type F stream, in violation of OAR 629-605-0170(2) (July 1, 2017). In Case 21-W0017, ODF alleged that on January 11, 2021, Mr. Wildfang failed to submit a Statutory Written Plan for fill exceeding 15 feet over a stream, in violation of OAR 629-625-0320(1)(b)(B) (January 1, 2006). In Case 21-W0018, ODF alleged that on January 11, 2021, Mr. Wildfang failed to provide adequate road drainage in the operation area, in violation of OAR 629-625-0330(6) (January 1, 2003). In Case 21-W0020, ODF alleged that on January 11, 2021, Mr. Wildfang placed undersized culverts in McNary creek, in violation of OAR 626-625-0320(2)(a) (January 1, 2006). Finally, in Case 21-W0021, ODF alleged that on January 11, 2021, Mr. Wildfang failed to install stream crossing that would allow fish passage, in violation of OAR 626-625-0320(2)(b) (January 1, 2006).

Although Mr. Wildfang began working with the Department to immediately begin repairs after he was notified of the violations, he did not request a hearing on any of the seven citations by the June 4, 2021 deadline. Therefore, the violations and citations became final by operation of law. Thereafter, ODF notified Mr. Wildfang of the Default Final Order for Case Nos. 21-W0014, 21-W0015, 21-W0016, 21-W0017, 21-W0018, 21-W0020, and 21-W0021.

Civil Penalty Amount

On October 8, 2025, the Department issued the Amended Civil Penalty Notice at-issue herein, proposing a civil penalty of $5,275 based on the seven citations, which became final by operation of law on June 4, 2021. As set out above, the amount of the civil penalty per violation is the lesser of $5,000 or the amount determined by the following formula: $B (C x P) + ($B x D x R), where $B is the base penalty, C is the cooperation value, P is the prior knowledge value, D is the damage value, and R is the repair value.

Case no. 21-W0014: For the violation related to the removal of trees in the RMA, the appropriate civil penalty amount is $3,125, calculated as follows:

The base penalty ($B) value is $250 for a violation of OAR 629-642-0100(2)(b) (July 1, 2017). OAR 629-670-0210(2) (January 1, 2006).

The cooperation value (C) is 1 because Mr. Wildfang cooperated with the State Forester. He immediately ceased any further violations once placed on notice of the violation and took prompt action to repair damage and correct the unsatisfactory condition where feasible. OAR 629-670-0210(3)(b) (January 1, 2006); ORS 527.685(2) (2007).

The prior knowledge value (P) is 0.5 because Mr. Wildfang had little or no prior knowledge of the FPA and was cooperative in ceasing the violation and correcting unsatisfactory conditions where feasible. OAR 629-670-0210(4) (January 1, 2006); ORS 527.685(2) (2007).

The damage value (D) is 15 based on the nature and extent of resource damage. The damage was the result of extensive harvest or destruction of trees or snags and the removal of understory vegetation. The State Forester appropriately determined that damage from the violation left uncorrected is major in relative effect, with self-restoration taking up to 10 years. OAR 629-670-0210(5) (January 1, 2006); ORS 527.685(2) (2007).

As to the repair value (R), the State Forester appropriately assigned 0.8 as the degree of damage that occurred and future damage that could not be prevented even after the repairs were completed. Because Mr. Wildfang replanted trees in the RMA, the State Forester appropriately reduced the R value from 1 to 0.8. OAR 629-670-0210(6) (January 1, 2006); ORS 527.685(2) (2007).

Applying the formula, $250 (1 x 0.5) + ($250 x 15 x 0.8) = $3,125.

Case no. 21-W0015: For the violation related to the failure to notify ODF of a stream crossing and work within 100 feet of a type F stream, the appropriate civil penalty amount is $50, calculated as follows:

The base penalty ($B) value is $100 for a violation of ORS 527.670(6). OAR 629-670-0210(2) (January 1, 2006).

The cooperation value (C) is 1 because Mr. Wildfang cooperated with the State Forester. OAR 629-670-0210(3)(b) (January 1, 2006); ORS 527.685(2) (2007).

The prior knowledge value (P) is 0.5 because Mr. Wildfang had little or no prior knowledge of the FPA. OAR 629-670-0210(4) (January 1, 2006); ORS 527.685(2) (2007).

The damage value (D) is 0 because this is an administrative violation and there are no damages associated with the violation. OAR 629-670-0210(5) (January 1, 2006); ORS 527.685(2) (2007).

As to the repair value (R), the State Forester appropriately assigned 0.0 for the degree of

damage that occurred and future damage because this is an administrative violation. OAR 629-670-0210(6) (January 1, 2006); ORS 527.685(2) (2007).

Applying the formula, $100 (1 x 0.5) + ($100 x 0 x 0.0) = $50.

Case no. 21-W0016: For the violation related to the failure to submit a Statutory Written Plan for operations near a type F stream, the appropriate civil penalty amount is $50, calculated as follows:

The base penalty ($B) value is $100 for a violation of OAR 629-605-0170(2) (July 1, 2017). OAR 629-670-0210(2) (January 1, 2006).

The cooperation value (C) is 1 because Mr. Wildfang cooperated with the State Forester. OAR 629-670-0210(3)(b) (January 1, 2006); ORS 527.685(2) (2007).

The prior knowledge value (P) is 0.5 because Mr. Wildfang had little or no prior knowledge of the FPA. OAR 629-670-0210(4) (January 1, 2006); ORS 527.685(2) (2007).

The damage value (D) is 0 because this is an administrative violation and there are no damages associated with the violation. OAR 629-670-0210(5) (January 1, 2006); ORS 527.685(2) (2007).

As to the repair value (R), the State Forester appropriately assigned 0.0 for the degree of damage that occurred and future damage because this was an administrative violation. OAR 629-670-0210(6) (January 1, 2006); ORS 527.685(2) (2007).

Applying the formula, $100 (1 x 0.5) + ($100 x 0 x 0.0) = $50.

Case no. 21-W0017: For the violation related to the failure to submit a Statutory Written Plan for fill exceeding 15 feet over a stream, the appropriate civil penalty amount is $50, calculated as follows:

The base penalty ($B) value is $100 for a violation of OAR 629-625-0320(1)(b)(B) (January 1, 2006). OAR 629-670-0210(2) (January 1, 2006).

The cooperation value (C) is 1 because Mr. Wildfang cooperated with the State Forester. OAR 629-670-0210(3)(b) (January 1, 2006); ORS 527.685(2) (2007).

The prior knowledge value (P) is 0.5 because Mr. Wildfang had little or no prior knowledge of the FPA. OAR 629-670-0210(4) (January 1, 2006); ORS 527.685(2) (2007).

The damage value (D) is 0 because this is an administrative violation and there are no damages associated with the violation. OAR 629-670-0210(5) (January 1, 2006); ORS 527.685(2) (2007).

As to the repair value (R), the State Forester appropriately assigned 0.0 for the degree of

damage that occurred and future damage because this was an administrative violation. OAR 629-670-0210(6) (January 1, 2006); ORS 527.685(2) (2007).

Applying the formula, $100 (1 x 0.5) + ($100 x 0 x 0.0) = $50.

Case no. 21-W0018: For the violation related to the failure to provide adequate road drainage in the operation area, the appropriate civil penalty amount is $1,000 calculated as follows:

The base penalty ($B) value is $250 for a violation of OAR 629-625-0330(6) (January 1, 2003). OAR 629-670-0210(2) (January 1, 2006).

The cooperation value (C) is 1 because Mr. Wildfang cooperated with the State Forester. He immediately ceased any further violations once put on notice and took prompt action to repair damage and correct the unsatisfactory condition where feasible. OAR 629-670-0210(3)(b) (January 1, 2006); ORS 527.685(2) (2007).

The prior knowledge value (P) is 0.5 because Mr. Wildfang had little or no prior knowledge of the FPA and was cooperative in ceasing the violation and correcting unsatisfactory conditions where feasible. OAR 629-670-0210(4) (January 1, 2006); ORS 527.685(2) (2007).

The damage value (D) is 5 based on the nature and extent of resource damage. Approximately 5.5 cubic yards of sediment were delivered into waters of the state as a result of the operation. The State Forester determined that damage from the violation left uncorrected is significant in relative effect, with self-restoration taking five to eight years. OAR 629-670-0210(5) (January 1, 2006); ORS 527.685(2) (2007).

As to the repair value (R), the State Forester appropriately assigned 0.7 as the degree of damage that occurred and future damage that could not be prevented even after the repairs were completed. A significant amount of sediment had already been delivered to waters of the state before any corrective action was taken, which could not be repaired. However, because Mr. Wildfang did take action to complete the required repairs, thereby limiting future damage, the State Forester appropriately reduced the R value from 1 to 0.7. OAR 629-670-0210(6) (January 1, 2006); ORS 527.685(2) (2007).

Applying the formula, $250 (1 x 0.5) + ($250 x 5 x 0.7) = $1,000.

Case no. 21-W0020: For the violation related to the placement of undersized culverts in McNary creek, the appropriate civil penalty amount is $500, calculated as follows:

The base penalty ($B) value is $250 for a violation of OAR 629-625-0320(2)(a) (January 1, 2006). OAR 629-670-0210(2) (January 1, 2006).

The cooperation value (C) is 1 because Mr. Wildfang cooperated with the State Forester. He immediately ceased any further violations once placed on notice and took prompt action to repair damage and correct the unsatisfactory condition where feasible. OAR 629-670-0210(3)(b) (January 1, 2006); ORS 527.685(2) (2007).

The prior knowledge value (P) is 0.5 because Mr. Wildfang had little or no prior knowledge of the FPA and was cooperative in ceasing the violation and correcting unsatisfactory conditions where feasible. OAR 629-670-0210(4) (January 1, 2006); ORS 527.685(2) (2007).

The damage value (D) is 5 based on the nature and extent of resource damage. The undersized culverts were in the creek for a relatively short period of time before repairs were undertaken. The State Forester appropriately determined that damage from the violation left uncorrected is significant in relative effect, with self-restoration taking 10 or more years. OAR 629-670-0210(5) (January 1, 2006); ORS 527.685(2) (2007).

As to the repair value (R), the State Forester appropriately assigned 0.3 as the degree of damage that occurred and future damage that cannot be prevented even after the repairs are completed. Because of the repair undertaken by Mr. Wildfang, the State Forester reduced the (R) value from 1 to 0.3. OAR 629-670-0210(6) (January 1, 2006); ORS 527.685(2) (2007).

Applying the formula, $250 (1 x 0.5) + ($250 x 5 x 0.3) = $500.

Case no. 21-W0021: For the violation related to the failure to install a stream crossing that would allow fish passage, the appropriate civil penalty amount is $250, calculated as follows:

The base penalty ($B) value is $250 a violation of OAR 629-625-0320(2)(b) (January 1, 2006). OAR 629-670-0210(2) (January 1, 2006).

The cooperation value (C) is 1 because Mr. Wildfang cooperated with the State Forester. He immediately ceased any further violations once placed on notice and took prompt action to repair damage and correct the unsatisfactory condition where feasible. OAR 629-670-0210(3)(b) (January 1, 2006); ORS 527.685(2) (2007).

The prior knowledge value (P) is 0.5 because Mr. Wildfang had little or no prior knowledge of the FPA and was cooperative in ceasing the violation and correcting unsatisfactory conditions where feasible. OAR 629-670-0210(4) (January 1, 2006); ORS 527.685(2) (2007).

The damage value (D) is 5 based on the nature and extent of resource damage. The lack of a fish passage was present in the creek for a relatively short period of time before repairs were undertaken. The State Forester appropriately determined that damage from the violation left uncorrected is significant in relative effect, with self-restoration taking 10 or more years. OAR 629-670-0210(5) (January 1, 2006); ORS 527.685(2) (2007).

As to the repair value (R), the State Forester appropriately assigned 0.3 as the degree of damage that occurred and future damage that cannot be prevented even after the repairs are completed. Because of the repair undertaken by Mr. Wildfang, the State Forester reduced the (R) value from 1 to 0.3. OAR 629-670-0210(6) (January 1, 2006); ORS 527.685(2) (2007).

Applying the formula, $250 (1 x 0.5) + ($250 x 5 x 0.3) = $500.

Mr. Wildfang's Claimed Defenses

At hearing, Mr. Wildfang argued that the length of time it took the Department to issue the civil penalties in this matter was unfair and should result in the elimination of any civil penalties. While Mr. Wagenblast testified that he would certainly like to be able to issue notices regarding civil penalties faster, he credibly testified about the real-world impediments to issuing notices faster. Furthermore, Mr. Wildfang provided no legal citations for, and the ALJ is unaware of, any law or rule that requires the Department to issue a civil penalty notice within a certain timeframe following a violation of the Forest Practices Act. Additionally, the Department specifically notified Mr. Wildfang in July 2021, when it issued the courtesy letter regarding the Default Final Orders, that it would next be considering the issuance of civil penalties. Thus, Mr. Wildfang was on notice that civil penalties were likely to come. Finally, Mr. Wildfang presented no evidence at hearing that the Department's failure to issue the civil penalty notice sooner caused him any damage. As such, his contention that the civil penalties should be eliminated in this matter is without merit.

Conclusion

As discussed above, as a matter of law, the violations and citations became final in Case Nos. 21-W0014, 21-W0015, 21-W0016, 21-W0017, 21-W0018, 21-W0020, and 21-W0021, as of July 2, 2021 when Mr. Wildfang failed to appeal those citations. Thereafter, the Department calculated the civil penalties in this matter as follows:

Case No.	Civil Penalty Amount
21-W0014	$3,125
21-W0015	$50
21-W0016	$50
21-W0017	$50
21-W0018	$1,000
21-W0020	$500
21-W0021	$500
TOTAL	$5,275

For the reasons discussed herein, the Department correctly calculated the civil penalties. Mr. Wildfang is liable to pay a total of $5,275 in civil penalties to the Department.

ORDER

I propose the Oregon Department of Forestry, Private Forests issue the following order:

For the violations in ODF Case Nos. 21-W0014, 21-W0015, 21-W0016, 21-W0017, 21-W0018, 21-W0020, and 21-W0021, Mr. Wildfang is assessed a total civil penalty in the amount of $5,275, as set forth in the October 8, 2025 Amended Civil Penalty Notice.

Kate Triana
Senior Administrative Law Judge
Office of Administrative Hearings

EXCEPTIONS TO PROPOSED ORDER

If this proposed order is adverse to you or to the agency, you or the agency may file exceptions within seven calendar days after the date of the filing of the proposed order with the board if no other time is specified. Exceptions must be filed with the agency.

Please send any exceptions to:

Greg Wagenblast, Civil Penalties Administrator
Department of Forestry, Private Forests Division
2600 State Street
Salem, OR 97310

The exceptions shall be confined to factual and legal issues that are essential to the ultimate and just determination of the proceeding, and shall be based only on grounds that:

1. A necessary finding of fact is omitted, erroneous, or unsupported by the preponderance of the evidence on the record;

2. A necessary legal conclusion is omitted or is contrary to law or the board's policy; or

3. Prejudicial procedural error occurred.

The exceptions shall be numbered and shall specify the disputed finding, opinions or conclusions. The nature of the suggested error shall be specified and the alternative or corrective language provided.

After the board has received and reviewed the proposed order and the exceptions, if any, the board may:

1. Entertain written and/or oral argument if the board determines it is necessary or appropriate to assist the board in the proper disposition of the case. If allowed, oral argument will be limited to matters raised in written exceptions and shall be presented under time limits determined by the board chair;

2. Remand the matter to the ALJ for further proceedings on any issues the board specifies, and to prepare a revised proposed order as appropriate, under OAR 137-003-0655(2);

3. Enter a final order adopting the recommendations of the ALJ; or

4. Enter an amended proposed order or final order that modifies or rejects the recommendations of the ALJ. If the board decides to modify or reject the proposed order, the board must comply with OAR 137-003-0655 and 137-003-0665.

Whether or not exceptions are filed, the Board of Forestry will issue the final order in this matter.

SERVICEMEMBERS' CIVIL RELIEF ACT

Unless otherwise stated in this order, the Office of Administrative Hearings (OAH) has no reason to believe that a party to this proceeding is subject to the Servicemembers' Civil Relief Act (SCRA). If a servicemember is a party to this proceeding and did not appear for a hearing that convened during the servicemember's period of service or within 90 days after their termination of service, the servicemember should immediately contact the agency to address any rights they may have under the SCRA.

CERTIFICATE OF MAILING

On March 2, 2026, I mailed the foregoing PROPOSED ORDER issued on this date in OAH Case No. 2025-ABC-07433.

By: Electronic and Certified Mail

Mark Wildfang
PO Box 6123
Salem OR 97304
Email: markwildfang@gmail.com

By: Electronic Mail

Greg Wagenblast
Agency Representative
Department of Forestry, Private Forests
2600 State St Bldg D
Salem OR 97310
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Matthew B Devore
Assistant Attorney General
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1162 Court St NE
Salem OR 97301
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Anesia N Valihov
Hearing Coordinator

BEFORE THE BOARD OF FORESTRY
STATE OF OREGON

IN THE MATTER OF:	**FINAL ORDER**
MARK WILDFANG	OAH Case No. 2025-ABC-07433
Respondent.	Agency Case No. 21-W0014, 21-W0015, 21-W0016, 21-W0017, 21-W0018, 21-W0020, 21-W0021

The Board of Forestry, at a meeting in Salem on June 3, 2026, by consensus affirms the Notice of Civil Penalty regarding Citations 21-W0014, 21-W0015, 21-W0016, 21-W0017, 21-W0018, 21-W0020, 21-W0021 issued by Jennifer Erdmann, Stewardship Forester at the time of the violation, and adopts and incorporates by reference the attached proposed order issued by Senior Administrative Law Judge Kate Triana, on March 2, 2026. Neither party submitted exceptions to the proposed final order; hence, none were considered by the Board.

Dated this _____ day of June, 2026

By: _____
Kacey KC
State Forester and
Secretary to the Board of Forestry

RIGHT TO JUDICIAL REVIEW

If you are dissatisfied with the Order, you may request rehearing or reconsideration by the Board. To do so, you must file a petition for rehearing or reconsideration pursuant to OAR 137-003-0675 and OAR 629-001-0050 within 60 days from the day this Order was served on you. If this Order was personally delivered to you, the date of service is the day you received the Order. If this Order was mailed to you, the date of service is the day it was *mailed,* not the day you received it. A petition for rehearing or reconsideration must state with specificity the grounds for objection to the order, and the remedy sought. If you do not file a petition for rehearing or reconsideration within the time limits provided, you will lose your opportunity for rehearing or reconsideration and you will lose your right to appeal to the Oregon Court of Appeals. (OAR 137-003-0675 and OAR 629-001-0050).

If, after you have filed a petition for rehearing or reconsideration, the Board issues an Order you are dissatisfied with, you have the right to appeal that Order to the Oregon Court of Appeals pursuant to ORS 183.482. To appeal, you must file a petition for judicial review with the Court of Appeals within 60 days from the day the Order was served on you.

If, 60 days after you have filed a petition for rehearing or reconsideration, the Board has not issued an order, your petition will be considered denied and at that time you will have the right to appeal the original Order to the Court of Appeals pursuant to ORS 183.480 and ORS 183.482. To appeal, you must file a petition for judicial review with the Court of Appeals within 60 days from the day that your petition is deemed denied. If you do not file a petition for judicial review within the 60-day time period, you will lose your right to appeal.

Agenda Item No.:	E
Work Plan:	Forest Resources Division
Presentation Title:	Proposed Final Order- Ernest A. Bussman
Date of Presentation:	June 3, 2026
Contact Information:	Greg Wagenblast, Civil Penalties Administrator, Forest Resources Division, greg.wagenblast@odf.oregon.gov, 541-525-6462 Scott Swearingen, Field Support Manager, Forest Resources Division, Scott.Swearingen@odf.oregon.gov, 541-580-7485

SUMMARY

The purpose of this agenda item is to consider the hearing record for contested civil penalty notice involving two forest practices violations by Ernest Bussmann and to make a decision on the final order regarding the matter. The Department issued a Notice of Civil Penalty to Mr. Ernest Bussmann for two FPA violations, 1.Failing to provide effective cross drainage on all roads causing road surface and fill erosion with delivery into Waters of the State and 2. Failing to remove berms on the edges of roads or provide effective drainage through the berms resulting in road surface and fill erosion into Waters of the State. Mr. Bussmann contested the Notice of Civil Penalty. The matter was referred to the Office of Administrative Hearings for a contested hearing. Administrative Law Judge Allison Webster conducted the hearing, resulting in a ruling in favor of the Department. ALJ Webster issued a proposed order upholding the Department's Civil Penalties. The Board is now called upon to consider issuance of a Final Order.

CONTEXT

The *VISION FOR OREGON'S FORESTS* priority and goal for Resilient Forests to reduce the vulnerability of Oregon's forests from a myriad of catastrophic climate driven disturbances, ODF will direct its policy, management and educational actions to enable and promote all forestland managers to make intentional decisions that increase adaptive capacity of forest ecosystems. ODF's Forest Resources Division is responsible for several key areas of operation that contribute to sustainable, healthy forests. One of these key areas involves the administration of the Forest Practices Act, which is a cornerstone of natural resource protection in Oregon that encourages sound management of forestlands. Citations, repair orders and civil penalties for violations of forest regulations are part of an effective enforcement program that meets these objectives by changing behaviors to comply with best management practices designed to promote a multitude of forest outputs and benefits.

BACKGROUND

ODF Case No. 19-CS021 & 19-CS022

Mr. Bussmann is the owner of land and timber, approximately 130 acres (T23S R12W Section 20 and T23S R12W Section 17), in Coos County adjacent to Ten Mile Lake. In March 2018, Mr. Bussmann notified for commercial thinning, selective cutting, and constructing a road (NOAP 2018-740-03876).

ODF received a complaint with concerns about the harvesting activity on the Bussmann property. Stewardship Forester Laine (ODF Coos Bay office) completed a site inspection and determined

operation in compliance but did note concerns about road construction and exposed soils for the landowner/operator.

In February 2019, Mr. Bussmann submitted for a new NOAP for 2019 operations. Heavy rainfall occurred mid-September resulting in erosion of road surface/sediment and road fill material. Both situations resulted in sediment delivery to waters of the state with 1 location into a wetland and second location into Tenmile Lake. ODF investigated and determined 2 FPA violations which resulted in enforcement action. Two citations with orders to cease violation and orders to repair (19-CS021 & 19-CS022) were issued to Mr. Bussmann. These enforcement documents were not contested and became final orders. Repairs were completed by Mr. Bussmann and a final inspection of long-term repairs was completed by SF Laine in 2023.

A civil penalty notice was issued to Mr. Bussmann in August of 2025 at which time he contested the civil penalties totaling $2,500.00 for the two violations. A hearing was held by Office of Administrative Hearings (OAH) on January 27, 2026 in Coos Bay, Oregon. Administrative Law Judge (ALJ) Webster presided over the hearing and then issued a proposed order with finding of facts related to the case.

Please review attachment 1 - Proposed Order for ODF Case No. 19-CS021 and 19-CS022 Civil Penalty for full details on Finding of Facts, Conclusion of Law, Opinion and Proposed Order.

EXCEPTIONS

The Administrative Procedures Act allows parties to make objections to proposed orders, in the form of "exceptions." ORS 183.460; OAR 137-003-0650. Consistent with the Department's rules, the Proposed Order explained that "exceptions shall be confined to factual and legal issues which are essential to the ultimate and just determination of the proceeding." OAR 629-001-0040(1). Exceptions "shall be based only on grounds that

(A) A necessary finding of fact is omitted, erroneous, or unsupported by the preponderance of the evidence on the record;
(B) A necessary legal conclusion is omitted or is contrary to law or the board's policy; or
(C) Prejudicial procedural error occurred." OAR 629-001-0040(2)(a).

In addition, the Proposed Oder explained that exceptions must specify the disputed finding, opinions, or conclusions. The party submitting exceptions must specify the nature of the suggested error and provide alternative or corrective language. OAR 629-001-0040(2)(b).

The Proposed Order set a deadline for filing exceptions of seven days after the date of the filing of the proposed order. The deadline for filing exceptions by mail would be February 19, 2026, counting seven calendar days after February 12, 2026.

No exceptions were received from Mr. Bussmann.

RECORD OF PROCEEDING

The record of the proceedings is available for Board members to review prior to the Board of Forestry meeting through a weblink to hearing documents by contacting Greg Wagenblast at (541) 525-6462 or greg.wagenblast@odf.oregon.gov. A hardcopy binder with all hearing documents will be available the day of the Board of Forestry meeting too.

The Board's decision must be based on the record established through the contested case hearing process. ORS 183.482(7). Any information about the facts at issue that Board members acquire from other sources may be ex parte communication. Ex parte communication is defined as "an oral or written communication to an agency decision maker during its review of the contested case not made in the presence of all parties to the hearing, concerning a fact in issue in the proceeding." OAR 137-003-0660(1). However, this definition specifically excludes "any communication from agency staff or counsel about legal issues or about facts in the record." OAR 137-003-0660(1). If a Board member receives an ex parte communication during their review of the contested case, the Board member must give all parties notice of the substance of the communication or a copy of the communication, and provide the other party with an opportunity to rebut the substance of the ex parte communication. ORS 183.462; OAR 137-003-0660(2).

BOARD'S ALTERNATIVES

Upon review of the proposed order and record presented in this case, pursuant to OAR 629-001-0045(3) the Board can:

1. Entertain written and/or oral argument from the State Forester and any party that filed exceptions to the proposed order if the board determines it is necessary or appropriate to assist the board in the proper disposition of the case. If allowed, oral argument will be limited to matters raised in written exceptions and shall be presented under time limits determined by the board chair; or
2. Remand the matter to the administrative law judge for further hearing on such issues as the Board specifies and to prepare a revised proposed order as appropriate under OAR 137-003-0655(2); or
3. Enter a final order adopting the recommendations (proposed order) of the administrative law judge; or
4. Enter an amended proposed order or final order that modifies or rejects the recommendations of the ALJ. If the board decides to modify or reject the proposed order, the board must comply with OAR 137-003-0655 and 137-003-0665.

RECOMMENDATION

The Department recommends that the Board approve Alternative 3 and issue a Final Order adopting the ALJ's proposed order. A draft Final Order is included as Attachment 02.

ATTACHMENTS

(1) Proposed Order for ODF Case No. 19-CS021 and 19-CS022 Civil Penalty
(2) Draft Final Order for ODF Case No. 19-CS021 and 19-CS022 Civil Penalty

BEFORE THE OFFICE OF ADMINISTRATIVE HEARINGS
STATE OF OREGON
for the
OREGON DEPARTMENT OF FORESTRY
PRIVATE FORESTS

IN THE MATTER OF:	)	**PROPOSED ORDER**
	)	
ERNEST A. BUSSMANN	)	OAH Case No. 2025-ABC-07388
	)	Agency Case Nos. 19-CS021 and 19-CS022
	)	
	)	

HISTORY OF THE CASE

On August 12, 2025, the Oregon Department of Forestry, Private Forests (ODF or Department) on behalf of the Board of Forestry issued a Notice of Proposed Order and Opportunity to Request a Hearing (Civil Penalty Notice) to Ernest Bussmann proposing to impose a civil penalty totaling $2,500 for two citations issued to Mr. Bussman on October 29, 2019, that became final on November 29, 2019. On August 18, 2025, Mr. Bussmann timely requested a hearing on the Civil Penalty Notice.

On October 1, 2025, ODF referred the matter to the Office of Administrative Hearings (OAH) for a hearing on Mr. Bussmann's challenges to the Civil Penalty Notice. The OAH assigned Senior Administrative Law Judge (ALJ) Alison G. Webster to preside at hearing.

On October 17, 2025, ALJ Webster convened a prehearing conference by telephone. Assistant Attorney General (AAG) Matt Devore participated for the Department along with ODF representative Greg Wagenblast. Respondent Ernest Bussmann participated without counsel. During the phone conference, the parties agreed to an in-person hearing at the Coos Forest Protective Association (CFPA) Office to be held January 27, 2026.

ALJ Webster convened the hearing as scheduled on January 27, 2026, in Coos Bay, Oregon. AAG Devore represented the Department. Mr. Bussmann appeared without counsel. The following witnesses testified at the hearing: Ryan Greco, ODF Unit Forester, Coos Bay; Greg Erb, ODF Natural Resource Specialist; Greg Wagenblast, ODF Policy Analyst and Civil Penalty Administrator; Mr. Bussman; and Elizabeth Potter, daughter of Mr. Bussman. The record closed on January 27, 2026, at the conclusion of the hearing.

ISSUE

Whether ODF may impose a civil penalty totaling $2,500 against Mr. Bussman for two violations of the Forest Practices Act, ODF Case Nos. 19-CS021 and 19-CS022.

///

EVIDENTIARY RULINGS

Department Exhibits A1 through A10, A12, A13, A15, A17 to A20, A23, A24, A27 to A31, and A33 to A54 were admitted without objection. Department Exhibits A11, A14, A16 A21, A22, A25, A26, and A32 were admitted over Mr. Bussman's relevancy objections.

Mr. Bussmann's Exhibits R1 to R9 were admitted without objection.

FINDINGS OF FACT

1. Mr. Bussman is the owner of land and timber, approximately 130 acres (T23S R12W Section 20 and T23S R12W Section 17), in Coos County adjacent to Ten Mile Lake. (Ex. A3 and A4.)

2. In March 2018, Mr. Bussman notified ODF of his plan to operate power driven machinery on his private forest land for the purposes of commercial thinning, selective cutting, and constructing a road. Mr. Bussman worked with ODF Stewardship Forester (SF) Jon Laine, who eventually approved starting work on clearing the road after discussing concerns about the complexity of the site. (Ex. A34 at 1-2.) ODF issued Mr. Bussman a permit for the operation (the 2018 Bussman Lakeside piece), NOAP 2018-740-03876C. (Ex. A3.)

3. On October 24, 2018, a neighboring landowner contacted ODF with concerns about the harvesting activity on the Bussman property. SF Laine notified the landowner that Mr. Bussman had a permit for the work. SF Laine also agreed to go out to the Bussman property to check out the work being performed under the permit. (Ex. A34 at 2.)

4. On October 25, 2018, SF Laine went to the Bussman property to inspect the area where the trees had been felled. SF Laine determined that Bussman had not felled trees onto the neighboring property or into any high landslide hazard location (HLHL). However, on this visit, SF Laine noted some areas of concern regarding the road construction project. He saw exposed soil in three locations where there was a potential for sediment entering waters of the state. (Ex. A34 at 2.)

5. On October 31, 2018, SF Lane spoke with Mr. Bussman about the operation. They discussed SF Laine's concerns about wet weather road building and the need to keep sediment out of waters of the state. (Ex. A34 at 3.) In a November 1, 2018 comment on the NOAP, SF Laine wrote:

> I contacted the landowner and operator today and discussed potential issues with road construction within the notified area. There are concerns with drainage from the road potentially entering waters of the state. The landowner and operator were made aware of the locations and [we] discussed ways to keep sediment out of the waters of the state. I reminded the landowner and operator of the requirements before operating in the HLHL areas of concern that have been identified. I also expressed concerns about any further road construction in the northern end of the

notified area with regards to HLHL areas, and sediment entering waters of the state.

(Ex. A3 at 2.)

6. On February 21, 2019, Mr. Bussmann submitted another notification to ODF through the Department's electronic reporting and notification system (FERNS). This notification set out Mr. Bussman's intent to harvest timber and to continue with the road construction project on the property. ODF granted Mr. Bussman a permit for the operation (2019 Bussmann Lakeside piece), NOAP No. 2019-740-02806. (Ex. A4.) In the comments on the NOAP, SF Quackenbush wrote: "Replacement notification for 2018-740-03876C - change of timber ownership made, new notification submitted and WP, maps and LUC information transferred from previous notification." (*Id.* at 2.)

7. For the period of September 1, 2019 through September 18, 2019, the remote weather station closest to the Bussman property (Charlotte Ridge) registered 12 days of measurable precipitation, including .75 inches on September 15; 1.08 inches on September 17; and 1.17 inches on September 18, 2019. (Ex. A33 at 8.)

8. On September 18, 2019, SF Laine and Unit Forester Ryan Greco conducted a site inspection on the Bussman Lakeside operation and observed what they deemed to be unsatisfactory conditions where the road was being constructed. At what they described as the wetland location at the south end of the property (Site 1), Laine and Greco saw that sediment from the road construction had drained into a wetland area to the left of the road. At a location to the north, described as the lake location (Site 2), Laine and Greco saw that fill and sediment from the road construction had drained through hillside vegetation and made its way into Ten Mile Lake. (Test. of Greco; Ex. A11; Ex. R8.)

9. In his inspection notes for the September 18, 2019 site visit, SF Laine wrote, "Road failure and erosion with sediment delivery at one location, erosion of road surface with sediment delivery in the other location. Lack of effective cross drainage, and failure to remove berms." (Ex. A9.)

10. SF Laine also documented the following in his Case Log notes:

> 9/18/19 – I performed a site inspection with Unit Forester Ryan Greco. We observed multiple locations with unsatisfactory conditions and damage[] had occurred. Specifically the road work had not provided proper drainage, causing sediment to enter waters of the state. This resulted in a Violation and I began the process of issuing a citation. I contacted the landowner, let Mr. Bussman know that he had a problem with the operation, and set up a time to meet with him the next day.

(Ex. A34 at 3.)

11. During the inspection, SF Lane and Unit Forester Greco took numerous photographs

at Site 1 and Site 2 to document the drainage damage, loss of fill material, and sediment trail. (Ex. A11.) Unit Forester Greco also estimated the extent of the damage, determining that approximately 33 cubic yards of sediment left the roadway at Site 2, and approximately 10 cubic yards drained into the lake. (Ex. A10; test. of Greco.)

12. On September 19, 2019, SF Laine met with Mr. Bussman and his daughter, Ms. Potter, at the Bussman property. SF Laine showed Mr. Bussman the areas of concern and the two locations where damage occurred. SF Laine advised that Mr. Bussmann would be receiving violation notices for the damage to waters of the state. In his Case Log notes, SF Lane wrote as follows:

> [Mr. Bussmann] acknowledged that there was resource damage. He also acknowledged that the responsibility was his. He and his daughter began to perform the initial work to repair the damage that day.

(Ex. A34 at 3.)

13. On September 27, 2019, SF Laine returned to the property for a follow-up inspection to check on the progress of the repairs. SF Laine found the operation in compliance with the permit. (Ex. A13; Ex. A34 at 3.)

14. On October 4, 2019, SF Laine notified the Oregon Department of Fish and Wildlife (ODFW) and the Oregon Department of Environmental Quality (DEQ) about the resource damage on the Bussman operation. SF Laine wrote:

> The operator built a road that has failed. The fill material washed down and delivered sediment to the lake. At this point it is a violation of the FPA rules, and I am in the process of issuing a citation. I have informed the landowner as well as going to the site with them. The landowner has been cooperative. They have started [] repairs and work to prevent further sediment from reaching waters of the state.

(Ex. A17.)

15. On October 7, 2019, SF Laine returned to the property for a follow-up inspection to check on the progress of the repairs. SF Laine found the operation in compliance with the permit. (Ex. A15; Ex. A34 at 3.)

16. On October 11, 2019, SF Laine returned to the property with SF Greg Erb to inspect the ongoing repairs. They determined that additional repairs and protections were necessary at both violation sites to prevent sediment from entering waters of the state. (Ex. A34 at 3.) On October 14, 2019, SF Laine notified Mr. Bussmann of the additional recommended repairs. (*Id.* at 4.)

17. On October 25, 2019, SF Laine emailed Mr. Bussmann a list of short-term and long-term repair work to be done on the property. The repair list was intended as a preview of the

forthcoming notice of violation and repair orders. (Ex. 18.)

18. On October 29, 2019, ODF issued Mr. Bussmann a Notice of Violation/Citation, Order to Cease Further Violation, and Order to Repair Damage or Correct Unsatisfactory Condition Caused by Violation (Violation Notice) in ODF Case numbers 19-CS021 and 19-CS022. ODF also sent Mr. Bussman a copy of Forest Practices Note 7, a document describing ODF's civil penalties process. (Ex. A1.)

19. In Case 19-CS021, ODF alleged that on September 18, 2019, Mr. Bussmann "failed to provide effective cross drainage on all roads, including temporary roads," in violation of OAR 629-625-0420(2), causing erosion on the road surface and fill slopes, resulting in sediment being deposited into waters of the state. (Ex. A1 at 2.) ODF ordered Mr. Bussman to cease further violations and directed him to take specific actions (set out in the Repair Order) to repair damage and correct unsatisfactory conditions resulting from the violation. (*Id.* at 3.)

20. In Case 19-CS022, ODF alleged that on September 18, 2019, Mr. Bussmann "failed to remove berms on edges of roads or provide effective drainage through these berms, except for those berms intentionally designed to protect road fills," in violation of OAR 629-625-0420(5), causing water to concentrate on, and run down the road surface, causing erosion of the road surface and road fills, resulting in sediment from the road and fill entering waters of the state. (Ex. A1 at 6.) ODF ordered Mr. Bussman to cease further violation of the rule and directed him to take specific short and long-term actions to repair damage and correct unsatisfactory conditions resulting from the violation of OAR 629-625-0420(5). (*Id.* at 7.)

21. The Violation Notice included information about Mr. Bussmann's right to a hearing on two the citations and the consequences for failing to request a hearing in a timely manner, as follows:

> Right to Hearing
> You have a right to a hearing on the Notice of Violation, Order to Cease Further Violation and Order to Repair. To request a hearing, you must make a written request for hearing within 30 days of the date of service or mailing of this Notice and Orders. OAR 629-672-0200. If you request a hearing, the request must be made to:
>
> Oregon State Forester
> Attn: Civil Penalty Administrator
> 2600 State Street
> Salem, Oregon 97310
>
> Default Final Order
> If you fail to request a hearing within the time provided or if you request a hearing but then fail to appear at that hearing, you will have waived your right to a hearing and the Notice and Orders will become Final Orders by Default. The record of the proceeding to date, including information in ODF's file and all material submitted by any party, will automatically become part of the record

upon default for the purpose of proving a prima facie case.

(Ex. A1 at 4, 8.)

22. The Department sent the Violation Notice and supporting documentation to Mr. Bussmann via certified and regular mail to his address of record, PO Box 282, Sixes, OR 97476.[1] (Ex. A1 at 1, 14.)

23. Also on October 29, 2019, SF Erb met with Mr. Bussmann and his grandson, Jake, to discuss the short-term and long-term repair work set out in SF Laine's October 25, 2019 email and the Repair Orders. (Test. of Erb; Ex. A19; Ex.A34 at 4.)

24. On November 6, 2019, SF Laine returned to the property for a follow up inspection. He found the operation in compliance with the permit. (Ex. A20; Ex. A34 at 5.) In his Case Log notes for November 6, 2019, SF Laine wrote:

> Silt fencing at lower location has been installed on both sides of the road. An additional water bar has been added. A catch basin has also been installed. At the upper location the contractor was in the process of laying straw down over the bare road surface and was nearly complete.

(Ex. A34 at 5.)

25. On November 27, 2019, SF Laine returned to the property once again to check on the status of the short-term repairs listed in the Repair Orders. He determined that all short-term repairs had been satisfactorily completed and long-term repairs still needed to be completed. (Ex. A23; Ex. A34 at 6.)

26. Mr. Bussmann did not request a hearing on either citation referenced in the Notice of Violation notice by the November 28, 2019 deadline. (Test. of Wagenblast.)

27. On December 2, 2019, ODF sent Mr. Bussmann a courtesy letter by regular mail to his address of record, PO Box. 282, Sixes, OR 97476 and by electronic mail advising that the citations in ODF Case Nos. 19-CS021 and 19-CS022 were now final orders by operation of law. The letter, with the reference line "Final Order on Default," stated in pertinent part:

> On October 29, 2019, the Department of Forestry sent you a Notice of Violation, Cease Order and Repair Order. Failure to respond to the Agency requesting a hearing by November 28, 2019 has resulted in a Final Order by default. * * *
>
> If you feel there are valid reasons why you could neither schedule the hearing, nor respond in a timely manner to schedule, you may petition for reconsideration or rehearing. * * *

[1] This is the same address Mr. Bussmann provided to the ODF in the 2018 and 2019 notifications of operations. (Exs. A3 and A4.)

> This letter serves as a Default Final Order for Case Numbers: 19-CS021 & 19-CS022.

(Ex. A24 at 1.) ODF enclosed a copy of the October 29, 2019 Violation Notice in the December 2, 2019 Final Order letter. (*Id.* at 2-9.)

28. On January 22, 2020, SF Laine returned to the property to check on the repairs. He determined that the repairs were holding, although he noted some "cracking parallel with the road in the center and on the edges with some raveling on the fill" at both locations. (Ex. A34 at 6.) SF Laine returned to the Bussmann property again on February 28, 2020. He determined that the repairs were continuing to hold. (*Id*.)

29. During 2020, SF Laine and SF Erb periodically checked in with Mr. Bussmann about the status of the road construction project on the property. (Ex. A28; test. of Erb.) In a letter to Mr. Bussmann dated January 11, 2021, SF Erb identified concerns about the construction project and explained why the planned road and the specifications were inconsistent with standard road location practices commonly used for forest harvest activities. He suggested that, going forward, Mr. Bussmann obtain approvals and necessary permits from the county and DEQ, and not ODF. (Ex. A29.)

30. On March 10, 2023, SF Laine went to the Bussmann property to check on the long-term repairs required by citation numbers 19-CS021 and 19-CS022. He found the operations in compliance at that time. In his Inspection Notes, SF Laine wrote:

> Long-term road repairs as listed in the citations have been completed. Cross drains were installed. Road has been sloped and water bars installed to achieve drainage and maintenance of road surface. Berms concentrating water on the road were removed and fill was moved to a stable location.

(Ex. A30.)

31. Having determined that all short-term and long-term repairs required by the Repair Orders had been satisfactorily completed, the Department conducted a damage estimate for the two violation sites. As to Site 1 (wetland location), ODF determined:

> Road sediment entered the wetland from two locations. The road above the wetland and the road next to the wetland. Because of the way the sediment dispersed throughout the wetland there was no way to measure the volume of sediment that actually entered the wetland.

(Ex. A31.) As to Site 2 (lake location), ODF determined:

> Loss of fill from the road was measured at 33 cubic yards. The fill traveled downhill approximately 300' to the lake, dispersing as it went. A visual assessment of delivery to the lake was estimated at 10 cubic yards.

(*Id.*) ODF also concluded that there was no way to remove the sediment from the lake or the wetland without causing more damage. (*Id.*; test of Wagenblast.)

32. As documented in FERNS, ODF's electronic reporting system, Mr. Bussman has been involved with forest practices operations and ODF permitting process since at least 2015. (Ex. A40; test. of Wagenblast.)

33. On August 12, 2025, the Department sent Mr. Bussmann, at his post office address of record in Sixes, Oregon, the Notice of Proposed Order (Civil Penalty Notice) proposing a civil penalty of $2.500 based on the two citations – Case Nos. 19-CS021 and 19-CS022 – issued on October 29, 2019, which became final by operation of law on November 29, 2019. (Ex. A2.) Applying the law and standards in effect at the time of the violations in 2019, the Department determined that Mr. Bussmann was subject to a civil penalty of $1,250 for each violation citation, for a total civil penalty of $2,500. (*Id.*)

CONCLUSION OF LAW

ODF may impose a civil penalty of $2,500 against Mr. Bussman for two violations of the Forest Practices Act, Case Nos. 19-CS021 and 19-CS022.

OPINION

As set out above, ODF has proposed assessing a civil penalty against Mr. Bussman in the amount of $2,500 based on violations of the Forest Practices Act, specifically two violations of OAR 629-625-0420 (2018), occurring in September 2019.[2] ODF has the burden of establishing by a preponderance of the evidence that it is entitled assess against Mr. Bussmann the civil penalty proposed in the August 12, 2025 Notice. ORS 183.450(2) ("The burden of presenting evidence to support a fact or position in a contested case rests on the proponent of the fact or position"); *Dixon v. Board of Nursing*, 291 Or App 207 (2018) (the standard of proof that generally applies in agency proceedings, including license-related proceedings, is the preponderance of the evidence standard); *Metcalf v. AFSD*, 65 Or App 761, 765 (1983) (in the absence of legislation specifying a different standard, the standard of proof in an administrative hearing is preponderance of the evidence). Proof by a preponderance of the evidence means that

[2] ODF amended OAR Chapter 629, Division 625 Forest Road Construction and Maintenance rules in 2022. At the time of the events in issue, OAR 629-625-0420 (2018) stated as follows:

> **Drainage**
> (1) Operators shall clear channels and ditches of slash and other road construction debris which interferes with effective roadway drainage.
> (2) Operators shall provide effective cross-drainage on all roads, including temporary roads.
> (3) Operators shall install drainage structures on flowing streams as soon as feasible.
> (4) Operators shall effectively drain uncompleted roads which are subject to erosion.
> (5) Operators shall remove berms on the edges of roads or provide effective drainage through these berms, except those berms intentionally designed to protect road fills.

the fact finder is persuaded that the facts asserted are more likely than not true. *Riley Hill General Contractor v. Tandy Corp*., 303 Or 390, 402 (1987).

Applicable Law

ORS 527.680(1) authorizes the State Forester to issue a citation to any operator whenever the State Forester determines the operator has committed a violation of the Forest Practices Act (FPA). An "operator" is any landowner or timber owner who conducts any commercial activity relating to the establishment, management, or harvest of forest trees. ORS 527.620(13), (14). As pertinent to this matter, a "violation" occurs when an "unsatisfactory condition exists and (A) Damage has resulted; or (B) The State Forester has determined that it is not feasible for the operator, by timely corrective action, to eliminate the consequences of the unsatisfactory condition[.]" OAR 629-670-0010(10) (2018). An "unsatisfactory condition," as defined in OAR 629-670-0010(9) (2018), means the failure to comply with a practice specified in a forest practice statute or rule that applies to the type of operation conducted.

Whenever the State Forester issues a citation for a violation of the FPA, the State Forester must also issue an order directing the operator or landowner cease further violation. ORS 527.680(2)(a). The State Forester may also issue an order directing the operator, where practical and economically feasible, to make reasonable efforts to repair the damage or correct the unsatisfactory condition specified in the citation within a period specified by the State Forester. ORS 527.680(2)(b); OAR 629-670-0130(2) (2018). Pursuant to ORS 527.683, ODF may not impose a civil penalty for a violation of the FPA until the operator incurring the penalty has received notice of the violation in writing from the State Forester specifying the violation.

Civil penalties are authorized by ORS 527.992 and OAR 629-670-0200 (2018). Any person who fails to comply with the provisions of the FPA or any rule or standard adopted thereunder is subject to a civil penalty in the amount adopted under ORS 527.685. The State Forester will assess the civil penalty after the citation and notice of violation is issued and after the Department's civil penalty administrator reviews the citation and circumstances of the violation to determine the penalty amount. OAR 629-670-0200(3) (2018). Except for circumstances not pertinent to this matter, a civil penalty may not exceed $5,000 per violation. ORS 527.685(1) (2019).[3]

As discussed in further detail below, in imposing a civil penalty authorized by ORS 527.685, the State Forester may consider the following factors:

> (a) The past history of the person incurring a penalty in taking all feasible steps or procedures necessary or appropriate to correct any violation.
>
> (b) Any prior violations of statutes, rules, orders and permits pertaining to the Oregon Forest Practices Act.
>
> (c) The gravity and magnitude of the violation.

[3] ORS 527.685 was amended in 2022 and increased the civil penalty limit to $10,000 per violation.

(d) Whether the violation was repeated or continuous.

(e) Whether the cause of the violation was an unavoidable accident, negligence or an intentional act.

(f) The size and type of ownership of the operation.

(g) Any relevant rule of the board.

(h) The cooperativeness of the person incurring the penalty and the person's efforts, if any, to correct the violation.

OAR 629-670-0210 (2018) sets out the formula for determining the civil penalty amount and provides, in pertinent part, as follows:

(1) The amount of civil penalty per violation shall be the lesser of $5,000 or the amount determined by the formula $B (C x P) + ($B x D x R) where:

(a) $B is a base fine established by type of violation in section (2) of this rule;

(b) C is cooperation;

(c) P is prior knowledge or prior violations;

(d) D is damage to protected resources; and

(e) R is the extent of damage that cannot be corrected, or prevented in the future, even though repairs are made.

(2) The base penalty value ($B) shall be established as follows:

* * * * *

(b) A base penalty of $250 shall be applied to:

(A) Violations of any rule or statute which requires or sets standards for accomplishing reforestation.

(B) Violations involving a failure to comply with the terms or conditions of any order of the State Forester issued in accordance with ORS 527.680.

(C) Violations of a type where the operator fails to comply with any term or condition of an approved plan for an alternate practice.

(D) Violations where the State Forester determines that an operator has intentionally failed to notify the State Forester of intent to operate,

notwithstanding subsection (2)(a) of this rule.

(E) All other violations of forest practice rules or statutes not specifically described in section (2) of this rule.

* * * * *

(3) The cooperation value (C) shall be determined by the State Forester after reviewing whether the operator is taking all feasible steps or procedures necessary or appropriate to correct the violation for which the penalty is being assessed. The value shall be assigned as follows:

(a) A value of 0.5 shall be assigned when, in the judgment of the State Forester, the operator takes substantial initiative to correct the damage or problem that led to the violation. Substantial initiative may include, but is not limited to, reporting the violation before it is discovered, initiating effective repairs without having to be directed, or making substantive changes in operating procedures designed to identify and avoid potential recurrences.

(b) A value of 1 shall be assigned when the operator cooperates in following the direction of the State Forester by immediately ceasing further violation and taking prompt action to repair damage or correct any unsatisfactory condition where deemed feasible by the State Forester.

* * * * *

(4) The prior knowledge value (P) shall be determined by the State Forester after reviewing department records of citations, operation notification or operation inspections. A value from 0.5 through 10 shall be assigned as follows:

* * * * *

(b) A value of 1 is appropriate when the operator has general knowledge of the Oregon Forest Practices Act and rules, but has not had significant past experience with the practice in question, or has significant past experience with the practice, but the violation is determined by the State Forester to be inadvertent or accidental.

* * * * *

(5) The damage value (D) shall be determined by the State Forester as a measure of extent or relative adverse effect of damage. The specific value applied shall be based on the pre-operation condition of the site, if known, the severity and extent of damage associated with the violation, and any potential economic gain to any involved operators. The damage value should be consistent with the policy of deterring future violations. A value from 0 through 20 shall be assigned. The

following shall guide the State Forester's determination:

* * * * *

(d) A value from 5 through 10 shall be assigned when the damage from the violation left uncorrected is major in relative effect, with natural self-restoration taking up to 10 years. A consideration in selecting a value from 5 to 10 may include, but is not limited to the size of the area affected.

* * * * *

(6) The repair value (R) shall be assigned by the State Forester as a measure of the relative extent of the damage that is corrected or prevented through timely corrective action. The value shall be set by the State Forester between 0 and 1, inclusive and expressed as a decimal. The decimal indicates the degree of damage that already occurred and future damage that cannot be prevented, even after the repairs are completed as directed in the repair order.

The Violations

As set out in the findings above, SF Laine and Unit Forester Greco visited the Bussman road construction operation on September 18, 2019, and observed unsatisfactory conditions at two locations. At Site 1, at the south end of the property, sediment from the road construction had drained into the wetlands to the left of the road. At Site 2 to the north, fill and sediment from the road construction drained down through hillside vegetation and into Ten Mile Lake.

SF Laine promptly notified Mr. Bussman of the unsatisfactory conditions at the two locations and advised that violation citations and repair orders would be forthcoming. On September 19, 2019, Mr. Bussman took immediate action to cease the violation and begin repairs. On October 29, 2019, in accordance with the requirements of ORS 527.680, ODF issued Mr. Bussmann the Violation Notice (including the Cease Orders and Repair Orders) in ODF Case numbers 19-CS021 and 19-CS022.

As set out in the findings above, in Case 19-CS021, ODF alleged that on September 18, 2019, Mr. Bussmann failed to provide effective cross drainage on all roads, including temporary roads, in violation of OAR 629-625-0420(2) (2018), causing erosion on the road surface and fill slopes, resulting in sediment being deposited into waters of the state. And, in Case 19-CS022, ODF alleged that on September 18, 2019, Mr. Bussmann failed to remove berms on edges of roads or provide effective drainage through the berms, except for those berms intentionally designed to protect road fills, in violation of OAR 629-625-0420(5) (2018), causing water to concentrate on, and run down the road surface, causing erosion of the road surface and road fills, resulting in sediment from the road and fill entering waters of the state. ODF sent the Violation Notice to Mr. Bussmann by regular and certified mail, to his address of record in Sixes, Oregon.

Although Mr. Bussman began repairs immediately after he was notified of the violations, he did not request a hearing on either citation referenced in the Violation Notice by the

November 28, 2019 deadline. Therefore, the violations and citations became final by operation of law. Thereafter, by letter dated December 2, 2019, mailed to Mr. Bussman's address of record in Sixes and sent by email, ODF notified Mr. Bussman of the Default Final Order for Case nos. 19-CS021 and 19-CS022. ODF enclosed a copy of the October 29, 2019 Violation Notice in the December 2, 2019 Final Order letter.

Civil Penalty Amount

On August 12, 2025, the Department sent Mr. Bussmann the Civil Penalty Notice in issue herein, proposing a civil penalty of $2,500 based on the two citations, Case Numbers 19-CS021 and 19-CS022, which became final by operation of law on November 29, 2019. Based on the statutes, rules, and standards in effect in 2019, the Department determined that Mr. Bussmann was subject to a civil penalty of $1,250 for each citation.

As set out above, for the two violations established in this case, the amount of civil penalty per violation is the lesser of $5,000 or the amount determined by the following formula: $B (C x P) + ($B x D x R), where $B is the base penalty, C is the cooperation value, P is the prior knowledge value, D is the damage value, and R is the repair value.

Case no. 19-CS021: For the violation at Site 1 (wetland location), the appropriate civil penalty amount is $1,250, calculated as follows:

The base penalty ($B) value is $250 for failing to provide effective cross-drainage in violation of OAR 629-625-0420(2) (2018). OAR 629-670-0210(2)(b) (2018).

The cooperation value (C) is 1 because Mr. Bussmann cooperated with the State Forester. He immediately ceased further violation and took prompt action to repair damage and correct the unsatisfactory condition where feasible. OAR 629-670-0210(3)(b) (2018); ORS 527.685(2).

The prior knowledge value (P) is 1 because Mr. Bussman has been involved with forest practices operations and ODF permitting process since at least 2015. He has general knowledge of the FPA and its implementing regulations, but the State Forester determined the violation to be inadvertent or accidental. OAR 629-670-0210(4)(b) (2018); ORS 527.685(2).

The damage value (D) is 10 based on the nature and extent of resource damage. Sediment from the road construction entered the wetland at two locations and dispersed throughout the wetland. There was no way to measure the volume of sediment that actually entered the wetland, but the State Forester appropriately determined that damage from the violation left uncorrected is major in relative effect, with self-restoration taking up to 10 years. OAR 629-670-0210(5) (2018); ORS 527.685(2). *See also* Exhibit A52.

As to the repair value (R), the State Forester appropriately assigned 0.4 as the degree of damage that occurred and future damage that cannot be prevented even after the repairs are completed. OAR 629-670-0210(6) (2018); ORS 527.685(2).

Applying the formula, $250 (1 x 1) + ($250 x 10 x 0.4) = $1,250.

Case no. 19-CS022: For the violation at Site 2 (lake location), the appropriate civil penalty amount is also $1,250, calculated as follows:

The base penalty ($B) value is $250 for failing to provide effective cross-drainage in violation of OAR 629-625-0420(2) (2018) and failing to remove or provide effective drainage through the berms along the edge of the road in violation of OAR 629-625-0420(5) (2018). OAR 629-670-0210(2)(b) (2018).

The cooperation value (C) is 1 because Mr. Bussmann cooperated with the State Forester, immediately ceased further violation and took prompt action to repair damage and correct the unsatisfactory condition where feasible. OAR 629-670-0210(3)(b) (2018); ORS 527.685(2).

The prior knowledge value (P) is 1 because Mr. Bussman has been involved with forest practices operations and ODF permitting process since at least 2015 and has therefore had general knowledge of the FPA and its implementing regulations, but the State Forester determined the violation to be inadvertent or accidental. OAR 629-670-0210(4)(b) (2018); ORS 527.685(2).

The damage value (D) is 10 based on the extent of resource damage. SF Laine and Unit Forester Greco determined that approximately 33 cubic yards of sediment and fill left the road at Site 2, and traveled downhill approximately 300' to the lake, dispersing as it went. Laine and Greco estimated that approximately 10 cubic yards of fill drained into the lake. The State Forester appropriately determined that damage left uncorrected was major in relative effect, with natural self-restoration taking up to 10 years. OAR 629-670-0210(5) (2018); ORS 527.685(2). *See also* Exhibit A52.

As to the repair value (R), the State Forester appropriately assigned 0.4 as the degree of damage that occurred and future damage that cannot be prevented even after the repairs are completed. OAR 629-670-0210(6) (2018); ORS 527.685(2).

Applying the formula: $250 (1 x 1) + ($250 x 10 x 0.4) = $1,250.

Mr. Bussmann's Claimed Defenses

At hearing, Mr. Bussman raised several defenses to the citations and the proposed $2,500 civil penalty. As explained below, these defenses lack merit.

Lack of Notice – Mr. Bussmann first argues that he should be allowed to challenge the underlying citations (which became final by default on November 29, 2019) because, to his knowledge, he did not receive written notice of the violations and his right to request a hearing as required by law.[4] Mr. Bussmann asserts he has no memory of receiving a written violation notice and that, had he known in 2019 he could have requested a hearing on the Violation Notice, he would have done so then. Mr. Bussmann also asserts that he moved from Sixes to

[4] *See* Exhibit R2 at 2.

North Bend "years ago" and stopped receiving mail from the post office box in Sixes at that time.[5]

The record establishes that on October 29, 2019, the Department served the Violation Notice on Mr. Bussmann by regular and certified mail addressed to PO Box 282 in Sixes, OR. This is the same address that Mr. Bussmann provided to the Department in the notifications of operations submitted in March 2018 and February 2019. This was his address of record with the Department at the pertinent time. By mailing the Violation Notice to Mr. Bussman at his address of record, the Department satisfied the requirements of ORS 527.680(1) (requiring the State Forester to mail or deliver a copy of the citation to the timber owner and landowner) as well as ORS 183.415 (setting out the requirements for a notice of right to hearing in a contested case).

Mr. Bussmann asserts the only documentation he recalls receiving was the "required repair work" and he was not made aware of the citations.[6] However, the record establishes that the citations, the orders to cease violation, and the repair orders were all part of the same document, the Violation Notice issued and served by mail on October 29, 2019. If Mr. Bussmann received the repair orders in written form, then it is more likely than not that he also received the violation citations, the order to cease further violation, and notice of his right to a hearing on the Violation Notice at the same time. Also, as Mr. Bussmann concedes, he was in frequent contact with SF Laine during the fall of 2019, from September 19, 2019, when SF Laine orally notified Mr. Bussmann of the unsatisfactory conditions, until late January 2020, when SF Laine notified him that the repairs were working but there were new concerns about cracking along the road. At any point during this time, Mr. Bussmann could have formally contested the citations alleging violations of OAR 629-625-0420(2) and (5) (2018). He did not do so.

Given these circumstances, Mr. Bussmann is not entitled to relief from default on the Final Orders in Case Nos. 19-19-CS021 and 19-CS022. His claim that he did not receive proper notice of his right to request a hearing in 2019 is unavailing. He has not shown good cause for failing to request a hearing on the Violation Notice.[7] At this point in the process, Mr. Bussmann is prohibited from contesting the underlying violations. *See, e.g., Farmers Insurance Co. of Oregon v. Stockton*, 112 Or App 120, 123 (1992), citing *State ex rel Nilsen v. Cushing*, 253 Or 262, 265 (1969) (a default judgment against a party "amount[s] to admissions by them of all of the material facts alleged against them.")

Erroneous or incomplete facts – Next, Mr. Bussmann contends that the Civil Penalty Notice contains false and/or incomplete facts which should preclude imposition of the proposed civil penalty. For example, Mr. Bussmann challenges the statement in the Civil Penalty Notice

[5] Mr. Bussman did not provide the year or a more specific date for when he and his wife moved from Sixes to North Bend.

[6] Exhibit R9 at 2.

[7] Moreover, the appropriate procedure for challenging the underlying violations would have been for Mr. Bussman to file a petition for relief from default or a motion to set aside the December 2, 2019 Default Final Order for Case Nos. 19-CS021 and 19-CS022, rather than collaterally attacking the underlying citations during the civil penalty phase. *See e.g., State v. Godfrey,* 263 Or App 562 (2014).

that rocks were added to the road where the cross-drain culvert was installed. He claims that he added no rock when constructing the road.[8] Mr. Bussman also maintains that he never removed the berms along the side of the road, and they remain in place to this day.[9] Mr. Bussmann further contends that these berms were and are an appropriate measure to control and reduce erosion during road construction.[10]

Mr. Bussman's challenges to the findings of fact recited in the Civil Penalty Notice are not relevant or material to the determination of the civil penalty amount. Moreover, as discussed above, Mr. Bussmann is precluded from challenging the underlying violations which became final by operation of law in 2019. The civil penalty, based on the factors and considerations in ORS 527.685 and OAR 629-670-0210 (2018) is warranted and appropriate.

Act of God – Finally, Mr. Bussmann argues that he should not be liable for civil penalties because the damage to the resource (sediment draining into waters of the state) was caused by an act of God, *i.e.,* the significant rainfall during September 2019. This contention also lacks merit. First, there is nothing in the FPA or the Department rules promulgated thereunder that recognizes an "act of God" as an affirmative defense to a FPA violation.[11] Second, even if such a defense were recognized in this context, there is nothing about the rainfall amount during September 2019 that was extraordinary or unforeseeable. Moreover, Mr. Bussmann has not demonstrated that the precipitation was the sole cause of the damage or that his road construction activities did not contribute to the sediment delivery to waters of the state.

In short, as the operator of the 2019 Bussman Lakeside road construction project, Mr. Bussmann bears responsibility for compliance with all applicable forest practice laws and rules, responsibility for unsatisfactory conditions resulting from the failure to comply with the laws and rules, and responsibility for any damage caused by the unsatisfactory conditions. ORS 527.630 (2019); ORS 527.680; OAR 629-625-0000 (2018); and OAR 629-625-0420 (2018).

ORDER

I propose ODF issue the following order:

For the violations in ODF Case Nos. 19-CS021 and 19-CS022, Mr. Bussman is assessed a total civil penalty in the amount of $2,500, as set forth in the August 12, 2025 Civil Penalty

[8] *See* Exhibit R9 at 2.

[9] *Id.*

[10] *See* Exhibits R5 and R6.

[11] In Oregon case law, an "act of God" has been defined as a natural occurrence of "extraordinary" and "unprecedented proportions" that is "not foreshadowed by the usual course of nature, and whose magnitude and destructiveness could not have been anticipated or provided against by the exercise of ordinary foresight." *See Northwestern Mut. Ins. Co. v. Peterson,* 280 Or 773, 777 (1977), citing *Schweiger v. Solbeck,* 191 Or 454, 464 (1951). For the defense to apply, the natural event must be the sole proximate cause of the injury complained of. *Id.*

Notice.

Alison G. Webster
Senior Administrative Law Judge
Office of Administrative Hearings

EXCEPTIONS TO PROPOSED ORDER

If this proposed order is adverse to you or to the agency, you or the agency may file exceptions within seven days after the date of the filing of the proposed order with the board if no other time is specified. Exceptions must be filed with the agency.

Please send any exceptions to:

Greg Wagenblast, Civil Penalties Administrator
Department of Forestry, Private Forests Division
2600 State Street
Salem, OR 97310

The exceptions shall be confined to factual and legal issues that are essential to the ultimate and just determination of the proceeding, and shall be based only on grounds that:

1. A necessary finding of fact is omitted, erroneous, or unsupported by the preponderance of the evidence on the record;

2. A necessary legal conclusion is omitted or is contrary to law or the board's policy; or

3. Prejudicial procedural error occurred.

The exceptions shall be numbered and shall specify the disputed finding, opinions or conclusions. The nature of the suggested error shall be specified and the alternative or corrective language provided.

After the board has received and reviewed the proposed order and the exceptions, if any, the board may:

1. Entertain written and/or oral argument if the board determines it is necessary or appropriate to assist the board in the proper disposition of the case. If allowed, oral argument will be limited to matters raised in written exceptions and shall be presented under time limits determined by the board chair;

2. Remand the matter to the ALJ for further proceedings on any issues the board specifies, and to prepare a revised proposed order as appropriate, under OAR 137-003-0655(2);

3. Enter a final order adopting the recommendations of the ALJ; or

4. Enter an amended proposed order or final order that modifies or rejects the recommendations of the ALJ. If the board decides to modify or reject the proposed order, the board must comply with OAR 137-003-0655 and 137-003-0665.

Whether or not exceptions are filed, the Board of Foresty will issue the final order in this matter.

RECONSIDERATION AND REHEARING

Under the provisions of OAR 137-003-0675, you may file a petition for reconsideration or rehearing of the final order with the board within 60 calendar days after this order is served. Any such petition shall set forth the specific grounds for reconsideration or rehearing and the remedy sought. The petition may be supported by a written argument. Under OAR 629-001-0050, you must file a petition for reconsideration as a condition for further appeal.

APPEAL

You may appeal by filing a petition for judicial review with the Oregon Court of Appeals within 60 days following the date the final order on reconsideration or rehearing is issued, or within 60 days following denial of the request for reconsideration or rehearing. *See* Oregon Revised Statutes 183.480 *et seq.*

SERVICEMEMBERS' CIVIL RELIEF ACT

Unless otherwise stated in this order, the Office of Administrative Hearings (OAH) has no reason to believe that a party to this proceeding is subject to the Servicemembers' Civil Relief Act (SCRA). If a servicemember is a party to this proceeding and did not appear for a hearing that convened during the servicemember's period of service or within 90 days after their termination of service, the servicemember should immediately contact the agency to address any rights they may have under the SCRA.

CERTIFICATE OF MAILING

On February 12, 2026, I mailed the foregoing PROPOSED ORDER issued on this date in OAH Case No. 2025-ABC-07388**.**

By: First Class and Electronic Mail

Ernest A Bussmann
3560 Chinook Ave
North Bend OR 97459
Email: Erniebussmann@yahoo.com

By: Electronic Mail

Greg Wagenblast
Agency Representative
Oregon Department of Forestry
2600 State St Bldg D
Salem OR 97310
Email: greg.wagenblast@odf.oregon.gov

Ashley Ziglinski
Agency Representative
Oregon Department of Forestry
2600 State Stree Bldg D
Salem OR 97305
Email: ashley.m.ziglinski@odf.oregon.gov

Matthew B Devore
Assistant Attorney General
Department of Justice
1162 Court St NE
Salem OR 97301
Email: Matt.B.DeVore@doj.oregon.gov

Anesia N Valihov
Hearing Coordinator

BEFORE THE BOARD OF FORESTRY
STATE OF OREGON

IN THE MATTER OF:	**FINAL ORDER**
ERNEST BUSSMANN	OAH Case No. 2025-ABC-07388 Agency Case No. 19-CS021 19-CS022
Respondent.	

The Board of Forestry, at a meeting in Salem on June 3, 2026, by consensus affirms the Notice of Civil Penalty regarding Citations 19-CS021 & 19-CS022 issued by Jon Laine, Stewardship Forester at the time of the violation, and adopts and incorporates by reference the attached proposed order issued by Senior Administrative Law Judge Alison G. Webster, on February 12, 2026. Neither party submitted exceptions to the proposed final order; hence, none were considered by the Board.

Dated this _____ day of June, 2026

By: _____
Kacey KC
State Forester and
Secretary to the Board of Forestry

RIGHT TO JUDICIAL REVIEW

If you are dissatisfied with the Order, you may request rehearing or reconsideration by the Board. To do so, you must file a petition for rehearing or reconsideration pursuant to OAR 137-003-0675 and OAR 629-001-0050 within 60 days from the day this Order was served on you. If this Order was personally delivered to you, the date of service is the day you received the Order. If this Order was mailed to you, the date of service is the day it was *mailed,* not the day you received it. A petition for rehearing or reconsideration must state with specificity the grounds for objection to the order, and the remedy sought. If you do not file a petition for rehearing or reconsideration within the time limits provided, you will lose your opportunity for rehearing or reconsideration and you will lose your right to appeal to the Oregon Court of Appeals. (OAR 137-003-0675 and OAR 629-001-0050).

If, after you have filed a petition for rehearing or reconsideration, the Board issues an Order you are dissatisfied with, you have the right to appeal that Order to the Oregon Court of Appeals pursuant to ORS 183.482. To appeal, you must file a petition for judicial review with the Court of Appeals within 60 days from the day the Order was served on you.

If, 60 days after you have filed a petition for rehearing or reconsideration, the Board has not issued an order, your petition will be considered denied and at that time you will have the right to appeal the original Order to the Court of Appeals pursuant to ORS 183.480 and ORS 183.482. To appeal, you must file a petition for judicial review with the Court of Appeals within 60 days from the day that your petition is deemed denied. If you do not file a petition for judicial review within the 60-day time period, you will lose your right to appeal.

STAFF REPORT

Agenda Item No.:	F
Work Plan:	Forest Resources Division
Presentation Title:	Proposed Final Order- Scott Churchill
Date of Presentation:	June 3, 2026
Contact Information:	Greg Wagenblast, Civil Penalties Administrator, Forest Resources Division, greg.wagenblast@odf.oregon.gov, 541-525-6462 Scott Swearingen, Field Support Manager, Forest Resources Division, Scott.Swearingen@odf.oregon.gov, 541-580-7485

SUMMARY

The purpose of this agenda item is to consider the hearing record for contested civil penalty notice involving a forest practices violation by Scott Churchill and to make a decision on the final order regarding the matter. The Department issued a Notice of Civil Penalty to Scott Churchill for a FPA violation involving diversion/relocating stream flow out of a tributary of Beaver creek into a new manmade channel.

Mr. Churchill contested the Notice of Civil Penalty. The matter was referred to the Office of Administrative Hearings for a contested hearing. Senior Administrative Law Judge Joe Allen conducted the hearing, resulting in a ruling in favor of the Department. ALJ Allen issued a proposed order upholding the Department's Civil Penalties. The Board is now called upon to consider issuance of a Final Order.

CONTEXT

The *VISION FOR OREGON'S FORESTS* priority and goal for Resilient Forests to reduce the vulnerability of Oregon's forests from a myriad of catastrophic climate driven disturbances, ODF will direct its policy, management and educational actions to enable and promote all forestland managers to make intentional decisions that increase adaptive capacity of forest ecosystems. ODF's Forest Resources Division is responsible for several key areas of operation that contribute to sustainable, healthy forests. One of these key areas involves the administration of the Forest Practices Act, which is a cornerstone of natural resource protection in Oregon that encourages sound management of forestlands. Citations, repair orders and civil penalties for violations of forest regulations are part of an effective enforcement program that meets these objectives by changing behaviors to comply with best management practices designed to promote a multitude of forest outputs and benefits.

BACKGROUND

ODF Case No. 22-WL012

Mr. Churchill filed a Notification of Operation for a 21.3 acre Commercial Thinning/Selective Cutting operation in Coos County (NOAP 2022-740-06443).

ODF received a complaint concerning a logging operation that had pushed dirt into a creek involving Churchill Road and a culvert crossing and corner section of the road. Stewardship Forester Jon Laine (ODF Coos Bay office) completed a site inspection to investigate and determined there was a violation involving the operation.

ODF issued a citation with orders to cease further violation and to repair for this operation. These enforcement documents were not contested and became a final order. Repairs were completed by Mr. Churchill.

A civil penalty notice (CPN) was issued to Mr. Churchill on August 19, 2025 at which time he contested the civil penalties totaling $475.00 for the violation. While preparing for the hearing additional information came to light about Mr. Churchills forestry history resulting in an amended CPN being issued reducing the civil penalty to $350.00 on November 19, 2025. A hearing was held by Office of Administrative Hearings (OAH) on January 21, 2026 in Coos Bay, Oregon. Administrative Law Judge (ALJ) Joe L. Allen presided over the hearing and then issued a proposed order with finding of facts related to the case.

Please review attachment 1 - Proposed Order for ODF Case No. 22-WL012 Civil Penalty for full details on Finding of Facts, Conclusion of Law, Opinion and Proposed Order.

EXCEPTIONS

The Administrative Procedures Act allows parties to make objections to proposed orders, in the form of "exceptions." ORS 183.460; OAR 137-003-0650. Consistent with the Department's rules, the Proposed Order explained that "exceptions shall be confined to factual and legal issues which are essential to the ultimate and just determination of the proceeding." OAR 629-001-0040(1). Exceptions "shall be based only on grounds that

(A) A necessary finding of fact is omitted, erroneous, or unsupported by the preponderance of the evidence on the record;
(B) A necessary legal conclusion is omitted or is contrary to law or the board's policy; or
(C) Prejudicial procedural error occurred." OAR 629-001-0040(2)(a).

In addition, the Proposed Oder explained that exceptions must specify the disputed finding, opinions, or conclusions. The party submitting exceptions must specify the nature of the suggested error and provide alternative or corrective language. OAR 629-001-0040(2)(b).

The Proposed Order set a deadline for filing exceptions of seven days after the date of the filing of the proposed order. The deadline for filing exceptions by mail would be March 23, 2026, counting seven calendar days after March 16, 2026.

No exceptions were received from Mr. Churchill.

RECORD OF PROCEEDING

The record of the proceedings is available for Board members to review prior to the Board of Forestry meeting through a weblink to hearing documents by contacting Greg Wagenblast at (541) 525-6462 or greg.wagenblast@odf.oregon.gov. A hardcopy binder with all hearing documents will be available the day of the Board of Forestry meeting too.

The Board's decision must be based on the record established through the contested case hearing process. ORS 183.482(7). Any information about the facts at issue that Board members acquire from other sources may be ex parte communication. Ex parte communication is defined as "an oral or written communication to an agency decision maker during its review of the contested case

not made in the presence of all parties to the hearing, concerning a fact in issue in the proceeding." OAR 137-003-0660(1). However, this definition specifically excludes "any communication from agency staff or counsel about legal issues or about facts in the record." OAR 137-003-0660(1). If a Board member receives an ex parte communication during their review of the contested case, the Board member must give all parties notice of the substance of the communication or a copy of the communication, and provide the other party with an opportunity to rebut the substance of the ex parte communication. ORS 183.462; OAR 137-003-0660(2).

BOARD'S ALTERNATIVES

Upon review of the proposed order and record presented in this case, pursuant to OAR 629-001-0045(3) the Board can:

1. Entertain written and/or oral argument from the State Forester and any party that filed exceptions to the proposed order if the board determines it is necessary or appropriate to assist the board in the proper disposition of the case. If allowed, oral argument will be limited to matters raised in written exceptions and shall be presented under time limits determined by the board chair; or
2. Remand the matter to the administrative law judge for further hearing on such issues as the Board specifies and to prepare a revised proposed order as appropriate under OAR 137-003-0655(2); or
3. Enter a final order adopting the recommendations (proposed order) of the administrative law judge; or
4. Enter an amended proposed order or final order that modifies or rejects the recommendations of the ALJ. If the board decides to modify or reject the proposed order, the board must comply with OAR 137-003-0655 and 137-003-0665.

RECOMMENDATION

The Department recommends that the Board approve Alternative 3 and issue a Final Order adopting the ALJ's proposed order. A draft Final Order is included as Attachment 02.

ATTACHMENTS

(1) Ruling on Motions for Summary Determination and Proposed Order for ODF Case No. 22-WL012 Churchill
(2) Draft Final Order for ODF Case No. 22-WL012 Churchill

BEFORE THE OFFICE OF ADMINISTRATIVE HEARINGS
STATE OF OREGON
for the
OREGON DEPARTMENT OF FORESTRY
PRIVATE FORESTS

IN THE MATTER OF:	)	**PROPOSED ORDER**
	)	
SCOTT CHURCHILL	)	OAH Case No. 2025-ABC-07386
	)	Agency Case No. 22-WL012
	)	

HISTORY OF THE CASE

On August 19, 2025, the Oregon Department of Forestry, Private Forests (ODF or Department) issued a Notice of Proposed Order and Opportunity to Request a Hearing (Notice) proposing to issue a civil penalty of $475 against Scott Churchill for alleged violations of the Forest Practices Act[1] (FPA). On August 29, 2025, Mr. Churchill requested a hearing.

On September 5, 2025, the Department referred the hearing request to the Office of Administrative Hearings (OAH). The OAH assigned Senior Administrative Law Judge (ALJ) Joe L. Allen to preside at hearing. ALJ Allen convened a prehearing conference on October 20, 2025. The purpose of the prehearing conference was to identify the issues for hearing, select hearing dates, and establish a calendar of prehearing filing deadlines. Assistant Attorney General (AAG) Matthew Devore appeared with Greg Wagenblast, Civil Penalty Administrator, on behalf of the Department. Mr. Churchill appeared without counsel.

On November 19, 2025, the Department issued an Amended Notice of Proposed Order and Opportunity to Request a Hearing (Amended Notice) reducing the proposed civil penalty from $475 to $350 based on a reassessment of Mr. Churchill's familiarity with the FPA.

A hearing was held on January 21, 2026, in Coos Bay, Oregon. Mr. Churchill appeared without counsel. Terri Churchill and Austin Churchill also attended the hearing. AAG Devore appeared on behalf of the Department with Mr. Wagenblast. Testifying on behalf of the Department were Ryan Greco, Unit Forester for Coos Bay, and Mr. Wagenblast. Mr. Churchill did not provide testimony or call any witnesses on his behalf. The record closed at the conclusion of the hearing on January 21, 2026.

ISSUE

Whether the Department may impose a civil penalty of $350 against Mr. Churchill for one violation of the Forest Practices Act. ORS 527.683 and 527.685; OAR 629-670-0040(1), -

[1] ORS 527.610 to 527.770, 527.990(1) and 527.992.

0200 and -0210 (2021).[2]

EVIDENTIARY RULING

Exhibits A1 through A38, offered by the Department, were admitted into the record without objection. Exhibits R1 through R3 and R13 through R47, offered by Mr. Churchill, were admitted into the record over the Department's objections. The ALJ excluded Exhibits R4 through R12 based on the Department's relevance objection.

FINDINGS OF FACT

1. Scott Churchill is the owner of 21.3 acres of land and timber located at Township 27 South, Range 13 West, Section 11 (T27S, R13W, Sec11), and T27S, R13W, Sec14 in Coos County Oregon (collectively, the subject property). (Test. of Greco; Ex. A3 at 1, 3.)

2. On or about May 13, 2022, Mr. Churchill filed a Notification of Operations/Permit to Operate Power-Driven Machinery (NOAP) informing the Department of his intent to conduct logging operations on the subject property for the purpose of commercial thinning/selective cutting. (Ex. A3 at 1-3.)

3. At the time of filing the NOAP, Mr. Churchill informed the Department that the logging operation would not be conducted within a 50-foot buffer of any stream or waterway. (Ex. A4.)

4. The creek in the immediate vicinity of the subject property is an unnamed, non-fish bearing, tributary to Beaver creek. (Test. of Greco.)

5. On June 24, 2022, Department Stewardship Forester John Laine received a voicemail complaint from a neighbor whose land abuts the subject property to the south. The complainant stated that Mr. Churchill's logging crew had pushed dirt and debris into an unnamed creek as part of work on the logging road necessary to access the subject property. (Test. of Greco; Ex. A5.)

6. On June 27, 2022, the complainant sent Forester Laine an email containing photos showing soil, root, and woody debris nearly covering the entirety of the creek bed and bank. (Ex. A8 at 1-3.)

7. On June 30, 2022, Forester Laine conducted an inspection of the subject property to determine compliance with the Forest Practices Act. Forester Laine observed sediment, root, and woody debris covering nearly the entirety of the creek as it exited a culvert on the left side (downhill side) of the logging road. (Ex. A7 at 1-3: test. of Greco.) Forester Laine determined Mr. Churchill's logging operation was not in compliance with the Forest Practices Act. To address the violations, Forester Laine instructed Mr. Churchill to take remedial measures to prevent soil erosion and stabilize the nearby creek bank including spreading hay and straw over

[2] The Department amended OAR 629-660-0040 in 2022, after the events giving rise to the proposed civil penalty. As such, the operative version of the rule is applicable to the penalty assessment and calculation.

exposed soil and installing a silt fence. (Ex. A6 at 1-2.)

8. On July 9, 2022, complainant contacted the Department of State Lands and Forester Laine via email and reported that Mr. Churchill had rerouted the unnamed creek by hand-digging a new channel and straightening the natural meander of the creek at that location. The complainant also alleged the new channel was much narrower and shallower than the natural stream channel, raising concerns about stream capacity during high flows. (Ex. A10 at 1-3; test. of Greco.)

9. On July 20, 2022, Forester Laine conducted a second inspection of the subject property to check on the status of the previously ordered remedial and stabilization measures. Forester Lane noted that while the remedial measures had been completed Mr. Churchill had also straightened the channel of the unnamed creek without authorization. Forester Laine advised the landowner that redirecting a stream without authorization was a violation of OAR 629-660-0040(1). (Ex. A14 at 1-2; test. of Greco.)

10. On September 19, 2022, the Department issued a Notice of Violation/Citation, Order to Cease Further Violation, and Order to Repair Damage or Correct Unsatisfactory Condition Caused by Violation. (Ex. A1 at 1-6.) With the notice of violation, the Department included a guide, published by the Department, to compliance and civil penalty assessments. (Test. of Greco and Wagenblast; Ex. A1 at 7-11.)

11. The notice of violation contained the following provisions:

> **Right to Hearing**
>
> You have a right to a hearing on the Notice of Violation, Order to Cease Further Violation and Order to Repair. To request a hearing, you must make a written request for a hearing within 30 days of the date of service or mailing of this Notice and Orders. The request for a hearing shall be in writing and must include a specific statement as to the reasons for disputing the State Forester's order, including but not limited to disagreement with any findings leading to the order. In addition, the request for hearing shall state what relief from the order is sought. OAR 629-672-0200. If you request a hearing, the request must be made to:
>
> **Oregon State Forester**
> **Attn: Civil Penalty Administrator**
> **2600 State Street**
> **Salem, Oregon 97310**
>
> **Default Final Order**
>
> If you fail to request a hearing within the time provided or if you request a hearing but then fail to appear at that hearing, you will have waived your right to a hearing and the Notice and Orders will become Final Orders by Default. The record of the proceeding to date, including info1mation in ODF's file and all

materials submitted by any party, will automatically become part of the record upon default for the purpose of proving a prima facie case.

(Ex. A1 at 4.)

12. Mr. Churchill did not request a hearing on the Notice of Violation. (Test. of Wagenblast.)

13. On September 23, 2022, the Department issued a letter amending the Notice of Violation to correct an erroneous rule citation. (Ex. A2 at 1; test. of Wagenblast.) Mr. Churchill received the Amended Notice of Violation via certified mail delivered by the United States Postal Service on September 28, 2022. (Ex. A2 at13.)

14. Mr. Churchill did not request a hearing on the Amended Notice of Violation and that notice became a final order by default. (Test. of Wagenblast and Greco.)

15. According to the Department's Order to Repair Damage or Correct Unsatisfactory Condition, Mr. Churchill was required to complete repairs to the unnamed creek by September 30, 2022. (Ex. A2 at 4; test. of Greco.)

16. On September 29, 2022, Forester Laine conducted a follow-up inspection of the subject property to ascertain how repairs were progressing. At that time, Forester Laine determined that Mr. Churchill's logging operation was in compliance with the provisions of the FPA. Forester Laine found that Mr. Churchill had restored creek to its original channel and made efforts to stabilize the banks to avoid sediment erosion in the creek and downstream waterways. (Exs. A20 and A21; test of Greco.)

17. Based on the post-correction inspection, the Department determined that Mr. Churchill remediated approximately 70 percent of the damage to the water resource. The Department also estimated that 30 percent of the damage to the stream and downstream waterway was uncorrectable. (Test. of Greco.)

18. The Department assessed the damage level as "serious" due to the fact that Mr. Churchill removed a tree of substantial size – from within the wetland riparian area surrounding the creek – that was not expected to regrow within 10 years and because the unnamed creek flows into a fish bearing waterway (Beaver Creek) and the narrow, straightened channel permitted increased flow rates capable of carrying sediment and debris into Beaver Creek. (Test. of Greco.)

19. Once a notice of violation becomes final, the Department moves the matter to its civil penalty queue. Typically, staff working on civil penalty assessments will wait for repairs or remediation to be completed to determine the extent of cooperation from the landowner and extent of uncorrectable damage. (Test. of Wagenblast.)

20. Civil penalty matters may take some time to move through the queue, depending on the extent of repairs necessary, the number of civil penalty cases in the queue, and the number

of staff available to process civil penalty calculations. During fire season, most Department employees focus on fire suppression, reducing the number of staff available to address civil penalty cases. (Test. of Wagenblast.)

21. On October 26, 2022, the Department issued a letter to Mr. Churchill notifying him that the Amended Notice of Violation became a Final Order by Default effective October 25, 2022. In that letter, the Department provided Mr. Churchill with information pertaining to his right to appeal the Final Order by Default. The letter also notified Mr. Churchill that the Department would "next consider issuance and calculations of civil penalties up to $5,000." (Ex. A23 at 1; test. of Wagenblast.)

22. Mr. Churchill did not appeal the Department's October 25, 2022 Final Order by Default. (Test. of Wagenblast.)

23. On August 19, 2025, the Department issued a Notice of Proposed Order and Opportunity to Request a Hearing (Notice) to Mr. Churchill proposing to assess a civil penalty in the amount of $475 for violations of the FPA addressed in the amended notice of violation. (Ex. A24; test. of Wagenblast.)

24. On August 22, 2025, Mr. Churchill requested a hearing. (Ex. A25.)

25. On November 19, 2025, the Department issued an Amended Notice of Proposed Order and Opportunity to Request a Hearing (Amended Notice) to Mr. Churchill, reducing the proposed civil penalty from $475 to $350 after the Department's civil penalty administrator determined Mr. Churchill had little or no prior knowledge of the FPA's statutes and rules. (Test. of Wagenblast; Ex. A31.)

CONCLUSION OF LAW

The Department may impose a civil penalty of $350 against Mr. Churchill for violation of OAR 629-660-0040(1).

OPINION

In this matter, the Department proposes to assess a civil penalty of $350 against Mr. Churchill based on a single violation of the FPA, specifically OAR 629-660-0040(1) (2021). As the proponent of that position, the Department bears the burden of proving its allegations by a preponderance of the evidence. ORS 183.450(2) and (5); *Reguero v. Teachers Standards and Practices Commission*, 312 Or 402, 418 (1991) (burden is on Commission in disciplinary action); *Dixon v. Board of Nursing,* 291 Or App 207, 213 (2018) (in administrative actions, the standard of proof that generally applies in agency proceedings, including license-related proceedings, is the preponderance standard.) Proof by a preponderance of the evidence means that the fact finder is convinced that the facts asserted are more likely true than false. *Riley Hill General Contractor v. Tandy Corp*., 303 Or 390, 402 (1987).

The burden of proof encompasses two burdens, the burden of production and the burden

of persuasion. *Marvin Wood Products v. Callow*, 171 Or App 175 (2000) (Conceptually, the burden of proof encompasses two distinct burdens: the burden of producing evidence of a particular fact (*i.e*., the burden of production), and the burden of convincing the trier of fact that the alleged fact is true (*i.e*., the burden of persuasion)). Accordingly, any party advocating a particular position bears the burdens of production and persuasion as to that position.

The Board of Forestry, established under ORS 526.009, is responsible for overseeing forest policy and management practices in the state, with limited exceptions. ORS 526.016. The State Forester, appointed by the Governor, acts as the executive officer of the Department. ORS 526.031. OAR 629-670-0010(7) (2021) defines the "State Forester" to also include any duly authorized representative of the State Forester. *See also* ORS 537.620(17).

Under ORS 527.680, the State Forester is authorized to issue a citation to any operator who has committed a violation of the FPA. An operator includes the land/timber owner who conducts a logging operation. ORS 527.620(13). The State Forester shall also, at that time, issue an order directing the landowner or operator to cease further violation. ORS 527.680(2)(a). The State Forester may also require the landowner or operator to make reasonable efforts to repair damage or correct unsatisfactory conditions. ORS 527.680(2)(b). *See also* OAR 629-670-0130(1),(2) (2021).

OAR 629-660-0040(1) (2021), adopted under ORS 527.710, prohibits channelizing, relocating, or diverting water from any stream, except as allowed in the forest practice rules for construction of roads, stream improvement projects or temporary stream crossings.

OAR 629-670-0010 (2021) provides definitions for the FPA and provides, in relevant part:

> (9) "**Unsatisfactory condition**" means the circumstance which exists when an operator or landowner fails to comply with a practice specified in a forest practice rule or statute listed in ORS 527.990(1) or 527.992 and the State Forester determines that all of the following conditions exist:
>
> (a) The forest practice rule or statute applies to the type of operation conducted;
>
> (b) The forest practice is necessary to meet the purpose of the statute or rule; and
>
> (c) The operator has not been exempted from the rule or statute by obtaining approval for, or having obtained approval has not followed, a plan for an alternate practice as prescribed by OAR 629-605-0100.
>
> (10) **"Violation"** means the circumstances which exist any time one or more of the following occurs:
>
> (a) An operator fails to comply with any provision of ORS 527.670(6)

or (7) requiring notification to the State Forester before commencing an operation.

(b) An unsatisfactory condition exists, and:

(A) Damage has resulted; or

(B) The State Forester has determined that it is not feasible for the operator, by timely corrective action, to eliminate the consequences of the unsatisfactory condition; or

(C) A written statement of unsatisfactory condition has been issued to the operator, the deadline for action has passed and appropriate action has not been taken by the operator.

(c) The operator has failed to follow a procedural practice required in statute or rule including, but not limited to, failure to submit a required written plan.

(d) An operator has failed to comply with any term or condition of any order of the State Forester issued in accordance with ORS 527.680.

Emphasis in original.

Mr. Churchill initiated a logging operation on the subject property in May 2022. In June 2022, the Department received complaints from a neighbor that Mr. Churchill and/or his logging crew had pushed significant amounts of dirt and plant debris into a roadside creek on her property while widening a logging road that crosses her land. On June 30, 2022, following an inspection of the logging road and creek mention in the complaint, a Department forester notified Mr. Churchill that his operation was not in compliance with the FPA and instructed him to remove sediment and debris from the creek and to take remedial measures to prevent soil erosion and stabilize the creek bank.

On July 20, 2022, a Department forester again visited the subject property to ascertain the state of the repairs and remediation in and around the creek. At that time, the Department's forester noted that, while Mr. Churchill's crew had removed silt and woody debris from the creek bed and stabilized the banks with straw and silt fencing, the crew also rerouted the channel of the creek as it exited a culvert under the road, removing a natural meander and narrowing the channel. The Department's forester again notified Mr. Churchill that the logging operation was not in compliance with the FPA.

On September 19, 2022, the Department issued a Notice of Violation/Citation, Order to Cease Further Violation, and Order to Repair Damage or Correct Unsatisfactory Condition Caused by Violation – alleging violation of OAR 629-660-0040(1) for unauthorized rerouting of the unnamed creek – to Mr. Churchill following the July 20, 2022 inspection. The Department amended that notice on September 23, 2022 to correct an erroneous rule citation. The

Department's notices informed Mr. Churchill that he could appeal the decision but had to do so within 30 days. Mr. Churchill did not request a hearing in response to the initial or Amended Notice of Violation.

On October 26, 2022, the Department notified Mr. Churchill via letter that the Amended Notice of Violation had become final by default and that the Department would next consider civil penalties up to $5,00 per violation. In that letter, the Department also notified Mr. Churchill that he could appeal the final order and provided instructions for doing so. Mr. Churchill did not file an appeal challenging the Department's final order.

ORS 527.992 authorizes the State Forester to assess civil penalties for, *inter alia*, any violation of ORS 527.670 or any rule adopted by the Department under ORS 527.710.[3] *See also* OAR 629-670-0200(1) (2021). ORS 527.685 permits the State Board of Forestry to establish, by rule, the amount of civil penalty to be assessed per violation, within the statutory limit. In assessing a civil penalty against a landowner or operator, the Department may consider several factors including:

> (a) The past history of the person incurring a penalty in taking all feasible steps or procedures necessary or appropriate to correct any violation.
>
> (b) Any prior violations of statutes, rules, orders and permits pertaining to the Oregon Forest Practices Act.
>
> (c) The gravity and magnitude of the violation.
>
> (d) Whether the violation was repeated or continuous.
>
> (e) Whether the cause of the violation was an unavoidable accident, negligence or an intentional act.
>
> (f) The size and type of ownership of the operation.
>
> (g) Any relevant rule of the board.
>
> (h) The cooperativeness of the person incurring the penalty and the person's efforts, if any, to correct the violation.

ORS 527.685(2).

OAR 629-670-0210 (2021) sets forth the formula for calculating a civil penalty and provides, in relevant part:

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[3] ORS 527.710(1) provides, "In carrying out the purposes of ORS 527.610 to 527.770, 527.990 (1) and 527.992, the State Board of Forestry shall adopt, in accordance with applicable provisions of ORS chapter 183, rules to be administered by the State Forester establishing standards for forest practices in each region or subregion."

(1) The amount of civil penalty per violation shall be the lesser of $5,000 or the amount determined by the formula $B(C x P) + ($B x D x R) where:

(a) $B is a base fine established by type of violation in section (2) of this rule;

(b) C is cooperation;

(c) P is prior knowledge or prior violations;

(d) D is damage to protected resources; and

(e) R is the extent of damage that cannot be corrected, or prevented in the future, even though repairs are made.

(2) The base penalty value ($B) shall be established as follows:

* * * * *

(b) A base penalty of $250 shall be applied to:

(A) Violations of any rule or statute which requires or sets standards for accomplishing reforestation.

* * * * *

(E) All other violations of forest practice rules or statutes not specifically described in section (2) of this rule.

* * * * *

(3) The cooperation value (C) shall be determined by the State Forester after reviewing whether the operator is taking all feasible steps or procedures necessary or appropriate to correct the violation for which the penalty is being assessed. The value shall be assigned as follows:

* * * * *

(b) A value of 1 shall be assigned when the operator cooperates in following the direction of the State Forester by immediately ceasing further violation and taking prompt action to repair damage or correct any unsatisfactory condition where deemed feasible by the State Forester.

* * * * *

(4) The prior knowledge value (P) shall be determined by the State Forester after reviewing department records of citations, operation notification or operation

inspections. A value from 0.5 through 10 shall be assigned as follows:

(a) A value of 0.5 is appropriate when the operator has little or no prior knowledge of the Oregon Forest Practices Act but has cooperated in ceasing violation and correcting unsatisfactory conditions

(b) A value of 1 is appropriate when the operator has general knowledge of the Oregon Forest Practices Act and rules, but has not had significant past experience with the practice in question, or has significant past experience with the practice, but the violation is determined by the State Forester to be inadvertent or accidental.

* * * * *

(5) The damage value (D) shall be determined by the State Forester as a measure of extent or relative adverse effect of damage. The specific value applied shall be based on the pre-operation condition of the site, if known, the severity and extent of damage associated with the violation, and any potential economic gain to any involved operators. The damage value should be consistent with the policy of deterring future violations. A value from 0 through 20 shall be assigned. The following shall guide the State Forester's determination:

* * * * *

(c) A value from 2 through 5 shall be assigned when the damage from the violation left uncorrected is mor serious than described in subsection (b) of this section, but the affected resources will self-restore naturally within five years. * * *.

* * * * *

(6) The repair value (R) shall be assigned by the State Forester as a measure of the relative extent of the damage that is corrected or prevented through timely corrective action. The value shall be set by the State Forester between 0 and 1, inclusive and expressed as a decimal. The decimal indicates the degree of damage that already occurred and future damage that cannot be prevented, even after the repairs are completed as directed in the repair order. * * *.

On August 19, 2025, the Department issued a Proposed Order and Opportunity to Request a Hearing Case No. 22-WL012 proposing to assess a civil penalty in the amount of $475 against Mr. Churchill as the owner of the subject property. Using the formula set forth in OAR 629-670-0210 (2021), the Department determined the base penalty ($B) value to be $250 for one violation of OAR 629-660-0040(1) pursuant to OAR 629-670-0210(2) (2021). Exhibit A24 at 10. The Department set the cooperation value (C) at 1 because Mr. Churchill cooperated with the State Forester by ceasing further violation and taking prompt action to repair damage where feasible. *Id*. Additionally, the Department initially determined the prior knowledge value (P)

should be set at 1 because it understood Mr. Churchill had general knowledge of the FPA but no prior experience with the rule or practice violated. *Id*. Next, the Department assigned a damage value (D) of 3 based on the nature and extent of resource damage, finding Mr. Churchill deposited approximately three cubic yards of debris in the waterway and, if left uncorrected, that condition would not self-correct within 10 years. Exhibit A24 at 10. Finally, the Department established the repair value (R) to be 0.3 as the degree of present and future damage that cannot be prevented even after repairs were completed. *Id*.

Applying the Department's factors to the applicable formula, $B(C x P) + ($B x D x R) results in $250 (1 x 1) + ($250 x 3 x 0.3) = $475.

In November 2025, the Department's Civil Penalty Administrator, Greg Wagenblast, determined that the Department had overestimated Mr. Churchill's experience with and knowledge of the FPA. Accordingly, Mr. Wagenblast recalculated the proposed civil penalty using a more appropriate factor of .5 for the prior knowledge (P) value. Thereafter, on November 19, 2025, the Department issued an amended civil penalty notice reducing the civil amount to $350 based on the reduced prior knowledge (P) value. Exhibit A31 at 10. Applying the formula with the revised (P) value, the Department recalculated the civil penalty as follows, $250 (1 x .5) + ($250 x 3 x 0.3) = $350.

Accordingly, as the owner of the subject property, Mr. Churchill is liable for a civil penalty of $350 for the damage caused by unsatisfactory conditions resulting from his crew's failure to comply with the forest practice laws and rules.

ORDER

I propose the Oregon Department of Forestry, Private Forests issue the following order:

Mr. Churchill shall pay $350 for one violation of OAR 629-660-0040(1) as set forth in the Department's November 19, 2025 an Amended Notice of Proposed Order and Opportunity to Request a Hearing.

/s/ Joe L. Allen
Senior Administrative Law Judge
Office of Administrative Hearings

EXCEPTIONS TO PROPOSED ORDER

If this proposed order is adverse to you or to the agency, you or the agency may file exceptions within seven calendar days after the date of the filing of the proposed order with the board if no other time is specified. Exceptions must be filed with the agency.

Please send any exceptions to:

Greg Wagenblast, Civil Penalties Administrator
Department of Forestry, Private Forests Division
2600 State Street
Salem, OR 97310

The exceptions shall be confined to factual and legal issues that are essential to the ultimate and just determination of the proceeding, and shall be based only on grounds that:

1. A necessary finding of fact is omitted, erroneous, or unsupported by the preponderance of the evidence on the record;

2. A necessary legal conclusion is omitted or is contrary to law or the board's policy; or

3. Prejudicial procedural error occurred.

The exceptions shall be numbered and shall specify the disputed finding, opinions or conclusions. The nature of the suggested error shall be specified and the alternative or corrective language provided.

After the board has received and reviewed the proposed order and the exceptions, if any, the board may:

1. Entertain written and/or oral argument if the board determines it is necessary or appropriate to assist the board in the proper disposition of the case. If allowed, oral argument will be limited to matters raised in written exceptions and shall be presented under time limits determined by the board chair;

2. Remand the matter to the ALJ for further proceedings on any issues the board specifies, and to prepare a revised proposed order as appropriate, under OAR 137-003-0655(2);

3. Enter a final order adopting the recommendations of the ALJ; or

4. Enter an amended proposed order or final order that modifies or rejects the recommendations of the ALJ. If the board decides to modify or reject the proposed order, the board must comply with OAR 137-003-0655 and 137-003-0665.

Whether or not exceptions are filed, the Board of Forestry will issue the final order in this matter.

RECONSIDERATION AND REHEARING

Under the provisions of OAR 137-003-0675, you may file a petition for reconsideration or rehearing of the final order with the board within 60 calendar days after this order is served. Any such petition shall set forth the specific grounds for reconsideration or rehearing and the remedy sought. The petition may be supported by a written argument. Under OAR 629-001-0050, you must file a petition for reconsideration as a condition for further appeal.

APPEAL

You may appeal by filing a petition for judicial review with the Oregon Court of Appeals within 60 days following the date the final order on reconsideration or rehearing is issued, or within 60 days following denial of the request for reconsideration or rehearing. *See* Oregon Revised Statutes 183.480 *et seq*.

SERVICEMEMBERS' CIVIL RELIEF ACT

Unless otherwise stated in this order, the Office of Administrative Hearings (OAH) has no reason to believe that a party to this proceeding is subject to the Servicemembers' Civil Relief Act (SCRA). If a servicemember is a party to this proceeding and did not appear for a hearing that convened during the servicemember's period of service or within 90 days after their termination of service, the servicemember should immediately contact the agency to address any rights they may have under the SCRA.

CERTIFICATE OF MAILING

On March 16, 2026, I mailed the foregoing Proposed Order issued on this date in OAH Case No. 2025-ABC-07386**.**

By: Electronic and Certified Mail

Scott Churchill
2220 Maine Ct
North Bend OR 97459
Email: Shaggy3doo3@gmail.com

By: Electronic Mail

Greg Wagenblast, Agency Representative
Oregon Department of Forestry
2600 State St Bldg D
Salem OR 97310

Ashley Ziglinski, Agency Representative
Oregon Department of Forestry
2600 State Stree Bldg D
Salem OR 97305

Matthew B Devore, Assistant Attorney General
Department of Justice
1162 Court St NE
Salem OR 97301

Lucy M Garcia
Hearing Coordinator

BEFORE THE BOARD OF FORESTRY
STATE OF OREGON

IN THE MATTER OF:	**FINAL ORDER**
SCOTT CHURCHILL	OAH Case No. 2025-ABC-07386 Agency Case No. 22-WL012
Respondent.	

The Board of Forestry, at a meeting in Salem on June 3, 2026, by consensus affirms the Notice of Civil Penalty regarding Citations 22-WL012 issued by Jon Laine, Stewardship Forester at the time of the violation, and adopts and incorporates by reference the attached proposed order issued by Senior Administrative Law Judge Joe L. Allen, on March 16, 2026. Neither party submitted exceptions to the proposed final order; hence, none were considered by the Board.

Dated this _____ day of June, 2026

By: _____
Kacey KC
State Forester and
Secretary to the Board of Forestry

RIGHT TO JUDICIAL REVIEW

If you are dissatisfied with the Order, you may request rehearing or reconsideration by the Board. To do so, you must file a petition for rehearing or reconsideration pursuant to OAR 137-003-0675 and OAR 629-001-0050 within 60 days from the day this Order was served on you. If this Order was personally delivered to you, the date of service is the day you received the Order. If this Order was mailed to you, the date of service is the day it was *mailed,* not the day you received it. A petition for rehearing or reconsideration must state with specificity the grounds for objection to the order, and the remedy sought. If you do not file a petition for rehearing or reconsideration within the time limits provided, you will lose your opportunity for rehearing or reconsideration and you will lose your right to appeal to the Oregon Court of Appeals. (OAR 137-003-0675 and OAR 629-001-0050).

If, after you have filed a petition for rehearing or reconsideration, the Board issues an Order you are dissatisfied with, you have the right to appeal that Order to the Oregon Court of Appeals pursuant to ORS 183.482. To appeal, you must file a petition for judicial review with the Court of Appeals within 60 days from the day the Order was served on you.

If, 60 days after you have filed a petition for rehearing or reconsideration, the Board has not issued an order, your petition will be considered denied and at that time you will have the right to appeal the original Order to the Court of Appeals pursuant to ORS 183.480 and ORS 183.482. To appeal, you must file a petition for judicial review with the Court of Appeals within 60 days from the day that your petition is deemed denied. If you do not file a petition for judicial review within the 60-day time period, you will lose your right to appeal.

STAFF REPORT

Agenda Item No.:	G
Work Plan:	Fire Protection
Topic:	Annual Topic: Approval of Rangeland Fire Protection Association Budgets
Date of Presentation:	June 3, 2026
Contact Information:	Boone Zimmerlee, Wildfire Prevention & Policy Manager Fire Protection Division 971-375-8921; boone.w.zimmerlee@odf.oregon.gov

SUMMARY

The purpose of this agenda item is to obtain Board approval of the annual budgets of the Rangeland Fire Protection Associations currently operating in Eastern Oregon.

CONTEXT/BACKGROUND

Rangeland fire protection associations (RFPA) are nonprofit, locally governed, and operated landowner associations organized to provide fire protection on rangeland areas of Eastern Oregon. These geographic areas are outside both forest protection districts and rural fire districts. State statutes ORS 477.315-325 provides for the formation of these associations under the authority of the Board and with assistance from the Department. After formation, ORS 477.325 requires that the Board review and approve the rangeland fire protection associations' annual operating budgets.

In 2025, RFPAs provided initial attack fire protection for 17.7 million acres in eastern Oregon, with 1,284 volunteers and 870 pieces of firefighting equipment spread out across nine counties. They responded to 290 fires within their associations, 58 more than in 2024. A total of 168,272 acres burned within RFPA boundaries, far less than in 2024. For the first time, the forecasted RFPA fiscal year income exceeds $1,000,000. This is in large part due to the passing of HB 3349, as well as increased grant opportunities. Also, projected income exceeds expected expenditures, unlike fiscal year 26. In 2025, RFPAs also contributed 27,962 hours working on 16 extended attack incidents with incident management teams. Many people describe this as "neighbors helping neighbors" model. RFPA funds go toward administrating guidance, fire suppression training, facilitating access to federal grants and surplus firefighting equipment, as well as some administrative cost reimbursement. RFPA fire prevention and suppression help conserve habitat as well as safeguarding local economic resources.

The Board's approval will assist these associations of landowners in building partnerships, investing in their community, and providing their own local wildfire protection.

RECOMMENDATION

The Department recommends the Board approve the fiscal year 2027 budgets of the Ashwood-Antelope, Bakeoven-Shaniko, Blue Mountain, Brothers Hampton, Burnt River, Crane, Fields-Andrews, Frenchglen, Gateway, Greater Pine Valley, Grizzly, High Desert, Ironside, Jordan Valley, Juntura, Lone Pine, Lookout Glasgow, Lower Bridge, North Harney, North Pendelton,

Petersburg, Post Paulina, Silver Creek, Twickenham, Vale, Wagontire, Warner Valley, WC Ranches, and Wheeler County Rangeland Fire Protection Associations.

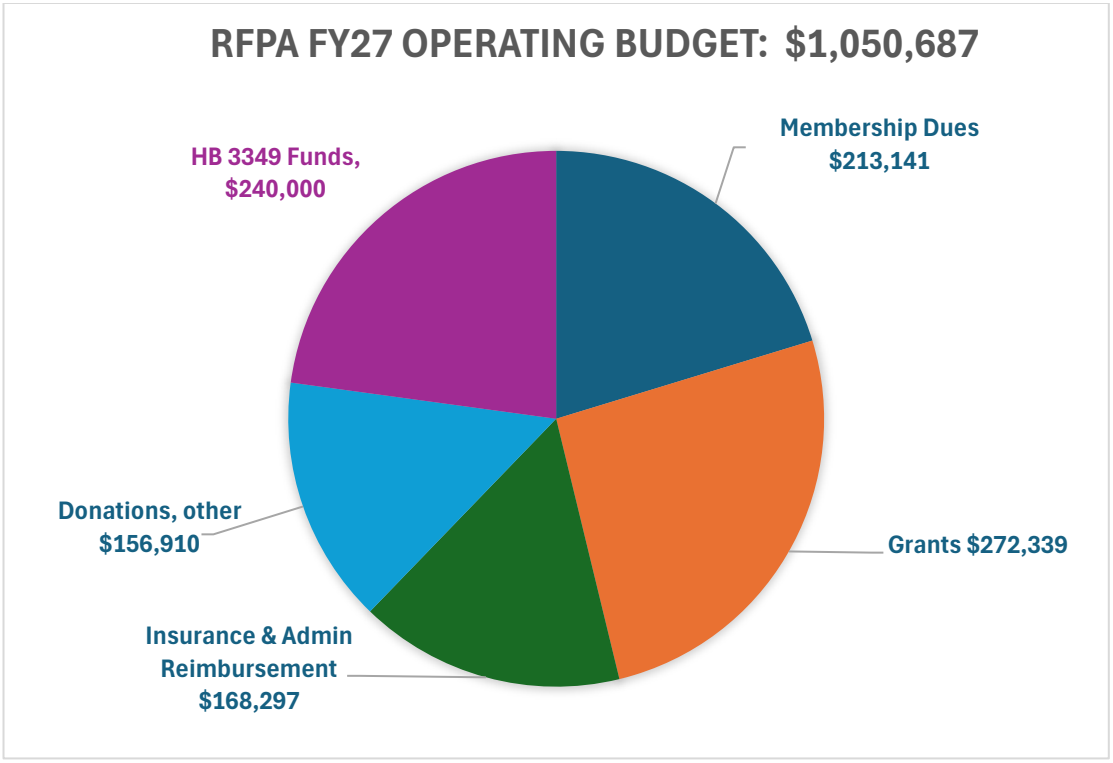
ATTACHMENTS

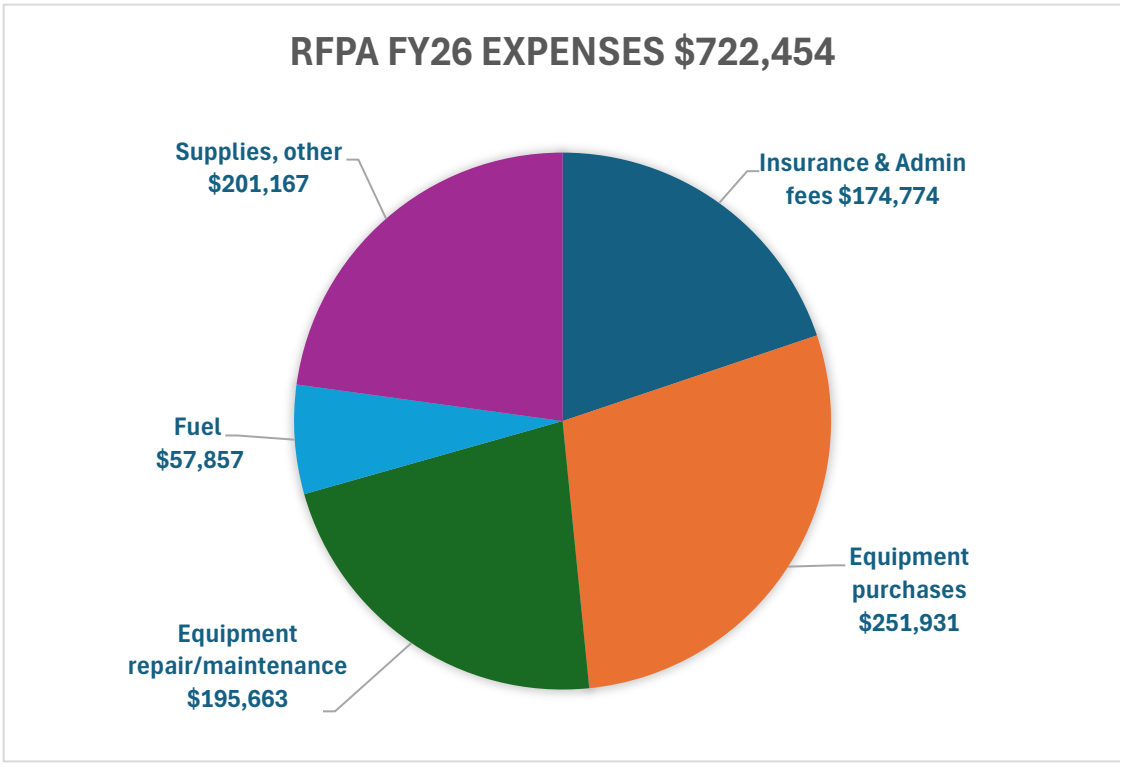
(1) Fiscal Year 2027 Rangeland Fire Protection Associations Budgets
(2) 2025 Annual Report Statistics
(3) Total Acres Protected by Year List
(4) Rangeland Fire Protection Associations 2025 Annual Newsletter

Rangeland Forest Protection Association Budget Summary
July 1, 2026 - June 30, 2027

Fiscal Year 2027 Rangeland Fire Protection Association Budget Summary

	Income							Expenses										
RFPA	Membership Fees	Donations	House Bill 3349 Funds	Grants	Reimbursed Expenses	Other	**Total Income**	Insurance	CPA & Non-profit Filings	Equipment Purchases	Equipment Repair/ Maintenance	Fuel	Supplies For Fire Suppression	Communications Equipment & Repair	Office Expenses (Supplies, Postage, etc.)	Other	**Total Expenses**	**Reserve Account**
Ashwood-Antelope	12,000	0	8,000	10,000	7,000	2,200	39,200	7,500	500	3,500	10,000	2,500	750	3,000	500	3,200	31,450	28,490
Bakeoven-Shaniko	9,000	5,000	8,000	10,000	5,000	25,000	62,000	5,000	1,000	10,000	7,000	1,500	10,000	1,000	200	5,000	40,700	330,000
Blue Mountain	1,400	3,500	0	0	4,200	0	9,100	4,000	500	0	1,000	0	0	0	0	0	5,500	
Brothers-Hampton	3,400	300	8,000	10,000	6,525	2,000	30,225	6,000	125	7,000	6,000	2,000	2,400	5,000	300	1,400	30,225	15,940
Burnt River	8,000	0	8,000	15,000	6,500	0	37,500	5,800	0	20,000	10,000	5,000	2,500	3,500	500	0	47,300	80,492
Crane	30,000	2,500	8,000	15,000	12,500	30,000	98,000	12,000	500	45,000	20,000	5,000	5,000	5,000	1,500	4,000	98,000	20,000
Fields Andrews	4,200	2,800	8,000	0	0	0	15,000	5,825	1,000	12,000	5,000	1,500	2,500	0	400	0	28,225	
Frenchglen	6,000	0	8,000	0	3,625	500	18,125	3,500	625	4,000	3,000	2,800	1,000	200	250	2,750	18,125	18,462
Gateway	1,000	1,000	8,000	5,000	4,000		19,000	3,500	0	2,000	5,000	1,000	1,000	500	100	500	13,600	41,000
Greater Pine Valley	600	0	8,000	0	1,037	0	9,637	2,103	70	0	353	275	0	0	82	218	3,101	4,740
Grizzly	3,000	0	8,000	10,000	10,000	5,000	36,000	3,000	0	3,000	5,000	1,000	2,000	1,000	500	0	15,500	25,000
High Desert	16,000	8,000	8,000	0	10,711	0	42,711	11,500	100	6,000	5,000	4,500	1,000	1,200	400	0	29,700	8,000
Ironside	4,200	1,500	8,000	15,000	3,700	0	32,400	4,300	100	19,100	3,000	1,000	1,000	3,000	1,000	0	32,500	23,155
Jordan Valley	15,000	0	8,000	0	5,950	10,670	39,620	5,900	600	5,000	20,000	0	2,500	5,000	300	0	39,300	25,500
Juntura	5,500	500	8,000	10,000	5,767	0	29,767	5,567	200	0	5,000	1,000	5,000	0	150	0	16,917	38,007
Lookout-Glasgow	2,000	3,500	8,000	0	4,150	5,000	22,650	4,000	150	10,000	2,000	2,500	2,000	1,000	100	0	21,750	37,270
Lone Pine	6,000	0	8,000	13,231	4,140	0	31,371	3,700	440	3,231	17,710	550	500	0	301	3,091	29,523	5,024
Lower Bridge	17,000	2,500	16,000	15,000	6,500	0	57,000	3,500	750	10,000	15,000	2,500	1,500	1,000	500	6,500	41,250	47,650
North Harney	6,000	500	8,000	5,000	5,000	0	24,500	4,500	500	2,000	4,000	1,000	500	500	500	0	13,500	18,000
North Pendleton	15,000	5,000	8,000	15,000	7,000	10,000	60,000	4,500	2,500	15,000	7,500	5,000	3,500	7,500	2,500	7,500	55,500	0
Petersburg	5,350	2,500	8,000	4,608	4,442	0	24,900	3,800	200	0	0	0	10,000	500	300	0	14,800	23,748
Post Paulina	10,000	6,000	8,000	0	6,900	0	30,900	6,800	100	1,500	4,500	1,000	1,000	1,000	300	700	16,900	51,585
Silver Creek	12,500	500	8,000	0	8,300	0	29,300	6,300	2,000	4,600	5,600	2,500	1,800	3,750	1,075	250	27,875	57,148
Twickenham	2,000	1,000	8,000	10,000	4,200	0	25,200	3,420	50	8,000	1,000	1,000	0	10,000	100	0	23,570	30,766
Vale	3,500	1,000	8,000	40,000	4,150	0	56,650	4,000	150	5,000	5,000	6,000	1,000	1,000	2,500	0	24,650	4,000
Wagontire	0	1,000	16,000	45,000	7,000	0	69,000	3,500	3,500	40,000	16,000	0	1,000	5,000	0	0	69,000	12,000
Warner Valley	12,091	3,740	8,000	0	6,000	0	29,831	10,399	700	500	5,000	1,732	500	1,200	600	1,200	21,831	1,599
WC Ranches	2,400	200	8,000	15,000	9,000	0	34,600	7,000	2,000	5,500	2,000	0	1,000	5,000	300	11,800	34,600	
Wheeler County	0	10,000	8,000	9,500	5,000	4,000	36,500	5,500	0	10,000	5,000	5,000	5,000	3,000	0	3,000	36,500	66,900
	213,141	62,540	240,000	272,339	168,297	94,370	1,050,687	156,414	18,360	251,931	195,663	57,857	65,950	68,850	15,258	51,109	881,392	1,014,476


RFPA FY27 OPERATING BUDGET: $1,050,687
Membership Dues $213,141
HB 3349 Funds, $240,000
Donations, other $156,910
Grants $272,339
Insurance & Admin Reimbursement $168,297


RFPA FY26 EXPENSES $722,454
Supplies, other $201,167
Insurance & Admin fees $174,774
Fuel $57,857
Equipment purchases $251,931
Equipment repair/maintenance $195,663

2025 Annual Report Statisics

Rangeland Fire Protection Association	Total Acres 4/	Private Acres 3/	State, County, Acres 2/	Federal Acres 1/	Tribal Acres	Est.	No. of Fires	Mutual Assist Fires	Smoke Chases	State & Private Acres Burned	Total Acres Burned	*Large Fires over 500 ac	Fire Suppress. Hours	Admin Hours	POV Mileage	Prescribe Fire Acres	Mem Properties *(estimate)*	Support Personel	Trained Firefighters	Fire Eng Type 4	Fire Eng Type 5&6	Slip-ons Pickup	Slip on Trailers	ATV/UTV tanks	Tenders	Graders	Dozers	Tractor w/ Transport	Tractor w/ Disk	Other
Ashwood-Antelope	**357,003**	314,547	356	41,917	183	**2009**	**3**	**10**	**3**	**79,803**	**82,036**	**1)**	**2,347**	**1,753**	**4,569**	**2314**	**41**	**45**	**20**	**3**	**7**	**9**	**0**	**12**	**1**	**1**	**11**	**3**	**0**	
Bakeoven-Shaniko	**183,145**	176,247	81	5,947	870	**2019**	**3**	**4**	**22**	**653**	**663**	**0**	**1,002**	**853**	**2,331**	**241**	**17**	**10**	**27**	**4**	**11**	**30**	**2**	**18**	**4**	**4**	**5**	**0**	**2**	2- Tractor w/plow
Blue Mountain	**1,157,141**	75,020	2,828	1,059,899	19,394	**2013**	**6**	**9**	**4**	**23**	**36**	**0**	**538**	**347**	**2,686**	**0**	**11**	**25**	**25**	**8**	**2**	**5**	**0**	**0**	**9**	**0**	**1**	**0**	**0**	
Brothers / Hampton	**716,557**	225,797	35,288	455,472	-	**2006**	**35**	**3**	**2**	**3**	**45**	**0**	**172**	**616**	**4,973**	**1200**	**56**	**22**	**17**	**3**	**5**	**2**	**7**	**2**	**0**	**2**	**2**	**2**	**4**	Port-a-tank
Burnt River	**273,581**	169,336	3,702	100,543	-	**2000**	**23**	**0**	**2**	**1,293**	**2,354**	**2), 3)**	**741**	**150**	**2,306**	**0**	**62**	**16**	**19**	**2**	**1**	**11**	**0**	**5**	**1**	**1**	**7**	**3**	**2**	
Crane	**1,344,523**	574,596	102,682	658,557	8,688	**1998**	**21**	**0**	**7**	**9**	**187**	**0**	**101**	**379**	**450**	**0**	**300**	**10**	**29**	**10**	**12**	**0**	**4**	**0**	**6**	**2**	**2**	**0**	**3**	
Fields / Andrews	**1,009,243**	161,806	1,077	846,360	-	**1998**	**8**	**0**	**0**	**6**	**59**	**0**	**288**	**115**	**3,424**	**117**	**48**	**41**	**7**	**0**	**5**	**2**	**0**	**0**	**3**	**1**	**1**	**0**	**0**	
Frenchglen	**1,467,117**	414,529	2,109	1,050,479	-	**2013**	**8**	**1**	**0**	**10**	**227**	**0**	**24**	**595**	**6,871**	**0**	**32**	**5**	**41**	**4**	**3**	**4**	**1**	**0**	**1**	**0**	**1**	**1**	**0**	
Gateway	**9,310**	8,703	0	605	2	**2010**	**0**	**2**	**3**	**0**	**0**	**0**	**22**	**116**	**274**	**323**	**22**	**17**	**13**	**1**	**2**	**0**	**0**	**4**	**0**	**2**	**1**	**3**	**0**	
Greater Pine Valley	**74,955**	29,662	437	44,856	-	**2016**	**2**	**0**	**2**	**35**	**35**	**0**	**122**	**947**	**350**	**0**	**7**	**2**	**24**	**2**	**2**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	
Grizzly	**70,923**	42,619	1	28,303	-	**2023**	**1**	**1**	**0**	**4,391**	**4,585**	**1)**	**750**	**850**	**650**	**0**	**23**	**15**	**5**	**2**	**2**	**6**	**1**	**4**	**2**	**0**	**2**	**2**	**3**	
High Desert	**2,014,038**	393,047	63,343	1,557,490	158	**2018**	**35**	**0**	**12**	**10**	**15**	**0**	**650**	**960**	**1,230**	**150**	**102**	**5**	**40**	**4**	**18**	**1**	**2**	**1**	**4**	**0**	**4**	**3**	**6**	2 trailer mounted pumps
Ironside	**356,097**	330,501	1,649	23,947	-	**1964**	**2**	**0**	**0**	**85**	**85**	**0**	**125**	**1,365**	**3,324**	**0**	**36**	**30**	**30**	**0**	**0**	**7**	**1**	**14**	**4**	**2**	**4**	**3**	**0**	
Jordan Valley	**2,496,084**	292,992	178,676	2,024,416	-	**2008**	**27**	**0**	**0**	**11,565**	**57,980**	**4), 5), 6), 7), 8), 9)**	**8,001**	**825**	**8,595**	**0**	**45**	**40**	**100**	**8**	**1**	**31**	**0**	**37**	**8**	**3**	**3**	**2**	**0**	
Juntura	**952,374**	178,141	82,154	688,808	3,271	**2007**	**2**	**0**	**1**	**8**	**28**	**0**	**59**	**402**	**668**	**5**	**12**	**9**	**19**	**1**	**5**	**1**	**1**	**0**	**2**	**2**	**1**	**2**	**0**	1 lowboy, 1 county owned tractor
Lone Pine	**55,146**	17,301	2,675	35,170	-	**2013**	**1**	**0**	**6**	**1**	**1**	**0**	**20**	**719**	**2,175**	**23**	**23**	**5**	**18**	**2**	**2**	**2**	**1**	**0**	**3**	**1**	**1**	**1**	**0**	
Lookout Glasgow	**267,235**	168,166	561	98,508	-	**2014**	**3**	**2**	**7**	**9**	**9**	**0**	**143**	**212**	**2,136**	**0**	**10**	**15**	**30**	**4**	**0**	**5**	**0**	**5**	**5**	**1**	**2**	**2**	**0**	1 Lowboy, 3 Semi tank trailers
Lower Bridge	**32,258**	15,212	40	17,006	-	**2022**	**10**	**7**	**3**	**1,172**	**5,096**	**10), 11)**	**2,402**	**1,982**	**970**	**160**	**49**	**20**	**31**	**3**	**4**	**3**	**2**	**2**	**6**	**0**	**4**	**1**	**0**	2
North Harney	**106,269**	82,663	1,209	20,607	1,790	**2022**	**1**	**2**	**2**	**10**	**11**	**0**	**65**	**1,220**	**600**	**20**	**37**	**4**	**13**	**1**	**3**	**5**	**1**	**2**	**1**	**0**	**0**	**0**	**10**	
Petersburg	**179,026**	162,834	1033.69	14,636	522.1	**2023**	**1**	**6**	**0**	**30**	**30**	**0**	**250**	**252**	**3,231**	**0**	**34**	**3**	**108**	**0**	**0**	**25**	**0**	**0**	**10**	**0**	**0**	**0**	**9**	
Post / Paulina	**640,268**	351,909	22,898	265,461	-	**2006**	**22**	**2**	**4**	**2,104**	**5,077**	**12)**	**470**	**215**	**2,295**	**0**	**37**	**41**	**13**	**1**	**6**	**12**	**4**	**0**	**5**	**0**	**11**	**6**	**0**	
Silver Creek	**765,887**	231,336	10,820	523,746	-	**2001**	**12**	**0**	**0**	**0**	**50**	**0**	**41**	**423**	**4,650**	**0**	**84**	**47**	**39**	**9**	**10**	**2**	**4**	**0**	**2**	**0**	**6**	**3**	**3**	1 trailer mounted volume pump
Twickenham	**126,292**	77,338	40	46,317	2,597	**2001**	**3**	**3**	**0**	**5**	**6**	**0**	**264**	**1,032**	**4,369**	**20**	**42**	**10**	**6**	**2**	**1**	**2**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	2 Chainsaws
Vale	**1,025,383**	204,660	24,195	796,528	-	**2008**	**13**	**1**	**0**	**278**	**1,220**	**3)**	**298**	**1,403**	**770**	**0**	**32**	**15**	**62**	**9**	**0**	**12**	**0**	**15**	**3**	**0**	**1**	**0**	**6**	
Wagontire	**301,322**	37,852	68,621	194,849	-	**2015**	**4**	**0**	**1**	**10**	**11**	**0**	**80**	**2,835**	**120**	**0**	**3**	**18**	**5**	**1**	**2**	**0**	**0**	**0**	**2**	**2**	**3**	**3**	**3**	Support Humvee
Warner Valley	**1,311,703**	162,789	77,098	1,071,776	40	**2011**	**12**	**1**	**1**	**102**	**1,688**	**13)**	**468**	**550**	**1,774**	**0**	**114**	**13**	**22**	**0**	**8**	**5**	**2**	**6**	**8**	**1**	**4**	**2**	**0**	
WC Ranches	**49,243**	41,506	1,948	5,789	-	**2015**	**0**	**5**	**0**	**0**	**0**	**0**	**141**	**2,445**	**8,358**	**0**	**11**	**3**	**18**	**2**	**5**	**1**	**0**	**5**	**0**	**1**	**6**	**2**	**1**	1 skidder, 1 backhoe
Wheeler Co. F & Res	**391,920**	283,710	548	75,917	31,745	**2016**	**32**	**13**	**11**	**3,594**	**6,737**	**14), 15)**	**1,865**	**530**	**110**	**0**	**14**	**1**	**16**	**2**	**5**	**1**	**1**	**1**	**3**	**0**	**1**	**1**	**0**	
	17,734,043	**5,224,819**	**686,070**	**11,753,908**	**69,260**		**290**	**72**	**93**	**105209.2**	**168271.7**	**15**	**21,449**	**24,089**	**74,258**	**4,573**	**1,304**	**487**	**797**	**88**	**122**	**186**	**37**	**137**	**93**	**26**	**84**	**45**	**52**	

1/ RFPAs do not protect Federal acres, this list is just the federal land within the RFPA boundary.

2/ RFPAs protect DSL lands as a membership in the RFPA, also OPRD lands are protected under a protection agreement with ODF

3/ RFPAs protect all private lands regardless of membership in the Assn as per agreement with the Board of Forestry

4/ Only includes Oregon acres.

4/ Silver Creek and Petersburg finalized boundary expansions in 2025.

1) Cram; 95,736 ac, Wasco & Jefferson Counties, 7/13/25
2) Daybreak; 851 ac, Baker County, 7/16/25
3) Lost Tom; 1,124 ac, Baker and Maleheur Counties, 7/30/25
4) Coyote; 764 ac, Malheur County, 7/13/25
5) Black Hills; 4,958 ac, Malheur County, 7/17/25
6) Little John; 12,973 ac, Malheur County, 7/72/25
10) Alder Springs; 3,279 ac, Jefferson County, 6/16/25
11) Flat Fire; 23,380 ac, Jefferson & Deschutes Counties, 8/21/25
12) Willow; 4,417 ac, Crook County, 7/9/25
13) Black Canyon; 1,584 ac, Lake County, 7/1/25
14) Butte Creek; 1,776 ac, Wheeler County, 5/25/25
15) Black Rock; 43,842 ac, Wheeler County, 9/4/25

Annual Totals

Row One

Year	No. of RFPA	Total Acres Protected	Private Acres[3]	State Acres[2]	Federal Acres[1]	No. of Fires	Mutual Assist Fires	Smokes	State & Private Acres Burned	Total Acres Burned	Fires over 500 Acres	Fire Suppression Hours	Admin Hours	POV Mileage	Prescribed Fire Acres
2015	20	13,897,124	4,007,960	616,063	9,322,329	164			113,160	263,971	11	15,591	9,954		2,755
2016	22	14,228,169	4,169,230	601,743	9,457,196	116	31		2,732	87,422	7	5,956	20,148		5,632
2017	23	15,967,400	4,553,896	639,901	10,773,603	146	35	147	29,580	103,388	17	9,556	21,148	76,589	4,174
2018	23	16,556,081	4,855,598	639,982	11,060,501	168	52	57	25,579	76,380	17	8,692	21,075	82,000	9,060
2019	24	16,556,081	4,855,598	639,982	11,060,501	114	32	76	3,308	34,475	5	5,624	17,802	84,770	1,198
2020	24	16,556,081	4,855,598	639,982	11,060,501	142	37	78	19,005	79,516	14	8,068	17,264	62,050	3,394
2021	24	16,556,081	4,855,598	639,982	11,060,501	114	32	34	5,643	14,493	9	5,228	15,816	56,938	3,345
2022	26	17,703,201	5,276,687	646,767	11,778,940	131	41	67	30,449	53,790	6	5,194	19,061	57,662	3,881
2023	28	17,539,962	5,130,732	685,902	11,654,112	93	30	91	5,606	7,080	5	4,743	20,264	67,862	1,710
2024	28	17,539,962	5,130,732	685,902	11,654,112	232	80	151	325,830	747,822	39	45,150	26,981	78,465	1,914
2025	28	17,734,043	5,224,819	686,070	11,753,908	290	72	93	105,209	168,272	15	21,449	24,089	74,258	4,573
10-Year Average						**155**	**44**	**79**	**55,294**	**137,264**	**13**	**11,966**	**20,365**	**64,059**	**3,888**

Row Two

Year	Member Properties *(estimate)*	Support Personnel	Trained Firefighters	TOTAL VOLUNTEERS	Fire Eng Type 4	Fire Eng Type 5 & 6	Slip-on Pickup	Slip-on Trailer	ATV UTV Tank	Tenders	Graders	Dozers	Tractor w/ Transport	Tractor w/ Disk	TOTAL FF EQUIP
2015	641	252	283	535	95		112	6	57	45	11	43			369
2016	558	449	340	789	61	71	116	24	70	50	26	98	41		557
2017	671	516	512	1028	80	76	127	18	72	54	26	86	51	17	607
2018	1,007	400	648	1048	92	97	146	31	89	62	30	87	45	15	694
2019	988	406	684	1090	97	108	140	19	82	55	24	76	48	13	662
2020	996	443	655	1098	98	103	139	23	84	50	25	101	47	16	686
2021	1,185	412	639	1051	93	111	140	38	103	55	31	95	44	16	726
2022	1,129	403	802	1205	99	113	171	41	123	68	28	89	47	41	820
2023	1,286	375	798	1173	89	115	192	39	123	73	33	83	46	40	833
2024	1,248	462	746	1208	100	123	192	39	124	75	21	90	40	63	867
2025	1,304	487	797	1,284	88	122	186	37	137	93	26	84	45	52	870

1. RFPAs do not protect federal acres, this is the acres of federal land within the RFPA boundary.
2. RFPAs protect DSL lands as a membership of the RFPA; OPRD lands are protected under a protection agreement with ODF
3. RFPAs protect all private lands regardless of membership in the Association as per agreement with the Board of Forestry

Rangeland Fire Protection Associations

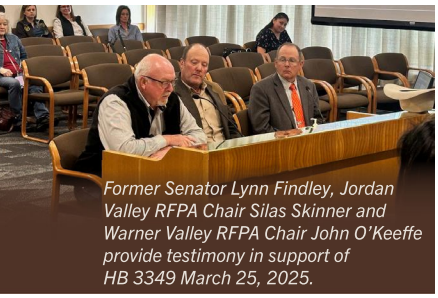
Annual Newsletter | 2025

Rangeland Fire Protection Associations (RFPAs), volunteer groups of landowners who protect their properties and neighboring lands from wildfires; play a vital role in safeguarding 17.7 million acres of rural private and public land, including 5.9 million acres that would otherwise lack fire protection.



Dani Cowdrey and Mat Felton of the Ashwood-Antelope RFPA attend Cram Fire morning briefing July 16, 2025.

Oregon Legislature Passes House Bill 3349



Former Senator Lynn Findley, Jordan Valley RFPA Chair Silas Skinner and Warner Valley RFPA Chair John O'Keeffe provide testimony in support of HB 3349 March 25, 2025.

The large fires that swept through eastern Oregon in the summer of 2024 pushed fire agencies and Rangeland Fire Protection Associations to their limits. During a visit to the area, Governor Tina Kotek met with Representative Mark Owens and recognized the critical work RFPAs were doing despite operating on shoestring budgets.

With the Governor's support, Owens worked alongside the rangeland fire program to develop legislation addressing these challenges. The result was House Bill 3349, signed by Governor Kotek on July 17, 2025, which authorizes Oregon Department of Forestry to transfer surplus firefighting equipment, vehicles, radios, and gear, to local RFPAs, and invests $1 million to directly support their work.

RFPAs Form Unified Leadership Committee

Following passage of House Bill 3349, which allocated $1 million in funding and streamlined equipment acquisition through Oregon Department of Forestry, the RFPAs recognized the need for a coordinated body to help facilitate funding and equipment distribution while supporting state agency efforts and as a result the Interim Leadership Committee was formed. Ted Netter of Lower Bridge RFPA shared that the committee emerged from a commitment to "communication, cooperation and collaboration between all 28 RFPAs," with the state requiring an official representative body for effective dialogue.

A nine-person structure with three representatives each from Central, Southern, and Eastern areas covering all 28 RFPAs was formed. The committee includes:

- **Central area:** Chairman Ted Netter, Lower Bridge RFPA; Mat Felton, Ashwood-Antelope RFPA; Alan Canady, Twickenham RFPA.
- **Southern area:** Mike Fox, Frenchglen RFPA; Ron Whiting, Lone Pine RFPA; John O'Keeffe, Warner Valley RFPA
- **East area:** Silas Skinner, Jordan Valley RFPA; Jeff Burkhardt, Vale and Ironside RFPAs; Levi Bunch, Burnt River RFPA

As it formalizes its duties and structure, the committee emphasizes that it will not interfere with individual RFPA operations but rather serve as a conduit to gather and transmit member needs, concerns, and successes between RFPAs and external cooperators.

Cooperation Between RFPAs and Agencies Contains Cram & Flat Fires



Mat Felton working to control the Cram Fire July 15, 2025.

The Cram Fire, which started July 13, burned more than 95,000 acres, primarily within the Ashwood-Antelope RFPA in Wasco and Jefferson Counties. Mat Felton, Fire Supervisor for the Ashwood-Antelope RFPA, described the first 24 hours as "a fiasco" driven by severe winds, with firefighters battling house to house as flames tore through Ashwood. The combined efforts of members from four RFPAs, alongside BLM, Oregon Department of Forestry, and structure teams over the next five days prevented what Felton estimates could have become a 300,000-acre fire. Ted Netter with Lower Bridge RFPA, who assisted during the day the fire grew 24,000 acres due to high winds, emphasized that "we worked as a team, and worked with the agencies on the ground, and there were a lot of good things that happened on a really bad day." In total, Ashwood-Antelope, Grizzly, Bakeoven-Shaniko and Lower Bridge RFPAs responded with 50 fire apparatus for 2,750 volunteer hours over a period of ten days.

The Flat Fire started August 21 and burned more than 23,000 acres in Jefferson and Deschutes Counties, destroying five houses and 11 outbuildings while damaging two additional homes and two outbuildings. Netter noted that while the fire started under Lake Chinook and Oregon Department of Forestry protection outside Lower Bridge RFPA's boundary, he immediately recognized it would affect members in the area. Day two of the fire proved particularly critical, with extreme fire conditions and "completely nasty" wind creating dangerous circumstances. Despite these challenges, cooperation between RFPA firefighters and state agencies enabled responders to contain the blaze. "Through teamwork and pretty unbelievable effort, we were able to hold that thing," Netter said. The fire burned 943 acres of private land within Lower Bridge RFPA protection. Lower Bridge and Ashwood-Antelope RFPAs responded with 28 fire apparatus for 1,652 volunteer hours over a period of ten days.

RFPAs Experience More Fires, Fewer Acres Burned in 2025 than 2024

In 2025, Oregon experienced an increased number of fire starts compared to 2024, statewide as well as within RFPA areas of protection, however, significantly fewer acres burned. Although the state didn't experience the same large-scale extreme fire weather that led to six megafires in the 2024 fire season, 2025's 95,000 acre Cram fire proved the conditions for catastrophic fires did exist. Oregon Department of Forestry Rangeland Fire Coordinator Allison Rayburn cites a contributing factor to the success as "increased participation and urgency and increased cooperation and partnerships after experiencing the devastation of 2024." RFPAs responded to 290 fires compared to 232 in 2024 and well above the ten year average of 155 fires. Burned acreage within RFPA areas of protection dropped to 168,272 acres compared to the 747,822 acres in 2024. Large fires over 500 acres decreased from 39 to 15, and large fires with Incident Management Team and RFPA interactions fell from 39 to six.



Twickenham RFPA responds to the Butte Fire in Wheeler County June 4, 2025.

Lessons Learned from 2024 Fire Season Resonate Throughout 2025

After Action Reviews Produce Lessons Learned

Following the 2024 fire season, Katie Wollstein, Rangeland Fire Specialist with Oregon State University Extension Fire Program, facilitated After Action Reviews (AARs) in the Vale and Burns districts involving RFPAs and cooperating agencies to examine fire response effectiveness. While in-person communications and local knowledge proved strong, with people knowing each other and catching fire starts early, the reviews identified significant communication challenges between Incident Management Teams (IMTs) and RFPAs, including confusion over IMT organizational structure, contact protocols, and radio channels. The AARs highlighted critical needs for dedicated liaisons, mutual understanding between RFPAs and IMTs, and practical training opportunities, with Wollstein emphasizing that while some IMTs excel at recognizing RFPAs as valuable assets, others need time to understand the training and resources these "landowners in yellow shirts" bring to fire response as large, complex fires requiring IMT involvement become increasingly common.

RFPAs Respond to Lessons Learned

RFPAs responded to lessons learned, perhaps none more so than the Vale RFPA, which doubled its membership to 62 and increased water carrying capacity from 3,750 to 22,750 gallons through equipment acquired via donations, grants, and the Federal Excess Personal Property program. Jeff Burkhardt, a member of both the Ironside and Vale RFPAs, credits community members wanting to help after witnessing 2024's horrific fires. The enhanced capacity yielded dramatic results in 2025: despite more fire starts than 2024, burned acreage dropped as the Vale RFPA and BLM contained fires at 5 or 10 acres instead of thousands. "When we get a call, we're on the road in minutes," Burkhardt said. "People just know what to do."

Agencies Respond to Lessons Learned

The Oregon Department of Forestry Rangeland Fire Program's six full-time staff experienced the 2024 fire season alongside RFPAs, participated in after action reviews, and applied lessons learned throughout 2025 with increased focus on basic fire training, radio communications, and working effectively with Incident Management Teams. Working with Federal Surplus Screener Skip Morton, RFPAs acquired 15 pieces of equipment including federal surplus trucks, fire engines, and equipment trailers. Oregon Department of Forestry Rangeland staff provided presentations on working with RFPAs at four agency incident management team trainings, invited IMT personnel to present at the annual RFPA Summit, and served as liaison officers on the Alder Springs, Cram, Flat, and Black Rock fires to facilitate communication and cooperation.

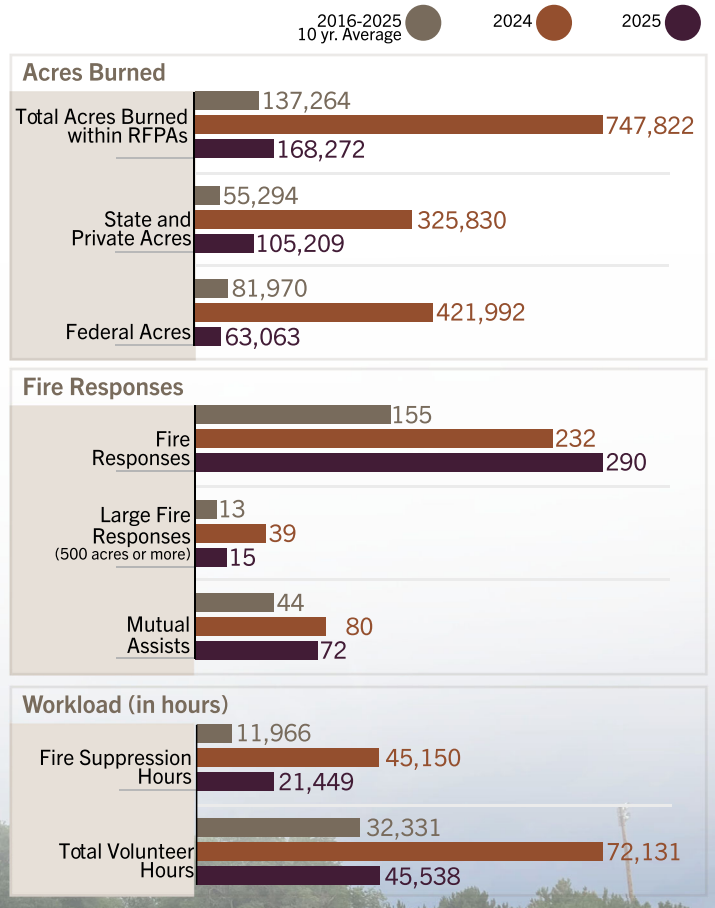


Katie Wollstein, Rangeland Fire Specialist with OSU Extension Fire Program facilitates a 2024 fire season after action review for RFPAs and cooperators in Burns January 24, 2025.



Mark McBride of the Vale RFPA is presented the Outstanding Neighbor Award by Steve Meyer, Oregon Department of Forestry Rangeland Fire Specialist, at the 2025 RFPA Summit.

RFPA Firefighting Contributions





Vale RFPA equipment, July 4, 2025. Vale added 6 heavy engines/tenders to their lineup after the 2024 fire season, tripling their fleet going into 2025.

Oregon Rangeland Fire Protection Associations

Range Fire Protection Associations

Oregon Department of State Lands

Tribal Fee Lands

United States Bureau of Land Management

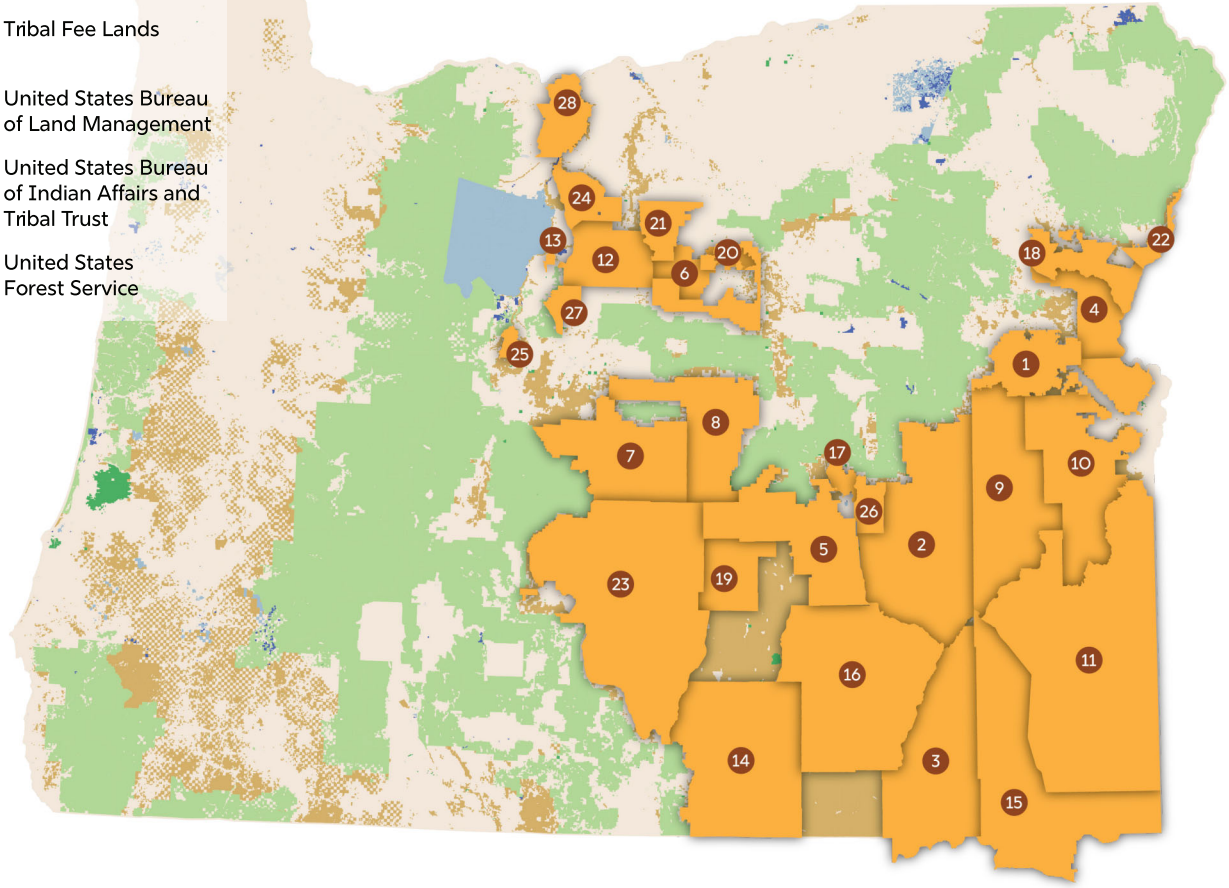
United States Bureau of Indian Affairs and Tribal Trust

United States Forest Service

28 RFPAs consist of 1,200 volunteer members across 9 counties in eastern Oregon. 800 are trained firefighters and 400 provide support.

June 4th, 2025 the Silver Creek RFPA expanded to include an additional 90,831 acres.

September 3rd, 2025 the Petersburg RFPA expanded to include an additional 103,262 acres.



1. Ironside RFPA, Malheur Co. est. 1964
2. Crane RFPA, Harney Co. est. 1998
3. Fields-Andrews RFPA, Harney Co. est. 1998
4. Burnt River RFPA, Baker Co. est. 2000
5. Silver Creek RFPA, Harney Co. est. 2001
6. Twickenham RFPA, Wheeler Co. est. 2001
7. Brothers-Hampton RFPA, Crook, Deschutes Co. est. 2006
8. Post-Paulina RFPA, Crook, Deschutes, & Harney Co. est. 2006
9. Juntura RFPA, Malheur Co. est. 2007
10. Vale RFPA, Malheur Co. est. 2008
11. Jordan Valley RFPA, Malheur Co. est. 2008
12. Ashwood-Antelope RFPA, Jefferson, Wasco Co. est. 2009
13. Gateway RFPA, Jefferson Co. est. 2010
14. Warner Valley RFPA, Lake Co. est. 2011
15. Blue Mountain RFPA, Malheur Co. est. 2013
16. Frenchglen RFPA, Harney Co. est. 2013
17. Lone Pine RFPA, Harney Co. est. 2013
18. Lookout-Glasgow RFPA, Baker Co. est. 2014
19. Wagontire RFPA, Harney Co. est. 2015
20. WC Ranches RFPA, Wheeler Co. est. 2015
21. Wheeler County Fire & Rescue RFPA, Wheeler Co. est. 2016
22. Greater Pine Valley RFPA, Baker Co. est. 2016
23. High Desert RFPA, Lake Co. est. 2018
24. Bakeoven-Shaniko RFPA, Wasco Co. est. 2019
25. Lower Bridge RFPA, Deschutes & Jefferson Co. est. 2022
26. North Harney RFPA, Harney Co. est. 2022
27. Grizzly RFPA, Jefferson Co. est. 2023
28. Petersburg RFPA, Wasco Co. est. 2023

Oregon Department of Forestry supports Rangeland Fire Protection Associations through administrative guidance and cost reimbursement, fire suppression training, facilitating access to federal grants and surplus fire fighting equipment.

For more Information:
Oregon Department of Forestry | allison.rayburn@odf.oregon.gov

STAFF REPORT

Agenda Item No.:	H
Work Plan:	Board of Forestry Standard Business
Topic:	Facilities Capital Management Program Project Update
Date of Presentation:	June 3, 2026
Contact Information:	Laura A. Al Omrani, Director – FCMP 503-302-5707; laura.a.alomrani@odf.oregon.gov

SUMMARY

The purpose of this agenda item is to provide the Board with an overview of current capital project status and recurring and deferred maintenance needs, as well as an overview of forthcoming projects for Statewide and Salem Campus locations, with emphasis on the planning report for the Radio Communications unit.

CONTEXT

The Board receives periodic updates regarding the overall condition and management of our extensive network of agency facilities.

BACKGROUND AND ANALYSIS

The Department manages over 400 structures in a network of Salem and field office buildings, storage warehouses, housing facilities, communication sites, and miscellaneous infrastructure. The update to the Board includes the following:

- Organizational and Staffing Update (Attachment #1)
- Current and Upcoming Capital Project Status (Attachment #2)
- Current and Upcoming Deferred Maintenance Project Status (Attachment #3)
- Radio Communications Planning Report (Attachment #4)

RECOMMENDATION

This agenda item is for information only.

NEXT STEPS

Facilities management information is anticipated to be reported to the Board on an annual basis with the next potential presentation occurring in June 2027. Feedback and direction provided based on this report will inform further updates.

ATTACHMENTS

(1) 2026 Facilities Capital Management Staffing Updates and Organizational Chart
(2) 2026 Capital Projects Status Report
(3) 2026 Deferred Maintenance Projects Status Report
(4) 2026 Radio Communications Planning Report

2026 Facilities Capital Management Staffing Updates and Organizational Chart

Updates for 2026

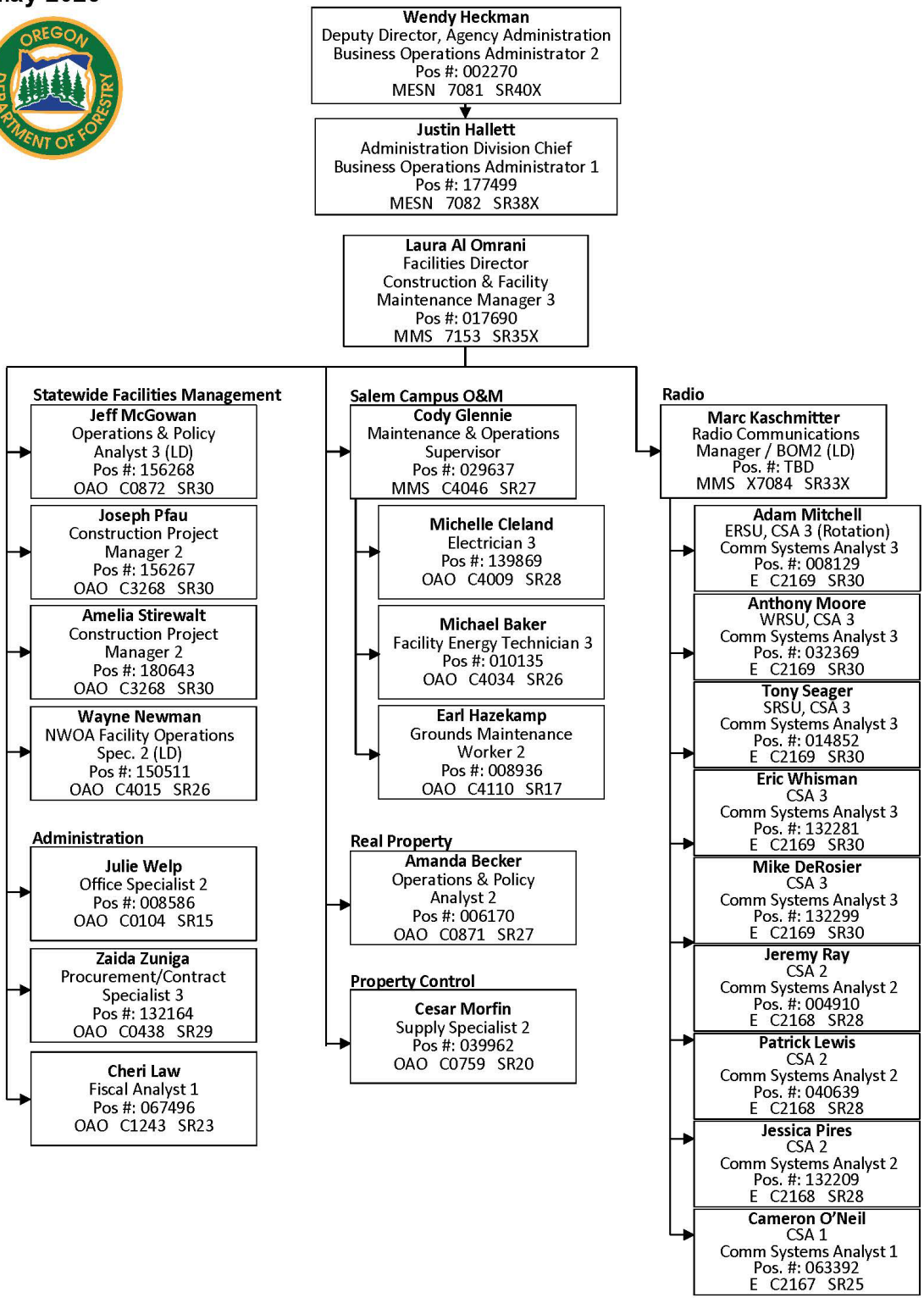
Over the last year, the Facilities Capital Management Program, through policy option packages and reorganization, has been able to add an additional Construction Project Manager and Fiscal Analyst to the program and enhance the resources available for meeting program objectives.

As of January 1, 2026, the Radio Communications Program has been moved to the Facilities Capital Management Program. A programmatic review of the Radio Communications Program in 2025 determined that the Facilities Capital Management Program would provide the appropriate structure and oversight to administer the Radio Communications Program and establish consistent and reliable performance of the program through the following actions:

- Establishing clear priorities and an aligned workforce
- Setting vision for program improvements
- Assessment of infrastructure vulnerabilities and strategy for prioritized remediation, including funding, resources and implementation strategies
- Policy review

Continued evaluation is underway ensure consistent and reliable performance of the radio program to meet the demands of a complete and coordinated protection system and improve program delivery.

Agency Administration
Facilities Capital Management Program Organizational Chart
May 2026



The 2026 Capital Projects Status Report

Current Projects – 2026

North Cascade (Santiam) Unit Headquarters Facility Replacement:

- Fourth month into scheduled twelve-month construction period.
- May/June schedule – construction expected to begin.
- Radio/technical upgrades: Radio system for LMR – sent to designer. Addition of microwave to communicate with McCulley Mountain – requires direct line-of-sight so optimal location to be determined. Other technical upgrade will be location of the wall mounted wireless access points within the newly constructed building.

Veneta Modernization Project
Fall 2026 will begin the Request for Proposals process.

Airport Hangar for Multi-Mission Aircraft
Following legislative approval of the administrative correction to the hangar location, the Aviation project team initiated coordination with the Prineville Airport to advance siting and development planning. As the current level of funding received is insufficient for the build, development of a policy option package and a cost-refinement exercise have been underway. Cost estimates for site buildout, utilities, and infrastructure are in excess of available funding. As of May 2026, updated cost estimates for the original Salem Airport site are being considered, as well as locations other than Salem or Prineville.

Klamath Fire Cache Warehouse Replacement
Currently near 50% completion on construction documents. Expected solicitation for Fall 2026 and a construction contract in place this winter.

State Forester's Building Office Restoration
Phase 1: envelope repair/waterproofing – basement demolition will first remove (and salvage, where indicated) non-load bearing interior basement walls and other fixtures to expose foundation and slab for evaluation of structural integrity prior to committing to a full excavation around the perimeter of the building for waterproofing. Demolition team solicited as an intermediate procurement. SHPO approval not needed for these activities as they only effect areas of tertiary importance. Associated activities:

- Fiber connections to be relocated
- Archive materials in the basement to be re-located to corresponding room/area on the main level. Will be working with division staff and Museum staff regarding moving and cataloguing these materials.

Findings based on the foundation evaluation will guide next steps in the process.

2026 Deferred Maintenance Projects Status Report

Completed Projects – 2025

- Campus lighting – control panel upgrades, exterior lighting upgrades, battery replacements for lighting and fire panels
- Building D roof replacement and window sealing complete.
- Building D remodel (Forest Resources) complete. Currently the facilities team is completing storage refinements to the FR conference room ("The Grove")
- Astoria Roofing and Siding

Current and Upcoming Projects – 2026

Salem Campus:

- Building B (SFOB) envelope repair/waterproofing – will first remove (and salvage, where indicated) interior basement walls to expose foundation and slab for evaluation of structural integrity prior to excavating around the exterior foundation walls. (May, 2026)
- Building Systems upgrades and repairs: HVAC, Building A Furnace, Water heater replacement, Building G roof unit replacements, etc.
- Building E Roof Evaluation
- Surveillance camera upgrades/additions
- Parking Lot Striping
- Exterior Painting (Not including building B)
- Miscellaneous repairs and deferred/regular maintenance
- Landscape repair around Building D

Statewide:

- COD Deferred maintenance projects (various)
- Clatskanie Guard Station
- Molalla Stormwater
- South Fork/Tillamook – Fuel System Upgrades

2026 Radio Communications Planning Report

Radio Program Review Action Plan

Performance and Accountability
To increase performance, Agency Administration developed standardized position descriptions for all agency Communication Systems Analysts. The updated PDs are now aligned with the tasks, skills, and workload required to support the agency's Land Mobile Radio and Smoke Detection systems.

To address accountability the Radio Communication Program is currently developing a multiyear statewide project list with the goal of providing the agency with timely and transparent updates on project status.

To increase system resiliency the Radio Communications Program has developed updated preventative maintenance and site installation standards for both Land Mobile Radio and Smoke Detection equipment.

Infrastructure
The agency has identified the critical need to assess the status of ODF owned communications infrastructure. To address this need, the agency has applied for a grant through OEM to fund professional condition assessments of these critical assets. The data received from the condition assessments will be used to develop prioritized plans to either replacement or remediation agency owned infrastructure.

AVL Project
ODF has developed an Automatic Vehicle Location (AVL) system to track ODF staff throughout the state. 36 locations have been selected to provide the required coverage. The Radio Communications program has been challenged with completing the installation of 50% of AVL sites during calendar year 2026. The other effort associated with AVL is ensuring all agency subscriber radios that have the capability are configured for AVL.

Current Status:
- By June 1 (7) sites installations will be completed
- The remaining (11) sites will be completed during fire season or after fire season

Smoke Detection Site Upgrades
Out of the (84) smoke detection sites (16) required upgrades to function on Forest Watch 4, upgrades completed by June 1.

Agenda Item No.:	I
Work Plan:	Board of Forestry Standard Business
Topic:	ODF Equipment Pool Report
Presentation Title:	Equipment Pool Update, ORS 526.144 Overview
Date of Presentation:	June 3, 2026
Contact Information:	Justin Hallett, Agency Administration Division Chief

SUMMARY

The purpose of this agenda item is to provide the Board with an informational update of the Equipment Pool program to include:

- Statutory establishment of pool under ORS 526.144,
- BOF authority,
- Current operations with Fleet and Communications,
- Agency evaluation and realignment.

CONTEXT

The equipment pool is a centralized support function that manages the agency's vehicles and field equipment used for forestry operations, wildfire response and administrative travel. The pool exists to ensure Oregon Department of Forestry (ODF) staff have reliable, cost-effective transportation and equipment across the state. The pool supports everything from daily field inspections to large-scale wildfire mobilization.

BACKGROUND AND ANALYSIS

It is the policy of the Forester and the State Board of Forestry to operate an Equipment Pool to furnish transportation and equipment.

ORS 526.144 through ORS 526.152 grants the authority to establish and operate the equipment pool. The equipment pool is an Internal Service Fund (ISF) with ORS 283.395 and Oregon Department of Administrative Services (DAS) Oregon Accounting Manual providing rules for management of ISF's and interagency fund transfers. Internal service fund activities do not count towards overall revenue and expenditures of the agency as doing so would overstate total revenues and expenditures.

Board of Forestry authority over the equipment pool is defined within each section of the statutes.

ORS 526.144 Equipment Pool; participation.

(1) The equipment pool operated by the forester and the State Board of Forestry, which furnishes transportation and equipment for the various activities and programs of the board, is for the acquisition, operation, storage, maintenance and replacement of equipment. Notwithstanding any other law, the forester, under the direction of the board, may:

(a) Determine each activity or program of the board that shall participate in the equipment pool, and in so doing, cause the transfer of moneys from the account representing such activity or

program in an amount determined advisable for equipment pool purposes. However, in each instance the transfer of moneys must be based on the proportionate use of the equipment pool, or the proposed use thereof, by the activity or program.

(b) Transfer equipment to the equipment pool, which items of transfer are owned by the State of Oregon and under the jurisdiction of the board or forester. In such event the records shall reveal the cash value of the transferred items as of the date of the transfer.

(2) Forest protective associations or agencies under contract or cooperative agreement with the board pursuant to ORS 477.406 may, with the approval of the board, participate in the equipment pool for the purposes of the contract or agreement. Participation by such an association or agency shall be on the same basis as an activity or program of the board that participates in the equipment pool.

ORS 526.146 Charges

1) All items transferred under ORS 526.144, together with any equipment purchased from moneys transferred to the equipment pool, are available for all activities or programs participating in the equipment pool. However, upon use of such equipment for any activity or program, a reasonable use charge shall be made against such activity or program. The charge shall be based upon the maintenance and replacement costs for the equipment used, including operational expenses.

(2) At the end of each month the forester, under the supervision and direction of the State Board of Forestry, shall render a statement on a basis of mileage or rental against each activity or program for transportation or equipment used or furnished for such activity or program. Administrative costs in connection with the operation of the equipment pool shall be included in the computation of the mileage or rental statement. The forester shall at all times keep records showing the mileage and rental charges, and against which activity or program the charges are a claim. The amount specified in the statement shall be a charge against the moneys available for such activity or program. All amounts so charged shall be credited to the State Forestry Department Account and, notwithstanding ORS 291.238, are available and shall be used exclusively for:

(a) The acquisition, operation, storage, maintenance, repair and replacement of equipment by the forester;

(b) Administrative expenses of the forester and the board in connection therewith; and

(c) The payment of insurance premiums for such equipment.

ORS 526.148 Leasing communication equipment.

(1) The forester and State Board of Forestry may lease communication equipment owned or acquired under ORS 526.144 to any forest protective association or agency under contract or agreement with the board for the protection of forestland against fire. However, the communication equipment may be used only for purposes of the forest protection system designated in ORS 477.005. Any lease so made must provide for a rental at the current rates established for the equipment pool. All amounts so charged shall be credited as provided in ORS 526.146.

(2) At the option of the board, the lease agreements made under this section may be merged under the equipment pool administration and equities set forth in ORS 526.152.

ORS 526.152 Disposition of equipment; termination of the pool.
(1) Any proceeds from the sale or other disposition of equipment of the equipment pool shall be credited to the State Forestry Department Account for equipment pool purposes.

(2) Should the equipment pool be terminated by the State Board of Forestry, each activity or program shall have an equity in the moneys of the pool and in the cash value of the equipment and personalty of the pool. The equity shall be in proportion to the amount of moneys and value of the equipment and personalty transferred to the pool under ORS 526.144. By this subsection, each activity or program participating in the equipment pool has a continuing and recognized interest in the total value of the pool so long as the equipment pool exists unless otherwise such equity is purchased.

Support Operations
The Equipment Pool currently supports operations for Fleet Services and Radio Communications across the agency. Fleet Services has 1100 units in the pool and is responsible for all facets of fleet management including equipment replacement, disposal, fueling, maintenance and compliance with DAS reporting.

Radio Communications oversees statewide project coordination, planning facilitation and implementation of a communications network across 142 radio and detection camera sites with 5900 pieces of equipment in the pool.

Agency Evaluation
The agency recently started a holistic review of the pool to evaluate the program as a whole, looking at operational efficiency, financial sustainability, governance and long-term planning. One of the initial outcomes of the review is the separation of the Fleet and Communications programs. Due to the number of communications sites across the state, it was determined Communications more closely aligned with Real Property within ODF Facilities Capital Management Program. The organizational change was made in January of 2026. The separation between Fleet and Communications allows for greater focus on the individual disciplines. Further review may see additional restructuring reflect an organizational model similar to DAS with a combination of programs under ODF Facilities Capital Management Program.

RECOMMENDATION
This agenda item is for information only.

STAFF REPORT

Agenda Item No:	J
Topic:	Appointment of Deputy State Forester
Date of Presentation:	June 3, 2026
Contact Information:	Kacey KC, Oregon State Forester 971-707-2459; kacey.kc@odf.oregon.gov

SUMMARY

The purpose of this agenda item is to obtain Board approval for the State Forester appointment of Deputy State Forester.

526.031 State Forester; deputy and assistants; compensation. *(1) The Governor shall appoint a State Forester subject to Senate confirmation under ORS 171.562 and 171.565. The forester shall be the chief executive officer of the State Forestry Department and shall act as the secretary of the State Board of Forestry. The forester shall serve a term of four years at the pleasure of the Governor and shall be eligible for reappointment.*

(2)(a) With the approval of the board and subject to applicable provisions of the State Personnel Relations Law, the State Forester may appoint a Deputy State Forester, assistant state foresters and other employees of the department.

CONTEXT

The position of Deputy State Forester became vacant November 1, 2024. Recruitment began for the position January 2025 but it was ultimately cancelled. An interim deputy was designated pending changes to the State Forester appointment through SB1051 and recruitment process.

State Forester KC was appointed as agency head March 1, 2026, and appointed Kate Skinner as Acting Deputy State Forester, April 1, 2026.

RECCOMENDATION

The Department recommends the Board take the following action:

> Approve State Forester KC's appointment of Kate Skinner as the Deputy State Forester effective June 4, 2026.

Board of Forestry
Public Meeting

1. Opening Comments

This item serves as an opportunity for the State Forester and Board Chair to offer introductory comments, housekeeping tips and best practices, and for Board Members to provide introductions.

This is an information item.

2. Consent Agenda Items

This item serves as an opportunity to review and consider items presented on the Consent Agenda.

This is a decision item.

3. Public Forum

Sign-up instructions for providing public comments are posted on the Board's meeting webpage. Comments are limited to three minutes or less and are reserved for remarks on information items and topics off the agenda.

This is an information item.

STAFF REPORT

Agenda Item No.:	4
Topic:	Board Governance Committee Work
Date of Presentation:	June 3, 2026
Contact Information:	Ben Duemailing, Governance Subcommittee Chair

SUMMARY

The purpose of this agenda item is to ratify Board Policy Manual edits brought forth by the Governance Subcommittee at the March 4, 2026, Board of Forestry meeting.

CONTEXT

The Board of Forestry subcommittee is made up of Ben Demling, subcommittee Chair, Liz Agapaoa, and Heath Curtis. The subcommittee has provided written updates and edits to the Board Policy Manual that were presented and discussed at the March 2026 Board meeting. The edits and updates include following sections:

- Board Job Description
- Board Orientation
- Board Member Code of Conduct
- State Forester Job Description
- Communication and Counsel to the Board
- State Forester Performance Review
- Addendum C – Agenda Development

RECCOMENDATION

The subcommittee recommends the Board take the following action:

Approve Board Policy Manual edits as written and presented at March 4, 2026, Board of Forestry meeting.

ATTACHMENTS

(1) Board Policy Manual Draft
(2) Board Policy Manual Addendum C - Agenda Development

Board Policies Manual (BPM)[1]

for the

Oregon Board of Forestry

Version: 1.1 Dated: 06/04/2025

Updates to version 2 of the Board Policies Manual include language updates to 3.1, 3.1.1, 3.4, 3.5, 3.6, 3.6.8, 3.10, 3.10.1 3.11, 3.11.1, 3.11.6 and additional policies 3.11.12, 3.11.13, 3.11.14.

Part 1: Introduction and Administration

This Board Policies Manual (BPM) contains all the current standing (on-going) governance policies adopted by the Oregon Board of Forestry (the board) since the approved revisions on June 4, 2025. The board works in concert with the Oregon State Forester (State Forester), who is the Chief Executive Officer of the Oregon Department of Forestry (the department or ODF). (ORS 526.031)

1.1 Reasons for Adoption. The board's reasons for adopting this BPM include:

1. Efficiency of having all on-going board governance policies in one place
2. Ability to quickly orient new board members and key staff to current governance policies
3. Elimination of redundant, or conflicting, policies over time
4. Ease of reviewing current policy when considering new issues
5. Clear, pro-active policies to guide the State Forester and staff
6. Reduce risks of losing agency integrity from unexpected events
7. Models an approach to governance that sister agencies might use

1.2 Consistency. Each policy in this document must be construed in a manner consistent with federal and Oregon laws, policy of the Oregon Governor, and policy of related Oregon agencies, all of which have precedence over these board policies. Except for time-limited or procedural-only board decisions (approve operational policies, approve a budget, approve past minutes, etc.), which are recorded in regular board minutes, all standing governance policies are expected to be included or referenced in this document. The State Forester is responsible for developing agency and administrative policies and procedures that are consistent with this BPM.

1.3 Transition. Whether adopted in whole or in part, as soon as some version of the BPM is voted on as the "one voice" of the board, those policies are deemed to supersede any past policy that might be found in old minutes or any compilation of board policies over the years, unless a prior board resolution or contract obligates the agency to a specific matter. Paragraphs not yet approved by the board will be identified by a # and reviewed for approval at a later date. If any actual or apparent conflict arises between the BPM and other policies or board resolutions, the matter is expected to be resolved by the Chair or the entire board as may be appropriate.

1.4 Changes. These policies are meant to be reviewed periodically and revised and refined as needed to reflect new wisdom or circumstances. The Chair or the State Forester helps the board formulate new language in the BPM by distributing proposed changes in advance. Software and editing techniques will be used that show all changes for readers to review easily. Each previously approved numbered section or paragraph with a proposed change will be shown with the change highlighted to help readers quickly locate proposed changes. Any final change to this BPM must be approved by the full board by a simple majority, unless required otherwise by statute or rule. Any board member, as well as the State Forester, may submit proposed changes. Changes will be considered in a two-step process: proposed

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changes will be presented and discussed at one board meeting and will be acted upon at the following meeting. Whenever changes are adopted, a new document will be dated (at the top and in the footer) and quickly made available to board members and key staff and posted on the board public website. The previous version will be retained for future reference if needed according to the department's records retention policy.

1.5 **Specificity**. Each new policy will be drafted to fit in the appropriate Part and Section within the BPM. Conceptually, policies should be drafted from the "outside in," i.e., the broadest policy statement should be stated first, then the next broadest, etc. down to the level of detail that the board finds appropriate for board action and below which management is afforded discretion as to how it implements the policies in this BPM.

1.6 **Oversight Responsibility.** Below are the parts, the committees primarily responsible for drafting and reviewing those parts, and the individuals given authority to interpret and make decisions within the scope of those policies:

	Part	Oversight Committee	Implementation Authority
1.	Introduction/Administration	Governance Committee	Chair/State Forester
2.	Strategic Essentials	Full board	Chair/State Forester
3.	Board Structure/Processes	Governance Committee	Chair
4.	Board-Staff Relationship	Governance Committee	Chair/State Forester

1.7 **Maintenance of Policies**. The Chair should ensure that staff record and publish all current policies correctly. The State Forester will ensure that a repository is established and maintained for board policies and supporting materials. The State Forester or the State Forester's designee should maintain the policies repository, provide updated copies to the board whenever the policies change, or upon request, and update the board public website. The board will seek legal counsel review of this BPM once a biennium to ensure consistency with law. Discrete documents referred to in the BPM and listed at the end for easy tracking will be provided to board members in digital format for their own technology devices and/or kept in an online board website or other agreed upon web tool.

1.7.1 Unless otherwise noted or required, the board will periodically review the following materials for currency and consistency as follows:

- Strategic Plan: Every 5 Years
- New Board Member Orientation Package: Biennially
- Board Agenda Development Procedures: Annually
- Advisory Committee Establishment Procedures: Biennially
- Board Conflict of Interest Policy and Procedures: Annually
- Board Member Annual Affirmation Conflict of Interest Statement: Annually
- Annual Board Governance Performance Evaluation Procedures: Biennially

1.8 **Context of Different Policies**. Individual governance policies within this BPM fit into a hierarchy of policies within which authority flows down and accountability flows up. No level may be inconsistent with the levels above it.

1.	Federal and General Oregon Laws and Applicable Regulations
2.	State of Oregon Administrative Policies Requirements
3.	Statutes of the board, State Forester, and ODF
4.	Administrative Rules of the board, State Forester, and ODF
5.	Board Policies Manual
6.	State Forester-approved Agency Policies
7.	Policies Set by Managers Under the State Forester

Part 2: Strategic Essentials

2.1 Strategic Thinking. The board expects itself to think strategically at all times. The board and the State Forester are expected to develop a collaborative strategic plan, update it as necessary, link major activities in the plan to the relevant sections of this BPM, and ensure that the plan is available to the board and the public on an ongoing basis.

2.2 Strategic Planning. The board's mission, vision, values, owner and beneficiary relationships, goals and primary strategies, and monitoring standards are all contained within the strategic plan (Addendum A).

Part 3: Board Structure and Processes

3.1 Governing Style. The board will approach its task with a style that emphasizes outward vision rather than an internal preoccupation, encouragement of diversity in viewpoints, strategic leadership more than administrative detail, clear distinction of board and staff roles, and pro-activity rather than reactivity. The Board will demonstrate empathy and emotional intelligence in understanding and responding to colleagues and staff. In this spirit, the board seeks to:

3.1.1 Govern with excellence and respect, and address conflict and disagreements in a constructive and solution-based manner. Discipline may apply to matters such as attendance, respect of clarified roles, maintaining confidentialities, leaving questions about agency activities and issues to the State Forester, and self-policing of any tendency to stray from the governance structure and process adopted in these board policies.

3.1.2 Be accountable to its stakeholders and the general public for competent, conscientious, and effective accomplishment of its obligations as a body. It will allow no officer, individual, or committee of the board to usurp this role or hinder this commitment.

3.1.3 Monitor and regularly discuss the board's own process and performance, seeking to ensure the continuity of its governance functions.

3.1.4 Be an initiator of policy, not merely a reactor to staff initiatives. The board, not the staff, will be responsible for board performance.

3.2 Board Job Description. The job of the board is to lead the agency toward desired performance and help ensure that it occurs. (ORS 526.016) The board's specific contributions are unique to its supervisory role and necessary for proper governance and management. To perform its job, the board will endeavor to:

3.2.1 In collaboration with the State Forester, determine the mission, vision, values, and major goals/outcomes and hold the State Forester accountable for implementing the strategic plan.

3.2.2 Ensure the state forester is achieving ~~**Determine the parameters within which the State Forester is expected to achieve**~~ the goals/outcomes per statutory authority, this BPM, the State Forester's position description, and the personal goal setting for the State Forester.

3.2.3 Monitor the performance of the agency relative to the achievement of the goals/outcomes within the executive parameters in this BPM.

3.2.4 Maintain and constantly improve all on-going policies of the board in this BPM.

3.2.5 ~~**Select,**~~ Support and evaluate annually ~~and, **if necessary, terminate**~~ the State Forester, who functions as the board's sole agent.

3.2.6 Ensure financial oversight[2] and integrity of the State Forester and department through policies and behavior. (Exhibit 1)

[2] For the purposes of this BPM, "Oversight" or "Oversee" is defined as: Watchful care, as a safety net to ensure: 1) due diligence takes place before key decisions are made; 2) policies and strategies are being implemented as intended; 3) key risks are identified, monitored and mitigated; 4) business processes and systems working well; 5) expected results are being achieved; 6) activities comply with policies, laws, regulations and ethical standards; 7) developing areas of concern are being dealt with; and 8) assets are safeguarded.

3.2.7 Consider and suggest periodic financial, legal, and other external audits to ensure compliance with the law and good practices.

3.2.8 Evaluate and constantly improve the board's performance as the governing board and set expectations for board members' involvement as volunteers.

3.3 Orientation. Prior to appointment, each prospective board member candidate will be given this BPM along with adequate briefings on the BPM itself, the role of the board, the anticipated meeting schedule, the generalized workload expectations, an overview of key staff, and an overview of programs, plans, and finances of ODF. This may be accomplished through in-person briefings or by written materials. Soon after appointment, each new board member will be given additional comprehensive orientation material and training via the new member orientation package. (Addendum B), which will be regularly maintained by the board administrator and reviewed by the Board Governance Committee annually.

3.4 Chair's Role. The Governor of Oregon appoints the board Chair. (ORS 526.009) The job of the Chair is, primarily, to maintain the integrity of the board's process. The Chair manages the work of the Board and Board relationships.

3.4.1 The Chair is the only board member authorized to officially communicate the decisions of the board, other than in rare and specifically board-authorized instances.

3.4.2 The Chair ensures that the board behaves consistent with its own rules and those legitimately imposed upon it from outside the agency.

3.4.3 Meeting content will be those issues that, according to statutory or rule requirements or board policy, clearly belong to the board, not staff.

3.4.4 The Chair has no authority to impose policies beyond policies created by the board. Therefore, the Chair has no authority to supervise or direct the State Forester's work, but is expected to maintain close communication, offer advice, and provide encouragement to the State Forester and staff.

3.4.5 By Oregon statute and rule, the Chair has the duties of a presiding officer as prescribed by Roberts Rules of Order and has the duty to appoint standing and ad hoc committees of the board. (ORS 526.009; OAR 629-010-0010; OAR 629-010-0020; OAR 629-010-080)

3.5 Vice-Chair. The Chair will, after consulting each board member, appoint a Vice-Chair who will serve in the absence of the Chair. The Chair may assign additional duties to the Vice-Chair to facilitate the work of the Board. The Vice Chair will be a rotating position among current Board members with terms not to exceed 3 years.

3.6 Board Meetings. Ideally, board events often will include time for guest presenters, interaction with staff and interested parties, board development, committee meetings, social activities, and plenary business sessions. Policies that are intended to improve the process for planning and running meetings follow:

3.6.1 With the assistance and support of the State Forester, the board will establish an electronic 'online' repository for its meeting and reference materials.

3.6.2 At the annual planning retreat the schedule for Board meetings will be set two years in advance. The general geographic locations for the Board meetings will be set one year in advance. (ORS 192.630; ORS 526.016; OAR 629-010-0020)

3.6.3 The Chair will work with the State Forester and Board committee chairs in developing meeting agendas (OAR 629-010-0030; OAR 629-010-0040). Agenda development will be guided by the board's Agenda Development Procedures document (Addendum C), approved by the board by majority vote.

3.6.4 By Oregon statute, a majority of the voting members of the board or board committee constitutes a quorum to do business. (ORS 174.130; ORS 526.016; OAR 629-010-0050) 'Proxy' assignments are not allowed for conducting board business.

3.6.5 By Oregon Administrative Rule, unless otherwise specified by the board, Roberts Rules of Order are adopted for the conduct of meetings of the board and board committees. (OAR 629-010-0010)

3.6.6 Unless otherwise specified by law or policy, the board and board committees will make formal decisions by voice vote, with a simple majority determining the outcome.

3.6.7 As a record of the board meeting, an electronic recording will be made of all board meetings and posted on the board's public website within 72 hours of the conclusion of the meeting. (ORS 192.650)

3.6.8 By Oregon statute (ORS 526.016), regular board meetings will be held on the first Wednesday after the first Monday in January, March, June, and September. Additional meetings may be scheduled or called by the Chair in consultation with the State Forester. At least once per year, the board, along with the State Forester and key staff, will meet in a 'planning retreat' style to facilitate long term thinking, discussion, and planning. The agenda for the Board Retreat will be set collaboratively among the Board, Board Chair and State Forester and key staff. The retreat agenda should address leadership skills and team dynamics, and areas of growth that a specific Board found challenging during the year. The September meeting will include a review of the performance of the State Forester and the agency for the past year.

3.6.9 As often as is necessary, the board will meet in executive session as authorized by Oregon statute. (ORS 192.660)

3.7 Board Committees. Board committees (standing and ad hoc) help the board be effective and efficient. (OAR 629-010-0080) They speak "to the board" and not "for the board."

3.7.1 Unless authorized by the whole board, a committee may not exercise authority that is reserved for the whole board.

3.7.2 Committees are not created to advise or exercise authority over staff.

3.7.3 The board Chair has the authority to appoint standing and ad hoc board committees. (OAR 629-010-0020; OAR 629-010-0080)

3.7.4 Each committee will develop a committee charter which will include (a) purpose and objective, (b) committee structure and organization, and (c) major responsibilities and duties, subject to board approval. The board Chair and the State Forester are ex officio members[3] of all committees.

3.7.5 The State Forester, or a designee, will assist the work of each committee.

3.7.6 **Governance Committee.** This standing board committee recommends policies (or policy changes) to the board pertaining to governance issues and processes including the oversight and management of the BPM, orientation and training of new board members, the evaluation and improvement of the board, the repository of board materials, and oversight of the written conflict of interest policies, procedures, and review of annual or special statements of board members.

3.8 Ad Hoc Committees. As needed, the board Chair may establish board ad hoc committees to conduct time-limited, topic-specific tasks that the board deems necessary to conduct its business. (OAR 629-010-0080)

3.8.1 The board Chair will consult with the entire board and the State Forester before establishing ad hoc committees and will provide the ad hoc committee with clear intent, expectations, directions, and/or instructions.

3.8.2 Ad hoc committees may comprise both board members and other relevant and interested parties, but in no case will an ad hoc committee include more than three board members.

[3] For the purposes of this BPM, "ex officio member" means a person who is a member of the committee by virtue of the office or position they hold and has all of the participatory rights and privileges of being a committee member (attendance, offering thoughts and observations, engaging in discussion) except for decision-making by voting or consensus. For the purposes of establishing a committee quorum or the outcome of a vote, the ex officio member(s) is/are not counted.

3.8.3 Unless otherwise approved by the board, to conduct meetings, ad hoc committees will operate under the current version of Roberts Rules of Order. (OAR 629-010-0010)

3.8.4 Upon request by the Chair, the State Forester will assign an appropriate staff member(s) to serve and support ad hoc committees .

3.9 Advisory Committees. The board supports the use of advisory committees to increase its knowledge base and depth of available expertise. The board may establish advisory committees. (ORS 526.016) Advisory committees may also be established by legislative action. Unless otherwise defined or required by law, the following provisions apply to board-established advisory committees:

3.9.1 The board will consult with the State Forester before establishing and appointing members to advisory committees.

3.9.2 When the board recruits and appoints advisory committee members, it will actively seek and select members who bring a diversity of backgrounds and experiences, with an emphasis on historically and presently underserved communities. The board will intentionally recruit from the nine federally recognized tribes in Oregon, BIPOC communities, low-income communities, gender diverse communities, and additional underserved communities. These appointees will have the relevant knowledge, expertise, or lived experience in the subject matter and be reflective of the diversity of the people of Oregon. This will be further articulated by the board in the Advisory Committee Establishment Procedures document. (Addendum D)

3.9.3 The board may assign a board member to act as liaison to the advisory committee. In this capacity, the board member serves ex officio.

3.9.4 All advisory committees will have an established charter approved by the board establishing, at a minimum, purpose, objective(s), group composition, primary responsibilities and/or tasks, including reporting requirements, and a 'sunset' date, 'sunsetting' process, or reestablishment process.

3.9.5 All advisory committees will provide a full report of its activities to the board at least once a year unless directed otherwise by the board or legislature.

3.9.6 Unless otherwise approved by the board, to conduct meetings, advisory committees will operate under the current version of Roberts Rules of Order.

3.9.7 Upon request by the Chair, the State Forester will assign a staff member(s) to serve and support the advisory committee as needed.

3.9.8 By statute, rule, or board decision, the following advisory committees to the board have been established:

3.9.8.1 Adaptive Management Program Committee (Oregon Laws 2022 Chapter 33 / SB1501)

3.9.8.2 Committee for Family Forestlands (ORS 526.016) (board established)

3.9.8.3 Forest Trust Land Advisory Committee (ORS 526.156)

3.9.8.4 Independent Research and Science Team (Oregon Laws 2022 Chapter 33 / SB1501)

3.9.8.5 Regional Forest Practices Committees (ORS 527.650)

3.10 Board Member Service to Other Boards. Board members may serve on other organizations' boards or commissions provided that (1) no conflict of interest exists between their multiple service, and that (2) their service on other boards or commissions does not materially interfere with or diminish their service to the board. More specifically, by statute or agreement, board members may be called upon to serve on other State of Oregon boards or commissions in an active or liaison role.

3.10.1 For other State of Oregon boards or commissions, the Chair will, after consulting with each board member, appoint specific board members to fulfill these responsibilities.

3.10.2 Current State of Oregon responsibilities include:

3.10.2.1 Oregon Watershed Enhancement Board (ORS 541.900)

3.10.2.2 Oregon Environmental Quality Commission (Agreement)

3.11 Board Members' Code of Conduct. The board expects of itself and its members conduct which is ethical and respectful towards each other, staff, and the public. To that end:

3.11.1 Board members commit to fostering an environment that respects all individuals, which seeks diverse perspectives, and values differences. Board members will be open to change and adapt to evolving work conditions and requirements.

3.11.2 Board members commit to supporting and affirming the public interest, superseding any conflicting interests to others such as that to family members or friends, a business, advocacy or interest groups and membership on other boards or staff.

3.11.3 Consistent with applicable state ethics laws, board members must avoid any conflict of interest with respect to their governance responsibility. Given a particular meeting agenda, a board member with an actual or potential conflict of interest will state as such at the beginning of an agenda item marked for decision, and the board and member will respond per the board's Conflict of Interest Policy and Procedures. (Addendum E) (ORS Chapter 244)

3.11.4 There must be no self-dealing or any conduct of private business or personal services between any board member and the agency to assure openness, competitive opportunity, and equal access to "inside" information.

3.11.5 Board members must keep in mind that their mission is to serve the public, and it is inappropriate to use board membership to create a personal platform.

3.11.6 Individual board members may not agree with a decision, but once the board decision is made, all board members will respect the decision and move forward.

3.11.7 Board members will not disclose information about board investigations or matters dealt with in executive sessions unless that information is a part of the public record.

3.11.8 As appropriate, board members will provide constructive feedback to~~of~~ the State Forester on agency performance. The formal evaluation of the performance of the State Forester is assessed against explicit board policies and agreed upon written personal and professional performance objectives following each performance review of the State Forester by the board.

3.11.9 Board members must be aware of and respectful of staff time and workloads when additional requests are made.

3.11.10 Each board member is expected to arrange their schedules to provide optimum engagement as a board member including board or committee meeting preparation, meeting attendance, and meeting engagement.

3.11.11 Each board member is expected to complete and sign an Annual Affirmation and Conflict of Interest Statement, (Addendum F) which covers, among other things, board member conflicts of interest.

3.11.12 In consulting the Board, the Chair will be mindful to avoid serial communications.

3.11.13 **Stipend Policy.** Any day when a Board member spends one or more hours traveling or involved in a required activity (duty), that Board member who meets the eligibility requirements listed in ORS 292.495 would be eligible for a stipend. Required activities would include Board meetings (online or in person), pre-meetings, subcommittee meetings, meetings held at the invitation of agency staff, agency organized Board or individual tours, or when the Board Chair or the State Forester authorizes a Board member to attend an activity.

3.11.14 **Reimbursement Policy.** A Board member who travels or engages in a required duty, and who meets the eligibility requirements as listed in ORS 292.495 would be eligible for expense reimbursement per the Oregon Accounting Manual. Required activities would include Board meetings (online or in person), pre-meetings, subcommittee meetings, meetings held at the invitation of agency staff, agency organized board or individual tours, or when the Board Chair or the State Forester authorizes a Board member to attend an activity.

3.12 Board Performance Evaluation. With the guidance of the Governance Committee, the board will periodically assess its performance as follows:

3.12.1 As the last agenda item for regular meetings, the board members, led by the Chair, will have an open, frank, and respectful discussion about the agenda/meeting structure, meeting outcomes, board member interactions, a summary of any requests for additional information from

individual board members, and meeting logistics. This will be known as a 'Mop Up' evaluation, identifying positives as well as areas for improvement, and will be captured by the Governance Committee for summation and use for future board meeting planning.

3.12.2 As prescribed by Oregon Legislative and Executive direction, annually, the board will conduct a self-evaluation of governance best practices. (ORS 291.110) This will be done in accordance with the Annual Board Governance Performance Evaluation Procedures document (Addendum G), which is approved by the board by majority vote. The results of this evaluation will be summarized into the annual performance report, will form the basis of a board meeting agenda item for discussion, and agreed upon changes or improvements will be identified by the board and implemented as either changes to the BPM or the procedures of the board.

3.12.3 Every three years, the board may conduct a '360' evaluation of the board's governance performance with involvement of the State Forester, key ODF staff, and outside partners, constituents, or interested parties. If conducted, this process will have oversight by the Governance Committee. The results of this '360' evaluation will form the basis of a board meeting agenda item for discussion, and agreed upon changes or improvements will be identified by the board and implemented as either changes to the BPM or the procedures of the board.

Part 4: Board – State Forester/Staff Relationship

4.1 Delegation to the Chief Executive (State Forester). While the board's job is generally confined to establishing high-level policies, implementation and subsidiary policy development is delegated to the State Forester, unless otherwise required by law.

4.1.1 All board authority delegated to staff is delegated through the State Forester, so that all authority and accountability of staff – as far as the board is concerned – is considered to be the authority and accountability of the State Forester.

4.1.2 Strategic Essentials policies (Part 2) direct the State Forester to achieve certain results. This BPM and the State Forester's Position Description (Addendum H) define the acceptable boundaries of prudence and ethics within which the State Forester is expected to operate. The State Forester is authorized to establish all further policies, make all decisions, take all actions, and develop all activities as long as they are consistent with laws and regulations and any reasonable interpretation of the board's policies in this BPM.

4.1.3 The board may change its policies during any meeting, thereby shifting the boundary between the board and State Forester domains. Consequently, the board may change the latitude of choice given to the State Forester, but so long as any particular delegation is in place, the board and its members will respect and support State Forester choices. This does not prevent the board from obtaining information in the delegated areas.

4.1.4 No board member, officer, or committee has authority over the State Forester or department staff. If a board member seeks a special meeting with department staff for information gathering or clarification purposes, that request will come through the State Forester.

4.1.5 Additional information requests by board members: Outside of board meetings, requests for additional information, studies, or materials from board members will come to and through the Chair, who will discuss the request with the State Forester for further consideration and disposition. Requests from any board member made during board meetings will be noted by the Chair, captured by the Board Administrator, and the State Forester will be given time to consider the request before responding. In either case, if in the State Forester's judgment, the request requires a material amount of staff time or funds or is disruptive, it may be refused until the Chair determines that the work is critical for board work and should be completed. The State Forester will keep the full board apprised of the current status of requests and the final

decision about meeting requests. If additional information, studies, or materials are provided to the board, the State Forester will ensure that all board members receive all information, not just the original requestor.

4.2 **State Forester Job Description**. As the board's single official link to the operating agency, State Forester job performance will be considered to be synonymous with agency performance as a whole. Consequently, the State Forester's job contributions can be stated as performance in two areas: (a) agency accomplishment of the major goals articulated in the Strategic Plan and (b) agency operations within the boundaries of the law, prudence and ethics established in board policies. Working with the State Forester and the Governor's office the board will develop and approve a written position description (Addendum H) which will be reviewed and approved by the Governor. The Board of Forestry will review the position description and recommend to the Governor's office any suggested modifications ~~reviewed and updated~~ annually during the State Forester performance review.

4.3 **Communications and Counsel to the Board.** With respect to providing information and counsel to the board, the State Forester is expected to keep the board informed about matters essential to carrying out its policy duties. Accordingly, the State Forester is expected to:

4.3.1 Report to the Chair any personnel actions or behavior of himself/herself or others which could potentially discredit the integrity of the board, the State Forester, and/or the agency. The Chair and the State Forester are expected to report such things to the board, engage contract counsel (Oregon DOJ) as appropriate, engage outside non-legal third parties as appropriate, and handle in the best interests of the agency. If the board finds the State Forester's actions illegal, unethical, or immoral, the board may recommend appropriate action to the Governor. ~~may be the result.~~

4.3.2 Inform the board of relevant trends, material external and internal issues or changes, particularly changes in the assumptions upon which any board policy has previously been established, always presenting information in as clear and concise formats as possible.

4.3.3 Relate to the board as a whole except when fulfilling reasonable individual requests for information or responding to committees duly charged by the board.

4.3.4 Report immediately any actual or anticipated material noncompliance with a policy of the board, along with suggested modifications to this BPM for the future.

4.3.5 Engage and dialogue with the board during board meetings as information is presented, topics are discussed, alternatives considered, and policy change options are deliberated.

4.3.6 Recommend to the board changes to this BPM to improve efficiency or effectiveness.

4.4 **Monitoring Executive Performance.** The purpose of board oversight and monitoring is (1) to determine the degree to which the mission and goals of the board and the department are being accomplished and board policies are being fulfilled by the State Forester and (2) to set the stage and support 'continuous improvement' by the department in both policy and operations. Monitoring will be as simple, automatic and non-duplicative as possible, using a minimum of board time so that board efforts can be used to affect the future rather than to review the past. Primary questions to be considered in monitoring include: does the action or effort inform policy; does the action or effort implement policy; and does the action or effort address emerging policy areas. A given policy or action may be monitored in one or more of three ways:

4.4.1 Direct Board Inspection: Discovery of compliance information by the board as a whole. This includes board inspection of documents, activities, or circumstances that allows a "prudent person" test of policy compliance.

4.4.2 External Report: Discovery of compliance information by a disinterested, external person or firm who is selected by and reports directly to the board. Such reports must assess executive performance only against legal requirements or policies of the board, with suggestions from the external party as to how the agency can improve itself, including changes to this BPM.

4.4.3 State Forester Reports: Through negotiation with the Chair, the State Forester is expected to help the board determine relevant tracking data to measure progress/outcomes in achieving the mission and goals and conformance with board policies. Currently, the board requests these regular monitoring reports, in addition to any specific reports requested in other sections of the BPM:

4.4.3.1 At each board meeting and/or monthly: Informal State Forester reports on achievements, problems, emerging issues, board notices, etc.

4.4.3.2 At each board meeting and/or monthly: The current monthly ODF Financial Report as required by the ODF Policy, *Financial Oversight of the Board of Forestry*. (Exhibit 1)

4.4.3.3 At least Semi-annually: A simple 'scorecard' report that shows the status and achievement of strategic planning goals in finance, policy, emerging issues, and workforce.

4.5 State Forester Performance Review. The Chair will oversee and coordinate the board's ~~**conduct a**~~ formal evaluation of the State Forester annually, timed to precede and adequately inform the Governor's performance review. The Board's evaluation will be based upon the State Forester Position Description and focused on achievement of agency goals and key performance measures and other specific objectives the board and State Forester have agreed upon in advance, as well as the State Forester's own written self-evaluation. The Chair will invite and incorporate comments from all board members after they have seen the self-evaluation. The Chair will also contact interested parties who can provide meaningful input to the performance evaluation and incorporate comments from those parties. When the input is collected and summarized, the Chair will lead the board to create the final evaluation per ORS 192.660. This final evaluation will be provided to the Governor's office in written form. During this annual process, the board will agree on any needed professional development and specific personal performance goals for the two years ahead. This will also serve as an opportunity for the board to make recommendations for either commendation or discipline of the State Forester. These goals and recommendations should be documented in a letter to the Governor's office from the board Chair and will become the primary basis for assessing the State Forester's performance. ~~**State Forester in written form. During this biennial process, the State Forester and the board will agree on any needed professional development and any specific personal performance goals for the two years ahead. These goals should be documented in a letter to the State Forester from the board Chair and will become the primary basis for assessing the State Forester's performance at the end of the two years.**~~

4.6 State Forester Transitions. The board will collaborate with the governor's office to ensure a successful transition from one State Forester to the next. ~~**owns the succession/transition process for the State Forester position but works with the Governor's office and the Oregon Department of Administrative Services to carry out its responsibility. (ORS 526.031)**~~

4.6.1 ~~**At any time, the Chair may appoint a succession/transition work group to explore options, propose strategies, and board policies related to succession and transition of the State Forester.**~~

4.6.2 ~~**The board Chair is authorized, as soon as a vacancy or scheduled departure of the State Forester is known, to appoint a search committee and committee chair, and to establish a search and selection process for the vacancy.**~~

4.7 Other Board Expectations of the State Forester. The State Forester is expected to:

4.7.1 Develop both a professional development strategy and succession plan for all key staff, whether paid or volunteer. (Exhibit 2)

4.7.2 Embrace and foster a climate of 'continuous improvement' in the department.

4.7.3 Notify board members whenever any new governance-important document is available for board review according to the agreed upon system referenced in 1.7.

Part 5 Miscellaneous

5.1 [NOTE: available if needed for policies that do not fit naturally in other parts]

VERSIONS, ADDENDA AND EXHIBITS

BPM Versions (BPM Version Tracking – current version is listed last)

#	Version Summary	Date
0.1	Original first Working Draft for the Work Group – Parts 1-3	6/12/2023
0.2	Working Draft for Development Work Group – Parts 3.7 through 4.5	6/30/2023
0.3	Working Draft for Development Work Group – Parts 4.6 through Part 5	7/20/2023
0.4	Working Draft for Development Work Group – All Parts	8/16/2023
0.5	The Development Work Group's Final Draft – All Parts	9/8/2023
0.6	Results of Full Board of Forestry Discussion at October 2023 Retreat	10/19/2023
0.7	Working Draft from the Development Work Group via the Board Retreat	11/17/2023
0.8	Working Draft with Incorporation of Legal Review and Staff Comments	1/19/2024
0.9	Final Draft with Incorporation of Development Work Group Final Review	2/12/2024
1.0	Board-approved and adopted version	3/6/2024
2.0	Board-approved and adopted revision.	6/4/2025

BPM Addenda (*Board* documents referenced in this BPM) are:

#	BPM Ref.	Title	Status
A	2.2	Strategic Plan via *The Forestry Program for Oregon*	Active - 2011
B	3.3	New Board Member Orientation Package	In process
C	3.6.3.2	Board Agenda Development Procedures	Not started
D	3.9.2	Advisory Committee Establishment Procedures	Not started
E	3.11.3	Board Conflict of Interest Policy and Procedures	Not started
F	3.11.11	Board Member Annual Affirmation and Conflict of Interest Statement	Not started
G	3.12.2	Annual Board Governance Performance Evaluation Procedures	In process
H	4.1.2 & 4.2	State Forester Position Description	Active

BPM Exhibits (*State Forester/Agency* documents referenced in this BPM) are:

#	BPM Ref.	Title	Status
1	3.2.6	Financial Oversight of the Board of Forestry	Active
2	4.7.1	Key ODF Staff Succession Plan	In process

Questions about this BPM should be referred to the Board Administrator at 503-945-7210.

Addendum C
Board Agenda Development

Agendas should prioritize deliberation and substantive engagement by all board members. The chair will develop the agenda in collaboration with department staff, and in consultation with the entire board, with the goal of creating buy-in and support for the board's work.

For agenda items that are not part of the expected board workplan, the chair will solicit board feedback at the earliest possible opportunity. Otherwise the draft agenda, including topics and time windows, will be sent to the other six board members by the board administrator six weeks ahead of the meeting for feedback from board members. The chair will take this feedback into consideration when finalizing the agenda.

Any board member may request an item for a future agenda and the chair must take these requests into consideration. The chair will give increasing weight to requests made by more board members.

The final agenda is at the discretion of the chair.

This document supersedes all previous guidance on this topic.

STAFF REPORT

Agenda Item No.:	5
Work Plan:	State Forests Work Plan
Topic:	State Forests Management
Presentation Title:	Western Oregon State Forests Draft Forest Management Plan
Date of Presentation:	June 3, 2026
Contact Information:	Justin Butteris, Policy Analyst Justin.Butteris@odf.oregon.gov Michael Wilson, State Forests Division Chief Michael.Wilson@odf.oregon.gov

CONTEXT

Forest Management Plans (FMP) provide the overarching management direction for State Forests. These plans are developed pursuant to Oregon Administrative Rule and are approved by the Board of Forestry to codify the Board's finding that management direction in the FMP meets Greatest Permanent Value (OAR 629-035-0020).

After the Board approves a Forest Management Plan, it is required to be adopted as Administrative Rule (OAR 629-035-0030(6)(a)), which requires formal rulemaking under the Administrative Procedures Act (ORS 183.310 – 183.410).

The draft Western Oregon State Forests Management Plan was presented to the Board at its January 2025 meeting to seek consent to initiate rulemaking. This FMP is proposed to replace the current FMPs for the State Forest lands under the Department of Forestry's management in western Oregon. The draft FMP is developed to provide policy direction consistent with the draft Western Oregon State Forests Habitat Conservation Plan (HCP).

Rulemaking

The State Forests Division initiated the formal rulemaking process on November 1, 2025. Prior to beginning rulemaking, the Division conducted outreach with the nine federally recognized Tribes in Oregon. The rulemaking process included all steps required by the Administrative Procedures Act, including required notifications to stakeholders and the legislature, a public comment period and public hearings. The Department provided the Board with a summary of the comments received in March and now presents the Board with the final proposed FMP, which includes recommended changes based on the comment received. This final draft version of the FMP will be sent out for a final round of public comment before a Board vote to approve the FMP to be adopted as rule. When the expected date of issuance for the Incidental Take Permits is better known, the Department will determine the desired effective date for the new FMP and finalize the rulemaking with the Secretary of State to promulgate the rule consistent with that timeline.

Summary of Forest Management Plan Revisions

Based on comments received, the Department has made recommended changes to the draft FMP. The most common type of edit was made to improve clarity and readability (e.g., simplifying word choice or sentence structure, eliminating redundancy, deleting extraneous detail) or to correct grammatical issues (e.g., tense, capitalization, punctuation). These types of edits were made

throughout the document and do not reflect a change in policy or management approach for state forests. In some cases, paragraphs may have been rewritten, and in other cases, only a few words changed.

For example, the recreation strategy related to providing recreation, education, and interpretation opportunities was revised from the first paragraph below to the second. The intent of the strategy is unchanged.

> Original:
> *Reimagine and adapt recreation, education, and interpretation opportunities across state forest lands to provide a diversity of experiences, services and programs, improve delivery of services and increase access. Opportunities include interpretation and education services for forest visitors and communities to learn about and connect with Oregon's history, people, and forests.*
>
> Revised:
> *Assess, maintain, and improve recreation, education, and interpretation opportunities on state forest lands through existing trails, facilities and future development.*
> - *a. Consider connecting to existing recreational infrastructure when planning new development in close proximity.*
> - *b. Use BMPs, engineering standards, and planning principles suited for facility and trail development on public lands.*

A paragraph on the use of mineral resources was revised for clarity, and provides another example.

> Original:
> *However, ODF may use soil, clay, stone, sand, and gravel for constructing or repairing roads or other state facilities (ORS 530.050). State forest lands have provided high-quality rock for local road surfacing and ballast rock. This rock is an important resource for road construction and maintenance of roads.*
>
> Revised:
> *ODF may use soil, clay, stone, sand, and gravel for constructing or repairing roads or other state facilities (ORS 530.050). State forest lands can provide rock for local road surfacing, which is an important resource for road construction, road improvement, and road maintenance.*

Updates were made to Chapter 1 to provide context for the FMP and its implementation, with the following statements added:

> *The purpose of the FMP is to ensure ODF's management of these lands provides greatest permanent value (GPV) to all Oregonians. GPV means healthy, productive, and sustainable forest ecosystems that over time and across the landscape provide a full range of social, economic, and environmental benefits. While the FMP provides the guidance for forest management across western Oregon, mid-term implementation and*

annual project plans are written and released to the public on a 10-year and annual to biennial basis.

As a BOF-adopted plan, this FMP is designed to support the priorities and goals of other BOF plans, specifically the Vision for Oregon's Forests (VOF)2 and the Climate Change and Carbon Plan (CCCP), through goals and strategies that promote resilient forest ecosystems and communities in light of changing conditions exacerbated by climate change.

Intent Statements

Intent statements were also added for each forest resource strategy. Intent statements are meant to provide more detail about the outcomes the strategy seeks to accomplish when implemented.

For example, one of the FMP strategies relates to Tribal seed sources:

Collaborate with Tribal Partners on native seed source recommendations that consider appropriate habitat in planting regimes, climate resiliency, and legacy seed source information that contributes to a storied landscape understanding.

The intent statement paired with this strategy provides more detail with respect to ways the Department will implement this strategy:

Identify and cultivate partnership opportunities with established native nurseries, including but not limited to the Coastal Native seed partnership, ODA's seedbank, and Tribal seed nurseries. Continue to work with Tribal Partners in Implementation Plan (IP), Operations Plan (OP), and adaptive management planning processes to develop and implement climate adaptation strategies to support culturally significant plant and animal species.

Connections to Other Policies

Connections to other policy documents were also updated throughout to better tie the FMP to the Board adopted *Vision for Oregon's Forests* and *Climate Change and Carbon Plan*. For example, the Forest Resilience section in Chapter 3 now contains:

The forest will be actively managed to achieve objectives within stands and across the landscape to create a variety of forest conditions designed to improve resilience and capacity for adapting to climate change consistent with the Vision for Oregon's Forests and the ODF Climate Change and Carbon Plan (CCCP). Examples of management options that foster resilience and adaptation are provided in Table 1 below, adapted from Burton (2025).

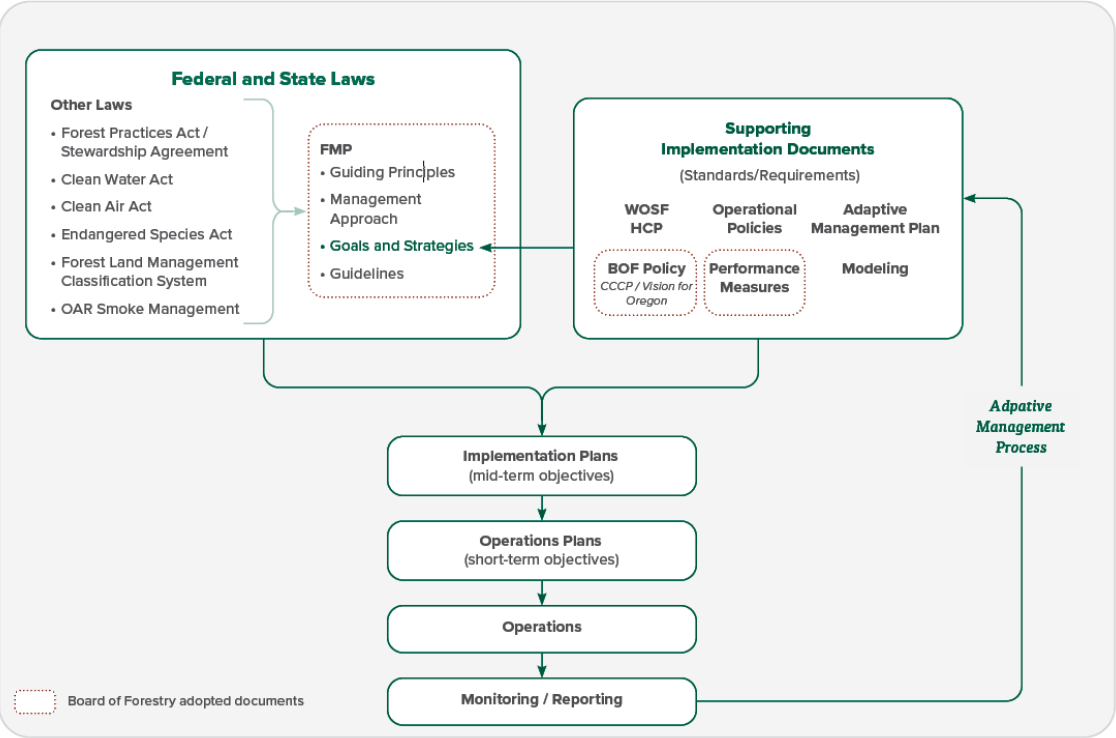
Table 1 - Examples of management options that foster resilience and adaptation

Management options to increase climate resilience	Examples
Sustain ecological functions	Maintain or restore hydrology and riparian areas
Reduce the impact of existing stressors	Reduce tree density to minimize water stress
Protect from severe disturbances	Alter forest structure to reduce fire or wind throw risk
Maintain refugia	Protect unique sites or habitat of species of conservation concern
Enhance species and structural diversity	Promote diverse age classes, diverse species, and biological legacies
Increase redundancy across the landscape	Manage forest and habitat types over a range of sites and environmental conditions
Promote landscape connectivity	Reduce fragmentation and expand reserve networks.
Enhance genetic diversity	Use seed sources adapted to future conditions, diversify nursery stock
Aid species transitions	Favor drought tolerant species, guide species composition during young stand management, consider assisted migration of species.
Plan for disturbances	Revegetate promptly and retain seed source to allow for natural regeneration.

Source: Burton 2025

> *The effectiveness of novel silviculture prescriptions under a changing climate is evaluated during the planning and adaptive management processes described in Chapter 4, Guidelines.*

A figure depicting how various laws, policies, supporting documents, and research and monitoring are linked to the FMP was simplified for improved understanding.



Additional information was added to Chapter 4 to clarify decision-making authorities and responsibilities for implementation.

> *ODF implements the FMP and WOSF HCP through IPs and OPs. The State Forests Division Chief, Area Directors, and District Foresters review IPs, which are approved and signed by the State Forester. District Foresters implement the FMP and WOSF HCP within their districts through the approval and oversight of OPs. Table 4-2 describes the tasks and responsibilities for IP and OP approval and implementation.*

Table 4-2. Roles and Responsibilities of Decision-Makers in the Implementation, Operations, and Revision Approval Process

Task	Responsible Party
Approves FMP and performance measures and requests and approve FMP/performance measure revisions	Board of Forestry
Approves IPs and major revisions to FLMCS	State Forester
Approves Operational Policies specific to the State Forests Division	State Forests Division Chief
Approves minor revisions to FLMCS	Area Director
Approves and implements OPs	District Forester

Guiding Principles

The Guiding Principles in Chapter 1 were not changed from the Board-approved versions, excepting minor grammatical edits to Principles 6 and 9; however, the explanatory sections were updated for some to provide additional clarity regarding the context for FMP development. An explanation was also added to clarify the difference between the actual guiding principle and the expanded text that follows each.

> *The text that follows the principle explains the policy guidance and in some cases clarifies how the plan meets the principle.*

As a reminder, the Guiding Principles are defined by the Planning Rule (OAR 629-035-0030(2)(a)) as principles that guide development of the management plan. Some of the comments received confused the purpose of the Guiding Principles, suggesting that they guide management under the plan. For example, Guiding Principle 3 states:

> *The FMP will provide sufficient revenue to ensure ODF's ability to manage, conserve, and invest in the forest in order to provide GPV.*

This means during FMP development, the Department sought to formulate strategies that provide sufficient revenue, not that management under the FMP will guarantee any particular outcome related to revenue.

Adaptive Management

The Adaptive Management Guidelines in Chapter 4 were streamlined to match the level of detail provided in rule: Adaptive management is "the process of implementing plans in a scientifically based, systematically structured approach that tests and monitors assumptions and predictions in management plans and uses the resulting information to improve the plans or management practices used to implement them (OAR 629-035-0000(2))." For example, the description of decision analysis and structured decision-making was removed. In its place, a new section Decision Authority and Revision Guidelines describes how plans or policies can be amended and who makes those decisions in response to monitoring. The Board responds to new information to change the FMP or its implementation in the following manner:

> *The BOF reviews the FMP no less than every 10 years in light of current social, economic, scientific, and silvicultural considerations (OAR 629-035-0020). The BOF evaluates new information in the context of the guiding principles, goals, and strategies of the FMP. If implementation of the FMP is not achieving the BOF's desired results (e.g., indicated from monitoring and reporting of performance measures), the BOF may respond by directing the State Forester to change implementation of the FMP through revising operational policies or BMPs or adjusting implementation focus. The BOF may initiate an FMP revision if outcomes cannot be improved by implementation changes alone. The BOF and the State Forester engage county partners, Tribes, other federal and state agencies, stakeholders and the public to gather input on the proposed revision.*

Forest Management Plan Implementation

The Forest Management Plan is developed following the requirements of the Forest Management Planning Rule (OAR 629-035-0030). The Forest Management Plan is to be developed by the State Forester to "*establis*h the general management framework for the planning area of forest land." The State Forester is also required to "*develop implementation and operations plans that describe smaller-scale, more specific management activities within the planning area*." The draft FMP contains the required elements (e.g., guiding principles, goals, strategies, and guidelines); however, some details used for implementation are found in other policy documents, such as the draft WOSF HCP, operational policy, or the Forest Practices Act (for the State Forests Division, compliance with much of the FPA is codified through a Stewardship Agreement).

During operations planning and implementation, State Forests staff specialists and foresters collaborate to ensure all resource goals are met. The outcome of this integrated forest management approach can be visualized through maps demonstrating how goals are emphasized in specific areas and how harvest operations are modified to achieve desired outcomes.

Figure 1 shows, for a portion of the Astoria District, a variety of emphasis areas. Habitats for native fish and wildlife are the focus within HCAs and RCAs. Several recreation trails are shown, where the emphasis is public use. Operationally limited areas, where terrain characteristics preclude harvest operations, and visual emphasis areas, where the focus is on aesthetics, are also shown.

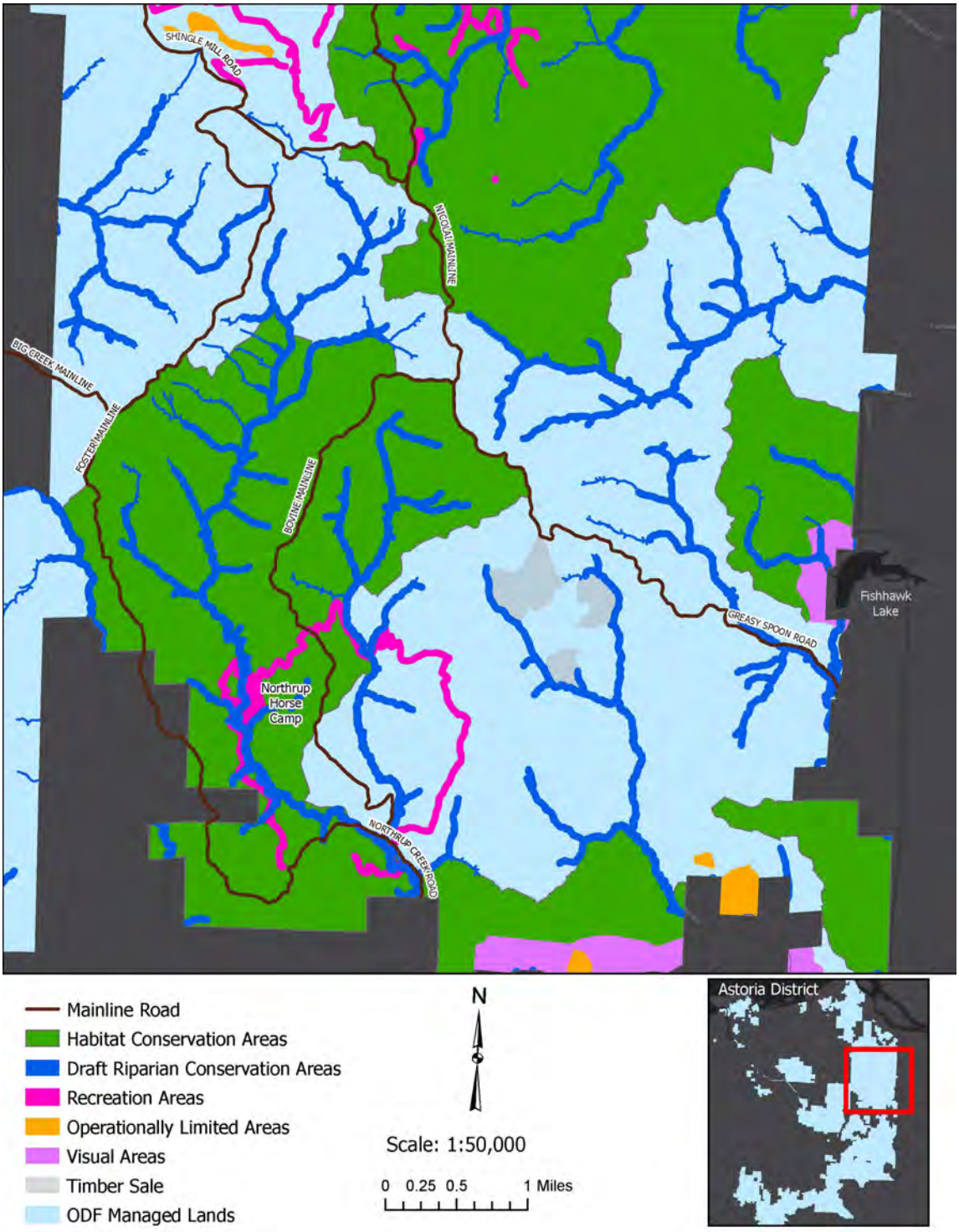


Figure 1. A portion of the Astoria District. A variety of emphasis areas are shown, including HCAs and RCAs, recreation areas, and visual emphasis areas. A timber sale operation is also shown.

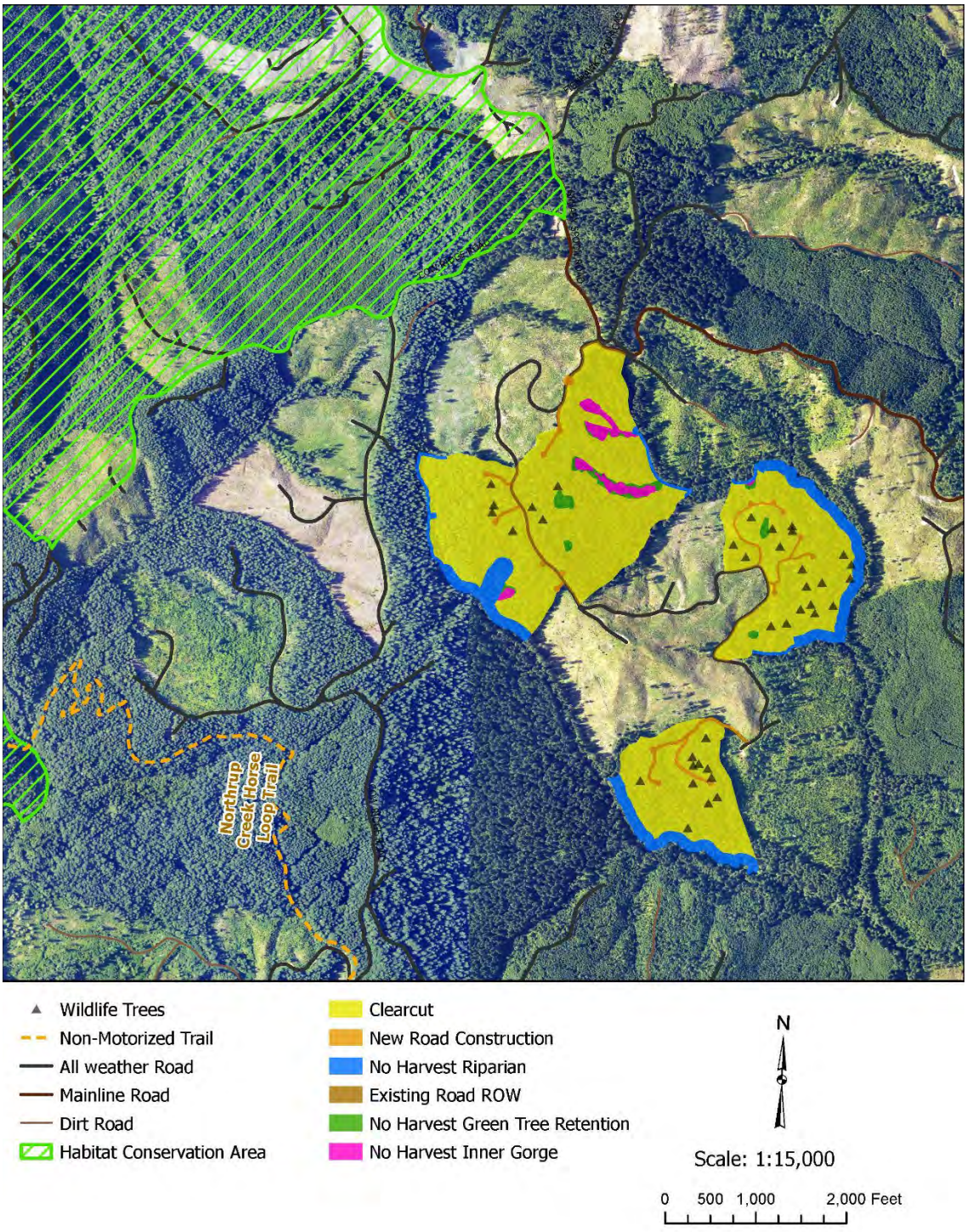


Figure 2. A timber sale operation in the Astoria District shows how active management is modified to account for other goals. Buffers for streams, green tree retention areas, and wildlife trees are shown, along with roads and trails, and the adjacent Habitat Conservation Area.

Figure 2 depicts a closer view of the operation shown in Figure 1, overlaid on an orthoimage. Operational policies regarding the management of recreation trails, roads, legacy structures and

terrestrial and aquatic habitats, along with the direction provided by the FMP and Forest Practices Act combine to prescribe the outcome of a timber sale operation.

Additional details and clarity with respect to the outcomes associated with the management of State Forests lands for the first decade (e.g., Performance Measures, HCP monitoring) will be provided with the development of the initial Implementation Plans.

RECOMMENDATION
Information only.

NEXT STEPS

The State Forests Division will:
(1) Return to the Board in July 2026 to obtain final approval of the draft FMP.
(2) Complete the process with the Secretary of State to adopt the FMP as rule with an effective date that aligns with the issuance of Incidental Take Permits.
(3) Return to the Board at its January 2027 meeting to provide the Board with modeling results and to adopt the Performance Measures.

ATTACHMENTS

(1) Final Draft Western Oregon State Forests Management Plan (May 2026)
(2) Redline version of the Final Draft Western Oregon State Forests Management Plan depicting changes from the May draft and the previous draft.



Western Oregon State Forests Management Plan

DRAFT FINAL • MAY 2026

Oregon Department of Forestry Headquarters
2600 State Street
Salem, OR 97310

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Land Acknowledgement[1]

Indigenous tribes and bands have been with the lands that we inhabit today throughout Oregon and the Northwest since time immemorial and continue to be a vibrant part of Oregon today. We would like to express our respect to the First Peoples of this land, the nine federally recognized Tribes of Oregon: Burns Paiute Tribe, Confederated Tribes of Coos, Lower Umpqua & Siuslaw Indians, Confederated Tribes of Grand Ronde, Confederated Tribes of Siletz Indians, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Reservation, Coquille Indian Tribe, Cow Creek Band of the Umpqua Tribe of Indians, and The Klamath Tribes. It is important that we recognize and honor the ongoing legal and spiritual relationship between the land, plants, animals, and people indigenous to this place we now call Oregon. The interconnectedness of the people, the land, and the natural environment cannot be overstated; the health of one is necessary for the health of all. We recognize the pre-existing and continued sovereignty of the nine federally recognized Tribes who have ties to this place and thank them for continuing to share their traditional ecological knowledge and perspective on how we might care for one another and the land, so it can take care of us. We commit to engaging in a respectful and successful partnership as stewards of these lands, and as we are obliged by state law and policy, we will uphold government-to-government relations to advance strong governance outcomes supportive of Tribal self-determination and sovereignty.

[1] Land acknowledgement provided by Legislative Commission on Indian Services

CHAPTER 1

Introduction

1.1 Purpose and Scope of the Forest Management Plan

The *Western Oregon State Forests Management Plan* (FMP) provides management direction for all *Board of Forestry Lands*[1] (BOFL) and *Common School Forest Lands* (CSFL) managed by the Oregon Department of Forestry (ODF) west of the crest of the Cascade Range. The purpose of the FMP is to ensure ODF's management of these lands provides *greatest permanent value* (GPV) to all Oregonians. GPV means healthy, productive, and sustainable forest *ecosystems* that over time and across the *landscape* provide a full range of social, economic, and environmental benefits. While the FMP provides the guidance for forest management across western Oregon, mid-term implementation and annual project plans are written and released to the public on a 10-year and annual to biennial basis.

This plan supersedes and replaces the *2010 Northwest Oregon State Forests Management Plan*, the *2011 Elliott State Forest Management Plan*, and the *2010 Southwest Oregon State Forest Management Plan*. The *Board of Forestry* (the BOF) may review, modify, or terminate the FMP at any time; however, the BOF will review the FMP no less than every 10 years (Oregon Administrative Rules [OAR] 629-035-0030).

As a BOF-adopted plan, this FMP is designed to support the priorities and *goals* of other BOF plans, specifically the *Vision for Oregon's Forests* (VOF)[2] and the *Climate Change and Carbon Plan* (CCCP), through goals and strategies that promote *resilient* forest ecosystems and communities in light of changing conditions exacerbated by *climate change*.

[1] Terms italicized in this document are defined in the Glossary. Defined terms are italicized at the first instance in each chapter.

[2] All references are to direct the reader to another document that provides further information and are not intended nor should be construed as incorporating the cited or referred to document into the FMP.

The public and various organizations were involved in developing the FMP. For more information, see Appendix A, *Engagement*.

This chapter describes or provides the following.

- The BOF's *guiding principles* for the FMP, ownership and location of the lands governed by the FMP, and history of the FMP.
- Plan themes: GPV, considering and engaging all Oregonians, resilience to climate change, *sustainability,* and *adaptive management*.
- How the FMP relates to other plans and processes.
- An outline of the FMP chapters.

1.1.1 Guiding Principles

The Forest Management Planning rule for state forests (OAR 629-035-0030) identifies required elements for FMPs. Among these are "guiding principles that include legal mandates and Board of Forestry policies." In addition to the VOF and CCCP, the BOF provided the following guiding principles, shown in italics, to direct the development of this FMP. The text that follows the principle explains the *policy* guidance and in some cases clarifies how the plan meets the principle.

Principle 1 – Greatest Permanent Value

The FMP will be grounded in the management mandates for BOFL as expressed in the GPV and Forest Management Planning OARs.

OAR 629-035-0020, Greatest Permanent Value, and OAR 629-035-0030, Forest Management Planning, provide the foundation for the development of the FMP.[3] The Forest Management Planning rule requires the State Forester to create plans to manage state forests for GPV—balancing environmental, social, and economic benefits. GPV benefits include but are not limited to the following.

- Sustainable and predictable production of *forest products* that generate *revenues* for the benefit of the state, counties, and local taxing districts.
- Properly functioning *aquatic* habitats for salmonids, and other native fish and aquatic life.
- Habitats for native wildlife.
- Productive soil, and clean air and water.
- Protection against floods and *erosion*.
- Recreation.

The Forest Management Planning rule directs the FMP to include strategies that accomplish the following.

[3] Division 35 includes definitions, findings, and principles associated with acquired lands, language defining GPV, and direction for the development of FMPs.

- Contribute to *biological diversity* of forest stand types and *structures* at the landscape level and over time.
- Apply *silvicultural* techniques that provide a variety of forest conditions and resources.
- Conserve and maintain genetic diversity of forest tree *species*.
- Manage forest conditions to result in a high probability of maintaining and restoring properly functioning aquatic habitats.
- Protect, maintain, and enhance native wildlife habitats.
- Recognize that forests are dynamic.
- Provide for healthy forests by using an *integrated pest management* approach and appropriate genetic sources of seed.
- Maintain or enhance forest soil productivity.
- Produce sustainable levels of timber consistent with protecting, maintaining, and enhancing other *forest resources*.
- Apply management strategies that enhance timber yield and value while contributing to the diversity of habitats for native fish and wildlife.

The GPV and the Forest Management Planning rule OARs require the State Forester to actively manage lands and include strategies for actively managing forest lands in the FMP. *Active management* involves application of silvicultural prescriptions, such as thinning and *regeneration* harvest, reforestation, and *young stand management*. However, certain forest resource goals are best achieved through deliberate *passive management* such as allowing stands to develop without silvicultural intervention, or regenerate after natural *disturbances* without active reforestation. Site-specific management decisions are made considering the future *objectives* for, as well as current characteristics of, forest stands. Chapter 2, *Management Approach*, and Chapter 3, *Forest Resources, Goals, and Strategies*, describe passive management and active management techniques and considerations for their application, which are consistent with the OAR definition of active management: "applying practices over time and across the landscape to achieve site-specific forest resource goals using an integrated, science-based approach that promotes the compatibility of most forest uses and resources over time and across the landscape."

The GPV and Forest Management Planning rule OARs also direct that landscape context be considered. *Landscape* is defined as "a broad geographic area that may cover many acres and more than one ownership and may include a *watershed* or sub-watershed areas" (OAR 629-035-0000). Plans must contain "a description and assessment of the resources within the planning area and consideration of surrounding ownership in order to provide a landscape context" (OAR 629-035-0030).

Key to GPV, the State Forester is required to manage state forest lands in a manner to provide sustainable timber harvest within a broader management context through integrating and achieving a variety of forest resource management goals. Although the counties have a recognizable interest in

revenue generated on state forests, OAR 629-035-0010 includes the following BOF finding, which is consistent with GPV.

> The counties in which these forest lands are located have a protected and recognizable interest in receiving revenues from these forest lands; however, the Board [of Forestry] and the *State Forester* are not required to manage these forest lands to maximize revenues, exclude all non-revenue producing uses on these forest lands, or to produce revenue from every acre of these forests lands (OAR 629-035-0010).

GPV and the Forest Management Planning rule also directs that the FMP be based on the best science available, use *monitoring* and research to generate new information, and use an adaptive management approach. Additional information on adaptive management is found in Chapter 4, *Guidelines*.

Principle 2 - Biological Diversity

State forest lands will be managed, conserved, and restored to provide overall biological diversity of state forest lands, including the variety of habitats for native fish and wildlife and accompanying ecological processes. The GPV and Forest Management Planning rules are the BOF's expression of providing conservation.

Biological diversity is the cornerstone for fostering resilient forest ecosystems. The GPV and Forest Management Planning rules include references to attributes that are directly tied to providing a multitude of environmental, social, and economic co-benefits associated with *biodiversity* on BOFL. These references include, but are not limited to, providing and restoring properly functioning aquatic systems; protecting, maintaining, and enhancing native wildlife habitats; contributing to diversity of forest stand types and structures at the landscape level and over time; and conserving and maintaining genetic diversity of forest tree species.

Principle 3 - Revenue

The FMP will provide sufficient revenue to ensure ODF's ability to manage, conserve, and invest in the forest in order to provide GPV.

The FMP strives to provide sufficient revenue to support the stewardship of these forest lands and produce economic, social, and environmental benefits. *Financial viability* is achieved over the long term through continued protection and management of the forest *asset*, and it is achieved over the short term with operational tools that ensure cash flow is available to ODF for sound management of state forest lands.

In the current business model, 98% of revenue used to support ODF's management of state forests is derived from timber. Revenues derived from the management of BOFL are shared with the counties and local taxing districts in which the management activities take place: 63.75% of revenues are distributed to local counties and taxing districts and 36.25% of revenue is retained by ODF to fund the management of BOFL. Revenues from CSFL is transferred to the Oregon Department of State Lands (DSL) to be deposited in the state *Common School Fund*, and DSL reimburses ODF for expenses associated with management of CSFL.

Expanding and diversifying revenue sources to support public benefits may increase long-term financial stability. Revenues are cyclical and subject to market forces beyond ODF's control, and the balance of social, economic and environmental co-benefits produced will vary over time in alignment with available operating funds (Chapter 4, Section 4.3, *Asset Management Guidelines*). Several tools are used to ensure ongoing management of state forests under different revenue outlooks ensuring fiscally responsible management into the future.

Principle 4 – Social Benefits

The FMP will provide for a range of social benefits for all Oregonians, including direct and indirect financial contributions to local and state governments, opportunities for public access and recreational use, support for diverse local employment opportunities, and the inclusion of Oregonians and their broad range of perspectives.

State forest lands support multiple social benefits on a variety of scales and contribute to community well-being for all Oregonians. These benefits include clean air, clean water, shade, hunting, fishing, foraging, and recreational opportunities, like birding and hiking, that draw in visitors, contribute to local and statewide tourism economies, and enhance the quality of life for all Oregonians. Other social benefits include various health factors such as improved mental and physical wellness, mitigation of the negative impact of climate change, and enhance community cohesion around shared natural spaces. ODF provides opportunities for lasting and diverse outdoor recreation, education, and interpretive experiences that inspire visitors to enjoy, respect, and connect with Oregon's state forest lands. Active forest management provides revenue for counties, social services, and public education. It supports communities by creating living-wage jobs and contributing to local, regional, and state economies.

Principle 5 – Forest and Watershed Restoration

The FMP will recognize that investments in forest and watershed restoration are necessary to achieve desired outcomes that align with the GPV policy direction for the BOF.

Restoration efforts are essential to rehabilitate *degraded forest lands* and *degraded watersheds*. Degraded conditions may exist because of past management practices, changing climatic conditions, or natural *disturbances* such as fires, windstorms, floods, and outbreaks of insects or disease. Much of Oregon's state forest lands experienced significant degradation from repeated, large-scale wildfires and extensive logging in the first half of the 20th century prior to ODF management, and although most are they are now reforested, additional challenges remain where forests are underproductive or aquatic systems need to be rehabilitated. Restoration efforts are carried out with the goal of restoring properly functioning ecological conditions and resilient forests that continue to produce the benefits of GPV.

Forest Restoration

Sole reliance on natural regeneration, as opposed to proactively planting trees, in the wake of large-scale disturbance events (e.g., ice storms, wind events, floods, and fires) can extend periods of underproductive forest conditions and susceptibility to insects and disease. More immediate action, such as salvage of dead and downed trees followed by reforestation may be required to mitigate

additional fire or disease risks, improve *resilience*, and return the forest to a productive state in a reasonable timeframe.

The FMP recognizes these restoration needs and seeks creative funding mechanisms to implement them. Restoration efforts contribute to diverse and *healthy forest landscapes* that allow for natural disturbance at different scales. This helps create working forests that are more resilient in the face of climate change, fire, or other disturbance events and stressors. Monitoring and adaptive management are key components of restoration efforts.

Watershed Health

For over 20 years, ODF has made a concerted effort to conserve and improve rivers and watersheds throughout the state, with the direct involvement of local *Watershed Councils* and *Soil and Water Conservation Districts*. ODF's management plans and activities have been an important part of those efforts. The FMP supports the Oregon Watershed Enhancement Board's mission to "help protect and restore healthy watersheds and natural habitats that support thriving communities and strong economies" and emphasizes a continuing commitment to restoration activities. This commitment recognizes the vital contribution that these forests can make to the success of large-scale regional efforts like the *Oregon Plan for Salmon and Watersheds* (Oregon Watershed Enhancement Board 2006).

Principle 6 – Pace and Scale

The FMP will be developed and implemented on a scale and at a pace that provides a geographic and temporal range of economic, social, and environmental benefits.

Not all benefits can be optimized at every spatial scale for every time period. Therefore, ODF shall strive to achieve a range of benefits across the landscape and over time. Chapter 2, *Management Approach*, of this FMP describes how state forests are managed at different spatial and temporal scales to achieve a range of benefits. ODF allocates state forest lands according to stewardship classes that translate into a specific emphasis on different areas. The layout of these *emphasis areas* is intentionally designed to provide benefits at the larger landscape scale, like clean water, timber revenue across counties, recreational and tribal access, and habitat *connectivity* for diverse species, including fish and game. At smaller scales, such as individual forest stands within emphasis areas, site-specific conditions guide prescriptive management elements. Management across these spatial scales, from emphasis areas to stand conditions, produces a range of benefits over time.

Principle 7 – Varying Levels of Outcomes

The FMP will provide varying levels of social, economic, and environmental outcomes over time as fiscal conditions change. While this approach will result in short-term trade-offs among specific goals, over the long term, GPV will be achieved.

Different GPV outcomes may be emphasized at different time periods, depending on *fiscal conditions*. For example, when fiscal conditions are favorable, increased investments may be made in aquatic and watershed restoration efforts and to conduct forest management activities to increase resiliency that are cost prohibitive under poor market conditions. Fluctuating timber market conditions (rising markets

versus recessions) may favor more or less active management during specific time periods. However, over the long term, the FMP provides a predictable and sustainable flow of timber and other management activities. Protection of native fish and wildlife habitats is maintained consistent with the strategies established in this FMP and the *Western Oregon State Forests Habitat Conservation Plan* (WOSF HCP).

Principle 8 – Legal and Regulatory Compliance

The FMP will comply with other state and federal laws and rules.

In addition to the management mandates specific to state forest lands, the FMP addresses compliance with other state and federal laws and rules including, but not limited to, the state and federal *Endangered Species Acts* (ESAs), the federal *Clean Water Act*, the Oregon Forest Practices Act (FPA), Oregon *fish passage* laws, and *cultural resource* protection administered by the *State Historic Preservation Office* and coordinated with *the nine federally recognized Tribes in Oregon* (also known as *Tribal Partners*)[4] and the Oregon State Police.

Principle 9 – Tribal Outreach and Engagement

Reach out to and engage with the nine federally recognized Tribes in Oregon throughout the planning and implementation processes.

ODF acknowledges Tribes and the Confederations of Tribes are the original stewards of the lands currently managed by ODF and recognizes the value and importance of integrating tribal interests and perspectives into land management and implementation processes. ODF pursues opportunities to meet with tribal government executives and councils, members, practitioners, and staff to listen, learn, and seek opportunities to build collaborative relationships. Chapter 3, *Forest Resources, Goals, and Strategies*, provides additional context for outreach and *engagement* with the Tribes, and supporting plans may be developed in collaboration between the Tribes and ODF. Appendix A, *Engagement*, describes how ODF and Tribes worked together to develop the FMP cultural resources goals and strategies.

Principle 10 – Diverse Input

Seek diverse input from Oregonians.

Understanding, acceptance, and support from a wide range of Oregonians contributes to long-term success in managing state forest lands. ODF is committed to open, equitable, and transparent engagement processes. Counties containing BOFL have a statutorily established relationship with the BOF through the *Forest Trust Land Advisory Committee* (FTLAC). Additionally, the State Forest Advisory Committee, state and federal partners, and local communities provide input through public meetings and public comment periods. ODF provides accurate and timely information to ensure interested parties

[4] The nine federally recognized Tribes in Oregon are Burns Paiute Tribe; Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians; Confederated Tribes of Grand Ronde; Confederated Tribes of Siletz Indians; Confederated Tribes of the Umatilla Indian Reservation; Confederated Tribes of the Warm Springs Reservation; Coquille Indian Tribe; Cow Creek Band of the Umpqua Tribe of Indians; and the Klamath Tribes.

have the information they need to ensure they can provide testimony and comment to the BOF and the State Forester.

Principle 11 – Cooperative Efforts

The FMP will achieve goals through cooperative efforts with other agencies and units of local government, user groups, and organizations.

Management objectives can often be achieved more effectively and efficiently through collaboration with others. Consultation and communication with state and federal agencies, counties and local governments, academic institutions, and non-governmental organizations, is important to identifying areas where ODF's efforts intersect with other state initiatives.

Principle 12 – Managing for Climate Change

The FMP will be implemented to adapt to climate change and mitigate its impacts on the management of state forest lands. The FMP will also contribute to climate change mitigation and sequester carbon.

Temperature, precipitation, other climate variables, and *hydrologic processes* are changing, and they are likely to increase the frequency and severity of disturbances, including insect outbreaks, disease, severe windstorm events, wildfire, flood, and drought. Within the context of ODF's adaptive management process and consistent with the CCCP (ODF 2021), the FMP contains forest management strategies intended to maintain, restore, and improve ecological processes and functional characteristics that promote resilient forests. Healthy and resilient forests sequester and store carbon from the atmosphere, a factor in mitigating global climate change. Wood products derived from working forests store carbon and are less carbon intensive than building materials such as concrete and steel. A focus on strategies that adapt to climate change increases ODF's ability to provide GPV over the long term.

1.1.2 Land Ownership and Governance

State forest lands comprise 3% of Oregon's forested landscape. The *planning area* for the FMP covers approximately 640,000 acres consisting of BOFL (614,000 acres) and CSFL (26,000 acres), two types of land that are owned by different state government entities. The BOF owns BOFL, while the *State Land Board* owns CSFL. Each land ownership has its own set of legal and policy mandates. The locations of these lands are shown on the vicinity map (Appendix B, *District Maps*, Figure B-1). Lands are organized into management districts (Appendix B, *District Maps,* Figures B-1 through B-7).

Prior to state ownership, almost all BOFL had been owned and managed by private landowners. Most of these lands had been logged, or burned and salvage-logged, and abandoned without the implementation of modern *best management practices* (BMPs). Tax-delinquent and abandoned lands reverted to county ownership. The counties entered into an agreement with the state that was codified in statute and deeded the lands to the state. Those counties share in revenues from these lands today (Oregon Revised Statutes [ORS] 530.110, 530.010–530.040). CSFL are a subset of Common School Lands that were granted to Oregon by the federal government upon statehood. The original configuration of both types of lands has changed somewhat over time due to land exchanges and acquisitions.

ODF recognizes that the lands covered by the FMP include ancestral lands of the nine federally recognized Tribes in Oregon. The people living and using the lands were displaced during federal and private land acquisition, prior to the lands being deeded to the state. The nine federally recognized Tribes in Oregon were engaged in development of the FMP with the intention of integrating their interests and recognized historical claim in the management of lands that ODF currently manages.

1.1.3 Location

The planning area is west of the crest of the Cascade Range and is distributed across 17 counties. The lands covered by this FMP include both large blocks and isolated smaller tracts of state forest lands. The three largest blocks are designated as the Tillamook State Forest, Clatsop State Forest, and Santiam State Forest. Smaller tracts of BOFL and CSFL are unnamed state forest lands, scattered throughout the planning area.

The Clatsop State Forest and Tillamook State Forest are in the northern end of the Oregon Coast Range, roughly 25 miles northwest of Portland. They are managed by the Astoria District (Appendix B, *District Maps,* Figure B-2), Tillamook District (Appendix B, *District Maps*, Figure B-5), and the Forest Grove District (Appendix B, *District Maps*, Figure B-3). The Pacific Coast is a few miles to the west and the Columbia River is to the north and east. Local communities include Forest Grove to the east, Astoria to the northwest, and Tillamook to the west.

Located almost entirely in the Astoria District, the Clatsop State Forest is the second-largest state forest and contains the first parcels that were deeded to the state in 1937. In 1957, Clatsop County transferred 141,000 acres to the state. At 364,000 acres, Tillamook is the largest state forest, located primarily in the Tillamook and Forest Grove Districts. The Clatsop and Tillamook State Forests were formally designated in 1973.

The Santiam State Forest is in the Cascade Range, roughly 25 miles southeast of Salem, in the North Cascade District (Appendix B, *District Maps*, Figure B-4). Local communities include Detroit, Mill City, and Scotts Mills. Santiam is the third-largest state forest covered by this FMP. It was dedicated in 1974.

Many scattered state forest lands are in the Coast Range between Newport and Corvallis (Appendix B, *District Maps*, Figure B-7). There are additional tracts between Florence and Eugene in the Coast Range, scattered in a checkerboard pattern, and some tracts between Reedsport and the California border (Appendix B, *District Maps*, Figure B-6).

1.1.4 History of the State Forests Management Plans



Dedication of Tillamook and Clatsop State Forests. Governor Tom McCall speaks at the formal dedication of the Tillamook and Clatsop State Forests on July 18, 1973. Today, these lands remain Oregon's largest state forests, with Tillamook encompassing 346,000 acres and Clatsop encompassing 154,000 acres.

Credit: Unknown

As with many public forests, goals and management plans for state forest lands have evolved over time in response to shifting public values, changes in environmental conditions, and better understanding of forest management effects on *ecosystem function* and biodiversity. The *Long-Range Timber Management Plan for Northwest Oregon* (ODF 1984) and *Long-Range Timber Management Plan for the Willamette Region* (ODF 1989) set sustainable timber volume targets as the objective for forest management while giving consideration to other forest resource values. By the mid-1990s, threatened and endangered species listings under the federal ESA had raised significant public concern about how state forest lands were being managed and caused substantial reductions in timber harvest objectives. Growing recreational use of the Tillamook State Forest also demanded attention, and the *Tillamook State Forest Comprehensive Recreation Plan* was adopted in 1993.

The State Forester is mandated to manage state forest lands for multiple benefits including timber, recreation, and fish and wildlife habitats (ORS 530.050). In 1998, the BOF adopted a set of administrative rules (OAR 629-035) that were intended to provide clarity around the benefits that Oregonians derive from state forest lands. The rules were also intended to direct the State Forester to pursue management practices that promote "compatibility of forest uses over time" and "integrate and achieve a variety of forest resource management goals." The State Forester is required to develop FMPs, using best available science, that establish the general management framework for state forest lands, as well as *Implementation Plans* (IPs) and *Operations Plans* (OPs) that describe more specific, smaller-scale management activities. (OAR 629-035-0030(1)).

In response to these revised rules, in 2001, ODF adopted new Northwest and Southwest Oregon State Forests Management Plans. The plans took a much more comprehensive, multi-resource, ecosystem-based approach to forest management than previous long-range plans and used a system of *integrated resource management* and a landscape-level approach to achieve GPV. The FMPs underwent modifications in 2010 as part of decadal review and updates. The modifications included *species of conservation concern* strategies and revision of landscape design. This FMP is designed to use the WOSF HCP as its compliance mechanism with the federal ESA as well as be the foundation for supporting many of the forest resource goals. It replaces the 2010 FMPs for Northwest and Southwest Oregon, and the 2011 *Elliott State Forest Management Plan*, under which some BOFL are still managed.



The North Fork Kilchis River Drainage recovery after wildfire and logging. Most state forest lands are recovering from logging or wildfire, salvage-logging, and abandonment that occurred prior to state ownership and without modern BMPs.

1.2 Plan Themes

While the current FMP was developed to address all of the guiding principles, five fundamental themes emerged that form the core of the FMP: GPV, considering and engaging all Oregonians, climate change, sustainability, and adaptive management. These themes, and how the FMP will address them, are explained in the following subsections.

1.2.1 Greatest Permanent Value

The FMP is intended to achieve GPV for Oregonians through a comprehensive, multi-resource approach of integrated forest management. GPV means healthy, productive, and sustainable forest ecosystems that, over time and across the landscape, provide a full range of social, economic, and environmental benefits to the people of Oregon (OAR 629-035-0020).

State forest lands in western Oregon are managed to create healthy, productive forest ecosystems that provide benefits from forest resources such as a reliable, sustainable and predictable source of timber, economic benefits to rural communities and schools, clean air and water, high-quality habitats for native fish and wildlife, and a diversity of educational and recreational opportunities for the people of Oregon.

Social, economic, and environmental goals have been developed for forest resources. GPV icons are used throughout Chapter 3, *Forest Resources, Goals, and Strategies*, to provide examples of these forest resource goals by category. (Figure 1-1).

FIGURE 1-1. Greatest Permanent Value Categories and Icons. GPV category icons are used throughout Chapter 3, *Forest Resources, Goals, and Strategies*, to indicate connections with social, economic, and environmental benefits.

Social	Economic	Environmental
		
Examples Include • Protection of cultural resources • Recreation, education, and interpretation opportunities • Opportunities to collect special forest products such as firewood, edible fungi, and salal	Examples Include • Sustainable and predictable production of forest products that support local and regional economies • Revenue generation for local taxing districts • Revenue generation for the management of state forest lands	Examples Include • Healthy, sustainable, resilient forests • Properly functioning aquatic habitats for native fish and aquatic life • Habitat for native wildlife • *Carbon sequestration* and storage

1.2.2 Considering and Engaging All Oregonians

GPV calls for providing a full range of social, economic, and environmental benefits to the people of Oregon, which necessarily requires ODF to understand and honor the diverse *demographics* of our state. The goals and strategies of the FMP are intended to serve all Oregonians and are able to adapt to Oregon's changing demographics.

An essential element of the commitment to manage for GPV is to recognize Tribes as the original stewards of Oregon's state forest lands, as well as their continued contributions to these lands as sovereign nations with unique ancestral and local knowledge and stewardship since time immemorial. Further, we recognize humans—past, present, and future—are an integral part of state forests. Oregonians benefit from *ecosystem services* that the forests provide, and our relationship with state forest lands is grounded in *reciprocity*—we care for the forests and the forests care for us and for our communities (Chapter 2, Figure 2-1).



Visitors to Tillamook Forest Center explore exhibits about the importance of woody debris on the forest floor for soil health and wildlife habitat.

Photo credit: ODF

1.2.3 Resilience to Climate Change

Stressors associated with climate change adversely affect forest ecosystem resiliency and the delivery of GPV benefits. Rising ambient air and water temperatures, extreme heat events, and increased incidences of drought can adversely affect aquatic and wildlife habitats, drinking water, forest products, and tree growth. These conditions can also influence the frequency and intensity of wildfire and storm events, resulting in *landslides*, *debris flows,* and *windthrow.* which can adversely affect road and trail conditions, soil productivity, water quality, and the availability of merchantable timber. These disturbances may also adversely affect visitor safety, state revenue, future timber productivity, fish and wildlife habitat, and tribal access opportunities.

In alignment with the VOF and CCCP, the FMP provides goals and strategies to increase the forest's capacity to adapt to, and mitigate the effects of, climate change. Both adaptation and mitigation are key tenets of *climate-smart forestry*, in which forests are actively managed to achieve resource goals, prepare for climate change, offset carbon emissions, and support communities reliant on wood products.

Chapter 2, *Management Approach*, describes the elements of managing for more *resilient forests under a changing climate.* This management approach results in a range of activities across the landscape by evaluating trade-offs in the context of climate vulnerability factors, site-specific conditions, and goals for forest resources and considering specific emphasis area designations. Future changes in forest conditions and new research findings will be incorporated through adaptive management.

Chapter 3, *Forest Resources, Goals, and Strategies*, describes management goals and strategies that increase climate resilience across resources, including wildlife, aquatics, and timber production. One way climate adaptation is achieved is through climate-informed silviculture, in which *management prescriptions* are aligned with *climate-smart forestry* approaches.

The high productivity of forests in the Coast Range and Western Cascades are well-suited for *climate change mitigation* due to their ability to sequester and store large amounts of atmospheric carbon dioxide. The carbon sequestration and storage goal has co-benefits with other resource goals, such as increasing late seral habitat for wildlife species or producing timber that can store carbon in long-lived structures like housing. Carbon is sequestered and stored long term on the landscape in dedicated *conservation areas* while areas with a timber production focus contribute to carbon storage in long-lived forest products.

1.2.4 Sustainability

Consistent with the guiding principles, the FMP is adopting an *ecologically sustainable forest management* approach. The foundation of this approach to forest management is to support the health and *function* of forest ecosystems, thereby improving the long-term delivery of ecosystem services. Healthy, diverse, productive, and resilient forests maintain ecosystem services and the benefits the public derives from them, including timber production. These services are the foundation upon which a sustainable managed forest model is built (Spies et al. 2018).

Ecologically sustainable forest management views forest resources and benefits within the context of societal values. This approach anticipates change and uncertainty in forest development and disturbance regimes, societal values and demands, and future climate effects on forest productivity, species ranges, and ecological processes. To address change and uncertainty, land managers seek outcomes to reduce risk to forest resources, and increase future options by applying strategies that improve forest resilience in an adaptive management framework. Under ecologically sustainable forest management, specific areas on the landscape emphasize different ecosystem services and benefits. The protection requirements outlined in the WOSF HCP are central in implementing the FMP habitat strategies by defining habitat emphasis areas, which safeguard conservation values while generating regulatory certainty for timber production and other active management activities covered by the WOSF HCP. For more information, see Chapter 2, *Management Approach*.

The principles of ecologically sustainable forest management are reflected in Chapter 3, *Forest Resources, Goals, and Strategies*. Goals and strategies support the delivery of ecosystem services and the values articulated in the guiding principles. The goals emphasize the function of social, economic, and environmental systems and recognize that the application of strategies differs by emphasis area, considers resource trade-offs, and adapts through time.

1.2.5 Adaptive Management

The FMP uses adaptive management to evaluate and learn from decisions and revise plans as changes occur in society, the economy, and the environment, as required by OAR 629-035-0020(3)(f) and 629-035-0030(3)(d). Adaptive management is a systematic and rigorous approach to learning from actions, improving management, and accommodating change. Chapter 2, *Management Approach*, describes how adaptive management is used to monitor and improve the sustainable delivery of ecosystem services. All strategies in Chapter 3, *Forest Resources, Goals, and Strategies*, are supported by adaptive management, which tests and monitors the assumptions and predictions of the FMP goals. Chapter 4, *Guidelines*, describes how forest management is implemented at ODF.

1.3 Relationship with Other Plans and Planning Processes

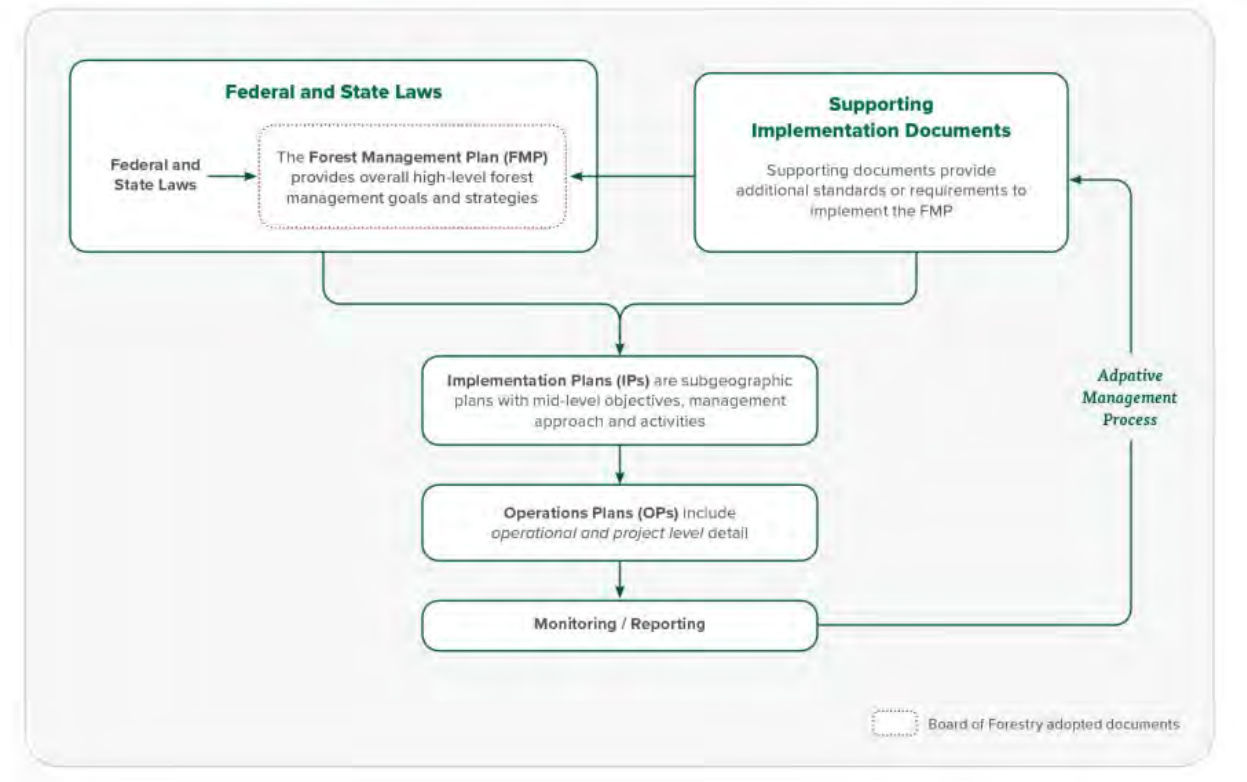
This FMP provides the overarching framework for managing state forest lands, in alignment with the VOF and CCCP. The goals and strategies described in this FMP reflect priorities articulated in the VOF and CCCP as they are applied to management of state forest lands and the delivery of GPV.

The specific requirements and standards for implementing the goals and strategies, such as riparian buffers, soil protections, and green tree requirements, are detailed in supporting plans (e.g., the WOSF HCP), laws (e.g., the FPA), performance measures, operational policies, the Forest Land Management Classification System, and BMPs. The goals and strategies in the FMP, along with the requirements and standards outlined in these supporting documents (Chapter 2, Figure 2-1) will guide the development of IPs and plans for monitoring, reporting, and adaptive management.

The FMP and supporting plans inform all lower levels of planning shown in Figure 1-2.FMP implementation is carried out through IPs, which are then achieved through on-the-ground management activities described in OPs. IPs are shorter-term plans (typically 10-year) in which the FMP goals are distilled into more specific activities, objectives, and expected outcomes for smaller sections of land. Each new IP presents an opportunity to review previous performance and make adjustments as needed, leading to adaptive management. OPs detail specific planned operations, projects, and activities that will be used to support IP objectives and budgets (biennial and fiscal) over the short term (1 to 2 years).

For additional information, see Chapter 4, *Guidelines*.

FIGURE 1-2
Relationship with Other Supporting Plans and the Planning Process. This figure provides additional detail about how federal and state laws and supporting implementation documents work in conjunction with the FMP to inform the tiered planning levels of implementation.



1.4 Overview of the Forest Management Plan Chapters

In accordance with the Forest Management Planning rule, the following chapters are included in this FMP.

- **Chapter 2, *Management Approach*.** Chapter 2 provides the vision for forest management through an ecologically sustainable forest management framework that increases the ability of the forest to continue to provide ecosystem services to Oregonians.
- **Chapter 3, *Forest Resources, Goals, and Strategies*.** Chapter 3 describes forest resource conditions to provide context for management. The chapter also includes the FMP's goals and strategies. The goals are statements of what ODF intends to achieve for each forest resource in the planning area. Strategies describe how ODF manages the forest resources and identifies management techniques the State Forester may use to achieve the plan's goals.
- **Chapter 4, *Guidelines*.** Chapter 4 states the general *guidelines* for asset management, implementation, adaptive management, plan revision, and public engagement. Asset management guidelines provide overall direction on investments, marketing, and expenses. Implementation guidelines prescribe the process for implementing the FMP. Adaptive management guidelines describe the approach for learning from management and applying new findings to adjust management to continue to meet GPV as conditions change. Section 4.4, *Decision Authority and Revision Guidelines,* describes what causes plans to change and how plan changes are governed. Section 4.5, *Engagement Guidelines*, describes the various levels of public engagement required by plan level.

Additionally, the FMP includes a *Glossary, List of Acronyms,* and *References* as well as three appendices. Appendix A, *Engagement*, summarizes tribal, public, and stakeholder engagement efforts during FMP development; Appendix B, *District Maps*, shows the FMP planning area by management *district*; and Appendix C, *Description of Figures,* describes the content of all FMP figures for accessibility purposes.

CHAPTER 2

Management Approach

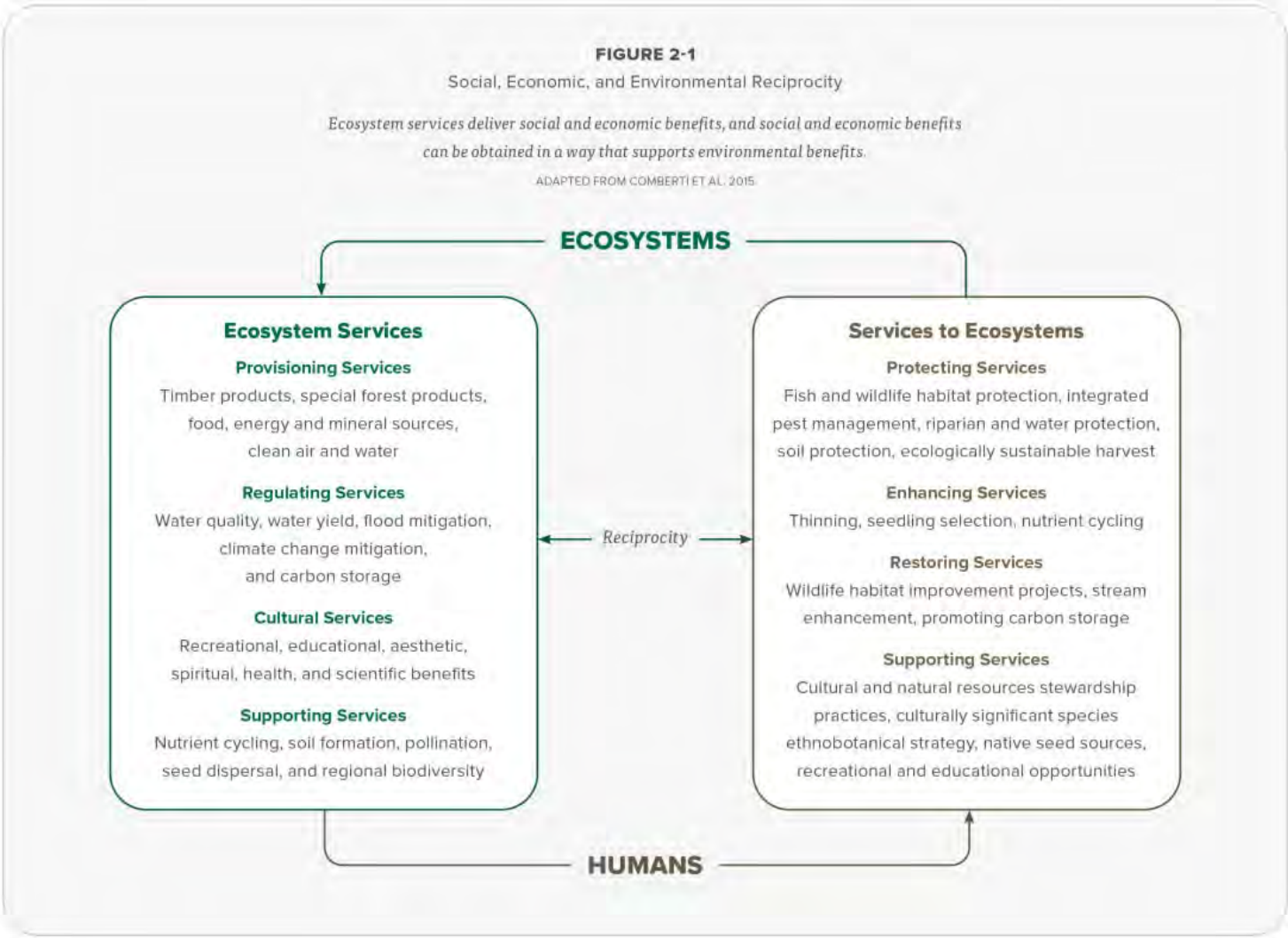
Chapter 2 describes the *Western Oregon State Forests Management Plan* (FMP) management approach. This FMP is grounded in the concept that all economic, social, and environmental benefits of the forest are derived from *properly functioning ecosystems*.[1] It is, therefore, essential for the management approach to reciprocate by managing the forest to support *ecological function*. Chapter 2 describes how to sustain ecological function by managing the land in alignment with management *emphasis areas*, in the context of the broader *landscape* conditions, and in accordance with *stand* conditions. This chapter also clarifies emphasis area design and layout, appropriate example management treatments and their aims, and approaches for supporting ecosystem function under climate change.

2.1 Sustainable Delivery of Ecosystem Services

Although forests have always provided for multiple uses and benefits, the Oregon Department of Forestry (ODF)'s understanding of these uses and how they are interrelated has deepened and evolved over time. ODF forest management plans have changed from a primary focus on production and harvest of wood products to a greater emphasis on 1) integrating management actions to realize multiple co-benefits such as clean water, rare *species* protections, diverse recreational opportunities and timber production; and 2) recognizing that forest uses and benefits are derived from intact, functioning forest ecosystems and ecological processes (Kline et al. 2013; Jaworski et al. 2018). ODF uses the framework of *ecosystem services* to identify how healthy forest ecosystems support social, economic, and environmental benefits, and conducts management activities in service to those ecosystems to support their functions (Figure 2-1).

[1] Terms italicized in this document are defined in the Glossary. Defined terms are italicized at the first instance in each chapter.

FIGURE 2-1
Social, Economic, and Environmental Reciprocity. Ecosystem services deliver social and economic benefits, and social and economic benefits can be obtained in a way that supports environmental benefits.



Adapted from Comberti et al. 2015.

Ecosystem services are the benefits provided by ecosystems to humans. These services are categorized into the following four groups: provisioning, regulating, cultural, and supporting services (Millennium Ecosystem Assessment 2005).

- **Provisioning services.** Provisioning services are resources provided by forest ecosystems that include a sustainable and predictable supply of timber, wood products, and *special forest products*; food, energy and mineral sources; and clean air and water.
- **Regulating services.** Forests help regulate ecosystem processes, for example through *carbon sequestration* and flood control.
- **Cultural services.** Forests provide sustenance; spiritual, recreational, aesthetic, and scientific benefits; and values as numerous and diverse as the people and cultures that use them.
- **Supporting services.** Forest ecosystems support regional *biodiversity* and the function of many systems including *nutrient cycling*, soil *formation*, pollination and seed dispersal.

In addition to the many important *outcomes* that contribute to community well-being, the concepts of ecosystem services and *reciprocity* create a framework that recognizes how human needs are supported by healthy ecosystems and how society, in turn, provides services to those ecosystems by supporting their functions (Figure 2-1). In this framework, management activities can enhance the quality or quantity of ecosystem services while maintaining ecological integrity and resilience (Comberti et al. 2015). Services to ecosystems can likewise be categorized into the following four groups: protecting, enhancing, restoring, and supporting services.

- **Protecting services.** Fish and wildlife *habitat* protections, *riparian* buffers, and water protection.
- **Enhancing services.** Forest growth management and development, species selection and translocation, and nutrient cycling.
- **Restoring services.** Wildlife habitat improvements, *stream* enhancements, and promoting carbon storage.
- **Supporting services.** Enhanced cultural and natural resource *stewardship* practices.

To support the delivery of ecosystem services into the future to provide *greatest permanent value* (GPV) to Oregonians, ODF manages state forest lands in western Oregon under an *ecologically sustainable forest management* approach, as described in Section 2.2, *Ecologically Sustainable Forest Management of State Forest Lands*.

2.2 Ecologically Sustainable Forest Management of State Forest Lands

Healthy, diverse, productive, and *resilient* forests maintain ecosystem services and are the foundation upon which sustainable working forests are built (Spies et al. 2018). The overall focus of ecologically sustainable forest management is the sustainable delivery of ecosystem services while maintaining the

integrity of the ecosystem (Lindenmayer et al. 2012). This approach can be challenging because it requires an integrated understanding of the relationships between *forest resources* that are distributed across the landscape and change over time (Fischer 2018; Thompson et al. 2021). This understanding, while always incomplete, informs ODF's planning, decision-making, and implementation.

Specific strategies for individual resource *goals* are considered (Chapter 3, *Forest Resources, Goals, and Strategies*), as well as integrated strategies across resource goals, which include the following considerations: resilient forests, *trade-offs* among resources, and *adaptive management*. Forest managers are confronting a changing climate, chronic stressors, and disturbance regimes that are increasingly different from historical norms. Localized forest *stand management*, along with landscape-level considerations, seeks to reduce the vulnerability of state forests to ecosystem service disruption by increasing the diversity, complexity, and *adaptive capacity* of forests to tolerate, recover from, or adapt to disturbances. The focus on increasing resilience is informed by the Oregon Board of Forestry (the BOF) and ODF's shared *Vision for Oregon's Forests* (VOF) and ODF's *Climate Change and Carbon Plan* (CCCP).

To produce GPV, different resource outcomes are prioritized at different points in time or places leading to trade-offs among the many resource goals. ODF evaluates trade-offs among resource goals through a tiered planning framework that operates at multiple geographic and temporal scales. For instance, at the *policy* level, the *Western Oregon State Forests Habitat Conservation Plan* (WOSF HCP) establishes overall biological goals and *objectives*, conservation actions, and the spatial design of conservation areas. At the *Implementation Plan* (IP) level, regional targets for activities and protections balance habitat, *watershed* function, social values, and sustainable timber *revenue* over the plan term. At the *Operations Plan* (OP) level, site-specific plans evaluate forest stand conditions, forest access, *best management practices* (BMPs), and resource protections to integrate co-benefits. Adaptive management links these planning levels by using *monitoring* and new information to adjust strategies and ensure long-term resilience and delivery of ecosystem services.

Adaptive management is a structured approach to learn from actions, monitor outcomes, and adjust management in response to ecological, economic, and societal changes. In ecologically sustainable forest management, ODF implements management, monitors performance relative to goals and targets, and updates plans or operations where needed. This iterative cycle links planning (FMP, WOSF HCP, IPs, OPs) to on-the-ground learning, ensuring strategies remain effective as conditions evolve. Adaptive management is one of the fundamental themes (Chapter 1, Section 1.2, *Plan Themes*) present throughout the FMP. Chapter 4, *Guidelines*, provides additional adaptive management *guidelines*.

2.3 Management Approaches within Ecologically Sustainable Forest Management

Ecologically sustainable forest management uses a combination of approaches at different scales and evaluates trade-offs among forest resources across the landscape to support ecological function and productivity. Management for diversity and complexity occurs at these various spatial scales (genes to ecosystems, individual trees to ecoregions) and timeframes (annual, decadal, plan term) in alignment

with the management of each emphasis area. Approaches include management of emphasis areas, landscape conditions, and individual forest stands (Lindenmayer et al. 2012). Together, these three approaches deliver the ecosystem services to provide GPV (Figure 2-2). Each approach is described in more detail in the following sections.

2.3.1 Management of Emphasis Areas

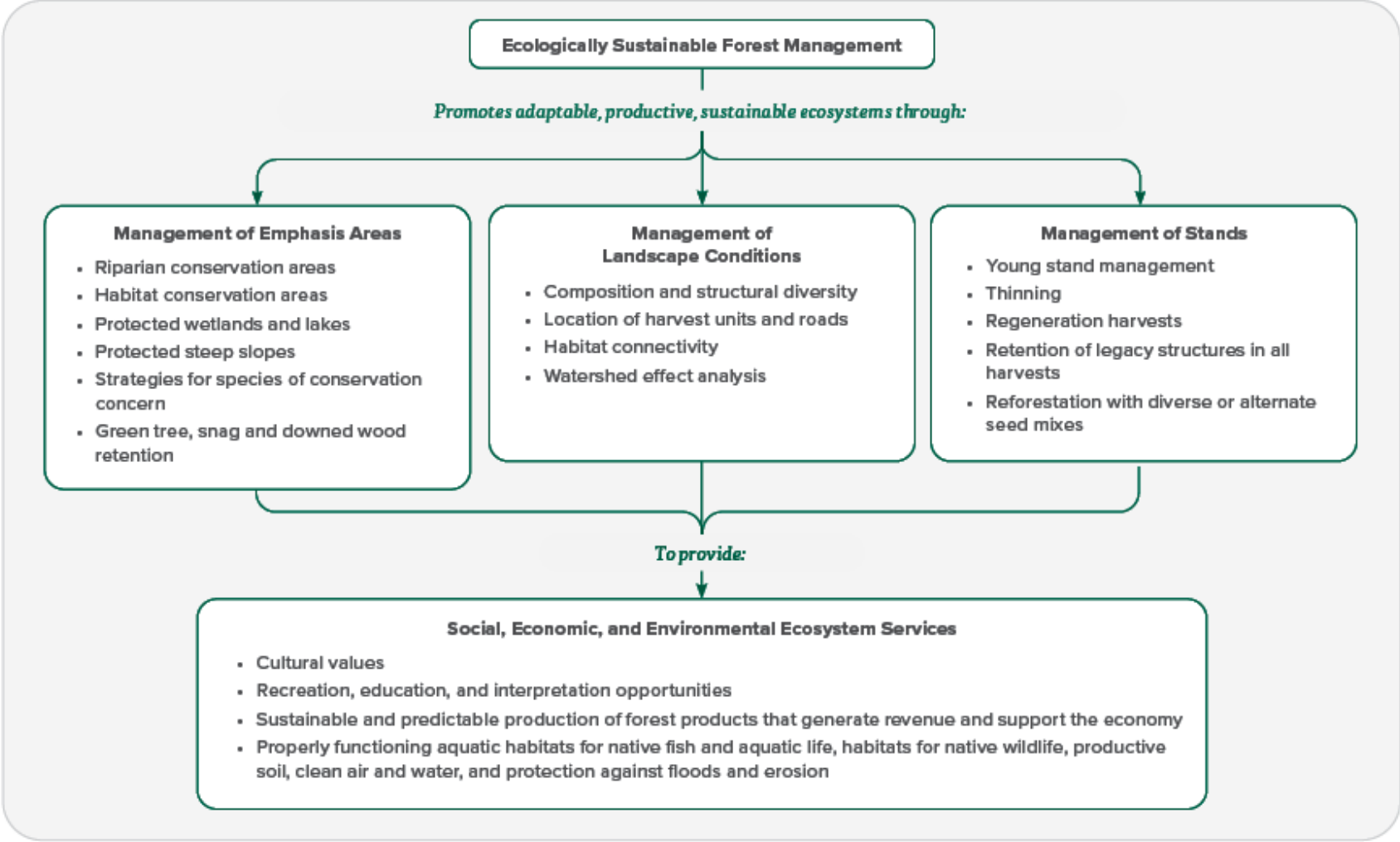
Different types of management can be applied to different areas of the forest to balance trade-offs between resource goals and to deliver the desired ecosystem services most effectively. Emphasis areas may include lands designated for environmental protection, timber production, or multiple compatible uses (Burton 2025). ODF's ecologically sustainable forest management approach designates emphasis areas that guide management priorities and acknowledge the trade-offs between different forest uses on any single parcel of forestland. These emphasis areas are mapped using the *Forest Land Management Classification System (FLMCS)*.

Forest Land Management Classification System

The FLMCS describes the *management emphasis* of specific areas of state forest lands and is implemented in accordance with Oregon Administrative Rules (OAR) 629-035-0055. The FLMCS 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. The spatial locations of the emphasis areas are mapped according to the FLMCS classification criteria and are based on the requirements and *standards* found in supporting plans such as the WOSF HCP, laws, operational policies, and BMPs.

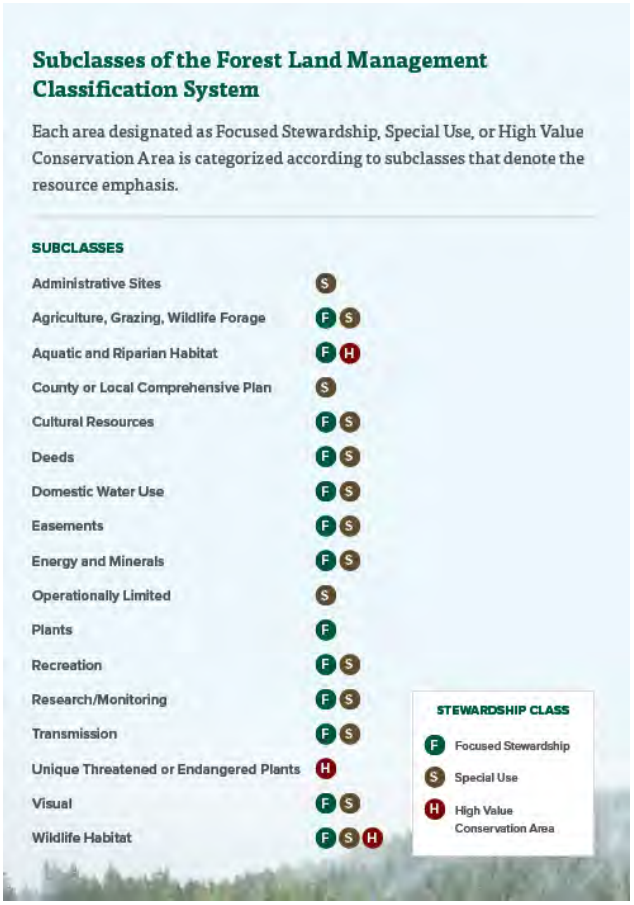
The FLMCS is made up of four land management stewardship classes: General Stewardship, Focused Stewardship, Special Use, and High Value Conservation Areas (HVCAs). Within the Focused Stewardship, Special Use, or HVCA Stewardship classes, the resource emphasis is defined in more detail with subclasses. In many instances there may be several forest resources in an area that result in overlapping subclasses and stewardship classifications. In other areas, these specific forest resources may be absent and are classified as General Stewardship. These classifications are not prescriptive in nature but provide a guide during implementation to the types and appropriate range of management activities, and the forest resource or resources that should be considered and prioritized for each area.

FIGURE 2-2
Ecologically Sustainable Forest Management. Practices that promote adaptive capacity to secure GPV.



Adapted from Lindenmayer et al. 2012.

General Stewardship



General Stewardship is a classification with the broadest range of potential management activities. General Stewardship lands that are designated as *silviculturally capable* under the Oregon Forests Practices Act are actively managed to meet the requirements of OAR 629-035-0020(2), which is to "provide sustainable timber harvest and revenues to the state, counties, and local taxing districts." Non-silviculturally capable lands in this classification are not managed for timber harvest, but are managed to meet the remaining goals of GPV (OAR 629-035-0055(4)(a)).

Focused Stewardship

Focused Stewardship lands contain these lands that require heightened or focused awareness, supplemental planning or modified management practices may be required to achieve the goals of the FMP, WOSF HCP, FPA, or other legal requirements (OAR 629-035-0055(4)(b)).

There are several resources within Focused Stewardship lands that are identified by specific subclasses, including areas with *cultural resources*, domestic water use, or recreational uses, where additional planning or management practices are considered to maintain and protect these resources.

Special Use

Special Use is a classification of lands that are "managed for a specific forest use. Integrated management is conducted on these lands to the extent possible without interfering with the management of the specific forest use" (OAR 629-035-0055(4)(c)). On lands classified as Special Use, a legal or contractual constraint, such as an administrative site or easement, dictates a clear priority and precludes the integrated management of all forest resources. These lands are committed to a specific use, and management activities are limited to those that are compatible with the specific use (OAR 629-035-0055(3)(c)). The Tillamook Forest Center and Smith Homestead day use area are examples of Special Use lands. In accordance with the governance documents for these sites, the forest is specifically managed for visitor and facility needs—such as access, recreation, education, interpretation, hazard mitigation, and maintenance and compliance with other laws.

High Value Conservation Areas

HVCAs are a classification of lands managed for a specific conservation value, where forest management activities are designed to promote specific conservation values, avoid long-term adverse impacts on those values, and are consistent with applicable legal requirements (OAR 629-035-0055 4(d)). *Habitat conservation areas* (HCAs) and *riparian conservation areas* (RCAs) are examples of HVCAs where specific wildlife or riparian needs are promoted by applying forest management activities according to the specifications set out in the WOSF HCP. Examples include limiting harvest in RCAs to improve stream shade, and thereby salmon habitat, and designing harvest in HCAs to improve habitat for covered species.

2.3.2 Management of Landscape Conditions

While applying different management approaches among emphasis areas increases the effective delivery of ecosystem services, the spatial arrangement of emphasis areas across the landscape can promote the resilience of ecosystem services to unpredictable changes. The spatial layout of emphasis areas and pacing of management activities are intentionally designed to support diversity, complexity, connectivity, and *redundancy* across the landscape and its ecosystem functions and processes. Decadal targets for management activities and outcomes are set in IPs and OPs prescribe specific spatially explicit annual management activities, in alignment with the IPs.

The distribution of stands of various ages and structural conditions affects a broad range of ecosystem services, such as availability of wildlife habitats (Figure 2-3) and timber over time. Sustainable timber production requires a balanced set of forest ages across districts in General Stewardship areas, while many wildlife species require specific habitat elements, *patches* of sufficient size and connectivity among them allow for production and dispersal. Consideration of how management in one area affects the adjacent areas and, vice versa, how the surrounding forest influences management outcomes is critical for functional landscape design. Diverse landscape conditions are managed to increase connectivity of forests for wildlife dispersal and flow of ecosystem services like pollination. This, in turn, promotes biodiversity and related ecosystem processes, such as seed and fungal spore dispersal, soil and nutrient cycling, water quality, and aquatic habitat, which further enhances function and increases resilience to stochastic and chronic disturbance (Carey 2007; Franklin et al. 2018). Active management for diversity, while incorporating or emulating natural disturbance events, further increases the complex arrangement of stands and distributes flows of resources across the landscape and through time.

The size and layout of HCAs and RCAs in relation to one another creates a connected network of conservation features across varied forest types, elevations, and climate zones. Even within a single type of emphasis area (i.e., HVCA), wildlife habitat reflects a diversity of climate conditions, disturbance history, and patch sizes. Connectivity is provided in part by RCAs that allow trees to grow old in long swaths alongside streams, traversing through a landscape of diverse age classes. Meanwhile, the network of HCA patches creates the opportunity to improve wildlife habitat connectivity throughout the forest uplands (Figure 2-4, View A). Distributing emphasis areas across the landscape builds redundancy in ecological functions and mitigates the risk of exposure to disturbances and climate stress.

Losses to ecosystem services in any one area are compensated through the abundance of similar features elsewhere on the landscape.

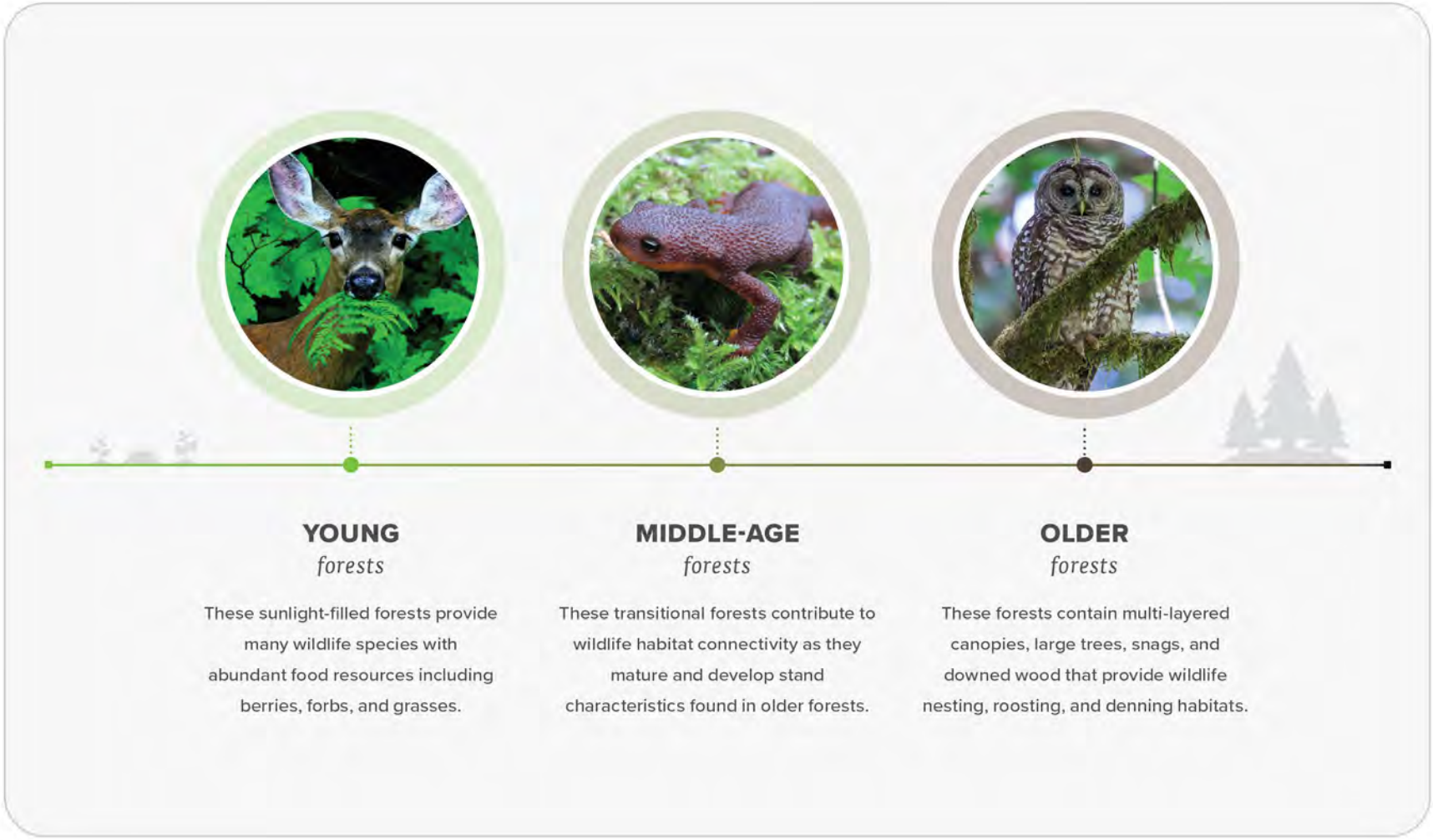
The size and layout of conservation areas among actively managed forest is intentional. Placing HCAs next to, and RCAs throughout, General Stewardship emphasis areas with active management, the landscape becomes a complex mix of habitat types and forest stages that provide diversity between forest stands and supports complementary ecosystem services that deliver multiple benefits. A complex landscape with diverse forest types can increase the resilience of the forest to threats, such as an insect or disease. The complex arrangement of forest types, tree ages, and emphasis areas can also provide a range of options for recovery or adaptation after disturbances (Burton 2025). For instance, a wildfire or ice storm that causes patchy areas of tree mortality could be followed by natural seed dispersal from nearby surviving trees that persisted because they were a less-susceptible age or on a sheltered landscape feature.

Emphasis areas of different types are integrated and overlaid across the forest to create a landscape of diverse uses and benefits (Figure 2-4, View B), which are managed for multiple values, improving GPV. In this way, emphasis areas work together to produce timber, provide social benefits such as public access, and protect a wide array of ecosystem services.

2.3.3 Management of Stands

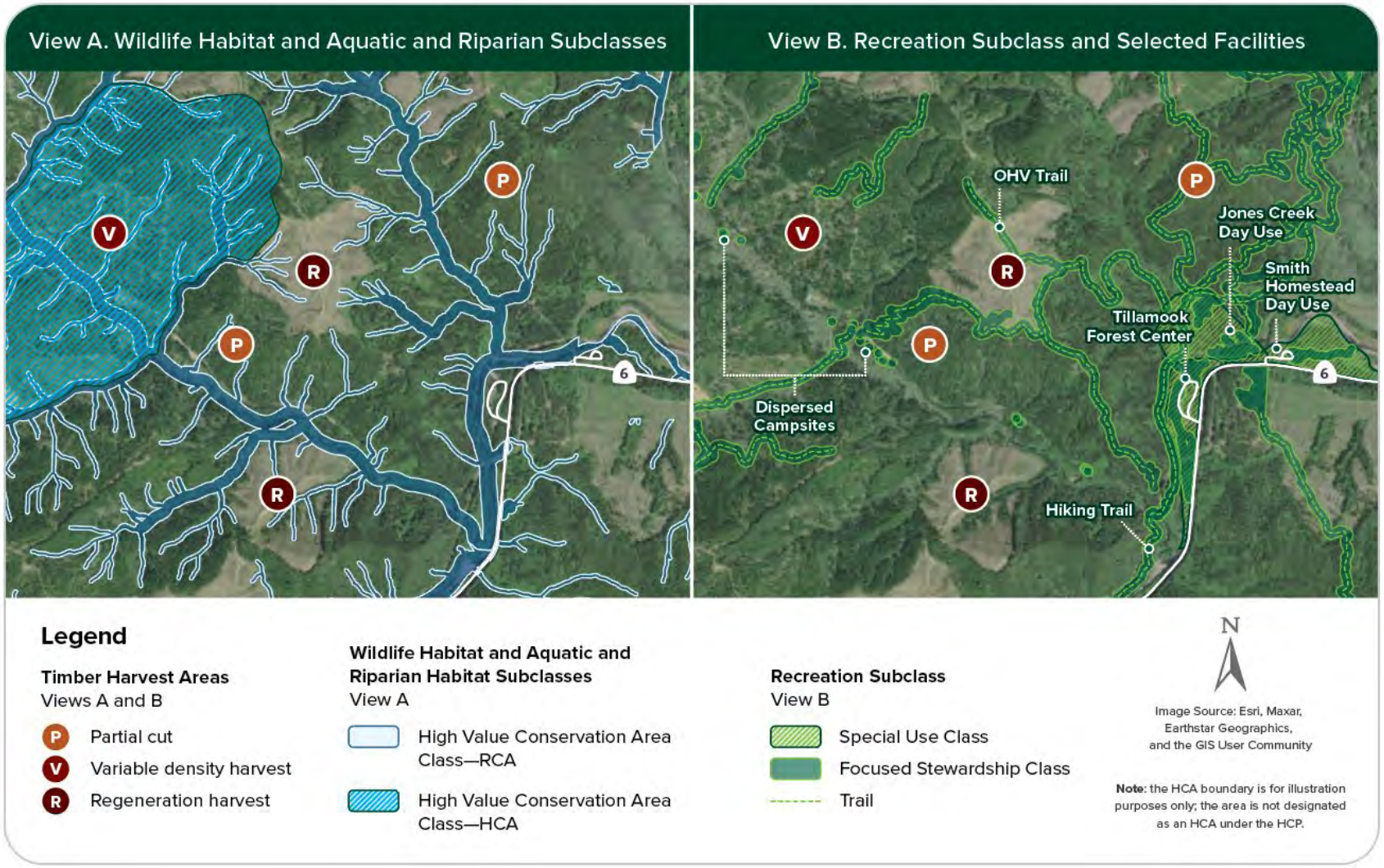
Management of individual forest stands is based on site-specific resource goals. Management varies depending on existing tree conditions and can include *young stand management*, thinning older trees *regeneration harvests*, retention of biological *legacies*, and *reforestation*. Options for management approaches for forest stands are detailed in Chapter 3, Section 3.1.3, *Forest Resilience*. Within emphasis areas, stand management activities have similarities based on the common resource goals. However, even within emphasis areas, the site conditions and trade-offs among resources lead to different treatments. The emphasis areas found in FLMCS can generally be placed into the social, economic, and environmental categories that make up GPV. Descriptions provided in the following subsections give examples of how ODF management may vary at the forest stand level given the considerations of the emphasis areas.

FIGURE 2-3
Landscape-Level Forest Stand Diversity Contributions to Ecosystem Function. Management across the landscape supports diversity, connectivity, complexity, and redundancy, which, in turn, supports adaptive capacity of the forest for sustained ecosystem services delivery under changing conditions.



Source: Oregon Forest Resources Institute 2022.

FIGURE 2-4
Examples of Emphasis Areas across the Landscape. Active management is integrated across the landscape guided by resource management emphasis areas.



Note: The HCA boundary is for illustration purposes only; the area is not designated as an HCA under the WOSF HCP.

Social Emphasis

State forests provide for a wide range of social benefits, including clean air and water, abundant fish and wildlife habitat for fishing and hunting, carbon sequestration, forest products, job opportunities, and revenue (Figure 2-4, View B). While social benefits are present across all emphasis areas, there are also specific areas managed primarily for social benefits such as *scenic* highways and *scenic waterways*; public access through developed and dispersed recreational opportunities including hiking, motorized trails, and camping; and educational and interpretive services. The cultural goals and strategies outlined in Chapter 3, *Forest Resources, Goals, and Strategies*, provide for tribal access, opportunities for co-stewardship of culturally significant species, and protection of cultural resources.

Management within social emphasis areas also integrates other resource goals and strategies. For example, planning and construction of new trails follow standards in the WOSF HCP for location, stream-crossing design, and hydrological connectivity. Campgrounds in certain areas of the forest may be required to implement trash management practices described in the WOSF HCP to protect marbled murrelets. Stand management may occur in social emphasis areas when it supports social benefits, such as thinning in campgrounds or on lands deeded to ODF for recreational use to enhance scenic qualities or remove safety hazards. While these activities may produce other incidental benefits, such as economic revenue, this is not their primary purpose.

Economic Emphasis

On state forest lands, timber revenue funds the majority of management activities, including habitat *restoration*, fuels reduction, recreation, educational programs, and infrastructure development and maintenance. These funds are also the primary vehicle for providing economic benefits to rural communities and public services. Emphasis on timber-production goals and related *silvicultural* strategies are prioritized on a significant portion of the landscape, especially on General Stewardship lands. Although economics is the emphasis of General Stewardship lands, these lands are managed to continue to provide a suite of additional ecosystem services such as clean water, *carbon sequestration* and *storage*, and habitat for many different wildlife species associated with early- and mid-*seral* forest types (Figure 2-3). Environmental and social goals and strategies in Chapter 3, *Forest Resources, Goals, and Strategies*, apply during management of General Stewardship lands.

With an economic emphasis, silvicultural practices in forest stands consider the long-term resilience of tree growth and production of wood products under climate change. To moderate the uncertain impacts of future climate conditions, stand management may vary by the anticipated vulnerability of the stand (e.g., based on its aspect, elevation, precipitation, and species mix). Diversifying management strategies at the stand level provides risk management across the General Stewardship lands. Options include increasing the number of species used or adjusting planting density, different thinning types, and timing of cutting activities. Some approaches may perform better or worse in the future compared to what is currently optimal, but preserving a range of options for future management provides some assurance of maintaining long-term timber *sustainability* under an adaptive management approach (Puettmann 2011).

Management activities are reviewed during individual project planning to ensure alignment with FMP goals and strategies. For example, harvest operations on General Stewardship lands are planned with the management emphasis of revenue and timber production.

Other co-benefits are realized from these operations.

- Domestic water intakes in or adjacent to a harvest area and are protected according to applicable rules and policies.
- RCAs and leave tree and downed wood requirements (defined in WOSF HCP Chapter 4, *Conservation Strategy*) retained within the *harvest unit* contribute to fish and wildlife habitat, clean water, and carbon storage.
- Harvested timber contributes to carbon storage in manufactured wood products.
- Policies and BMPs may be used to minimize impacts on a recreation trail located within a harvest area.

Figure 2-4 shows how forest and social resources protections and considerations and active management are integrated across the landscape.

Environmental Emphasis

Environmental benefits are found throughout the forest from healthy stands with productive soils, fish and wildlife habitat, and clean air and water. Areas with an environmental emphasis include *wetlands*, meadows, lakes, and larger conservation areas to provide habitat to a multitude of species. These conservation areas also provide extensive carbon storage, maintain large portions of continuous tree cover within *viewsheds*, and support recreation through trails, camping, and other outdoor activities. While treatments and management actions in these areas are designed to increase the quantity and quality of certain habitats, these actions also generate economic and social co-benefits.

The WOSF HCP defines two types of conservation areas: HCAs and RCAs. A mix of *passive management* and *active management* in HCAs maintains and develops, structurally complex forests as they relate to specific habitat needs for *native* wildlife species that rely on them. Predominantly passive management in RCAs improves habitat for native aquatic and riparian-dependent species and increases resilience by buffering ecological function against changes in streamflow and temperatures resulting from climate change.

Active management in a portion of the HCAs promotes habitat development and adaptive capacity by incorporating principles of *ecological silviculture* and *adaptation silviculture* (Palik et al. 2020; D'Amato and Palik 2020). Ecological silviculture is based on the spatial heterogeneity and historical range of variation found in unmanaged old forests and seeks to emulate *stand initiation* and development processes that result from small-scale natural disturbances (e.g., *windthrow*, lightning, insects, disease) to promote within-stand diversity and complexity. Natural history (forest development, dynamics, species, and *structures*) is a model for management and provides insight into potential pathways, trajectories, limitations, risks, and options. Natural forest development principles (e.g., disturbance, succession) inform management strategies and prescriptions related to stand initiation and

development, forest maintenance, retention of biological legacies, and landscape mosaics (Carey 2007). However, management based on historical conditions may become less relevant with climate change, leading to greater use of adaptative silviculture that increases the forest's ability to adapt to changing conditions and continue to deliver ecosystem services (Nagel et al. 2017). The outcomes of ecological silviculture—stands with greater diversity and complexity—remain relevant to adapting to novel conditions (D'Amato and Palik 2020). Habitat conditions and ecosystem services are assessed in HCAs in light of novel conditions to determine when to modify management principles.

Both active and passive management can be used to promote complex stands that enhance adaptive capacity and produce resilient, heterogeneous landscapes. For example, active management can reduce *stand density* in young stands to encourage trees more likely to withstand wind (Mitchell 2000; Moore et al. 2003). The location of treatments in HCAs can also be a factor to help build *resistance* to disturbance. Variable-retention harvest or variable-density thinning creates spatial heterogeneity for habitat development purposes (e.g., robust shrub and forb communities) in closed-canopy, homogeneous stands (e.g., Berrill et al. 2018; Willis et al. 2021) and may also reduce fuels to mitigate fire risk depending on site conditions (Prichard et al. 2021). Conifer restoration actions in *Swiss needle cast*-infected stands and some *hardwood stands*, are implemented to guide stand development to resilient stands with more desirable long-term habitat quality and improved carbon sequestration. Reforestation using diverse tree species mixes, with limited site preparation and young stand management, introduces complexity early in stand development.

Where current stand development is expected to achieve long-term objectives for fish and wildlife habitat, passive management to promote complex older stands may be the optimum approach to increase adaptive capacity (Nagel et al. 2017). Passive management promotes development and recruitment of biological legacies and accommodates small-scale disturbances followed by natural *regeneration*. In some cases, the existing components within a stand are well adapted to the site and have persisted through previous disturbances, providing long-term *refugia* and habitat types on the landscape (Krawchuk et al. 2020). High genetic diversity within stands increases adaptive capacity when natural regeneration is allowed to occur and well-adapted and diverse seedlings grow after disturbances. Forests managed passively in RCAs produce increasingly complex and resilient riparian conditions over time, as shade increases to maintain water temperature and large wood increases habitat complexity in streams as trees fall.

Both active and passive management can facilitate transformative change, e.g., by actively introducing future-adapted tree stocks and a diverse species mix during reforestation or allowing transformation over time to future-adapted species or *populations* within the existing plant community, if present. Whether to enable transformative changes after disturbances and under climate change in conservation areas is assessed under an adaptive management framework with regard to habitat requirements for WOSF HCP-covered species. The varied sizes and distribution of HCAs, coupled with more regular distribution of RCAs, is intended to create a functional network of habitat *patches* across the plan area, that provide opportunities for diversity of trajectories and redundancy, which supports resilience.

Ecologically sustainable forest management integrates emphasis areas, landscape conditions, and stand management to sustain social, economic, and environmental benefits over time. By designing a functional landscape, applying stand-level practices that build resilience, and evaluating trade-offs through a transparent planning and adaptive-management framework, ODF maintains ecosystem integrity while delivering GPV to Oregonians. The principles of ecologically sustainable forest management are reflected in Chapter 3, *Forest Resources, Goals, and Strategies*. Each goal represents a forest resource, and management strategies are designed to foster resilient forests that deliver multiple ecosystem services. Chapter 4, *Guidelines*, provides implementation guidance and decision processes that link monitoring to management adjustments.

CHAPTER 3

Forest Resources, Goals, and Strategies

The planning rule requires that the *Western Oregon State Forests Management Plan* (FMP) set forth management goals, which are statements of what the State Forester intends to achieve for each forest resource consistent with greatest permanent value (GPV) and management strategies, which describe how to manage the forest resources in the planning area to achieve those goals. The strategies identify management techniques that may be used to achieve the goals of the FMP during the implementation phase of the plan.

Chapter 3 describes the types and conditions of *forest resources*, how they contribute to *greatest permanent value* (GPV), the long-term *goals* for each resource, and high-level *strategies* the Oregon Department of Forestry (ODF) uses to achieve those goals. The resource description, goals, and strategies described in this chapter reflect the five plan themes described in Chapter 1, Section 1.2, *Plan Themes*. ODF does not optimize any one goal across the entire *landscape* but applies the strategies using the principles described in Chapter 2, *Management Approach*, to produce a blend of outcomes for forest resources that meets GPV.

3.1 Forest Condition

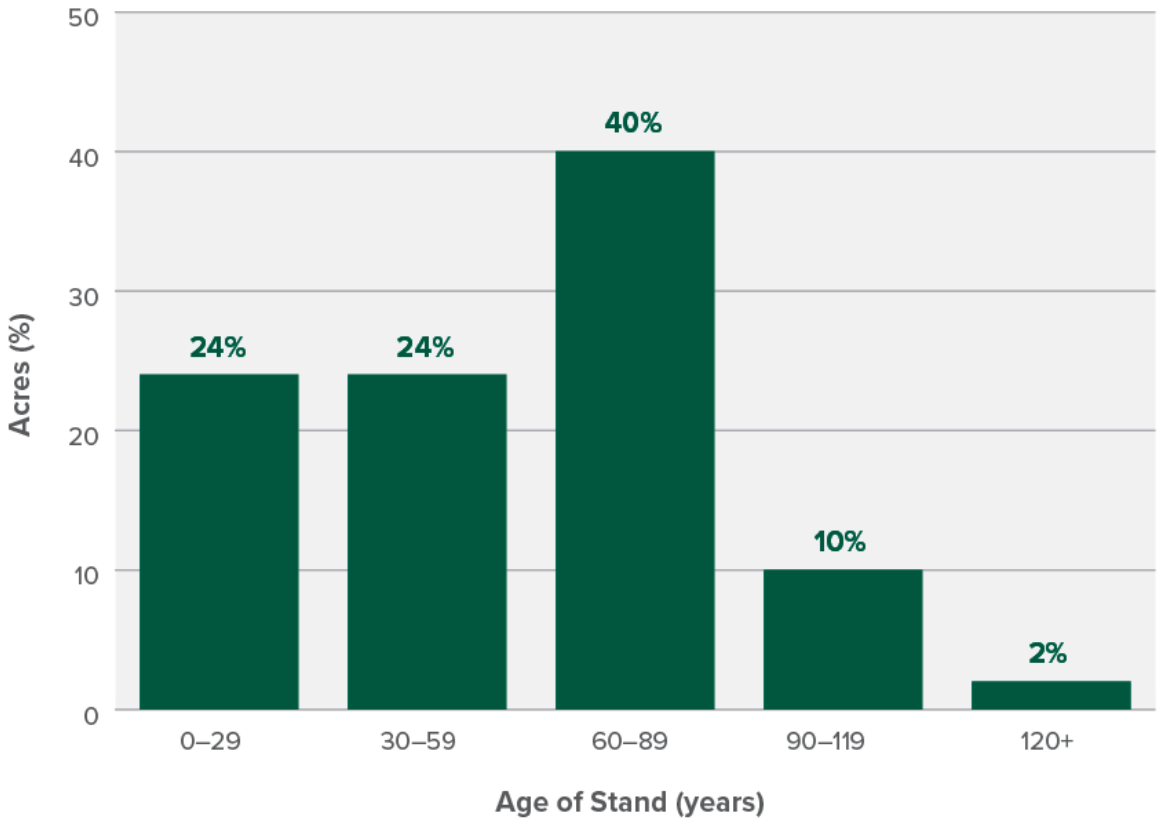
To better understand and provide context for the resource goals and strategies, this section details the current state forest condition. Forests are complex *ecosystems* with numerous *biotic* and *abiotic* interactions. State forests managed under the *Western Oregon State Forests Management Plan* (FMP) are distributed from the California border to the Columbia River, and from the coast to the crest of the Western (Old) Cascades. The diversity of forest types and plant communities reflect much of the variation in environmental gradients (precipitation, temperature, elevation) across western Oregon as well as local geology, disturbance history, and past management. Many state forest lands were affected by repeated, large wildfires or were extensively logged prior to acquisition by the State in the first half of the 20th century. *Reforestation* and *restoration* efforts were implemented across state forest lands to replant burned or harvested lands after the State took ownership. The age and *species* distribution of state forests reflect this history of large fires, salvage logging, and reforestation (Figures 3-1 and 3-2).



Forest types vary across the geographic range of state forests. Species composition and age class distribution have important implications for future management.
Credit: ODF.

The current species composition and age class distribution across state forest lands affects future management, particularly in the development of *silvicultural* pathways and conservation strategies aimed at promoting *biodiversity*, improving *adaptive capacity*, and promoting resilient forest and *aquatic* ecosystems. Resilient ecosystems deliver important co-benefits over time, including functional aquatic and terrestrial habitats for *native* fish and wildlife, *carbon sequestration* and *carbon storage*, production of forest products, health soils, clean air, and access for all Oregonians. Approximately 40% of state forest lands in the *planning area* have a *dominant cohort* of trees between 60 and 89 years old. These lands include 49% of the merchantable timber volume in the planning area. The relative abundance of stands in this age bracket reflects a period of reforestation following salvage logging and a series of repeated wildfires (1933, 1939, 1945, 1951) referred to as the Tillamook Burn, prior to State ownership. Dominant cohort age is not the only factor that influences stand conditions, however; site productivity, past management practices, and current and historical *disturbance* regimes interact to produce the forests that ODF manages today.

FIGURE 3-1
Distribution of Stand Ages as a Percentage of Area of Western Oregon State Forests. Stands in the 60–89 year age bracket represent a plurality of stands, reflecting the management history of state forest lands. Reforestation following a period of salvage logging and a series of wildfires in the early 20th century resulted in a large number of stands in this age range.



Source: ODF 2022.

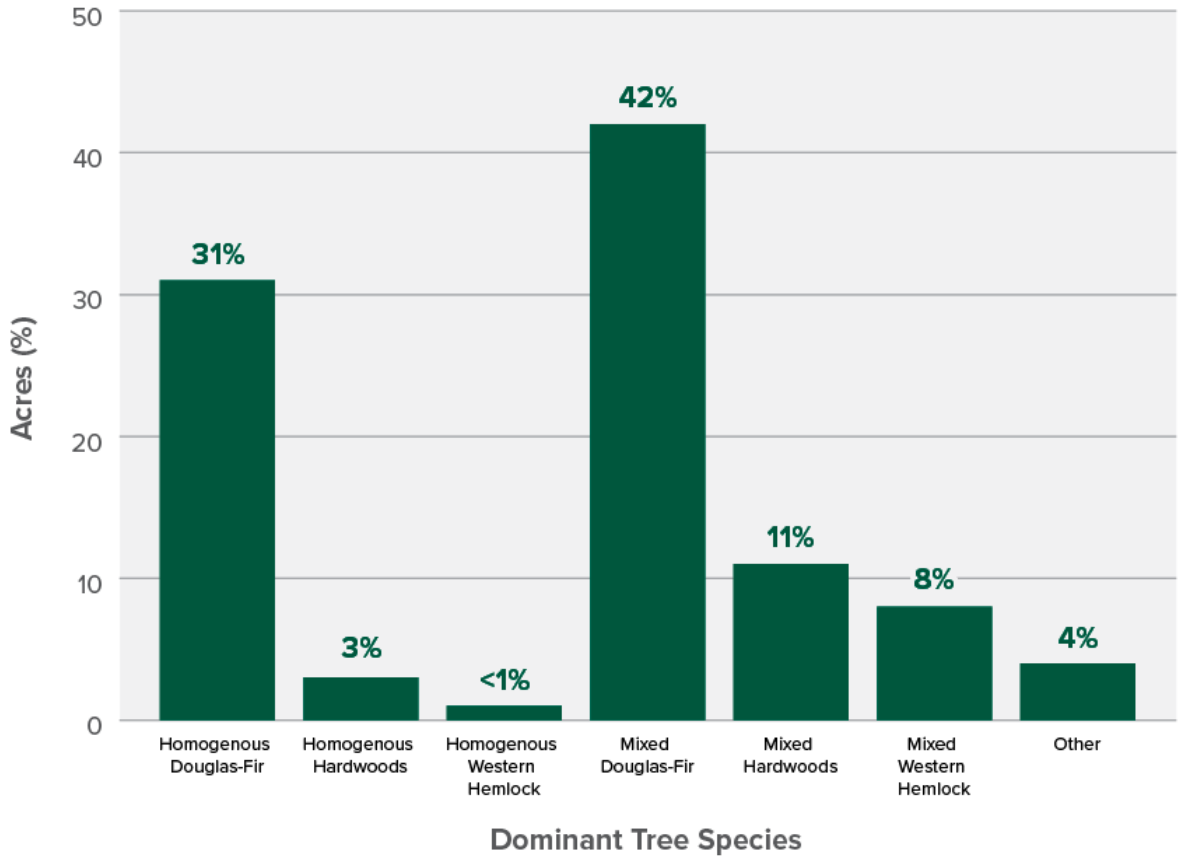
Note: Stands that experienced stand-replacing fire within the Beachie Creek Fire (North Cascade District) had their stand initiation date reset to 2020. Thus, the distribution of stand ages likely differ markedly from previously published reports that used the *Stand Level Inventory*.

3.1.1 Conifer Management

Management history and geography strongly influence the stand composition of tree species and stand age across space and through time (Figures 3-1 and 3-2). Because of their relatively fast growth rate and value as merchantable timber, Douglas-fir (*Pseudotsuga menziesii*)–dominated forests, in which Douglas-fir accounts for the majority of the stand, are the most common forest type on state forest lands, making up approximately 73% of the forested landscape (homogeneous Douglas-fir plus mixed Douglas-fir stands in Figure 3-2). Western hemlock (*Tsuga heterophylla*)-dominated forests and red alder (*Alnus rubra*)-dominated forests are the next most common forest types. Nearest to the ocean, within the Astoria and Tillamook districts, Sitka spruce (*Picea sitchensis*) is a dominant or *co-dominant* species in stands with a maritime climate with milder temperatures and abundant moisture. As shown in Table 3-

1, true firs (*Abies* species), western redcedar (*Thuja plicata*), and various hardwood species (Section 3.1.2, *Hardwood Management*) add diversity within stands dominated by other species in the North Coast and Western Cascades. In the forests in southwestern Oregon, stands are the most diverse, with additional conifers and hardwoods adapted to drier sites and more frequent fire. In general, each of these forest types presents distinct management opportunities, offers different economic return, provides habitat for different species, and offers different levels of resilience to extreme weather conditions. Species selected to be cut and planted are based on the *emphasis area*, landscape context, stand conditions, and best available information. For example, in General Stewardship lands, planted trees consist primarily of commercially viable conifer species, because they are the most efficient stock to provide timber products, *revenue*, and local jobs. However, non-commercial species are also planted or allowed to regenerate naturally, as these areas still provide a level of diversity.

FIGURE 3-2
Tree Species Composition in Western Oregon State Forests. Stand composition affects potential vulnerabilities or resilience to disturbances and stressors such as insect outbreaks, pathogens, fire, windthrow, drought, and climate change.



Source: ODF 2022.

Note: For this figure, homogenous is defined as >80% of the stand *basal area* in a single species group; mixed stands have >50% of the stand basal area in the named species group. Other includes stands <50% of the stand basal area in Douglas-fir, western hemlock, or hardwood species.

3.1.2 Hardwood Management

Native hardwood trees, such as red alder, bigleaf maple (*Acer macrophyllum*), Pacific dogwood (*Cornus nuttallii*), bitter cherry (*Prunus emarginata*), golden chinquapin (*Chrysolepis chrysophylla*), willow (*Salix sp.*), and others provide a *diversity* of cultural and provisioning services, like timber, food, fiber, shelter, and ecological *functions* and resources for wildlife that complement the conifer-dominated forests typical of state forest lands (Ellis and Betts 2011). Maintaining hardwood diversity within stands involves retaining some hardwood species as leave trees during harvests and including hardwood species during replanting or allowing natural regeneration hardwood species. Management actions for hardwoods depend on the designation of the stand, such as whether it is intended for revenue generation from timber harvest, or a *habitat conservation area* (HCA) intended to grow more complex habitat. In some cases, hardwood-dominated stands may not provide desired values, such as large trees for wildlife habitat or carbon storage, and may be managed to introduce additional conifer species, as in the example of anticipated red alder management below. At the time of writing, homogeneous hardwood stands account for just under 15% of total acres in the planning area. Table 3-1 shows the distribution of forests dominated by hardwood and other tree species across the state forest districts.

TABLE 3-1
Distribution (acres) of Forest Types on Western Oregon State Forests. Douglas-fir–dominated forests comprise the majority of all districts other than Tillamook, but forests dominated by species other than Douglas-fir or by multiple species exist in all districts.

District	Homogenous Douglas-Fir	Homogenous Hardwoods	Homogenous Western Hemlock	Mixed Douglas-Fir	Mixed Hardwoods	Mixed Western Hemlock	Other
Astoria	31,310	1,050	1,080	64,240	8,710	21,750	8,720
Forest Grove	59,620	540	30	43,930	1,830	1,660	7,390
North Cascade	14,220	10	120	24,870	730	2,040	5,490
Tillamook	50,260	16,680	1,430	93,670	51,540	22,650	14,360
West Oregon	23,430	500	0	9,130	1,550	630	1,330
Western Lane	17,930	360	20	26,050	4,310	660	3,710

Source: ODF 2022.

Note: For this table, homogenous is defined as >80% of the stand in a single species group; mixed stands have >50% of the stand in the named species group. Other includes stands <50% of the stand in Douglas-fir, western hemlock, or hardwood species.

Red alder is a native hardwood that is ecologically and commercially important. In Pacific Northwest forests, red alder is a species that readily colonizes disturbed areas, particularly when reseeding or planting of conifers does not occur. Alders contribute to soil creation and *nutrient cycling* by fixing nitrogen while also supporting *regeneration* of shade-tolerant conifers (Hibbs et al. 1994). This ecological role is particularly important where soil has been damaged by disturbance (e.g., high-severity

wildfire), such as portions of the Tillamook Burn that were subject to repeated fire events.. Goals and strategies for soil resources are discussed in Section 3.2, *Integrated Resource Management*.

A history of repeated fires and cut-and-run logging practices prior to the creation of state forest lands resulted in relatively large areas dominated by alder on the North Coast and in the Tillamook and Clatsop State Forests in particular. There are more than 70,000 acres of alder-dominated stands that lack any significant conifer component on the Tillamook District alone. The age of the dominant cohort in red alder-dominated forests primarily ranges between 40 and 80 years old. Red alder rarely live more than 100 years (Hibbs et al. 1994). Red alder mortality in the Tillamook District will increase in the next 20 years as these trees approach the end of their life expectancy. Dead and dying alders provide important nesting and denning habitat for diverse wildlife species (Carey et al. 1997). As red alder-dominated stands unravel, the regenerating forest can provide diverse and complex young forest habitats. Goals and strategies for wildlife habitat are discussed in Section 3.2, *Integrated Resource Management, Wildlife*.

The relatively large proportion of alder stands in some state forest landscapes provides opportunities for both *active management and passive management* for specific resource values. The pace, scale, and intent of active management is different in different emphasis areas. In areas with an economic emphasis, conversion of some *hardwood stands* to *conifer forests* is an important priority, but ensuring a continued supply of hardwood logs to local mills remains a priority as well. The intent for activities that reduce the proportion of hardwoods is not to eradicate these species or ignore their key role in promoting biodiversity, but to provide a greater array of co-benefits. In conservation emphasis areas (including HCAs), conifer restoration treatments are intended to promote development of habitat for covered species listed in the *Western Oregon State Forests Habitat Conservation Plan* (WOSF HCP), but will have relatively greater retention of hardwoods compared to timber harvest in General Stewardship areas.

There are at least 30,000 acres of hardwood-dominated stands on areas that are *operationally limited* for timber harvest, or are otherwise protected, across the planning area. Stand development in these areas continues to occur without active management. For example, hardwood stands in *riparian conservation areas* (RCAs) are protected under the WOSF HCP, where cutting of trees is not allowed except for limited circumstances such as stream crossings, yarding corridors, hazard tree falling, and aquatic restoration activities. These passively managed stands serve as an important baseline for comparing a broad suite of management approaches to promote conifer and habitat development in an *adaptive management* framework.

3.1.3 Forest Health

There are several *forest health* challenges for state forest lands throughout the planning area. Some forest health concerns are the result of past practices and history of the lands, including earlier attempts to restore deforested lands. For example, much of the Tillamook Burn was planted or seeded with Douglas-fir from non-local seed sources, at a time when less was known about the importance of locally adapted seed sources. These non-local trees are known to exhibit reduced growth as they mature and are also one of the contributing factors to increased impacts of *Swiss needle cast* (SNC).

The increasing popularity of recreational activities on northwest Oregon state forest lands increases the likelihood of new invasive species being introduced. Recreationists often unknowingly transport invasive species on their vehicles or by bringing firewood and recreational equipment carrying invasive species. This, in turn, affects ecosystem function and long-term forest health.

The frequency, duration, and magnitude of extended drought periods and heat waves also stress the forest ecosystem. For example, in the aftermath of the June 2021 heat dome, which brought record-breaking temperatures to the Pacific Northwest, nearly 5% of trees in western Oregon and Washington forest canopies had visible damage to their foliage (Sibley et al. 2025). Because of *climate change*, hotter and drier summers create more favorable conditions for insect outbreaks, making trees more vulnerable to infestation (Fettig et al. 2022). Drought-stressed trees are often subsequently attacked by secondary agents, such as *pathogens* (Simler-Williamson et al. 2019).

Forest health strategies are addressed on a site-specific basis. Considerations for treatments include species, aspect, elevation, soil types, disease presence, tree stocking guidelines, natural tree regeneration, and *desired stand goals*. Such strategies also anticipate and plan for drier and hotter future conditions resulting from climate change. This site-specific approach to forest health provides for a diverse, healthy, productive, and *sustainable* forest ecosystem over time that is more resilient to change.

The *integrated pest management* process guides herbicide application and other management techniques that control pest damage or unwanted vegetation. It uses site-specific management *objectives* and *best management practices* (BMPs) to decrease adverse impacts of herbicides and other control measures on other forest resources and ecosystem processes. The integrated pest management process is similar across emphasis areas. Actual use of pest management depends on the issue, regional context, *Forest Land Management Classification System* (FLMCS) designation, existing conditions, and desired *outcomes*. For example, insects and disease may be treated differently in HCAs than outside of HCAs, where they have wildlife benefits. ODF participates in cooperative applied research and *monitoring* projects with partner agencies, universities, and organizations that encourage cross-ownership treatments and allow for adaptive integrated pest management.

Diseases

Swiss Needle Cast

SNC is a native disease of Douglas-fir caused by the fungus *Phaeocryptopus gaeumannii* that has intensified on coastal lands managed by ODF since 2010. It affects trees of all ages and causes premature loss of needles, especially in the upper crown, which reduces tree growth and vigor. Trees from non-local seed sources or growing in poor soil conditions are affected more severely, which can be seen by the management and fire history in the Tillamook District. Growth reductions decrease future timber yields and affect ODF's ability to manage stands toward desired conditions. While native throughout the range of Douglas-fir, SNC is most prevalent on the west slopes of the northern Oregon Coast Range from the coastline to 28 miles inland. In recent decades, the zone of highest prevalence has not shifted, but the severity of SNC has increased (Shaw et al. 2021). Management actions have occurred over the last 20

years to harvest the most severely affected Douglas-fir stands and replant with alternate species such as western hemlock or Douglas-fir that has been bred to be resistant to SNC.

Laminated Root Rot

Laminated root rot, a native disease caused by the fungus *Phellinus weirii,* affects many conifer species, and is the most widespread and destructive root disease of Douglas-fir in the Oregon Coast Range and Western Cascade Range. Results from forest health surveys show that in northwest Oregon state forest lands, at least 10% of the Douglas-fir-dominated stands are affected by this disease. The acres affected in individual stands range from 0% to over 75% of the area. The most susceptible host species are Douglas-fir, grand fir (*Abies grandis*), and mountain hemlock (*Tsuga mertensiana*). Western hemlock and noble fir (*Abies procera*) have intermediate susceptibility, pines and cedars are resistant, and hardwoods are immune. Treatment of infected areas is accomplished by replanting with more resistant species after harvest.

Black Stain Root Disease

Black stain root disease, caused by the fungus *Leptographium wageneri*, has been detected in many areas but is thought to be more localized in southwest Oregon. In recent years, reports of black stain root disease in young, intensively managed Douglas-fir stands have increased in the northwest part of the state. Treatment of infected areas is accomplished by replanting with more resistant species after harvest.

Forest Insects

Douglas-fir Bark Beetle

Douglas-fir bark beetle (*Dendroctonus pseudotsugae*) usually infest trees following *windthrow*, disease, or drought. When major disturbances occur, a large supply of high-quality downed Douglas-fir allows beetle *populations* to erupt. Outbreaks typically last 2 to 4 years, though can be prolonged when conditions are favorable. Management to reduce the likelihood of outbreaks involves timely salvage of dead or downed trees.

Emerald Ash Borer

Emerald ash borer (*Agrilus planipennis*) is an invasive species that has killed ash trees across the United States since its introduction in Michigan in 2002. It was detected in Forest Grove, Oregon in 2022, and has spread to multiple counties since then. Oregon ash (*Fraxinus latifolia*) is the native tree at risk of infestation and rapid mortality, affecting *riparian* forests west of the Cascades and below 2,000 feet elevation. There are currently no feasible, preventative treatments for this pest that can be applied on a forest-wide scale. Management includes continued *monitoring*, replanting with alternate species where mortality occurs, and breeding programs to create resistant ash hybrids.

Sitka Spruce Weevil

Sitka spruce weevil (*Pissodes strobi*) commonly kills the current and 1-year-old terminal shoots of Sitka spruce. The weevil typically affects trees between 3 and 20 years old. At times, foresters have avoided

planting Sitka spruce in western Oregon because repeated weevil outbreaks slow tree growth and produce severe stem deformations (ODF 2007). When planting Sitka spruce, ODF uses seed sources that have shown natural resistance to the weevil. ODF is participating in research to determine the most resistant seed sources, improve understanding of the damage caused by the weevils, and obtain necessary information to breed more resistant seed sources for future planting.

Spruce Aphid

Spruce aphid (*Elatobium abietinum*) is an invasive species that causes premature loss of older needles in Sitka spruce and eventually kills branches or the entire tree. Much of the spruce decline along the Oregon Coast is attributable to the spruce aphid. ODF follows genetic testing studies and breeding programs to determine the most resistant seed sources for planting.

Noxious Weeds

Noxious weeds are terrestrial, aquatic, or marine plants designated by the Oregon State Weed Board under Oregon Revised Statutes (ORS) 569.615 as representing the greatest public menace and are a top priority for action by weed control programs. The Oregon Weed Control Policy (ORS 869.180) declares weeds "shall be detected, controlled and, where feasible, eradicated on all lands in this state." As a result, ODF is responsible for developing and implementing an eradication plan on state forest lands. Currently, roughly 120 species are listed as noxious weeds across Oregon. Many of these species occur on state forest lands. The most common, Scotch broom (*Cytisus scoparius*), Himalayan blackberry (*Rubus armeniacus*), Canada thistle (*Cirsium arvense*), bull thistle (*Cirsium vulgare*), and Japanese knotweed (*Reynoutria japonica*) are well established throughout all state forest lands. Other non-native invasive species on the state's noxious weed list expanding on state forest lands include false brome (*Brachypodium sylvaticum*), English ivy (*Hedera helix*), garlic mustard (*Alliaria petiolata*), and non-native geraniums (*Geranium* spp.).



Rum Creek Fire burned near Ennis Riffle County Park after igniting by lightning on August 17, 2022. Fire has always been part of Oregon forests and, when managed proactively, can contribute to forest health and development.
Credit: ODF.

Wildfire

Oregon's forests are shaped by, and adapted to fire. Fire can have many positive outcomes for forests under the right conditions. However, uncontrolled or high-severity wildfire presents a threat to many forest co-benefits, including habitat, carbon storage, healthy soils, clean water and clean air. As the original stewards of these forests, indigenous peoples used fire on the landscape to maintain and enhance forest conditions. In modern times, human-caused fires have resulted from various activities, usually accidental. For over 100 years, the response to both human and natural fires has been to suppress fire in the forest to protect life and property, including timber values. This

has resulted in conditions where fuels for fire have accumulated, creating increased risk of uncontrolled and even catastrophic wildfire.

There are many examples of historic fire and related salvage activities across the planning area. Forest wildfires in Oregon are expected to burn larger areas and possibly become more severe as climate change affects the state into the future (Dalton and Fleishman 2021; Reilly et al. 2022).

General Stewardship lands are actively managed and provide various options for exploring fire mitigation and response. ODF's management of these areas includes thinning at key points during forest stand development that reduces the density of trees to maintain stand growth and reduce fire risk. All timber-management activities on General Stewardship lands account for fire risk both during (e.g., operational restrictions) and after (e.g., slash mitigation) operations. The transportation system that supports state forest management also provides access for suppression of wildfires where they occur.

Managing fire risk inside HCAs and RCAs is consistent with the WOSF HCP. Habitat enhancement prescriptions provide mitigation, and adaptive management is employed to provide opportunities to address additional mitigation measures in response to worsening conditions that put habitat values at risk. Future potential mitigation needs in HCAs and RCAs will be developed in collaboration with NOAA Fisheries and the U.S. Fish and Wildlife Service.

3.1.4 Forest Resilience

Through activities on the forest, the overarching aim of the FMP goals is to ensure healthy, sustainable, and resilient forest ecosystems that help achieve environmental, social, and economic goals that benefit all Oregonians. Functioning ecosystems on state forest lands provide a variety of co-benefits including clean water, recreation, wildlife habitat, timber, and other *ecosystem services*.

For this FMP, the health of a forest is defined as its ability to increase or maintain productivity and function while maintaining *resistance* and *resilience* to biological and physical stressors. Fire, windstorms, ice storms, *landslides*, heat, drought, insects, and diseases present both discrete events and chronic conditions that affect forest health. Some disturbances are natural and necessary processes of the forest ecosystem that increase the forest's complexity and reduce the intensity of future disturbances. However, active management may be necessary to reset stand trajectories toward goals based on the *management emphasis* of the affected area.

The forest is actively managed to achieve objectives within stands and across the landscape to create a variety of forest conditions designed to improve resilience and capacity for adapting to climate change consistent with the *Vision for Oregon's Forests* (VOF) and the ODF *Climate Change and Carbon Plan* (CCCP). Table 3-2 provides examples of management options that foster resilience and adaptation.

TABLE 3-2
Examples of Management Options that Foster Resilience and Adaptation.

Management Options to Increase Climate Resilience	Examples
Sustain ecological functions	Maintain or restore hydrology and *riparian areas*
Reduce the impact of existing stressors	Reduce tree density to minimize water stress
Protect from severe disturbances	Alter forest structure to reduce fire or windthrow risk
Maintain *refugia*	Protect unique sites or habitat of *species of conservation concern*
Enhance tree species and structural diversity	Promote diverse age classes, diverse tree species, and biological legacies
Increase redundancy across the landscape	Manage forest and habitat types over a range of sites and environmental conditions
Promote landscape connectivity	Maintain and enhance habitat conditions that support wildlife dispersal and population flow,
Enhance genetic diversity of trees	Use seed sources adapted to future conditions, diversify nursery stock
Aid tree species transitions	Favor drought tolerant species, guide species composition during *young stand management*, consider assisted migration of species
Plan for disturbances	Replant promptly and retain seed source to allow for natural regeneration

Source: Burton 2025.

The effectiveness of novel *silviculture prescriptions* under a changing climate is evaluated during the planning and adaptive management processes described in Chapter 4, *Guidelines*.

Stand Management

Creating forest resilience through management follows three major steps: 1) retention of important *legacy structures* (e.g., leave trees, snags, *downed wood*, minor vegetative species) during *regeneration harvest*; 2) successful replanting using a variety of tree species; and 3) conducting harvest activities that promote forest conditions with multiple age groups, tree densities, and stand complexity that deliver ecosystem services. Stand management operations include a full suite of silvicultural prescriptions. These include partial cuts like fixed and variable density thinning or *variable retention harvest* and regeneration harvests. Leave trees, downed wood, and stream buffer requirements are defined in the

WOSF HCP as part of the conservation strategies. Stand-level management decisions and trade-offs are informed by other resource goals and strategies at the stand, basin, or landscape level. Stand management differs among emphasis areas. Environmental emphasis area management prioritizes fish and wildlife habitat and carbon sequestration. Management within social emphasis areas focuses on safety, stand health, and scenic quality. Economic emphasis area management emphasizes growing healthy and resilient stands to support timber production and generate revenue for social services.

Reforestation and Young Stand Management

Stand initiation after harvest, salvage, or areas affected by wind or fire is conducted through a combination of tree planting on the majority of sites and allowing for natural regeneration on some sites. Stand initiation and young stand development are imperative to set a stand on a course to achieve management objectives. Each area planted is assessed to determine which species to plant, the number of trees per acre to plant, size of the seedlings, and site preparation needs such as *slash* piling or herbicide treatment. In areas where there is a disease present, seedlings are selected that are more tolerant to the disease, if available.

ODF's ongoing efforts to enhance seedling genetics are vital to improving future resilience of these forests. This includes selective breeding to strengthen tolerance to drought, temperature shifts, insects, and forest diseases that are expected to increase with climate change. ODF also participates in assisted migration studies that evaluate the performance of alternative seed sources or species across a range of site conditions. Findings from these efforts help inform future reforestation strategies and ensure that seed selection contributes to long-term forest health, productivity, and sustainability.

Young stand management activities are important to ensure a stand is on a path to reach the long-term goal for the stand based on its emphasis areas, adaptive capacity needs, and role in meeting *Implementation Plan* (IP) and performance measure targets. Young stand management can include precommercial thinning for spacing and species selection, or removal of competing vegetation to provide more growing space and accelerate tree development. Incorporating uneven-aged stands across the landscape promotes a diverse *structure* with small, medium, and large trees providing a multi-layered canopy. A forest diverse in species type, age, and structure can provide needed or preferred habitat for many plant and wildlife species, improve soil conditions by providing diverse tree hosts for mycorrhizal fungi, increase the resilience of forests to climate change, and reduce susceptibility to diseases and insect infestations that affect stand health and timber productivity in the long term.

Disturbance Response

Over the duration of this FMP, disturbances from wind, fire, ice, and insects or disease will occur. While some disturbance is a part of functioning systems and can be accommodated or incorporated at some scales and in some emphasis areas, strategies that build forest resilience and adaptive capacity are also a key component of ensuring sustainable timber production. When disturbance events happen, the affected area is assessed to better determine response. The assessments consider the scale, location, and long-term goals of the forest for habitat development or management. Details for reforestation actions

and activities are addressed at the mid-term planning level, through IPs, at the project level through *Operations Plan* (OP)s, and through *standards* and specifications set in *operational policies*.

Mitigation responses to future wildfire include reducing the risk through fuel management, prevention, and education. Fuel management prioritizes restoration actions and treatment areas, based on risk to communities and critical infrastructure, and emergency ingress and egress. Activities include density management, slash reduction, and prescribed fire, as well as coordinating priorities and responsibilities for maintaining defensible space with critical facility owners, such as water, power, communications utilities, and non-ODF road owners. In addition, ODF engages *Tribal Partners* to find opportunities to reintegrate traditional cultural fire practices to provide ecological benefits. ODF may also partner with neighboring landowners and communities on prescribed burn projects that include common objectives.

Among the management techniques used in response to disturbance, salvage harvest can be used to remove timber after a natural disturbance affects forest health. Harvest intensity can range from the selective harvest of individual trees to regeneration harvest, depending on the degree of the disturbance event and forest management goals. Salvaging can be employed to remove merchantable timber from disturbed areas, prevent the spread of disease or insect infestation, reduce safety hazards, and promote forest health for future harvest, while considering potential negative impacts (Lindenmayer et al. 2012).

Responding to disturbance and managing state forest lands in accordance with the resource goals of a particular area, promotes sustainable *ecological silviculture* and the continuation and enhancement of ecosystem services. Prescriptions in disturbed areas still follow minimum legacy retention standards, but depending on the event may present additional opportunities to retain additional snags or increase inputs of larger pieces of downed wood. Ultimately, disturbance responses, whether passive or actively managed, present learning opportunities in an adaptive management context.

3.2 Goals and Strategies for Resource Management

This section describes the conditions of forest resources and the overarching goals and strategies for each to sustain GPV across state forest lands over time. Each of the forest resource management goals support and contribute to different aspects of GPV. Quantitative targets for goals at a smaller scale are defined in IPs, specific project locations where strategies are enacted are defined in OPs, and detailed standards governing the IP and OP processes are defined in operational policies, the WOSF HCP, and other laws. In the following sections, GPV category icons (Chapter 1, Figure 1-1) and the resource descriptions are used to indicate connections with social, economic, or environmental resources and concepts. GPV can be tracked using the highlighted icons next to each goal.

Because forest resources coexist in space and time, integration of goals and strategies is necessary to minimize conflicts, facilitate decision-making, and generate the co-benefits that flow from resilient forest landscapes. Chapter 2, *Management Approach*, provides a discussion of FLMCS stewardship classes across the landscape. Chapter 4, *Guidelines*, provides additional detail on implementation and how trade-offs are considered. Adaptive management enables ongoing assessment and modifications of goals and strategies and their application in response to new information and changing circumstances,

such as natural disasters, climate change, and new research findings. Effective integration entails synthesis of knowledge, experience, and best available science from multiple disciplines including *forestry*, wildlife and fisheries *ecology*, *geology* and *hydrology*, *engineering,* and recreation resource management.

3.2.1 Forest Resource 1: Timber Management

Forests in western Oregon are some of the most productive in the world. Timber harvested from Oregon forests continues to be both an important component of Oregon's economy and a provider of wood products across the nation and globally. Average weekly wages in the western Oregon timber industry are higher than the average weekly wages in other industries in western Oregon (Daniels and Wendel 2020). The availability of harvestable timber directly affects local forestry and mill jobs and indirectly affects the number of additional jobs in local communities.



Timber log deck during harvest operations in Santiam State Forest.
Credit: ODF

Forest products are used to build homes, businesses, schools, and other structures needed by society. Revenue from state forest lands comes largely from timber sales, though smaller amounts are received from the sale of *special forest products*, leases and agreements, recreation fees, and special use fees. Within the planning area, 14 Oregon counties, and the local taxing districts within them, share in revenues from these lands. As mandated by state law, 63.75% of Oregon Board of Forestry (the BOF) revenues are distributed to counties, which further distribute revenues to taxing districts. This revenue is a significant contributor to local budgets used to help pay for local community services such as education, rural fire protection districts, law enforcement, roads infrastructure, and community health.

The remaining 36.25% of revenue from state forest lands pays for the management of Board of Forestry Lands. This management includes planting trees, managing young stands, conducting *threatened and endangered species* surveys, improving fish and wildlife habitat, providing fire protection, and providing recreation, education, and interpretation programs, staff, and infrastructure.

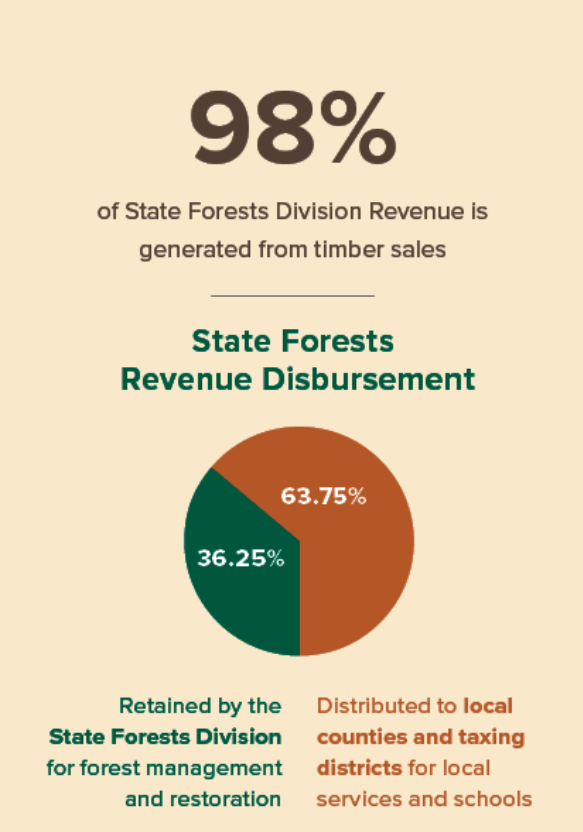
Revenue from timber harvest on Common School Forest Lands (CSFL) is transferred to the Oregon Department of State Lands and deposited in the *Common School Fund*. The Oregon Department of State Lands reimburses ODF for CSFL management costs and related overhead from the Common School Fund.

ODF has historically managed the forest with the objective of maximizing timber volume over the long term. This results in the regeneration harvest of individual stands near the point where tree growth slows, which can be between 70 and 90 years old, depending on the productivity of the site (e.g., soils, precipitation, and other factors). This plan allows for flexibility in harvest objectives over time, but it is

likely that ODF will continue to manage for sustainable, long-term maximization of volume in general stewardship areas.

Goal: Timber Production

Provide a sustainable and predictable supply of timber that generates revenue for the benefit of the state, counties, and local taxing districts, and that results in economic opportunity, jobs, and availability of sustainably harvested forest products.



Strategy: Sustainable Harvest

Determine the sustainable harvest level during IP development to ensure predictable timber supply over the life of the IP.

a. Harvest timber within an adaptive capacity framework to promote resilient forests and the ecosystem services they provide.

Intent

The intent of this strategy is to ensure predictable long-term flow of timber from state forest lands with associated economic benefits to the state, counties, and local communities. The emphasis on timber-production goals is prioritized on a significant portion of the landscape, especially on General Stewardship lands. Although economics is the emphasis of General Stewardship lands, these lands are managed to continue to provide a suite of additional ecosystem services such as clean water, carbon sequestration and carbon storage, and habitat for many different wildlife species associated with early- and mid-*seral* forest types. Active management in HCAs is focused on habitat restoration for wildlife species associated with late-seral forests, but will also result in additional timber volume.

Strategy: Silviculture Practices for Stand Management and Development

a. Implement a variety of silvicultural prescriptions to ensure successful stand initiation and development of a variety of tree species, ages, and densities that are resilient to disturbance and climate change and sustainably deliver ecosystem services, based on emphasis area.

b. Use silvicultural prescriptions designed for sustainable timber production and economic performance in General Stewardship areas, while still providing for retention of legacy structures in varying arrangements, forest connectivity, and species diversity.

c. Diversify tree species for reforestation to consider species that are likely to have better growth and survival under projected future climate conditions.

Intent

The intent of this strategy is to support timber production and wildlife species that are associated with early- and mid-seral forests while increasing the resiliency of all stands across the landscape. Lands in stewardship classes other than General Stewardship may require silviculture prescriptions that emphasize other objectives, such as safety in Recreation Special Use and Focused Stewardship classes, or traditionally important natural resources in Cultural Resource Special Use and Focused Stewardship classes.

The intent of this strategy is also to maintain and enhance habitat for the species covered by the WOSF HCP. Management of HCAs incorporates principles of ecological forestry. During harvest of SNC and hardwood stands, and gap creation in variable retention treatments, additional legacy features are retained, an even greater variety of tree species planted, and herbicide use limited to regenerate forests that provide complex early-seral habitat that is positioned to grow into mature stands with high biodiversity. Variable retention treatments are designed specifically to emulate processes that result from small-scale natural disturbances (e.g., windthrow, lightning, insects, disease) that promote within-stand diversity and complexity in mid-seral stands. Passive management in HCAs and RCAs for late-seral conditions also promotes resilience in mature forests and provides a baseline for comparison of strategies. The majority of treatments to reduce fire, insect, and disease risk occur in stands outside of the HCAs.

Strategy: Timber Sale Design

Design timber sales that consider timber markets and cost of logging, to ensure efficient operations and increased revenue consistent with other desired outcomes, and FMP goals and strategies.

Intent

The intent of this strategy is to increase the revenue generated from timber sales by designing sales with cost-effective and logical harvest units. Well-designed harvest units decrease logging costs and can also lead to more competitive bidding on timber sales, leading to increased revenue. Structuring timber sales to target specific log product markets and scheduling timber sales to take advantage of historic seasonal trends (e.g., bid prices for timber that can be logged in the winter months are typically increased) can increase revenues. OPs balance low- and high-value timber sales and units to ensure that forest management treatments are conducted where need, not just in high-value areas.

Strategy: Timber Salvage

Implement a timely response to natural disturbances (e.g., fires, windstorms, ice storms) to salvage merchantable timber, in accordance with the management emphasis of the affected areas, other forest management plan goals and strategies, and opportunities for additional legacy retention on the landscape.

a. Limit salvage within HCAs and RCAs to hazard tree felling.

b. Develop and implement responses to more extensive events in HCAs and RCAs in collaboration with NOAA Fisheries and U.S. Fish and Wildlife Service

Intent

Natural disturbances occur periodically across the landscape. These can result from different events such as windstorms, ice storms, and fires. These disturbed areas can range in size and impact and require careful consideration by foresters. The intent of this strategy is to ensure that timber is salvaged quickly after natural disturbances to recover economic value and reduce safety and wildfire risks.

3.2.2 Forest Resource 2: Transportation



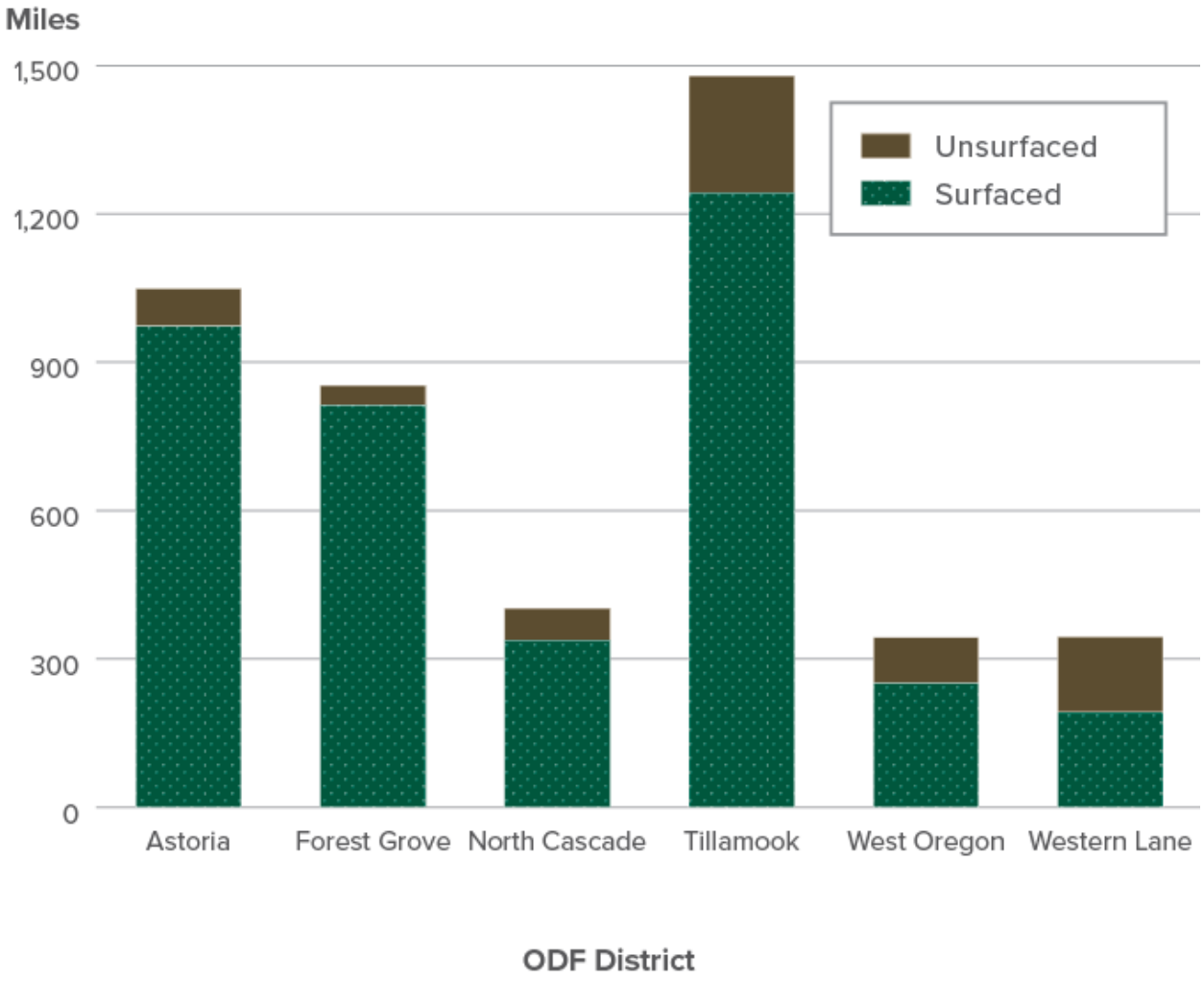
Bridge replacement in the Tillamook State Forest. Stream crossing improvements can help protect water quality.
Credit: ODF.

The state forests road system is an integral part of achieving desired economic, social, and environmental outcomes by providing access for the many activities that happen on state forest lands.

There are approximately 4,500 miles of road on state forest lands, and 88% of all state forest land acres are within 0.25 mile of a road. Approximately 85% of the roads are surfaced, mostly by gravel, which reduces risk of roads contributing fine sediments to streams and adversely affecting water quality and aquatic habitat (Figure 3-3). The road system has the potential to adversely affect natural resources, particularly water quality and aquatic species migration when it is not properly maintained. The condition of the road system is dynamic and changes over time depending on weather conditions, soil saturation, vegetation growth, public use, and hauling activities. Monitoring these conditions is important and BMPs must be incorporated to protect natural resources.

The transportation system is evaluated on an ongoing basis to determine the current condition, potential resource impacts, and future access needs. Different emphasis areas help guide management decisions for road construction, improvement, maintenance activities, as well as vacating, which can involve removing the road or closing it. For example, the WOSF HCP conservation actions guide road construction in RCAs and HCAs. An example could be building a temporary dirt spur that is only used in the summer and vacated after use, which would eliminate the need for long-term maintenance, reducing potential resource impacts.

FIGURE 3-3
State Forest Roads by District. There are approximately 4,500 miles of road on state forest lands; approximately 85% of these roads are surfaced (primarily graveled, though some main travel routes are paved).



Source: ODF 2026.

Existing roads are improved if determined to have potential impacts on aquatic species based on the transportation assessment. Roads outside of HCAs and RCAs go through the same assessment process; however, the improvement strategy may include more rock replacement, mitigation strategies, and BMPs for water quality if wet weather timber-hauling activities are anticipated.

A major concern for forest roads is hydrologic connection to streams, where water from the road drains directly into a stream, which can negatively affect water quality. ODF collects and maintains data over time to track where these connections exist so that ODF can target road-drainage improvements that reduce the negative impacts of roads on water quality. Adding drainage features, like cross-drains and rolling water dips, to ensure road segments drain water to hillsides instead of streams, combined with maintenance of the road surface, ditches, and drainage features, reduces erosion, sediment loading, and

potential impacts on natural resources. Road improvement projects are prioritized to address large hydrologic disconnection projects, culvert replacements that are barriers to fish migration, infrastructure stability for public safety, and facilitation of timber sales.

Goal: Transportation System Management

Manage the transportation system in a fiscally sound manner that protects resources and promotes transportation efficiency and safety.

Strategy: Transportation Planning

Use transportation planning principles, engineering standards, and BMPs to ensure that the transportation system facilitates achievement of GPV, provides for safe and efficient traffic flow, and minimizes impacts on natural resources.

Intent

The intent of this strategy is to build a lasting transportation system with an informed and holistic view, which considers all factors relevant to management decisions, resource protection, and public safety. Using these principles, standards, and BMPs reduces erosion potential, disconnects road segments from streams, maintains adequate surface conditions, and mitigates chronic issues over time through road vacating or other methods. Priorities for different emphasis areas are considered during the planning process, including following the WOSF HCP conservation actions that guide road construction in HCAs and RCAs. Additional details can be found in supporting documents, including the WOSF HCP, ODF guidance, State Forest Roads Manual, BMPs, Oregon Forest Practices Act (FPA), and other applicable laws.

Strategy: Transportation Assessment

Monitor and assess the transportation system to ensure alignment with other FMP goals and strategies, resource protection standards, and safety.

Intent

The intent of this strategy is to collect information over time to verify the transportation system is being managed according to standards and policies. This information helps inform adaptive management decisions to address management goals, resource protections, and public safety related to the transportation system. The effectiveness of standards and BMPs can be evaluated and refined through this process. Through this assessment, projects can be prioritized for improvement based on potential impacts on natural resources, infrastructure stability, and public safety.

3.2.3 Forest Resource 3: Cultural and Historic Resources



Traditional cedar bark collection in the Astoria District. Western redcedar) is one of the most culturally significant trees on ODF land.

Credit: Keepers of ancestral knowledge. Photograph taken by Fran McReynolds, with permission from the Confederated Tribes of Warm Springs.

Cultural and *historic resources* provide a record of our shared past, present, and future relationship with the land and how this relationship changes over time. These resources are often observed in physical forms, such as historic buildings, arrowheads, rock art, basketry, and other items. What is not as apparent is the interconnectedness of humans and the natural and cultural resources that support them. These relationships with the land are illustrated through practices, such as preserving sites and objects of cultural importance, and cultivating plants and trees and other natural resources for traditional uses. Protecting cultural and historic resources is a shared responsibility for all Oregonians, as they provide an opportunity to apply knowledge from past civilizations to inform management practices and approaches to living with the land. The tribal cultural resources goals for the FMP were developed in collaboration with the *nine federally recognized Tribes of Oregon* in government-to-government forums.

Tribal Partners:[1] Natural Resources Protection

ODF recognizes that Tribal Partners have lived in *reciprocity* with the landscape since time immemorial, using sustainable management practices to achieve quality, abundance, and self-sustaining plant and wildlife populations. Each Tribe has a unique perspective and history, with cultural identities that are intrinsically tied to their ancestral lands. ODF seeks to honor these relationships by working with Tribal Partners in shared stewardship toward a sustainable future. ODF is committed to integrating tribal cultural stewardship practices and *Indigenous Traditional Ecological and Cultural Knowledge*[2] (ITECK) into planning, implementation, and adaptive management processes to ensure that tribal ancestral lands are respected and honored by state forest's management activities.

Landscape-scale stressors such as droughts, floods, wildfires, plant and animal extinctions, and changes in climate occurred in the past, as did Native Americans' adaptations to such events. Working with the Tribes to integrate their cultural and natural resources knowledge and stewardship practices builds

[1]Tribal Partners include the nine federally recognized Tribes of Oregon: Burns Paiute Tribe, Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians, Confederated Tribes of Grand Ronde, Confederated Tribes of Siletz Indians, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Reservation, Coquille Indian Tribe, Cow Creek Band of the Umpqua Tribe of Indians, and the Klamath Tribes.

[2] Indigenous Traditional Ecological and Cultural Knowledge (ITECK) is grounded in social, spiritual, cultural, and natural systems that are frequently intertwined and inseparable, offering a holistic perspective. ITECK is inherently heterogenous and unique to each Tribe due to the cultural, geographic, and socioeconomic differences, as well as their history and the surrounding environment.

adaptive capacity across the landscape. Tribal Partners, their communities, peoples, ancestors, and culturally significant places persist, as do their ancestral knowledge and practices. They hold a rich diversity of holistic strategies, technologies, and management techniques that have existed through many generations and can help inform current conversations regarding climate change and landscape resiliency.

ODF is committed to working with Tribal Partners to understand, identify, manage, and provide access to native populations of culturally significant plants, trees, animals, places, and waters on ODF-managed lands. This includes working with Tribal Partners to develop *ethnobotanical* strategies that are adaptive to the effects of climate change, using native seed sources to encourage self-sustaining plant communities over time, and using fire-adapted *successional* plants to prevent *erosion*. ODF also commits to diversifying tree species in reforestation efforts to encourage proliferation of traditional plants.

The following description of culturally significant natural resources is intended to provide a generalized understanding of the past and present cultural and natural resources that occur or have existed on state forest lands. Culturally significant natural resources, their uses, and associated management practices are extensive. A few examples are provided with the intent of demonstrating the concept of reciprocity, in which all plants, trees, animals, and humans were a part of and contributed to a holistic ecosystem.

Among the many traditionally important natural resources, western redcedar (canoe cedar) is one of the most culturally significant trees on ODF land (Whereat-Phillips 2016). It has healing and symbolic properties that are at the source of many Tribal Partners' ideological and cultural identities. The cultural significance of western redcedar is inextricably tied to its ideological value, as well as its many uses, including medicine-making and ceremonial uses. Western redcedar provides material for basketry, mats, buildings, canoes, cups, buckets, backpacks, spears, bedding, pest abatement, and much more.

Pacific yew (*Taxus brevifolia*) and ash (*Fraxinus*) trees provide raw materials for bows. Arrows are sometimes made from hazel (*Corylus cornuta*), oceanspray (*Holodiscus discolor*), or other available plant species, and vine maple (*Acer circinatum*) is used for making net and spear handles.

Sitka spruce is an example of a culturally important tree species that requires careful tending of individual trees to strengthen the root system and promote healthy growth. It has many important uses, including basketry and making multiple types of fishing and foraging devices to gather eel, smelt, salmon, and other aquatic species. In addition, Sitka spruce's versatility serves well for making larger bowls and cups and other vessels.

Tribes' management of natural resources includes the extensive use of fire to create clearings in the forest to promote growth of successional plants like serviceberry (*Amelanchier alnifolia*). Various parts of serviceberry are used for medicinal purposes and consumption (raw, dried, or made into a preserve), and the branches serve as tool handles, ropes, and sometimes spears or arrow shafts. Bear grass (*Xerophyllum tenax*), bulrush (*Typha*), hazel, and fireweed (*Chamaenerion angustifolium*) are examples samples of other plant species that require burning for production. These species colonize clearings and decline as the forest canopy closes and shade inhibits their growth.

Understory burning that maintains forest canopy cover produces habitat for large and small game including elk, deer, and other sustenance-providing animals; however, animals are more than food. The animal shares its life with people to make clothing, bones for fishing implements, sinew for binding, brains for hide tanning, bones for gaming pieces, and shells for trade, jewelry, rituals, and symbolic displays. Still, many animals are not used for food or other utilitarian purposes but hold deep symbolic meaning in the form of cultural origin stories, and inform and contribute to medicinal practices.

Goal: Tribal Access and Use of Natural Resources

In coordination with the nine federally recognized Tribes of Oregon, provide access, availability, and enhancement of cultural resources and natural resources on state forest lands.

Strategy: Tribal Engagement

Engage Tribal Partners in planning processes for state forest lands and provide opportunities for implementation of cultural and natural resources stewardship practices appropriate to location and habitat.

Intent

The intent of this strategy is to ensure that significant cultural and natural resources are recognized and integrated into planning and management activities. ODF and tribal governments meet regularly to ensure that communication is occurring early and often with the appropriate staff, and at the appropriate levels. The intent is also for tribal and ODF staff to understand respective organizational structures and planning processes to identify meaningful points of engagement, cultural and natural resources stewardship practices, and culturally significant plant and animal species. ODF works with interested Tribes to integrate cultural and natural resources stewardship and restoration practices and priorities for culturally significant plant and animal species in the IP, OP, and adaptive management processes.

Strategy: Coordinate Tribal Ethnobotanical Strategy

Coordinate with Tribal Partners to develop and implement an ethnobotanical strategy that is adaptive to the effects of climate change and ensures self-sustaining populations of culturally significant species are abundant and available on state forest lands.

Intent

The intent of this strategy is to have a process for including or introducing culturally significant plant species and cultural techniques into forest management practices, including native seed source recommendations that consider appropriate habitat in planting regimes, climate resiliency, and legacy seed source information that contributes to a storied landscape understanding.

Strategy: Tribal Seed Sources

Collaborate with Tribal Partners on native seed source recommendations that consider appropriate habitat in planting regimes, climate resiliency, and legacy seed source information that contributes to a *storied landscape* understanding.[3]

Intent

The intent of this strategy is to identify and cultivate partnership opportunities with established native nurseries, including but not limited to the Coastal Native seed partnership, the Oregon Department of Agriculture's (ODA) seedbank, and tribal seed nurseries. The intent is also to continue to work with Tribal Partners in IP, OP, and adaptive management planning processes to develop and implement climate adaptation strategies to support culturally significant plant and animal species.

Strategy: Tribal Access

Work with Tribal Partners to develop and administer processes that facilitate *unimpeded access*,[4] with protected allowances for Tribal Partners' to access, use, and manage cultural and natural resources (e.g., western redcedar bark peeling, bear grass collection) on state forest lands.

Intent

The intent of this strategy is to implement processes necessary to allow protected tribal access to state forest lands. ODF and Tribes build their understanding of locations and logistical needs for accessing culturally significant locations and forest resources. ODF and Tribes clarify responsibility for ensuring access, including but not limited to identifying entities responsible for access administration, methods of identification of tribal members, and provisions and conditions for gathering, cultivating, and harvesting. Tribal input on access is considered during IPs. ODF may consider Oregon Parks and Recreation Department tribal collection processes as a model program.

Tribal Partners: Cultural Resources Protection

European settlement in western states destabilized existing human-ecological systems and severed ties between the past and present that are culturally significant to Tribal Partners. Historic practices, behaviors, and laws physically, emotionally, and spiritually forced tribal peoples from their lands and ways of life, yet the history, language, and people endure. Human remains (ancestors), funerary objects (tangible pieces of death rites and ceremonies), objects of cultural patrimony (spiritual and material associations), and culturally significant objects (religious or spiritual objects used in ceremonies) are prevalent across Oregon, including on state forest lands. These non-renewable resources may include culturally modified trees, rock cairns, waterfalls, caves, and other features. Visible evidence of ancestral communities include items of everyday life, such as animal bones, mollusks, beads, needles, and obsidian

[3] Within tribal contexts, storied landscape refers to a multitude of intrinsically linked and deeply held understandings, relationships, and actions between indigenous cultures and the landscapes with which they interact throughout time, including but not limited to origin stories, landscape features, and wildlife attributes that signal hunting, gathering, planting, and other seasonal use patterns.

[4] Provide reasonable opportunity for access, considering public safety, infrastructure, and topographic constraints.

tools. Protection of culturally significant sites and objects is critical for honoring and maintaining connections between ancestors, current tribal members, and future generations of tribal descendants.

ODF is committed to the shared and facilitated protection and repatriation of any items[5] (spiritual or material) that are considered culturally significant by Tribal Partners. Protection extends to known sites and locations, identification of undocumented sites, and avoidance of sacred spaces and places of concern. Protection of cultural resources also extends to management and recovery activities related to fire, restoration, flooding, wind, landslides, and other disturbance events.

The FMP provides for access, availability, protection, and enhancement of cultural resources on state forest lands. The plan recognizes these lands are a part of a long historical relationship, and access to *Traditional Cultural Places*[6] for spiritual, ceremonial, and traditional practices enables Tribes to maintain cultural identity, which is deeply rooted in the land. These locations are typically kept from common knowledge because of their sanctity and are almost exclusively known to Tribes and tribal members. Sometimes, only certain groups within a Tribe are keepers of such knowledge. Traditional Cultural Places and culturally significant forest and natural resources are *confidential*, and as such, ODF is committed to shared stewardship with Tribes, with stewardship being the protection of locational knowledge, meaning, and materials (ORS 192.005–192.170). ODF is also committed to increasing internal and external cultural awareness, understanding, and accountability through regular training focused on prioritizing, recognizing, and protecting cultural resources. These commitments are only successful through shared stewardship and partnership, built from mutual respect, trust, and understanding.

Goal: Tribal Cultural Resources Protection

Take an inclusive and proactive approach to working with Tribes to identify, record, preserve, protect, and keep confidential[7] culturally significant resources, including but not limited to *archaeological* and *historic sites* and *objects*, considerations for human remains, historic artifacts, and real property.[8]

Strategy: Tribal Relationships

Develop and maintain relationships with Tribal Partners to facilitate consistent information sharing and collaboration on state forest management activities that may affect cultural resources, including timber harvest and related activities, wildfire suppression and recovery, and habitat restoration.

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[5] 43 CFR § 10 (Native American Graves Protection and Repatriation Act); 16 U.S.C. § 1B (Archaeological Resources Protection Act); 16 U.S.C. § 470 (National Historic Preservation Act), ORS 97.740–97.760, ORS 358.905–961, and ORS 390.235–390.240. Oregon EO 17–12, 368.905–358.961; 97.740–97.760; 390.235.

[6] The National Historic Preservation Act and the 36 CFR 800 regulations implementing it refer to "properties of traditional religious and cultural significance." These are geographic places prominent in a particular group's cultural practices, beliefs, or values, when those practices, beliefs or values: (i) are widely shared within the group, (ii) have been passed down through the generations, and (iii) have served a recognized role in maintaining the group's cultural identity for at least 50 years.

[7] Includes culturally sensitive locations in *State Historic Preservation Office* and tribal databases and places known by affiliated Tribes.

[8] EO 96-30; EO 17-12; ORS 358.640 and 358.653, ORS 97.740 to 97.760; 358.905 to 358.955; and 390.235.

Intent

The intent of this strategy is to promote communication with Tribes about potential impacts and opportunities of forest management activities by developing tribal engagement policies and procedures and ensuring ongoing consultation and coordination. This includes working with Tribal Partners toward a systematic notification and record keeping process for state forests management activities and emergency operations (e.g., fire, flood, wind) that provides established points of contact and a collaborative structure for protection and rehabilitation of natural and cultural resources.

Strategy: Cultural Resources Inventory

Develop a comprehensive and ongoing cultural resources survey and inventory strategy to increase the understanding of culturally significant archaeological, historic, and cultural sites and objects on state forest lands, and implement the strategy in coordination with Tribal Partners over time.

Intent

The intent of this strategy is to work with Tribal Partners to develop and implement cultural resources protection processes and strategies associated with all forest management activities to help identify and protect culturally significant resources and to ensure their protection is part of IP, OP, and adaptive management processes.

Strategy: Determining Level of Cultural Significance

Coordinate with Tribal Partners to identify Tribes that have direct ties to state forest lands (in terms of location, materials, knowledge, and practice); determine the level of significance of archaeological, historic, and cultural sites and objects; and solicit recommendations for protection and preservation thereof.

Intent

The intent of this strategy is to promote communication with Tribes to determine significance and relative protection measures to be taken.

Strategy: Cultural Resource Awareness

Increase internal and external cultural awareness, understanding, and accountability for cultural resources protection through regular training focused on prioritizing, recognizing, and protecting cultural resources.

Intent

The intent of this strategy is to provide ongoing education to ODF staff, volunteers, contractors, and visitors to state forests so they understand their role in cultural resources protection. The intent is also for ODF to provide internal and external cultural awareness training opportunities for staff, volunteers, and contractors, and coordinate with Tribal Partners on curriculum development, including Senate Bill

(SB) 13:[9] Tribal history/Shared History curriculum (as outlined by Tribal Partners). Awareness training opportunities for visitors is provided through education and interpretation programs and the Tillamook Forest Center.

Strategy: Intergovernmental Agreements

Use intergovernmental agreements[10] with Tribal Partners to facilitate cooperation, information exchange, and cost sharing.

Intent

The intent of this strategy is to codify communication processes, cultural and natural resources protection strategies, and land management partnerships.

Historic Cultural Resources

Historic sites and artifacts across Oregon's landscape tell a rich story of people, communities, travel, conflict, trauma, and persistence, which collectively represent the diversity of descendants of Oregonians today.

European explorations intensified in the early 1800s and expanded significantly with the 1850 Oregon Donation Land Law bringing over 30,000 white settlers. This cultural shift, predicated on colonization and western cultivation of the landscape, brought extractive agriculture, ranching, logging, and homesteading (a foreign concept of land ownership and control for Native Americans). The European explorers and settlers also brought diseases that decimated Native American peoples and *lifeways*. The Native Americans that survived this era of disease and genocide were forced to join an unfamiliar labor culture to provide for their families.

Other groups also found their way to what is now Oregon, despite laws that intended to keep them out. Even before Oregon became a U.S. territory, the Provisional Government of Oregon enacted laws that banned both free and enslaved Black people from Oregon and threatened violence to those who stayed. Oregon's state constitution was the first to ban Black residents and barred Chinese residents from voting, despite having worked and lived in Oregon since the early 1800s. Despite these laws and bans, these marginalized communities endured. For example, Maxville, a logging camp east of the town of Wallowa, was home to a multi-cultural logging camp, with 400 residents, 40 to 60 of which were Black people. It was the largest town in Wallowa County between 1923 and 1933 and is memorialized by the Maxville Heritage Interpretive Center.

Other immigrants continued to find their way to Oregon, including the Basque (primarily sheepherders), Mexicans who mined gold and tended livestock, and Chinese who established mining camps in southwest and northeast Oregon and continued to work on building the transcontinental railroad. The Chinese Exclusion Act of 1882 forced many Chinese immigrants, and their American-born children, to

[9] Senate Bill (SB) 13 Tribal History/Shared History directs the Oregon Department of Education to create the K-12 Native American Curriculum for inclusion in Oregon public schools and provide professional development to educators.
[10] ORS 190.110, National Historic Preservation Act Section 106, ORS 358.653.

leave the state. This resulted in labor shortages that were filled by immigrants from Japan and other parts of Asia. The influence of these many communities can still be found upon the state's landscape and are visible in the historic cultural resources memorializing their experiences.

Historic cultural resources are some of Oregon's most valuable and important *assets*. Buildings, structures, sites, furnishings, art, objects, and items of personal property that are important to local, state, or national history can tell the story of a region's cultural history. These cultural resources are protected under the National Historic Preservation Act and Oregon state law when they meet certain criteria.[11] ODF is committed to historic cultural resources stewardship through the identification and protection of culturally sensitive resources across state forest lands. Historic cultural resources protection provides an opportunity for visitors to state forest lands to connect with the state's history and people.

Goal: Historic Cultural Resources Protection

Identify and protect historic cultural resources.

Strategy: Archaeological Review

Perform archaeological review of all operation locations and protect historic resources following applicable rules and statutes.

Intent

The intent of this strategy is to incorporate historic cultural resources review by qualified cultural resources specialists, in compliance with state and federal regulations, into operation planning processes to ensure protection of historic cultural resources across state forest lands.

3.2.4 Forest Resource 4: Recreation, Education, and Interpretation



Mountain biking on one of ODF's many trail systems. Demand for outdoor opportunities in Oregon is increasing.
Credit: ODF.

ODF's recreation, education, and interpretation program manages both developed and *dispersed recreation* and interpretive programming across all state forest lands, with the greatest concentration of opportunities and visitor use in northwest Oregon on the Clatsop, Santiam, and Tillamook State Forests. The program aims to welcome all visitors, provide opportunities to learn about forest stewardship, and ensure lasting, diverse, and accessible outdoor experiences.

On state forest lands, visitors enjoy a wide range of activities such as camping, hunting, fishing, hiking, mountain biking, boating, horseback riding, target

[11] National Historic Preservation Act Section 106, ORS 358.653.

shooting, and motorized trail use. These opportunities are regulated under Oregon Administrative Rules (OAR) 629-25 to ensure safety and resource protection.

Recreation on state forests involves more than leisure activities—recreation is an ecosystem service that improves quality of life, supports cultural traditions, and connects Oregonians to their state forests. It also generates significant economic benefits for nearby communities and the state as a whole. According to Oregon's 2025–2029 Statewide Comprehensive Outdoor Recreation Plan (SCORP), outdoor recreation in Oregon contributes nearly $57 billion annually to the state's economy and saves billions in health-related costs (Oregon State Parks 2025).

SCORP data show that demand for outdoor recreation continues to grow across the state. Hiking, camping, and wildlife viewing remain among the most popular activities, while mountain biking and non-motorized trail use are seeing steady growth. At the same time, barriers persist for some groups, including low-income households, people with disabilities, and racially or ethnically diverse communities. This highlights the need for more inclusive access and programming.

As demand grows and user demographics evolve, the recreation program continues to adapt facilities, trails, and educational offerings to meet changing needs and create more inclusive experiences. The following sections describe some of these recreational opportunities in detail and outline strategies for future improvements.

Motorized Trail Use

State forests provide some of the most diverse and challenging off-highway vehicle (OHV) opportunities in Oregon, filling an important recreational niche in the Pacific Northwest. OHV staging areas, including campgrounds and day-use sites, offer parking and camping that support access to trail systems.

The Clatsop and Tillamook State Forests feature extensive OHV networks for motorcycles, quads, side-by-sides, and four-wheel-drive vehicles, with trails ranging from beginner-friendly to highly technical. The Santiam State Forest and the West Oregon District offer smaller systems with easy-to-moderate routes for motorcycles and quads. OHV trails are generally open year-round, with peak use in spring and fall.

Non-motorized Trail Use

State forests offer an extensive network of non-motorized trails for hiking, horseback riding, trail running, and mountain biking. These trails range from scenic forest paths to purpose-built mountain bike routes, including cross-country, downhill, and freeride options. The Black Rock Mountain Bike Area in the West Oregon District is a prime example, managed in partnership with the Black Rock Mountain Bike Association to provide advanced riding experiences.

Looking ahead, maintaining and expanding these trails will require strong collaboration with local trail organizations and other nearby systems—such as those managed by counties, cities, and nonprofits—to create seamless connections between state forests and regional networks. These linkages enhance recreational opportunities, reduce congestion, and support tourism by offering longer, integrated trail experiences.

Camping

Camping on Oregon's state forests offers a range of experiences, from rustic dispersed sites to developed campgrounds with amenities. ODF manages three primary types of camping: developed campgrounds, designated sites outside campgrounds, and dispersed camping across forest lands. Developed campgrounds vary in size and features, including drive-in sites for recreational vehicles and tents, walk-in tent sites, horse camps designed for equestrian users, and OHV campgrounds tailored for motorized recreationists.

ODF campgrounds serve as hubs for recreation, providing access to trails, rivers, and scenic viewpoints. Many sites are intentionally kept simple to maintain a natural forest experience, while still offering essentials like fire rings, picnic tables, and vault toilets. Future priorities include improving accessibility for all visitors, upgrading infrastructure for safety and sustainability, and exploring partnerships to expand camping options near high-demand areas.

Day-Use Activities

ODF manages a variety of day-use sites that provide essential amenities for visitors, including trailheads, picnic areas, boat launches, target-shooting lanes, interpretive sites, and demonstration forests. While facilities are generally rustic, many offer river access, restrooms, and picnic shelters. These sites serve as gateways to recreation, supporting activities like hiking, mountain biking, fishing, and OHV riding. Target shooting is also supported at designated shooting lanes, which are maintained to improve safety and reduce environmental impacts.

Future priorities include improving accessibility, upgrading infrastructure for safety and sustainability, and enhancing interpretive elements to enrich visitor experiences.

Aquatic Activities and Hunting

State forest lands provide abundant opportunities for water-based recreation and hunting, both deeply rooted in Oregon's outdoor traditions. Rivers and lakes within the forests support fishing, boating, and swimming. ODF manages several primitive boat launches, some in partnership with the Oregon Department of Fish and Wildlife (ODFW), and small lakes in the Santiam and Clatsop State Forests offer angling and non-motorized boating. RCA protections support healthy fish populations and ensure the recruitment of in-stream downed wood and other habitat elements over time.

Hunting remains a cornerstone activity on state forests, with ODF working closely with ODFW and hunting organizations to manage access and maintain habitat to support healthy populations of game animals. *Travel management are*as and selective road closures create walk-in hunting opportunities while balancing habitat protection and safety. These activities not only connect people to Oregon's natural heritage but also contribute to local economies and community wellbeing.

Looking forward, ODF aims to enhance water access points, improve signage and safety features, and strengthen partnerships to support sustainable hunting practices and aquatic recreation.



Interpretation and Education Services

Education and interpretation are central to the VOF by fostering stewardship and understanding of Oregon's forests. Since the mid-1990s, programs have provided insight into forest ecology, wildfire history, and sustainable management practices *on working forests* that promote resilient ecosystems. The Tillamook Forest Center, built in 2006, is the flagship facility—a premier destination for locals and visitors alike. It features interactive exhibits, an award-winning film on the Tillamook Burn, accessible trails, seasonal presentations, traveling exhibits, and school programs. School programs for K–12 classrooms are especially important for ensuring that school children experience the forest and are aware of future career opportunities in stewardship of their natural resources.

Future plans emphasize modernizing interpretive services, expanding digital engagement, and strengthening partnerships with schools and community organizations. These efforts aim to reach broader audiences, integrate climate and wildfire education, and ensure that interpretation remains relevant and engaging for the next generation.

Goal: Recreation, Education, and Interpretation Opportunities

Provide forest recreation, education, and interpretation opportunities to create meaningful and enjoyable experiences that foster appreciation and understanding of state forest lands and contribute to community health, sustainable working forests, and economic wellbeing.

Strategy: Welcoming and Accessible Recreation, Education and Interpretation Opportunities

Assess, maintain, and improve recreation, education, and interpretation opportunities on state forest lands through existing trails, facilities and future development.

a. Consider connecting to existing recreational infrastructure when planning new development in close proximity.

b. Use BMPs, engineering standards, and planning principles suited for facility and trail development on public lands.

Intent

The intent of this strategy is creates enjoyable experiences across the recreation spectrum and within educational fields that build appreciation for state forests and support connection with Oregon's history, people, and environment

Strategy: Visitor Use Research and Monitoring

Monitor visitor use of program assets to inform decisions related to the recreation, education, and interpretation program., Support efforts to diversify program funding mechanisms, contribute to program sustainability, and help the program describe and deliver its contribution to GPV and resilient ecosystems.

a. Regularly collect and analyze data on how visitors use state forest recreation, education, and interpretation facilities and programs to guide decisions and improve services.

Intent

The intent of the strategy is to prioritize infrastructure upgrades, design new programs, and demonstrate the value of investments to stakeholders.

Strategy: Community Engagement

Build partnerships and community connections to increase investment, collaboration, and support for recreation, education, and interpretation programs.

Intent

The intent of this strategy is to create a sense of shared ownership around the mission, vision, and brand of the recreation, education, and interpretation program through collaboration and engagement with diverse audiences, partners, and stakeholders that creates community connections, develops broad support for and investment in the program, and increases our collective capacity.

3.2.5 Forest Resource 5: Visual Resources

Western Oregon state forest lands are near some of Oregon's major cities. Several *scenic* highways and rivers cross the planning area and attract people to recreational infrastructure including many campgrounds and extensive trail networks. Sightseeing is popular in state forests, and visual resources play a major part in the quality of experience in social activities, such as camping, trail use, fishing, wildlife watching, rafting, and driving. Visual resources enhance the quality of social benefits and attract tourists whose spending supports the local tourism economy and contributes to revenues.

In many places, smaller parcels of state forest lands are not readily distinguishable from other surrounding forestlands by visitors. By contrast, the Clatsop and Tillamook State Forests are large, consolidated blocks of state forest lands that are signed and well-known to many visitors and dominate *viewsheds* along some busy travel corridors, especially between Portland and the Oregon Coast. Goals for retaining visual buffers from timber harvest are balanced with goals for maintaining safe conditions for motorists and recreationists.



Santiam State Forest. On state forest lands visitors can expect to see a wide range of forested settings, streams, rivers, lakes, and other scenery.
Credit: Zak Stone.

State forest lands are also home to state-designated *scenic waterways*, which are designated to create a balance between protecting natural resources, scenic value, and recreational use of these rivers.

Scenic Highways, Byways, and Visually Sensitive Corridors

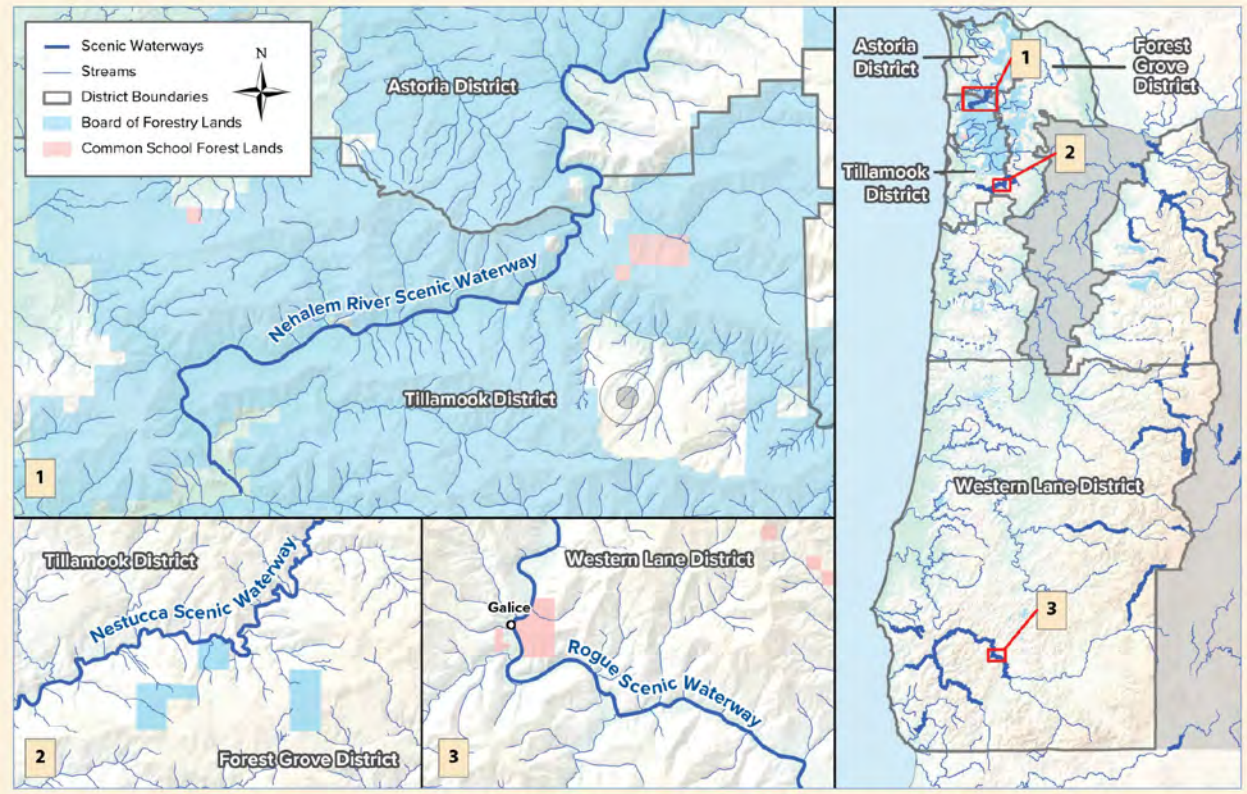
State forest lands are a major part of the view along some stretches of Highway 6 and Highway 26 in the Oregon Coast Range. Along major highways, the immediate visual foreground is protected either by Oregon Department of Transportation-owned scenic buffers or by statute. Many highways in western Oregon are designated as scenic for the purpose of visual corridor management (ORS 527.755) and are within or adjacent to state forest lands.

Special rules apply to timber harvest in *visually sensitive corridors*. Goals for retaining scenic buffers are balanced with goals for maintaining motorist safety. Additionally, Highway 6, located in the Tillamook State Forest, is designated as a portion of the Trees to Sea Scenic Byway and must be maintained as a scenic corridor per the *Trees to Seas Highway 6/131 Scenic Byway Corridor Management Plan* (ODF 2018).

Scenic Waterways

There are three state scenic waterways on or adjacent to state forest lands. Management of lands in and adjacent to designated scenic waterways is subject to the provisions of ORS 390.805 to 390.925, and administrative rules adopted by the Oregon Parks and Recreation Department. The first designated waterway is the Nestucca River Scenic Waterway in Forest Grove and Tillamook Districts (designated by ORS 390.826(11); OAR 736-040-0041) (Figure 3-4). The second state scenic river is a 17.5-mile section of the Nehalem River located in the Clatsop and Tillamook State Forests (designated by Executive Order 2019-05; OAR 736-040-0120). The third state scenic river is the Rogue River Scenic Waterway (designated by ORS 390.826(9)) located adjacent to CSFL in the Western Lane district near the small town of Galice (16 miles northwest of Grants Pass). This same reach is also part of the Lower Rogue National Wild and Scenic River, which is one of eight rivers established under the passage of the Wild and Scenic Rivers Act in 1968.

FIGURE 3-4
Scenic Waterways. Scenic-designated segments of the Nestucca, Nehalem, and Rogue Rivers flow through the planning area.



Goal: Visual Resources

Manage forests in ways that value scenery and a range of forested settings based on emphasis area.

Strategy: Scenic Considerations

Integrate scenic considerations into management decisions where compatible with safety considerations, other resource priorities, harvest plans and operational needs. Scenic emphasis areas are mapped as part of the FLMCS based on classification criteria for visual sensitivity. Classification criteria may include factors such as number of viewers, viewing distance, viewing angle, landform, vegetation, water and uniqueness. Table 3-3 provides examples of visual sensitivities.

TABLE 3-3
Examples of Visual Sensitivities used to Map Scenic Emphasis Areas as Part of the FLMCS

Visual Sensitivity	Examples
High	Areas where state and federal regulations apply such as scenic highways and scenic waterways.
Moderate	Portions of the viewshed visible from established campgrounds, high use vistas, viewpoints along major highways, urban views, and heavily used recreation areas.

Intent

The intent of this strategy is to provide views of a wide range of managed forest settings, including areas where scenic considerations are regulated by law. Active management of state forest lands provides a unique experience where visitors can expect to view a range of forest conditions ranging from newly planted seedlings to stands of large, mature trees; management activities including thinning and regeneration harvests with leave trees, snags, and resource buffers; and natural features like streams, rivers, lakes, and waterfalls. The varied scenes experienced on state forest lands reflect the social, economic, and environmental co-benefits that come from these working forests.

3.2.6 Forest Resource 6: Special Forest Products



Hand-picked Chantrelle mushrooms. Special forest products provide social and economic benefits for communities.
Credit: ODF.

Special forest products are non-timber products that are collected for personal and commercial uses. They include firewood and other products identified by the BOF (ORS 530.050 and 164.813; OAR 629-028). In western Oregon State forest lands, special forest products include, but are not limited to, bear grass, evergreen boughs, cedar shakes, cones, ferns, firewood, moss, mushrooms, vine maple cuttings, poles, Oregon grape (*Mahonia spp.*), salal (*Gaultheria shallon*), and Pacific yew bark.

The special forest products industry makes an important contribution to Oregon's economy, cultural values (Section 3.2.3, *Cultural and Historic Resources*, for more details), and social wellbeing. The types of products vary among districts. Managing special forest products as a viable, sustainable commodity program, compatible with other forest resources, provides economic and social benefits for local communities and allows the special forest products industry to adapt and serve changing needs over time.

Goal: Special Forest Products

Provide opportunities for sustainable harvest of special forest products for personal and commercial use.

Strategy: Special Forest Products Harvest

Sell permits for sustainable commercial harvest of special forest products. Provide the public with information on locations and acceptable collection limits of products for personal use, consistent with other goals and the protection of forest resources.

Intent

The intent of this strategy is to provide opportunities to harvest special forest products that are compatible with other resource goals, while complying with ORS 530.050 and 164.813. The permitting process is used to guide personal or commercial users to specific areas of the forest where special forest products are available and harvest is unlikely to affect other resources (e.g., sensitive wildlife areas, campgrounds).

3.2.7 Forest Resource 7: Mining, Agriculture, Grazing, Administrative Sites



Tillamook Forest Center is a modern education and interpretive center in the heart of the Tillamook State Forest. Through hands-on exhibits, attractive riverside and forest trails, and educational offerings, visitors take a journey through the history of Oregon's forests, the power of wildfire and the art and science of sustainable forest management today.
Credit: ODF.

Mining, agriculture, grazing, and *administrative sites* provide direct economic benefits by generating income and revenue, and indirect social benefits by supplying education and interpretation facilities and materials for developing and maintaining the transportation network. The mineral, oil, and gas potential of western Oregon state forest lands is largely unknown. Few systematic surveys have been conducted for most commodities, and no regional geochemical studies have been conducted to define or eliminate areas of possible metal mineralization

Generally, except where a prior reservation exists, minerals and geothermal resources are owned by the State of Oregon and are managed jointly by the State Forester and the Department of State Lands (ORS 530.050(2) and ORS 273.551). ODF's share of revenues or royalties from these resources under ORS 530.110 and 530.115 is typically distributed to the Common School Fund by operation of ORS 273.780 and 273.785(4), while the counties' share of such revenues under Chapter 530 are distributed to the counties under ODF's revenue distribution statutes. Development of subsurface mineral resources may still require easements or special use permits issued by ODF and other agencies.

ODF may use soil, clay, stone, sand, and gravel for constructing or repairing roads or other state facilities (ORS 530.050). State forest lands can provide rock for local road surfacing, which is an important resource for road construction, road improvement, and road maintenance.

Although state laws permit agriculture and grazing on state forest lands if those uses are compatible with other forest resources, the topography of state forest lands is generally not suitable for most agricultural uses. Historically, under the open-range laws, all of the districts in western Oregon allowed grazing on burned or logged areas. As forests were re-established, grazing diminished. Open-range grazing ended in the early 1980s, and grazing is now almost non-existent on state forest lands.

Goal: Permit Mining, Agriculture, Grazing, Administrative Sites

Permit mining, agricultural use, development and use of administrative sites, and livestock grazing when these uses are compatible with other forest resource goals.

Strategy: Special Use Permit Evaluation

Consider mining, agricultural use, administrative sites, and livestock grazing on a case-by-case basis, such that use is not detrimental to the best interest of the state, is allowed by law, and is compatible with ODF resource management policies and plans.

Intent

The intent of this strategy is that proposals for uses such as mining, agriculture, grazing, and administrative sites be considered only after consultation with a staff biologist, an aquatic and riparian specialist, a land specialist, planners, and districts to ensure alignment with ORS 530.050. The purpose of the consultation is to evaluate whether these uses are compatible with other forest resource goals and with maintaining forests. Potential subclasses include Administrative Sites, Agriculture, Grazing Wildlife Forage, Easements, Energy and Minerals, or Transmission.

3.2.8 Forest Resource 8: Geology and Soils



Dynamic processes, such as forest succession, wind, and fire affect the accumulation of organic matter and available nutrients in the soil.

Credit: ODF.

The landscape upon which forest management occurs is affected by historic geologic processes and their resulting *formations*. Volcanic activity, sediment deposition, *uplift*, soil formation and erosion are the driving forces that have given western Oregon its unique terrain. The soils, which are derived from geologic and biological materials and form the bedding from which Oregon's forests grow, provide many ecosystem services that are key to maintaining resilient forests. Tree and other plant community productivity is determined mainly by soil characteristics and soil health. Road and recreation infrastructure depend on soil and topographic

characteristics for stability and seasonal accessibility. Inoperable areas that are not available for active management due to unstable slope characteristics, provide other ecosystem functions such as wildlife habitat and carbon storage.

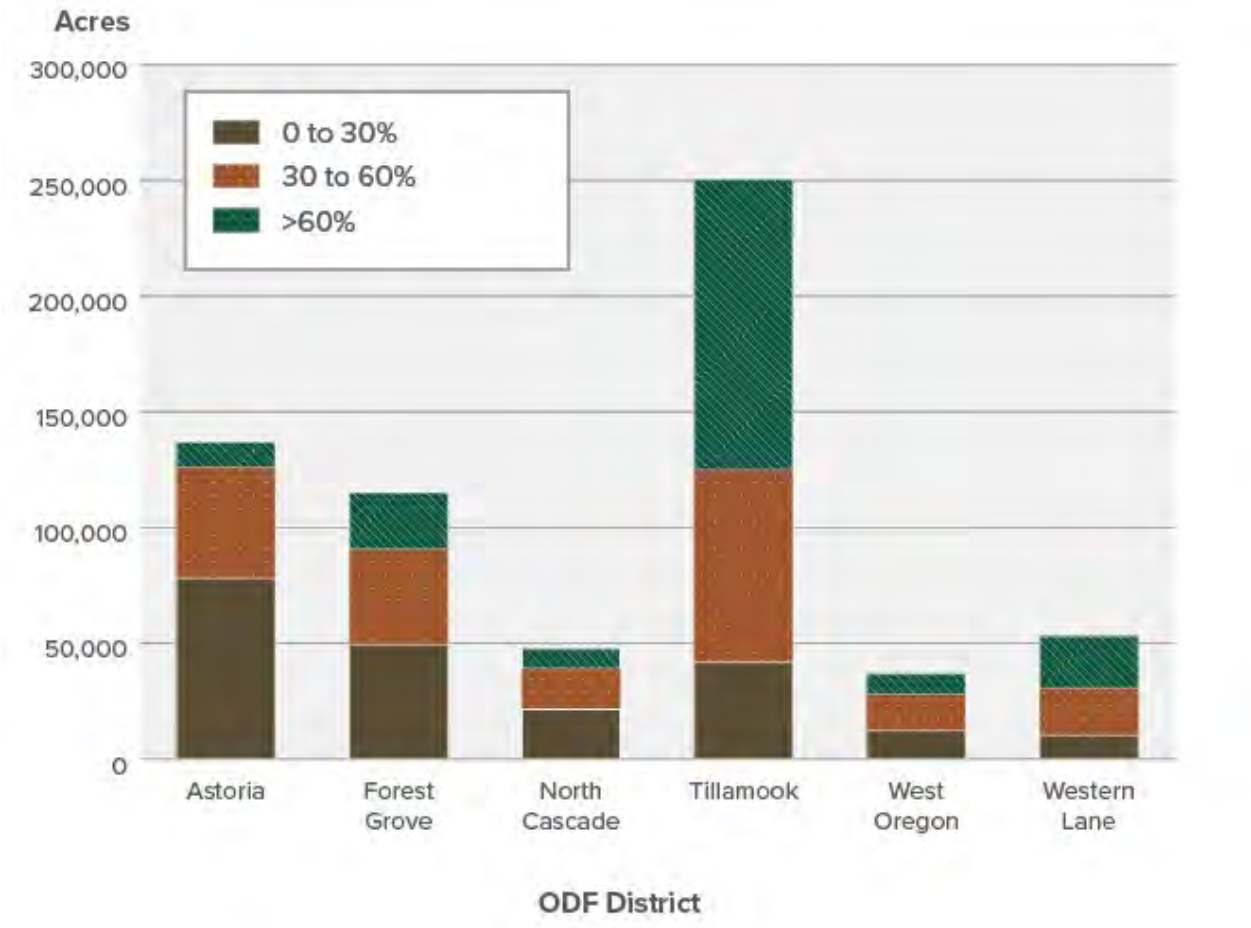
Geology

The planning area includes a diverse mix of terrain and soil types owing to a variety of geologic processes over time. Submarine volcanic activity, deposition of marine siltstones, sandstones and mudstones, and uplifting have resulted in mountainous terrain across most of the planning area. In addition, fluid basalts from volcanic activity further east flowed down the ancestral channel of the Columbia River Gorge into the lower areas of the Willamette Valley to the margins of the present coastline throughout much of the northern area of the planning area. Erosion from heavy precipitation and landslides transported large amounts of sedimentary material downstream, resulting in the deeply incised and complex topography that is the present-day Oregon Coast Range. Periodic earthquakes triggered many large, deep-seated landslides that exist throughout this area today.

Concurrent with the shaping of coastal mountains, volcanism formed the high Cascade mountains along the eastern edge of the planning area. Following their formation, the topography was further shaped by erosion processes similar to the coastal mountains, but also by the formation and subsequent receding of glaciers.

The net effect of geology, erosion, and climate is apparent in the distribution of slope steepness across the planning area. Nearly 33% of state forest lands have a slope greater than 60% (Figure 3-5). Steeper slopes are generally more prone to landslides as a result of harvest and road construction, more difficult to safely operate on, and can be less productive for tree growth in general. Where steep slopes are prevalent, logging and building access roads is more costly, and some areas are inoperable and excluded from timber harvest planning.

FIGURE 3-5
Slope Steepness across the Planning Area. The highest percentage of steeper slopes in the planning area are in the Tillamook and Western Lane Districts.



Source: Oregon Lidar Consortium 2007–2020.

Soils

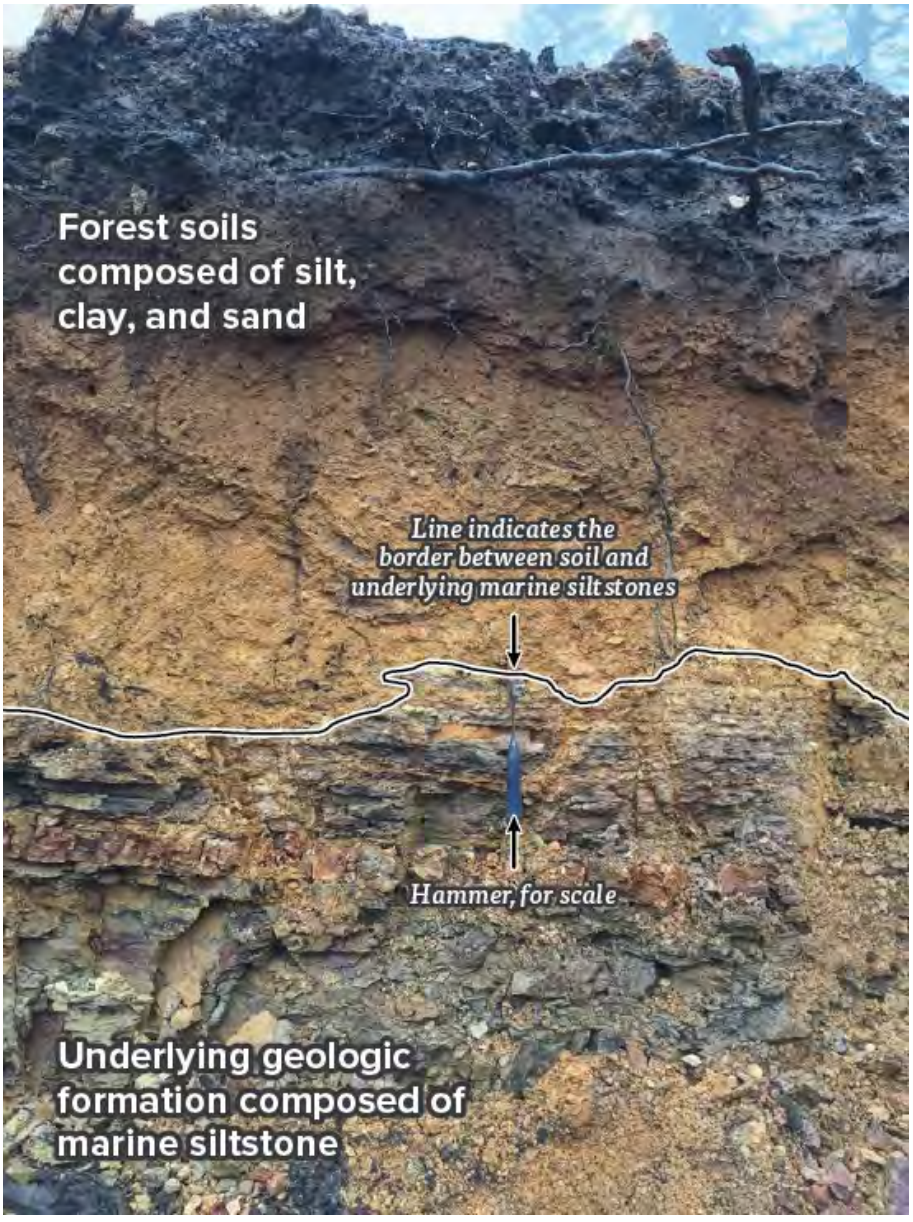
There are three general soil types: those formed from underlying volcanic formations, those from underlying marine formations, and those from alluvium (unconsolidated materials deposited by streams and rivers). Alluvial soils are a very minor portion of planning area soils and are wholly contained with RCAs. Soils are almost always thinner along ridgetops and thicker in *swales* due to faster and deeper weathering of underlying formations, which are wetter for longer periods, and gradual downslope soil movement, which increases soil depth in low areas. All soils contain organic and biological components in addition to minerals.

Soils formed on volcanic formations in the planning area are classed predominantly as gravels. These soils are very well drained, often occur on the steepest slopes in the planning area, and tend to be thinner than soils formed from marine formations or alluvium. The highest concentration of volcanic soils is in the Tillamook Highlands, the Cascade foothills, and near the Columbia River. While these soils

are still suitable for growing trees, they tend to be less productive than deeper soils that store more water and nutrients.

Soils formed on underlying marine sedimentary formations are predominantly silts, sands, and clays with minor amounts of gravel (Figure 3-6). These occur in many areas outside the Tillamook Highlands. These soils are well drained on hillslopes but can be wet most of the year in low-lying areas. Water permeates through these soils much slower than the volcanic soils due to their fine-grained texture. These soils tend to be highly productive, due their retention of water and nutrients.

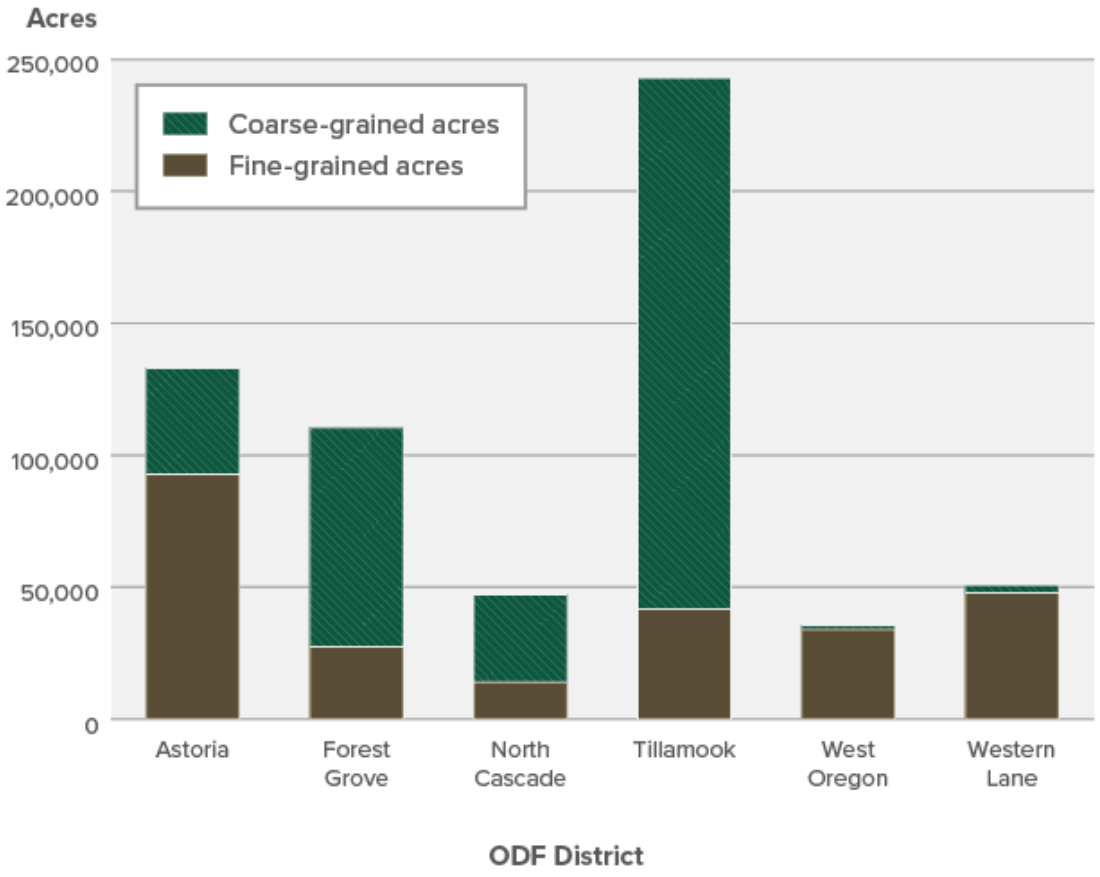
FIGURE 3-6. Forest Soils Developed on Marine Siltstones in Less Rugged Coastal Areas.
Past geologic processes create many different layers in the soil, which contribute to different forest types and management actions.



Source: ODF.

Due to the influence of ancient volcanism, the Forest Grove, North Cascade, and Tillamook Districts have predominantly coarse-grained soils, while the remaining districts' soils are fine-grained and were derived from softer marine sediments (Figure 3-7).

FIGURE 3-7
Fine- and Coarse-Grained Soils by District. The Tillamook District has the highest proportion of coarse-grained soils in the planning area.



Source: ODF analysis of underlying geology in Oregon Department of Geology and Mineral Industries (DOGAMI) 2015.

Some locations have the ability to grow timber more easily than others. Forest site productivity is controlled by a complex relationship among topography, slope, aspect, soil depth, porosity, biology, and the availability of nutrients in the soil. Dynamic processes, such as forest succession, wind, and fire affect the accumulation of organic matter nutrients in the soil. The amount and *composition* of organic matter affect soil fertility. Small materials such as needles and twigs have the highest concentration of nitrogen. Large materials such as downed trees influence soil nutrients and soil moisture and can stabilize soils on moderate and steep slopes. *Downed wood* is an important component of forest soils, providing nutrients, habitat, carbon storage, and soil structure that promote both storage and transport of water. Retention standards for downed wood during timber harvest activities are detailed in the WOSF HCP.

While forests in the Oregon Coast Range are widely recognized as some of the most productive in the world, there is local variation, based on the attributes discussed above. Productivity of locations along the Western Cascades can be slightly lower. The most productive sites have deeper, nutrient-rich soils, which remain moist during dry periods. The least productive sites occur on and near steep rock outcrops that lack organic nutrients and dry out quickly.

Slope Stability

Soil movement, from gradual creep to landslides, occurs in both managed and unmanaged forests. Landslides are a natural part of ecosystem processes, delivering woody debris along with gravels, sands, and silt-sized material to streams. These organic and inorganic components can contribute positively to the aquatic ecosystem.

Landslides are a dominant erosional process in the planning area, and timber harvest and road-building activities can increase the rate of occurrence of landslides compared to unmanaged areas. This makes management around potential landslide areas a key focus for land managers. For a limited period after canopy removal, the frequency of slides increases in western Oregon (Turner et al. 2010; Robison et al. 1999). Slides that initiate and move through harvested terrain, may not deliver the same component of beneficial woody debris important for the aquatic system, depending on the amount of tree retention along the debris flow track during harvest. To mitigate this risk, ODF assesses potential landslide areas during the planning of management activities and applies standards described in the WOSF HCP to both reduce the risk of slope failure and ensure that landslides that may occur deliver woody debris to the aquatic system. Table 3-4 shows the landslide density associated with 100-year storm intensity as a function of stand age and slope.

TABLE 3-4
Landslide Density Associated with 100-Year Storm Intensity as a Function of Stand Age and Slope. Both the age of a stand and the slope steepness affect the likelihood of slide initiation during large storms.

Stand Age (years)	Landslide Density per Square Mile (steepest slopes)	Landslide Density per Square Mile (all slopes)
0 to 9	51	13
10 to 30	22	7
31 to 100	19	7
Greater than 100	26	13

Source: Robison et al. 1999.

Within the planning area there are also hundreds of deep-seated landslides, a few of which are active and many more that are prehistoric and presently not moving. Almost all of these examples were caused naturally, many probably initiated by large offshore earthquakes. However, some forest practices can affect the initiation and movement of these slides. These practices include large topographic

modifications such as quarrying and stockpiling rock and creating large slope cuts or placing large amounts of fill material during road construction, especially along the bottom edges of these landslides. ODF mitigates these risks by assessing the landscape for the presence of deep-seated landslides and applies BMPs to avoid practices that might trigger their movement.

Goal: Soil Health

Maintain natural soil processes, protect soils from damage, and increase soil carbon and other nutrients.

Strategy: Soil Protection

Follow BMPs during forest operations, such as road building, timber harvesting, trail construction, and site preparation to ensure protection of soils against erosion and loss of organic materials and soil structure.

a. Use BMPs to protect against erosion and loss of soil structure during harvesting, site preparation, and road and trail construction, improvement, and maintenance. Evaluate and refine the effectiveness of BMPs through adaptive management.

b. Implement downed wood, snag, and leave-tree retention practices as specified in the WOSF HCP to recruit organic content into soils across emphasis areas.

Intent

The intent of this strategy is to plan and implement management activities that protect and maintain the organic content of soils on a landscape scale and to increase carbon, water, and nutrient storage. Management activities protect against erosion and loss of soil structure by using BMPs during harvesting, site preparation, and road and trail construction, improvement, and maintenance. The effectiveness of BMPs is evaluated and refined through adaptive management.

This strategy applies across emphasis areas. For example, in General Stewardship areas, downed wood, snag, and leave-tree retention practices contribute to recruitment of organic content into soils as those materials break down over time. In areas with an environmental emphasis, stands remain largely intact with harvest prescriptions designed to increase the growth of large trees that will eventually die and decay resulting in continual recruitment of organic material into the soil. In HCAs, passive management plays a role through natural disturbances such as insect and disease processes, windthrow, and mass-wasting along with regular trees growth and senesce. RCAs also build soil stability through continued recruitment of large woody debris, mostly through passive management, as trees in these buffer zones grow large and slowly senesce over time.

Goal: Slope Stability

Minimize and mitigate negative impacts on public safety, transportation infrastructure, and aquatic resources from landslides that may be triggered by management activities.

Strategy: Landslide Evaluation and Protections

Use the planning and assessment tools described under the Transportation System goal and the WOSF HCP strategies as described under the Functional Aquatic and Riparian Habitat Resources FMP goal.

Intent

The intent of this strategy is to reduce risks to people and resources associated with landslides while supporting beneficial ecological outcomes in appropriate scenarios.

3.2.9 Forest Resource 9: Carbon



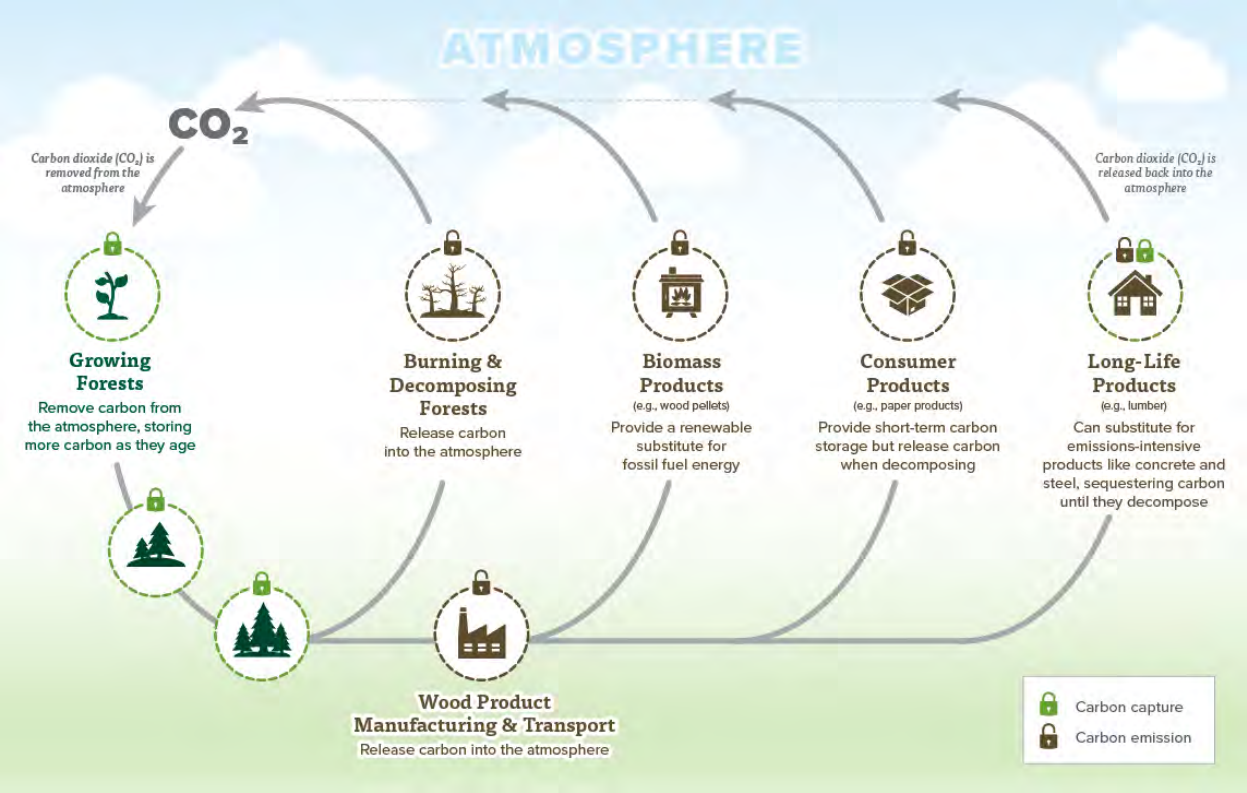
Growing trees sequester carbon. Forests provide long-term storage of carbon in trees, snags, downed wood, vegetation, and soils.
Credit: ODF.

Forests provide carbon storage and sequestration as ecosystem services. Carbon storage and sequestration help mitigate climate change by reducing the amount of greenhouse gases in the atmosphere. Greenhouse gas mitigation supports resilient forest ecosystems by assisting with slowing the pace of climate change and allowing systems to adapt to climate change consequences, such as droughts, extreme heat, wildfire, insect and disease outbreaks, and storms.

Forest vegetation sequesters carbon dioxide from the atmosphere in living tissues and provides long-term storage of carbon in trees, snags, downed wood, other plants, and soils (Figure 3-8).

Forests in the Oregon Coast Range and Western Cascades have the capacity to accumulate some of the highest densities of carbon on Earth through their productivity (Keith et al 2009). *Live trees* are the largest store of carbon (Table 3-5) and the component most affected by management via timber harvest and reforestation.

FIGURE 3-8
Paths of the Forest Carbon Cycle. Forest vegetation sequesters carbon dioxide from the atmosphere in living tissues and provides long-term storage of carbon in trees, snags, downed wood, other plants, and soils.



Source**: ODF.**

TABLE 3-5
Forest Carbon Pools. Approximate percentage of carbon stored in each pool on state forest lands in the Oregon Coast Range.

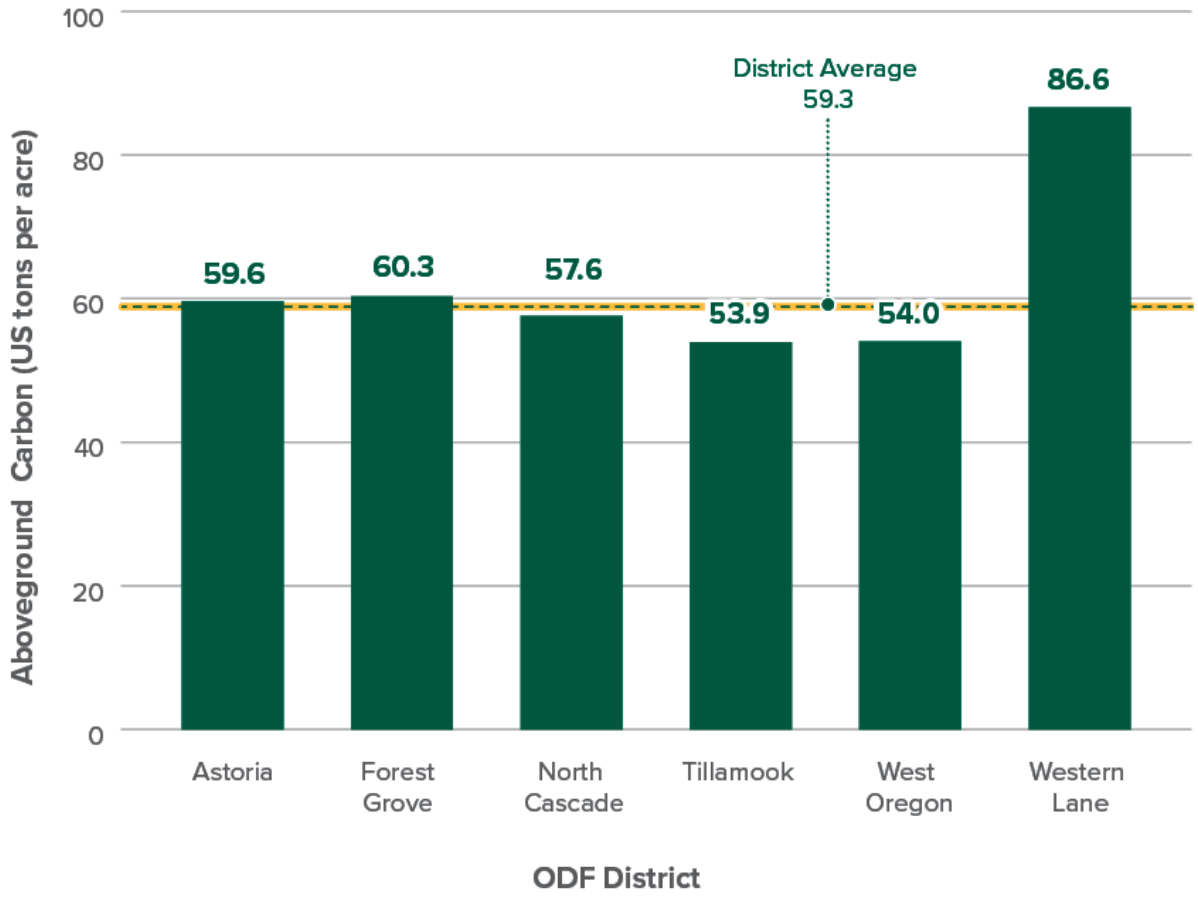
Forest Carbon Pools	Description	Percentage [a]
Live trees	Roots, bole, branches, bark, and foliage of live trees	44.8%
Standing dead trees	Roots, bole, branches, and bark of snags	2.5%
Fallen dead trees	Logs and large branches lying on the forest floor, larger than 3 inches diameter	6.6%
Forest floor	Litter, duff, and low vegetation	2.8%
Soil	Organic material, excluding coarse roots	43.3%

[a] Percentage calculation is from Forest Inventory and Analysis plots on ODF and other state-owned lands in the Oregon Coast Range.

Source: Christensen et al. 2019

Forests continue to sequester carbon as trees grow. Western Oregon state forests store an average of 59.3 tons of carbon per acre aboveground in live trees. Estimates of average aboveground carbon storage varies by district due to stand types, ecoregions, and management history (Figure 3-9).

FIGURE 3-9
Estimated Average Aboveground Carbon in Live Trees across ODF Districts. Data are based on the 2022 Forest Inventory and Analysis estimate on western Oregon state forests.



Note: Some data in this figure were collected prior to the 2020 Labor Day fires, estimated from plots measured in 2013–2022.
Source: USFS 2024.

Goal: Carbon Sequestration and Storage

Contribute to climate change mitigation through carbon sequestration and storage on state forest lands and in harvested wood products.

Strategy: Long-term Carbon Storage

Implement management activities that improve long-term carbon storage in the forest and in harvested wood products.

a. Consider carbon sequestration as part of IP development. This can be done through modeling carbon processes in forest activity planning, restoring underproductive timber stands, and passively managing forests with high carbon storage potential in HCAs and RCAs.

b. Include management options to promote adaptation to climate change in the management approach (Chapter 2, *Management Approach*, and Section 3.1.3, *Forest Resilience*). This includes managing stands to withstand drought and disturbances, maintain climate-adapted trees, and provide continuity of ecosystem services as the climate warms.

Intent

In alignment with the CCCP, the intent of this strategy is to promote climate change mitigation by integrating carbon sequestration and long-term carbon storage with other resource goals and strategies. Areas of land managed for timber production contain both trees that actively sequester and store carbon while they are growing, as well as trees that continue to store carbon when they are manufactured into wood products. Timber harvest results in a portion of sequestered carbon released back into the atmosphere through burning of fossil fuels during harvest operations and burning or decay of slash. Carbon stored in wood products can serve as short-term or longer-term storage depending on their use and longevity. Harvesting trees reduces carbon storage in the forest in the short term, but reforestation after harvest maintains a landscape of actively growing trees to sequester and store carbon as they age. HCAs and RCAs can also serve as long-term stores for carbon as a co-benefit of managing for late-seral forest habitat conditions.

Strategy: Carbon Monitoring and Markets

Model the impact of management on carbon sequestration and storage in forest planning, monitor carbon pools through time, and explore additional potential revenue sources from carbon markets.

a. Forecast and monitor carbon sequestration and storage.

b. Where compatible with other forest resource goals, participate in carbon offset markets to diversify revenue streams. Share revenues derived from ODF participation in carbon offset markets or other carbon finance products with county partners pursuant to ORS 530.110, as described in the *Timber Management* section.

Intent

The intent of this strategy is to have predicted and monitored carbon sequestration and storage as a key component of state forests' inventory to inform forest planning and report the long-term carbon storage in the forest and harvested wood products. Participation in carbon markets or exploring other carbon finance products can help diversify revenue sources for state forests management and provide

additional revenue to counties and local taxing districts while supporting many other ecosystem services (e.g., air quality, wildlife habitat).

3.2.10 Forest Resource 10: Air Quality

A healthy and productive forest ecosystem provides clean air, which is an important ecosystem service that supports the health and wellbeing of Oregonians. In contrast, if air quality is poor, this has a negative impact on health, safety, and local and state economies. Wildfires and *prescribed burns* can adversely affect air quality. Advanced planning and consideration of best burning practices during prescribed burns protect air quality and the associated health risks to the public.

Air quality is regulated under the federal *Clean Air Act*, the primary law regulating air quality. Under the law, the U.S. Environmental Protection Agency (EPA) sets the National Ambient Air Quality Standards (NAAQS). In Oregon, the Oregon Department of Environmental Quality (DEQ) develops and carries out the *State of Oregon Clean Air Act Implementation Plan* (OAR 340-200-0040) to meet the NAAQS. This State Implementation Plan also includes the Oregon Regional Haze Program (OAR 340-223), which protects visibility in *Class I areas*. Class I areas include national parks and certain wilderness areas (OAR 629-048-0005(5)).



Mount Jefferson as seen from the Santiam State Forest on a high visibility day.
Credit: ODF.

Timber harvest results in a large quantity of slash. This material is an important pool of carbon, serves as an input of organic matter to soil, and provides habitat for a variety of organisms. In some cases, this leftover slash can be a barrier to tree planting, increase fire risk, and increase the potential for pest infestations (Buhl et al. 2021). Where the quantity and distribution of slash impedes achieving management goals, prescribed burns may be used as a tool to mitigate the impacts of slash accumulation.

ODF regulates prescribed burning on all forest lands in Oregon, including federal, state, and privately owned lands through the *Oregon Smoke Management Plan* (OAR 629-048). Some of its objectives are to protect public health, minimize smoke intrusions into designated population areas, reduce emissions from prescribed burning in western Oregon, and comply with state and federal air quality and visibility requirements.

Current annual levels of burning on state forest lands represent less than 10% of the total burning annually on all ownerships west of the Cascade Crest. Prescribed burning on state forest lands is estimated to contribute much less than 1% of the air pollution in western Oregon cities (ODF 2021b).

Goal: Air Quality

Maintain and protect healthy air quality.

Strategy: Smoke Management

Follow Smoke Management rules (OAR 629-048) and the *State of Oregon Clean Air Act Implementation Plan* (DEQ 2022), which includes planning guidance, visibility objectives, and BMPs, as well as information on regulated and sensitive areas and special protection zones to reduce smoke and smoke-related consequences.

Intent

The intent of this strategy is to minimize the public's health risks related to smoke from prescribed burning by encouraging the minimization of emissions and the avoidance of smoke intrusions.

Strategy: Slash Management and Alternative Burning Practices

Treat slash and debris in manners other than burning, when feasible.

a. Retain slash in harvest units where fire risk is low and complimentary to other forest resource goals (e.g., Soil Health)

b. Explore cost-effective alternatives to burning, such as selling to small-diameter timber markets, using high-efficiency incinerators, and exploring methods of converting slash to other uses, such as biofuels or *biochar*.

Intent

The intent of this strategy is to minimize the public's health risks from prescribed burning by minimizing emissions and avoiding smoke intrusions.

3.2.11 Forest Resource 11: Aquatic and Riparian Resources



Juvenile coho salmon (*Oncorhynchus kisutch*). Aquatic and riparian ecosystems provide essential habitat and resources for many species, including food and drinking water for humans *(Homo sapiens)*.
Credit: Wild Salmon Center.

Resilient and properly functioning aquatic and riparian ecosystems provide many co-benefits that support GPV. In addition to environmental benefits, social activities such as fishing, swimming, and sightseeing depend on healthy, functioning waterways. For example, the commercial and recreational fishing industry, which is a significant component of Oregon's regional economy, relies on healthy rivers and streams. Properly functioning aquatic and riparian systems also protect drinking water quality and quantity by reducing erosion, regulating air and stream temperatures, and replenishing groundwater supplies. Aquatic resources include, but are not limited to, surface waters such as rivers, streams, lakes, springs, and *wetlands*, and subsurface waters contained in aquifers or subsoils. Riparian areas are transitional zones between terrestrial and aquatic environments where the

vegetation and microclimates are influenced by year-round, or seasonal water and soils that are saturated by flowing surface water for all or portions of the year.

Properly functioning riparian areas provide important ecosystem benefits and contribute to shading of surface waters that regulate water temperatures, bank stabilization, and enhanced water quality by filtering of water pollutants. Removal of riparian vegetation can increase water temperature and have cascading effects on water quality and quantity that negatively affect native aquatic species, recreation, and domestic drinking water. Natural disturbance in riparian areas such as high flow events, windstorms, debris flows, and other ecological processes create complex aquatic habitats by contributing woody debris, creating suitable fish spawning areas, and depositing organic materials that maintain properly functioning stream ecosystems.



Properly functioning riparian areas provide important ecosystem services, including creating complex habitats and regulating water quality.
Credit: Erik Moberly, ODF.

Climate change models predict a rise in air and stream temperatures resulting in disrupted precipitation and streamflow, creating significant challenges to native aquatic species and their habitats. Changes may not occur evenly in all habitats or through time, but the occurrence of less-suitable environmental conditions for native species may increase overall.

Maintaining and enhancing the functional components of aquatic ecosystems relies on strategic long-range planning and adaptive management approaches that focus on reducing the vulnerability of native aquatic species and their habitats to climate change. Aquatic enhancement projects support the persistence of native aquatic species by maintaining and restoring aquatic and riparian habitats to address impacts from climate change. Projects are prioritized to increase resistance to and resilience against the expected effects of climate change to achieve the greatest benefits to native aquatic species. In addition, ODF supports the implementation of aquatic enhancement projects through partnerships with local and regional stakeholders in the planning area. ODF's ability to directly influence aquatic conditions are tied to the portion of watershed it manages. Most of the subwatersheds with substantial ODF ownership are in the North Coast Districts as shown in Figure 3-10.

FIGURE 3-10
Watersheds Overlapping with North Coast Districts and the Planning Area. The median percentage of ODF-managed lands in northwest districts by HUC-12-sized [a] subwatersheds is 26% (range <1% to 100%).



[a] Hydrologic Unit Code (HUC)-12 subwatersheds are the smallest-sized watershed delineated by the U.S. Geological Survey.

Classification of Waters for Protection

The FPA Water Protection Rules classifies waters by matching the physical characteristics and beneficial uses of a water body to a set of appropriate protection measures, in compliance with state regulations intended to meet the Clean Water Act (OAR 629-635-0200; DEQ 2021, 2018). Stream classification is based on flow permanence, fish presence, permitted private and public domestic water use, and average annual flow. For purposes of protection, streams are classified into five beneficial categories including fish use, non-fish use, perennial, seasonal, and domestic water use. Streams are also further classified by a waterbodies size including small, medium, and large. For purposes of classification, a stream is considered to have domestic water use only if a water use permit has been issued by the Oregon Water Resources Department (OWRD).

Aquatic and Riparian Habitat Conditions

Aquatic and riparian ecosystems occur adjacent to one another and have been shaped over time by human and natural disturbances. Physical habitat assessments conducted by ODFW indicated a lack of large wood in streams and large conifers in riparian areas compared to ideal large wood requirements (ODFW 2019). This is a result of the planning area's history of large fires, past logging practices, and in-stream large wood removal practices, resulting in younger riparian forests and a lack of large wood in streams and many riparian areas. Larger riparian buffer protections and an active stream restoration program during recent decades have begun to improve degraded historic conditions on aquatic and riparian ecosystems in the planning area.



ODF implements stream enhancement projects to improve the health of aquatic ecosystems benefit native aquatic species.

Credit: ODF.

Threatened or Endangered Species and Species of Conservation Concern

Numerous native aquatic species occur either in the planning area or adjacent to state forest lands. These include distinct populations of coho salmon (*Oncorhynchus kisutch*), Chinook salmon (*Oncorhynchus tshawytscha*), steelhead trout (*Oncorhynchus mykiss*), and chum salmon (*Oncorhynchus keta*), all of which are listed as threatened under the federal Endangered Species Act (ESA) or are under

review for listing. Additionally, several native aquatic amphibians, such as torrent salamanders (*Rhyacotriton* spp.) and coastal tailed frog (*Ascaphus truei*) also occur in the planning area. Many of these are also under review for federal listing or are designated as sensitive species in the *Oregon Conservation Strategy* (ODFW 2016).

ODF's species of concern policy and associated species list was developed in 2010 and updated in 2025 and is used for identifying strategies for managing habitat for these species. The policy identifies aquatic and terrestrial species that need immediate and focused conservation efforts and informs the development of conservation tools. The species list was established from multiple sources including federal and state lists of threatened, endangered, and *candidate species*, as well as the *Oregon Conservation Strategy* (ODFW 2016) and ODFW's sensitive species list (ODFW 2021). The policy and associated list are updated as needed and captured in IPs as state and federal lists are updated, or as new data or science become available.

Aquatic Habitat Enhancement

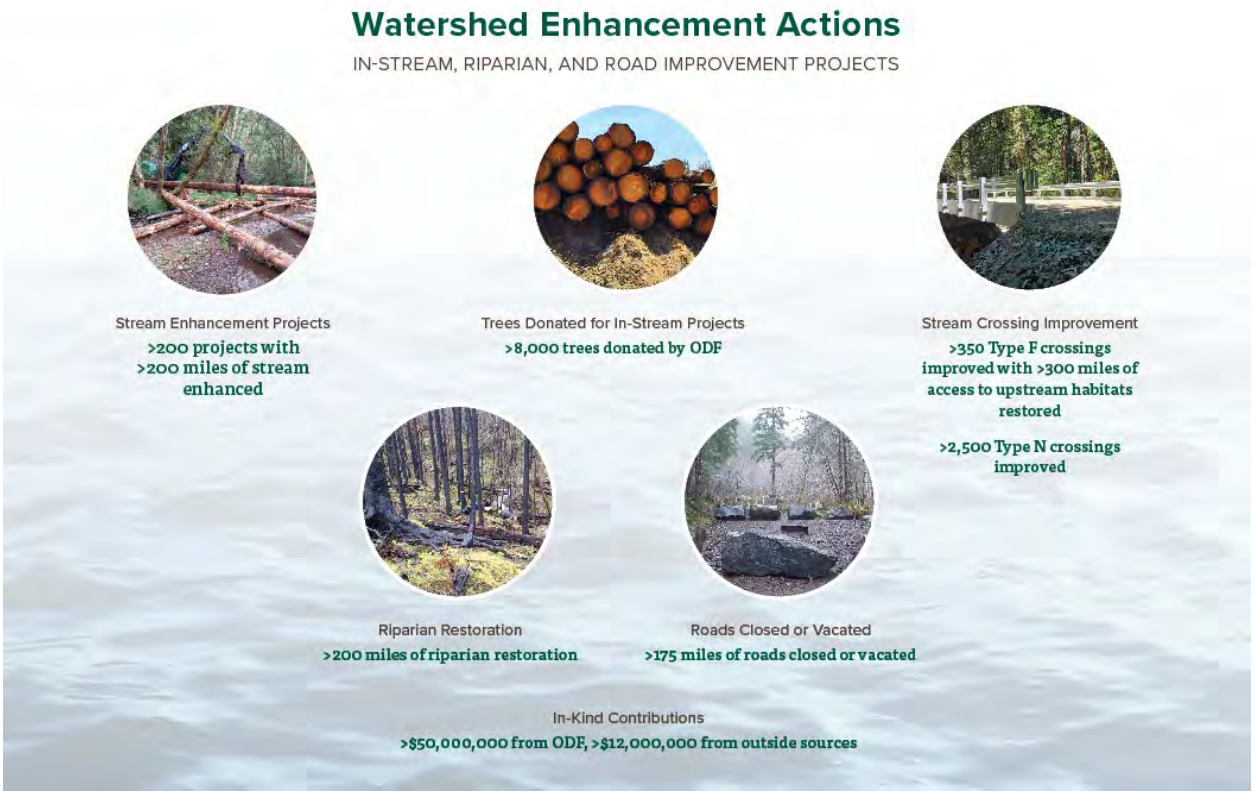


Culvert replacements like this one on Warner Creek (Astoria District) improve aquatic organism passage and restore habitat connectivity.
Credit: ODF.

Aquatic habitat enhancement projects focus on restoring ecosystem functions and accessibility for native aquatic species. The placement of appropriately sized wood in streams, addressing fish passage barriers, riparian planting, and road/trail improvement or vacating are examples of projects that restore properly functioning fish habitat, fish passage, and water quality conditions. ODF is committed to enhancing aquatic habitats and has implemented thousands of aquatic habitat enhancement projects over the past few decades.

The Oregon Watershed Enhancement Board (OWEB) maintains the most comprehensive online reporting system to track projects that improve habitat for native aquatic and terrestrial species. The most current information can be found on the Oregon Watershed Restoration Inventory website managed by OWEB. Activities on state forest lands that contribute to *watershed restoration projects* (as defined by OWEB) include projects that improve in-stream habitat, as well as and road-related projects that provide aquatic organism passage, disconnect road-drainage systems from streams, and minimize sediment delivery to streams (Figure 3-11). For more information on the condition of road-stream interactions, see Forest Resource 2: *Transportation*.

FIGURE 3-11 Watershed Enhancement Actions. In-stream, riparian, road improvement, and donations tracked by OWEB, 1995–2025.



Drinking Water

An important component of aquatic and riparian area management includes the protection of permitted private and public water supplies. Stream ecosystems are dynamic and can experience fluctuations in water quality and quantity due to natural and human factors. Forest management activities can affect the quality, supply, and storage of this key ecosystem service through various mechanisms. Currently, there are 125 permitted private or public domestic points of diversion on and adjacent to state forest lands in six districts with Tillamook and Astoria Districts having the most (OWRD 2023).

EPA provides federal oversight and approves water quality standards that are used to assess whether the quality of Oregon's rivers and lakes is adequate for drinking water and other beneficial uses such as recreation and fisheries. The Clean Water Act requires states to adopt water quality standards designating beneficial uses of the state's waters, including drinking water, and to set criteria designed to protect those uses. Surface and groundwater quality standards are regulated by DEQ.

Any forest operations on forestlands within the state must be conducted in full compliance with the rules and standards of the Environmental Quality Commission related to air and water pollution control (ORS 527.724). ODF is a Designated Management Agency for discharges of pollutants from *non-point sources* from forest operations, such as sediment from forest roads (OAR 340-042-0080(2)). The FPA contains rules that regulate harvest practices, road construction and maintenance, and the use of

chemicals and other petroleum products on state forest lands to minimize the likelihood of management activities adversely affecting water quality. Forest operations are also subject to other laws and rules administered by state agencies to protect the beneficial uses of waters of the state.

Goal: Functional Aquatic and Riparian Habitat Resources

Protect, maintain, and enhance aquatic and riparian systems that support native aquatic and riparian species.

Strategy: Aquatic and Riparian Habitat Improvements

c. Limit management activities in RCAs as described in the WOSF HCP.

d. Plan forest management activities that protect, maintain, and enhance riparian habitat function.

e. Design aquatic habitat enhancement projects that restore in-stream habitat processes, features, and complexity.

f. Manage stream temperatures by planting trees and riparian plants as needed to improve stream shading.

g. Plant species favored by American beaver (*Castor canadensis*) in appropriate locations to promote dam construction that improves aquatic condition and function.

h. Control the introduction and establishment of non-native plant species.

Intent

The intention of this strategy is to promote properly functioning and resilient in-stream and riparian habitats for native fish and wildlife species. Riparian management strategies, detailed in the WOSF HCP, ensure ecosystem processes and resilience are maintained to support increased stream shading, contributions of organic matter, sediment trapping and chemical filtration, and bank stabilization. Biological and ecosystem responses resulting from riparian management strategies, such as moderating and reducing fluctuations in water temperatures, large wood inputs, reducing sediment delivery, and resilience to climate-driven stressors and disturbance events effectively improves water quality and creates suitable habitats for native fish and wildlife species.

Stream enhancement projects increase the quality and quantity of important habitat elements such as pools, spawning gravels, and off-channel habitats creating more productive rearing, spawning, and refugia habitats for aquatic species. Biological and ecosystem responses resulting from stream enhancement projects, such as increased growth and survival rates, reproductive success, and resilience to climate-driven stressors and disturbance events, increase overall aquatic species production in the planning area.

Strategy: Aquatic Organism Passage

Maintain and improve stream-crossing structures like culverts and bridges, to support native aquatic species, improve hydrologic processes, and increase stream connectivity.

a. Follow a prioritization process for stream-crossing upgrades based on physical and biological elements.

b. Identify and evaluate stream-crossing upgrades and end-of-life replacements as part of the IP process and/or in collaboration with local and regional partners.

c. Design and maintain all new and replacement fish passage projects to meet or exceed state and federal fish passage criteria.

Intent

The intent of this strategy is to ensure stream-crossing structures provide unimpeded upstream and downstream passage to maintain habitat connectivity for native resident and *anadromous* fish and other aquatic organisms while providing sufficient transport of expected flows, woody debris, and other materials. Reconnecting fragmented aquatic habitats allows fish to access previously blocked spawning and rearing habitat, promotes biodiversity and genetic flow, supports nutrient cycling, and acts as refugia from warmer downstream water temperatures and high-water events.

Strategy: Headwater Processes

Maintain the hydrologic, *geomorphic*, and ecological processes of *headwater* systems that shape the physical and biological communities of aquatic and riparian ecosystems.

d. Support the long-term addition of woody debris, coarse and fine sediment, nutrients, and other organic materials to aquatic and riparian ecosystems over time.

e. Minimize direct impacts from forest management activities.

f. Acquire greater scientific understanding of rare and *endemic species* occurrences and habitat use in headwater streams.

Intent

The intent of this strategy is to protect the critical ecological functions of headwater systems. Headwater streams comprise most of the overall length of the stream networks in the planning area. Their critical ecological functions include trapping sediments and pollutants, which result in improved water quality and sustain the health of the entire watershed. Headwater streams also capture large amounts of organic matter and nutrients, which support healthy microbial communities and populations of macroinvertebrates, which, in turn, support production of fish and wildlife species downstream. In most cases, headwaters are fed by groundwater, which provides unique cold-water refugia for many aquatic species.

Strategy: Landslide Processes

Protect landslide-prone areas to reduce the risk of landslides triggered by management activities and ensure that landslides that do occur contain large wood, in order to reduce adverse impacts of landslides on water quality and aquatic habitat and promote development of downstream physical habitat and biological communities of aquatic and riparian ecosystems.

a. Protect slope features that are potential sources of debris flows using the steep slope strategies detailed in the WOSF HCP.

b. Facilitate landslide processes that contribute to the development of complex aquatic and riparian habitats.

Intent

The intent of this strategy is avoid triggering landslides and to promote the delivery of woody debris, course sediment, and other organic materials to aquatic systems that facilitate the creation of complex habitats for aquatic species and recycle fresh minerals and nutrients back into the ecosystem where landslides occur. The assessment of slope hazards and the potential for delivery uses the best science, professional expertise, and field observations to assess risk of failure.

Strategy: Wetlands and Lakes

Maintain the ecological function and value of wetlands and lakes.

a. Avoid and minimize disturbances to soil conditions, bank stability, and drainage patterns during management activities.

b. Apply appropriate live tree, vegetation, and snag and downed wood retention measures consistent with the FPA.

Intent

The intent of this strategy is to protect and maintain the unique hydrological and habitat functions of wetlands and lakes such as sediment trapping, nutrient absorption, flow regulation, and groundwater recharge. Intact and functional wetlands and lakes provide vast amounts of resources for resident and migratory fish and wildlife species and are home to various endemic flora and fauna. Minimizing disturbances to vegetation, live trees, snags, and downed wood, and preventing the drainage or alteration of wetlands and lakes provides invaluable benefits to aquatic and terrestrial species that rely upon the functionality of these unique habitat features on the landscape.

Strategy: Threatened and Endangered Species and Other Species of Conservation Concern

Protect, maintain, and enhance habitat structure and function for threatened and endangered species and other *species of conservation concern*.

a. Comply with state and federal ESA requirements, recovery plans, and implementation of WOSF HCP conservation actions.

b. Adopt management approaches that contribute to the survival and recovery of threatened and endangered species and other species of conservation concern.

c. Conduct species assessments during IP development and related revisions to determine which species warrant special consideration and whether existing conservation measures are adequate.

d. Collaborate across ownership boundaries to meet common aquatic conservation goals.

Intent

The intent of this strategy is to contribute to the recovery and long-term persistence of threatened, endangered, and other species of conservation concern by complying with state and federal ESA requirements. Implementation of this strategy and conservation actions identified in the WOSF HCP ensure that aquatic and riparian habitats are managed in a way that meets all legal requirements and that listed and imperiled species persist in the planning area. Determining whether conservation actions, as described in the WOSF HCP, are contributing to species recovery is addressed through effectiveness monitoring. Staying informed about potential future ESA candidate species or other species of conservation concern helps plan for future habitat conservation requirements.

Strategy: Partnerships

Promote and support partnerships with state and federal government agencies, Tribal Partners, academic institutions, non-governmental organizations, adjacent landowners, and the forest industry to plan and implement aquatic and riparian habitat improvement and effectiveness monitoring projects.

a. Collaborate with local stakeholders and regional partners to develop and implement watershed planning initiatives and strategic action plans.

b. Implement conservation actions that benefit native aquatic and riparian habitats.

Intent

The intent of this strategy is to protect and enhance aquatic and riparian habitats through voluntary and mutually beneficial partnerships. Collaborative processes create greater alignment of each stakeholder's vision and responsibilities associated with planning and implementing complex ecological outcomes than those achieved by a single organization. Partnerships with stakeholders holding different regulatory authorities allow for more efficient navigation of multi-layered regulatory landscapes, improve compliance efficiency, and accelerate project timelines. Leveraging financial resources, promoting sound science and data sharing, and providing professional expertise and guidance provide partnerships the ability to enhance larger areas rather than fragmented patches across the planning area.

Goal: Water Quality and Quantity

Protect, maintain, and enhance water quality and quantity for native fish and wildlife species and permitted private and public domestic drinking water sources.

Strategy: Water Quality Standards

Ensure state and federal water quality standards support the beneficial uses of waters of the state.

a. Limit forest management activities in RCAs as detailed in the WOSF HCP.

b. Improve road and trail system drainage to avoid transporting fine sediments and contaminants from roads and trails to streams.

c. Establish measurable goals to meet state and federal water quality standards.

d. Support research and monitoring to better understand the interactions between forest vegetation conditions and water quality.

Intent

The intent of this strategy is to minimize adverse impacts on water quality through conservation actions detailed in the WOSF HCP. Management standards that are designed to maintain and improve water quality through reducing sediment inputs to streams, reducing stream temperatures, and reducing erosion support healthier ecosystems that contribute to high-quality aquatic habitats for fish and other species. Degraded water quality can have detrimental effects on metabolism and growth, reproduction, and disease resistance often resulting in reduced production and survival of aquatic organisms.

Strategy: Total Maximum Daily Loads

Ensure Total Maximum Daily Load (TMDL) standards are met to maintain and restore water quality.

a. Control water pollution and improve impaired waterways by limiting management in RCAs as detailed in the WOSF HCP and applying BMPs for transportation system and forest management.

b. Monitor forest management activities that have the potential to contribute pollutants to waterways and implement mitigative measures where necessary.

Intent

The intent of this strategy is to reduce non-point source pollution from waters of the state through reducing pollutants identified in TMDL IPs that direct management strategies. Conservation actions identified in the WOSF HCP protect and improve impaired waters of the state by reducing solar radiation and sediment inputs into streams, support in-stream enhancement projects, and adhere to BMPs and other pollutant control measures associated with forest management activities.

Strategy: Drinking Water

Protect forest drinking water sources for permitted private and public domestic drinking water use.

a. Ensure permitted domestic drinking water sources are integrated into planning forest management activities.

b. Limit forest management activities in RCAs.

c. Hydrologically disconnect road and trail systems from streams.

d. Ensure chemical application on state forests complies with the FPA and EPA labeling to prevent harm to human health, non-target vegetation, and other forest resources.

e. Engage with local community members to communicate drinking water protection approaches and provide information regarding planned forest management activities.

Intent

The intent of this strategy is to minimize sediment and pollutants from entering streams that overlap with permitted private and public domestic drinking water sources. Reducing organic and inorganic pollutants from entering streams and adversely affecting water quality is be achieved through conservation actions detailed in the WOSF HCP and Division 620 of the FPA reducing the costs associated with treatment and public safety risks.

3.2.12 Forest Resource 12: Wildlife



Blacktail deer near Roseburg, Oregon. Many species of wildlife are found in Oregon's state forest lands.
Credit: ODF.

Like aquatic and riparian resources, management of wildlife habitat contributes to resilient forest ecosystems and GPV. Protecting and enhancing wildlife habitat not only sustains the wildlife communities themselves but also the social and economic benefits derived from them. Abundant wildlife enhances recreation, subsistence, and cultural activities such as bird-watching and hunting. These activities contribute to the local tourism economy and tax revenues from licensing fees.

Habitat Condition

The amount and quality of habitat for different species results from interactions between natural processes and management history. Environmental gradients, underlying geology, species distributions, and natural disturbance have always provided for variability in vegetation types across state forest lands in western Oregon. Extensive disturbances, such as wildfire and windstorms, also influence habitats. Disturbances over smaller areas, such as insect and disease outbreaks, create spatial heterogeneity within and among individual forest stands.

As described in Section 3.1.1, *Forest Condition*, many of the state forest lands in western Oregon have a legacy of repeated, large wildfires or had been extensively logged prior to acquisition by the State. Managing the current landscape for multiple values including timber production, forest health, aquatic systems, and wildlife habitat has ultimately produced a complex mosaic of stand types and ages and within-stand habitat features. The variety of stand types resulting from ODF's management of state forest lands provide well-dispersed diverse habitat across the landscape at regional scales, and broad *connectivity* to and between older forests on federal lands, as well as habitats where comparatively little other public forest lands exist (e.g., on the North Coast including the Tillamook and Clatsop State Forests). Young stands and associated early-seral characteristics are important for diverse game and

non-game wildlife species, including many species of state or federal concern (Swanson et al. 2014). Older stands foster and support a variety of late-seral associates, such as northern spotted owls (*Strix occidentalis caurina*), marbled murrelets (*Brachyramphus marmoratus*), and red tree voles (*Arborimus longicaudus*). Forests in mid-*seral stages* (e.g., 30–80 years old) provide habitat for most native forest species, including early and late-seral associates, and enhance broader landscape function (Swanson et al. 2014). Current ODF forest inventory data document the age class distribution of state forest lands and provide insight into the range of habitat types provided in them (Section 3.1.1, *Forest Condition*).

Additional variation in stand composition and structure due to stand development, management history, site productivity, topography, region, and numerous other factors contribute to diversity across spatial scales. For example, rare or unique habitats, such as talus slopes and caves, add to landscape diversity, the broader ecological function, and resilience. There is considerable variation both within and among districts in the relative proportions of tree age classes and associated habitat types on the landscape. Individual species use different stand types and habitat features at varying spatial scales. Thus, state forest lands provide for diverse habitat across the landscape. Recent harvest practices in young stands have promoted high-quality, complex early-seral habitat. This is important because complex early-seral habitats can support a diverse and unique array of wildlife species from insect pollinators and insect-eating songbirds, to hunting opportunities for forest raptors along *edges* adjacent to older forest stands.



Large-diameter snag previously used as a black bear den, as evidenced by the numerous claw and bite marks surrounding the cavity's entrance.
Credit: ODF.

When adequate numbers of snags are retained in harvested units, young forest habitats can provide denning and nesting cavities for sensitive species, such as fisher (*Pekania pennanti*), ringtail (*Bassariscus astutus*), purple martin (*Progne subis*), and western bluebird (*Sialia mexicana*).

Mid-seral stands are highly variable in habitat structure and function depending on natural disturbance, management history, and other factors, but all provide some degree of habitat to meet various needs of native wildlife species; they also provide connectivity between other habitat types and across the landscape. Mid-seral habitat can provide for dispersal and foraging habitat for resident raptors, as well as cover and overall landscape connectivity for movement of forest carnivores and herbivores. Terrestrial salamanders can also be supported in early and mid-seral landscapes where adequate downed wood is retained (Kluber et al. 2008).

Late-seral habitats provide for associated wildlife when arranged in a manner that maximizes interior forest, reduces edge effects, and minimizes the distances between *patches* to maintain connectivity. The recruitment and retention of large-diameter snags and downed wood is key for all seral stages and patch sizes across the landscape.

ODF forest inventory data indicate a lack of habitat on state forests to support old forest-adapted species, such as northern spotted owls and marbled murrelets. Approximately 87% of state forest lands are less than 80 years old. In general, the districts in the central and southern Oregon Coast Range and the Santiam State Forest have a greater proportion of total acreage in older stands. The Tillamook and Clatsop State Forests have comparatively little older forest, largely because of the extensive fires and logging that occurred prior to state acquisition. Despite large improvements in habitat diversity and quality since then, the state forests' habitat story remains one of restoration, rehabilitation, and enhancement in a young forest landscape (Figure 3-1).

General Wildlife Species

Western Oregon state forest lands currently have habitat suitable for most native species found in forests of the Oregon Coast Range and Western Cascades. Vertebrate species known or suspected to be found on, adjacent to, or in some cases, downstream of, state forest lands in both aquatic and terrestrial environments include approximately 270 species, including 63 mammals, 147 birds, 32 amphibians and reptiles, and 28 fishes. This excludes the many species of marine fishes, birds, and mammals that may be found in the estuaries adjacent to state forest lands, unless they use state forest lands for some portion of their life.

Wide-ranging mammals such as deer (*Cervida*e), elk (*Cervus canadensis roosevelti*), American black bear (*Ursus americanus*), cougar (*Puma concolor*), and bobcat (*Lynx rufus*) use a variety of habitats in and near state forest lands to meet their needs. Forest stands are host to most native weasel species (*Mustelidae*), skunks (*Mephitidae*), squirrels (*Sciuridae*), voles (*Microtus*), mice (*Mus*), and other forest-floor small mammals. Native resident and migratory songbirds and raptors, including rare and sensitive species, are present on state forest lands. Upland game birds, such as grouse (*Tetraoninae*), quail (*Odontophoridae*), and Rio Grande wild turkeys (*Meleagris gallopavo intermedia*) are also present. Resident and migratory waterfowl and other aquatic birds depend on riparian, aquatic, and wetland habitats within state forest lands. Mammals such as river otters (*Lontra canadensis*) and American beavers make almost exclusive use of these habitats. Many amphibians are associated with aquatic habitats, such as tailed frog (*Ascaphus*) and torrent salamanders. Other amphibians use terrestrial habitats and are strongly tied to the abundance and quality of downed wood, such as plethodontid salamanders (Oregon slender salamander [*Batrachoseps wright*] and clouded salamander [*Aneides ferreus*]). Many birds, reptiles, and some mammals use rocky habitats (including caves or rock outcrops) for a variety of



Aquatic Habitat Modified by American Beaver Damming Activity Benefits a Multitude of Aquatic and Terrestrial Wildlife Species.
Credit: ODF.

their needs. Bats (*Chiroptera*) make use of many structures throughout the forest for roosting and hibernation and forage over nearby aquatic habitats.

Threats to wildlife on state forest lands include poaching, illegal dumping, habitat destruction and modification from management activities or public misuse, and extreme natural disturbances. Many of these issues can be addressed via forest planning and management in collaboration with other agencies and stakeholders. The long-term effects of climate change on wildlife are more difficult to assess and address by management. Changes in temperature, precipitation, and other aspects of climate are will likely to alter the quantity and quality of many species' habitats.

The overarching goal of ODF's strategies for wildlife is to protect, maintain, and enhance habitat for native wildlife species. Restoration and enhancement needs exist where fire and subsequent salvage logging or reforestation have reduced the extent or quality of habitat for some species (e.g., in the Tillamook Burn). Vegetation complexity and old forest features, in particular, take many decades to develop through both passive and active management. While moving the landscape toward more diverse habitat conditions, some individual species of conservation concern, and their habitats may require special consideration.

Species of Conservation Concern

Species of conservation concern are wildlife species whose long-term persistence is at risk due to declining populations, rarity, or other factors (e.g., having a limited range). There are many species of conservation concern that are not protected by federal or state ESAs including birds, bats, and aquatic amphibians. Habitat needs vary for each species; some of these species are associated with late-seral habitats, others (e.g., flycatchers and warblers) are associated more with complex early-seral habitats, and some (e.g., bats) are associated with more specific habitat elements like suitable roost structures or hibernacula. Some species, such as coastal marten and Pacific fisher, appear to be missing from forests in the region although habitat for the species seems to be present. State and federal managers and the public recognize the importance of conserving these species to aid in maintaining ecological integrity and biodiversity.

Numerous public and private entities designate wildlife species of conservation concern, from local to global scales. The U.S. Fish and Wildlife Service, U.S. Forest Service, and U.S. Bureau of Land Management publish relevant lists for the Oregon Coast Range and Cascade Mountains Districts. At the state level, ODFW and the Oregon Biodiversity Information Center (ORBIC) (formerly Oregon Natural Heritage Program) publish statewide and county lists. ODF's species of conservation concern list was developed with federal and state lists of threatened, endangered, and candidate species, as well as species not protected by federal or state ESAs but included in the *Oregon Conservation Strategy* (ODFW 2016) and ODFW's sensitive species list (ODFW 2021). These documents identify species that need immediate and focused conservation efforts. The list is a component of ODF's species of conservation concern operational policies and is updated semi-regularly and is captured in IPs as state and federal lists are updated or new data or scientific understanding become available.

There are many species of conservation concern that are not protected by federal or state ESAs including birds, bats, and aquatic amphibians. Habitat needs vary for each species; some of these species are associated with late-seral habitats, others (e.g., flycatchers and warblers) are associated more with complex early-seral habitats, and some (e.g., bats) are associated with more specific habitat elements like suitable roost structures or hibernacula. Species of conservation concern identified as part of this FMP's associated policies are currently present or have the potential to be present on state forest lands.

Threatened or Endangered Species

Forest management activities must comply with all federal and state laws, including those related to the protection and conservation of wildlife populations and their habitat (e.g., state and federal ESAs, federal Bald and Golden Eagle Protection Act, federal Migratory Bird Treaty Act, FPA). Although many laws apply to the management of state forest lands, legal requirements for protection of threatened or endangered species can have significant effects on planning and operations. The WOSF HCP describes the status and occurrence of three wildlife species listed under state and federal endangered species protection acts, and how management operations are conducted to protect them. These species include northern spotted owl, marbled murrelet, and coastal marten. Threatened or endangered fish species are discussed under *Forest Resource 11: Aquatic and Riparian Resources*.

ODF has an extensive survey history for ESA-*listed species* (i.e., northern spotted owls and marbled murrelets) and continues to monitor activity at known sites on an annual basis. ODF, in various capacities over time, has supported research related to habitat relationships of numerous species (e.g., deer, elk, owls, murrelets, early-seral birds, tree voles) and wildlife responses to forest management practices. (songbirds, small mammals, amphibians). Some species may be present that have not been detected or documented yet (e.g., coastal marten), while other listed species are not currently known to be present but could become re-established as a result of habitat improvements, regional population recovery, or potential re-introductions (e.g., Oregon spotted frog).



Coastal marten captured with a wildlife camera on the southern Oregon coastline.
Credit: ODF.

Goal: Wildlife

Maintain, protect, and enhance functional and resilient landscapes that provide the variety and quality of habitat types and features necessary for long-term persistence of all native wildlife species.

Strategy: Habitat Diversity

Manage for diverse habitats across the landscape and over time.

a. Manage for a diverse array of seral stages.

b. Protect, maintain, and enhance habitats that account for the range of forest types topography (slopes, aspects, elevations), and habitat features at the district level.

c. Identify and protect rare and unique habitats, particularly those that are fragile, sensitive, or potentially vulnerable to climate change.

Intent

The intent of this strategy is to conserve and enhance diversity as it promotes resilience and ecosystem function, which provides for many ecosystem services (e.g., pest control, pollination) and co-benefits (hunting, fishing, birding, existence value). Managing for diversity helps ensure the full suite of habitats for native wildlife persist on the landscape in spite of short-term disturbances or chronic perturbations.

HCAs provide the majority of late-seral stands and the total amount of late-seral forest increases therein over time. Early- and mid-seral stands exist both inside and outside of HCAs and contribute to the diversity of habitat types on the landscape. Treatment of 30,000 acres of SNC and hardwood-dominant stands over the first 30 years of the WOSF HCP permit provides a complex early-seral component in HCAs that is positioned to mature into diverse mid-seral habitat by the end of the WOSF HCP permit term. RCAs and leave-tree strategies provide for some older habitat components outside of HCAs. Operationally limited areas contribute to diversity and older age classes outside of HCAs. HCAs are designed to account for the range of forest types and topography and most habitat features at the district level. Rare, unique, and otherwise vulnerable habitat types and features outside of HCAs can be addressed with focused strategies (e.g., bat hibernacula) and other policies (e.g., wetlands).

This strategy is also intended to reduce threats to biodiversity by ensuring rare and unique habitats, which often occur in patchy and isolated locations on the landscape, are protected and continue to support the life history needs of vulnerable species. Protecting and maintaining the functionality of these habitats supports the delivery of ecosystem services across state forest lands by providing important resources for highly specialized species of conservation concern.

Strategy: Habitat Complexity

Manage for complex habitats of all ages and types.

a. Promote structural complexity, compositional diversity, and spatial heterogeneity at stand and landscape scales.

b. Adapt standards to regional and stand-level goals (e.g., habitat enhancement, forest restoration, fuels and fire risk, timber production, harvest age), and over time as stand and landscape conditions change.

c. Protect, maintain, and enhance legacy structures, including *old growth* trees, retained green trees, snags, and downed wood. Allow exceptions for hazard tree removal for public safety.

d. Promote vertical canopy layering where habitat restoration or enhancement are primary concerns.

Intent

The intent of this strategy is to conserve and manage for habitat complexity as it enhances function of many ecosystem processes and services. Complexity is a key feature of high-quality habitat at all spatial scales for many species of conservation concern and contributes to forest and habitat resiliency through time.

Stands in HCAs are the foundation for this strategy and provide the majority of complex stands of mid- to late-seral forest. Management in HCAs (variable retention harvests and regeneration harvest of SNC and alder) enhances complexity over time and provides for a complex early-seral component. Outside of HCAs, leave-tree strategies, RCAs, and operationally limited areas contribute to stand and landscape complexity. Multi-species plantings inside and outside of HCAs further promote complexity and resilience. Silvicultural prescriptions vary at the stand-level based on past management, current conditions, and desired stand goals (e.g., production-emphasis versus habitat emphasis, fuels reduction management needs). These also vary by district based on forest types, WOSF HCP covered species distribution, ownership patterns, and forest health concerns. Natural disturbances across the planning area introduce complexity and heterogeneity at stand, watershed, and landscape scales.

Strategy: Functional Landscapes

Manage for functional landscapes for native wildlife.

a. Create a variety of patch types, sizes, and arrangements over time.

b. Provide for adequate interior forest habitats.

c. Maintain connectivity between habitats and broad landscape permeability, to allow for dispersal and migration of diverse wildlife species including species of conservation concern.

d. Foster and maintain redundancy at various ecological scales (e.g., species, stand types).

e. Incorporate WOSF HCP conservation actions inside and outside of HCAs.

Intent

The intent of this strategy is to have functional patches and resource arrangements with redundancy to help ensure resilient, functioning ecosystems that persist to provide GPV as environmental conditions continue to change.

HCAs are designed to provide for functional landscapes for the covered species. As habitat develops therein, it promotes a variety of patch types, sizes, and arrangement, adequate interior forest habitat, and broadscale connectivity. Outside of HCAs, leave-tree strategies, RCAs, and inoperable areas further enhance landscape function, habitat distribution, and connectivity. Northern spotted owl dispersal habitat connectivity requirements further enhance the function of the areas outside of HCAs. Age class structure outside of HCAs contributes to the variety of patch types on the landscape. Redundancy occurs both inside and outside of HCAs and contributes to forest resilience.



Female northern spotted owl monitored at a known active site located inside an HCA. Maintaining dispersal habitat outside HCAs facilitates spotted owl movement across the landscape, supporting survival, reproduction, and successful colonization.
Credit: Turnstone Environmental Consultants Inc.

Strategy: Threatened and Endangered Wildlife Species and Other Species of Conservation Concern

Protect, maintain, and enhance habitat for threatened and endangered species and other species of conservation concern.

a. Comply with state and federal ESA requirements and adopt management approaches that contribute to the survival and recovery of threatened and endangered species and other species of conservation concern.

b. Implement the WOSF HCP and associated conservation actions targeted to benefit the species covered under the Incidental Take Permit.

c. Conduct species assessments during IP development and related revisions to determine which species warrant special consideration and whether existing conservation measures are adequate.

d. Collaborate across ownership boundaries to meet common wildlife conservation goals.

e. Support habitats beneficial to pollinator species (including invertebrates) by integrating alternative management practices, where appropriate.

Intent



Fine filters include creating suitable nesting structures like this snag patch in an open, upland meadow restoration site to aid long-term occupancy of purple martin. Artificial nest boxes were also installed to provide immediate nesting opportunities until woodpeckers excavate natural nesting cavities in the decaying wood.
Credit: ODF.

The intent of this strategy is to comply with state and federal ESA requirements and the HCP, while also managing for other species of conservation concern. Implementation of this strategy includes management approaches that contribute to the persistence of threatened and endangered wildlife species. Where appropriate, these approaches can also be applied to species of conservation concern not formally listed under state or federal ESA. Implementation ensures that wildlife habitats are managed in a way that meets all legal requirements and that listed and imperiled species persist on the landscape using the conservation actions specified in the HCP. While the HCP captures currently listed and some candidate species, ODF will continue to remain informed about any potential future candidate species and species listings.

Applying the above considerations to management approaches provides a *coarse filter–fine filter* approach to addressing species of conservation concern, while following the directions within the HCP ensures ESA compliance. Other species of conservation concern are determined through regular policy review with assessment of need for additional fine filter strategies beyond FMP and HCP commitments. This strategy ensures ODF is managing habitat for all native species as required under the GPV rule, while also working to prevent future listings.

HCP commitments provide the majority of conservation measures to achieve this goal. The HCAs, leave-tree standards, and northern spotted owl dispersal habitat outside of HCAs and RCAs are the primary coarse filters that address the needs of a variety of species of conservation concern at the landscape level. Additional fine filters are added during IP development and implementation to address species of conservation concern that have habitat requirements inadequately addressed by coarse filters. Fine filters are species- and site-specific, and generally of minor/minimal impact or complementary to operations. Examples include 1) protecting rock outcrops and caves of known use by Townsend's big-eared bats; 2) creating/retaining smaller-diameter, short snags on ridgetops in areas of known purple martin occupancy; and 3) implementing seasonal restrictions near known active peregrine falcon nests.

ODF considers pollinator habitat as part of wildlife habitat restoration efforts for species of conservation concern. Pollination is an important ecosystem service that benefits forest health and resiliency. Pollinators have more specialized habitat needs that can be pursued alongside other management

objectives with small shifts in practices or in areas unsuitable for timber production (Buhl et al 2021). In general, pollinator abundance and diversity may benefit from more open forest canopies and from native plant communities (Hanula et al. 2016). Focus for these practices could be within HCAs and stewardship classes with a subclass designation of cultural resources, plants, research/monitoring, unique threatened or endangered plants, or wildlife subclasses. Where practices are implemented, pollinators would provide ecosystem services to adjacent stewardship areas and nearby agricultural lands (Rivers 2018).

3.2.13 Forest Resource 13: Sensitive Plants

State forest lands have hundreds of species of plants. Native plants fill many roles in the forest ecosystem. They provide organic matter to forest soils, influence temperature and moisture conditions of the surrounding area, support native pollinators, contribute to biodiversity, and are used as cover and forage by many animals. In addition to their ecological functions, some plant species are harvested commercially or for cultural uses. Commercial and cultural uses of understory plants are discussed in the *Special Forest Products* and *Cultural and Historic Resources* sections, respectively.



Coast Range fawn lily (*Erythronium elegans*). Sensitive and rare plants provide environmental and social benefits and are protected by the Oregon Department of Agriculture Native Plant Conservation Program.

Credit: ODF.

This section focuses on Oregon's ESA-listed threatened and endangered plant species administratively protected by the ODA Native Plant Conservation Program (ORS 564.105; OAR 603-073), and candidate plant species considered for ESA listing (collectively, *sensitive plants*).

Threats to sensitive plants on state forest lands include habitat loss and fragmentation from management activities, public misuse (i.e., illegal collection), and competition with invasive species. Many of these issues can be addressed via forest planning and management in collaboration with other agencies and stakeholders. The long-term effects of climate change on sensitive plants are more difficult to assess and address by management. Shifts in temperature, precipitation, and other aspects of climate that reduce water availability and disrupt growing seasons likely alter the habitats that support sensitive plants.

ORBIC provides a list of sensitive plants that may be found on state forest lands, as well as records of known locations. Many of these species occur in non-forested areas, such as open, high-elevation rocky areas; open meadows; bluffs; and coastal areas. Examples of currently known sensitive plant species on state forest lands include Coast Range fawn lily (*Erythronium elegans*), Nelson's checkermallow (*Sidalcea nelsoniana*), Saddle Mountain bittercress (*Cardamine pattersonii*), cold-water corydalis (*Corydalis casea*na ssp. *Aquae-gelida*e), Chambers' paintbrush (*Castilleja chambersii*), and frigid

shootingstar (*Dodecatheon austrofrigidum*) (ORBIC 2023). ODF is not aware of any other sensitive plant species that are likely to occur on state forest lands.

ODF protects listed plant species in accordance with state and federal ESA requirements. ODF has identified ESA-listed species that occur, or are suspected to occur, on state forest lands and continues to update these lists in consultation with the ODA's Native Plant Conservation Program. During operations planning, the districts determine if ESA-listed species occur or are likely to occur on lands where management activities are planned. If so, the district then determines whether the proposed management activities are consistent with the conservation program for the ESA-listed species and whether specific protection or mitigation measures are needed.

Goal: Sensitive Plants

Ensure the long-term persistence of sensitive plant species.

Strategy: Sensitive Plants

Identify, protect, maintain, and enhance sensitive plant species populations.

a. During operations planning, determine if ESA-listed plant species occur or are likely to occur on lands where management activities are planned. Implement protection measures as needed.

b. Coordinate with ODA and other agencies as needed to identify sensitive plant occurrences during planning.

c. Coordinate with the Native Plant Conservation Program to remain informed concerning future candidate species and species listings.

Intent

The intent of the strategy is to comply with state and federal ESA requirements, while also managing for other sensitive species. Implementation of this strategy includes management approaches that contribute to the persistence of threatened and endangered plant species. Where appropriate, these approaches can also be applied to the conservation of sensitive species not formally listed under state or federal ESA. Conserving sensitive plant species where they occur on state forest lands promotes genetic diversity that is crucial for maintaining plant survival and adaptability to various environmental conditions. Supporting diverse sensitive plant populations is essential for maintaining the services and resilience of ecosystems.

This chapter described the forest resource conditions and laid out the forest resource management goals and strategies at a high level. Chapter 4, *Guidelines*, provides guidelines on how to implement the goals and strategies.

CHAPTER 4

Guidelines

Implementation of the *Western Oregon State Forests Management Plan* (FMP) is grounded in the themes established in Chapter 1, *Introduction*, including *greatest permanent value*[1] (GPV), consideration of and *engagement* with all Oregonians, climate *resilience*, *sustainability*, and *adaptive management*. The management approach in Chapter 2, *Management Approach*, together with the *goals* and *strategies* outlined in Chapter 3, *Forest Resources, Goals, and Strategies*, provide strategic direction for carrying out this work. This chapter provides actionable guidance that defines the processes, supporting plans, and engagement mechanisms necessary for asset management, effective implementation, and adaptive management. This guidance will help to ensure that management actions are aligned with the plan's intent, informed by ongoing *monitoring* and evaluation, and responsive to changing conditions.

4.1 Asset Management Guidelines

Assets, as they are discussed in this section, are the tangible resources and infrastructure (e.g., parcels of land, *forest products* and forest roads, trails, and campground facilities) on state forest lands. Maintaining or enhancing the value of the assets described in this plan is fundamental to long-term *sustainability* of benefits described in the GPV rule (Oregon Administrative Rules [OAR] 629-035-0020) such as forest products that generate *revenue, special forest products*, *aquatic* and wildlife *habitat*, and recreational uses. ODF developed asset management *guidelines* for this FMP in alignment with the Oregon Revised Statutes (ORS), OAR, and Oregon Department of Forestry (ODF) *policy*.

Implementation of the FMP consistent with the following asset management guidelines ensures that the asset value of the forest is maintained or enhanced.

- Conserve forest lands by maintaining the state forest land base.

[1] Terms italicized in this document are defined in the Glossary. Defined terms are italicized at the first instance in each chapter.

- Maintain a land exchange and acquisition program to consolidate state forest lands for management efficiencies, economic values, or enhanced *stewardship*.
- Implement marketing strategies that increase the value of forest products.
- Prioritize and invest in *stand management* activities that increase the quality and quantity of timber and enhance other *ecosystem services*.
- Maintain, develop, and protect investments in infrastructure such as roads, bridges, and facilities, while recognizing that in some cases investments may need to be moved, removed, or decommissioned.
- Maintain existing assets that support recreation, education, and interpretation activities, while recognizing that in some cases investments may need to be moved, removed, or decommissioned.
- Maintain investments in forest inventory, *geographic information system* (GIS) technologies, and timber harvest-tracking technologies that support planning and implementation processes, contribute to *adaptive management*, and improve overall efficiency and transparency.
- Prioritize and undertake investments in research and monitoring consistent with Section 4.3, *Adaptive Management Guidelines*.
- Maintain budgeting and financial management system and practices that track *revenues* and expenses and aids in financial decision-making, and provide transparency to the public.
- Implement and maintain accountability strategies and systems to ensure anticipated financial and environmental benefits from the forest are tracked and reported accurately.

4.1.1 Investment Priorities

Funding levels for plan implementation vary with cyclical economic trends. FMP implementation is primarily funded through timber harvest revenues. There may be periods where revenues limit funding. Annual budget instructions for developing fiscal budgets reflect the *Forest Development Fund* (FDF) balance and the projected FDF balance. The highest level of implementation and investment occurs when the FDF balance exceeds 12 months of operating expenses, and the balance is forecast to be relatively steady or increasing. The lowest level occurs when the FDF balance has less than 6 months of operating expenses, and the balance is forecast to decrease (Table 4-1). To avoid service level decreases, ODF may seek external federal, state, and non-governmental organization funding sources, such as grants or legislative funding through policy option packages or legislative concepts. External opportunities will be considered at any investment level to diversify funding streams and reduce risk associated with poor timber markets. Table 4-1 shows the forest management investment levels based on the revenue forecast and FDF balance.

TABLE 4-1
Forest Management Investment-Level Guidance Based on Revenue Forecast and FDF Balance

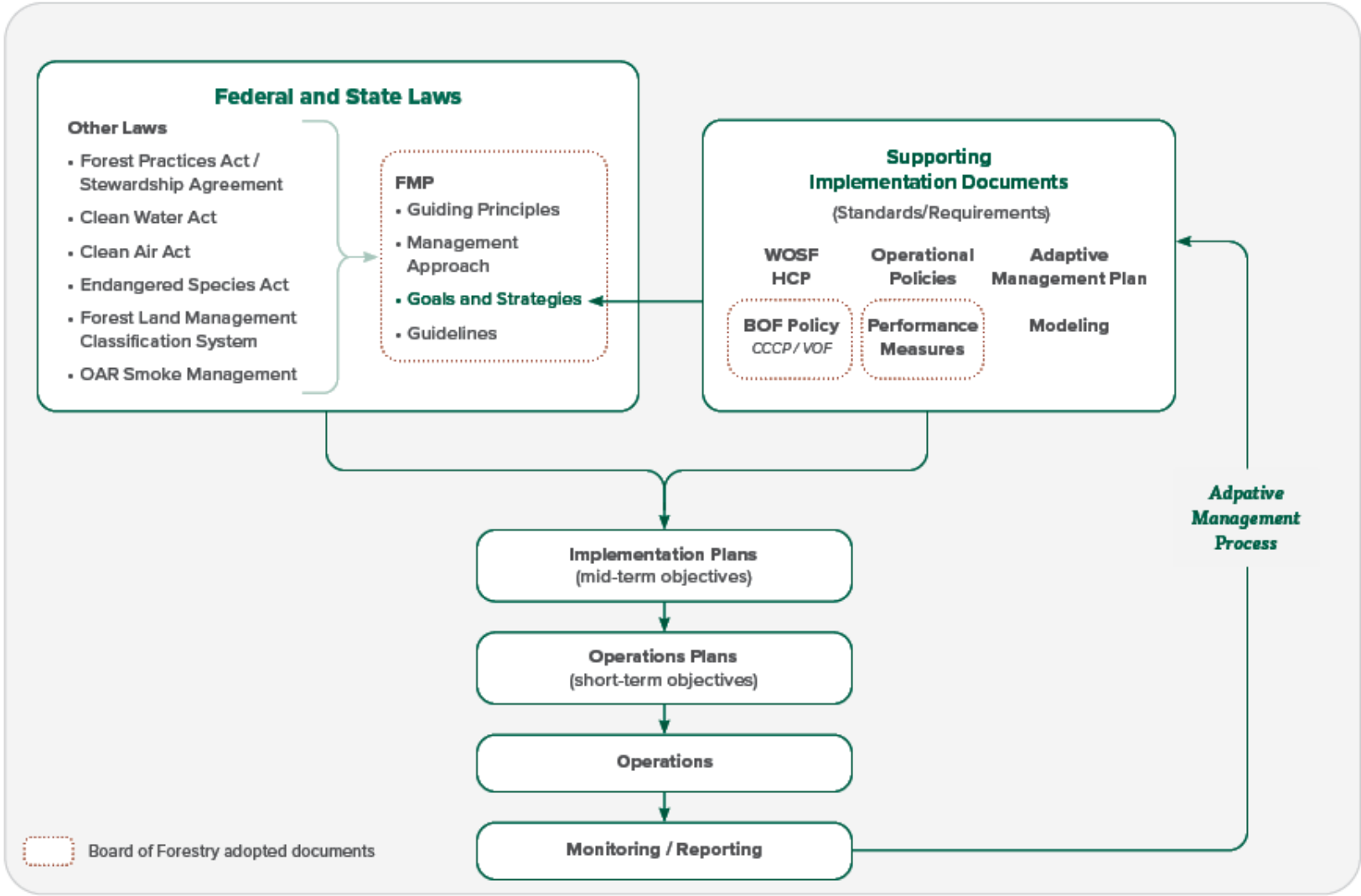
	Increasing 3-Year Revenue Forecast	**Decreasing 3-Year Revenue Forecast**
FDF Contains Greater than 12 Months of Operating Expenses	Level 1: Maintain or expand existing investments and fund new strategic investments.	Level 2: Maintain or expand existing investments and explore additional strategic investments.
FDF Contains 6 to 12 Months of Operating Expenses	Level 2: Maintain or expand existing investments and explore additional strategic investments.	Level 3: Invest in deferred maintenance and maintain select strategic investments.
FDF Contains Less than 6 Months of Operating Expenses	Level 3: Invest in deferred maintenance and maintain select strategic investments.	Level 4: Maintain core business and meet legal obligations; no new investments.

Note: Level 1 is the highest level of investment, while level 4 is the lowest.

4.2 Implementation Guidelines

FMP implementation is carried out through *Implementation Plans* (IPs) that set mid-term (typically 10-year) *objectives*, which are then achieved through on-the-ground management activities described in *Operations Plans* (OPs). Monitoring and reporting are incorporated into all planning levels to inform future planning cycles and practice adaptive management. The *standards,* requirements, and operational direction underpinning these plans are detailed in applicable laws and regulations, the *Western Oregon State Forests Habitat Conservation Plan* (WOSF HCP), *Oregon Board of Forestry* (the BOF) policies (e.g., *Vision for Oregon's Forests* (VOF), *Climate Change and Carbon Plan* [CCCP]), *performance measures*, *operational policies*, the Forest Land Management Classification System (FLMCS), and other guidance. These tiered planning levels ensure consistent, compliant, and goal-driven implementation of the FMP across the landscape. Figure 4-1 shows the connections among these plans and the overall implementation process.

FIGURE 4-1
Links among the FMP, Major Example Laws, Other Plans, and Policy Guidance. This figure provides additional detail of the laws and supporting documents that inform the FMP and implementation.



Note: The other laws listed in this figure are an example subset of all applicable federal and state laws.

The following planning elements depicted in Figure 4-1 are key to development of the IPs and OPs, and inform monitoring, reporting, and the adaptive management process.

- ***Western Oregon State Forests Habitat Conservation Plan*.** The WOSF HCP enables ODF to comply with the federal *Endangered Species Act* for certain covered *species* while conducting land management activities on state forest lands west of the Cascade crest. The WOSF HCP biological goals and objectives will be implemented through IPs and OPs. The conservation actions within the WOSF HCP provide requirements and standards for a wide range of forest management activities such as retention of *biological legacies* (green trees, *snags,* and *downed wood*); *stream* buffers; steep slope protections; habitat *restoratio*n; and aquatic passage. These actions also promote forest diversity, complexity, and *connectivity* across the landscape, reinforcing ecological resilience, maintaining *ecosystem functions*, and contributing to the sustainable delivery of ecosystem services and GPV.
- **Operational policies.** The FMP establishes overall goals and strategies; however, the specific standards for resource protection are found in other documents that support implementation (Figure 4-1). Operational policies guide decisions within the range of options by outlining specific procedures and *best management practices* (BMPs) that allow for management flexibility, while ensuring sound management and resource protection. Operational policies include quantitative standards (e.g., *riparian* buffer widths, upland leave tree requirements) that align with laws and regulations, and FMP and WOSF HCP goals and strategies. These policies and standards enable forest managers to develop IPs and OPs and to evaluate *trade-offs* when a range of management options will achieve FMP goals. Operational policies are developed within the State Forests Division (Division) under the direction of the *State Forests Division Chief*.
- **Board of Forestry policies.** The BOF is mandated to supervise all matters of forest policy and management under state jurisdiction (ORS 526.016). In carrying out this duty, the BOF may establish policies to guide ODF decisions. These policies may have broader applicability and apply to multiple operational divisions (e.g., the VOF and CCCP) or be limited to one division.
- **Performance measures.** *Performance measures* are selected by the BOF, based on *metrics* that the BOF considers key to ensuring progress toward FMP resource management goals, maintaining accountability for management commitments, supporting the adaptive management process, and aligning with IP and WOSF HCP reporting timelines (Section 4.3, *Adaptive Management Guidelines*).
- **Forest Land Management Classification System.** As described in OAR 629-035-0050, the FLMCS is a method of mapping and describing the *management emphasis* of specific areas of state forest lands. The management emphasis provides context for management activities based on *forest resources* that are present in specific areas. It also identifies when a particular forest resource may need a more focused approach in its management, or possibly an exclusive priority as described by this FMP, the WOSF HCP, other laws or commitments, and policy choices. This information is used in the development of IPs and OPs.
- **Modeling.** Modeling is used as a decision-support tool to ensure sustainable harvest over time, evaluate management trade-offs, inform targets for forest resource goals at various spatial and temporal scales, and quantify the costs and outputs associated with management scenarios. Modeling aids forest managers in evaluating potential effects and making decisions about allocation of resources across the landscape.
- **Adaptive Management Plan.** The *Adaptive Management Plan* (AMP) describes the monitoring and reporting process that will ensure FMP resource goals are met during implementation of the FMP.

The AMP grounds monitoring and reporting within an adaptive management framework to inform management decisions and align with IP and WOSF HCP reporting timelines (Section 4.3, *Adaptive Management Guidelines*).

Most of these documents are publicly available on the ODF website.

4.2.1 Implementation Plans

IPs are mid-term (typically 10-year) plans that outline how the FMP strategies will be implemented at a *district* or multi-district scale. These plans integrate the strategies for forest resource goals described in Chapter 3, *Forest Resources, Goals, and Strategies*, and provide additional detail on objectives, management approaches, and activities that will be used. IPs integrate district operations and are used to develop annual OPs and budgets, and to assess progress toward meeting the goals identified in the FMP. Based on monitoring and reporting, IPs will be evaluated and revised to reflect key recommendations from the adaptive management process. IPs will be revised for the next implementation cycle, but may also be revised during a current IP cycle, depending on monitoring *outcomes* or unforeseen circumstances (e.g., large-scale *disturbance* events).

IPs will include the following information.

- Current condition of forest resources.
- Activity levels expressed as objectives to be achieved during the implementation period such as an average annual harvest volume of timber offered for sale.
- Some anticipated management activities are more difficult to quantify over the course of the IP, such as restoration thinning or cultural burning to improve habitat, because they are dependent on external partnerships or reliant on funding that is less certain.
- A description of specific monitoring activities over the course of the IP.

4.2.2 Operations Plans

OPs describe the specific projects and activities over the short term (e.g., 1 to 2 years) that align with fiscal budgets and are consistent with IP objectives. Planned activities and projects may include timber harvest operations; road construction, improvement, and vacating; *reforestation* and *young stand management*; aquatic habitat restoration; development or maintenance of recreational trails or facilities; or monitoring projects. OPs prioritize activities and investments in the forests based on investment levels as described in Section 4.1, *Asset Management Guidelines*.

4.2.3 Implementation Responsibilities

ODF implements the FMP and WOSF HCP through IPs and OPs. The State Forests Division Chief, *Area Directors, and District Foresters* review IPs, which are approved and signed by the *State Forester*. District Foresters implement the FMP and WOSF HCP within their districts through the approval and oversight of OPs. Table 4-2 describes the tasks and responsibilities for IP and OP approval and implementation.

TABLE 4-2
Roles and Responsibilities of Decision-Makers in the Implementation, Operations, and Revision Approval Process

Task	Responsible Party
Approves FMP and performance measures and requests and approve FMP/performance measure revisions	Board of Forestry
Approves IPs and major revisions to FLMCS	State Forester
Approves Operational Policies specific to the State Forests Division	State Forests Division Chief
Approves minor revisions to FLMCS	Area Director
Approves and implements OPs	District Forester

4.3 Adaptive Management Guidelines

Adaptive management is "the process of implementing plans in a scientifically based, systematically structured approach that tests and monitors assumptions and predictions in management plans and uses the resulting information to improve the plans or management practices used to implement them (OAR 629-035-0000(2))."

Meeting the goals of the FMP in a changing environment requires "learning by doing," in which ODF assesses and updates the strategies, operational policies, and BMPs through adaptive management. The adaptive management approach directs the monitoring process to document legal and policy compliance, determines whether strategies are meeting FMP goals, and tests whether the assumptions used in the development of the FMP strategies remain valid under a changing climate. The process begins with IPs, which quantify specific, measurable resource objectives based on the FMP goals and strategies, that are achievable within the next 10 years. Monitoring assesses if IP targets are being met and if plans or operational policies could be improved to better meet the IP targets and achieve the goals in the FMP. The resulting information is used by the appropriate decision-makers to revise management plans (Section 4.4, *Decision Authority and Revision Guidelines*).

4.3.1 Performance Measures

Performance measures are a select set of metrics the BOF uses to direct the State Forester on expectations for management of state forests and to evaluate management outcomes to ensure that the FMP continues to provide GPV. The BOF defines the specific measured components that make up the performance measures. Although the BOF does not approve IPs, desired targets or trends expressed in performance measures will be used to guide ODF's implementation of the FMP. ODF monitors these components and reports the results to the BOF and the public via the BOF webpage. While performance

measures do not encompass all aspects of ODF monitoring and reporting (Section 4.3.2, *Adaptive Management Plan*), their purpose is to provide an up-to-date dashboard for the BOF and the public to easily track management outcomes across a broad range of key ecosystem services provided by state forests. The BOF can evaluate and make recommendations based on the performance reports depending on the need (Section 4.4, *Decision Authority and Revision Guidelines*).

4.3.2 Adaptive Management Plan

The AMP is a separate document from the FMP that provides monitoring workflows and reporting requirements that support implementation of the FMP. The need for an AMP comes from the expanded scope of this FMP that includes adaptive management as a key theme, the WOSF HCP extensive monitoring requirements, and a commitment to accountability to the BOF and all Oregonians. Monitoring and reporting is updated in the AMP to enable timely management responses to new information. The schedule of specific monitoring and reporting varies, depending on the time frame required to detect change. Reports of monitoring results will be available on the ODF website.

Monitoring Approaches

ODF monitors the management of state forests for compliance and effectiveness. Compliance monitoring (i.e., *implementation monitoring*) involves gathering information to determine if the rules, regulations, and policies are being followed during implementation. *Effectiveness monitoring* assesses if the implementation of management actions produces the intended outcomes, such as measuring if forest treatments increase habitat quality or quantity over time for a *species of conservation concern*.

The WOSF HCP commitments guide much of the monitoring and span many FMP goals and strategies. Additional monitoring for adaptive management of FMP goals is tracked in the AMP, with prioritization of monitoring projects and expected outcomes developed alongside the IP.

Reporting

The AMP coordinates monitoring projects with their reporting commitments for different plans, such as annual, 5- and 10-year reports for the WOSF HCP, progress toward IP objectives, and performance measures reported to the BOF.

4.3.3 Research

Research in the context of the FMP is intended to generate reliable scientific information to guide management actions. New research performed by ODF is designed within an adaptive management framework. In addition, ODF supports and relies on several research cooperative partnerships to advance scientific understanding in strategic areas, such as planting tree species outside their normal range to account for forecast changes in climate, suitable forest *composition* for ecosystem service delivery, and improvements to landscape design to balance benefits across space and time. ODF offers planning support and special use permitting for research performed on state forest lands by scientists outside of the agency.

4.3.4 Process Improvement

ODF pursues process improvements to data collection, monitoring, and reporting to provide high-quality and accessible information to ODF staff, the BOF, and the public. This forms the basis for effective planning and assessing progress toward plan goals to ensure continued resilience of state forests in response to known and emerging stressors. Within the limits of budgetary constraints, ODF leverages new technologies to provide increasingly precise and accurate assessments of forest ecosystem conditions at multiple spatial and temporal scales to inform all levels of management, from site-specific operations to overarching policy.

4.4 Decision Authority and Revision Guidelines

As the environment changes, revisions to plans and processes may be necessary to implement adaptive management and incorporate new information. Different policy contexts and planning levels dictate the process involved, including appropriate authorities.

4.4.1 Forest Management Plan

The BOF reviews the FMP no less than every 10 years in light of current social, economic, scientific, and *silvicultural* considerations (OAR 629-035-0020). The BOF evaluates new information in the context of the *guiding principles*, goals, and strategies of the FMP. If implementation of the FMP is not achieving the BOF's desired results (e.g., indicated from monitoring and reporting of performance measures), the BOF may respond by directing the State Forester to change implementation of the FMP through revising operational policies or BMPs or adjusting implementation focus. The BOF may initiate an FMP revision if outcomes cannot be improved by implementation changes alone. The BOF and the State Forester engage county partners, Tribes, other federal and state agencies, stakeholders and the public to gather input on the proposed revision.

4.4.2 Habitat Conservation Plan

The WOSF HCP amendment process is described in the WOSF HCP document. Amendments to the WOSF HCP or *Incidental Take Permits* are expected to be rare and informed by the adaptive management process as outlined in the WOSF HCP. ODF, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service are key decision-makers in the modification process.

4.4.3 Implementation Plan

As new information becomes available through monitoring and reporting, the State Forester may revise IPs in response to changing or unforeseen conditions (e.g., large-scale disturbance events) or development of new or better approaches to implementation identified through adaptive management. Table 4-2 outlines the key decision-makers.

4.4.4 Operational Policy

The State Forester or State Forests Division Chief may change operational policies as needed, in response to information from the adaptive management process, changing laws or conditions, new technology, improved management strategies, or new direction from the BOF or ODF leadership. Specific approval authorities depend on the scope of the policy in question, with the State Forester approval of policies that apply broadly to the agency, and State Forests Division Chief approval of policies confined to the State Forests Division. Most operational policies related to the management of state forests under this FMP fall under the authority of the State Forests Division Chief.

4.4.5 Forest Land Management Classification System

Revisions may be needed to the FLMCS when there is a change to the management emphasis on an area of land. Examples of such changes include the development of a new campground, a new wild and *scenic river* designation, or the removal of a research area after completion of a project. The District Forester recommends revisions to the Area Director, who may approve minor revisions or review and recommend major revisions to the State Forester for approval. While revisions may take place at any time, major revisions are usually carried out during IP development, and minor revisions are typically applied during OP development. A complete description of the process, including public comment periods can be found in OAR 629-035-0060.

4.5 Engagement Guidelines

The goals for public involvement in forest land planning are outlined in OAR 629-035-0080 and include providing information, seeking insight, building understanding, and providing public comment opportunities. For tribal engagement, the goals and strategies are outlined in Chapter 3, *Forest Resources, Goals, and Strategies*, and implementation is described in the IPs and OPs.

The purpose of public engagement is to create a relationship that provides meaningful opportunities to contribute to planning decisions. Engagement is most beneficial during the IP process, when input can have the most influence on the types and location of planned management activities. Engagement opportunities for the IPs occur during the public comment period, which generally occurs during the IP development process, prior to final approval. Input may contribute to setting priorities and identifying general locations of management activities. For the OPs, engagement opportunities occur during the annual or biennial public comment period, where input typically focuses on specific operations or activities, minor changes, refinements, or clarification of the plan. Additional opportunities for public input occur through BOF meetings. Table 4-3 shows the engagement opportunities, forums, and frequency by plan level and provides examples of types of input received during past engagement.

TABLE 4-3
Engagement Opportunities and Examples

Plan Level Venue	**Engagement Areas**	**Topic**	**Example Comment**
FMP Performance Measures BOF meetings	• Performance measures adopted for the purpose of BOF assessment of the FMP • Reports on performance measure trends	Performance measures	• The best available science has changed the understanding of the *adaptive capacity* of forests. The BOF should change the way adaptive capacity is measured and reported by ODF.
		Performance measure trends	• The reported trend in *carbon sequestration* is insufficient. We think the BOF should adopt a carbon sequestration target for ODF.
IP Public comment period	• Harvest types, priorities, and general locations • Recreation, education, and interpretation development/activity levels, types, priorities, and general locations • Stream enhancement types, priorities, and general locations • Road assessments, project types, priorities, and general locations • Monitoring and adaptive management priorities	Management activity type and location	• I would like more mountain biking trails, preferably built inside habitat conservation areas to reduce potential conflicts with harvesting. • Harvest objectives need to be increased to provide better economic opportunities in rural communities. • I would like to see more species diversity in newly planted *stands* including hardwoods. • I think reducing road density within a certain *watershed* should be prioritized. • Harvests within habitat conservation areas should focus on young stand thinning. • I recommend managing for complex early-*seral* conditions after *regeneration harvest* in specific watersheds.
		Stream enhancement/road project priority and location	• I propose a specific watershed as a high priority for stream enhancement to align with work being done by a local Watershed Council in the next 5 years to replace non-fish-passable *culverts* and enhance 5 miles of a specific stream.

Plan Level Venue	**Engagement Areas**	**Topic**	**Example Comment**
OP Public comment period (annual or biannual)	• Ensured consistency with the IP and/or FMP • Improved efficiency or effectiveness • Clarified description of planned operations • Additional information or correction of an error • Solution-oriented comments to achieve GPV goals and objectives	Efficiency/ site-specific information	• The boundary of a specific timber sale could be extended to the southwest where the terrain flattens out. Extending the boundary would eliminate the need to work through young stands while harvesting the timber during future sales. • A specific sale has a potential culturally/historic significant site that requires certain protection measures.
		Clarification	• I don't understand the terminology being used in this plan. Can you include definitions for BA, shelterwood and MBF in the document? • I'm uncertain about what exactly the stream enhancement entails. Can you provide more details on the project?
		Solutions-oriented	• This sale area will affect approximately 1 mile of the existing trail. Is it possible to have trails open for use on the weekends? • I am concerned with the amount of dust that comes off the road during log hauling. Can you please use dust abatement measures on the gravel road in front of my house to limit the impact? • This sale includes a domestic water source. I recommend leaving additional leave trees around no-harvest buffers for additional protection. • I am concerned that the proposed timber harvest treatment will not improve habitat for covered species. I recommend increasing leave tree densities to meet specific habitat goals.

This chapter provided the overarching guidelines for implementing the FMP, evaluating whether the strategies are meeting the goals, and adapting the plans to better meet the goals. Details on how ODF engaged county partners, other state agencies, interested parties, the public, and the *nine federally recognized tribes in Oregon* in the development of the FMP can be found in Appendix A, *Engagement*. Maps of the planning area and district boundaries are found in Appendix B, *Maps*. Visually impaired readers can find descriptions of all FMP figures in Appendix C, *Alternative Text to Figures*. For additional information on supporting plans, policies, tiered planning documents, and reports, please visit the ODF website.

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Chapter 1, Introduction

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List of Acronyms and Abbreviations

Acronym	Definition
AMP	Adaptive Management Plan
BMP	best management practice
the BOF	Oregon Board of Forestry
BOFL	Oregon Board of Forestry Lands
CCCP	Climate Change and Carbon Plan
CSFL	Common School Forest Lands
DEQ	Oregon Department of Environmental Quality
Division	State Forests Division
DOGAMI	Oregon Department of Geology and Mineral Industries
DSL	Oregon Department of State Lands
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FDF	Forest Development Fund
FLMCS	Forest Land Management Classification System
FMP	Western Oregon State Forests Management Plan
FPA	Oregon Forest Practices Act
GIS	geographic information system
GPV	greatest permanent value
HCA	habitat conservation area
HUC	Hydrologic Unit Code
HVCA	High Value Conservation Area
IP	Implementation Plan
ITECK	Indigenous Traditional Ecological and Cultural Knowledge
NAAQS	National Ambient Air Quality Standards
OAR	Oregon Administrative Rules
ODA	Oregon Department of Agriculture

Acronym	Definition
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
OHV	off-highway vehicle
OP	Operations Plan
ORBIC	Oregon Biodiversity Information Center
ORS	Oregon Revised Statutes
OWEB	Oregon Watershed Enhancement Board
OWRD	Oregon Water Resources Department
RCA	riparian conservation area
SB	Senate Bill
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SNC	Swiss needle cast
TMDL	Total Maximum Daily Load
VOF	Vision for Oregon's Forests
WOSF HCP	Western Oregon State Forests Habitat Conservation Plan

Glossary

A

Term	Definition
abiotic	Non-living components of an ecosystem.
active management, actively managed	Purposeful application of silvicultural prescriptions and other activities, like reforestation and young stand management, in accordance with the future objectives and current characteristics of forest stands. In contrast, see *passive management*.
adaptation silviculture, adaptive silviculture	Use of silvicultural techniques to increase the forest's ability to adapt to changing conditions and continue to deliver ecosystem services.
adaptive capacity (of ecosystems)	The ability of the system to sustain delivery of desirable ecosystem services under changed climate conditions and other disturbances via resistance and resilience to disturbance or transformative change to an acceptable new equilibrium. The Intergovernmental Panel on Climate Change defines adaptive capacity as the degree to which adjustments in practices, processes, or structures can moderate or offset the potential for damage or take advantage of opportunities created by a given change in climate.
adaptive management	A systematic and rigorous approach to learning from actions, improving management, and accommodating change. Adaptive management is defined as the process of implementing plans in a scientifically based, systematically structured approach that tests and monitors assumptions and predictions in management plans and uses the resulting information to improve the plans or management practices used to implement them (Oregon Administrative Rule [OAR] 629-035-0000).
Adaptive Management Plan (AMP)	Describes the monitoring and reporting process that will ensure Western Oregon State Forests Management Plan (FMP) resource goals are met during implementation of the FMP. The AMP grounds monitoring and reporting within an adaptive management framework to inform management decisions and align with Implementation Plan (IP) and *Western Oregon State Forests Habitat Conservation Plan* (HCP) reporting timelines.

Term	Definition
administrative site(s)	Lands where administrative requirements restrict the integrated management of forest resources. These lands include but are not limited to building sites, rock stockpile sites, log storage/sorting sites, and demonstration areas (OAR 629-035-0055 39(c)(B)(i).
aggregate	Sand and pebbles added to cement to make concrete, or that are used in road construction.
anadromous	Species, such as salmon, that are born in freshwater, migrate to the ocean to grow into adults, and return to freshwater to spawn.
aquatic	In or on the water; aquatic habitats are in streams or other bodies of water, as contrasted with riparian habitats, which are near water.
aquatic organism passage, passage, fish passage	Aquatic organism passage is the term for removal or improvement of structures that restrict the movement of aquatic animals, such as fish, turtles, amphibians, and insects within and between streams.
aquifer	A sand, gravel, or rock formation that is capable of storing or transporting water below the surface of the ground.
archaeological and/or historic object(s)	An object that is at least 75 years old; is part of the physical record of an indigenous or other culture found in the state or waters of the state; and is material remains of past human life or activity that are of archaeological significance, including, but not limited to, monuments, symbols, tools, facilities, technological by-products, and dietary by-products (ORS 358.905).
archaeological and historic resource(s)	Sites, buildings, structures, and artifacts that possess material evidence of human life and culture of the prehistoric and historic past.
archaeological and historic site(s)	A geographic locality in Oregon, including but not limited to, submerged and submersible lands and the bed of the sea within the state's jurisdiction, that contains archaeological objects and the contextual associations of the archaeological objects with each other, or with biotic or geological remains or deposits (ORS 358.905). Specific types of sites, as defined in Oregon law: • Pre-historic archaeological site - Created and/or used by humans indigenous to the area before Euro-American inhabitance.

Term	Definition
	• Historic archaeological site - Created and/or used by humans since the time of Euro-American inhabitance; usually belowground and/or aboveground diminishing remains. • Historic Site - Created and/or used by humans since the time of Euro-American inhabitance; usually aboveground structurally intact remains. • Site of archaeological significance - Any archaeological site in, or eligible for inclusion in, the National Register of Historic Places as determined in writing by the State Historic Preservation Officer, or any archaeological site that has been determined significant in writing by an Indian tribe (ORS 358.905).
Area Director(s)	Lead managers of the two administrative areas covered by this FMP: northwest and southern Oregon. The northwest Oregon area covers Astoria, Tillamook, Forest Grove, West Oregon, and North Cascade Districts. The southern Oregon area covers the Western Lane district.
asset(s)	Tangible resources and infrastructure on state forest lands.

B

Term	Definition
basal area	Cross-sectional area of a standing tree bole at breast height. Basal area per acre of all trees in a stand is an important measure of stand density and is related to stand volume.
best management practices (BMPs)	Oregon Forest Practices Act (FPA) rules adopted by the Board of Forestry (BOF) to minimize the impact of forest operations on natural resources, such as water quality or air quality, or human safety, such as trail users.

Term	Definition
biochar	Charred forest material, such as slash or dead plants, which can improve soil productivity and water quality and sequester carbon. The practice of charring forest material and mixing it with soil was used for thousands of years by indigenous people in the Amazonian basin. The practice created rich soils, called "terra preta de Indio", in otherwise infertile soils. Modern technologies use pyrolysis to produce biochar. Pyrolysis prevents harmful emissions and produces valuable byproducts in addition to biochar. Pyrolysis is the thermal decomposition of plant material in the absence of oxygen, which prevents combustion (burning). By preventing combustion, the production process prevents the release of greenhouse gases, particulates, and other toxicants to the atmosphere and instead produces bio-oil and synthesis gas, which are captured and can be used as fuel or precursors to other chemical products. Like coal, biochar is a stable form of carbon that can store carbon in the soil for hundreds to thousands of years.
biodiversity, biological diversity	The genetic variation and the variety of microbial, fungal, plant, and animal life.
biotic	Any living aspect of the planet.
Board of Forestry (BOF)	The BOF is a seven-member citizen board appointed by the governor and confirmed by the Oregon State Senate. The BOF supervises all matters of forest policy in Oregon; adopts rules regulating forest practices; and provides general supervision of the state forester's management of the Oregon Department of Forestry (ODF). The BOF authorizes and directs the State Forester in the management of state forests.
Board of Forestry Lands (BOFL)	BOFL were acquired by the BOF under ORS 530.010–530.040. Most were transferred from counties to the BOF in exchange for a portion of future revenue from the lands. Some lands were acquired by direct purchase.

C

Term	Definition
candidate species	Species being considered by the Secretary of the Interior for listing under the Endangered Species Act as an endangered or a threatened species, but not yet the subject of a proposed rule.

Term	Definition
carbon pools	Categories of carbon reservoirs, such as soil, tree roots, aboveground tree boles, or harvested wood products, that have the capacity to both take in and release carbon.
carbon sequestration	The process of capturing atmospheric carbon dioxide, removing it from the atmosphere where it contributed to global warming. In the forest, sequestration is primarily measured in trees sequestering carbon in their wood through their use of carbon dioxide in photosynthesis
carbon storage	Sequestered carbon is a stable component of various carbon pools within the forest and in wood products, contributing to climate change mitigation by preventing carbon dioxide from being released into the atmosphere. See *carbon pools*.
Class I area(s)	National park lands and some wilderness areas are designated as federal mandatory Class I areas under the Clean Air Act.
Clean Air Act	Federal law passed in 1970 and amended several times since. The authority to implement the act is delegated to states. The Clean Air Act is implemented, in part, through a permit system.
Clean Water Act	Federal law was passed in 1948 under the Federal Water Pollution Control Act but was significantly reorganized and expanded in 1972 and has been known as the Clean Water Act since then. This act, which has been amended several times since 1972 as well, establishes the basic structure for regulating discharges of pollutants into the waters of the United States; states may have their own Clean Water Acts whose standards must meet or exceed the federal mandates.
climate change	Per the United Nations, involves long-term shifts in temperatures and weather patterns. Some shifts are natural, but since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (like coal, oil, and gas), which produces heat-trapping greenhouse gases that build up in the Earth's atmosphere, causing average temperatures around the globe to increase ("global warming").

Term	Definition
climate change mitigation	Reducing heat-trapping greenhouse gases added to the atmosphere by reducing production from sources (e.g., the burning of fossil fuels for electricity, heat, or transport) and/or sequestering these gases from the atmosphere, such as through tree growth.
climate-smart forestry	An extension of sustainable forest management developed to guide management of forests in ways specific to climate change adaptation and mitigation efforts and to support climate-affected communities. Climate-smart forestry principles can be enacted through climate-informed silviculture, which may include reforestation using alternative tree species; reforestation using alternative planting spacings and densities; reforestation using diverse species mix (bet hedging); and leaving legacy trees and downed wood to store carbon on the landscape.
coarse filter, fine filter	An operational approach for managing biological diversity. The coarse-filter component is based on the premise that maintaining a range of seral stages, stand structures, and sizes, across a variety of ecosystems and landscapes, will meet the needs of most organisms. Fine-filter management adds specific management actions for individual species or habitats that require special consideration, such as species with unique or limited distributions.
cohort	A group of trees regenerating after a single disturbance. The age range within a cohort may be as narrow as 1 year (typical with planting under active management) or as wide as several decades (with natural regeneration under passive management).
Common School Fund	A permanent fund or account managed to provide revenues to the common schools. The State Land Board (governor, secretary of state, and treasurer) is the trustee of the fund.

Term	Definition
Common School Forest Lands (CSFL)	Common School trust lands that have been listed by the State Land Board for the primary goal of managing these lands for the generation of the greatest amount of income for the Common School Fund over the long term, consistent with sound techniques of land management. Common School trust lands that have been listed by the State Land Board for the primary use of timber production are called Common School Forest Lands. Other Common School trust lands are designated as rangelands or for other uses.
composition	For an ecosystem, composition refers to the different species of plants and animals that live therein. The dynamic attributes of a forest ecosystem are composition, function, and structure. Composition is the proportion of various species. In contrast, *function* is the processes taking place in the system, while *structure* includes kinds and distribution of stand components such as trees, snags, and logs of various sizes and shape.
confidential	Limited to persons authorized or entrusted with the information.
conifer forest	These stands occupy most of the state forest lands. ODF classifies conifer stands as those in which conifer tree species compose 50 percent or more of the basal area. Although conifers are the principal species with economic value in these stands, the stands may also include substantial amounts of other vegetation types such as hardwoods, shrubs, grasses, and ferns, which contribute to a diverse forest ecosystem. These types are either intermixed with the conifers or are in clumps too small to map and inventory separately.
connectivity	A measure of how well different areas (patches) of a landscape are connected by linkages. For wildlife, habitat patches could be connected by corridors of forest used to move between patches. At a landscape level, the connectivity of ecosystem functions and processes is considered in addition to the connectivity of habitats, by the spatial arrangement and pacing of management activities.

Term	Definition
conservation area(s)	Designated land where conservation strategies are applied for the purpose of attaining specific conservation objectives such as maintaining or improving conditions for species of conservation concern. In State Forests, conservation areas include habitats used by northern spotted owls and marbled murrelets, riparian conservation areas, rare or unique habitats, and areas requiring special protection for other resource values. Habitat conservation areas and riparian conservation areas are defined below and dictated by the WOSF HCP.
cultural resource(s)	An aspect of a cultural system that is valued by or significantly representative of a culture or that contains significant information about a culture. A cultural resource may be tangible, a place or space, or a cultural practice. Tangible cultural resources are categorized as sites, buildings, structures, and objects for listing in the National Register of Historic Places and as archeological resources, cultural landscapes, structures, museum objects, and ethnographic resources. A cultural place or space may include areas containing a variety of natural and cultural resources that associated people define as heritage resources, including plant and animal communities, geographic features, and structures. Cultural practices may be associated with plant and animal communities or particular places, acknowledge past events or people, and have significant meaning to practitioners.
culvert(s)	Structure that channels water past an obstacle, under a roadway, or to a subterranean waterway. Typically surrounded by soil or road fill (embedded), a culvert may be made from a pipe, reinforced concrete, or other material.

D

Term	Definition
debris torrent, debris flow	Rapid movement of a large quantity of materials, including wood and sediment, down a stream channel. This generally occurs in smaller streams during storms or floods, which scours the streambed.

Term	Definition
degraded forest lands, degraded watersheds	Areas where the forest's biodiversity and ecological processes are diminished or severely constrained. These conditions may exist because of past management practices or large-scale disturbances such as fire, windstorms, floods, and outbreaks of insects or pathogens.
demographics	The collection and analysis of general characteristics about groups of people and populations, such as age, gender, and income.
demonstration forest(s)	Timberland managed for forestry education, research, and recreation. It demonstrates innovations in forest management, watershed protection and restoration, and environmentally sensitive timber harvesting techniques.
deposition	When rocks or particles of soil or silt are carried from one location and placed in another, usually by moving water or wind. The wind or water can physically pick up and carry small particles, and these particles are deposited when there is not enough energy to carry them any longer.
desired stand goal	A planning goal that describes the conditions land managers are attempting to achieve over a specified period of time in a given geographic area. In some cases, the land may already be in the desired condition and land managers would focus on maintaining those conditions. If the natural area is not currently in the desired condition, managers may take actions to encourage a different pattern of change over time to reach the desired stand goals. The desired stand goals describe the land or resource conditions of the forest given implementation of management direction contained in the plan if goals and objectives are fully achieved.
dispersal habitat	For northern spotted owls, can be conifer and mixed mature conifer-hardwood stands with a canopy cover greater than or equal to 40 percent but without suitable nesting habitat and contains understory features that inhibits foraging both through decreased visibility of prey (overgrown vegetation or high twig density) or inadequate understory vegetation to support prey species. (Habitat neither suitable for nesting nor foraging.)
dispersed recreation	Areas where camping and hiking are allowed in undeveloped areas, where there are no trail or camping facilities or infrastructure.

Term	Definition
dissected	A landscape that has been cut into hills and valleys by the process of erosion.
district(s)	The FMP planning area is organized into management districts. Northwest area districts are Astoria, Tillamook, Forest Grove, West Oregon, and North Cascade. The Western Lane District includes all state forests in Lane County and southwest Oregon.
District Forester	The lead forester for an ODF management district.
disturbance(s)	A force that causes significant change in an ecosystem's structure and/or composition. Disturbance can be caused by natural events such as fires, floods, extreme winds, earthquakes, and insect or disease outbreaks, or by human activities.
domestic water use	The use of water for human consumption and other household human use.
dominant, co-dominant	The largest-sized trees in a stand with crowns in the forest canopy that receive direct sunlight. Co-dominant implies that multiple species contribute to the dominant canopy layer. Also used as a synonym for primary, for example, in describing the most common component of a stand or ecosystem process.
downed wood, woody debris	Fallen trees or pieces of trees on the forest floor or in the stream channel that provide many important functions such as nutrient cycling, maintenance of site productivity, natural forest regeneration (nurse logs), substrates for mycorrhizal fungal network formation, and diverse habitat elements for fish and wildlife species.

E

Term	Definition
ecological silviculture	Silvicultural practices that promote within-stand diversity and complexity found in unmanaged older forests by emulating the stand initiation and development processes that result from small-scale natural disturbances (e.g., windthrow, lightning, insects, disease).

Term	Definition
ecologically sustainable forest management	A management approach that focuses on the sustainable delivery of ecosystem services while maintaining the integrity and improving the resilience of the ecosystem.
ecology	The study of the interactions of organisms to one another and with their physical environment.
ecosystem(s)	A complex system comprising populations of organisms considered together with their physical environment and the interacting processes that exchange energy and matter between them (e.g., marsh, watershed, lake ecosystems). Ecosystems do not have boundaries fixed in time or space, or fixed biological or physical compositions, because the form and function of ecosystems change at various rates, depending on prevailing environmental factors and their resistance and resilience to disturbances.
ecosystem function(s) or functioning	The many, interacting biotic and abiotic processes that occur within an ecosystem (e.g., biogeochemical processes, nutrient cycling, decomposition, regeneration, and succession).
ecosystem goods and services	Goods produced by ecosystems such as water, food, medicine, fuel, construction materials; and services produced by ecosystems such as clean air, clean water, heat mitigation, flood risk mitigation, water storage, and erosion control.
edge(s)	The point where two different plant communities (different vegetation types, successional stages, or conditions) meet. Edges may be created by a soil or topographical feature of the site, or where short-term effects are created by natural or human-caused disturbances.
effectiveness monitoring	Monitoring designed to evaluate whether a given management action was effective in meeting a stated management objective. See definition for *monitoring*.
emphasis area(s)	Spatially explicit areas managed with an emphasis on certain resource goals or benefits, such as wildlife habitat improvement or timber production. See *Forest Land Management Classification System (FLMCS)* and Chapter 2 for how the designation, distribution, and management of emphasis areas contributes to ESFM.

Term	Definition
endangered species	As defined by the Endangered Species Act of 1973 (ESA), any species (including subspecies or qualifying population) that is in danger of extinction throughout all or a significant portion of its range.
Endangered Species Act (ESA)	Federal and state laws that provide a framework to conserve and protect endangered and threatened species and their habitats both domestically and abroad.
endemic species	Species restricted to a geographic location and found nowhere else in the world.
engagement	The involvement and participatory actions of the public and Tribes in planning and decision-making processes.
engineering	The science or profession of developing and using nature's power and resources in ways that are useful to people (as in designing and building roads, bridges, dams, or machines and in creating new products).
environmental gradient	Changes in physical or chemical characteristics across space, such as elevation, soil characteristics, ground slope, air or stream temperature, soil moisture or humidity, average annual precipitation.
Equipment Restriction Zone (ERZ)	A 35-foot buffer within RCAs where ground disturbance and vegetation removal are minimized to project streambanks and aquatic habitat.
erosion	The geological process in which earthen materials are worn away and transported by natural forces such as wind or water.
ethnobotanical	The scientific study of the traditional knowledge and customs of a people concerning plants and their medical, religious, and other uses.

Term	Definition
Evolutionarily Significant Unit (ESU)	An ESU is a group of stocks or populations that 1) are substantially reproductively isolated from other population units of the same species; and 2) represent an important component in the evolutionary legacy of the species. This term is used by the National Marine Fisheries Service (NMFS) as guidance for determining what constitutes a distinct population segment for the purposes of listing Pacific salmon species under the ESA. For example, the Oregon Coast chinook ESU is a delineation that encompasses all populations of chinook salmon from the Necanicum River on the northern Oregon coast, to Cape Blanco on the south coast.

F

Term	Definition
financial viability	Achieved over the long term through continued protection and management of the forest asset; achieved over the short term with operational tools that ensure cash flow is available to ODF for sound management of state forest lands.
fine filter	See definition for *coarse filter, fine filter*.
fiscal conditions	Describes a government's ability to meet its financial and service obligations. If an agency is able to meet these obligations, it is in good fiscal condition; if not, it may experience fiscal stress.
fish passage	See definition for *aquatic organism passage*.
FMP area	See definition for *planning area*.
forest carbon	Atmospheric carbon dioxide that is sequestered and stored by trees and other vegetation through the process of photosynthesis and released during respiration and decomposition.
Forest Development Fund (FDF)	Revenue derived from BOFL that is retained by ODF and used as the operating fund for management of BOFL. Note that this fund is tracked independently within ODF's general operating funds but does not exist as a separate account.

Term	Definition
forest health, healthy forest landscapes	Forest condition where the severity, extent, and frequency of events causing injury or death of trees and other organisms is minimized; ability of forest to resist or recover from disturbances both natural and manmade.
Forest Land Management Classification System (FLMCS)	As codified in OAR 629-035-00550, a method of describing the management emphasis of parcels of state forest lands. The FLMCS is recorded as a geographic information system (GIS) layer. 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 as designated by the FMP, the WOSF HCP, and other laws or commitments. State forest lands are classified as General Stewardship, Focused Stewardship, Special Use, or High Value Conservation Areas.
forest product(s)	Products that people take to market or use directly like timber or firewood, mushrooms, and medicinal plants. See *special forest products*.
forest resources	As defined by OAR 629-035-0000, include, but are not limited to: (a) Timber production and harvest; (b) Salmonid, and other native fish and wildlife habitats; (c) Soil, air, and water; (d) Forage and browse for domestic livestock; (e) Landscape effect; (f) Protection against flood and erosion; (g) Recreation; (h) Mining; (i) Use of water resources; and (j) Administrative sites.

Term	Definition
Forest Trust Lands Advisory Committee	An advisory group of elected county commissioners mandated by statute that advise the BOF and state forester on matters related to state forestland managed by ODF. The council represents the 15 counties with state forest lands on policy matters related to the management of the forestlands and distributions of revenues produced from those lands. The counties that receive revenues from these forestlands are Benton, Clackamas, Clatsop, Columbia, Coos, Douglas, Josephine, Klamath, Lane, Lincoln, Linn, Marion, Polk, Tillamook, and Washington. The committee's member roster is established during the middle of November each year when the Council of Forest Trust Land Counties elects their board of directors at the annual meeting of the Association of Oregon Counties.
forestry	The science and practice of establishing, managing, and conserving forests and associated resources in a sustainable manner to meet desired goals, needs, and values.
formation(s)	The action of forming or process of being formed. In geology, a formation is a group of strata, or layers, of the same sort of rock or mineral, or rock having common characteristics. A formation is usually defined distinctive enough in appearance that a geologic mapper can tell it apart from the surrounding rock layers.
fragmentation	Process of breaking up forest types or habitat patches into smaller areas and reducing connectivity by impeding the movement of organisms.
function(s), ecological function	An activity or process that occurs in an ecosystem; some typical functions are plant growth, animal reproduction, and decay of dead plants.

G

Term	Definition
geographic information system (GIS)	A system for management analysis and display of geographic knowledge that is represented using a series of information sets such as maps and globes, geographic data sets, processing and workflow models, data models, and metadata.
geology	The study of the earth's physical structure and substance, its history, and the processes that act on it.
geomorphic process	The physical and chemical interactions between Earth's surface and natural forces that shape landforms such as stream channels and floodplains over time. These processes are driven by tectonics and volcanism and weathering, erosion, and deposition by water, wind, and ice.
geothermal	Of or relating to the internal heat of the earth.
goals	A concise, broad statement of an organization's end or process that programs are designed to achieve. OAR 629-035-0030 requires that the FMP contain "forest resource management goals, which are statements of what the State Forester intends to achieve for each forest resource within the planning area consistent with OAR 629-035-0020 (Greatest Permanent Value)."
greatest permanent value (GPV)	Healthy, productive, and sustainable forest ecosystems that over time and across the landscape provide a full range of social, economic, and environmental benefits to the people of Oregon as defined in OAR 629-035-0020.
guidelines	A set of recommended or suggested methods or actions that should be followed in most circumstances to assist administrative and planning decisions, and their implementation in the field. They are provided as a broad framework of recommended actions to be taken and, thus, provide some flexibility for decision-making.
guiding principles	The overall rules, aims, and responsibilities that guide the planning process for the northwest Oregon state forests. Guiding principles are required elements for the FMP identified in the Forest Management Planning rule (OAR 629-035-0030).

H

Term	Definition
habitat	The resources, conditions, and factors necessary to support living organisms over space and through time. Improving habitat means improving the resources or conditions that support a species' health or the population's persistence.
habitat conservation area (HCA)	A protected area with boundaries established by the WOSF HCP intended to conserve, maintain, and enhance habitat for the terrestrial covered species.
habitat conservation plan (HCP)	A comprehensive planning document that is a mandatory component of an Incidental Take Permit (ITP) application pursuant to section 10(a)(2)(A) of the ESA. The WOSF HCP enables ODF to comply with the federal ESA for certain covered species while conducting land management activities on state forest lands west of the Cascade Crest.
hardwood stand(s)	Found on a minority of state forest lands. ODF classifies hardwood stands as those in which hardwood tree species comprise more than 50 percent of the stand's basal area.
harvest units	Delineated forest parcels that reflect potential harvest operation areas considering topography and access. A unit for silvicultural prescriptions such as regeneration and thinning harvests.
headwater	The source or uppermost tributaries and wetlands where larger streams begin, located at the higher elevations within a watershed
healthy forest landscapes	See *forest health*.

Term	Definition
historic or historical resources	Defined by state and federal law, these include artifacts, property, and sites: • Historic artifacts - Three-dimensional objects including furnishings, art objects, and items of personal property that have historic significance. Historic artifacts do not include paper, electronic media, or other media that are classified as public records (ORS 358.635). • Historic property - Real property that is listed in the National Register of Historic Places, established and maintained under the National Historic Preservation Act of 1966, or approved for listing on an Oregon Register of Historic Places. • Historic site - Sites created and/or used by humans since the time of Euro-American inhabitance; usually aboveground structural intact remains.
hydrologic processes	Describes how water is exchanged (cycled) through Earth's soil, geology, vegetation, and atmosphere through evaporation, transpiration, condensation, precipitation, infiltration, and subsurface flow. Hydrologic processes relate to how the landscape is shaped by water, for example how streams and floodplains form and change over time.
hydrology	The study of the properties, distribution, and effects of water on the landscape, under the surface, in the rocks, and in the atmosphere.

I

Term	Definition
implementation monitoring	Used to determine if objectives, standards, and management practices specified by law, regulation, policy, or the HCP are being implemented. Implementation monitoring is used to determine whether specified actions or criteria are being met. See definition for *monitoring*.
Implementation Plan (IP)	An ODF plan that describes the management approaches and activities designed to achieve the FMP goals and the WOSF HCP goals and objectives within a timeframe of approximately 10 years.

Term	Definition
Incidental Take Permit	A federal exemption to take prohibition of Section 9 of the ESA; the ITP is issued by the U.S. Fish and Wildlife Service pursuant to Section 10(a)(1)(B) of the ESA. An Incidental Take Permit is also referred to as a Section 10 Permit or Section 10(a)(1)(B) Permit. To take is to "... to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" with regard to federally listed endangered species of wildlife (Section 3(18) of the ESA). Federal regulations provide the same taking prohibitions for threatened wildlife species (50 CFR 17.31(a)).
Indigenous Traditional Ecological and Cultural Knowledge (ITECK)	A body of observations, oral and written knowledge, innovations, practices, and beliefs developed by Tribes through interaction and experience with the environment. ITECK can be developed over millennia, continues to develop, and includes understanding based on evidence acquired through direct contact with the environment and long-term experiences, as well as extensive observations, lessons, and skills passed from generation to generation. ITECK is grounded in social, spiritual, cultural, and natural systems that are frequently intertwined and inseparable, offering a holistic perspective. ITECK is inherently heterogeneous and unique to each Tribe, due to the cultural, geographic, and socioeconomic differences, as well as their history and the surrounding environment.
integrated pest management	A systematic approach that uses a variety of techniques to reduce pest damage or unwanted vegetation to economically and socially tolerable levels. Integrated pest management techniques may include the use of natural predators and parasites, genetically resistant hosts, environmental modifications, and, when necessary and appropriate, chemical pesticides or herbicides.
integrated resource management	The management of two or more resources in the same general area and period of time (e.g., water, soil, timber, grazing, fish, wildlife, and forests). Integrated resource management means that the design and application of management practices must consider the effects and benefits of all of the forest resources in such a way that those effects and benefits lead to achieving the goals in the FMP over time and across the landscape.

L

Term	Definition
landscape(s)	In ecological terms, an area of land containing a mosaic of different patches or ecosystems that interact through ecological processes and may change over time.
landscape context	Refers to the spatial relation of different patches (land management, habitat type, ecological processes, hydrological process, etc.) within the landscape and the values, constraints, or risks they impose on each other. See *landscape*.
landslide(s)	The dislodging and fall of a mass of earth and rock. There are many types of landslides, including debris slides, earthflows, rock block slides, slumps, slump blocks, and slump earthflows. The different types of landslides vary tremendously in their cause and impact, such as shallow rapidly moving landslides and slow deep-seated landslides.
leave area	An area of standing timber retained among areas of logging activity to satisfy management objectives, such as providing seed sources or wildlife habitat.
leave trees	See *live trees*.
legacy structures, legacies, legacy retention, biological legacies	Structural components within a forest stand that are retained during harvest operations, and that provide habitat diversity in the future stand. Examples of legacy structure include live trees, snags, and downed wood.
lifeways	A traditional way of life reflecting customs, practices, and belief systems. This may include foods consumed, materials collected, religious practices.
listed, federally listed, or listed species	Species, including subspecies and distinct vertebrate populations, of fish, wildlife, or plants, listed at 50 CFR 17.11-17.12 as either endangered or threatened.
live trees, leave trees	Living trees that are retained to provide short-term habitat needs of wildlife species, to serve as a source of future snags and downed wood, and to provide legacy trees in future stands. This term also refers to living trees present in a stand that are legacies of a previous cohort of trees.

M

Term	Definition
management emphasis	See *emphasis areas*.
management prescription	The management practices and intensity selected and scheduled for application on a specific area to attain predefined goals and objectives.
mass wasting processes	Down slope movement of rock or soil due to the force of gravity. The four most common types of mass-wasting are falls, slides, flows, and creep. Falls are abrupt movements of rocks that have detached from steep slopes of cliffs. Slides are the movement of a mass of earth and rock from a mountain or cliff and can occur slowly or quickly. Examples of flow type are debris, mud, or earth. Creep (or soil creep) is a slow, long-term mass wasting process. The steeper the slope the faster the creep. Precipitation, chemical weathering, lithology (type of rock), and steepness of slope(s) contribute to mass wasting processes.
metrics	A quantifiable value, characteristic, or condition measured by monitoring programs. See *monitoring*.
monitoring	The measurement of metrics—to determine resource status or trends, document actions, or test research hypotheses with the goal of aiding adaptive management and decision-making.. • Implementation, or compliance, monitoring - Asks the question, "Did we do what we said we would do?" For example, did we leave the number of snags during a timber harvest required by law or policy? • Effectiveness monitoring - Asks the question, "Are the management practices producing the desired results?" For example, are snag retention practices resulting in improved habitat for a species of interest?

N

Term	Definition
native	Indigenous to Oregon and not introduced.
nine federally recognized Tribes in Oregon, Tribal Partners	Representatives of one or more of the nine federally recognized Tribes of Oregon. ORS 182.162–168 define state agencies' relations with federally recognized Tribes in Oregon when an agency develops or implements programs that may affect Tribes. The nine federally recognized Tribes of Oregon are Burns Paiute Tribe; Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians; Confederated Tribes of Grand Ronde; Confederated Tribes of Siletz Indians; Confederated Tribes of the Umatilla Indian Reservation; Confederated Tribes of the Warm Springs Reservation; Coquille Indian Tribe; Cow Creek Band of the Umpqua Tribe of Indians; and The Klamath Tribes.
non-point source	Entry of a pollutant into a body of water from widespread or diffuse sources, with no identifiable point of entry. The source is not a distinct, identifiable source such as a discharge pipe. Erosion is one example of a non-point source.
noxious weeds	Terrestrial, aquatic, or marine plants designated by the Oregon State Weed Board under ORS 569.615 as representing the greatest public menace and a top priority for action by weed-control programs.
nutrient cycling	Circulation or exchange of elements, such as nitrogen and carbon, between living and nonliving portions of the environment.

O

Term	Definition
objective(s)	A clear and specific statement of results to be achieved within a defined time period. An objective is measurable and implies precise time-phased steps to be taken and resources to be used, which, together, represent the basis for defining and controlling the work to be done.

Term	Definition
old growth	A forest stand whose typical characteristics are a patchy, multi-layered, multi-species canopy dominated by large overstory trees, some with broken tops and decaying wood; numerous large snags; and abundant downed wood (such as fallen trees) on the ground. In western Oregon, old-growth characteristics begin to appear in unmanaged forests at 175–250 years of age.
operationally limited	By the FLMCS (OAR 629-035-0055), lands where current technology or engineering techniques are considered by the State Forester to be inadequate to reasonably ensure that integrated management practices would not cause significant long-term adverse effects. The State Forester may limit, restrict, or prohibit management activities in these areas as needed to protect forest resources or to accomplish the management goals for surrounding areas.
operational policy(ies)	Documented, specific standards and best practices for implementation and resource protection. Operational policies guide decisions within the range of options by outlining specific procedures and BMPs that allow for management flexibility, while ensuring sound management and resource protection. Operational policies include quantitative standards (e.g., riparian buffer widths, upland leave tree requirements) that align with laws and regulations, and FMP and WOSF HCP goals and strategies. Operational policies are developed within the State Forests Division under the direction of the State Forests Division Chief.
Operations Plan (OP)	Describes individual projects for achieving expected FMP and WOSF HCP outcomes, over the near term (for example 1–2 years), that align with fiscal budgets and IPs.
Oregon Conservation Strategy	Created by the Oregon Department of Fish and Wildlife to outline a set of priorities and recommendations for addressing Oregon's fish, wildlife, and habitat conservation needs. Strategy species in the Oregon Conservation Strategy are Oregon's species of greatest conservation need because they are experiencing population decline, habitat loss, and other issues that put them at risk.
outcomes	Projected or realized results of management activities conducted during IP and OP implementation.

P

Term	Definition
passive management	Typically allows resources to change over time with minimal human intervention. For example, forest stands could be allowed to grow and regenerate along their current successional trajectory—no reforestation, thinning, harvesting, site preparation or prescribed burning activities would be used.
patch(es)	A term fundamental to landscape ecology and silviculture, it is defined as a relatively homogeneous (same/similar) area of habitat or forest stand that differs from its surroundings. Patches are the basic unit of the landscape that change and fluctuate, a process called patch dynamics.
pathogen(s)	A specific causative agent (such as a bacterium, fungus, or virus) of a disease.
performance measure(s)	A select set of metrics the BOF uses to evaluate management outcomes to ensure that the FMP continues to provide GPV. The performance measures have specific components set and monitored by the BOF with trends reported publicly.
planning area, plan area, or FMP area	Approximately 640,000 acres consisting of BOFL, Common School lands, and administrative sites west of the Cascade Crest.
policy	A definite, stated method or course of action adopted and pursued by an entity that guides and determines present and future decisions and actions. A policy establishes a commitment by which an entity is held accountable.
pollutant	A substance of such character and existing in such quantities as to degrade an environmental resource (i.e., water, air, or soil) by impairing its usefulness (including its ability to support living organisms).
population(s)	The organisms that constitute a particular group of a species, or that live in a particular habitat or area. A group of fish (e.g., Nehalem River fall chinook salmon) that spawn in a particular area at a particular time, and that do not interbreed to any substantial degree with any other group spawning in a different area, or in the same area at a different time are considered a population (OAR, Division 7, 635-07-501(38)).

Term	Definition
prescribed burn/burning	Controlled fire burning under specified conditions to accomplish planned objectives; also called slash burning, as a frequent objective is to reduce the amount of slash left after logging. Objectives may include site preparation for planting and reduction of fire hazards or pest problems.
private and domestic drinking water	Systems serving three or fewer homes or connections with a water use permit issued by the Oregon Water Resources Department.
properly functioning aquatic habitat *or* condition	The range of diverse aquatic and riparian conditions over time and space that emulate the habitat conditions that resulted from natural disturbance regimes under which native species evolved.

R

Term	Definition
reciprocity	Ecosystem services deliver social and economic benefits, and social and economic benefits can be obtained in a way that supports environmental benefits.
redundancy	The duplication of components or functions of a system with the intention of increasing the resilience of the system by assuring that some components remain intact even if a disturbance degrades a similar component elsewhere.
reforestation	Management to renew tree cover by planting and cultivating young trees. This can be accomplished by planting an area with trees or aerial seeding or passive natural regeneration.
refugia	Areas that remain unchanged while surrounding areas change markedly. The changes could be short term, such as wildfires, elevated stream temperatures, or human activity, or much longer term, such as periods of glaciation. Alternatively, refugia could refer to locations and habitats that support population of organisms that are limited to small fragments of their previous geographic range.
regeneration	The process of renewal of a forest or stand of trees, or young trees in a stand.

Term	Definition
regeneration harvest(s), regeneration harvesting	The removal of trees to make regeneration possible or to assist in the development of the established regeneration (young trees). Regeneration harvests can range from a clearcut to a retention cut. A clearcut removes almost all trees from a stand (see definition for *clearcut*) resulting in a new even-aged stand of trees. A retention cut retains more residual trees within the unit (between 33 and 80 square feet of basal area per acre), similar in look to a heavy thinning resulting in a stand with two distinct ages of trees following tree planting.
resilience, resiliency, resilient	Broadly, the ability of ecosystems to persist in response to pressure from episodic disturbances (e.g., wildfire) and chronic stress (e.g., warmer temperatures or prolonged drought from climate change). A resilient forest recovers the delivery of ecosystem services in response to multiple pressures.
resistance	The ability of a system to withstand disturbances.
restoration	Management actions taken to rehabilitate degraded forest lands to properly functioning condition such that lands are delivering ecosystem goods and services such as timber, fish and wildlife habitat, special forest products, carbon sequestration, and drinking water.
revenue(s)	The total income produced by an organization's operations, such as income generated by timber harvest operations.
riparian, riparian area	Three-dimensional zone of direct influence and/or interaction between terrestrial and aquatic ecosystems. The boundaries of the riparian area extend outward from the streambed or lakeshore.
riparian conservation area (RCA)	A protected area with boundaries established by the WOSF HCP; the width varies according to the stream classification or special protection needs. The purpose of an RCA is to protect the stream, aquatic resources, and riparian area. Aquatic resources include water quality, water temperature, fish, stream structure, and other resources. The WOSF HCP defines the rules that govern RCAs.

S

Term	Definition
salvage harvesting	The utilization of standing or downed trees that are dead, dying, or deteriorating, for whatever reason, before the timber values are lost.
scenic	Providing or relating to views of impressive or beautiful natural scenery.
scenic waterways, scenic river	A river, lake, or segment thereof, including related adjacent land and the airspace above, that has been so designated by or in accordance with the Scenic Waterways Act (ORS 390.805–390.925)
sensitive plants	Oregon's ESA listed threatened and endangered plant species administratively protected by the Oregon Department of Agriculture Native Plant Conservation Program (ORS 564.105; OAR 603-073), and candidate plant species considered for ESA listing.
seral, seral stages	Developmental stages that succeed each other as an ecosystem changes over time; specifically, the stages of ecological succession as a forest develops.
silvicultural, silviculture, silvicultural prescriptions	The practice of managing the establishment, composition, health, quality, and growth of the vegetation of forest stands and forest landscapes.
silviculturally capable	Capable of growing forest tree species, as defined by the Forest Practices Reforestation Suitability Standards as established by the Oregon Forest Practices Act (Silviculturally Capable).
site productivity	A measure of an area's relative capacity for producing timber or other vegetation. Forest site productivity is controlled by a complex relationship among topography, slope, aspect, soil depth, porosity, biology, and the availability of nutrients in the soil.
slash	Logging debris left in the forest after a harvest such as tree limbs and tops. Sometimes called logging residue.
slope stability	The degree to which a slope resists the downward pull of gravity. The more resistant, the more stable.
snag	A standing dead tree.

Term	Definition
Soil and Water Conservation Districts (SWCD)	The Oregon Department of Agriculture's SWCD Program provides services to the 45 Soil and Water Conservation Districts throughout Oregon. The districts work with local landowners and residents, natural resource organizations, natural resource users, and local, state, and federal governments to conserve natural resources, control and prevent soil erosion, conserve and develop water resources and water quality, preserve wildlife, conserve natural beauty, and promote collaborative conservation efforts to protect and enhance healthy watershed functions. The Oregon Department of Agriculture Soil and Water Conservation District Program offers trainings to help support district operations, directors, and staff. Their staff is also available to provide operational technical assistance by phone, email, or in person. SWCDs in Oregon are governed by an independently elected board of directors.
soil composition	The mixture of minerals, dead and living organisms (organic materials), air and water that make up soil. This mix of ingredients varies from place to place.
source areas	Areas in which a watershed is delivering water to a water system.
special forest products	Products, other than timber, collected for personal and commercial uses from forests.
species	Organisms of the same species share similar DNA, physical shape, form, and structure and are capable of producing fertile offspring.
species diversity	Diversity among species in an ecosystem. Species diversity accounts for the number of different species (species richness) and the relative abundance of each species (species evenness).
species of conservation concern	Those species included on federal or state ESA lists, state sensitive species, and the Oregon Department of Fish and Wildlife's Oregon Conservation Strategy species, which are currently present or have the potential to be present on state forest lands.
stand(s)	A contiguous group of trees or other vegetation in a specific area sufficiently uniform in composition, structure, age, size, or condition, such that it is distinguishable from adjacent areas for management purposes.

Term	Definition
stand density	In silviculture, measured as the amount of tree biomass per unit area of land. This can be measured as the number of trees, basal area, wood volume, or foliage cover.
stand initiation	Begins when new seedlings actively invade or sprout or are planted and begin to grow following 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.
Stand Level Inventory	Acquires and updates state forest vegetation information at the forest stand. This information is used for tactical and operational decision-making. The Stand Level Inventory includes vegetation sampling protocols, forest stand data arranged in a database, computer programs for managing and using the information, and documentation of inventory elements.
stand management	Silvicultural techniques to be applied at the stand level in pursuit of management objectives. See *silviculture*.
standard(s)	A working principle that establishes the measure of performance extent, values, quantity, or quality for a given activity or item.
State Forester	The Chief Executive Officer of the State Forestry Department and the Secretary to the BOF (ORS 526.031), nominated by the governor and confirmed by the State Senate.
State Forests Division Chief	The head of the State Forests Division.
State Historic Preservation Office	Created in 1966 by federal statute. It administers the Statewide Plan for Historic Preservation and submits Oregon's nominations for the National Register of Historic Places.
State Land Board	Composed of the governor, secretary of state, and state treasurer. It was established under the Oregon Constitution to manage Common School Trust Lands and serve as trustee of the CSF.
stewardship	Responsible management of forest land to ensure its health, productivity, and biodiversity for current and future generations
stocking	A measure of the number of trees or basal area per acre in a stand.

Term	Definition
storied landscape	Within tribal contexts, refers to a multitude of intrinsically linked and deeply held understandings, relationships, and actions between indigenous cultures and the landscapes with which they interact throughout time, including but not limited to origin stories, landscape features, and wildlife attributes that signal hunting, gathering, planting, and other seasonal use patterns.
strategy(ies)	A carefully considered plan or method, more encompassing and on a larger scale than tactics, for achieving an objective. For the FMP, OAR 629-035-0030 requires "management strategies, which describe how the State Forester will manage the forest resources in the planning area to achieve the goals articulated in the plan. The strategies shall identify management techniques the State Forester may use to achieve the goals of the plan during the implementation phase of the plan."
stream	A water course having a distinct channel that carries flowing surface water during some portion of the year, including associated beaver ponds, oxbows, side channels, and stream-associated wetlands if these features are connected to the stream by surface flow during any portion of the year. Ephemeral overland flow is not a stream because this type of flow does not have a defined channel.
stream classification	Used to apply stream protections. Streams are classified using a combination of FPA and WOSF HCP classifications.
stream reach	A section of a stream along which similar hydrologic conditions exist, such as channel gradient, form, or other physical parameters.
structure(s)	The physical parts of an ecosystem that can be seen and touched; typical structures in a forest are trees of various sizes, standing dead trees (snags), and fallen dead trees.
successional	A series of changes by which one group of organisms succeeds another group; a series of developmental stages in a plant community.

Term	Definition
sustainability, sustainable	Sustainability is the ability of an ecosystem to maintain ecological processes and functions, biological diversity, and productivity over time. Sustainable forest management describes forest management regimes that maintain the productive and renewal capacities, as well as the genetic, species, and ecological diversity of forest ecosystems.
swale	Shallow, gently sloping, or depressed area of land that functions to capture and infiltrate runoff, that can collectively serve to reduce erosion and sustain streamflows.
Swiss needle cast (SNC)	A foliage disease specific to Douglas fir caused by the fungal pathogen *Nothophaeocryptopus gaeumannii*. SNC symptoms include yellow needles and decreased needle retention, resulting in sparse crowns and reduced diameter and height growth.

T

Term	Definition
tectonic	Resulting from changes in the Earth's crust.
threatened and endangered species	Endangered species are those plants and animals that have become so rare they are in danger of becoming extinct. Threatened species are plants and animals that are likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Federal and state agencies make formal classifications of wildlife species, according to standards set by federal and state ESAs.
trade-offs	An exchange of one thing for another. Understanding trade-offs is a critical part of decision-making and planning where maximizing benefits from all resources is not possible everywhere at the same time.

Term	Definition
Traditional Cultural Places	The National Historic Preservation Act and the 36 CFR 800 regulations implementing the act refer to "properties of traditional religious and cultural significance." These are geographic places prominent in a particular group's cultural practices, beliefs, or values, when those practices, beliefs or values: (i) are widely shared within the group, (ii) have been passed down through the generations, and (iii) have served a recognized role in maintaining the group's cultural identity for at least 50 years.
transformation	The process of an ecosystem changing to a condition that is different from historic structure, composition, or function. Both active and passive management can guide or allow transformation, respectively.
Travel Management Area(s)	Designated areas where it is restricted to operate or to be transported in a motor-propelled vehicle during certain dates as designated by the Oregon Department of Fish and Wildlife.
Tribal Partners, nine federally recognized Tribes of Oregon	Representatives of one or more of the nine federally recognized Tribes of Oregon. ORS 182.162–168 define state agencies' relations with federally recognized Tribes in Oregon when an agency develops or implements programs that may affect Tribes. The nine federally recognized Tribes of Oregon are Burns Paiute Tribe; Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians; Confederated Tribes of Grand Ronde; Confederated Tribes of Siletz Indians; Confederated Tribes of the Umatilla Indian Reservation; Confederated Tribes of the Warm Springs Reservation; Coquille Indian Tribe; Cow Creek Band of the Umpqua Tribe of Indians; and The Klamath Tribes.

U

Term	Definition
understory	The layer of vegetation beneath the main canopy of a forest.
unimpeded access	Provides reasonable opportunity for access, considering human safety, infrastructure, and topographic constraints.
uplift (geologic)	The process by which Earth's surface slowly rises either due to an increasing upward force applied from below or decreasing downward force (weight) from above.

V

Term	Definition
variable retention harvest	Timber harvest that is a combination of thinned and unthinned areas with regeneration patch cuts to create openings intended to mimic small-scale natural disturbances.
viewshed(s)	An area of land, water, or other environmental element that is visible to the human eye from a fixed vantage point and often is considered valuable or worth preserving for aesthetic reasons.
visually sensitive corridor	The area within 150 feet (measured on the slope) of the outermost edge of the roadway along both sides of the highway.

W

Term	Definition
watershed(s)	An area within which all water that falls as rain or snow drains to the same stream or river. Watersheds can vary greatly in size, from that of a small stream to a larger waterbody.
watershed council(s)	Based in local communities across the state. While natural resource specialists lead the councils, their boards of directors are made up of local community members. They assess and monitor environmental conditions and conduct voluntary conservation projects to restore and enhance the waters and lands for native species and people. They work with local landowners, community members, companies, elected officials and agencies. The Oregon legislature encourages local governments to form watershed councils (ORS 541.910).
watershed restoration project(s)	Per the Oregon Watershed Enhancement Board, specifies involvement of an on-the-ground element such as riparian planting, fish habitat construction, wetland restoration, livestock grazing plans, and water conservation projects that support watershed processes, which support watershed health.
wetland(s)	As defined in Oregon's Forest Practice Rules OAR 629-24-101 (77), wetlands are "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

Term	Definition
windthrow	Trees felled by high winds.
working forest(s)	As defined by Oregon Forests Resources Institute, "forests where the sustainable production of timber is carefully balanced with protecting other important resources such as water quality and wildlife habitat are known as 'working forests.' After timber is harvested from these forests, they are replanted and harvested again in a sustainable process that may span decades, and even lifetimes."

Y

Term	Definition
young stand management	Activities that benefit growth of stands after regeneration harvest or natural disturbance and can include replanting, herbicide application to reduce competition, and precommercial thinning to enhance tree size and growth rate.

APPENDIX A

Public Engagement

The engagement process ensured that interested parties had opportunities to provide meaningful input on the development of the *Western Oregon State Forests Management Plan* (FMP). This appendix is a high-level summary of the stakeholder, public, and tribal engagement efforts, including the engagement approach, goals, and activities.

Goals, Methods, and Key Audiences

A comprehensive strategy for public engagement and communications was developed early in the FMP process. The goals of the stakeholder engagement process included the following items.

- Fully informing counties, Tribes, stakeholders, and the general public throughout the FMP development process.
- Providing counties, Tribes, stakeholders, and the public with opportunities to engage and offer input at multiple levels throughout the process.
- Obtaining a better understanding of what Oregonians care about when it comes to forest management.
- Ensuring state agencies are engaged as an integral part of the process and are supportive of the FMP outcomes.
- Providing clear expectations for how stakeholder and public input will be used and integrated into the FMP.
- Aligning engagement and outreach opportunities with related processes such as the *Western Oregon State Forests Habitat Conservation Plan* (WOSF HCP) National Environmental Policy Act (NEPA) process and other Oregon Department of Forestry (ODF) processes.

ODF developed the FMP through a combination of content development by staff and technical experts and feedback from stakeholders and the public. The process for developing the FMP and integrating feedback from stakeholders and the public is listed below.

- **Internal content development**. ODF worked with staff and technical experts to develop draft content.
- **Internal review**. ODF distributed content to ODF leadership, field staff, executive sponsors, and state partners for review.
- **Internal revisions**. ODF staff and technical experts reviewed internal feedback and revised content.
- **Leadership review and approval**. ODF leadership reviewed revised content and requested additional edits or approved content for external sharing.
- **Shared content with the Board of Forestry and committees**. ODF shared content with the Oregon Board of Forestry (the BOF), Forest Trust Lands Advisory Committee, and State Forests Advisory Committee.
- **External review and input**. ODF shared content with the public and stakeholders for review.
- **Review of external feedback and revisions**. ODF reviewed external input and revised content accordingly.

Key Audiences

The engagement effort sought to involve all potentially affected and/or interested individuals, communities, and organizations. The process involved the following groups.

- The BOF
- Counties, including the Forest Trust Land Advisory Committee (FTLAC)
- Business and economic organizations
- Civic groups
- Conservation and wildlife groups
- Elected officials
- Existing ODF advisory groups, including the State Forests Advisory Committee
- Federal and state agencies
- General public
- Groups involved in forest management including foresters and fisheries
- Media
- ODF district staff
- Recreational users of the forest

- Small woodland, private forest landowners, and farm and agricultural interest groups
- Tribal representatives
- Timber and forest products industry

The following sections outline the key stakeholder and public engagement activities and include details on the convening interviews, surveys, FMP state agency meetings, meetings open to the public, and stakeholder meetings.

Interviews

County representatives and stakeholders provided their reflections from the past WOSF HCP engagement process, discussed ideas and suggestions for an effective FMP public engagement process, and expressed key interests and concerns related to FMP development. Thirteen virtual interviews took place with individuals of the following entities.

- FTLAC
- 350PDX
- Association of Oregon Counties
- Association of Oregon Loggers
- Cascadia Wildlands
- County Commissioners
- EcoTrust
- Hampton Lumber
- Oregon Forest Industries Council
- Oregon Wildlife Society
- Rasmussen Group
- State Forests Advisory Committee
- The Nature Conservancy
- Trout Unlimited
- Wild Salmon Center

Surveys

ODF developed two surveys to gather feedback from the public on draft goals and strategies. For the draft goals survey, participants were asked to rank support for each goal and provide general feedback. ODF then summarized the goals and posted them to the project website. For the draft strategies survey, participants were asked if the strategies were sufficient to meet their corresponding goal. Participants

were also asked to share if the strategies were on the right track, if anything was missing, or if any modifications were needed. A feedback summary was posted to the website. The following is a summary of those results.

- The survey on the Draft FMP Goals was sent out in August 2021; 54 individuals responded, providing a total of 459 comments.
- The survey on the Draft FMP Strategies was sent out in December 2021; 1,344 individuals responded, providing a total of 3,322 comments.
- ODF also solicited email feedback from stakeholders and the public on the Draft FMP Strategies and received 318 email responses.

State Agency Meetings

ODF has continued to work with state agencies throughout the development of the FMP. The FMP state agencies include government agency representatives from the Oregon Department of Environmental Quality, Oregon Department of State Lands, and Oregon Department of Fish and Wildlife. Members have been meeting approximately monthly from June 2021 through spring 2026. Members voluntarily work together to provide advice on how the FMP can achieve a mutually acceptable outcome that satisfies, to the greatest degree possible, the interests of all participants. FMP state agencies also serve on the WOSF HCP Scoping Team, allowing for continuity between the two processes.

Meetings Open to the Public

ODF engaged the public early in the FMP development process, occurring between 2021 and 2023, and during the FMP rulemaking process, starting in 2025. During early FMP development, ODF held public meetings via webinars, because of COVID-19 pandemic concerns. Stakeholders and members of the public were invited to meetings open to the public using ODF's GovDelivery notification system. GovDelivery was also used to share links to materials, meeting recordings, and surveys.

Five western Oregon FMP meetings open to the public took place between May 2021 and February 2023. The meetings open to the public included updates on the FMP process, presentations, and question-and-answer discussions followed by informal discussions with meeting participants to discuss topics of most interest to participants. During meetings open to the public, ODF answered questions and received comments on the development of the FMP. Following the meetings, comments related to goals and strategies were provided to ODF to inform revisions.

ODF notification to inform stakeholders and the public about the meetings included the following methods.

- Email distributions to interested parties
- Posts on ODF social media including Facebook and Twitter

- Meeting notices via FlashAlert to media in areas that could be covered in the WOSF HCP (including Portland media)
- Posts on the ODF news site
- Posts on the WOSF HCP and FMP project webpages

The meetings open to the public received strong participation and engagement. Attendance ranged from approximately 40 to 90 participants (Table A-1).

TABLE A-1 Public Meetings

Open Public Meeting Date	Attendees	Meeting Purpose
May 6, 2021	Over 70 members of the public attended via webinar	• Provide an introduction to the FMP project and describe the engagement process for this effort. • Provide an update on the WOSF HCP and orientation to the Draft WOSF HCP on the ODF website. • Provide updates on the WOSF HCP NEPA process.
August 10, 2021	Over 70 members of the public attended via webinar	• Provide an update on the FMP project and describe the engagement process for this effort. • Provide an update on the Administrative Draft WOSF HCP. • Provide an update on the WOSF HCP NEPA process.
October 12, 2021	40 members of the public attended via webinar	• Provide an update on the FMP and regional project and describe the engagement process for this effort. • Provide an update on the Administrative Draft WOSF HCP. • Provide an update on the WOSF HCP NEPA process.

Open Public Meeting Date	Attendees	Meeting Purpose
December 7, 2021	Over 50 members of the public attended via webinar	• Provide an update on the FMP and regional project and describe the engagement process for this effort. • Provide an update on the Administrative Draft WOSF HCP. • Provide an update on the WOSF HCP NEPA process.
February 7, 2023	Over 90 members of the public attended via webinar	• Provide an update on the WOSF FMP and describe the upcoming engagement process. • Provide an update on the Administrative Draft WOSF HCP. • Provide an update on the WOSF HCP NEPA process.

As part of the rulemaking process, ODF held two public comment periods. The first public comment period took place from November 1, 2025 through January 31, 2026. The second public comment period took place in June 2026. The first comment period included one virtual public hearing and three in-person public hearings—located in Forest Grove, Tillamook, Eugene—in January 2026. One virtual public hearing was held in June 2026, as part of the second public comment period. ODF revised the draft FMP in consideration of public comments.

Stakeholder Meetings

The project team conducted meetings with interested parties who expressed a cross-section of interests. The purpose of these meetings was to review and discuss FMP goals and strategies or topics as requested. The project team conducted three large meetings and several small meetings as requested. Stakeholder groups included conservation interests, industry representatives, and recreation interests.

ODF held several joint stakeholder meetings to discuss the development of the FMP (Table A-2). These meetings provided an opportunity for stakeholders to learn more about the FMP development process and to provide specific feedback on the draft and strategies of the FMP. Feedback from the meetings was captured in meeting summaries and shared with ODF to inform the FMP. Links to meeting summaries, recordings, and surveys were made available to participants via email.

TABLE A-2 Stakeholder Meetings

Meeting Date	Attendees	Meeting Purpose
Joint Stakeholders		
August 18, 2021	24 stakeholders attended the meeting, 71 comments received	• Review and discuss draft FMP goals.
December 9, 2021	42 stakeholders attended the meeting	• Review and discuss draft FMP strategies on climate change, carbon, drinking water, forest resilience, wildfire, and soil.
December 13, 2021	40 stakeholders attended the meeting	• Review and discuss draft FMP strategies on timber production, restoration, wildlife, aquatics and riparian, revenue, and recreation, education, and interpretation.
Conservation Interests		
June 24, 2021	Two stakeholders attended the meeting	• Discuss drinking water issues related to the FMP.
February 14, 2022	Three stakeholders attended the meeting	• Discuss FMP goals and strategies feedback.
Industry Representatives		
February 17, 2022	Three stakeholders attended the meeting	• Discuss FMP goals and strategies feedback.

ODF also engaged in several meetings and phone calls with individual stakeholders throughout the process to check in on the development of the FMP and to understand their interests, concerns, feedback, and suggestions as they relate to the FMP.

Forest Trust Land Advisory Committee

ODF provided updates on the FMP during the following FTLAC meetings.

- May 28, 2021
- August 27, 2021
- September 17, 2021
- October 8, 2021
- December 3, 2021

- February 18, 2022
- August 12, 2022
- February 24, 2023
- April 14, 2023
- August 11, 2023
- November 3, 2023
- February 23, 2024
- May 24, 2024
- November 15, 2024
- May 23, 2025
- November 7, 2025
- December 19, 2025

In fall 2024, the BOF, FTLAC, and State Forests Division (Division) staff discussed potential timber harvest scenarios the Division would model to demonstrate a range of possible trade-offs among resource goals under the proposed FMP and WOSF HCP governance framework. At the June 4, 2025 BOF meeting, Division staff shared the results of the modeled scenarios for discussion between the BOF, FTLAC, and Division staff to assess whether the range of potential outcomes under the proposed FMP could be sufficient to meet greatest permanent value (GPV). Informed by the discussion with FTLAC, the BOF provided feedback to guide the Division in developing subsequent harvest scenarios presented in fall 2025 and winter 2026, which inform future Implementation Planning and contribute to further defining measures for reporting to the BOF on FMP performance.

State Forests Advisory Committee

ODF provided updates on the FMP during the following State Forests Advisory Committee meetings.

- April 23, 2021
- June 11, 2021
- October 29, 2021
- April 8, 2022
- June 24, 2022
- October 27–28, 2022
- April 7, 2023
- June 1–2, 2023

- October 27, 2023
- March 8, 2024
- May 17, 2024
- October 25, 2024
- October 24, 2025
- March 20, 2026

Tribal Sovereign Nations' Coordination

ODF has engaged Tribal Partners in the government-to-government framework on the development of the cultural resources goals and strategies through six individual tribal workgroup meetings from August 2021 to March 2022. ODF will continue to work with Tribal Partners in this forum to integrate their interests in ODF's planning and implementation processes at every level.

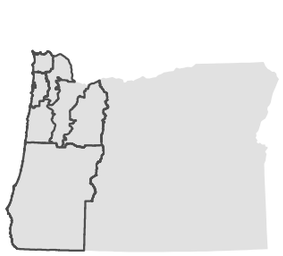
Tribal Partners include the following nine federally recognized Tribes of Oregon: Burns Paiute Tribe; Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians; Confederated Tribes of Grand Ronde; Confederated Tribes of Siletz Indians; Confederated Tribes of the Umatilla Indian Reservation; Confederated Tribes of the Warm Springs Reservation; Coquille Indian Tribe; Cow Creek Band of the Umpqua Tribe of Indians; and The Klamath Tribes.

Prior to entering the rulemaking process, ODF provided a revised FMP for comment from September 1, 2025 through January 31, 2026.

FIGURE B-1

Western Oregon FMP Planning Area

639,573 Acres Managed by ODF



- District Boundary
- City Limit

FMP Planning Area

- Board of Forestry
- Common School Lands
- District Office
- Tillamook Forest Center
- Districts

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Miles

Astoria District

Forest Grove District

Tillamook District

West Oregon District

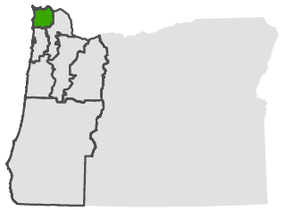
North Cascade District

Western Lane District

FIGURE B-2

Astoria District Planning Area

136,856 Acres Managed by ODF



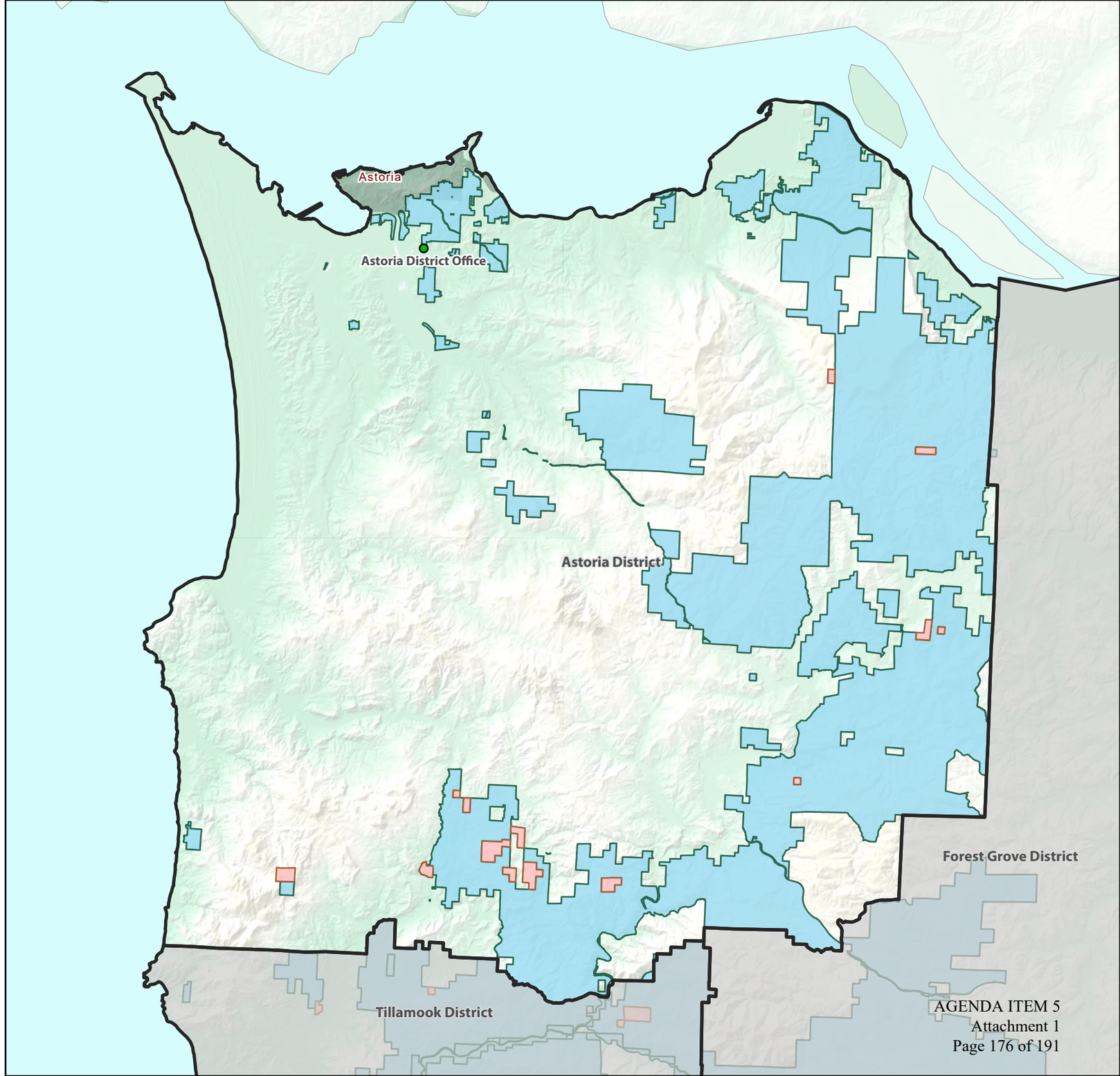
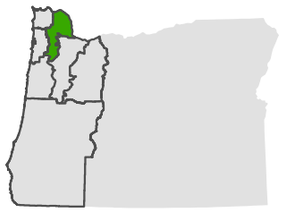
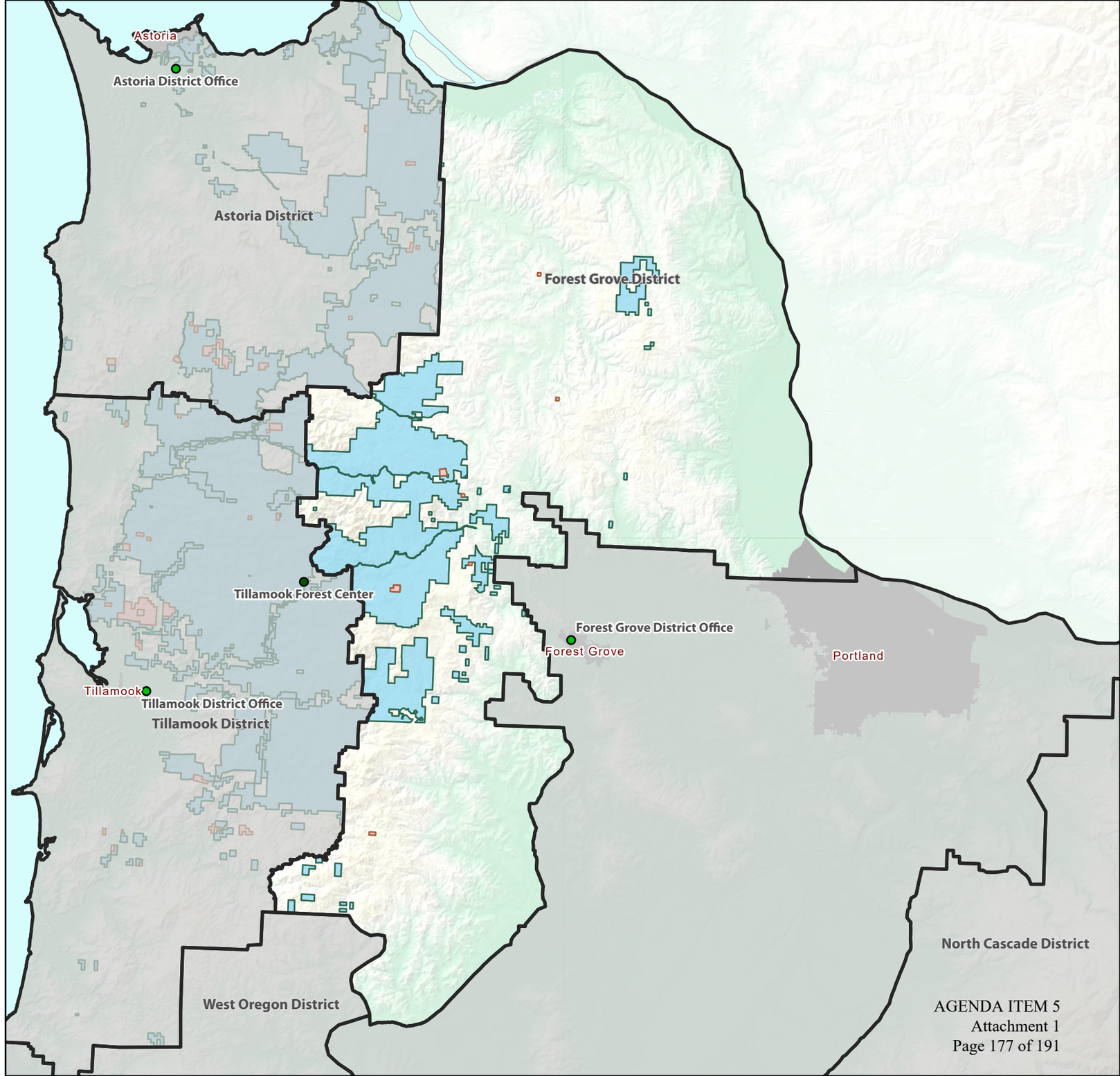


FIGURE B-3

Forest Grove District Planning Area

115,009 Acres Managed by ODF





District Boundary
City Limit
FMP Planning Area
Board of Forestry
Common School Lands
District Office
Tillamook Forest Center

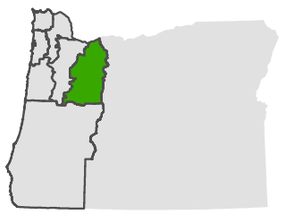
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FIGURE B-4

North Cascade District Planning Area

47,475 Acres Managed by ODF



District Boundary
City Limit
FMP Planning Area
Board of Forestry
Common School Lands
District Office

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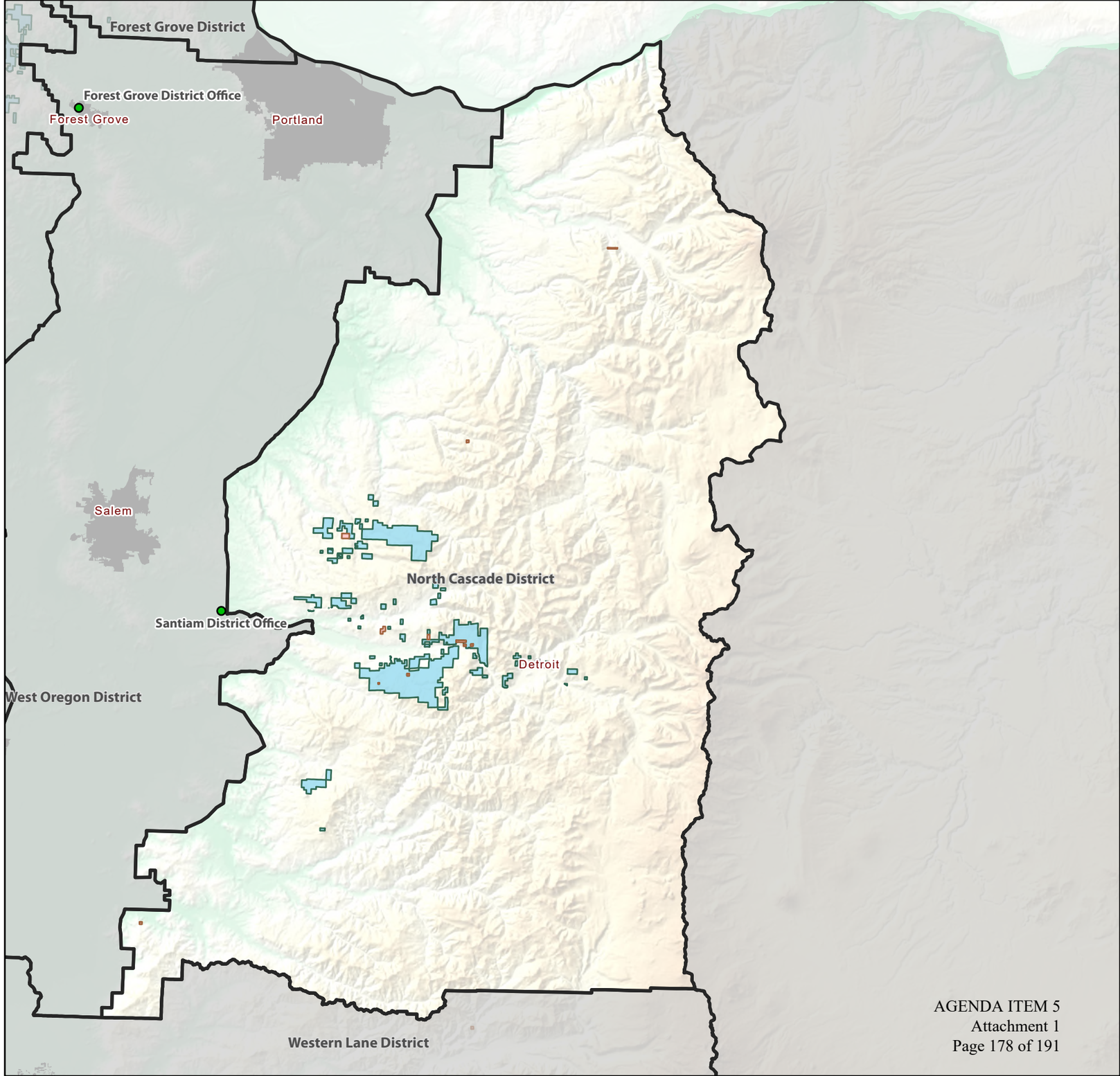
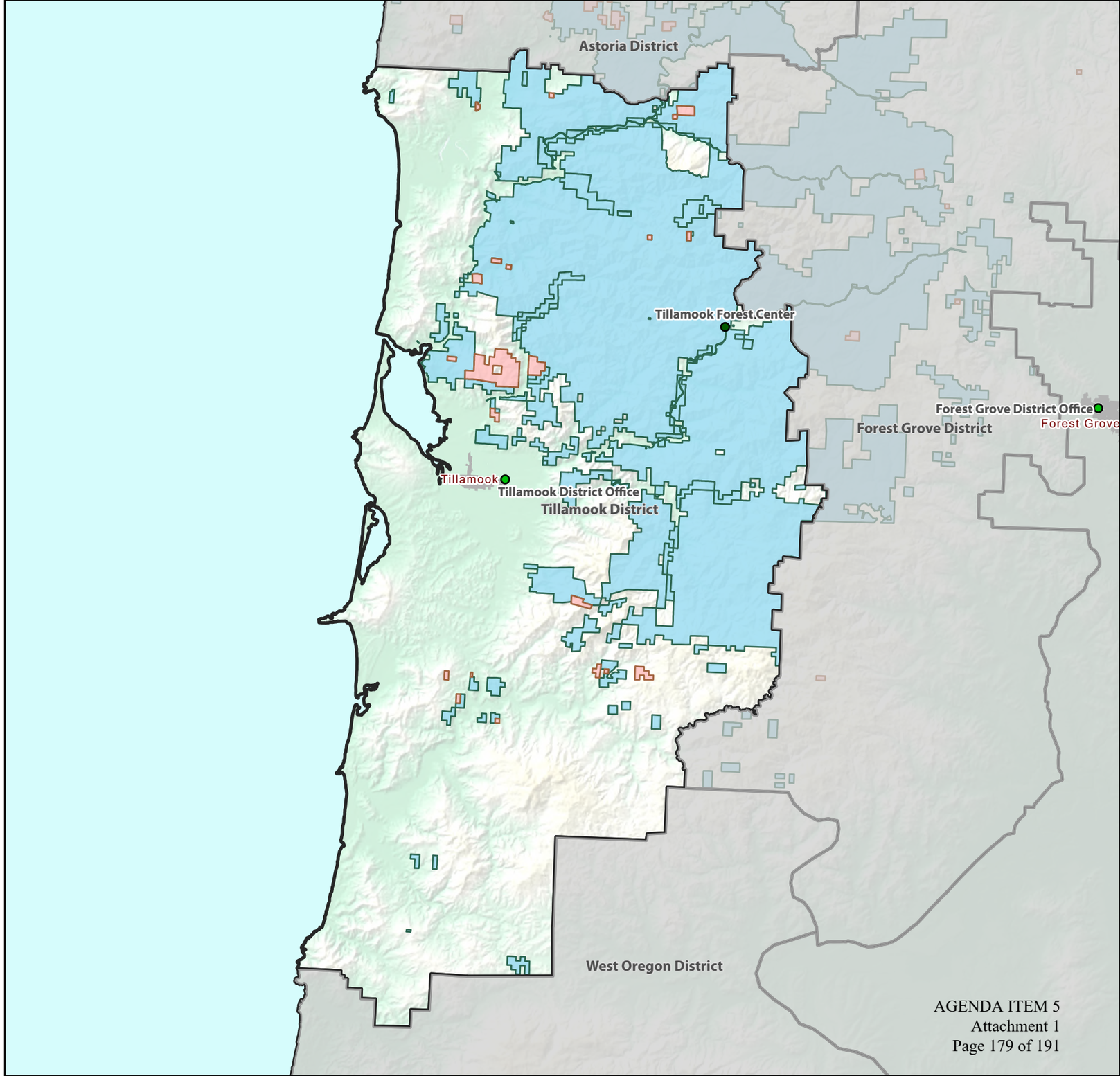


FIGURE B-5

Tillamook District Planning Area

250,589 Acres Managed by ODF



District Boundary
City Limit

FMP Planning Area
Board of Forestry
Common School Lands
District Office
Tillamook Forest Center

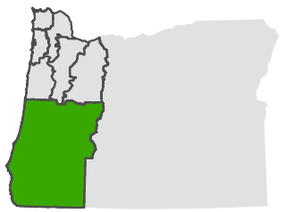
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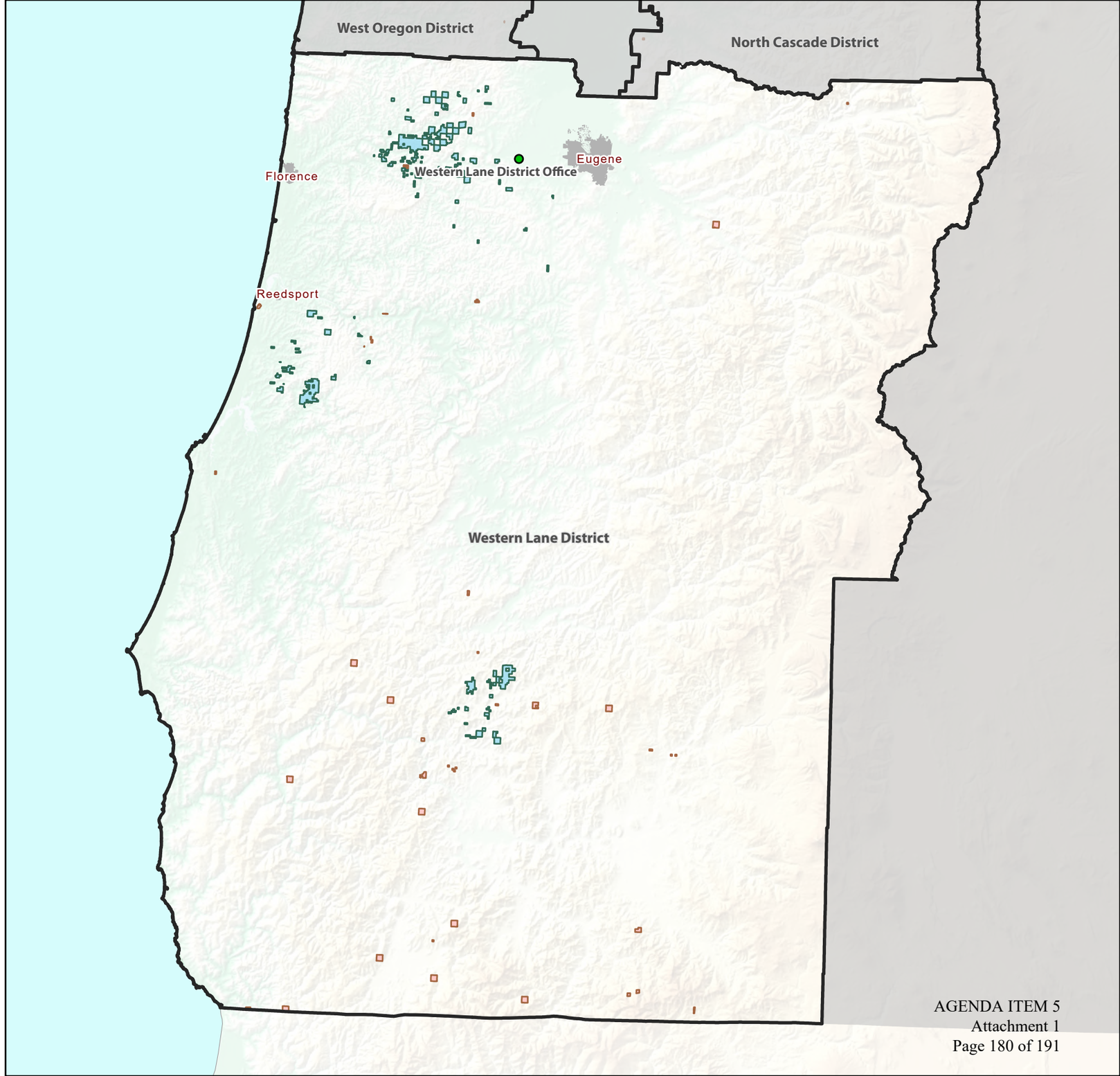
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FIGURE B-6

Western Lane District Planning Area

53,031 Acres Managed by ODF





District Boundary
City Limit
FMP Planning Area
Board of Forestry
Common School Lands
District Office

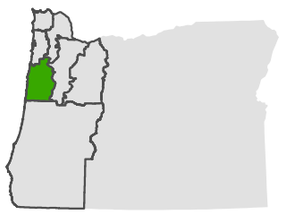
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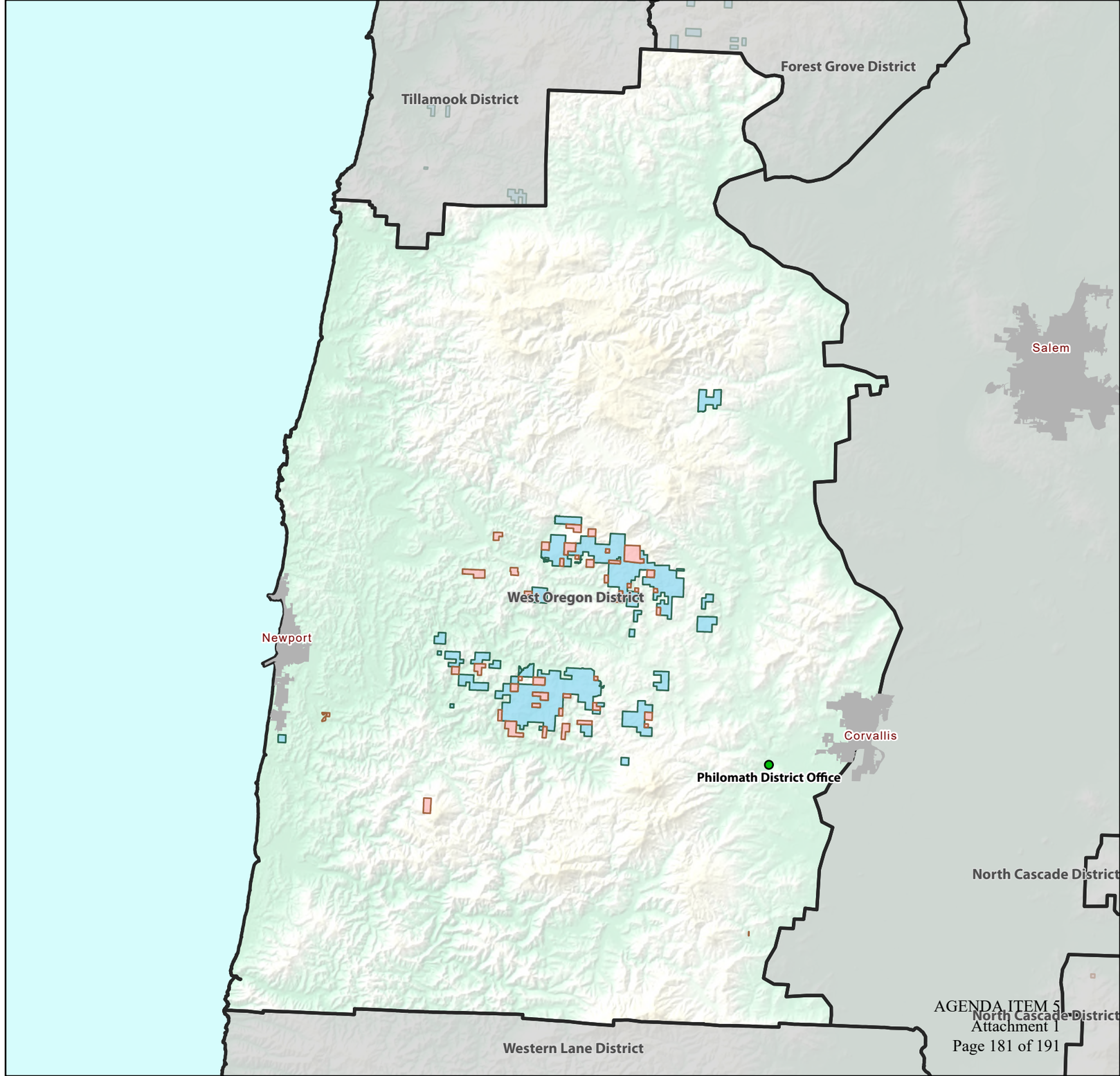
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FIGURE B-7

West Oregon District Planning Area

36,613 Acres Managed by ODF





- District Boundary
- City Limit

FMP Planning Area

- Board of Forestry
- Common School Lands
- District Office

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Appendix C
Description of Figures

The Oregon Department of Forestry (ODF) makes every attempt to ensure our documents are accessible. Should you need additional assistance, please contact us at ODF.StateForestMP@ODF.oregon.gov for accessibility assistance.

Land Acknowledgement

No figures.

Chapter 1 Introduction

Figure Number	Figure Title	Description of Figure
1-1	**Greatest Permanent Value Categories and Icons.** GPV category icons are used throughout Chapter 3, *Forest Resources, Goals, and Strategies*, to indicate connections with social, economic, and environmental resources and concepts.	Examples of social connections include the protection of cultural resources; recreation, education, and interpretation opportunities; and opportunities to collect special forest products (e.g., firewood, edible fungi, and salal). Examples of economic connections include sustainable and predictable production of forest products that support local and regional economies, including revenue generation for local taxing districts and management of state forest lands. Examples of environmental connections are healthy, sustainable, resilient forests; properly functioning

Figure Number	Figure Title	Description of Figure
		aquatic habitats for native fish and aquatic life; habitat for native wildlife; and carbon sequestration and storage.
1-2	**Relationship with Other Supporting Plans and the Planning Process.** This figure provides additional detail about how federal and state laws and supporting implementation documents work in conjunction with the FMP to inform the tiered planning levels of implementation.	The FMP provides overall high-level forest management goals and strategies. It is based on federal and state law and the plan itself is a state law. Supporting documents provide additional standards or requirements to implement the FMP. Federal and state laws, including the FMP, as well as the supporting documents, guide IPs, IPs are sub-geographic plans with mid-level objectives, management approach, and activities. IPs guide OPs. OPs include operational and project-level detail. Monitoring and reports are the result of implemented OPs, and those results inform the adaptive management process. The adaptive management process is the process by which supporting documents may be adjusted.

Chapter 2 Management Approach

Figure Number	Figure Title	Description of Figure
2-1	**Social, Economic, and Environmental Reciprocity.** Ecosystem services deliver social and economic benefits, and social and economic benefits can be obtained in a way that supports environmental benefits.	Figure 2-1 is a flowchart that depicts the connections between ecosystems, humans, and the reciprocity between ecosystem services and services to ecosystems. Ecosystem services provided by the ecosystem itself include provisioning services like timber products, food, and clean air and water; regulating services like carbon storage; cultural services like recreational and spiritual benefits; and supporting services like soil formation and pollination. Human actions that can serve ecosystems include protecting services like fish and wildlife habitat protection, enhancing services like thinning, restoring services like stream enhancement projects, and supporting services like natural resource stewardship practices.

Figure Number	Figure Title	Description of Figure
2-2	**Ecologically Sustainable Forest Management.** Practices that promote adaptive capacity to secure GPV.	Figure 2-2 is a flowchart of ecologically sustainable forest management that promotes adaptable, productive, sustainable ecosystems through designated emphasis areas, management of landscape conditions, and management of stands. Within emphasis areas, example practices include protection of wetlands and steep slopes. Within Landscapes, example practices include habitat connectivity and structural diversity. Within Stands, example practices include retention and reforestation with diverse or alternate species mixes. Ecologically sustainable forest management aims to provide social, economic, and environmental ecosystem services, such as cultural values, recreation, education, and interpretation opportunities; sustainable and predictable production of forest products that generate revenue and support the economy; properly functioning aquatic habitat for fish and aquatic life; habitats for native wildlife; clean air and water; and other important services.
Text Box	**Subclasses of the Forest Land Management Classification System.** Each area designated as focused, special, or high value conservation stewardship is categorized according to subclasses that denote the resource emphasis.	The text box lists the subclasses and their FLMCS stewardship class. Administrative sites are classified as Special Use stewardship. Agriculture, grazing, and wildlife forage areas can be classified as Focused Stewardship or Special Use. Aquatic and riparian habitat areas can be classified as Focused Stewardship or High Value Conservation Stewardship. County or Local Comprehensive Plan areas are classified as Special Use. Cultural resources areas are classified as Focused Stewardship or Special Use. Deeds are classified as Focused Stewardship or Special Use. Domestic water use areas are classified as Focused Stewardship or Special Use. Easements are classified as Focused Stewardship or Special Use. Energy and materials areas are classified as Focused Stewardship or Special Use. Operationally limited is classified as Special Use. Plant areas are classified as Focused Stewardship. Recreation areas are classified as Focused Stewardship or Special Use. Research and

Figure Number	Figure Title	Description of Figure
		Monitoring areas are classified as Focused Stewardship or Special Use. Transmission corridors are classified as Focused Stewardship or Special Use. Unique Threatened or Endangered Plant areas are classified as HVCAs. Areas with visual values are classified as Focused Stewardship or Special Use. Wildlife habitat areas are classified as Focused Stewardship, Special Use, or HVCAs.
2-3	**Landscape-Level Forest Stand Diversity Contributions to Ecosystem Function**. Management across the landscape supports diversity, connectivity, complexity, and redundancy, which, in turn, supports adaptive capacity of the forest for sustained ecosystem services delivery under changing conditions.	Figure 2-3 shows three pictures characterizing different contributions of seral stand conditions: young, middle-age, and older. Stand seral diversity contributes value to the ecosystem. The design of stand seral conditions across the landscape supports diversity, connectivity, complexity, and redundancy, which enhances function and improves adaptive capacity. Young forests (depicted by picture of a deer) are sunlight-filled and provide many wildlife species with abundant food resources, including berries, forbs, and grasses. Middle-age forests (depicted by picture of a salamander) are transitional forests contributing to wildlife habitat connectivity as they mature and develop stand characteristics found in older forests. Older forests (depicted by picture of an owl) contain multi-layered canopies, large trees, snags, and downed wood that provide wildlife nesting, roosting, and denning habitats.
2-4	**Examples of Emphasis Areas across the Landscape.** Active management is integrated across the landscape guided by resource management emphasis areas.	Figure 2-4 shows two aerial views of the same managed landscape highlighting how different timber harvest treatments may be applied in areas with different management emphasis by subclasses and stewardship classes. View A shows aquatic and riparian habitat and wildlife habitat subclasses around and near streams with the stewardship class being HVCAs. View B shows recreation subclass emphasis areas day use sites and the Tillamook Forest Center, where Special Use applies, and trails and dispersed campsites, where Focused Stewardship applies.

Chapter 3 Forest Resources, Goals, and Strategies

Figure Number	Figure Title	Description of Figure
3-1	**Distribution of Stand Ages as a Percentage of Area of Western Oregon State Forests.** Stands in the 60–89 year age bracket represent the plurality of stands, reflecting the management history of state forest lands. Reforestation following a period of salvage logging and a series of wildfires in the early 20th century resulted in a large number of stands in this age range.	Figure 3-1 is a bar graph showing the age distribution of stands in western Oregon state forests in percentages by 30-year-old age groups. The percent of acres with stands 0–29 years old is 24%, 30–59 years old is 24%, 60–89 years old is 40%, 90–119 years old is 10%, and 120 years or older is 2%.
3-2	**Tree Species Composition in Western Oregon State Forests.** Stand composition affects potential vulnerabilities or resilience to disturbances and stressors such as insect outbreaks, pathogens, fire, windthrow, drought, and climate change.	Figure 3-2 is a bar graph showing the percentage of acres of different tree species in western Oregon state forests. The dominant forests are mixed Douglas-fir at 42%, followed by homogenous Douglas-fir at 31%. Hemlock and mixed hemlock stands are approximately 9%. Hardwoods and mixed hardwoods are 14%. Other species and non-forested lands are at approximately 4%.
Text Box	**State Forests Revenue Disbursement**	The text box shows a pie chart of state forests revenue disbursement. 98% of State Forests Division revenue is generated from timber sales. 63.75% of state forest revenue is distributed to local counties and taxing districts for local services and schools. 36.25% of state forest revenue is retained by the State Forests Division for forest management and restoration.
3-3	**State Forest Roads by District.** There are approximately 4,500 miles of road on state forest lands; approximately 85% of these roads are surfaced (primarily graveled, though	Figure 3-3 is a bar chart showing the miles of state forest roads by district and what portion of those roads are unsurfaced. Astoria District has approximately 1,000 miles of roads of which 7% are unsurfaced, Forest Grove has approximately 800 miles of which 5% are unsurfaced. North Cascade has

Figure Number	Figure Title	Description of Figure
	some main travel routes are paved).	approximately 400 miles of which 16% are unsurfaced, Tillamook has almost 1,500 miles of which 18% are unsurfaced. West Oregon and Western Lane Districts each have approximately 350 miles of roads. Approximately 27% of roads for West Oregon and 44% for Western Lane are unsurfaced.
Text Box	**Tillamook Forest Center Annual Overview**	The text box shows average data from fiscal year 2024 and 2025. Approximately 62,700 people visited the Tillamook Forest Center. People gave approximately 3,070 volunteer hours. Approximately 2,700 people participated in education programs and 5,200 people participated in interpretive services.
3-4	**Scenic Waterways.** Scenic-designated segments of the Nestucca, Nehalem, and Rogue Rivers flow through the planning area.	Figure 3-4 is a four-panel map showing the scenic-designated segments of rivers within different districts of the planning area. One panel shows an overview of western Oregon state forest districts and the state's scenic-designated water ways. The other panels show details of which districts have sections of scenic waterways. A segment of the Nehalem River Scenic Waterway flows through the Astoria and Tillamook Districts. A segment of the Nestucca Scenic Waterway flows through both Tillamook and Forest Grove Districts. And a segment of the Rogue Scenic Waterway flows through Western Lane District.
3-5	**Slope Steepness across the Planning Area.** The highest percentage of steeper slopes in the planning area are in the Tillamook and Western Lane Districts.	Figure 3-5 is a bar graph showing acres of each district that are 0–30% slope, 30–60% slope, and >60% slope. Tillamook District has approximately 125,000 acres of the total district area of 250,000 acres that have slopes greater than 60%, the largest area of all districts.
3-6	**Forest Soils Developed on Marine Siltstones in Less Rugged Coastal Areas.** Soils formed on underlying marine sedimentary formations from deep weathering are predominantly silts, sands, and clays with minor amounts of	Figure 3-6 is an annotated photograph of a soil profile, showing the demarcation between underlying geologic formation of marine siltstone below the forest soils composed of silt, clay, and sand. A rock hammer is located in the center of the photo at the line indicating the border between soil and underlying marine silt stone to show scale.

Figure Number	Figure Title	Description of Figure
	gravel and can be wet most of the year.	
3-7	**Fine- and Coarse-Grained Soils by District.** The Tillamook District has the highest proportion of coarse-grained soils in the planning area.	Figure 3-7 is a bar graph showing acres of each district that are either fine- or coarse-grained soils. Astoria, West Oregon, and Western Lane Districts have predominantly fine-grained soils. Forest Grove, North Cascade, and Tillamook Districts have predominantly coarse-grained soils.
3-8	**Paths of the Forest Carbon Cycle.** Forest vegetation sequesters carbon dioxide from the atmosphere in living tissues and provides long-term storage of carbon in trees, snags, downed wood, other plants, and soils.	Figure 3-8 is a flow diagram showing carbon dioxide capture and emissions as part of a forest's carbon cycle. Carbon dioxide is removed from the atmosphere as forests grow and age. Carbon dioxide is released by fire, decomposition, biomass products like wood pellets, and short-term consumer products like paper. Long-lived products, like lumber, can sequester carbon until they start to decompose.
3-9	**Estimated Average Aboveground Carbon in Live Trees across ODF Districts**. Data are based on the 2022 Forest Inventory and Analysis estimate on western Oregon state forests.	Figure 3-9 is a bar graph of aboveground carbon in woody biomass measured by US tons per acre. The average aboveground carbon of all districts is 59.3. The aboveground carbon of individual districts are as follows: Astoria is 59.6, Forest Grove is 60.3, North Cascade is 57.6, Tillamook is 53.9, West Oregon is 54.0, and Western Lane is 86.6.
3-10	**Watersheds Overlapping with North Coast Districts and the Planning Area**. The median percentage of ODF-managed lands in northwest districts by HUC-12-sized sub-watersheds is 26% (range <1% to 100%).	Figure 3-10 is a map of the north coast districts within the planning area with Hydrologic Unit Code (HUC)-12 watersheds overlayed. HUC-12s are the smallest-sized watershed delineated by the U.S. Geological Survey.
3-11	**Watershed Enhancement Actions.** In-stream, riparian, road improvement, and donations tracked by OWEB, 1995–2025.	Figure 3-11 shows representative photographs of five types of watershed enhancement projects, along with quantities. ODF has implemented over 200 projects with over 200 miles of stream enhanced; donated over 8,000 trees for in-stream projects; improved over 350 road-stream crossings to enable aquatic organism access to over 300 miles of upstream habitat;

Figure Number	Figure Title	Description of Figure
		improved over 2,500 road-stream crossings on other streams to improve water quality; restored over 200 miles of riparian areas; closed or vacated over 175 miles of road; and donated over $50 million in-kind from ODF and $12 million from outside sources.

Chapter 4 Guidelines

Figure Number	Figure Title	Description of Figure
4-1	**Links among the FMP, Major Example Laws, Other Plans, and Policy Guidance.** This figure provides additional detail of the laws and supporting documents that inform the FMP and implementation.	Figure 4-1 is a flow diagram showing the connections and feedback between federal and state laws, including the FMP, and the tiered planning process. It is a more detailed version of Figure 1-2. It provides an example subset of laws that inform the FMP, including the Forest Practices Act, Stewardship Agreement, Clean Water Act, Clean Air Act, Endangered Species Act, Forest Land Management Classification System, and OAR Smoke Management. The supporting implementation documents are also provided in more detail and include the WOSF HCP, BOF Policy like the CCCP and VOF, OPs, the BOF Performance Measures, Adaptive Management Plan, and modeling. The figure highlights that supporting implementation documents inform the FMP goals and strategies specifically. Both the laws and the supporting documents inform IPs, which set mid-term objectives. IPs, in turn, inform the OPs, which set short-term objectives and guide operations. Monitoring and reporting communicate operations results and inform the adaptive management process, which may influence change of supporting documents.

Glossary

No figures.

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No figures.

Appendix A Engagement

No figures.

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B-3	**Forest Grove District Planning Area,** 115,009 Acres Managed by ODF	Figure B-3 is a map of the Forest Grove District that is in the northern part of the planning area, east of the Astoria and Tillamook Districts.
B-4	**North Cascade District Planning Area,** 47,475 Acres Managed by ODF	Figure B-4 is a map of the North Cascade District that is in the northern part of the planning area. The North Cascade District is east of Astoria, Tillamook, Forest Grove, and West Oregon Districts. The district goes as far north as the Forest Grove District and ends in the south at the Western Lane District, but state forest lands are generally east of Salem.
B-5	**Tillamook District Planning Area,** 250,589 Acres Managed by ODF	Figure B-5 is a map of the Tillamook District that is in the north-coast part of the planning area, south of the Astoria District and west of the Forest Grove District.

Figure Number	Figure Title	Description of Figure
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Western Oregon State Forests Management Plan


OREGON
DEPARTMENT OF FORESTRY

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Land Acknowledgement[1]

Indigenous tribes and bands have been with the lands that we inhabit today throughout Oregon and the Northwest since time immemorial and continue to be a vibrant part of Oregon today. We would like to express our respect to the First Peoples of this land, the nine federally recognized Tribes of Oregon: Burns Paiute Tribe, Confederated Tribes of Coos, Lower Umpqua & Siuslaw Indians, Confederated Tribes of Grand Ronde, Confederated Tribes of Siletz Indians, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Reservation, Coquille Indian Tribe, Cow Creek Band of the Umpqua Tribe of Indians, and The Klamath Tribes. It is important that we recognize and honor the ongoing legal and spiritual relationship between the land, plants, animals, and people indigenous to this place we now call Oregon. The interconnectedness of the people, the land, and the natural environment cannot be overstated; the health of one is necessary for the health of all. We recognize the pre-existing and continued sovereignty of the nine federally recognized Tribes who have ties to this place and thank them for continuing to share their traditional ecological knowledge and perspective on how we might care for one another and the land, so it can take care of us. We commit to engaging in a respectful and successful partnership as stewards of these lands, and as we are obliged by state law and policy, we will uphold government-to-government relations to advance strong governance outcomes supportive of Tribal self-determination and sovereignty.

[1] Land acknowledgement provided by Legislative Commission on Indian Services

CHAPTER 1

Introduction

1.1 Purpose and Scope of the Forest Management Plan

The *Western Oregon State Forests Management Plan* (~~plan or~~ FMP) provides management direction for all *Board of Forestry* ~~*Lands*~~[1]*Lands*[1] (BOFL) and *Common School Forest Lands* (CSFL) managed by the Oregon Department of Forestry (ODF) west of the crest of the Cascade Range. The purpose of the FMP is to ensure ODF's management of these lands provides *greatest permanent value* (GPV) to all Oregonians. GPV means healthy, productive, and sustainable forest *ecosystems* that over time and across the *landscape* provide a full range of social, economic, and environmental benefits. While the FMP provides the guidance for forest management across western Oregon, mid-term implementation and annual project plans are written and released to the public on a 10-year and annual to biennial basis.

This plan supersedes and replaces the *2010 Northwest Oregon State Forests Management Plan*, the *2011 Elliott State Forest Management Plan*, and the *2010 Southwest Oregon State Forest Management Plan*. The *Board of Forestry* (the BOF) may review, modify, or terminate ~~a plan~~the FMP at any time; however, the BOF will review the ~~plan~~FMP no less than every 10 years (Oregon Administrative ~~Rule~~Rules [OAR] 629-035-0030).

As a BOF-adopted plan, this FMP is designed to support the priorities and *goals* of other BOF plans, specifically the *Vision for Oregon's Forests* (VOF)[2] and the *Climate Change and Carbon Plan* (CCCP), through goals and strategies that promote *resilient* forest ecosystems and communities in light of changing conditions exacerbated by *climate change*.

[1] Terms italicized in this document are defined in the Glossary. Defined terms are italicized at the first instance in each chapter.

[2] All references are to direct the reader to another document that provides further information and are not intended nor should be construed as incorporating the cited or referred to document into the FMP.

The public and various organizations were involved in developing the FMP. For more information, see Appendix A, *Engagement*.

This chapter describes or provides the following.

- ~~Purpose and scope of the FMP, including~~The BOF's *guiding principles* ~~of~~for the ~~plan~~FMP, ownership and location of the lands governed by the ~~plan~~FMP, and history of the FMP.
- Plan themes: ~~*greatest permanent value* (~~GPV~~), *diversity, equity,* and *inclusion* (DEI),~~ considering and engaging all Oregonians, resilience to climate change*, sustainability,* and *adaptive management*.
- How the FMP relates to other plans and processes.
- An outline of the FMP chapters.

~~Definitions of italicized terms in this chapter and throughout the document are provided in the Glossary.~~

~~[1] Terms italicized in this document are defined in the Glossary. Defined terms are italicized at the first instance in each chapter.~~

1.1.1 Guiding Principles

The Forest Management Planning rule for state forests (OAR 629-035-0030) identifies required elements for FMPs. Among these are "guiding principles that include legal mandates and Board of Forestry policies." Taken together,In addition to the VOF and at the direction ofCCCP, the BOF, provided the following guiding principles directed, shown in italics, to direct the development of this FMP. The text that follows the principle explains the *policy* guidance and in some cases clarifies how the plan meets the principle.

Principle 1 – Greatest Permanent Value

The FMP will be grounded in the management mandates for BOFL as expressed in the GPV and Forest Management Planning OARs.

OAR Chapter 629, Division 35, -035-0020, Greatest Permanent Value, and OAR 629-035-0030, Forest Management of State Forest Lands, providesPlanning, provide the foundation for the development of the FMP.[3] The Forest Management Planning rule requires the State Forester to create plans to manage state forests for the BOF.GPV—balancing environmental, social, and economic benefits. GPV benefits include but are not limited to the following.

- Sustainable and predictable production of *forest products* that generate *revenues* for the benefit of the state, counties, and local taxing districts.
- Properly functioning *aquatic* habitats for salmonids, and other native fish and aquatic life.
- Habitats for native wildlife.
- Productive soil, and clean air and water.
- Protection against floods and *erosion*.
- Recreation.

The Forest Management Planning rule directs the FMP to include strategies that accomplish the following.

[3] Division 35 includes definitions, findings, and principles associated with acquired lands, language defining GPV, and direction for the development of FMPs.

GPV benefits include but are not limited to:

- *Sustainable* and predictable timber harvest and *revenues.*
- *Properly functioning aquatic habitats.*
- Protection, maintenance, and enhancement of *habitat* for *native* wildlife.
- Protection of soil, air, and water.
- Provision of outdoor recreational activities.
- Consideration of *landscape context.*

Also mentioned in the OARs are protection against floods and *erosion*; protection of water supplies; grazing, foraging, and browsing for domestic livestock; forest *administrative sites*; and mining leases and contracts.

The OARs direct that the FMP include strategies that accomplish the following.

- Contribute to *biological diversity* of forest stand types and *structures* at the landscape level and over time.
- Apply *silvicultural* techniques that provide a variety of forest conditions and resources.
- Conserve and maintain genetic diversity of forest tree *species*.
- Manage forest conditions to result in a high probability of maintaining and restoring properly functioning aquatic habitats.
- Protect, maintain, and enhance native wildlife habitats.
- Recognize that forests are dynamic.
- Provide for healthy forests by using an *integrated pest management* approach and appropriate genetic sources of seed.
- Maintain or enhance forest soil productivity.
- ~~Maintain and enhance forest productivity by producing~~Produce sustainable levels of timber~~.~~ consistent with protecting, maintaining, and enhancing other

forest resources.

- Apply management strategies that enhance timber yield and value while contributing to the diversity of habitats for native fish and wildlife.

OAR 629-035-0000 defines *active management* of state forest lands asThe GPV and the Forest Management Planning rule OARs require the State Forester to actively manage lands and include strategies for actively managing forest lands in the FMP. *Active management* involves application of silvicultural prescriptions, such as thinning and *regeneration* harvest, reforestation, and *young stand management*. However, certain forest resource goals are best achieved through deliberate *passive management* such as allowing stands to develop without silvicultural intervention, or regenerate after natural *disturbances* without active reforestation. Site-specific management decisions are made considering the future *objectives* for, as well as current characteristics of, forest stands. Chapter 2, *Management Approach*, and Chapter 3, *Forest Resources, Goals, and Strategies*, describe passive management and active management techniques and considerations for their application, which are consistent with the OAR definition of active management: "applying practices over time and across the landscape to achieve site-specific forest resource goals using an integrated, science-based approach that promotes the compatibility of most forest uses and resources over time and across the landscape." Site-specific forest resource *goals* can be achieved through deliberate *passive management*, as well as the active application of silvicultural prescriptions and other activities in accordance with the future *objectives* and current characteristics of forest stands.

TheThe GPV and Forest Management Planning rule OARs also direct that landscape context be considered. *Landscape* is defined as "a broad geographic area that may cover many acres and more than one ownership and may include a *watershed* or sub-watershed areas" (OAR 629-035-0000). Plans must contain "a description and assessment of the resources within the planning area and consideration of surrounding ownership in order to provide a landscape context" (OAR 629-035-0030).

Key to GPV, the State Forester is required to manage state forest lands in a manner to provide sustainable timber harvest within a broader management context through integrating and achieving a variety of forest resource management goals. Although the counties also have a recognizable interest. The OARs include in

revenue generated on state forests, OAR 629-035-0010 includes the following BOF finding~~:~~, which is consistent with GPV.

> The counties in which these forest lands are located have a protected and recognizable interest in receiving revenues from these forest lands; however, the Board [of Forestry] and the *State Forester* are not required to manage these forest lands to maximize revenues, exclude all non-revenue producing uses on these forest lands, or to produce revenue from every acre of these forests lands (OAR 629-035-0010).

~~The OARs also direct~~GPV and the Forest Management Planning rule also directs that the FMP be based on the best science available, use *monitoring* and research to generate new information, and use an adaptive management approach. Additional information on adaptive management is ~~defined as:~~found in Chapter 4, *Guidelines.*

> ~~The process of implementing plans in a scientifically based, systematically structured approach that tests and monitors assumptions and predictions in management plans and uses the resulting information to improve the plans or management practices used to implement them (OAR 629-035-0000).~~

Principle 2 - Biological Diversity

State forest lands will be managed, conserved, and restored to provide overall biological diversity of state forest lands, including the variety of habitats for native fish and wildlife and accompanying ecological processes. The GPV and Forest Management Planning rules are the BOF's expression of providing conservation.

Biological diversity is the cornerstone for fostering resilient forest ecosystems. The GPV and Forest Management Planning ~~rule~~rules include references to attributes that are directly tied to providing a multitude of environmental, social, and economic co-benefits associated with *biodiversity* on BOFL. These references include, but are not limited to, providing and restoring properly functioning aquatic systems; protecting, maintaining, and enhancing native wildlife habitats; contributing to diversity of forest stand types and structures at the landscape level and over time; and conserving and maintaining genetic diversity of forest tree species.

Principle 3 - Revenue

The FMP will provide sufficient revenue to ensure ODF's ability to manage, conserve, and invest in the forest in order to provide GPV.

The FMP ~~will~~strives to provide sufficient revenue to support the stewardship of these forest lands and ~~achieve the blend of~~produce economic, social, and environmental benefits. *Financial viability* is achieved over the long term through continued protection and management of the forest *asset*, and it is achieved over the short term with operational tools that ensure cash flow is available to ODF for sound management of state forest lands.

In the current business model, 98% of revenue used to support ODF's management of state forests is derived from timber ~~sales and all BOF expenditures and revenues~~. Revenues derived from the management of BOFL are ~~managed~~shared with the counties and local taxing districts in ~~the *Forest Development Fund*~~;which the management activities take place: 63.75% of ~~BOF~~ revenues are distributed to local counties and taxing districts~~. The remaining~~ and 36.25% of revenue ~~from state forest lands pays for~~is retained by ODF to fund the management of ~~state forest lands. Revenue~~BOFL. Revenues from CSFL is ~~used to reimburse ODF for management costs and the remaining net operating income is~~ transferred to the Oregon Department of State Lands (DSL~~).~~) to be deposited in the state *Common School Fund*, and DSL reimburses ODF for expenses associated with management of CSFL.

Expanding and diversifying revenue sources to support public benefits ~~can~~may increase long-term financial stability. ~~While~~ Revenues are cyclical~~, financial viability is achieved over the long term with business strategies that align anticipated funding availability with services that are prioritized by GPV.~~ and subject to market forces beyond ODF's control, and the balance of social, economic and environmental co-benefits produced will vary over time in alignment with available operating funds (Chapter 4, Section 4.3, *Asset Management Guidelines*). Several tools are used~~, including business improvements, financial metrics to assess future investments, new marketing opportunities,~~ to ensure ongoing management of state forests under different revenue ~~projections, *Implementation Plans* (IPs), the FMP, and risk~~outlooks ensuring fiscally responsible management into the future.

Principle 4 – Social Benefits

The FMP will provide for a range of social benefits for all Oregonians, including direct and indirect financial contributions to local and state governments, opportunities for public access and recreational use, support for diverse local employment opportunities, and the inclusion of Oregonians and their broad range of perspectives.

State forest lands support multiple social benefits on a variety of scales and contribute to community well-being for all Oregonians. ~~They provide *ecosystem services* including~~These benefits include clean air, clean water, shade, ~~*carbon sequestration*~~hunting, fishing, foraging, and ~~*storage*~~,recreational opportunities, like birding and ~~wildlife habitat services~~hiking, that draw in visitors, contribute to local and statewide tourism economies, and enhance the quality of life for all Oregonians. Other social benefits include various health factors such as improved mental and physical wellness, ~~in addition to~~mitigation of the negative impact of climate change, and enhance community cohesion around shared natural spaces. ODF provides opportunities for lasting and diverse outdoor recreation, education, and interpretive experiences that inspire visitors to enjoy, respect, and connect with Oregon's state forest lands. Active forest management provides revenue for counties, social services, and public education. It ~~builds~~supports communities by ~~supporting~~creating living-wage jobs and contributing to local, regional, and state economies.

Principle 5 – Forest and Watershed Restoration

The FMP will recognize that investments in forest and watershed restoration are necessary to achieve desired outcomes that align with the GPV policy direction for the BOF.

Restoration efforts are considerededessential to rehabilitate *degraded forest lands*. and *degraded watersheds.* Degraded conditions may exist because of past management practices, changing climatic conditions, or natural *disturbances* such as fire, windstormfires, windstorms, floods, and outbreaks of insectinsects or *pathogens*disease. Much of theOregon's state forest lands experienced significant degradation from repeated, large-scale wildfires and extensive logging in the first half of the 20th century prior to ODF management, and although most are they are now reforested, additional challenges remain where forests are underproductive or aquatic systems lack key components.need to be rehabilitated. Restoration efforts are carried out with the goal of restoring properly functioning ecological conditions and the ability of the forestresilient forests that continue to produce the benefits required underof GPV.

Forest Restoration

Sole reliance on natural regeneration, as opposed to proactively planting trees, in the wake of large-scale disturbance events (e.g., ice storms, wind events, floods, and fires) can extend periods of under-productive underproductive forest conditions and susceptibility to insects and disease. More immediate action, such as salvage of dead and downed trees followed by reforestation may be required to mitigate

additional fire or disease risks, improve *resilience*, and ~~productivity~~return the forest to ~~ensure~~ a ~~balance of GPV-related outcomes~~productive state in a reasonable timeframe.

The FMP recognizes these restoration needs and seeks creative funding mechanisms to implement them. Restoration efforts ~~will~~ contribute to diverse and *healthy forest landscapes* that allow for natural disturbance at different scales ~~within the context of a~~. This helps create working ~~*forest*~~forests that ~~will be~~are more resilient in the face of climate change, fire, or other disturbance events and stressors. Monitoring and adaptive management are key components of ~~the~~ restoration efforts.

Watershed Health

For over 20 years, ODF has made a concerted effort to conserve and improve rivers and watersheds throughout the state, with the direct involvement of local *Watershed Councils* and *Soil and Water Conservation Districts*. ODF's management plans and activities have been an important part of those efforts. The FMP ~~will continue to support~~supports the Oregon Watershed Enhancement Board's mission to "help protect and restore healthy watersheds and natural habitats that support thriving communities and strong economies" and ~~emphasize~~emphasizes a continuing commitment to restoration activities. This commitment recognizes the vital contribution that these forests can make to the success of large-scale regional efforts like the *Oregon Plan for Salmon and Watersheds* (Oregon Watershed Enhancement Board 2006).

Principle 6 – Pace and Scale

The FMP will be developed and implemented on a scale and at a pace that ~~provide~~provides a geographic and temporal range of economic, social, and environmental benefits.

~~The geographic scale of plan *strategy* and implementation will have an effect on the spatial distribution of plan *outcomes*. Likewise, the temporal pace of strategy implementation and investments will have an effect on the distribution of environmental, social, and economic outcomes over time. These dynamics will be considered in creating and implementing a plan that provides a range of benefits across space and time.~~

~~The FMP will not individually optimize environmental, social, or economic outcomes at each geographic scale or for every time period but will strive for a geographical and temporal blend of environmental, social, and economic outcomes.~~

Not all benefits can be optimized at every spatial scale for every time period. Therefore, ODF shall strive to achieve a range of benefits across the landscape and over time. Chapter 2, *Management Approach*, of this FMP describes how state forests are managed at different spatial and temporal scales to achieve a range of benefits. ODF allocates state forest lands according to stewardship classes that translate into a specific emphasis on different areas. The layout of these *emphasis areas* is intentionally designed to provide benefits at the larger landscape scale, like clean water, timber revenue across counties, recreational and tribal access, and habitat *connectivity* for diverse species, including fish and game. At smaller scales, such as individual forest stands within emphasis areas, site-specific conditions guide prescriptive management elements. Management across these spatial scales, from emphasis areas to stand conditions, produces a range of benefits over time.

Principle 7 – Varying Levels of Outcomes

The FMP will provide varying levels of social, economic, and environmental outcomes over time as fiscal conditions change. While this approach will result in short-term trade-offs among specific goals, over the long term, GPV will be achieved.

Different GPV outcomes may be emphasized at different time periods, depending on *fiscal conditions*. For example, when fiscal conditions are favorable, increased investments may be made in aquatic and watershed restoration efforts and to ~~promote~~conduct forest ~~stand development for both commercial (stand investment) and habitat goals.~~management activities to increase resiliency that are cost prohibitive under poor market conditions. Fluctuating timber market conditions (rising markets

versus recessions) may favor more or less ~~timber harvest~~active management during specific time periods. However, over the long term, the FMP ~~will provide~~provides a predictable and sustainable flow of timber~~.~~ and other management activities. Protection of native fish and wildlife habitats ~~will be~~is maintained consistent with the strategies established in this FMP and the *Western Oregon State Forests Habitat Conservation Plan* (~~HCP). Services associated with non-revenue-generating activities may fluctuate based on competing priorities and budgetary constraints.~~WOSF HCP).

Principle 8 – Legal and Regulatory Compliance

The FMP will comply with other state and federal laws and rules.

In addition to the management mandates specific to state forest lands, the FMP ~~will address~~addresses compliance with other state and federal laws and rules including, but not limited to, the state and federal *Endangered Species Acts* (ESAs), the federal *Clean Water Act*, the Oregon Forest Practices Act (FPA), Oregon *fish passage* laws, and *cultural resource* protection administered by the *State Historic Preservation Office* and coordinated with ~~*Tribal Nations*~~*the nine federally recognized Tribes in Oregon* (also known as *Tribal Partners*~~)[2]~~)[4] and the Oregon State Police.

Principle 9 – Tribal Outreach and Engagement

Reach out to and engage with the nine federally recognized Tribes ~~of~~in Oregon throughout the planning and implementation processes.

ODF acknowledges Tribes and ~~Confederation~~the Confederations of Tribes are the original stewards of the lands currently managed by ODF~~,~~ and ~~we recognize~~recognizes the value and importance of integrating tribal interests and perspectives into land management and implementation processes. ~~To the extent possible, and with the upmost respect, we will pursue~~ODF pursues opportunities to meet with tribal government executives and councils,

~~[2] Tribal Nations include the nine federally recognized Tribes of Oregon: Burns Paiute Tribe, Confederated Tribes of Coos, Lower Umpqua & Siuslaw Indians, Confederated Tribes of Grand Ronde, Confederated Tribes of Siletz Indians, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Reservation, Coquille Indian Tribe, Cow Creek Band of the Umpqua Tribe of Indians, and The Klamath Tribes.~~

members, practitioners, and staff to listen, learn, and seek opportunities to build collaborative relationships. Chapter 3, *Forest Resources, Goals, and Strategies*, provides additional context for outreach and *engagement* with the Tribes, and supporting plans may be developed in collaboration between the Tribes and ODF. Appendix A, *Engagement*, describes how ODF and Tribes worked together to develop the FMP cultural resources goals and strategies.

Principle 10 – Diverse Input

Seek diverse input from Oregonians.

Understanding, acceptance, and support from ~~interested parties~~a wide range of Oregonians contributes to long-term success in managing state forest lands. ODF is committed to open, equitable, and transparent engagement processes. Counties ~~within which~~containing BOFL ~~is managed~~ have a statutorily established relationship with the BOF through the *Forest Trust ~~Lands~~Land Advisory Committee~~.~~* (FTLAC). Additionally~~, Tribes~~, the State Forest Advisory Committee, state and federal partners, and local communities provide input through public meetings and public comment periods. ODF provides accurate and timely information to ensure ~~the committee has the information it needs to ensure parties~~interested parties

[4] The nine federally recognized Tribes in Oregon are Burns Paiute Tribe; Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians; Confederated Tribes of Grand Ronde; Confederated Tribes of Siletz Indians; Confederated Tribes of the Umatilla Indian Reservation; Confederated Tribes of the Warm Springs Reservation; Coquille Indian Tribe; Cow Creek Band of the Umpqua Tribe of Indians; and the Klamath Tribes.

have the information they need to ensure they can provide testimony and comment to the BOF and the State Forester.

Principle 11 – Cooperative Efforts

The FMP will achieve goals through cooperative efforts with other agencies and units of local government, user groups, and organizations.

Management objectives can often be achieved more effectively and efficiently through collaboration with others. Consultation and communication with ~~other~~state and federal agencies ~~and entities, including,~~ counties~~, will be~~ and local governments, academic institutions, and non-governmental organizations, is important to ~~identify~~identifying areas where ODF's efforts intersect with other state initiatives.

Principle 12 – Managing for Climate Change

The FMP will be implemented to adapt to climate change and mitigate its impacts on the management of state forest lands. The FMP will also contribute to climate change mitigation and sequester carbon.

Temperature, precipitation, other climate variables, and *hydrologic processes* are changing, and they are likely to ~~alter~~increase the frequency and severity of disturbances, including insect ~~eruptions~~outbreaks, disease, severe windstorm events, wildfire, flood, and drought. ~~These disturbances are predicted to have a disproportionate effect on marginalized communities.~~ Within the context of ODF's adaptive management process~~,~~ and consistent with the ~~Oregon Climate Change and Carbon Plan (~~CCCP~~) goal for state forests,~~ (ODF 2021), the FMP ~~will contain~~contains forest management strategies intended to maintain ~~and,~~ restore, and improve ecological processes and functional characteristics that promote resilient ~~forest conditions. Forest stands~~forests. Healthy and resilient forests sequester and ~~wood products derived from active management contribute to~~store carbon ~~sequestration~~from the atmosphere, a factor in mitigating global climate change. Wood products derived from working forests store carbon and are less carbon intensive than building materials such as concrete and steel. A focus on strategies that adapt to climate change ~~will increase the probability that ODF is able~~increases ODF's ability to provide GPV over the long term.

1.1.2 Land Ownership and Governance

State forest lands comprise 3% of Oregon's forested landscape. The ~~FMP~~ *planning area* for the FMP covers approximately 640,000 acres ~~of state forest lands~~ consisting of BOFL (614,000 acres) and CSFL~~,~~ (26,000 acres), two types of land that ~~were acquired by the state of Oregon in different ways. They~~ are owned by different state government

entities. The BOF owns most state forest landsBOFL, while the *State Land Board* owns CSFL. Each land ownership has its own set of legal and policy mandates. The locations of these lands are shown on the vicinity map (Appendix B, *District Maps*, Figure B-1). Lands are organized into management districts called *field districts* (Appendix B, *District Maps,* Figures B-1 through B-7).

Prior to state ownership, a majority of the acquired state forest landsalmost all BOFL had been owned and managed by private landowners. Most of these lands had been logged, or burned, and salvage-logged, and abandoned without the implementation of modern *best management practices* (BMPs). Tax-delinquent and abandoned lands reverted to county ownership. The counties entered into an agreement with the state that was codified in statute and deeded the lands to the state. Those counties share in all revenues from these lands today (Oregon Revised Statutes [ORS] 530.110, 530.010–530.040). CSFL are a subset of Common School Lands that were granted to Oregon by the federal government upon statehood. The original configuration of both types of lands has changed somewhat over time due to land exchanges and acquisitions.

ODF recognizes that the lands covered by the FMP include ancestral lands of the nine federally recognized Tribes ~~of~~in Oregon. The people living and using the lands were displaced during federal and private land acquisition ~~and management~~, prior to the lands being deeded to the state. The ~~Tribal Nations~~nine federally recognized Tribes in Oregon were engaged in ~~the~~ development of ~~this FMP's cultural resources goals and strategies~~the FMP with the intention of integrating their interests and recognized historical claim in the management of lands that ODF currently manages.

1.1.3 Location

The ~~FMP~~ planning area is west of the crest of the Cascade Range~~. The planning area~~ and is distributed across 17 counties. The lands covered by this FMP include both large blocks and isolated smaller tracts of state forest lands. The three largest blocks are designated as the Tillamook State Forest, Clatsop State Forest, and Santiam State Forest. Smaller tracts of BOFL and CSFL are unnamed state forest lands, scattered throughout the planning area. ~~The smaller, isolated tracts are not referred to as state forest lands but are referenced as "scattered state forest lands."~~

The Clatsop State Forest and Tillamook State Forest are in the northern end of the Oregon Coast Range, roughly 25 miles northwest of Portland. They are managed by the Astoria District (Appendix B, *District Maps,* Figure B-2~~) and~~), Tillamook District (Appendix B, *District Maps*, Figure B-5), ~~respectively.~~and the Forest Grove District (Appendix B, *District Maps*, Figure B-3). The Pacific Coast is a few miles to the west and the Columbia River is to the north and east. ~~Local~~Local communities include Forest Grove to the east, Astoria to the northwest, and Tillamook to the west.



Dedication of Tillamook and Clatsop State Forests. *Governor Tom McCall speaks at the formal dedication of the Tillamook and Clatsop State Forests on July 18, 1973. Today, these lands remain Oregon's largest state forests, with Tillamook encompassing 364,000 acres and Clatsop encompassing 154,000 acres.*

~~communities include Forest Grove to the east, Astoria to the northwest, and Tillamook to the west.~~

~~At 364,000 acres, Tillamook is the largest state forest. It was dedicated in 1973 and is located in the Tillamook and Forest Grove Districts.~~

atsop State Forest is the second-largest state forest~~. It was~~ deeded to the state in 1937. ~~By~~In 1957, Clatsop County ~~s were formally dedicated to~~At 364,000 acres, Tillamook is ~~hook~~ and Forest Grove Districts. The Clatsop and Tillamook ~~.~~

The Santiam State Forest is in the Cascade Range, roughly 25 miles southeast of Salem. It is, in the North Cascade District (Appendix B, *District Maps*, Figure B-4). Local communities include Detroit, Mill City, and Scotts Mills. Santiam is the third-largest state forest covered by this FMP. It was dedicated in 1974 and is located in the North Cascade District.

Many scattered state forest lands are in the Coast Range between Newport and Corvallis (Appendix B, *District Maps*, Figure B-7). There are additional tracts between Florence and Eugene in the Coast Range, scattered in a checkerboard pattern, and some tracts between Reedsport and the California border (Appendix B, *District Maps*, Figure B-6).

1.1.4 History of the ~~Forest~~State Forests Management ~~Plan~~Plans



Dedication of Tillamook and Clatsop State Forests. Governor Tom McCall speaks at the formal dedication of the Tillamook and Clatsop State Forests on July 18, 1973. Today, these lands remain Oregon's largest state forests, with Tillamook encompassing 346,000 acres and Clatsop encompassing 154,000 acres.

Credit: Unknown

As with many public forests, goals and management plans for state forest lands have evolved over time in response to shifting public values, changes in environmental conditions, and better understanding of forest management effects on *ecosystem function* and biodiversity. The *Long-Range Timber Management Plan for Northwest Oregon* (ODF 1984) and *Long-Range Timber Management Plan for the Willamette Region* (ODF 1989) set sustainable timber volume targets as the objective for forest management while giving consideration to other forest resource values. By the mid-1990s, threatened and endangered species listings under the federal ~~Endangered Species Act~~ESA had raised significant public concern about how state forest lands were being managed and caused substantial reductions in timber harvest objectives. Growing recreational use of the Tillamook State Forest also demanded attention, and the *Tillamook State Forest Comprehensive Recreation Plan* was adopted in 1993.

The State Forester is mandated to manage state forest lands for multiple benefits including timber, recreation, and fish and wildlife habitats (ORS 530.050). In 1998, the BOF adopted a set of administrative rules (OAR 629-035) that were intended to provide clarity around the benefits that Oregonians derive from state forest lands. The rules were also intended to direct the State Forester to pursue management practices that promote "compatibility of forest uses over time" and "integrate and achieve a variety of forest resource management goals~~" (OAR 629-035). ~~." The State Forester is required to develop FMPs, using best available science, that establish the general management framework for state forest lands, as well as *Implementation Plans* (IPs) and *Operations Plans* (OPs) that describe more specific, smaller-scale management activities. (OAR 629-035-0030(1)).

In response to these revised rules, in 2001, ODF adopted new Northwest and Southwest Oregon State Forests Management Plans. The plans took a much more comprehensive, multi-resource, ecosystem-based approach to forest management than previous long-range plans and used a system of *integrated resource management* and a landscape-level approach to achieve GPV. The ~~FMP~~FMPs underwent modifications in 2010 as part of decadal review and updates. The modifications included *species of ~~concern~~ strategies and revision of landscape design**conservation concern*** strategies and revision of landscape design. This FMP is designed to use the WOSF HCP as its compliance mechanism with the federal ESA as well as be the foundation for supporting many of the forest resource goals. It replaces the 2010 FMPs for Northwest and Southwest Oregon, and the 2011 *Elliott State Forest Management Plan*, under which some BOFL are still managed.

~~The State Forester is mandated to manage State Forest lands for multiple benefits including timber, recreation, and fish and wildlife habitat (ORS 530.050). In 1998, the BOF adopted the Forest Management Planning rule (OAR 629-035-0030), which provides the following further direction for state forest management.~~

In managing forest lands as provided in OAR 629-035-0020, the State Forester shall develop Forest Management Plans, based on the best available science, that establish the general management framework for the planning area of forest land. The Board may review, modify, or terminate a plan at any time; however, the Board shall review the plans no less than every ten years. The State Forester shall develop implementation and operations plans for forest management plans that describe smaller-scale, more specific management activities within the planning area.



Before and After. North Fork Kilchis in 1960 and fives decades later in 2012. CREDIT XXX

The North Fork Kilchis River Drainage recovery after wildfire and logging. Most state forest lands are recovering from logging or wildfire, salvage-logging, and abandonment that occurred prior to state ownership and without modern best management practices (BMPs).

1.2 Plan Themes

While the current FMP was developed to address all of the guiding principles, five fundamental themes emerged that form the core of the FMP: GPV, considering and engaging all Oregonians, climate change, sustainability, and adaptive management. These themes, and how the FMP will address them, are explained in the following subsections.

1.2.1 Greatest Permanent Value

The FMP is intended to achieve GPV for Oregonians through a comprehensive, multi-resource approach of integrated forest management. GPV means healthy, productive, and sustainable forest ecosystems that, over time and across the landscape, provide a full range of social, economic, and environmental benefits to the people of Oregon (OAR 629-035-0020).

GPV means healthy, productive, and sustainable forest ecosystems that over time and across the landscape provide a full range of social, economic, and environmental benefits to the people of Oregon (OAR 629-035-0020).

State forest lands in western Oregon are managed to create healthy, productive forest ecosystems that provide benefits from forest resources such as a reliable, sustainable and predictable source of timber, economic benefits to rural communities and schools, clean air and water, high-quality habitathabitats for native fish and wildlife, and a diversity of educational and recreational opportunities for the people of Oregon.

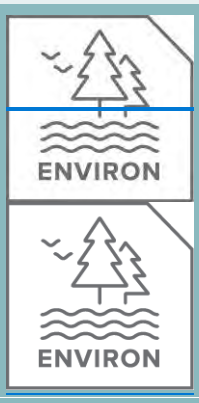
Social, economic, and environmental goals have been developed for forest resources, and while all forest resources. GPV icons are interrelated, eachused throughout Chapter 3, *Forest Resources, Goals, and*

Strategies, to provide examples of these forest resource ~~and its related goal can generally be grouped into social, economic, or environmental~~goals by category. (Figure 1-1).

~~categories.~~WESTERN OREGON STATE FORESTS MANAGEMENT PLAN

FIGURE 1-1. Greatest Permanent Value Categories and Icons. GPV category icons are used throughout Chapter 3*, Forest Resources, Goals, and Strategies*, to indicate connections with social, economic, ~~or~~and environmental ~~resources and concepts (Figure 1-1).~~benefits.

~~**FIGURE 1-1**~~
~~Greatest Permanent Value Categories and Icons~~

Social	Economic	Environmental
		
Examples Include • Protection of cultural resources • Recreation, education, and interpretation opportunities • Opportunities to collect special forest products such as firewood, edible fungi, and salal	Examples Include • Sustainable and predictable production of forest products that support local and regional economies • Revenue generation for local taxing districts • Revenue generation for the management of state forest lands	Examples Include • Healthy, sustainable, resilient forests • Properly functioning aquatic habitats for native fish and aquatic life • Habitat for native wildlife • *Carbon sequestration* and storage

1.2.2 Considering and Engaging All Oregonians



l environmental benefits to the people of Oregon, he diverse *demographics* of our state. The goals and and are able to adapt to Oregon's changing

An essential element of the commitment to manage for GPV is to recognize Tribes as the original stewards of Oregon's state forest lands, as well as their continued

~~Visitors to Tillamook Forest Center explore exhibits about the importance of woody debris for soil health and habitat. GPV calls for providing a full range of social, economic, and environmental benefits to the people of Oregon.~~

contributions to these lands as sovereign nations with unique ancestral and local knowledge and stewardship since time immemorial. Further, we recognize humans—past, present, and future—are an integral part of state forests. ~~Oregonians benefit from ecosystem services that the~~

Oregonians benefit from *ecosystem services* that the forests provide, ~~but~~and our relationship with state forest lands is grounded in ~~one of~~ *reciprocity*—we care for the forests and the forests care for us and for our communities (Chapter 2, Figure 2-1).

~~The goals and strategies of the FMP are grounded in serving all Oregonians and are able to adapt to Oregon's changing demographics.~~



Visitors to Tillamook Forest Center explore exhibits about the importance of woody debris on the forest floor for soil health and wildlife habitat.

Photo credit: ODF

1.2.3 Resilience to Climate Change

Stressors associated with climate change ~~stresses~~adversely affect forest ~~resources~~ecosystem resiliency and ~~adversely affects~~ the delivery of GPV benefits ~~across GPV categories. Increased incidence of drought limits timber production,~~. Rising ambient air and water temperatures, extreme heat events, and increased incidences of drought can adversely affect aquatic and wildlife ~~habitat~~habitats, drinking water, ~~and some *special*~~ forest products~~. Increased air and water temperature increases the spread of insect and disease, which adversely affects fish and wildlife habitat, as well as timber production. Increasing~~, and tree growth. These conditions can also influence the frequency and intensity of wildfire and ~~storms can increase~~ storm events, resulting in *landslides* ~~and~~, *debris flows*, and *windthrow* ~~and change *soil composition*,~~ which can adversely affect ~~timber production,~~ road and trail conditions, soil productivity, ~~and~~ water quality~~. The latter changes, in turn,~~, and the

availability of merchantable timber. These disturbances may also adversely affect ~~road~~visitor safety, state revenue, future timber productivity, fish and wildlife habitat, ~~recreation,~~ and tribal access opportunities.

~~In response to these threats to resource conditions, and~~ In alignment with the VOF and CCCP, the FMP ~~guides ODF to mitigate climate change and~~provides goals and strategies to increase the forest's capacity to adapt to, and mitigate the effects of, climate change. Both adaptation and mitigation are key tenets of *climate-smart forestry*, in which forests are actively managed to achieve resource goals, prepare for climate change, offset carbon emissions, and support communities reliant on wood products.

Chapter 2, *Management Approach*, describes the elements of ~~*adaptive capacity*, how strategies for enhancing adaptive capacity are applied differently~~managing for more *resilient forests under a changing climate.* This management approach results in a range of activities across the landscape ~~depending on the resource emphasized~~by evaluating trade-offs in ~~a particular area, and how adaptive management allows ODF to respond according to~~the context of climate vulnerability factors, site-specific conditions, and goals for forest resources and considering specific emphasis area designations. Future changes in forest conditions and new research findings ~~in climate science.~~ will be incorporated through adaptive management.

Chapter 3, *Forest Resources, Goals, and Strategies*, describes management goals and strategies that increase ~~adaptive capacity.~~climate resilience across resources, including wildlife, aquatics, and timber production. One way climate adaptation is achieved is through climate-informed silviculture, in which *management prescriptions* are ~~set in line with *climate-smart forestry* objectives. For example, altering planting *density* or species to grow forests to be more resilient to drought or wildfire, which would, in turn, improve long-term outcomes for social and economic goals~~aligned with *climate-smart forestry* approaches.

The high productivity of forests in the Coast Range and Western Cascades ~~makes them ideal~~are well-suited for *climate change mitigation*~~. These forests~~ due to their ability to sequester and store ~~carbon to reduce~~large amounts of atmospheric ~~greenhouse gases and lessen the future impacts of climate change. Mitigation goals have~~carbon dioxide. The carbon sequestration and storage goal has co-benefits with other resource goals, such as increasing late seral habitat for wildlife species or producing timber that can store carbon in long-lived structures~~.~~ like housing. Carbon is sequestered and stored long term on the landscape in dedicated *conservation areas* while areas with a timber production focus contribute to carbon storage in long-lived forest products.

~~Both adaptation and mitigation are key tenets of climate-smart forestry, in which forests are actively managed in ways intended to achieve resource goals by preparing for climate change, reducing carbon emissions, and supporting communities reliant on wood products or negatively affected by climate change.~~

~~Introduction~~

1.2.4 Sustainability

Consistent with the guiding principles, the FMP is adopting an *ecologically sustainable forest management* approach. The ~~goal~~foundation of this approach to forest management is to ~~sustain and~~ support the health and *function* of forest ecosystems, thereby improving the long-term delivery of ecosystem services. ~~and thereby improve sustainable delivery of ecosystem services.~~ Healthy, diverse, productive, and resilient forests maintain ~~and enhance~~ ecosystem services and the benefits the public derives from them, including timber production~~, and~~. These services are the foundation upon which a sustainable managed ~~forests~~forest model is built (Spies et al. 2018).

Ecologically sustainable forest management views forest resources and benefits within the context of societal values. This approach anticipates change and uncertainty in forest development and disturbance regimes, societal values and demands, and future climate effects on forest productivity, species ranges, and ecological processes. To address change and uncertainty, land managers seek outcomes to reduce risk to forest resources, and increase future options by applying strategies that improve forest resilience in an adaptive management framework. Under ecologically sustainable forest management, specific areas on the landscape emphasize different ecosystem services and benefits ~~such that management incorporates a sound understanding of the underlying systems and processes that produce those services and benefits~~. The protection requirements outlined in the WOSF HCP ~~is~~are central in implementing the FMP habitat strategies by defining habitat emphasis areas ~~and strategies~~, which safeguard conservation values while generating regulatory certainty for timber production and other active management activities covered by the WOSF HCP.

~~Ecologically sustainable forest management views resources and benefits within the context of societal values and the forest ecosystem in alignment with the guiding principles and GPV. This approach anticipates change and uncertainty in forest development and disturbances, societal values and demands, and future climate scenarios and effects on forest productivity, species, and ecological processes. To address change and uncertainty, management seeks outcomes to reduce risks to resources and increase future options through applying adaptive capacity strategies and an adaptive management framework.~~ For more information, see Chapter 2, *Management Approach*.

The principles of ecologically sustainable forest management are reflected in Chapter 3, *Forest ~~Resource~~Resources, Goals, and Strategies*. Goals and strategies support the delivery of ecosystem services and the values articulated in the guiding principles. The ~~strategies~~goals emphasize the function of social, economic, and environmental systems and recognize that ~~specific approaches and the levels~~the application of ~~commitment depend on management~~strategies differs by emphasis ~~areas and economic goals and circumstances~~area, considers resource trade-offs, and adapts through time.

1.2.5 Adaptive Management

The FMP uses adaptive management to evaluate and learn from decisions and revise plans as changes occur in society, the economy, and the environment, as required by OAR 629-035-0020(3)(f) and 629-035-0030(3)(d). Adaptive management is a systematic and rigorous approach to learning from actions, improving management, and accommodating change. Chapter 2, *Management Approach*, describes how adaptive management is used to ~~achieve~~monitor and improve the sustainable delivery of ecosystem services. All strategies in Chapter 3, *Forest Resources, Goals, and Strategies*, are supported by adaptive management, which tests and monitors the

assumptions and predictions ~~that the strategies achieve~~of the FMP goals. Chapter 4, *Guidelines*, describes how ~~it~~forest management is implemented at ODF.

1.3 Relationship with Other Plans and Planning Processes

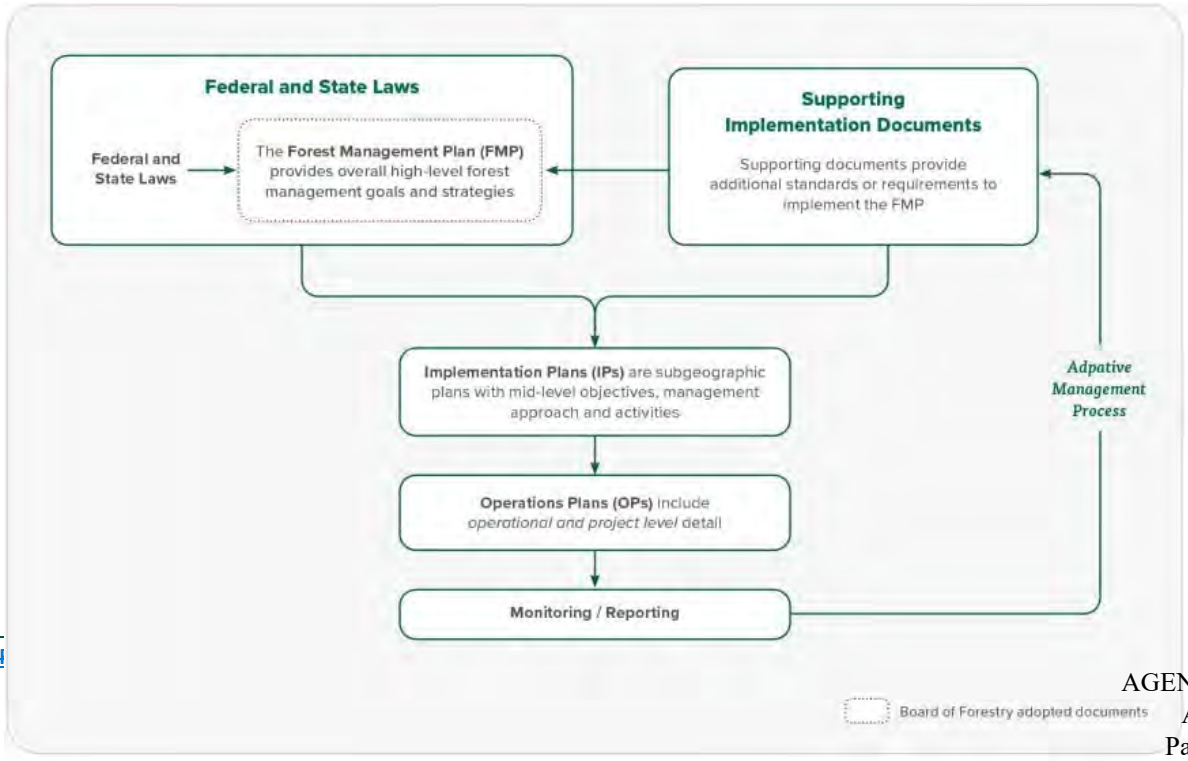
Management planning includes three planning levels, This FMP provides the overarching framework for managing state forest lands, in alignment with the VOF and CCCP. The goals and strategies described in this FMP reflect priorities articulated in the VOF and CCCP as wellthey are applied to management of state forest lands and the delivery of GPV.

The specific requirements and standards for implementing the goals and strategies, such as ~~fiscal and biennial budgeting. The FMP informs~~riparian buffers, soil protections, and green tree requirements, are detailed in supporting plans (e.g., the WOSF HCP), laws (e.g., the FPA), performance measures, operational policies, the Forest Land Management Classification System, and BMPs. The goals and strategies in the FMP, along with the requirements and standards outlined in these supporting documents (Chapter 2, Figure 2-1) will guide the development of IPs and plans for monitoring, reporting, and adaptive management.

The FMP and supporting plans inform all lower levels of planning ~~(Chapter 4,~~shown in Figure ~~4-~~1~~).~~ ~~Intermediate-level planning~~ 2.FMP implementation is ~~conducted by ODF administrative and field districts and is documented in IPs. *Operations Plans* (~~carried out through IPs, which are then achieved through on-the-ground management activities described in OPs~~) and~~. IPs are shorter-term plans (typically 10-year) in which the FMP goals are distilled into more specific activities, objectives, and expected outcomes for smaller sections of land. Each new IP presents an opportunity to review previous performance and make adjustments as needed, leading to adaptive management. OPs detail specific planned operations, projects, and activities that will be used to support IP objectives and budgets (biennial and fiscal) ~~support IP objectives~~ over the short term (1 to 2 years).

~~The HCP, *Forest Land Management Classification System* (FLMCS), Recreation, Education, and Interpretation programs, Operational Policies and BMPs will be used to implement strategies and further guide the shorter-term plans, and the *Adaptive Management Plan* (AMP) supports *effectiveness monitoring* and decision-making. Additionally, ODF's CCCP is an agency-wide policy guiding document for climate-smart forestry in Oregon, which includes goals and supporting actions applicable to the State Forest Division. The CCCP is cited throughout the FMP, where the two plans specifically align.~~ For additional information, see Chapter 4, *Guidelines*.

FIGURE 1-2
Relationship with Other Supporting Plans and the Planning Process. This figure provides additional detail about how federal and state laws and supporting implementation documents work in conjunction with the FMP to inform the tiered planning levels of implementation.



1.4 Overview of the Forest Management Plan Chapters

In accordance with the Forest Management Planning rule, the following chapters are included in this FMP.

- **Chapter 2, *Management Approach*.** Chapter 2 provides ~~a~~the vision for forest management ~~and describes the need to adapt~~through an ecologically sustainable forest management ~~as new information becomes available~~framework that increases the ability of the forest to continue to ~~sustainably deliver a diverse array of benefits~~provide ecosystem services to Oregonians.
- **Chapter 3, *Forest Resources, Goals, and Strategies*.** Chapter 3 describes ~~the~~ forest resource conditions to provide context for management. The chapter also includes the FMP's goals and strategies. The goals are statements of what ODF intends to achieve for each forest resource in the planning area. Strategies describe how ODF ~~will manage~~manages the forest resources and ~~identify~~identifies management techniques the State Forester may use to achieve the plan's goals.
- **Chapter 4, *Guidelines*.** Chapter 4 states the general *guidelines* for asset management, implementation, adaptive management, plan revision, and public engagement. Asset management guidelines provide overall direction on investments, marketing, and expenses. Implementation guidelines ~~provide~~prescribe the process for implementing the FMP. Adaptive management~~, monitoring, and research~~ guidelines describe the approach for learning from management and applying new findings to adjust management to continue to meet GPV~~. Plan revision guidelines describe~~ as conditions change. Section 4.4, *Decision Authority and Revision Guidelines,* describes what causes plans to change and how plan changes are governed. Section 4.5, *Engagement Guidelines* ~~describe~~, describes the various levels of public ~~and Tribal~~ engagement required by plan level.

Additionally, the FMP includes a *Glossary*, *List of Acronyms,* and *References* as well as three appendices~~:~~. Appendix A, *Engagement*, summarizes tribal, public, and stakeholder~~, and Tribal~~ engagement efforts during FMP development; Appendix B, *District Maps*, shows the FMP planning area by ~~field~~management *district*; and Appendix C, *Description of Figures,* describes the content of all FMP figures for accessibility purposes.

CHAPTER 2

Management Approach

Chapter 2 describes the *Western Oregon State Forests Management Plan* (FMP) management approach. This FMP is grounded in the concept that all economic, social, and environmental benefits of the forest are derived from *properly functioning ecosystems*.[1] It is, therefore, essential for the management approach to reciprocate by managing the forest to support *ecological function*. Chapter 2 describes how to sustain ecological function by managing the land in alignment with management *emphasis areas*, in the context of the broader *landscape* conditions, and in accordance with *stand* conditions. This chapter also clarifies emphasis area design and layout, appropriate example management treatments and their aims, and approaches for supporting ecosystem function under climate change.

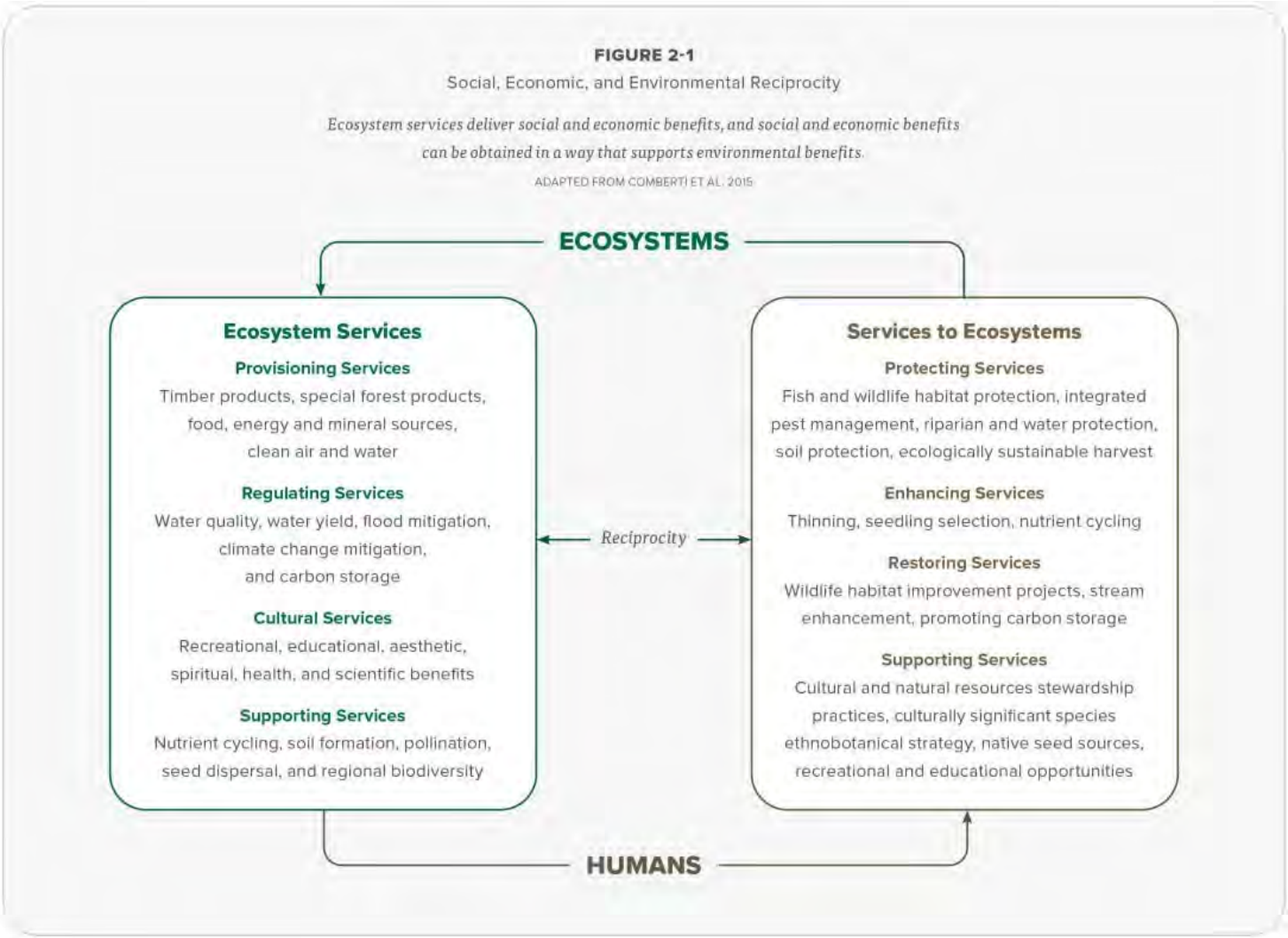
2.1 Sustainable Delivery of Ecosystem Services

~~For millennia, Oregon's forest *ecosystems*[1] have been a key part of Oregon's culture, history, and economy. Prior to European settlement, many bands of *Tribal Nations* inhabited Oregon's landscape for time immemorial. They managed the land to produce healthy and abundant *species* of plants and wildlife for sustenance, demonstrating the concept of *reciprocity*, where Tribal land preparations contributed to the *restoration* of natural resources while simultaneously providing healthy and *sustainable* ecosystems.~~ Although ~~the~~ forests have always provided for multiple uses and benefits, the Oregon Department of ~~Forestry's~~Forestry (ODF)'s understanding of these uses and how they are interrelated has deepened and evolved over time. ODF forest management plans have changed from a primary focus on production and harvest of wood products~~, other benefits (e.g., recreation) have been recently recognized that solicited (1) more~~ to a greater emphasis on ~~managing for~~1) integrating management actions to realize multiple ~~uses and their associated~~ co-benefits ~~and values (e.g.,~~such as clean water, rare *species* protections, diverse ~~recreation~~recreational opportunities~~) with varying levels of integration~~ and timber production; and ~~(2) a much broader recognition~~2) recognizing that forest uses ~~(i.e., goods~~ and ~~services) and their associated public values~~benefits are derived from intact, functioning forest ecosystems and ecological processes (Kline et al. 2013; Jaworski et al. 2018). ODF uses the framework of *ecosystem services* to identify how healthy forest ecosystems support social, economic, and environmental benefits, and

conducts management activities in service to those ecosystems to support their functions (Figure 2-1).

[1] Terms italicized in this document are defined in the Glossary. Defined terms are italicized at the first instance in each chapter.

FIGURE 2-1
Social, Economic, and Environmental Reciprocity. Ecosystem services deliver social and economic benefits, and social and economic benefits can be obtained in a way that supports environmental benefits.



Adapted from Comberti et al. 2015.

Ecosystem services are the benefits provided by ecosystems to humans~~;~~. These services are categorized into the following four groups: provisioning, regulating, cultural, and supporting services (Millennium Ecosystem Assessment 2005).

- **Provisioning services.** Provisioning services are resources provided by forest ecosystems that include a sustainable and predictable supply of timber, wood products, and *special forest products*; food, energy and mineral sources; and clean air and water.

[1] Terms italicized in this document are defined in the Glossary. Defined terms are italicized at the first instance in each chapter.

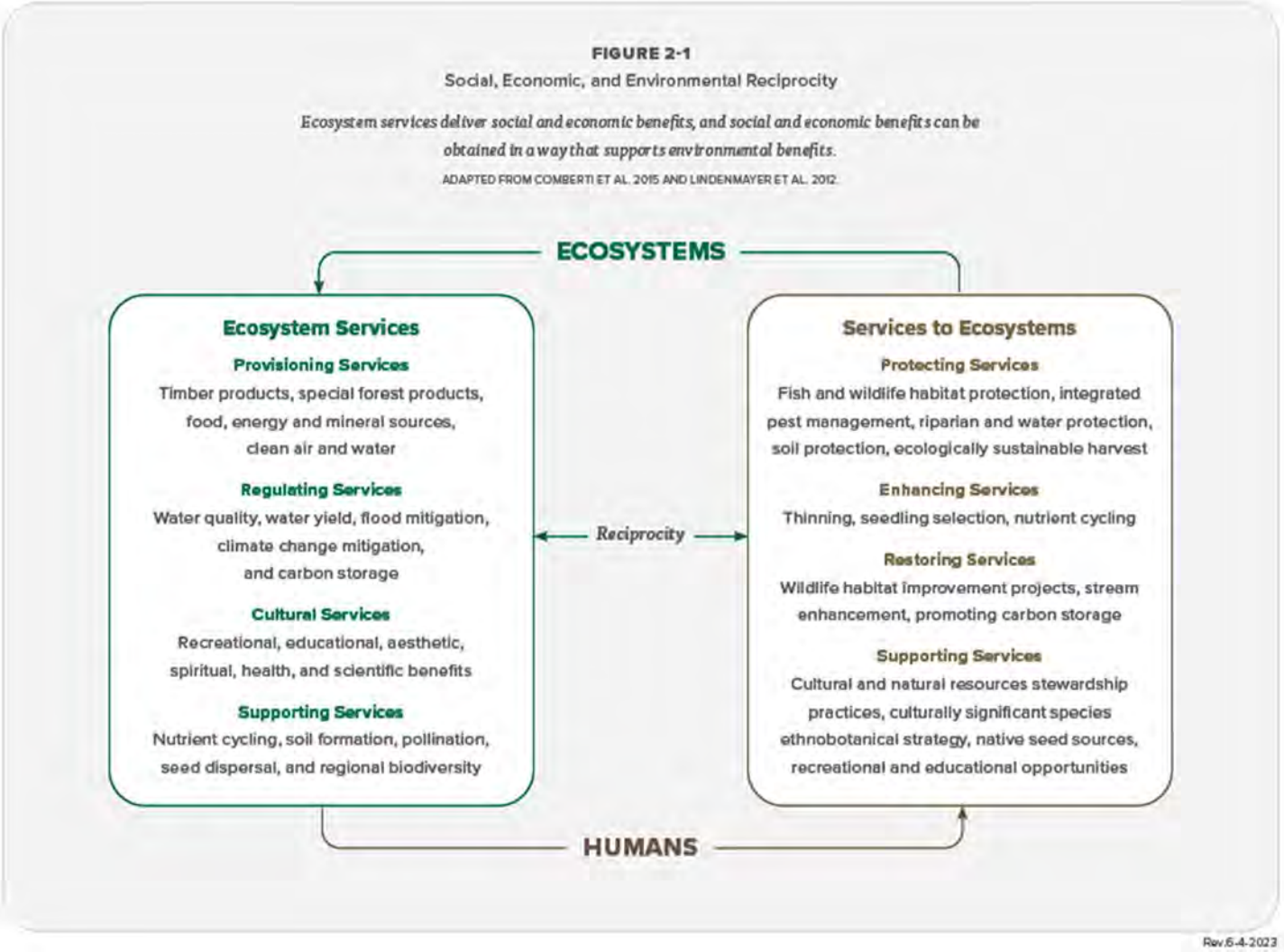
- **Regulating services.** Forests help regulate resources and ecosystem processes, for example through *carbon sequestration* and flood control.
- **Cultural services.** Forests provide sustenance; spiritual, recreational, aesthetic, and scientific benefits; and values as numerous and diverse as the people and cultures that use them.
- **Supporting services.** Forest ecosystems support regional *biodiversity* and the function of many systems including *nutrient cycling*, soil *formation*, pollination and seed dispersal, and regional *biodiversity*.

In addition to identifyingthe many important *outcomes* that contribute to community well-being, the conceptconcepts of ecosystem services createsand *reciprocity* create a framework that recognizes how social and economichuman needs are supported by healthy ecosystems and how society, in turn, provides services to those ecosystems by supporting their functions (Figure 2-1).

The overall goal of *ecologically sustainable* In this framework, management is a functional ecosystem that sustainably delivers activities can enhance the quality or quantity of ecosystem services. This approach to forest management is to sustain and support the ecological function and productivity of the forest, and thereby improve *resilience* or *adaptive capacity of ecosystems* to change over time, informed by ODF's Climate Change and Carbon Plan (CCCP) (Franklin et al. 2018; Lindenmayer et al. 2012; Palik et al. 2022). Healthy, diverse, productive, and resilient forests maintain and enhance ecosystem services and the varied benefits the public derives from them and are the foundation upon which sustainable working forests are built (Spies et al. 2018). In this framework, the ecosystem services provided by the forest are sustained across the *landscape* and through time (Figure 2-2). while maintaining ecological integrity and resilience (Comberti et al.

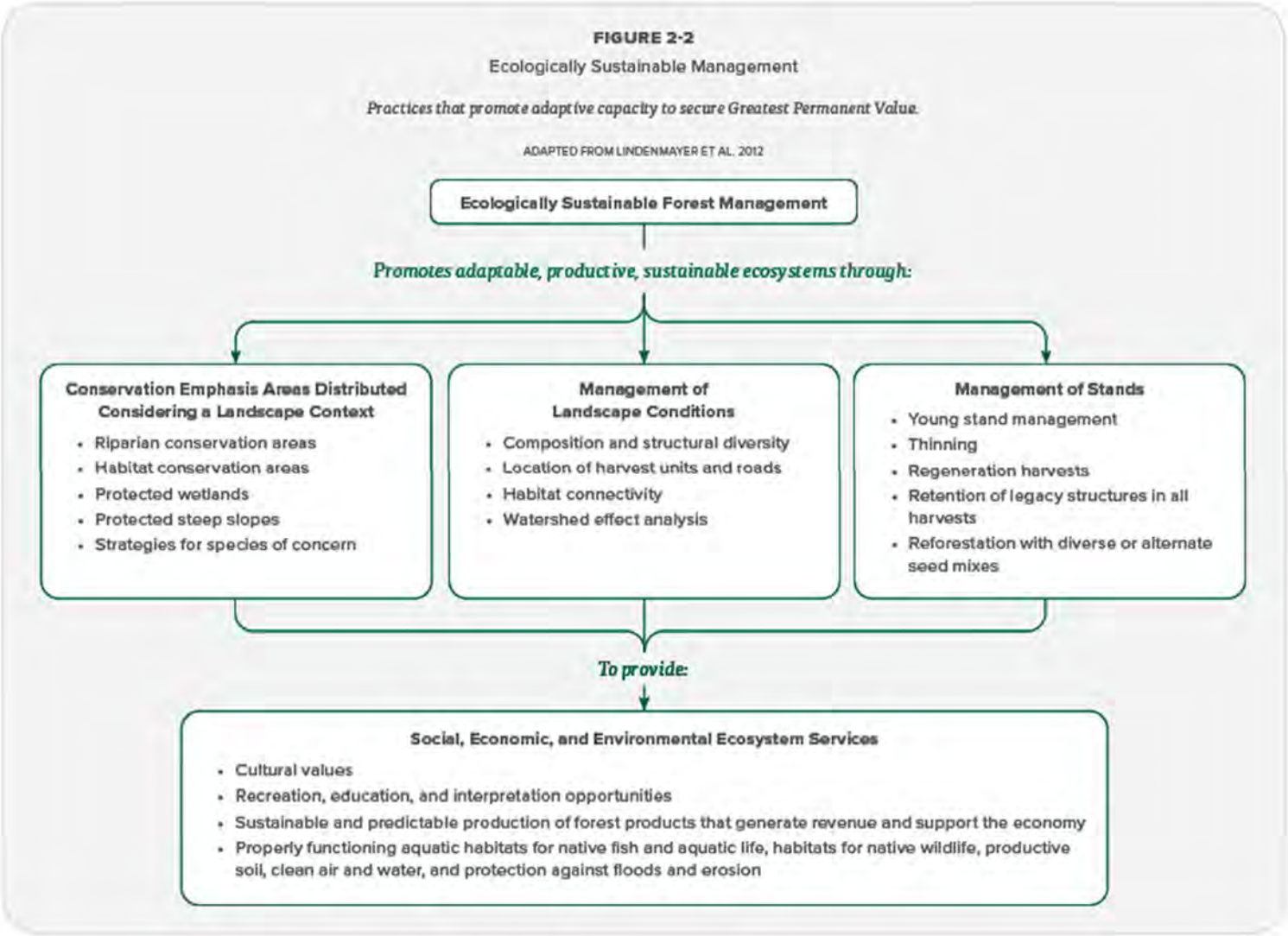
Ecologically sustainable management anticipates change and uncertainty in forest conditions and disturbances, as well as societal values and demands, forest product markets, future climate scenarios, and effects of climate variability and change on forest ecosystem services. To address change and uncertainty, ecologically sustainable management seeks outcomes that reduce risk to resources and increase future options to provide ecosystem services through an *adaptive management* framework and a focus on increasing adaptive capacity. Adaptive management is a key tenet of ecologically sustainable forest management in a changing world and society, especially given uncertainty and risks associated with long-term planning (Millar et al. 2007). Adaptive capacity of State Forests is increased when actions are taken to facilitate or improve the ability of the system to respond to changes that result in the desired ecosystem services (Aplet and Mckinley 2017). Increases in adaptive capacity may be achieved by increasing *resistance* and resilience of existing *stands* to discrete disturbance events and chronic *climate change* (Puettmann et al. 2009; Aquilué et al. 2021) or by guiding or allowing areas to transform to a new state, such as a new species *composition*.

FIGURE 2-1
Social, Economic, and Environmental Reciprocity. Ecosystem services deliver social and economic benefits, and social and economic benefits can be obtained in a way that supports environmental benefits.



Adapted from Comberti et al. 2015; Lindenmayer et al. 2012

FIGURE 2-2
Ecologically Sustainable Management. Practices that promote adaptive capacity to secure GPV.



Adapted from Lindenmayer et al. 2012.

Resistance refers to the ability of a system to avoid a disturbance. Resilience refers to the ability to recover from a disturbance. *Transformation* refers to the emergence of a new ecosystem different from its historic structure, composition, or function. Both *active* and *passive management* techniques can increase adaptive capacity, guide transformations, or respond to transformations to sustain ecosystem services (Lynch et al. 2021).

The management approach reflects complex social and ecological systems that require integrated understanding of the relationships between resources distributed across space and time and their interacting processes (Fischer 2018; Thompson et al. 2021). This understanding informs decision-making to achieve the overall goal of sustaining ecosystem services. In this context, the forest is a system that collectively provides ecosystem services. The following sections describes how ODF applies ecologically sustainable management to state forest lands.

2.1 Ecologically Sustainable Management of State Forest Lands

Under ecologically sustainable management, ODF will manage state forest lands in western Oregon 2015). Services to ecosystems can likewise be categorized into the following four groups: protecting, enhancing, restoring, and supporting services.

- **Protecting services.** Fish and wildlife *habitat* protections, *riparian* buffers, and water protection.
- **Enhancing services.** Forest growth management and development, species selection and translocation, and nutrient cycling.
- **Restoring services.** Wildlife habitat improvements, *stream* enhancements, and promoting carbon storage.
- **Supporting services.** Enhanced cultural and natural resource *stewardship* practices.

To support the delivery of ecosystem services into the future to provide *greatest permanent value* (GPV) to Oregonians. The following sections layout how, ODF manages state forest lands for sustainability of in western Oregon under an *ecologically sustainable forest* ecosystem services*management* approach, as described in Section 2.2, *Ecologically Sustainable Forest Management of State Forest Lands*.

2.1.1 Emphasis Areas Integrate Ecosystem Services

GPV

2.2 Ecologically Sustainable Forest Management of State Forest Lands

Healthy, diverse, productive, and *resilient* forests maintain ecosystem services and are the foundation upon which sustainable working forests are built (Spies et al. 2018). The overall focus of ecologically sustainable forest management is the sustainable delivery of ecosystem services while maintaining the

integrity of the ecosystem (Lindenmayer et al. 2012). This approach can be challenging because it requires an integrated ~~*resource management* such~~understanding of the relationships between *forest resources* that ~~the~~ are distributed across the landscape and change over time (Fischer 2018; Thompson et al. 2021). This understanding, while always incomplete, informs ODF's planning ~~*area* continues to produce benefits under the context of potentially transformative conditions driven by climate change. ODF's~~, decision-making, and implementation.

Specific strategies for individual resource *goals* are considered (Chapter 3, *Forest Resources, Goals, and Strategies*), as well as integrated strategies across resource goals, which include the following considerations: resilient forests, *trade-offs* among resources, and *adaptive management* ~~approach achieves GPV by designing spatially explicit *emphasis areas* whose overlapping layout emphasizes.~~ Forest managers are confronting a changing climate, chronic stressors, and disturbance regimes that are increasingly different ~~combinations of resource *goals* designed~~from historical norms. Localized forest *stand management*, along with landscape-level considerations, seeks to reduce the vulnerability of state forests to ~~complement each other to support long-term~~ ecosystem ~~*function*~~service disruption by increasing the diversity, complexity, and ~~increase~~ *adaptive capacity* ~~over time and across the landscape.~~of forests to tolerate, recover from, or adapt to disturbances. The focus on increasing resilience is informed by the Oregon Board of Forestry (the BOF) and ODF's shared *Vision for Oregon's Forests* (VOF) and ODF's *Climate Change and Carbon Plan* (CCCP).

To produce GPV, different resource outcomes are prioritized at different points in time or places leading to trade-offs among the many resource goals. ODF evaluates trade-offs among resource goals through a tiered planning framework that operates at multiple geographic and temporal scales. For instance, at the *policy* level, the *Western Oregon State Forests Habitat Conservation Plan* (WOSF HCP) establishes overall biological goals and *objectives*, conservation actions, and the spatial design of conservation areas. At the *Implementation Plan* (IP) level, regional targets for activities and protections balance habitat, *watershed* function, social values, and sustainable timber *revenue* over the plan term. At the *Operations Plan* (OP) level, site-specific plans evaluate forest stand conditions, forest access, *best management practices* (BMPs), and resource protections to integrate co-benefits. Adaptive management links these planning levels by using *monitoring* and new information to adjust strategies and ensure long-term resilience and delivery of ecosystem services.

Adaptive management is a structured approach to learn from actions, monitor outcomes, and adjust management in response to ecological, economic, and societal changes. In ecologically sustainable forest management, ODF implements management, monitors performance relative to goals and targets, and updates plans or operations where needed. This iterative cycle links planning (FMP, WOSF HCP, IPs, OPs) to on-the-ground learning, ensuring strategies remain effective as conditions evolve. Adaptive management is one of the fundamental themes (Chapter 1, Section 1.2, *Plan Themes*) present throughout the FMP. Chapter 4, *Guidelines*, provides additional adaptive management *guidelines*.

2.3 Management Approaches within Ecologically Sustainable Forest Management

Ecologically sustainable forest management uses a combination of approaches at different scales and

evaluates trade-offs among forest resources across the landscape to support ecological function and productivity. Management for diversity and complexity occurs at these various spatial scales (genes to ecosystems, individual trees to ecoregions) and timeframes (annual, decadal, plan term) in alignment

with the management of each emphasis area. Approaches include management of emphasis areas, landscape conditions, and individual forest stands (Lindenmayer et al. 2012). Together, these three approaches deliver the ecosystem services to provide GPV (Figure 2-2). Each approach is described in more detail in the following sections.

2.3.1 Management of Emphasis Areas

Different types of management can be applied to different areas of the forest to balance trade-offs between resource goals and to deliver the desired ecosystem services most effectively. Emphasis areas may include lands designated for environmental protection, timber production, or multiple compatible uses (Burton 2025). ODF's ecologically sustainable forest management approach designates emphasis areas that guide management priorities and acknowledge the trade-offs between different forest uses on any single parcel of forestland. These emphasis areas are mapped using the *Forest Land Management Classification System (FLMCS~~) is a method of describing~~).*

Forest Land Management Classification System

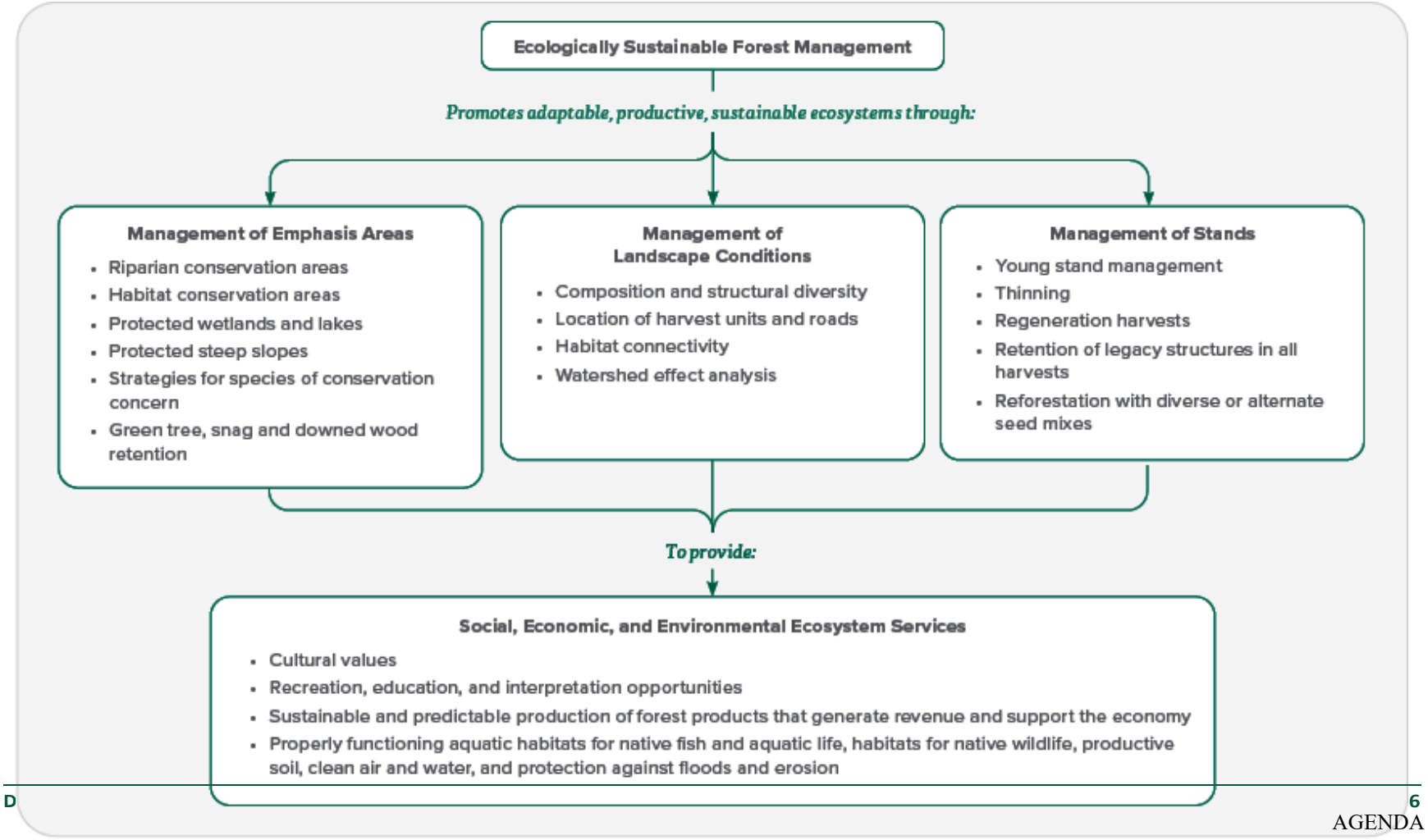
The FLMCS describes the *management emphasis* of ~~parcels~~specific areas of state forest lands and ~~has been~~is implemented in accordance with Oregon Administrative ~~Rule~~Rules (OAR) 629-035-0055. The~~ management emphasis of~~ FLMCS identifies the extent to which a parcel of land can be managed 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. ~~The spatial locations of the emphasis areas are delineated by FLMCS. The resource objectives emphasized therein, and the rules governing management activities in them, are found in the *Western Oregon State Forests Habitat Conservation Plan* (HCP) (ODF 2022), operational policies, OARs, and other laws and regulations. The Western Oregon State Forests Management Plan (FMP) Integrated Goals and Strategies apply across the landscape but are more strongly emphasized in certain locations according to the particular area's combination of emphasis areas. Management activities in any particular area must be designed to emphasize the resource goals according to the emphasis areas that apply in that particular area~~The spatial locations of the emphasis areas are mapped according to the FLMCS classification criteria and are based on the requirements and *standards* found in supporting plans such as the WOSF HCP, laws, operational policies, and BMPs.

The FLMCS is made up of four land management stewardship classes: General Stewardship, Focused Stewardship, Special Use, and High Value Conservation Areas (HVCAs). Within the Focused Stewardship, Special Use, or HVCA Stewardship classes, the resource emphasis is defined in more detail with subclasses. In many instances there may be several forest resources in an area that result in overlapping subclasses and stewardship classifications. In other areas, these specific forest resources may be absent and are classified as General Stewardship. These classifications are not prescriptive in nature but provide a guide during implementation to the types and appropriate range of management activities, and the forest resource or resources that should be considered and prioritized for each area.

~~The spatial layout of emphasis areas is intentionally designed with ecosystem function and related processes in mind. In particular, the HCP's *habitat conservation area* (HCA) layout, as discussed in HCP Chapter 4, Section 4.7.6, *Conservation Action 6: Establish Habitat Conservation Areas*, is complemented by adjacent portions of the landscape that are more actively managed, an arrangement known as land sparing (Harris and Betts 2023). HCA layout provides late *seral habitat connectivity* and complexity, while more actively managed adjacent areas provide early and mid-seral stand diversity (Donato et al.~~

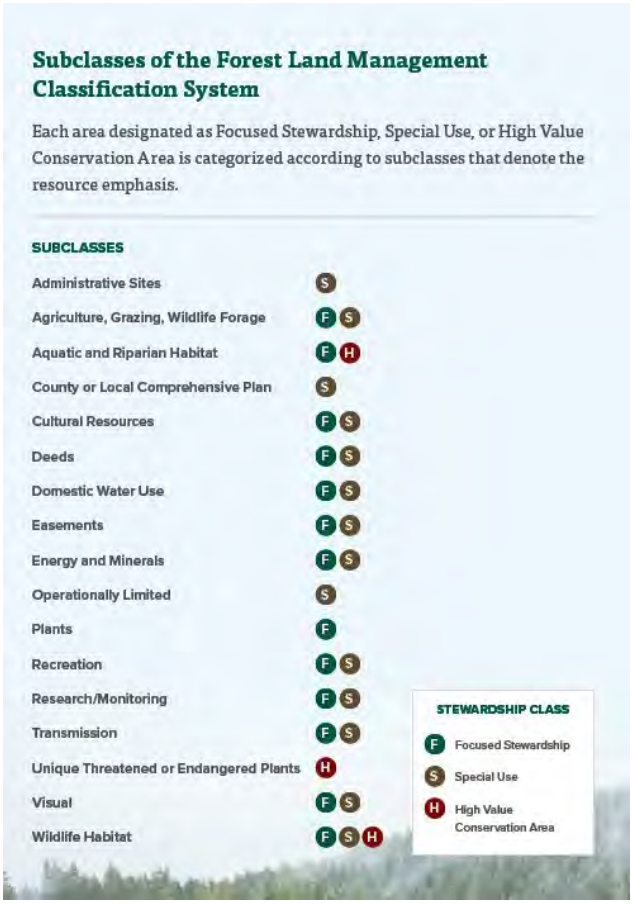
~~2012; Puettmann et al. 2016; Stokely et al. 2022). Forest stand and landscape diversity, complexity, and~~

FIGURE 2-2
Ecologically Sustainable Forest Management. Practices that promote adaptive capacity to secure GPV.



Adapted from Lindenmayer et al. 2012.

General Stewardship



General Stewardship is a classification with the broadest range of potential management activities. General Stewardship lands that are designated as *silviculturally capable* under the Oregon Forests Practices Act are actively managed to meet the requirements of OAR 629-035-0020(2), which is to "provide sustainable timber harvest and revenues to the state, counties, and local taxing districts." Non-silviculturally capable lands in this classification are not managed for timber harvest, but are managed to meet the remaining goals of GPV (OAR 629-035-0055(4)(a)).

Focused Stewardship

Focused Stewardship lands contain these lands that require heightened or focused awareness, supplemental planning or modified management practices may be required to achieve the goals of the FMP, WOSF HCP, FPA, or other legal requirements (OAR 629-035-0055(4)(b)).

There are several resources within Focused Stewardship lands that are identified by specific subclasses, including areas with *cultural resources*, domestic water use, or recreational uses, where additional planning or management practices are considered to maintain and protect these resources.

Special Use

Special Use is a classification of lands that are "managed for a specific forest use. Integrated management is conducted on these lands to the extent possible without interfering with the management of the specific forest use" (OAR 629-035-0055(4)(c)). On lands classified as Special Use, a legal or contractual constraint, such as an administrative site or easement, dictates a clear priority and precludes the integrated management of all forest resources. These lands are committed to a specific use, and management activities are limited to those that are compatible with the specific use (OAR 629-035-0055(3)(c)). The Tillamook Forest Center and Smith Homestead day use area are examples of Special Use lands. In accordance with the governance documents for these sites, the forest is specifically managed for visitor and facility needs—such as access, recreation, education, interpretation, hazard mitigation, and maintenance and compliance with other laws.

High Value Conservation Areas

HVCAs are a classification of lands managed for a specific conservation value, where forest management activities are designed to promote specific conservation values, avoid long-term adverse impacts on those values, and are consistent with applicable legal requirements (OAR 629-035-0055 4(d)). *Habitat conservation areas* (HCAs) and *riparian conservation areas* (RCAs) are examples of HVCAs where specific wildlife or riparian needs are promoted by applying forest management activities according to the specifications set out in the WOSF HCP. Examples include limiting harvest in RCAs to improve stream shade, and thereby salmon habitat, and designing harvest in HCAs to improve habitat for covered species.

2.3.2 Management of Landscape Conditions

While applying different management approaches among emphasis areas increases the effective delivery of ecosystem services, the spatial arrangement of emphasis areas across the landscape can promote the resilience of ecosystem services to unpredictable changes. The spatial layout of emphasis areas and pacing of management activities are intentionally designed to support diversity, complexity, connectivity, and *redundancy* across the landscape and its ecosystem functions and processes. Decadal targets for management activities and outcomes are set in IPs and OPs prescribe specific spatially explicit annual management activities, in alignment with the IPs.

The distribution of stands of various ages and structural conditions affects a broad range of ecosystem services, such as availability of wildlife habitats (Figure 2-3) and timber over time. Sustainable timber production requires a balanced set of forest ages across districts in General Stewardship areas, while many wildlife species require specific habitat elements, *patches* of sufficient size and connectivity ~~support~~ among them allow for production and dispersal. Consideration of how management in one area affects the adjacent areas and, vice versa, how the surrounding forest influences management outcomes is critical for functional ~~systems.~~landscape design. Diverse landscape conditions are managed to increase connectivity of forests for wildlife dispersal and flow of ecosystem services like pollination. This, in turn, promotes ~~other elements of~~ biodiversity and related ecosystem processes, such as seed and fungal spore dispersal, soil and nutrient cycling, water quality, and aquatic habitat, which further enhances function~~. These positive feedback loops foster adaptive capacity and, thus, resistance and~~ and increases resilience to stochastic and chronic disturbance ~~within stands and across the landscape (Carey 2007; Franklin et al. 2018). Both HCAs, and more actively managed areas, individually and collectively are intended to adapt to change. Operational policies and *riparian conservation areas* (RCAs) further define and guide more actively managed areas to protect other resources where they benefit the most. In this way, all emphasis areas are integrated across the landscape, such that lands produce timber and protect other ecosystem services~~(Carey 2007; Franklin et al. 2018). Active management for diversity, while incorporating or emulating natural disturbance events, further increases the complex arrangement of stands and distributes flows of resources across the landscape and through time.

Figure 2-3 depicts how areas where timber is produced create younger forests, which supports different wildlife species than the older forests created by *conservation areas*. Together, adjacent timber production and conservation areas will be managed to support *species diversity* for multiple values, which improves GPV. Management for diversity occurs at various spatial (genes to ecosystems, individual trees to ecoregions) and temporal (annual, decadal, plan term) scales and within the context of each emphasis area.

Management strategies intended to increase adaptive capacity to climate change and other disturbances will vary across the landscape depending on how particular areas are designated by the FMP, HCP, and other laws or policies. FLMCS describes the type of management that will be applied to a particular area, the allowable range of activities in these areas, and the resources the classification is intended to address. The HCP designates lands for conservation and commits to conservation actions across the forest. Legal requirements and policies define requirements to protect resources. The FMP goals and strategies further define ecosystem benefits that will also guide management activities. For example, FMP cultural goals and strategies include provisions for Tribal access and culturally significant species. Additionally, FMP strategies include recreation, education, and interpretation considerations for highly used trail systems, or areas that have unique interpretive and educational qualities. The following sections describe the emphasis areas and how landscape-level systems, processes, and risk are managed.

The size and layout of HCAs and RCAs in relation to one another creates a connected network of conservation features across varied forest types, elevations, and climate zones. Even within a single type of emphasis area (i.e., HVCA), wildlife habitat reflects a diversity of climate conditions, disturbance history, and patch sizes. Connectivity is provided in part by RCAs that allow trees to grow old in long swaths alongside streams, traversing through a landscape of diverse age classes. Meanwhile, the network of HCA patches creates the opportunity to improve wildlife habitat connectivity throughout the forest uplands (Figure 2-4, View A). Distributing emphasis areas across the landscape builds redundancy in ecological functions and mitigates the risk of exposure to disturbances and climate stress.

Losses to ecosystem services in any one area are compensated through the abundance of similar features elsewhere on the landscape.

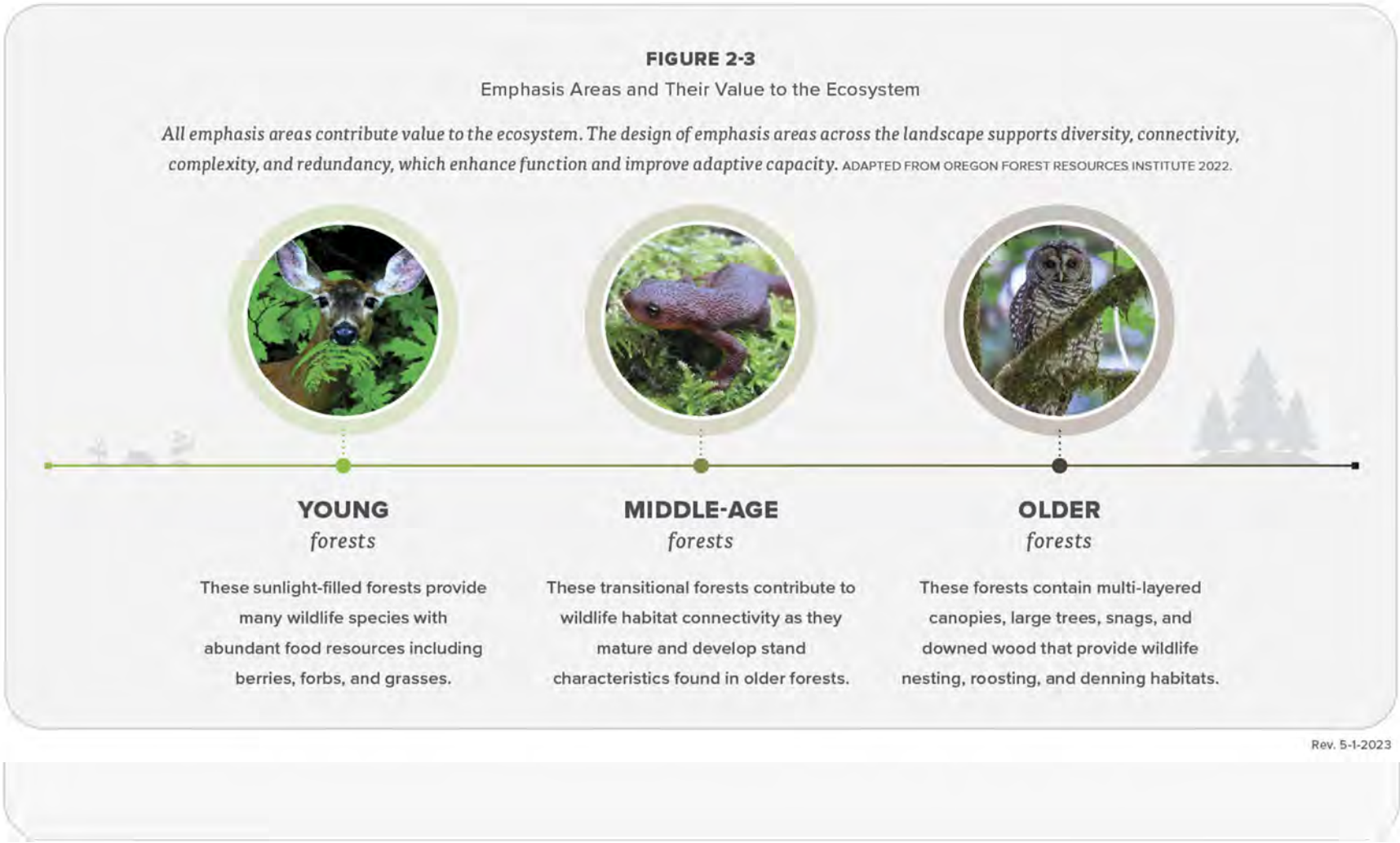
The size and layout of conservation areas among actively managed forest is intentional. Placing HCAs next to, and RCAs throughout, General Stewardship emphasis areas with active management, the landscape becomes a complex mix of habitat types and forest stages that provide diversity between forest stands and supports complementary ecosystem services that deliver multiple benefits. A complex landscape with diverse forest types can increase the resilience of the forest to threats, such as an insect or disease. The complex arrangement of forest types, tree ages, and emphasis areas can also provide a range of options for recovery or adaptation after disturbances (Burton 2025). For instance, a wildfire or ice storm that causes patchy areas of tree mortality could be followed by natural seed dispersal from nearby surviving trees that persisted because they were a less-susceptible age or on a sheltered landscape feature.

Emphasis areas of different types are integrated and overlaid across the forest to create a landscape of diverse uses and benefits (Figure 2-4, View B), which are managed for multiple values, improving GPV. In this way, emphasis areas work together to produce timber, provide social benefits such as public access, and protect a wide array of ecosystem services.

2.3.3 Management of Stands

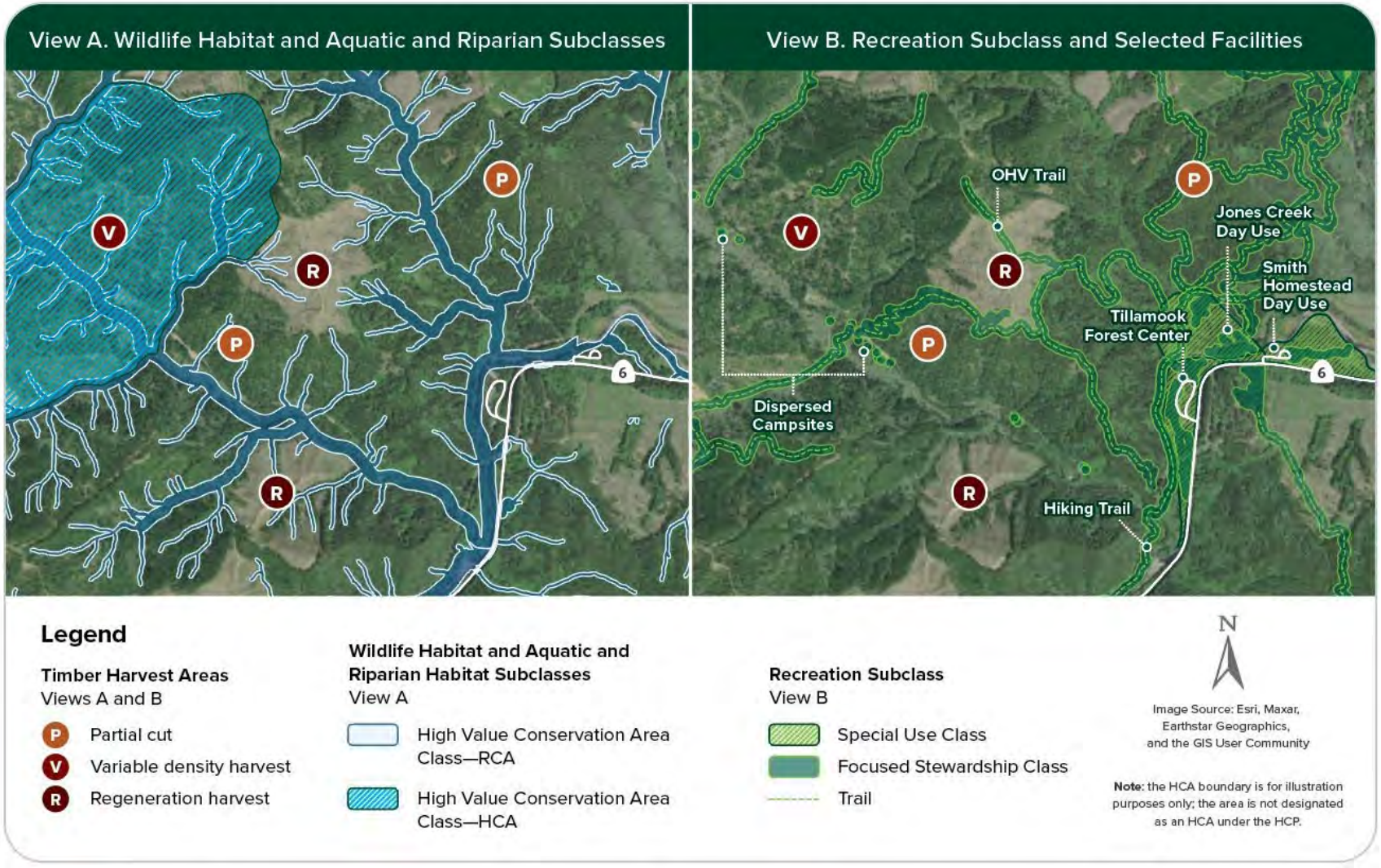
Management of individual forest stands is based on site-specific resource goals. Management varies depending on existing tree conditions and can include *young stand management*, thinning older trees *regeneration harvests*, retention of biological *legacies*, and *reforestation*. Options for management approaches for forest stands are detailed in Chapter 3, Section 3.1.3, *Forest Resilience*. Within emphasis areas, stand management activities have similarities based on the common resource goals. However, even within emphasis areas, the site conditions and trade-offs among resources lead to different treatments. The emphasis areas found in FLMCS can generally be placed into the social, economic, and environmental categories that make up GPV. Descriptions provided in the following subsections give examples of how ODF management may vary at the forest stand level given the considerations of the emphasis areas.

FIGURE 2-3
~~**Emphasis Areas and Their Value to the**~~**Landscape-Level Forest Stand Diversity Contributions to Ecosystem**~~. The design of emphasis areas~~ **Function.** Management across the landscape supports diversity, connectivity, complexity, and redundancy, which~~support~~, in turn, supports adaptive capacity of the ~~ecosystem~~forest for sustained ecosystem services delivery under changing conditions.



Source: Oregon Forest Resources Institute 2022.

FIGURE 2-4
Examples of Emphasis Areas across the Landscape. Active management is integrated across the landscape guided by resource management emphasis areas.

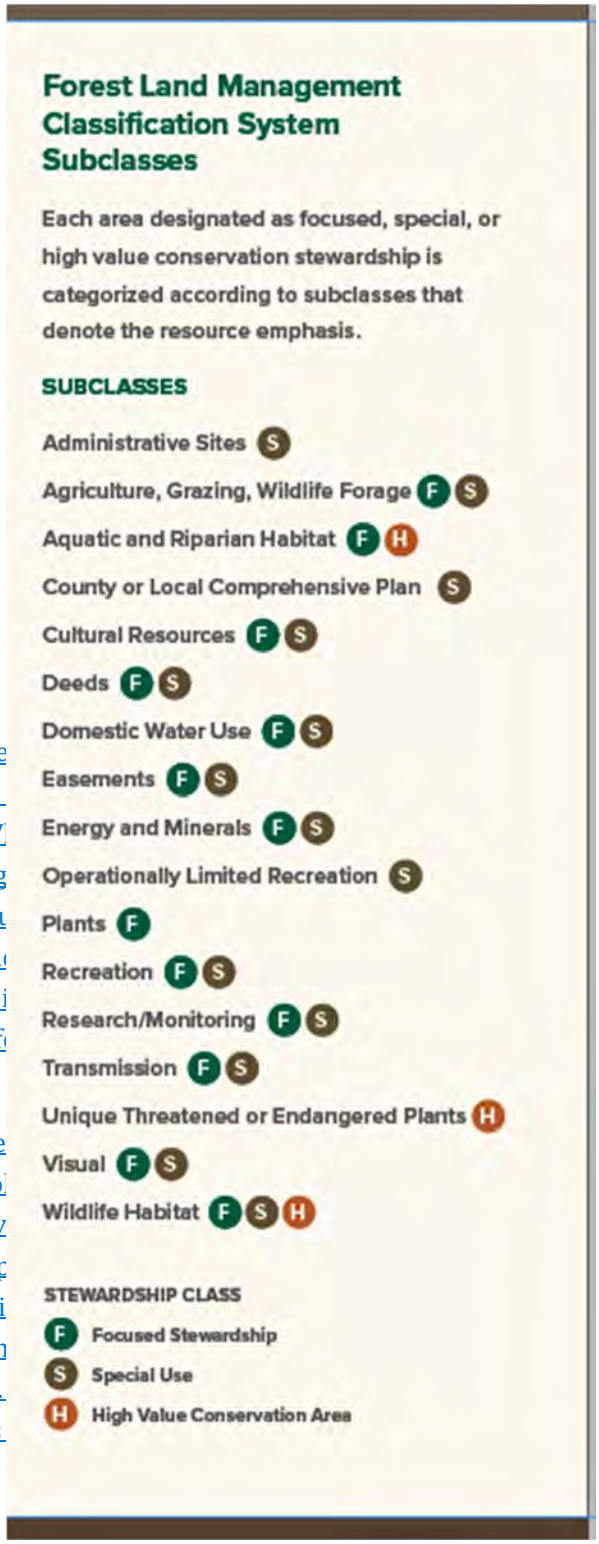


Note: The HCA boundary is for illustration purposes only; the area is not designated as an HCA under the WOSF HCP.

Forest Land Management Classification System

The FLMCS framework places all state forest land within one of four land management classifications: General Stewardship, Focused Stewardship, Special Use, and High Value Conservation Areas (HVCAs). Subclasses are assigned for the specific forest resources that require a Focused Stewardship classification, Special Use classification, or HVCA classification (*for subclasses and stewardship classes, see box at right*).

General Stewardship lands will be primarily managed for sustainable and predictable supply of timber. Trees younger than the criteria used in the definition of old growth in the HCP are available for harvest.



General Stewardship

Social Emphasis

State forests provide for a wide range of social bene
and wildlife habitat for fishing and hunting, carbon
opportunities, and revenue (Figure 2-4, View B). W
emphasis areas, there are also specific areas manag
highways and *scenic waterways*; public access throu
opportunities including hiking, motorized trails, an
services. The cultural goals and strategies outlined i
Strategies, provide for tribal access, opportunities f
species, and protection of cultural resources.

Management within social emphasis areas also inte
example, planning and construction of new trails fo
stream-crossing design, and hydrological connectiv
may be required to implement trash management p
marbled murrelets. Stand management may occur i
benefits, such as thinning in campgrounds or on lan
enhance scenic qualities or remove safety hazards.
incidental benefits, such as economic revenue, this

Economic Emphasis

On state forest lands, timber revenue funds the majority of management activities, including habitat *restoration*, fuels reduction ~~management~~, recreation ~~and education~~, educational programs, and

infrastructure. development and maintenance. These funds are also the primary vehicle for providing economic benefits to rural communities across the state.and public services. Emphasis on timber-production goals and related *silvicultural* strategies will, therefore, take priorityare prioritized on a significant portion of the landscape.

Production of timber will be the primary objective of, especially on General Stewardship lands. TheseAlthough economics is the emphasis of General Stewardship lands will, these lands are managed to continue to provide a suite of additional ecosystem services such as clean water, *carbon sequestration* and *storage*, and early seral wildlife habitat (Stokely et al. 2022).habitat for many different wildlife species associated with early- and mid-*seral* forest types (Figure 2-3). Environmental and social goals and strategies in Chapter 3, *Forest Resources, Goals, and Strategies*, apply during management of General Stewardship lands.

According to the OAR, General Stewardship lands shall be actively managed "to provide healthy, productive, and sustainable forest ecosystems that over time and across the landscape provide a full range of social, economic, and environmental benefits to the people of Oregon" (OAR 629-035-0055(4)(a)).

General Stewardship lands provide more opportunities for harvest operations relative to other land classifications. Each harvest entry provides opportunities to increase the subsequent stand's adaptive capacity by actively resisting or directing climate change effects through planting species mix, adjusting planting densities, and other factors to maintain productivity and diversity. Retention of biological *legacies* (old growth, *standing live and dead trees*, *downed wood*) provide for additional structure, function, and diversity in regenerating stands (Lindenmayer et al. 2012). General Stewardship lands may also employ fuels reduction management to reduce the risk of ignition and spread of wildfire, while maintaining the *standards* set forth in the HCP, and seek alternative revenue sources, such as *biochar* and small-diameter wood products. Careful *salvage* harvest of damaged stands will ensure recovery of economic values and allow new stands to be established with the species mix and planting strategies that are best suited for production under evolving conditions. Environmental goals and strategies in Chapter 3, *Forest Resources, Goals, and Strategies*, guide ODF to protect, maintain, and enhance soils, aquatic, and wildlife resources during management of General Stewardship lands.

The practice of charring forest material and mixing it with soil, to create biochar, was used for thousands of years by indigenous people in the Amazonian basin. The practice created rich soils, called "terra preta de Indio," in otherwise infertile soils.

Modern technologies use pyrolysis to produce biochar. Pyrolysis prevents harmful emissions and produces valuable byproducts in addition to biochar. Pyrolysis is the thermal decomposition of plant material in the absence of oxygen, which prevents combustion (burning). By preventing combustion, the production process prevents the release of greenhouse gases, particulates, and other toxicants to the atmosphere and instead produces bio-oil and synthesis gas, which are captured and can be used as fuel or precursors to other chemical products. Like coal, biochar is a stable form of carbon that can store carbon in the soil for hundreds to thousands of years.

Focused Stewardship

"Focused Stewardship lands include all those whose forest resources are managed using integrated management practices in a manner which is intended to accomplish forest management planning goals." (OAR 629-035-0055(3)(b)) "Because one or more specific forest resources on these lands require heightened or focused awareness, supplemental planning and/or modified management practices may be required to achieve the goals of forest management plans, habitat conservation plans or legal requirements." (OAR 629-035-0055(4)(b))

There are several subclassifications of Focused Stewardship lands, including areas with *cultural resources* or recreation use, where additional management strategies are designed to maintain and protect these resources. These additional strategies are considered through supplemental planning process (OAR 629-035-0055(3)(b)), described in ODF operational policies and state and federal regulations.

~~Special Use~~

~~Special Use areas shall be "managed for a specific forest use. Integrated management is conducted on these lands to the extent possible without interfering with the management of the specific forest use" (OAR 629-035-0055(4)(c)).~~

~~On lands classified as Special Use, "a forest management plan, habitat conservation 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" (OAR 629-035-0055(3)(c)).~~ With an economic emphasis, silvicultural practices in forest stands consider the long-term resilience of tree growth and production of wood products under climate change. To moderate the uncertain impacts of future climate conditions, stand management may vary by the anticipated vulnerability of the stand (e.g., based on its aspect, elevation, precipitation, and species mix). Diversifying management strategies at the stand level provides risk management across the General Stewardship lands. Options include increasing the number of species used or adjusting planting density, different thinning types, and timing of cutting activities. Some approaches may perform better or worse in the future compared to what is currently optimal, but preserving a range of options for future management provides some assurance of maintaining long-term timber *sustainability* under an adaptive management approach (Puettmann 2011).

Management activities are reviewed during individual project planning to ensure alignment with FMP goals and strategies. For example, harvest operations on General Stewardship lands are planned with the management emphasis of revenue and timber production.

Other co-benefits are realized from these operations.

- Domestic water intakes in or adjacent to a harvest area and are protected according to applicable rules and policies.
- RCAs and leave tree and downed wood requirements (defined in WOSF HCP Chapter 4, *Conservation Strategy*) retained within the *harvest unit* contribute to fish and wildlife habitat, clean water, and carbon storage.
- Harvested timber contributes to carbon storage in manufactured wood products.
- Policies and BMPs may be used to minimize impacts on a recreation trail located within a harvest area.

Figure 2-4 shows how forest and social resources protections and considerations and active management are integrated across the landscape.

Environmental Emphasis

Environmental benefits are found throughout the forest from healthy stands with productive soils, fish and wildlife habitat, and clean air and water. Areas with an environmental emphasis include *wetlands*, meadows, lakes, and larger conservation areas to provide habitat to a multitude of species. These conservation areas also provide extensive carbon storage, maintain large portions of continuous tree cover within *viewsheds*, and support recreation through trails, camping, and other outdoor activities. While treatments and management actions in these areas are designed to increase the quantity and quality of certain habitats, these actions also generate economic and social co-benefits.

The ~~Tillamook Forest Center and Smith Homestead day use area are examples of Special Use lands.~~

~~*High Value Conservation Areas*~~

~~HVCAs will be managed for a specific conservation value. "Forest management may be conducted to the extent that forest management activities promote the conservation values and are consistent with applicable legal requirements and will avoid long-term adverse impacts to the specified conservation value" (OAR 629-035-0055-4(d)). HCAs and RCAs are examples of HVCAs.~~

WOSF HCP ~~Conservation Areas~~

~~HCP Chapter 4, *Conservation Strategy* defines the~~ two types of conservation areas: HCAs and RCAs. ~~They are delineated and guided by the requirements described in the HCP.~~ A mix of *passive management* and *active management* in HCAs ~~will maintain~~maintains and ~~develop late-seral~~develops, structurally complex ~~stands~~forests as they relate to specific habitat needs for ~~covered~~*native* wildlife species that rely on them. Predominantly passive management in RCAs ~~will improve~~improves habitat for ~~covered~~native aquatic and riparian-dependent species and ~~increase~~increases resilience by buffering ecological function against changes in streamflow and temperatures resulting from climate change.

~~Within HCAs and RCAs, opportunities to increase adaptive capacity through silvicultural activities are more limited than they are for General Stewardship lands. However, certain conservation actions to promote habitat enhancement will provide specific opportunities to promote adaptive capacity or guide transformation. For example, *stream* restoration and *culvert* replacement are allowed~~

Active management in ~~RCAs, which can increase resilience~~a portion of ~~streams and resistance of roads to floods and *landslides*. Management of HCAs will promote~~the HCAs promotes habitat development and adaptive capacity ~~with the following approach. Management of HCAs will incorporate~~by incorporating principles of *ecological silviculture* and *adaptation silviculture* (Palik et al. 2020~~,~~; D'Amato and Palik 2020). Ecological silviculture is based on the spatial heterogeneity and historical range of variation found in unmanaged old forests and seeks to emulate *stand initiation* and development processes that result from small-scale natural disturbances (e.g., *windthrow*, lightning, insects, disease) to promote within-stand diversity and complexity. Natural history (forest development, dynamics, species, and *structures*) is a model for management and provides insight into potential pathways, trajectories, limitations, risks, and options. Natural forest development principles (e.g., disturbance, succession) inform management strategies and prescriptions related to stand initiation and

development, forest maintenance ~~of forests~~, retention of biological legacies, and landscape mosaics (Carey 2007). However, management based on historical conditions may become less relevant with climate change, leading to greater use of ~~adaptation~~adaptative silviculture that increases the

forest's ability to adapt to changing conditions and continue to deliver ecosystem services~~.~~ (Nagel et al. 2017). The outcomes of ecological silviculture—stands with greater diversity and complexity—remain relevant to adapting to novel conditions (D'Amato and Palik 2020). Habitat conditions and ecosystem services ~~will be continually~~are assessed in HCAs in light of novel conditions to determine when to modify management principles.

~~At the stand level, species composition, structural complexity, and function may increase adaptive capacity (Franklin et al. 2018). Management activities will seek to create, restore, and maintain structurally complex and biologically rich stands, considering local forest types and other site-specific conditions. Prescriptions should provide complex and diverse forests of all types and stages, and activities should be timed appropriately within the context of natural forest development (Carey 2007; Puettmann et al. 2016).~~

Both active and passive management can be used to promote complex stands ~~and heterogeneous landscapes~~ that enhance adaptive capacity and ~~have co-benefits for habitat development~~produce resilient, heterogeneous landscapes. For example, active management can reduce *stand density* in young stands to encourage trees more likely to withstand wind (Mitchell 2000; Moore et al. 2003). The location of ~~limited~~ treatments in HCAs can also be a factor to help build *resistance* to disturbance. ~~Fuels can be managed in portions of HCAs identified as high fire risk, using~~ Variable-retention harvest or variable-density thinning ~~that also~~ creates spatial heterogeneity for habitat development purposes (e.g., robust shrub and forb communities) in closed-canopy, homogeneous stands~~.~~ (e.g., Berrill et al. 2018; Willis et al. 2021) and may also reduce fuels to mitigate fire risk depending on site conditions (Prichard et al. 2021). Conifer restoration actions in *Swiss needle cast* ~~(SNC) -~~ infected stands and some *hardwood-dominated* ~~dominated~~ *stands*, ~~although limited in HCAs, will be~~are implemented to guide stand development to resilient stands with more desirable long-term habitat quality~~.~~ and improved carbon sequestration. Reforestation ~~will use a~~using diverse tree species ~~mix~~mixes, with limited site preparation and young stand management, ~~introducing~~introduces complexity early in stand development~~. Variable density thinning will also promote spatial heterogeneity, complexity, and diversity (e.g., robust shrub and forb communities) in closed-canopy, simple stands. While treatments and management actions in HCAs will be designed to increase habitat quantity and quality, some of these treatments will result in timber revenue~~.

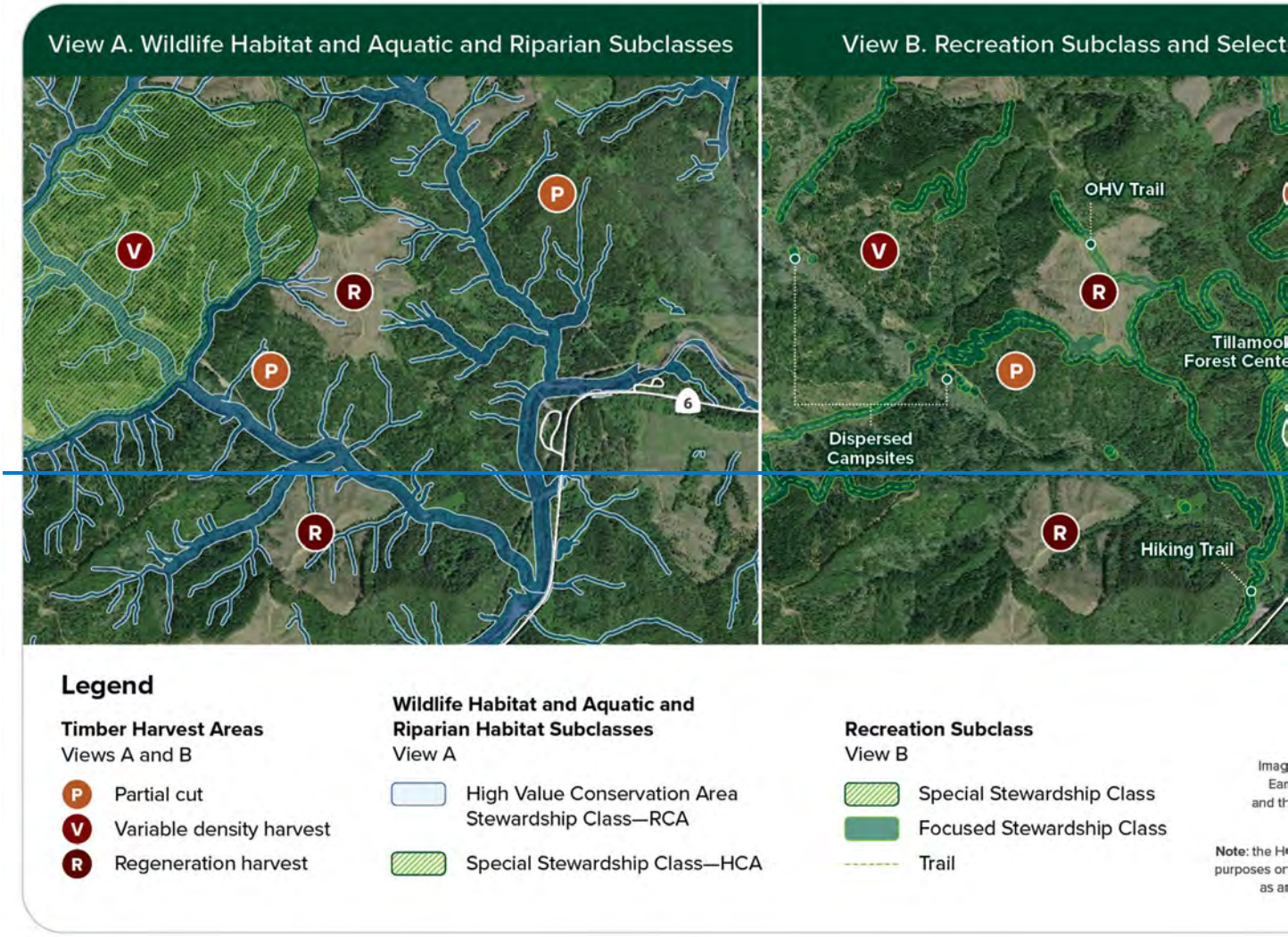
~~Allowing for passive~~Where current stand development ~~of~~ is expected to achieve long-term objectives for fish and wildlife habitat, passive management to promote complex older stands may ~~also~~be the optimum approach to increase adaptive capacity (Nagel et al. 2017). Passive management ~~retains~~promotes development and recruitment of biological legacies ~~on the landscape~~ and accommodates small-scale disturbances followed by natural *regeneration*. In some cases, the existing components within a stand are well adapted to the site and have persisted through previous disturbances, providing long-term *refugia* and habitat types on the landscape (Krawchuk et al. 2020). High genetic diversity within stands increases adaptive capacity when natural regeneration is allowed to occur and well-adapted and diverse seedlings grow after disturbances. Forests managed passively in RCAs produce increasingly complex and resilient riparian conditions over time, as shade increases to maintain water temperature and large wood increases habitat complexity in streams as trees fall.

Both active and passive management can facilitate transformative change, e.g., by actively introducing ~~warm~~future-adapted tree stocks ~~or~~and a diverse species mix during reforestation or allowing transformation over time to ~~warm~~future-adapted species or *populations* within the existing plant community~~.~~, if present.

Whether to enable transformative changes after disturbances and under climate change ~~will be~~in conservation areas is assessed under an adaptive management framework with regard to habitat requirements for WOSF HCP-covered species ~~under an adaptive management framework.~~. The varied sizes and distribution of HCAs ~~across the landscape~~, coupled with more regular distribution of RCAs, is intended to create a functional network of habitat *patches* across the plan area, ~~which supports resilience. RCAs will produce increasingly complex and resilient *riparian* conditions over time. Figure 2-4 shows how RCAs, recreation, and timber harvest activities are integrated across the landscape~~that provide opportunities for diversity of trajectories and redundancy, which supports resilience.

FIGURE 2-4

Examples of Emphasis Areas across the Landscape. Active management is integrated across the landscape guided by resource management emphasis areas.



Note: the HCA boundary is for illustration purposes only; the area is not designated as an HCA under the HCP.

2.1.2 Implementation Considerations across the Landscape

HCP conservation strategies, FMP strategies, and the planning process are intended to integrate management of ecosystem services across the landscape. Planning and operations work together across the landscape to provide Ecologically sustainable forest management integrates emphasis areas, landscape conditions, and stand management to sustain social, economic, and environmental benefits. During the planning process, management activities are reviewed to ensure alignment with goals and strategies. Important habitat types and ecological features are identified and managed according to the HCP and FMP. Consideration is given to recommendations, *Implementation Plan* (IP) targets, *best management practices* (BMPs), and operational policies to achieve GPV. The resulting landscape provides a range of integrated social, economic, and environmental benefits.

For example, harvest operations on General Stewardship lands are planned with the emphasis of revenue and timber production. Other values are integrated into these operations. Harvested timber contributes to carbon storage in manufactured wood products. RCAs, in addition to leave tree and downed wood requirements, defined in HCP Chapter 4, *Conservation Strategy*, contribute to carbon storage on the landscape, fish and wildlife habitat, and clean water. A special stewardship designated campground adjacent to a harvest area may be considered a visual buffer per the FMP strategies. A special stewardship domestic water intake may be in or adjacent to a harvest area and is protected according to applicable rules and policies.

2.1.3 Adaptive Capacity, Landscape Context, and Adaptive Management

To provide GPV, state forest lands management must sustain interrelated social, economic, and environmental benefits while continuing to promote the ecosystem services that support their delivery and the adaptive capacity of the system in the face of change and uncertainty. Resources change over time, economic cycles produce swings in the value of timber harvested, species move across the landscape, disturbance events alter conditions, public use patterns change, and ecosystems undergo transformation. Regional and global conditions such as climate change create uncertainty around future forest productivity and health, species distributions and biodiversity, the severity and frequency of disturbance patterns, and the potential for ecosystem transformation. To deliver ecosystem services in the face of change and uncertainty, the management approach focuses on building adaptive capacity, evaluates *trade-offs* between ecosystem services across the landscape, and leverages adaptive management to address uncertainty and change over time, in alignment with the CCCP.

Adaptive Capacity

Maintaining or increasing adaptive capacity across the landscape reduces risk associated with change and uncertainty. Increasing resistance reduces the likelihood of impacts, increasing. By designing a functional landscape, applying stand-level practices that build resilience reduces the degree of consequences, and transformation allows for change. Examples of management actions that promote resistance to disturbance include fuels reduction management and establishment of fuel breaks prior to a fire event that can reduce the likelihood of fire spread and severe burn. Examples of management options that promote resilience to disturbance include reforesting with diverse tree

species that can reduce the extent of insect and disease on timber inventory or enhancing stream habitat conditions throughout a *watershed* to ensure sufficient aquatic resources are available to accommodate increasing fluctuations in streamflow over time. Examples of increasing transformation include allowing an HCA to follow natural fire recovery processes. In general, species diversity, structural complexity in HCAs and RCAs, and spatial heterogeneity contribute to adaptive capacity—the ability of the forest to accommodate changes from both discrete events and gradual change.

Evaluating Trade-offs in a Landscape Context

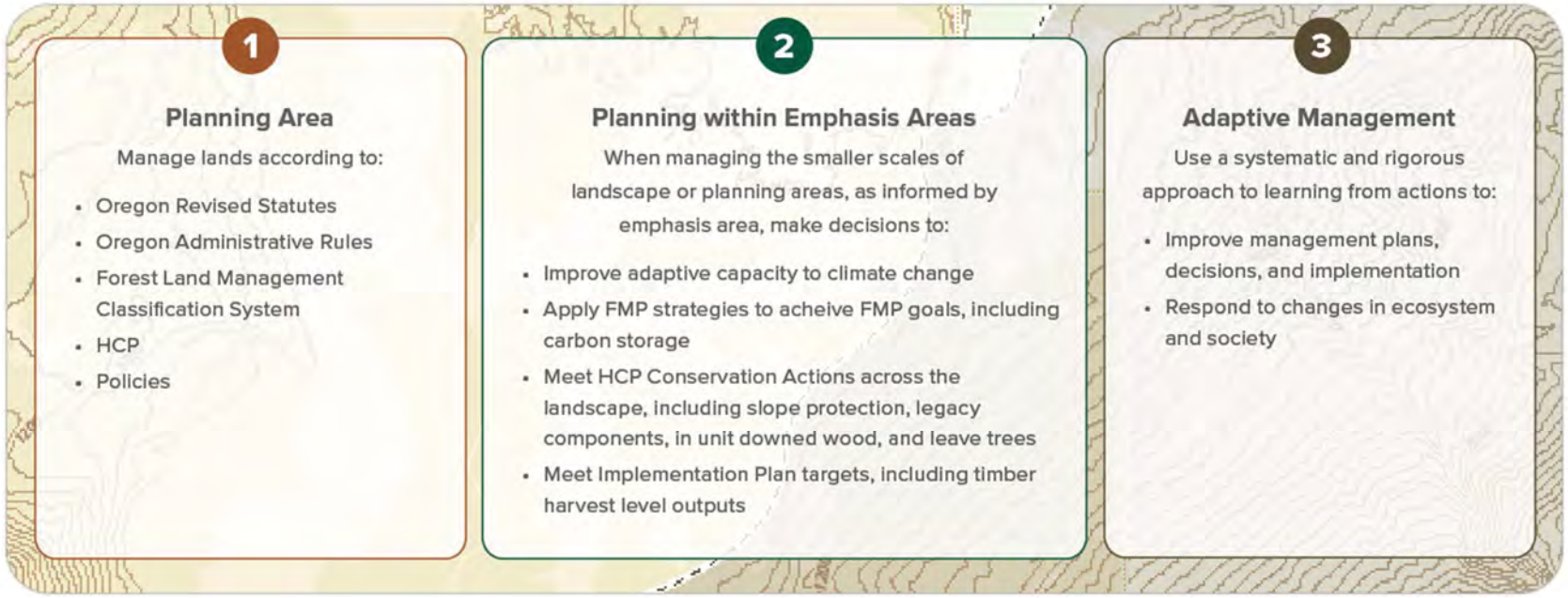
Evaluating trade-offs associated with provision of different ecosystem services is paramount to evaluation and revision of desired conditions and related strategies (Bradford and D'Amato 2012; Burton et al. 2014; Franklin et al. 2018). Trade-offs include but are not limited to management emphasis (e.g., timber, aquatic and riparian function, biological diversity and conservation, *scenic*, recreation), *desired future condition*, integration of resources, applicable *policy* restrictions, *landscape context*, and revenue.

Trade-offs are considered at every level of planning. For example, at the HCP level, they were considered in the designation of HCAs and RCAs and the development of conservation goals and objectives. At the IP level, they are considered in deciding the type and amount of activities that will occur over the life of the IP in a particular region. Site-specific trade-offs are considered during Operations Plan (OP) development, which designates operations in shorter time periods to achieve the IP. At the adaptive management level, trade-offs are evaluated prior to making any changes to IPs, FMPs, or the HCP. Additional details are provided in Chapter 4, *Guidelines*.

Adaptive Management

Adaptive management is a systematic and rigorous approach to learning from actions, improving management, and evaluating decisions in response to changes in ecosystems and society (Millar et al. 2007). FMP and HCP strategies are expected to sustain delivery of specific ecosystem services over time. Adaptive management is structured within a clear decision-making trade-offs through a transparent planning and adaptive-management framework that connects the evaluation of management alternatives relative to important resources and values with subsequent decision points that provide the opportunities to change management approaches (Gregory et al. 2012). With an adaptive approach to management, long-term targets and modeling may require more frequent revision and adjustment based on *monitoring* to achieve the FMP goals and better understand trade-offs in, ODF maintains ecosystem integrity while delivering ecosystem services. Adaptive management is incorporated into different levels of planning to respond to changes in the ecosystem and society. For the FMP, monitoring assesses the effectiveness of strategies for meeting forest resource goals. At the HCP level, monitoring assesses whether biological goals and objectives are being met. Investments in monitoring projects for adaptive management are prioritized during IP planning while on-the-ground monitoring operations are included in OP development. ODF's decision-making framework acknowledges the different values that GPV to Oregonians present to forest management when assessing tradeoffs between management alternatives, including those affected by these decisions. Additional details of this decision framework are presented in Chapter 4, *Guidelines*. Figure 2-5 shows the process from planning area implementation, to learning and adapting actions to meet GPV.

FIGURE 2-5
Application of Ecologically Sustainable Management to Deliver Ecosystem Services. The emphasis areas, policies, and strategies are applied across the planning area to support decision-makers as they strive to further improve conditions, adapt plans to respond to change, and improve performance over time.



2.2 Strategy Integration for Ecosystem Services Delivery

The . The principles of ecologically sustainable forest management are reflected in Chapter 3, *Forest Resources, Goals, and Strategies*. Each goal represents a forest resource, and management strategies are designed to foster resilient forests that deliver multiple ecosystem services: cultural values; timber production; fish and wildlife habitat enhancement; special forest products; soil processes; water quality; recreational, educational and interpretive opportunities; and carbon storage. Chapter 4, *Guidelines*, provides implementation guidance and decision processes that link monitoring to management adjustments.

Consistent with the CCCP goal for state forests, the strategies address climate change and other disturbance effects by adaptively managing for resistance, resilience, and directed or accepted change of ecosystems to sustainably deliver benefits. While HCAs and RCAs will receive less active management, and General Stewardship lands will have a timber production focus, the entire forest functions as a whole; therefore, management considers the dependencies among ecosystem services to provide sustainability over time. The primary goals of the emphasis areas will guide their management.

The FMP strategies support rural economies and public services by aiming to produce a sustainable and predictable timber supply. The strategies emphasize the function of economic systems that support forest management and recognize that specific approaches and the levels of commitment depend on economic goals and circumstances. Maintaining economic benefits is key to supporting implementation of all plan activities and maintaining public trust in ODF's ability to deliver plan outcomes. Chapter 3, *Forest Resources, Goals, and Strategies*, and Chapter 4, *Guidelines*, describes the methods for implementation, operations, and adaptive management.

CHAPTER 3

Forest Resources, Goals, and Strategies

OAR 629-035-0030 requires that the *Western Oregon State Forests Management Plan* (FMP) contain "forest resource management goals, which are statements of what the State Forester intends to achieve for each forest resource within the planning area consistent with OAR 629-035-0020 (Greatest Permanent Value)" and "management strategies, which describe how the State Forester will manage the forest resources in the planning area to achieve the goals articulated in the plan. The strategies shall identify management techniques the State Forester may use to achieve the goals of the plan during the implementation phase of the plan."

Chapter 3 describes the types and conditions of *forest resources*, how they reflect contribute to *greatest permanent value* (GPV), and what management of the long-term *goals* for each resource is intended to achieve and how. There are 16 forest resource *goals* and 40, and high-level *strategies* for accomplishing the Oregon Department of Forestry (ODF) uses to achieve those goals. The resource description, goals, and strategies described in this chapter reflect the five plan themes (described in Chapter 1, Section 1.2, *Plan Themes*) and the management approach (. ODF does not optimize any one goal across the entire *landscape* but applies the strategies using the principles described in Chapter 2, *Management Approach*).

Performance measures are specific measures reported to the *Board*, to produce a blend of *Forestry*[1]

(BOF)outcomes for forest resources that track the accomplishment of select FMP goals. Review of performance measures is the pathway for feedback and adjustment in the decision-making framework for *Adaptive Management Plans* (AMPs) and policies described in Chapter 4, *Guidelines*, and shown in Figure 4-1.

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[1] Terms italicized in this document are defined in the Glossary. Defined terms are italicized at the first instance in each chaptermeets GPV.

3.1 Forest Condition



State forests comprise different species of trees at different ages. The distribution of dominant tree cohort age and species has important implications for future management, particularly in the development of silvicultural pathways aimed at improving adaptive capacity of ecosystem processes to deliver GPV.

To better understand and provide context for the resource goals and strategies, this section details the current state forest condition ~~is detailed here.~~. Forests are complex *ecosystems* with numerous *biotic* and

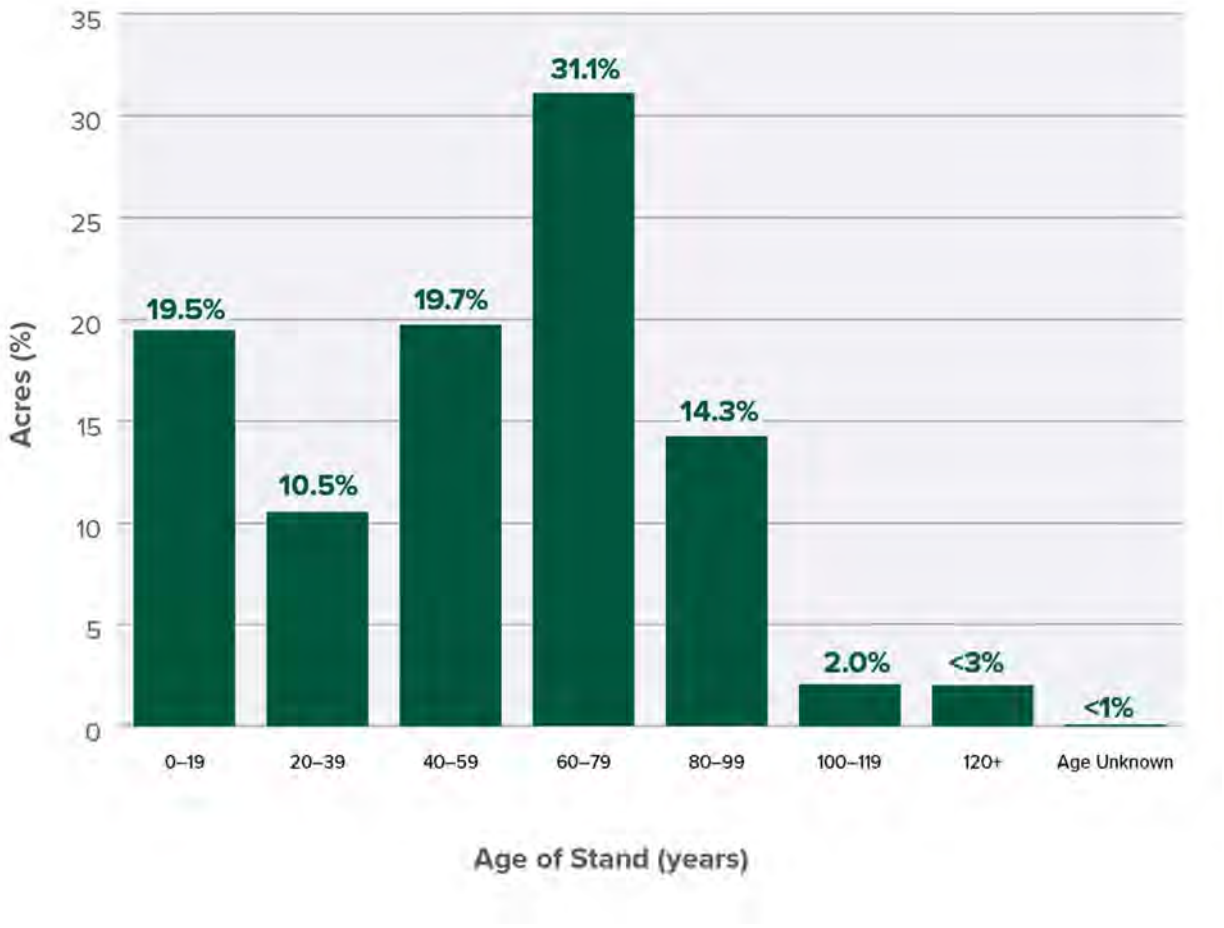


Forest types vary across the geographic range of state forests. Species composition and age class distribution have important implications for future management.
Credit: ODF.

interactions. ~~Trees~~State forests managed under the *Western Oregon State Forests Management Plan* (FMP) are distributed from the ~~dominant group of plants on state~~ California border to the Columbia River, and from the coast to the crest of the Western (Old) Cascades. The diversity of forest ~~lands~~types and plant communities reflect much of the variation in environmental gradients (precipitation, temperature, elevation) across western Oregon as well as local geology, disturbance history, and past management. Many state forest lands were affected by repeated, large wildfires or were extensively logged prior to acquisition by the State in the first half of the 20th century. *Reforestation* and *restoration* efforts were implemented across state forest lands to replant burned or harvested lands after the State took ~~ownership. The age and *species* distribution of state forests lands reflects the history of large fires, salvage logging, and reforestation (Figures 3-1 and 3-2).~~ ownership. The age and *species* distribution of ~~dominant tree age on~~state forests reflect this history of large fires, salvage logging, and reforestation (Figures 3-1 and 3-2).

The current species composition and age class distribution across state forest lands affects future management, particularly in the development of *silvicultural* pathways and conservation strategies aimed at promoting *biodiversity*, improving *adaptive capacity* ~~and promoting ecosystem processes that deliver high-quality *habitat*. Compared to simple *stands*, forests with complex stands will support more *biodiversity* and will be more~~, and promoting resilient ~~to windfall and insect infestations. Currently, approximately 45~~forest and *aquatic* ecosystems. Resilient ecosystems deliver important co-benefits over time, including functional aquatic and terrestrial habitats for *native* fish and wildlife, *carbon sequestration* and *carbon storage*, production of forest products, health soils, clean air, and access for all Oregonians. Approximately 40% of state forest lands in the *planning area* have a *dominant cohort* of trees between ~~50~~60 and ~~79~~89 years old. These lands include ~~53~~49% of the merchantable ~~standing~~timber volume in the planning area. ~~Stand ages reflect periods of salvage logging prior to State ownership and subsequent reforestation efforts by the Oregon Department of Forestry (ODF) that occurred after~~The relative abundance of stands in this age bracket reflects a period of reforestation following salvage logging and a series of repeated wildfires ~~in (~~1933, 1939, 1945 ~~and,~~ 1951~~, collectively known~~) referred to as the Tillamook Burn~~. However,~~, prior to State ownership. Dominant cohort age is not the only factor that influences ~~forest functioning condition.~~stand conditions, however; site productivity, past management practices, and current and historical *disturbance* ~~and disease history~~ regimes interact to produce the forests that ODF manages today.

FIGURE 3-1
Distribution of Stand Ages as a Percentage of Area of Western Oregon State Forests.
~~Compared to even-aged~~Stands in the 60–89 year age bracket represent a plurality of stands, ~~forests with uneven-aged stands often support a greater~~reflecting the management history of



Source: ODF ~~2022a~~2022.

Note: Stands that experienced stand-replacing fire within the Beachie Creek Fire (North Cascade District) had their stand initiation date reset to 2020. Thus, the distribution of stand ages ~~will~~ likely differ markedly from previously published reports that used the *Stand Level Inventory*.

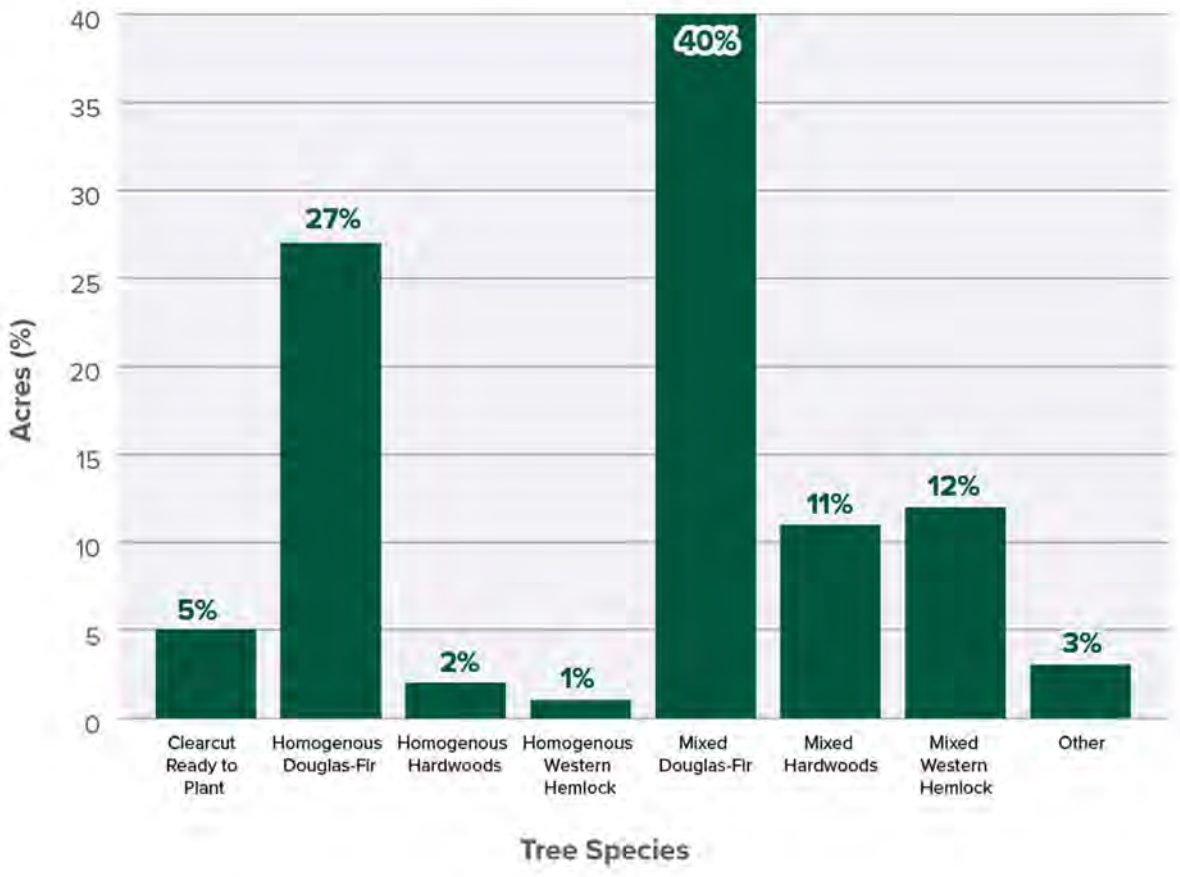
3.1.1 Conifer Management

Management history and geography strongly influence the stand composition of tree species and stand age across space and through time (Figures 3-1 and 3-2). Because of their relatively fast growth rate and value as merchantable timber, Douglas-fir ~~(~~*(Pseudotsuga menziesii*)–dominated forests, in which Douglas-fir accounts for the majority of the stand, are the most common forest type on state forest lands~~(~~, making up approximately 73% of the forested landscape (homogeneous Douglas-fir plus mixed Douglas-fir stands in Figure 3-2). Western hemlock (*Tsuga heterophylla*)-dominated forests and red alder ~~(~~*(Alnus rubra*)-dominated forests are the next most common forest types. Nearest to the ocean, within the Astoria and Tillamook districts, Sitka spruce (*Picea sitchensis*) is a dominant or *co-dominant* species in stands with a maritime climate with milder temperatures and abundant moisture. As shown

in Table 3-

1, true firs (*Abies* species), western redcedar (*Thuja plicata*), and various hardwood species (Section 3.1.2, *Hardwood Management*) add diversity within stands dominated by other species in the North Coast and Western Cascades. In the forests in southwestern Oregon, stands are the most diverse, with additional conifers and hardwoods adapted to drier sites and more frequent fire. In general, each of these forest types presents distinct management opportunities, offers different economic return, provides habitat for different species, and offers different levels of resilience to extreme weather conditions. Species selected to be cut and planted are based on the *emphasis area*, landscape context, stand conditions, and best available information. For example, in General Stewardship lands, planted trees consist primarily of commercially viable conifer species, because they are the most efficient stock to provide timber products, *revenue*, and local jobs. However, non-commercial species are also planted or allowed to regenerate naturally, as these areas still provide a level of diversity.

FIGURE 3-2
~~Dominant~~ Tree Species Composition in Western Oregon State Forests. ~~Tree species richness and~~Stand composition ~~affect~~affects potential vulnerabilities or resilience to disturbances and stressors such as insect outbreaks, pathogens, fire, windthrow, drought, and climate change.



Source: ODF ~~2022d~~2022.

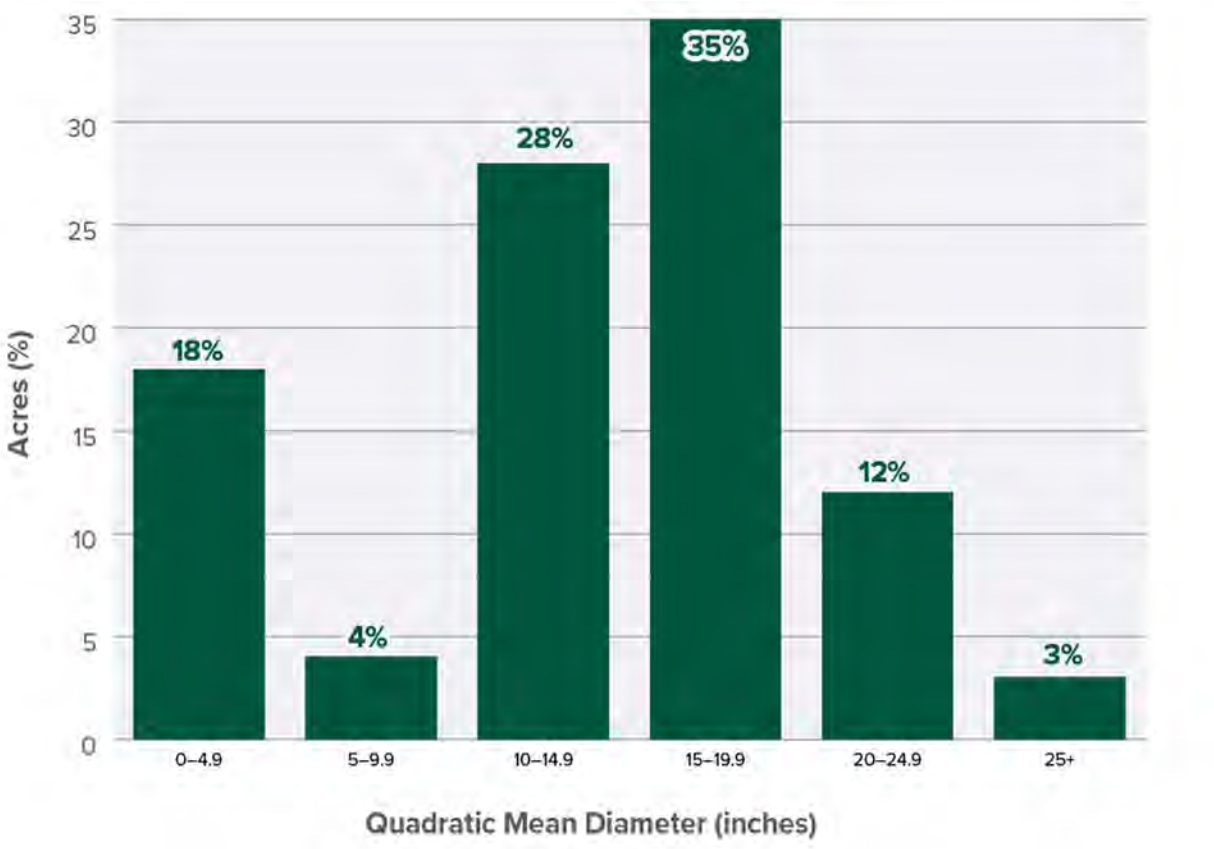
~~Note: Stands that experienced stand-replacing fire within the Beachie Creek Fire (North Cascade District) had their stand initiation date reset to 2020. Thus, the distribution of stand ages will likely differ markedly from previously published reports that used Stand Level Inventory.~~

~~On average, stands of trees in state forest lands have a quadratic mean diameter (a measure of average~~

~~tree diameter conventionally used in forestry, rather than arithmetic mean diameter) between 11 and 20 inches (Figure 3-3). A relatively small fraction of trees in the planning area have a quadratic mean diameter of more than 20 inches, reflecting the history of fire, *regeneration harvesting*, and reforestation on state forest lands. Silvicultural prescriptions may help accelerate diameter growth in trees and may help achieve silvicultural and habitat management goals for average tree diameter.~~

Note: For this figure, homogenous is defined as >80% of the stand *basal area* in a single species group; mixed stands have >50% of the stand basal area in the named species group. Other includes stands <50% of the stand basal area in Douglas-fir, western hemlock, or hardwood species.

~~**FIGURE 3-3**~~
~~**Distribution of Quadratic Mean Diameter of Trees in Western Oregon State Forests.**~~ ~~Quadratic mean diameter may be used as an indicator of the quality of habitat for some wildlife species and tree bole merchantability.~~



~~Source: ODF 2022a.~~

~~Note: Stands that experienced stand-replacing fire within the Beachie Creek Fire (North Cascade District) had their stand initiation date reset to 2020. Thus, the distribution of stand ages will likely differ markedly from previously published reports that used Stand Level Inventory.~~

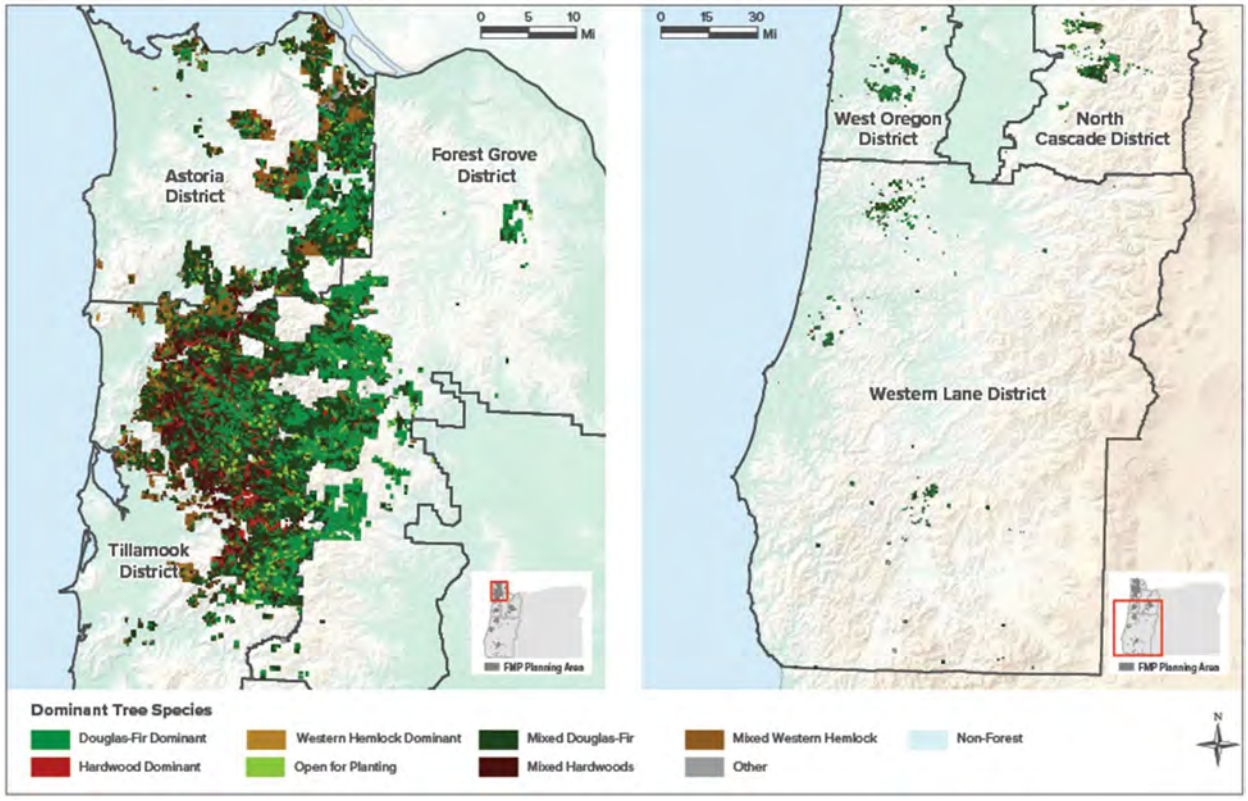
~~Management history and geography strongly influence the dominance of tree species and stand age across space and through time (Figure 3-4). Douglas-fir-dominated forests comprise the majority of forests. While other multispecies forest patches exist on state forest lands, they cover a minimal proportion of the planning area. In general, each of these forest types will present distinct silvicultural opportunities, offer different economic return, and provide habitat for different species. These differences are particularly relevant to habitat development and timber production.~~

~~3.1.1~~3.1.2 Hardwood Management

~~*Native* hardwood trees provide a *diversity* of~~*Native* hardwood trees, such as red alder, bigleaf maple (*Acer macrophyllum*), Pacific dogwood (*Cornus nuttallii*), bitter cherry (*Prunus emarginata*), golden chinquapin (*Chrysolepis chrysophylla*), willow (*Salix sp.*), and others provide a *diversity* of cultural and provisioning services, like timber, food, fiber, shelter, and ecological *functions* and resources for wildlife that complement the conifer-dominated forests typical of state forest lands (Ellis and Betts 2011). Maintaining hardwood diversity within stands ~~may involve appropriate silvicultural interventions,~~

~~including selecting~~ involves retaining some hardwood species as leave trees during harvests ~~or~~ and including hardwood species during replanting ~~with diverse~~or allowing natural regeneration hardwood species. Management actions for hardwoods ~~may~~ depend on the ~~focus~~designation of the stand, such as whether it is intended for revenue generation from timber harvest ~~of conifers~~, or a *habitat conservation area* (HCA) intended to grow more complex habitat. In some cases, hardwood-dominated stands may not provide desired values, such as large trees for wildlife habitat or carbon storage, and may be ~~converted~~managed to introduce additional conifer species, as in the example of anticipated red alder management below. At the time of writing, homogeneous hardwood stands ~~dominated by hardwoods accounted~~account for just under 15% of total acres in the planning area. Table 3-1 shows the distribution of forests dominated by hardwood and other tree species across the state forest districts.

~~FIGURE~~TABLE 3-~~4~~1
Distribution (acres) of ~~Dominant Tree Species~~Forest Types on Western Oregon State Forests. Douglas-fir–dominated forests comprise the majority of all districts other than Tillamook, but forests dominated by species other than Douglas-fir or by multiple species exist in all districts.



District	Homogenous Douglas-Fir	Homogenous Hardwoods	Homogenous Western Hemlock	Mixed Douglas-Fir	Mixed Hardwoods	Mixed Western Hemlock	Other
Astoria	31,310	1,050	1,080	64,240	8,710	21,750	8,720
Forest Grove	59,620	540	30	43,930	1,830	1,660	7,390
North Cascade	14,220	10	120	24,870	730	2,040	5,490

Tillamook	50,260	16,680	1,430	93,670	51,540	22,650	14,360
West Oregon	23,430	500	0	9,130	1,550	630	1,330
Western Lane	17,930	360	20	26,050	4,310	660	3,710

Source: ODF ~~2022a~~2022.

Note: For this table, homogenous is defined as >80% of the stand in a single species group; mixed stands have >50% of the stand in the named species group. Other includes stands <50% of the stand in Douglas-fir, western hemlock, or hardwood species.

Red alder is a native hardwood that is ecologically and commercially important. In Pacific Northwest forests, red alder is a species that readily colonizes disturbed areas, particularly when reseeding or planting of conifers does not occur. Alders contribute to soil creation and *nutrient cycling*~~, and improve soil nutrients~~ by fixing nitrogen~~,~~ while also supporting *regeneration* of shade-tolerant conifers (Hibbs et al. 1994). This ecological role is particularly important where soil has been damaged by disturbance (e.g., high~~ severity wildfire), such as in portions of the Tillamook Burn area that were subject to repeated fire events. Goals and strategies for soil resources are discussed in Section 3.2, *Integrated Resource Management, Soils and Geology*.~~ severity

wildfire), such as portions of the Tillamook Burn that were subject to repeated fire events.. Goals and strategies for soil resources are discussed in Section 3.2, *Integrated Resource Management.*

A history of repeated fires and cut-and-run logging practices~~,~~ prior to the creation of state forest lands~~,~~ resulted in relatively large areas dominated by alder on the North Coast and ~~on~~in the Tillamook and Clatsop State Forests in particular. There are more than 70,000 acres of alder-dominated stands ~~in~~that lack any significant conifer component on the Tillamook District alone. The age of the dominant cohort in red alder-dominated forests primarily ranges between 40 and 80 years old. Red alder rarely live more than 100 years (Hibbs et al. 1994~~); thus,~~). Red alder mortality in the Tillamook District ~~could~~will increase in the next 20 years as these trees approach the end of their life expectancy. Dead and dying alders provide important nesting and denning habitat for diverse wildlife species (Carey et al. 1997). As red alder-dominated stands unravel, the regenerating forest can provide diverse and complex ~~early-seral~~young forest habitats. Goals and strategies for wildlife habitat are discussed in Section 3.2, *Integrated Resource Management, Wildlife*.

The relatively large proportion of alder stands in some state ~~forests~~forest landscapes provides opportunities for both ~~*passive* and~~ *active management and passive management* for specific resource values. The pace, scale, and intent of active management ~~will be~~is different in different emphasis areas. In ~~production~~areas with an economic emphasis ~~areas~~, conversion of some *hardwood stands* to *conifer forests* is an important priority, but ensuring a continued supply of hardwood logs to local mills remains a priority as well. The intent for activities that reduce the proportion of hardwoods is not to eradicate these species or ignore their key role in promoting biodiversity, but to provide a greater array of co-benefits. In conservation emphasis areas (including HCAs), conifer restoration treatments ~~will be more limited, and~~are intended to promote development of habitat for covered species listed in the *Western Oregon State Forests Habitat Conservation Plan* (WOSF HCP~~) covered species~~), but will have relatively greater retention of hardwoods compared to timber harvest in General Stewardship areas. ~~Hardwood stands in the *riparian area* would be protected under the HCP, which does not allow conifer restoration treatments in *riparian conservation areas* (RCAs).~~

There are at least 30,000 acres of hardwood-dominated stands on areas that are *operationally limited* ~~ground~~for timber harvest, or are otherwise protected, across the planning area. Stand development in these areas ~~will continue~~continues to occur without active management. ~~Areas that are not *actively managed* (e.g., operationally limited areas) provide a basis for comparison~~For example, hardwood stands in *riparian conservation areas* (RCAs) are protected under the WOSF HCP, where cutting of ~~strategies intended to promote conifer and habitat development. The intent~~trees is not ~~to remove hardwoods from the landscape or ignore their key roles in biodiversity and *ecosystem function*, but rather to learn from~~allowed except for limited circumstances such as stream crossings, yarding corridors, hazard tree falling, and aquatic restoration activities. These passively managed stands serve as an important baseline for comparing a broad suite of management approaches to promote conifer and habitat development in an *adaptive management* framework.

~~3.1.2~~3.1.3 Forest Health

There are several *forest health* challenges for state forest lands ~~over~~throughout the planning area. Some forest health concerns are ~~due to~~the result of past practices and history of the lands, ~~while others are due to an increase of forest visitors~~including earlier attempts to restore deforested lands. For example, much of the Tillamook Burn was planted or seeded with Douglas-fir from non-local seed sources, ~~with unknown long-term consequences and are considered part of the factors for *Swiss needle cast* (SNC) impacts on stands. Increasing popularity of recreational activities in state forest lands of northwest Oregon increases the likelihood of new invasive species being introduced, which in turn, could affect long-term forest health. Increases in the frequency, duration, and magnitude of drought and heat waves may stress the forest ecosystem. Under *climate change*, hotter and drier summers will provide more favorable conditions for insect outbreaks and will make trees more vulnerable to infestation. Drought-stressed trees are often subsequently attacked by secondary agents, such as *pathogens*.~~at a time when less was known about the importance of locally adapted seed sources. These non-local trees are known to exhibit reduced growth as they mature and are also one of the contributing factors to increased impacts of *Swiss needle cast* (SNC).

The increasing popularity of recreational activities on northwest Oregon state forest lands increases the likelihood of new invasive species being introduced. Recreationists often unknowingly transport invasive species on their vehicles or by bringing firewood and recreational equipment carrying invasive species. This, in turn, affects ecosystem function and long-term forest health.

The frequency, duration, and magnitude of extended drought periods and heat waves also stress the forest ecosystem. For example, in the aftermath of the June 2021 heat dome, which brought record-breaking temperatures to the Pacific Northwest, nearly 5% of trees in western Oregon and Washington forest canopies had visible damage to their foliage (Sibley et al. 2025). Because of *climate change*, hotter and drier summers create more favorable conditions for insect outbreaks, making trees more vulnerable to infestation (Fettig et al. 2022). Drought-stressed trees are often subsequently attacked by secondary agents, such as *pathogens* (Simler-Williamson et al. 2019).

Forest health strategies are addressed on a site-specific basis ~~when reforestation prescriptions are developed for planting and other young *stand management*~~. Considerations for treatments~~. Site-specific prescriptions~~

consider target include species, aspect, elevation, soil types, SNC risk where applicable, *Phellinus weirii* (laminated root rot)disease presence, requiredtree stocking guidelines, natural advancedtree regeneration, and the *desired future condition* of the *stand goals*. Such prescriptionsstrategies also anticipate and plan for drier, and hotter future conditions resulting from climate change. This will provideThis site-specific approach to forest health provides for a diverse, healthy, productive, and *sustainable* forest ecosystem over time that will beis more resilient to change.

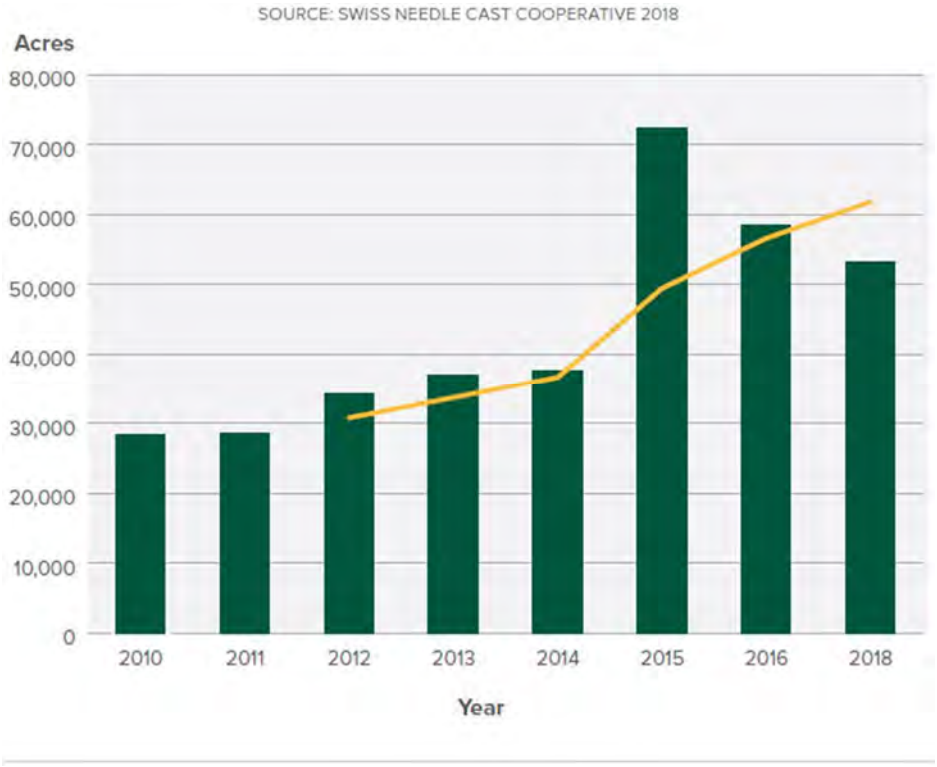
ODF will follow The *integrated pest management* process usingguides herbicide application and other management techniques that control pest damage or unwanted vegetation. It uses site-specific management *objectives* while decreasing non-targetand *best management practices* (BMPs) to decrease adverse impacts of herbicides and other control measures on other forest resources and ecosystem processes. The integrated pest management process will beis similar across the landscape designations.emphasis areas. Actual use of pest management will dependdepends on the issue, regional context, *Forest Land Management Classification System* (FLMCS) designation, existing conditions, and desired *outcomes*. For example, insectinsects and disease may be treated differently in HCAs than outside of HCAs, where they have wildlife benefits. Through the AMP and *Structured Decision-making* (Chapter 4, *Guidelines*) process, ODF will participateODF participates in cooperative applied research and *monitoring* projects with partner agencies, universities, and organizations that enableencourage cross-ownership, treatments and allow for adaptive integrated pest management.

Diseases

Swiss Needle Cast

SNC is a native disease of Douglas-fir caused by the fungus *Phaeocryptopus gaeumannii* that has intensified on coastal lands managed by ODF since 2010 (Figure 3-5). It affects trees of all ages and causes premature loss of needles, especially in the upper crown, which reduces tree growth and vigor. The growth reduction, especially if sustained, will not only reduceTrees from non-local seed sources or growing in poor soil conditions are affected more severely, which can be seen by the management and fire history in the Tillamook District. Growth reductions decrease future timber yields but also willand affect ODF's ability to manage stands intotoward desired conditions. While native throughout the range of Douglas-fir, SNC is most prevalent on the west slopes of the northern Oregon Coast Range from the coastline to 28 miles inland. The 2018 SNC aerial survey detected over 53,000 acres of moderate to severe SNC infection. Roughly 90% of infected acres were moderately infected. Most ofIn recent decades, the acres are concentrated onzone of highest prevalence has not shifted, but the Astoria and Tillamook Districts, followed by the West Oregon District (Table 3-1). The remaining acres were split evenly between Forest Grove, Western Lane, and North Cascade Districts.severity of SNC has increased (Shaw et al. 2021). Management actions have occurred over 20 years to harvest the most severely affected Douglas-fir stands and replant with other species such as western hemlock or SNC-tolerant Douglas-fir more suited for sites.the last 20

FIGURE 3-5
Swiss Needle Cast on State Forest Lands. Annual observations and 3-year moving average of Swiss needle cast-infected acres across state forest management since 2010.



Source: Swiss Needle Cast Cooperative 2018

TABLE 3-1
Swiss Needle Cast by District. Results of 2018 aerial survey of Swiss needle cast-affected acres on state forest lands.

District	Acres Affected in 2018
Astoria	12,319
Tillamook	35,909
West Oregon	4,196
Remaining Districts	1,478

years to harvest the most severely affected Douglas-fir stands and replant with alternate species such as western hemlock or Douglas-fir that has been bred to be resistant to SNC.

Laminated Root Rot

Laminated root rot, a native fungal disease thatcaused by the fungus *Phellinus weirii,* affects many

conifer species, and is the most widespread and destructive root disease of Douglas-fir in the Oregon Coast Range and Western Cascade Range. ~~On average, it affects about 5% of the Douglas-fir forest but is distributed unevenly.~~ Results from ~~several~~forest health surveys show that in northwest Oregon state forest lands, at least 10% of the Douglas-fir-dominated stands ~~is affected~~are affected by this disease. The acres affected in individual stands range from 0% to over 75% of the area. The most susceptible host species are

by this disease. The acres affected in individual stands ranges from 0% to over 75% of the area. The most susceptible host species are Douglas-fir, grand fir (*Abies grandis*), and mountain hemlock (*Tsuga mertensiana*). Western hemlock and noble fir (*Abies procera*) have intermediate susceptibility, pines and cedars are resistant, and hardwoods are immune. Treatment of infected areas is accomplished by replanting with more resistant species after harvest.

Black Stain Root Disease

Black stain root disease, caused by the fungus *Leptographium wageneri*, has been detected in many areas but is thought to be more localized in southwest Oregon. In recent years, reports of black stain root disease in young, intensively managed Douglas-fir stands hashave increased in the northwest part of the state. Treatment of infected areas is accomplished by replanting with more resistant species after harvest.

Forest Insects

Douglas-fir Bark Beetle

Douglas-fir bark beetle (*Dendroctonus pseudotsugae*) usually infest trees following *windthrow*, disease, or drought. When major disturbances occur, thea large supply of high-quality downed Douglas-fir allows beetle *populations* to erupt. Outbreaks typically last 2 to 4 years, though can be prolonged when conditions are favorable. Management to reduce the likelihood of outbreaks involves timely salvage of dead or downed trees.

Emerald Ash Borer

Emerald ash borer (*Agrilus planipennis*) is an invasive species that has killed ash trees across the United States since its introduction in Michigan in 2002. It was detected in Forest Grove, Oregon in 2022, and has spread to multiple counties since then. Oregon ash (*Fraxinus latifolia*) is the native tree at risk of infestation and rapid mortality, affecting *riparian* forests west of the Cascades and below 2,000 feet elevation. There are currently no feasible, preventative treatments for this pest that can be applied on a forest-wide scale. Management includes continued *monitoring*, replanting with alternate species where mortality occurs, and breeding programs to create resistant ash hybrids.

Sitka Spruce Weevil

Sitka spruce weevil (*Pissodes strobi*) commonly kills the current and 1-year-old terminal shoots of Sitka spruce. The weevil typically affects trees between 3 and 20 years old. At times, foresters have avoided

planting Sitka spruce in western Oregon because repeated weevil outbreaks slow tree growth and produce severe stem deformations (ODF 2007). When planting Sitka spruce, ODF uses seed sources that have shown natural resistance to the weevil. ODF is participating in research to determine the most resistant seed sources, improve understanding of the damage caused by the weevils, and obtain necessary information to breed more resistant seed sources for future planting.

Spruce Aphid

Spruce aphid (*Elatobium abietinum*) is an invasive species that causes premature loss of older needles in Sitka spruce and eventually kills branches or the entire tree. Much of the spruce decline along the Oregon Coast is attributable to the spruce aphid. ODF follows genetic testing studies and breeding programs to determine the most resistant seed sources for planting.

Noxious Weeds

Noxious weeds are terrestrial, aquatic, or marine plants designated by the Oregon State Weed Board under Oregon Revised Statutes (ORS) 569.615 as representing the greatest public menace and are a top priority for action by weed control programs. The Oregon Weed Control Policy (ORS 869.180) declares weeds "shall be detected, controlled and, where feasible, eradicated on all lands in this state." As a result, ODF is responsible for developing and implementing an eradication plan on state forest lands. Currently, roughly 120 species are listed as ~~a~~ noxious ~~weed~~weeds across Oregon. Many of these species occur on state forest lands. The most common, Scotch broom (*Cytisus scoparius*), Himalayan blackberry (*Rubus armeniacus*), Canada thistle (*Cirsium arvense*), bull thistle (*Cirsium vulgare*), and Japanese knotweed (*Reynoutria japonica*) are well established throughout all state forest lands. Other non-native invasive species on the state's noxious weed list expanding on state forest lands include false brome

(*Brachypodium sylvaticum*), English ivy (*Hedera helix*), garlic mustard (*Alliaria petiolata*), and non-native geraniums (*Geranium* spp.).

Wildfire





~~The history of western Oregon state~~

Rum Creek Fire burned near Ennis Riffle County Park after igniting by lightning on August 17, 2022. ~~Wildfires have~~Fire has always been part of Oregon forests and, when managed proactively, can contribute to forest health and development.

Credit: ODF.

Wildfire

Oregon's forests ~~is connected~~are shaped by, and adapted to fire. Fire can have many positive outcomes for forests under the right conditions. However, uncontrolled or high-severity wildfire~~.~~ presents a threat to many forest co-benefits, including habitat, carbon storage, healthy soils, clean water and clean air. As the original stewards of these forests, indigenous peoples used fire on the landscape to maintain and enhance forest conditions. In modern times, human-caused fires have resulted from various activities, usually accidental. For over 100 years, the response to both human and natural fires has been to suppress fire in the forest to protect life and property, including timber values. This has resulted in conditions where fuels for fire have accumulated, creating increased risk of uncontrolled and even catastrophic wildfire.

There are many examples of historic fire and related salvage activities across the planning area ~~as well as catastrophic fires like Tillamook Burn (1933, 1939, 1945, 1951). The 2020 fires across Oregon had a significant impact on the Santiam State Forest. Climate projections suggest that these trends will likely accelerate in the future (Dalton and Fleishman 2021).~~ Forest wildfires in Oregon are expected to ~~become more frequent,~~ burn larger areas~~,~~ and possibly become more severe as climate change affects the state into the future (Dalton and Fleishman 2021; Reilly et al. 2022).

~~Areas outside of HCAs and RCAs provide a broad array of options for exploring fire mitigation and response. Options in HCAs and RCAs are limited to those consistent with the HCP, but HCAs and RCAs~~

~~also provide opportunities to include alternative approaches and unmanaged control areas in monitoring programs and adaptive management.~~

General Stewardship lands are actively managed and provide various options for exploring fire mitigation and response. ODF's management of these areas includes thinning at key points during forest stand development that reduces the density of trees to maintain stand growth and reduce fire risk. All timber-management activities on General Stewardship lands account for fire risk both during (e.g., operational restrictions) and after (e.g., slash mitigation) operations. The transportation system that supports state forest management also provides access for suppression of wildfires where they occur.

Managing fire risk inside HCAs and RCAs is consistent with the WOSF HCP. Habitat enhancement prescriptions provide mitigation, and adaptive management is employed to provide opportunities to address additional mitigation measures in response to worsening conditions that put habitat values at risk. Future potential mitigation needs in HCAs and RCAs will be developed in collaboration with NOAA Fisheries and the U.S. Fish and Wildlife Service.

~~3.1.3~~3.1.4 Forest Resilience

Through activities on the forest ~~(management and conservation), the over-arching goal~~, the overarching aim of the FMP goals is to ensure healthy, sustainable, and resilient forest ecosystems that ~~over time~~ help achieve environmental, social, and economic goals that benefit all Oregonians. Functioning ecosystems on state forest lands provide a variety of co-benefits including clean water, recreation, wildlife habitat, timber, and other *ecosystem services*.

For this FMP, the health of ~~these forests~~ a forest is defined ~~for this FMP~~ as ~~their~~its ability to increase or maintain productivity and function while maintaining *resistance* and *resilience* to ~~biotic~~biological and ~~abiotic~~physical stressors. Fire, windstorms, ice storms, *landslides*, ~~people~~heat, drought, insects, and diseases ~~periodically~~ present both discrete events and chronic conditions that affect forest health~~, injuring or killing trees and other living things. These~~. Some disturbances are natural and necessary processes of the forest ecosystem~~; however, sometimes~~ that increase the forest's complexity and reduce the intensity of future disturbances. However, active management ~~is~~may be necessary to reset stand trajectories toward goals based on the *management emphasis* of the affected area.

The forest ~~will be~~is actively managed to achieve objectives within stands and across the landscape to create a variety of forest conditions designed to improve resilience and capacity for adapting to climate change consistent with the *Vision for Oregon's Forests* (VOF) and the ODF *Climate Change and Carbon Plan* ~~for state forests.~~(CCCP). Table 3-2 provides examples of management options that foster resilience and adaptation.

TABLE 3-2
Examples of Management Options that Foster Resilience and Adaptation.

Management Options to Increase Climate Resilience	Examples
Sustain ecological functions	Maintain or restore hydrology and *riparian areas*
Reduce the impact of existing stressors	Reduce tree density to minimize water stress

Protect from severe disturbances	Alter forest structure to reduce fire or windthrow risk
Maintain *refugia*	Protect unique sites or habitat of *species of conservation concern*
Enhance tree species and structural diversity	Promote diverse age classes, diverse tree species, and biological legacies
Increase redundancy across the landscape	Manage forest and habitat types over a range of sites and environmental conditions
Promote landscape connectivity	Maintain and enhance habitat conditions that support wildlife dispersal and population flow,
Enhance genetic diversity of trees	Use seed sources adapted to future conditions, diversify nursery stock
Aid tree species transitions	Favor drought tolerant species, guide species composition during *young stand management*, consider assisted migration of species
Plan for disturbances	Replant promptly and retain seed source to allow for natural regeneration

Source: Burton 2025.

The effectiveness of novel *silviculture prescriptions* under a changing climate is evaluated during the planning and adaptive management processes described in Chapter 4, *Guidelines*.

Stand Management

Creating forest resilience through management ~~starts with~~follows three major steps: 1) retention of important *legacy structures* (e.g., leave trees, snags, *downed wood*, minor vegetative species) during *regeneration harvest*; 2) successful ~~stand initiation by planting~~replanting using a variety of tree species; and 3) conducting harvest

activities that retain apromote forest conditionconditions with multiple age groups, tree densities, and stand complexity that are resilient to disturbance and climate change and deliver ecosystem services. Restoration practices include diversifying tree species, spacing, spatial patterns, variable *density* thinning, and weed control (Ares et al. 2010).

Trade-offs of various silviculture prescriptions and their effectiveness are evaluated during the planning processes described in Chapter 4, *Guidelines*.

Stand Management

Stand management operations will include a full suite of silvicultural prescriptions. These include partial cuts withlike fixed and variable density thinning or *variable* density *retention*, patch cuts, *harvest* and regeneration harvests. Leave trees, downed wood, and stream buffer requirements are defined in the HCP as part of the conservation strategies. Stand-level management decisions and tradeoffs will be informed by other resource goals and strategies at stand, basin or landscape level.

WOSF HCP as part of the conservation strategies. Stand-level management decisions and trade-offs are informed by other resource goals and strategies at the stand, basin, or landscape level. Stand management differs among emphasis areas. Environmental emphasis area management prioritizes fish and wildlife habitat and carbon sequestration. Management within social emphasis areas focuses on safety, stand health, and scenic quality. Economic emphasis area management emphasizes growing healthy and resilient stands to support timber production and generate revenue for social services.

Reforestation and Young Stand Management

Stand initiation after harvest, salvage, or areas affected by wind or fire ~~will be~~is conducted through a combination of tree planting on the majority of sites and ~~some areas of~~allowing for natural regeneration~~.~~ on some sites. Stand initiation and young stand development are imperative to set a stand on a course to ~~meet its~~achieve management objectives. Each area planted is assessed to determine which species to plant, the number of trees per acre ~~to plant, which species~~ to plant, size of the seedlings, and site preparation needs such as *slash* piling or herbicide treatment. In areas where there ~~was~~is a disease present, seedlings are selected that are more ~~resistant or~~ tolerant to the disease, if available.

ODF's ongoing efforts to enhance seedling genetics are vital to improving future resilience of these forests. This includes selective breeding to strengthen tolerance to drought, temperature shifts, insects, and forest diseases that are expected to increase with climate change. ODF also participates in assisted migration studies that evaluate the performance of alternative seed sources or species across a range of site conditions. Findings from these efforts help inform future reforestation strategies and ensure that seed selection contributes to long-term forest health, productivity, and sustainability.

Young stand management activities are important ~~because they can~~to ensure a stand is on a path to reach the long-term goal for the stand based on its emphasis areas, adaptive capacity needs, and role in meeting ~~(~~*Implementation Plan* ~~[~~(IP~~])~~) and performance measure targets. Young stand management can include precommercial thinning for spacing and species selection, or ~~release~~removal of ~~overtopped trees~~competing vegetation to provide more growing space and accelerate tree ~~and stand~~ development. Incorporating uneven-aged stands across the landscape promotes a diverse *structure*~~,~~ with small, medium, and large trees providing a ~~multilayered~~multi-layered canopy. A forest diverse ~~forest~~ in species type, age, and structure can provide needed or preferred habitat for many plant and wildlife species, improve soil conditions by providing diverse tree hosts for mycorrhizal fungi, increase the resilience of forests to climate change, and ~~provide resistance~~reduce susceptibility to diseases and insect ~~-~~infestations that ~~will~~ affect stand health and timber productivity in the long term.

Disturbance Response

Over the ~~time~~duration of this FMP, ~~there will likely be~~ disturbances from wind, fire, ice, and insects or disease~~.~~ will occur. While some disturbance is a part of functioning systems and can be accommodated or incorporated at some scales and in some emphasis areas, strategies that build forest resilience and adaptive capacity are also a key component of ensuring sustainable timber production. When disturbance events ~~occur, there will be assessment of areas impacted~~happen, the affected area is assessed to better determine response. The ~~assessment will~~assessments consider the scale, location, and ~~long-term goals of the forest for habitat development or management. Details for~~ reforestation actions

and activities ~~such as salvage or no activity will be~~are addressed at the ~~IP and~~ mid-term planning level, through IPs, at the project level through *Operations Plan* (OP) ~~level~~s, and through *standards* and specifications set in *operational policies*.

~~Actions will take place~~Mitigation responses to ~~reduce~~future wildfire include reducing the risk ~~from wildfires to life, property within state forest lands, and the forested landscape through~~through fuel management, prevention, and education. Fuel management ~~will prioritize~~prioritizes restoration actions and treatment areas ~~and may include activities such as~~, based on risk to communities and critical infrastructure, and emergency ingress and egress. Activities include density

management, slash reduction, controlled burns, and workingand prescribed fire, as well as coordinating priorities and responsibilities for maintaining defensible space with critical facility owners, such as water, power, communications utilities, and non-ODF road owners. In addition, ODF engages *Tribal Partners* to find opportunities to reintegrate traditional cultural fire practices.

3.1.1 Disturbance Response

A necessary part of managing for sustainable timber production is responding to changing landscapes and climate change by increasing adaptive capacity and to provide ecological function. Disturbances such as wildfire, ice damage, *windthrow*, insects, and disease affect state forest lands. These disturbances can kill or damage trees. Damaged trees often experience reduced growth and subsequent rot while *snags* begin to decay soon after dying. Chronic stressors such as increased temperatures and drought associatedbenefits. ODF may also partner with climate change can affect general forest productivity and sustainable timber production. Strategies that provide for forest resilience and adaptive capacity are also a key component of ensuring sustainable timber productionneighboring landowners and communities on prescribed burn projects that include common objectives.

Silviculture and *stand management* techniques can reduce the risk of damage to timber from climate change. Among the management techniques used in response to disturbance, salvage harvest can be used to remove timber after a natural disturbance affects forest health. Harvest intensity can range from the selective harvest of individual trees to regeneration harvest, depending on the degree of the disturbance event and forest management goals. Salvaging can be employed to remove merchantable timber from disturbed areas, prevent the spread of disease or insect infestation, reduce safety hazards, and promote forest health for future harvest, while considering potential negative impacts (Lindenmayer et al. 2012).

Responding to disturbance and managing state forest lands in accordance with the resource goals of a particular area, promotes sustainable *ecological silviculture* and the continuation and enhancement of ecosystem services. Prescriptions in disturbed areas still follow minimum legacy retention standards, but depending on the event may present additional opportunities to retain additional snags or increase inputs of larger pieces of downed wood. Ultimately, disturbance responses, whether passive or actively managed, present learning opportunities in an adaptive management context.

3.2 Integrated Goals and Strategies for Resource Management

TheThis section describes the conditions of forest resources and the overarching goals and strategies represent the integration of multipurpose, ecologically sustainable, and adaptive approaches necessary for maintaining ecosystem services andfor each to sustain GPV across state forest lands over time. Each of the forest resource management goals for the forest resources support and contribute to different aspects of GPV. Quantitative targets for goals at varying levels.a smaller scale are defined in IPs, specific project locations where strategies are enacted are defined in OPs, and detailed standards governing the IP and OP processes are defined in operational policies, the WOSF HCP, and other laws. In the following sections, GPV category icons (Chapter 1, Figure 1-1) and the resource descriptions are used to indicate

connections with social, economic, or environmental resources and concepts. GPV can be tracked using the highlighted icons next to each goal.

Because forest resources coexist in space and time, integration of goals and strategies is necessary to minimize conflicts, facilitate decision-making, and ~~balance social, economic, and environmental~~ generate the co-benefits~~.~~ that flow from resilient forest landscapes. Chapter 2, *Management Approach*, provides a discussion of FLMCS stewardship classes ~~and~~ across the landscape. Chapter 4, *Guidelines*, provides additional detail on implementation and how trade-offs are considered. Adaptive management ~~(Chapter 4, *Guidelines*)~~ enables ongoing assessment and modifications of goals and strategies and their application in response to new information and changing circumstances,

such as natural disasters, climate change, and new research findings. Effective integration entails synthesis of knowledge, experience, and best available science from multiple disciplines including *forestry*, wildlife and fisheries *ecology*, *geology* and *hydrology*, *engineering,* and recreation resource management.

3.2.1 Forest Resource 1: Timber Management



~~Timber log deck during harvest operations in Santiam State Forest. Forest product sales are a vital part of the economy, and forest products are needed to build homes, businesses, schools, and other structures needed by society.~~

Timber log deck during harvest operations in Santiam State Forest.
Credit: ODF

roductive in the world. Timber ~~is vital~~harvested from
component of Oregon's economy and ~~job creation,~~
products across the ~~state~~nation and globally. Average
stry
are higher than the average weekly wages in other industries in western Oregon (Daniels and Wendel 2020). ~~Timber harvest~~The availability of harvestable timber directly affects local ~~jobs~~forestry and ~~mills~~mill jobs and indirectly affects the number of additional jobs in local communities.

~~In addition to being a vital part of the economy,~~ Forest products ~~and sales~~ are used to build homes, businesses, schools, and other structures needed by society. ~~*Revenues*~~ Revenue from state forest lands ~~come primarily~~comes largely from timber sales, ~~while a significantly~~though smaller ~~contribution comes~~ amounts are received from the sale of *special forest products* ~~sales~~, leases and agreements, recreation fees, and special use fees. ~~Today, most~~ Within the planning area, 14 Oregon counties, and the local taxing districts within them, share in revenues from these lands ~~(ORS 530.110, ORS 530.010, ORS 530.040);~~. As mandated by state law, 63.75% of Oregon Board of Forestry (the BOF) revenues are distributed to counties ~~and~~, which further distribute revenues to taxing districts~~, where revenue is generated~~. This revenue is a significant contributor to local budgets used to help pay for local community services such as education, rural fire protection districts, law enforcement, roads infrastructure, and community health. ~~Revenue from state forest lands is a significant contributor to local budgets, which support social benefits.~~

The remaining 36.25% of revenue from state forest lands ~~pay~~pays for the management of Board of Forestry Lands ~~(BOFL).~~ This management includes ~~items such as reforestation,~~planting trees, managing young ~~stand management,~~stands, conducting *threatened and endangered species* surveys, improving fish and wildlife habitat ~~improvement,~~, providing fire protection, and providing recreation, education, and interpretation programs, staff, and infrastructure. ~~These silvicultural activities provide environmental benefits by increasing adaptive capacity to sustain a forested landscape under climate change and improving habitat quality. Revenue from~~

Revenue from timber harvest on Common School Forest Lands (CSFL) is transferred to the Oregon Department of State Lands ~~(DSL). DSL reimburses ODF for costs incurred on CSFL. Net operating income from revenues and costs is~~and deposited ~~into~~in the *Common School Fund*. The Oregon Department of State Lands reimburses ODF for CSFL management costs and related overhead from the Common School Fund.

ODF has historically managed the forest with the objective of maximizing timber volume over the long term. This results in the regeneration harvest of individual stands near the point where tree growth slows, which can be between 70 and 90 years old, depending on the productivity of the site (e.g., soils,

precipitation, and other factors). This plan allows for flexibility in harvest objectives over time, but it is

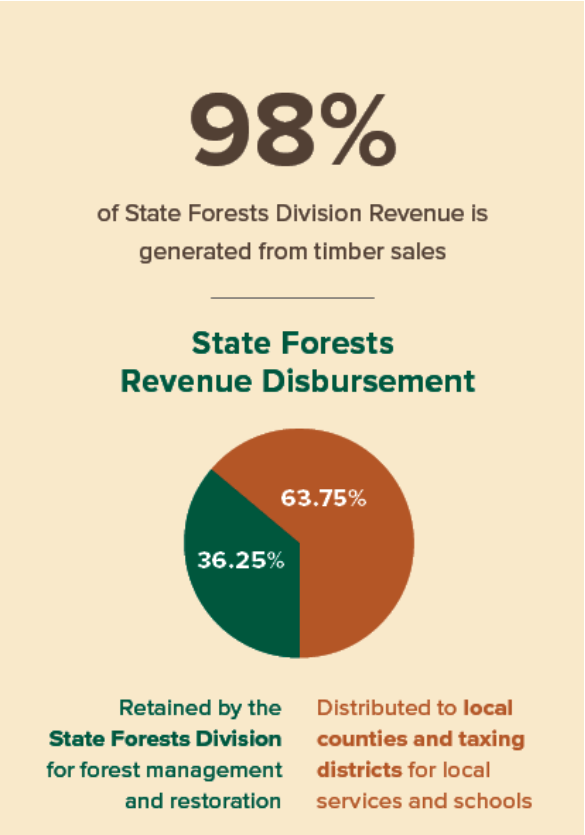
likely that ODF will continue to manage for sustainable, long-term maximization of volume in general stewardship areas.

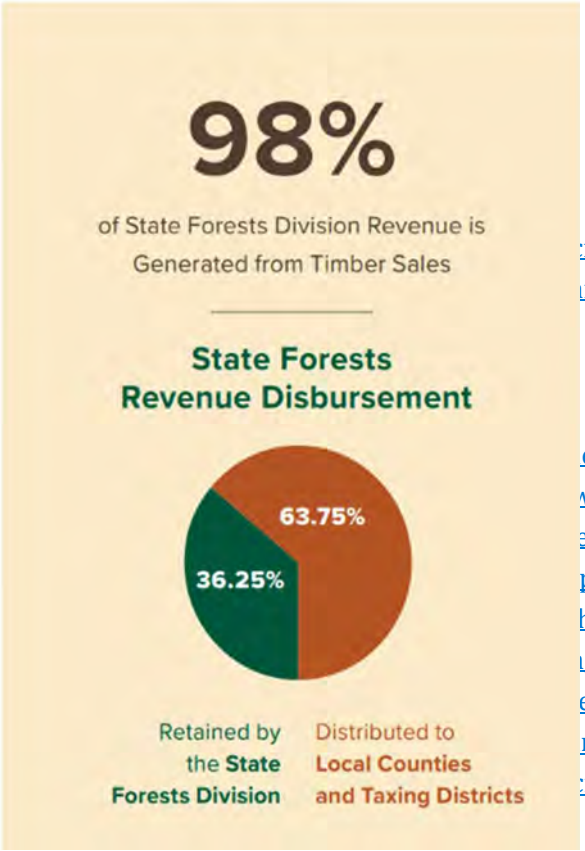
Goal: Timber Production

Provide a sustainable and predictable supply of timber that ~~provides~~generates revenue for the benefit of the state, counties, and local taxing districts, and that results in economic opportunity, jobs, and availability of sustainably harvested forest products.

Strategy: Sustainable Harvest ~~Objective~~

Determine ~~a~~the sustainable harvest ~~objective~~level during IP development ~~and complete this harvest objective with~~ to ensure predictable ~~year to year~~ timber supply over the life of the IP.





~~Strategy: Timber Salvage~~

~~Implement a timely response to natural disturbances (fires, windstorms, ice storms, etc.) to salvage merchantable timber, based on the management emphasis of the affected areas and operational *policy*.~~

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es,
production goals is prioritized on a significant portion
hip lands. Although economics is the emphasis of
ged to continue to provide a suite of additional
equestration and carbon storage, and habitat for many
nd mid-*seral* forest types. Active management in HCAs
ies associated with late-seral forests, but will also

Strategy: Silviculture Practices for Stand Management and Development

a. ~~In general stewardship land,~~Implement a variety of silvicultural prescriptions ~~will be~~ to ensure successful stand initiation and development of a variety of tree species, ages, and densities that are resilient to disturbance and climate change and sustainably deliver ecosystem services, based on emphasis area.

b. Use silvicultural prescriptions designed for sustainable timber production and economic performance~~, whereas~~ in ~~HCAs, silvicultural prescriptions will be designed~~General Stewardship areas, while still providing for ~~resilient wildlife habitat. For example, red alder may be harvested~~retention of legacy structures in ~~general stewardship and left as snags and stand~~ varying arrangements, forest connectivity, and species diversity.

c. Diversify tree species for reforestation to consider species that are likely to have better growth and survival under projected future climate conditions.

Intent

The intent of this strategy is to support timber production and wildlife species that are associated with early- and mid-seral forests while increasing the resiliency of all stands across the landscape. Lands in ~~HCAs. Other~~ stewardship classes other than General Stewardship may require silviculture prescriptions that emphasize other objectives, such as safety in Recreation Special Use and Focused Stewardship classes, or traditionally important natural resources in Cultural Resource Special Use and Focused Stewardship classes.

~~Within HCAs and RCAs, opportunities to increase adaptive capacity through silvicultural activities are more limited than they are for General Stewardship lands. However, certain conservation actions to promote~~The intent of this strategy is also to maintain and enhance habitat ~~enhancement will provide specific points to promote resiliency and resistance or to observe *transformation*.~~for the species covered by the WOSF HCP. Management of HCAs ~~will incorporate~~incorporates principles of ecological ~~silviculture, which seeks to emulate stand initiation and development~~ forestry. During harvest of SNC and hardwood stands, and gap creation in variable retention treatments, additional legacy features are retained, an even greater variety of tree species planted, and herbicide use limited to regenerate forests that provide complex early-seral habitat that is positioned to grow into mature stands with high biodiversity. Variable retention treatments are designed specifically to emulate processes that result from small-scale natural disturbances (e.g., windthrow, lightning, insects, disease) ~~to~~that promote within-stand diversity and complexity ~~and~~in mid-seral stands. Passive management in HCAs and RCAs for late ~~seral stands. A proportion of HCAs that are stunted due to SNC cast will be managed early in the permit term, which will retain unaffected conifers and hardwoods,~~ seral conditions also promotes resilience in mature forests and ~~will be replanted with habitat-suitable species mixtures.~~provides a baseline for comparison of strategies. The majority of treatments to reduce fire, insect, and disease risk ~~will~~ occur in stands outside of the HCAs.



Strategy: Timber Sale Design

Design timber sales that consider timber markets and cost of logging, to ensure efficient operations and increased revenue consistent with other desired outcomes, and FMP goals and strategies.

Intent

The intent of this strategy is to increase the revenue generated from timber sales by designing sales with cost-effective and logical harvest units. Well-designed harvest units decrease logging costs and can also lead to more competitive bidding on timber sales, leading to increased revenue. Structuring timber sales to target specific log product markets and scheduling timber sales to take advantage of historic seasonal trends (e.g., bid prices for timber that can be logged in the winter months are typically increased) can increase revenues. OPs balance low- and high-value timber sales and units to ensure that forest management treatments are conducted where need, not just in high-value areas.

Strategy: Timber Salvage

Implement a timely response to natural disturbances (e.g., fires, windstorms, ice storms) to salvage merchantable timber, in accordance with the management emphasis of the affected areas, other forest management plan goals and strategies, and opportunities for additional legacy retention on the landscape.

a. Limit salvage within HCAs and RCAs to hazard tree felling.

b. Develop and implement responses to more extensive events in HCAs and RCAs in collaboration with NOAA Fisheries and U.S. Fish and Wildlife Service

Intent

Natural disturbances occur periodically across the landscape. These can result from different events such as windstorms, ice storms, and fires. These disturbed areas can range in size and impact and require careful consideration by foresters. The intent of this strategy is to ensure that timber is salvaged quickly after natural disturbances to recover economic value and reduce safety and wildfire risks.

3.2.2 Forest Resource 2: Transportation



Bridge replacement in the Tillamook State Forest. Stream crossing improvements can help protect water quality~~, reduce the risk of flood damage, and improve aquatic habitat by enabling organism passage to upstream habitats~~.
Credit: ODF.

The state forests road system is an integral part of achieving desired economic, social, and environmental outcomes by providing access for the many activities that happen on state forest lands.

There are approximately 4,500 miles of road on state forest lands, and 88% of all state forest land acres are within 0.25 mile of a road. Approximately 85% of the roads are surfaced, mostly by gravel, which reduces risk of roads contributing fine sediments to streams and adversely affecting water quality and aquatic

~~### 3.1.2 Transportation~~

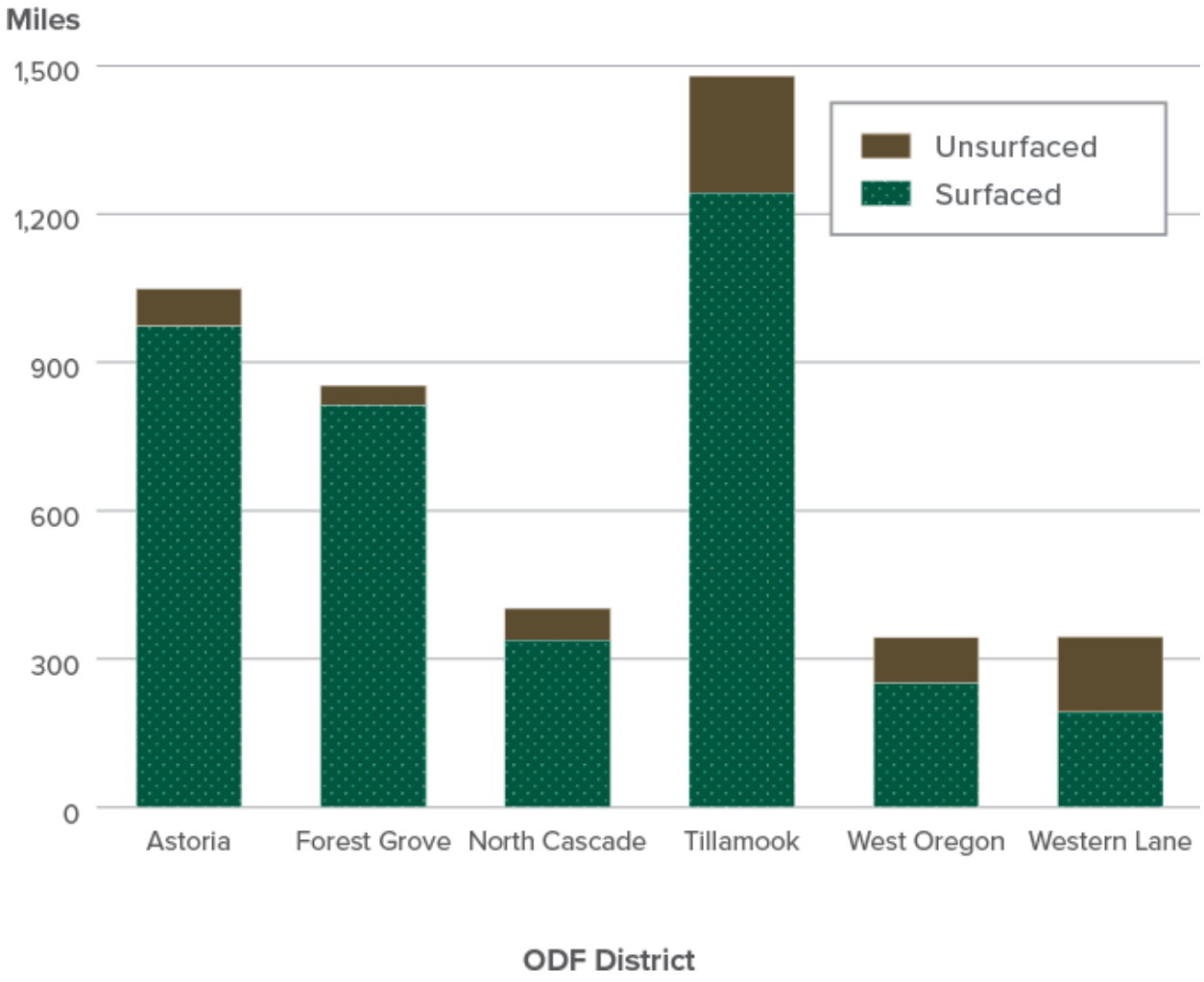
~~The road system is an integral part of achieving GPV. The road system supports economic benefits by facilitating timber and special forest product harvest and firefighting, which protects the timber resource. Roads provide access for a wide range of social benefits such as recreation and cultural activities and firefighting to protect public safety.~~

~~There are approximately 4,300 miles of road on state forest lands with 88% of all acres located within 0.25 mile of a road. Approximately 83% of the roads are surfaced.~~

habitat (Figure 3-3). The road system has the potential to adversely ~~impact~~affect natural resources, particularly water quality and aquatic species migration~~.~~ when it is not properly maintained. The condition of the road system ~~on state forest lands~~ is ~~managed to protect~~dynamic and changes over time depending on weather conditions, soil saturation, vegetation growth, public use, and hauling activities. Monitoring these conditions is important and BMPs must be incorporated to protect natural resources ~~in accordance with the HCP, ODF, guidance, best management practices (BMPs), Oregon Forest Practices Act (FPA), and other applicable laws.~~

The transportation system is evaluated on an ongoing basis to determine the current condition, potential resource impacts, and future access needs. Different emphasis areas help guide management decisions for road construction, improvement, maintenance activities, as well as vacating, which can involve removing the road or closing it. For example, the WOSF HCP conservation actions guide road construction in RCAs and HCAs. An example could be building a temporary dirt spur that is only used in the summer and vacated after use, which would eliminate the need for long-term maintenance, reducing potential resource impacts.

FIGURE 3-3
State Forest Roads by District. There are approximately 4,500 miles of road on state forest lands; approximately 85% of these roads are surfaced (primarily graveled, though some main travel routes are paved).



Source: ODF 2026.

Existing roads are improved if determined to have potential impacts on aquatic species based on the transportation assessment. Roads outside of HCAs and RCAs go through the same assessment process; however, the improvement strategy may include more rock replacement, mitigation strategies, and BMPs for water quality if wet weather timber-hauling activities are anticipated.

A major concern for forest roads is hydrologic connection to streams, where water from the road drains directly into a stream, which can negatively affect water quality. ODF collects and maintains data over time to track where these connections exist so that ODF can target road-drainage improvements that reduce the negative impacts of roads on water quality. Adding drainage features, like cross-drains and rolling water dips, to ensure road segments drain water to hillsides instead of streams, combined with maintenance of the road surface, ditches, and drainage features, reduces erosion, sediment loading, and

potential impacts on natural resources. Road improvement projects are prioritized to address large hydrologic disconnection projects, culvert replacements that are barriers to fish migration, infrastructure stability for public safety, and facilitation of timber sales.

Goal: Transportation System Management

Manage the transportation system in a fiscally sound manner that ~~provides for resource protection,~~protects resources and promotes transportation efficiency~~,~~ and safety~~, and sound fiscal management while meeting forest management objectives~~.

Strategy: Transportation Planning

Use transportation planning principles, engineering standards, and BMPs to ensure that the transportation system facilitates achievement of GPV, provides for safe and efficient traffic flow, and minimizes impacts on natural resources.

Intent

The intent of this strategy is to build a lasting transportation system with an informed and holistic view, which considers all factors relevant to management decisions, resource protection, and public safety. Using these principles, standards, and BMPs reduces erosion potential, disconnects road segments from streams, maintains adequate surface conditions, and mitigates chronic issues over time through road vacating or other methods. Priorities for different emphasis areas are considered during the planning process, including following the WOSF HCP conservation actions that guide road construction in HCAs and RCAs. Additional details can be found in supporting documents, including the WOSF HCP, ODF guidance, State Forest Roads Manual, BMPs, Oregon Forest Practices Act (FPA), and other applicable laws.

Strategy: Transportation Assessment

~~Periodically~~ Monitor and assess the transportation system to ensure alignment with ~~GPV management objectives~~other FMP goals and strategies, resource protection standards, and safety.

Intent

The intent of this strategy is to collect information over time to verify the transportation system is being managed according to standards and policies. This information helps inform adaptive management decisions to address management goals, resource protections, and public safety related to the transportation system. The effectiveness of standards and BMPs can be evaluated and refined through this process. Through this assessment, projects can be prioritized for improvement based on potential impacts on natural resources, infrastructure stability, and public safety.

~~3.2.2~~3.2.3 3: Cultural and Historic Resources



Traditional cedar bark collection in the Astoria District. Western redcedar ~~(*Thuja plicata;* canoe cedar~~) is one of the most ~~important~~ culturally significant trees on ODF land.

Credit: Keepers of ancestral knowledge. Photograph taken by Fran McReynolds, with permission from the Confederated Tribes of Warm Springs.

Cultural and *historic resources* provide a record of our shared past, present, and future relationship with the land~~,~~ and how this relationship changes over time. ~~Remnants of past cultures and *lifeways* represent thriving cultures of the past and of today. This is~~ These resources are often observed in physical forms, such as historic buildings, arrowheads, rock art, basketry, ~~etc~~and other items. What is not as apparent is the interconnectedness of humans and the natural and cultural resources that support them. These relationships with the land are illustrated through practices, such as preserving sites and objects of

~~illustrated though practices, such as preserving sites and objects of~~ cultural importance, and cultivating plants and trees and other natural resources for traditional uses.

Protecting cultural ~~practices~~and historic resources is a shared responsibility for all Oregonians, as they provide an opportunity to apply knowledge from past civilizations to inform management practices and approaches to living with the land. ~~The Tribal cultural resources goals for the FMP were developed in collaboration with the nine federally recognized Tribes of Oregon in the government-to-government forum.~~The tribal cultural resources goals for the FMP were developed in collaboration with the *nine federally recognized Tribes of Oregon* in government-to-government forums.

Tribal ~~Nations:~~[2]Partners:[1] Natural Resources Protection

ODF recognizes that Tribal ~~*Nations* (also referred to as Tribal~~ Partners~~)~~ have lived in *reciprocity* with the landscape ~~for~~since time immemorial, using sustainable management practices to achieve quality, abundance, and self-sustaining plant and wildlife populations. Each Tribe has a unique perspective and history, with cultural identities that are intrinsically tied to their ancestral lands. ODF ~~acknowledges this relationship with ancestral lands that are currently considered State Forests and~~ seeks to honor these ~~ties~~relationships by working with Tribal ~~Nations~~Partners in ~~partnership and~~ shared stewardship toward a sustainable future. ODF is committed to integrating tribal cultural stewardship practices and *Indigenous Traditional Ecological and Cultural ~~Knowledge~~*[3]*Knowledge*[2] (ITECK) into planning, implementation, and adaptive management processes to ensure that ~~State Forests~~tribal ancestral lands are respected and honored by state forest's management activities ~~respect and honor the Tribal cultures whose ancestral lands comprise these lands~~.

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[2]~~Tribal Nations~~Landscape-scale stressors such as droughts, floods, wildfires, plant and animal extinctions, and changes in climate occurred in the past, as did Native Americans' adaptations to such events. Working with the Tribes to integrate their cultural and natural resources knowledge and stewardship practices builds

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[1]Tribal Partners include the nine federally recognized Tribes of Oregon: Burns Paiute Tribe, Confederated Tribes of Coos, Lower Umpqua ~~&~~and Siuslaw Indians, Confederated Tribes of Grand Ronde, Confederated Tribes of Siletz Indians, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Reservation, Coquille Indian Tribe, Cow Creek Band of the Umpqua Tribe of Indians, and the Klamath Tribes.

[3]~~2~~ Indigenous Traditional Ecological and Cultural Knowledge (ITECK) is grounded in social, spiritual, cultural, and natural systems that are frequently intertwined and inseparable, offering a holistic perspective. ITECK is inherently ~~heterogeneous~~heterogenous and unique to each Tribe~~,~~ due to the cultural, geographic, and socioeconomic differences, as well as their history and the surrounding environment.

Current landscape-scale stressors and perturbations such as droughts, floods, wildfires, plant and animal extinctions, and changes in climate occurred in the past, as did human adaptations. Working with the Tribes to integrate their cultural and natural resources knowledge and stewardship practices will build adaptive capacity across the landscape. Tribal Nations**Forest Resource, Goals, and Strategies**

adaptive capacity across the landscape. Tribal Partners, their communities, peoples, ancestors, and culturally significant places persist, as do their ancestral knowledge and practices. They hold a rich diversity of holistic strategies, technologies, and management techniques that have sustained throughoutexisted through many generations and can help inform current conversations regarding climate change and landscape resiliency.

ODF is committed to working with Tribal Partners to understand, identify, manage, and provide access to native populations of culturally significant plants, trees, animals, places, and waters on ODF-managed lands. This includes working with Tribal Partners to develop *ethnobotanical* strategies that are adaptive to the effects of climate change, using native seed sources to encourage self-sustaining plant communities over time, and using fire-adapted *successional* plants to prevent *erosion*. ODF will also considercommits to diversifying tree species in reforestation efforts to encourage proliferation of traditional plants.

The following description of culturally significant natural resources is intended to provide a generalized sense forunderstanding of the past and present cultural and natural resources that occur or have existed on state forest lands. Culturally significant natural resources, their uses, and associated management practices are extensive. A few examples are provided with the intentionintent of demonstrating the concept of reciprocity, in which all plants, trees, animals, and humans were a part of and contributed to a whole and healthyholistic ecosystem.

Among the many traditionally important natural resources, western redcedar (*Thuja plicata*) (canoe cedar) is one of the most important culturally significant trees on ODF land (Whereat-Phillips 2016). It has healing and symbolic properties that are at the source of many Tribal Nations'Partners' ideological and cultural identities. The cultural significance of western redcedar is inextricably tied to its ideological value, as well as its many uses, including medicine-making and ceremonial use. Theuses. Western redcedar providedprovides material for basketry, mats, building materialsbuildings, canoes, cups, buckets, backpacks, spears, bedding, pest abatement, and much more.

Pacific yew (*Taxus brevifolia*) and ash (*Fraxinus*) trees provide the raw materialmaterials for bows. Arrows are sometimes made from hazel (*Corylus cornuta*), oceanspray (*Holodiscus discolor*), or other available plant species, and vine maple (*Acer circinatum*) areis used for making net and spear handles.

Sitka spruce is an example of a culturally important ~~in~~ tree species that requires careful tending of individual trees to strengthen the root system and promote healthy growth. It has many important uses, including basketry and ~~the~~ making ~~of~~ multiple types of fishing and foraging devices to gather eel, smelt, ~~and~~ salmon, ~~etc.~~and other aquatic species. In addition, ~~this tree species'~~Sitka spruce's versatility serves well for making larger bowls and cups and other vessels. ~~Management of spruce required careful tending of roots to strengthen the root system and promote healthy growth. Another example of~~

Tribes' management of natural resources ~~is~~ includes the extensive use of fire ~~management, which promotes~~to create clearings in the forest to promote growth of successional plants like serviceberry (*Amelanchier alnifolia*). Various parts of serviceberry ~~were~~are used for medicinal purposes and consumption (raw, dried, or made into a preserve), and the branches ~~served~~serve as tool handles, ropes, and sometimes spears or arrow shafts. Bear grass (*Xerophyllum tenax*), bulrush (*Typha*), hazel, and fireweed (*Chamaenerion angustifolium*) are examples samples of other plant species that require burning for production. These species colonize clearings and decline as the forest canopy closes and ~~shading prevents~~shade inhibits their growth. ~~They are, therefore, prominent examples of successfully fire-managed species as they colonize created clearings~~.

Bear grass (*Xerophyllum tenax*), bulrush (*Typha*), hazel (*Corylus cornuta*), and fireweed (*Chamaenerion angustifolium*) are a sampling of other plant species requiring cultural burning for production and use of their many attributes. WESTERN OREGON STATE FORESTS MANAGEMENT PLAN

Understory burning also producedthat maintains forest canopy cover produces habitat for large and small game including elk, deer, and other sustenance-providing animals.; however, animals wereare more than food;. The animal sharedshares its life with people to make clothing, bones for fishing implements, sinew for binding, brains for hide tanning, bones for gaming pieces, and shells for trade, jewelry, rituals, and symbolic displays. Still, many animals wereare not used for food or other utilitarian purposes but held—and continue to hold —deep symbolic meaning in the form of cultural origins, religious prescription,origin stories, and inform and qualities. For example, northern flicker (*Colaptes auratus*) flight feathers represent healing and healers who make people whole again; ravens, owls, eagles, are all of ideological and symbolic importancecontribute to medicinal practices.

Goal: Tribal Access and Use of Natural Resources

In coordination with the nine federally recognized Tribal governmentsTribes of Oregon, ODF will provide access, availability, and enhancement of cultural resources and natural resources for their membership on state forest lands.

Strategy: Tribal Engagement

Engage Tribal Partners in planning processes for state forest lands and provide opportunities for implementation of cultural and natural resources stewardship practices appropriate to location and habitat.

Intent

The intent of this strategy is to ensure that significant cultural and natural resources are recognized and integrated into planning and management activities. ODF and tribal governments meet regularly to ensure that communication is occurring early and often with the appropriate staff, and at the appropriate levels. The intent is also for tribal and ODF staff to understand respective organizational structures and planning processes to identify meaningful points of engagement, cultural and natural resources stewardship practices, and culturally significant plant and animal species. ODF works with interested Tribes to integrate cultural and natural resources stewardship and restoration practices and priorities for culturally significant plant and animal species in the IP, OP, and adaptive management processes.

Strategy: Coordinate Tribal Ethnobotanical Strategy

Coordinate with Tribal Partners to develop and implement an ethnobotanical strategy that is adaptive to the effects of climate change and ensures self-sustaining populations of culturally significant species are abundant and available on state forest lands.

Intent

The intent of this strategy is to have a process for including or introducing culturally significant plant

species and cultural techniques into forest management practices, including native seed source recommendations that consider appropriate habitat in planting regimes, climate resiliency, and legacy seed source information that contributes to a storied landscape understanding.

Strategy: Tribal Seed Sources

Collaborate with Tribal Partners on native seed source recommendations that consider appropriate habitat in planting regimes, climate resiliency, and legacy seed source information that contributes to a *storied landscape* understanding.[4] [3]

Intent

The intent of this strategy is to identify and cultivate partnership opportunities with established native nurseries, including but not limited to the Coastal Native seed partnership, the Oregon Department of Agriculture's (ODA) seedbank, and tribal seed nurseries. The intent is also to continue to work with Tribal Partners in IP, OP, and adaptive management planning processes to develop and implement climate adaptation strategies to support culturally significant plant and animal species.

Strategy: Tribal Access

Work with Tribal Partners to develop and administer processes that facilitate ~~*unimpeded*~~[5] *unimpeded access*,[4] with protected allowances for Tribal Partners' ~~membership~~ to access, use, and manage cultural and natural resources (e.g., western redcedar bark peeling, bear grass collection) on state forest lands.

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[4] *Intent*

The intent of this strategy is to implement processes necessary to allow protected tribal access to state forest lands. ODF and Tribes build their understanding of locations and logistical needs for accessing culturally significant locations and forest resources. ODF and Tribes clarify responsibility for ensuring access, including but not limited to identifying entities responsible for access administration, methods of identification of tribal members, and provisions and conditions for gathering, cultivating, and harvesting. Tribal input on access is considered during IPs. ODF may consider Oregon Parks and Recreation Department tribal collection processes as a model program.

Tribal Partners: Cultural Resources Protection

European settlement in western states destabilized existing human-ecological systems and severed ties between the past and present that are culturally significant to Tribal Partners. Historic practices, behaviors, and laws physically, emotionally, and spiritually forced tribal peoples from their lands and ways of life, yet the history, language, and people endure. Human remains (ancestors), funerary objects (tangible pieces of death rites and ceremonies), objects of cultural patrimony (spiritual and material associations), and culturally significant objects (religious or spiritual objects used in ceremonies) are prevalent across Oregon, including on state forest lands. These non-renewable resources may include culturally modified trees, rock cairns, waterfalls, caves, and other features. Visible evidence of ancestral communities include items of everyday life, such as animal bones, mollusks, beads, needles, and obsidian

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[3] Within tribal contexts, storied landscape refers to a multitude of intrinsically linked and deeply held understandings, relationships, and actions between indigenous cultures and the landscapes with which they interact throughout time, including but not limited to ~~creation~~origin stories, landscape features, and wildlife attributes that signal hunting,

gathering, planting, and other seasonal use patterns.

[54] Provide reasonable opportunity for access, considering public safety, infrastructure, and topographic constraints.

~~3.1.3 Tribal Nations: Cultural Resources Protection~~

~~European settlement in western states destabilized human-ecological systems and severed ties between the past and present that are culturally significant to Tribal Nations. Historic and even modern practices, behaviors, and laws physically, emotionally, and spiritually forced Tribal peoples from their lands and ways of life. Yet the history, language, and people endure. Human remains (ancestors), funerary objects (tangible pieces of death rites and ceremonies), objects of cultural patrimony (spiritual and material associations), and culturally significant objects (religious or spiritual objects used in religion and religious ceremonies) are prevalent across Oregon, including on state forest lands. These non-renewable resources may include culturally modified trees, rock cairns, waterfalls, caves, etc. Visible evidence of ancestral communities would include items of everyday life, such as animal bones, mollusks, beads, needles, and obsidian~~ tools. Protection of culturally significant sites and objects is critical ~~in~~for honoring and maintaining connections ~~from~~between ancestors ~~to~~, current tribal members, and future generations of tribal descendants.

ODF is committed to the shared and facilitated protection and repatriation of any ~~items[6]~~items[5] (spiritual or material) that are considered culturally significant by Tribal Partners. Protection ~~includes~~extends to known sites and locations, identification of undocumented sites, and avoidance of sacred spaces and places of concern. ~~It~~Protection of cultural resources also extends to management and recovery activities related to fire, restoration, flooding, wind, landslides, and other disturbance events.

The FMP provides for access, availability, protection, and enhancement of cultural ~~and natural~~ resources on state forest lands. ~~It~~The plan recognizes these lands are a part of a long historical relationship, and access to *Traditional Cultural* ~~Places[7]~~*Places*[6] for spiritual, ceremonial, and traditional practices enables Tribes to maintain cultural identity, which is deeply rooted in the land. These locations are typically kept from common knowledge because of their sanctity and are almost exclusively known to Tribes and ~~membership; sometimes~~tribal members. Sometimes, only certain groups within a Tribe are keepers of such knowledge. Traditional Cultural Places and culturally significant forest and natural resources are *confidential*, and as such, ODF is committed to shared stewardship with Tribes, with stewardship being the protection of locational knowledge, meaning, and materials (ORS 192.005–192.170). ODF is also committed to increasing internal and external cultural awareness, understanding, and accountability ~~for cultural resources protection~~ through regular training focused on prioritizing, recognizing, and protecting cultural resources. These commitments ~~will~~are only ~~be~~ successful through shared stewardship and partnership, built from mutual respect, trust, and understanding.

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[6] ***Goal: Tribal Cultural Resources Protection***

Take an inclusive and proactive approach to working with Tribes to identify, record, preserve, protect, and keep confidential[7] culturally significant resources, including but not limited to *archaeological* and *historic sites* and *objects*, considerations for human remains, historic artifacts, and real property.[8]

Strategy: Tribal Relationships

Develop and maintain relationships with Tribal Partners to facilitate consistent information sharing and collaboration on state forest management activities that may affect cultural resources, including timber harvest and related activities, wildfire suppression and recovery, and habitat restoration.

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[5] 43 CFR § 10 (Native American Graves Protection and Repatriation Act); 16 U.S.C. § 1B (Archaeological Resources Protection Act); 16 U.S.C. § 470 (National Historic Preservation Act), ORS 97.740–97.760, ORS 358.905–961, and ORS 390.235–390.240. Oregon EO 17–12, 368.905–358.961; 97.740–97.760; 390.235.

~~[6]~~ The National Historic Preservation Act and the 36 CFR 800 regulations implementing it refer to "properties of traditional religious and cultural significance." ~~They~~These are geographic places prominent in a particular group's cultural practices, beliefs, or values, when those practices, beliefs or values: (i) are widely shared within the group, (ii) have been passed down through the generations, and (iii) have served a recognized role in maintaining the group's cultural identity for at least 50 years.

[7] Includes culturally sensitive locations in *State Historic Preservation Office* and tribal databases and places known by affiliated Tribes.

[8] EO 96-30; EO 17-12; ORS 358.640 and 358.653, ORS 97.740 to 97.760; 358.905 to 358.955; and 390.235.

Goal: Tribal Cultural Resources Protection

Take an inclusive and proactive approach to working with Tribes to identify, record, preserve, protect, and keep confidential[8] culturally significant resources, including but not limited to *archaeological* and *historic sites* and *objects*, considerations for human remains, historic artifacts, and real property.[9]

Strategy: Tribal Relationships

Develop and maintain relationships with Tribal Partners to facilitate consistent information sharing and collaboration on state forest management activities that may affect cultural resources, including timber harvest and related activities, wildfire suppression and recovery, and habitat restoration.

Intent

The intent of this strategy is to promote communication with Tribes about potential impacts and opportunities of forest management activities by developing tribal engagement policies and procedures and ensuring ongoing consultation and coordination. This includes working with Tribal Partners toward a systematic notification and record keeping process for state forests management activities and emergency operations (e.g., fire, flood, wind) that provides established points of contact and a collaborative structure for protection and rehabilitation of natural and cultural resources.

Strategy: Cultural Resources Inventory

Develop a comprehensive and ongoing cultural resources survey and inventory strategy to increase the understanding of culturally significant archaeological, historic, and cultural sites and objects on state forest lands, and implement the strategy in coordination with Tribal Partners over time.

Intent

The intent of this strategy is to work with Tribal Partners to develop and implement cultural resources protection processes and strategies associated with all forest management activities to help identify and protect culturally significant resources and to ensure their protection is part of IP, OP, and adaptive management processes.

Strategy: Determining Level of Cultural Significance

Coordinate with Tribal Partners to identify Tribes that have direct ties to state forest lands (by in terms of location, materials, knowledge, and practice, etc.);); determine the level of significance of archaeological, historic, and cultural sites and objects; and solicit recommendations for protection and preservation thereof.

Intent

The intent of this strategy is to promote communication with Tribes to determine significance and relative protection measures to be taken.

Strategy: Cultural Resource Awareness

Increase internal and external cultural awareness, understanding, and accountability for cultural resources protection through regular training focused on prioritizing, recognizing, and protecting cultural resources.

Intent

The intent of this strategy is to provide ongoing education to ODF staff, volunteers, contractors, and visitors to state forests so they understand their role in cultural resources protection. The intent is also for ODF to provide internal and external cultural awareness training opportunities for staff, volunteers, and contractors, and coordinate with Tribal Partners on curriculum development, including Senate Bill

(SB) 13:[9] Tribal history/Shared History curriculum (as outlined by Tribal Partners). Awareness training opportunities for visitors is provided through education and interpretation programs and the Tillamook Forest Center.

Strategy: Intergovernmental Agreements

Use intergovernmental ~~agreements[10]~~agreements[10] with ~~federally recognized Tribes of Oregon~~Tribal Partners to facilitate cooperation, information exchange, and cost sharing.

Intent

The intent of this strategy is to codify communication processes, cultural and natural resources protection strategies, and land management partnerships.

Historic Cultural Resources

~~Historic sites and artifacts are not just records of white settlement; they record the protohistoric era where European and Tribal interactions and assimilations occurred, Chinese immigrants worked toward freedom from servitude on western railroads, and Russian colonies pre-dating, non-Spanish westward expansion.~~ Historic sites and artifacts across Oregon's ~~historical~~ landscape tell a rich ~~history of diversity~~story of people, communities, travel, conflict, trauma, and persistence, which collectively represent ~~in~~ the diversity of descendants of Oregonians today.

~~[8] Includes culturally sensitive locations in *State Historic Preservation Office* and Tribal databases, and places known by affiliated Tribes.~~

~~[9] EO 96-30; EO 17-12; ORS 358.640 and 358.653, ORS 97.740 to 97.760; 358.905 to 358.955; and 390.235.~~

~~[10] ORS 190.110, National Historic Preservation Act Section 106, ORS 358.653.~~

European explorations ~~that began~~intensified in the ~~1830s~~early 1800s and expanded significantly with the 1850 Oregon Donation Land Law bringing over 30,000 white settlers.~~[11]~~ This cultural shift, predicated on colonization and western cultivation of the landscape, brought extractive agriculture, ranching, logging, and homesteading (a foreign concept of land ownership and control for Native Americans). The European explorers and settlers also brought diseases that decimated Native American peoples and ~~life ways~~*lifeways*. The Native Americans that survived this era of disease and genocide were forced to join an unfamiliar labor culture to provide for their families.

Other groups also found their way to what is now Oregon, despite laws that intended to keep them out. Even before Oregon became a U.S. territory, the Provisional Government of Oregon enacted laws that banned both free and enslaved ~~Blacks~~Black people from Oregon and threatened violence to those who stayed. Oregon's state constitution was the first to ban Black residents and barred Chinese residents from voting, ~~who had~~despite having worked and lived in Oregon since the early 1800s. Despite these laws and bans, these marginalized communities endured. For example, Maxville, a logging camp east of the town of Wallowa, was home to a ~~multicultural~~multi-cultural logging camp, with 400 residents, 40 to 60 of which were ~~African American~~Black people. It was the largest town in Wallowa County between 1923 and 1933 and is memorialized by the Maxville Heritage Interpretive Center.

~~Non-European~~Other immigrants continued to find their way to Oregon, including the Basque (primarily sheepherders), Mexicans who mined gold and tended livestock, and Chinese who established mining camps in southwest and northeast Oregon~~,~~ and continued to work on building the transcontinental railroad. The Chinese Exclusion Act of 1882 forced many Chinese immigrants, and their American-born children, to

[9] Senate Bill (SB) 13 Tribal History/Shared History directs the Oregon Department of Education to create the K-12 Native American Curriculum for inclusion in Oregon public schools and provide professional development to educators.
[10] ORS 190.110, National Historic Preservation Act Section 106, ORS 358.653.

leave the state. ~~The resultant~~This resulted in labor shortages that were filled by immigrants from Japan~~.~~ and other parts of Asia. The ~~marks~~influence of these many communities can still be found upon the state's landscape and ~~made~~are visible in the historic cultural resources memorializing their experiences.

Historic cultural resources are some of Oregon's most valuable and important *assets*. Buildings, structures, sites, furnishings, art, objects, and items of personal property that are important to local, state, or national history can tell the story of a region's cultural history ~~and might be~~. These cultural resources are protected under the National Historic Preservation Act and Oregon state law ~~if~~when they meet certain criteria~~, including being at least 50 years old.~~[12].[11] ODF is committed to historic cultural resources stewardship~~, using various methodologies designed to identify and protect~~ through the identification and protection of culturally sensitive ~~areas and locations~~resources across state forest lands. Historic cultural resources protection provides an opportunity for visitors to state forest lands to connect with the state's history and people.

Goal: Historic Cultural Resources Protection

Identify and protect historic cultural resources.

~~[11] The1850 Donation Land Act specifically excluding Blacks, Native Americans that were not "half-breeds" and Hawaiians.~~

~~[12] National Historic Preservation Act Section 106, ORS 358.653.~~

Strategy: Archaeological Review

Perform archaeological review of all operation locations and protect historic resources following applicable rules and statutes.

Intent

The intent of this strategy is to incorporate historic cultural resources review by qualified cultural resources specialists, in compliance with state and federal regulations, into operation planning processes to ensure protection of historic cultural resources across state forest lands.

3.2.33.2.4 Forest Resource 4: Recreation, Education, and Interpretation



Mountain biking on one of ODF's many trail systems. Demand for outdoor opportunities in Oregon is increasing.
Credit: ODF.

ODF's recreation, education, and interpretation program manages both developed and *dispersed* recreational opportunities in*recreation* and interpretive programming across all state forest lands, with the largestgreatest concentration of recreational opportunities and visitor use occurring in northwest Oregon on the Clatsop, Santiam, and Tillamook State Forests. Recreation, education, and interpretation programs are aimed at welcomingThe program aims to welcome all visitors, provide opportunities to enjoy and learn about Oregon's state forest lands and their stewardship, and providingensure lasting, diverse, and accessible outdoor experiences.

accessible outdoor recreation, education, and interpretation opportunities. Research conducted in conjunction with the *Oregon State Comprehensive Outdoor Recreation Plan 2019–2023* (Oregon Parks and Recreation Department 2019–2023) reveals that the demand for outdoor opportunities in Oregon is increasing, the popularity of specific activities is changing over time, and some groups or persons have not accessedOn state forest lands for a variety of reasons. This reflects ever-evolving changes in user *demographics*, advances in technology, shifting economic trends, and outdoor recreation trends and opportunities for more inclusion overall.

State forest lands provide recreational opportunities for both residents and , visitors to the state, enjoy a wide range of activities such as camping, hunting, boating, angling, target shooting, fishing, hiking, birding, mountain biking, boating, horseback riding, and motorized and non-motorized trail use. Public use is regulated through OAR 629.25.target

The availability of recreational

[11] National Historic Preservation Act Section 106, ORS 358.653.

shooting, and motorized trail use. These opportunities are regulated under Oregon Administrative Rules (OAR) 629-25 to ensure safety and resource protection.

Recreation on state forests involves more than leisure activities—recreation is an ecosystem service that ~~contributes to the~~ improves quality of life, ~~and additionally provides~~supports cultural traditions, and connects Oregonians to their state forests. It also generates significant economic benefits ~~to~~for nearby communities ~~adjacent~~and the state as a whole.
According to Oregon's 2025–2029 Statewide Comprehensive Outdoor Recreation Plan (SCORP), outdoor recreation in Oregon contributes nearly $57 billion annually to ~~state forest lands. For many Oregonians, recreation on state forest lands is part of their cultural heritage.~~the state's economy and saves billions in health-related costs (Oregon State Parks 2025).

SCORP data show that demand for outdoor recreation continues to grow across the state. Hiking, camping, and wildlife viewing remain among the most popular activities, while mountain biking and non-motorized trail use are seeing steady growth. At the same time, barriers persist for some groups, including low-income households, people with disabilities, and racially or ethnically diverse communities. This highlights the need for more inclusive access and programming.

As demand grows and user demographics evolve, the recreation program continues to adapt facilities, trails, and educational offerings to meet changing needs and create more inclusive experiences. The following sections describe some of these recreational opportunities ~~are discussed~~ in ~~more~~ detail ~~in the following sections~~and outline strategies for future improvements.

Motorized Trail Use

State ~~forest lands offer~~ forests provide some of the most diverse and challenging off-highway vehicle (OHV) ~~trail~~ opportunities in ~~the Pacific Northwest~~Oregon, filling an important recreational niche in the ~~state and region.~~Pacific Northwest. OHV staging areas ~~(~~, including campgrounds and day-use ~~areas) provide~~ sites, offer parking and camping ~~opportunities~~ that support ~~OHV trail system~~ access to trail systems.

~~OHV areas in~~ The Clatsop and Tillamook State Forests ~~include trails~~ feature extensive OHV networks for ~~motorcycle, quad~~motorcycles, quads, side-by-~~side~~sides, and four-wheel~~ use that range~~-drive vehicles, with trails ranging from ~~easy to extremely challenging. OHV areas on~~beginner-friendly to highly technical. The Santiam State

Forest and the West Oregon District offer smaller systems with easy-to-moderate opportunitiesroutes for motorcyclemotorcycles and quad use. Thequads. OHV trail system accommodatestrails are generally open year-round use, with the highestpeak use levels occurring in the spring and fall.

Non-motorized Trail Use

State forests offer an extensive network of non-motorized trails and supporting infrastructure, such as trailheads and campgrounds, accommodatefor hiking, horseback riding, trail running, and mountain biking. The non-motorized trail system is primarily used by day-use visitors. The trail system includes a variety of These trails range from scenic forest paths to purpose-built mountain bike trailsroutes, including cross-country and all-mountain trails, downhill trails, and free-ride opportunitiesfreeride options. The Black Rock Mountain Bike Area in the West Oregon District is a prime example, managed in collaborationpartnership with the Black Rock Mountain Bike Association to provide advanced riding experiences.

Looking ahead, maintaining and expanding these trails will require strong collaboration with local trail organizations and other nearby systems—such as those managed by counties, cities, and nonprofits—to create seamless connections between state forests and regional networks. These linkages enhance recreational opportunities, reduce congestion, and support tourism by offering longer, integrated trail experiences.

Camping

~~ODF~~ Camping on Oregon's state forests offers a range of experiences, from rustic dispersed sites to developed campgrounds with amenities. ODF manages three primary types of camping ~~opportunities~~: developed campgrounds, designated ~~campsites~~sites outside ~~of developed~~ campgrounds, and dispersed camping across ~~state~~ forest lands. Developed campgrounds vary in size and ~~amenities offered.~~

~~Campground opportunities are diverse and include regular~~features, including drive-in ~~site campgrounds that accommodate~~ sites for recreational ~~vehicle (RV)~~vehicles and ~~tent use~~tents, walk-in tent ~~site campgrounds that accommodate tent use only~~sites, horse camps~~, that are~~ designed for equestrian users, and OHV campgrounds ~~designed and managed to accommodate OHV enthusiasts~~tailored for motorized recreationists.

ODF campgrounds serve as hubs for recreation, providing access to trails, rivers, and scenic viewpoints. Many sites are intentionally kept simple to maintain a natural forest experience, while still offering essentials like fire rings, picnic tables, and vault toilets. Future priorities include improving accessibility for all visitors, upgrading infrastructure for safety and sustainability, and exploring partnerships to expand camping options near high-demand areas.

Day-Use Activities

~~State forests are popular destinations for~~ ODF manages a variety of day-use ~~activities, such as swimming and water play, target shooting, fishing, hiking, mountain biking, horseback riding, OHV trail use, and picnicking. Day-use facilities~~ sites that provide ~~parking and restrooms, and some locations have picnic tables and cooking grills.~~

~~Facilities are generally rustic in nature but often provide river access and support other day-use activities. Developed facilities include~~ essential amenities for visitors, including trailheads, picnic areas, boat launches, target-shooting lanes, interpretive sites, and ~~a *demonstration forest*~~demonstration forests. While facilities are generally rustic, many offer river access, restrooms, and picnic shelters. These sites serve as gateways to recreation, supporting activities like hiking, mountain biking, fishing, and OHV riding.
Target shooting is also supported at designated shooting lanes, which are maintained to improve safety and reduce environmental impacts.

Future priorities include improving accessibility, upgrading infrastructure for safety and sustainability, and enhancing interpretive elements to enrich visitor experiences.

Aquatic Activities and Hunting

~~State forest rivers are a destination for~~ State forest lands provide abundant opportunities for water-based recreation and hunting, both deeply rooted in Oregon's outdoor traditions. Rivers and lakes within the forests support fishing, boating, and ~~water play. In support of fishing and boating activities,~~swimming. ODF manages several primitive boat launches, some ~~of which are managed~~ in partnership with the Oregon Department of Fish and Wildlife (ODFW~~).~~), and small lakes in the Santiam and Clatsop State Forests ~~also provide opportunities for swimming,~~offer angling~~,~~ and non-motorized boating. RCA protections support healthy fish populations and ensure the recruitment of in-stream downed wood and other habitat elements over time.

Hunting

~~Oregon has~~ remains a ~~long history of hunting~~cornerstone activity on state forests~~.~~, with ODF ~~works~~working closely with ODFW and hunting organizations to ~~better~~ manage ~~hunting~~ access~~, through~~ and maintain habitat to support healthy populations of game animals. *Travel management are*as and ~~selected~~selective road closures ~~to provide~~create walk-in hunting opportunities while balancing habitat protection and safety. These activities not only connect people to Oregon's natural heritage but also contribute to local economies and community wellbeing.

Target Shooting

Target shooting is most active in districts closest to the Willamette Valley and the Portland metropolitan area. Most target shooting takes place at established shooting lanes or dispersed locations such as rock quarries, rock stockpiles, and at the end of spur roads.

Looking forward, ODF aims to enhance water access points, improve signage and safety features, and strengthen partnerships to support sustainable hunting practices and aquatic recreation.



TILLAMOOK FOREST CENTER

Annual Overview

Visitors

62,700

Volunteer Hours

3,070

Education Programs (participants)

2,700

Interpretive Services (participants)

5,200

Data averaged from FY 2024 and FY 2025.

Interpretation and Education Services

~~ODF has been supporting interpretative and educational programs~~ Education and interpretation are central to the VOF by fostering stewardship and understanding of Oregon's forests. Since the mid-1990s, ~~providing information about current and past land management, natural disturbance, and forest stewardship occurring~~programs have provided insight into forest ecology, wildfire history, and sustainable management practices *on* ~~Oregon lands to both locals and a diverse array of visitors. One facility that is a popular stopping-off point between the valley and the coast is~~*working forests* that promote resilient ecosystems. The Tillamook Forest Center, ~~which was constructed in the Tillamook State Forest~~built in 2006~~. This center,~~ is the flagship facility—a premier destination for ~~Oregonians~~locals and ~~out-of-state~~ visitors ~~and is one of the region's largest forest-based learning centers providing information about the natural and cultural history of Oregon's forests, wildfire science, and sustainable forest management. A variety of educational and interpretation opportunities are provided there, including interpretive~~ alike. It features interactive exhibits ~~in the museum, a movie theater showing,~~ an award-winning film ~~about~~on the Tillamook Burn, accessible trails, seasonal presentations, traveling exhibits, ~~educational programs for school groups, and facility rentals at the Smith Homestead Shelter. A primary focus of the~~and school programs. School programs for K–12 classrooms are especially important for ensuring that school children experience the forest and are aware of future career opportunities in stewardship of their natural resources.

Future plans emphasize modernizing interpretive ~~and educational~~ services ~~and programs is intended to assist the public in developing an understanding of basic ecological processes, which in turn may foster a sense of environmental awareness and long-term stewardship of shared natural resources~~, expanding digital engagement, and strengthening partnerships with schools and community organizations. These efforts aim to reach broader audiences, integrate climate and wildfire education, and ensure that interpretation remains relevant and engaging for the next generation.

Goal: Recreation, Education, and Interpretation Opportunities

Provide forest recreation, education, and interpretation opportunities to create meaningful and enjoyable experiences that foster appreciation and understanding of state forest lands and contribute to

community health, sustainable working forests, and economic wellbeing.

Strategy: Welcoming~~, Inclusive,~~ and ~~High Quality~~Accessible Recreation, Education~~,~~ and Interpretation Opportunities

improve recreation, education, and interpretation opportunities
isting trails, facilities and future development.

e a diversityexisting recreational infrastructure when planning
ximity.

rds, and planning principles suited for facility and trail



joyable experiences~~, services and programs, improve delivery of~~
~~nities include interpretation and education services for forest visitors~~
~~mmunities to learn about~~within educational fields that build
~~ect~~support connection with Oregon's history, people, and

Strategy: Visitor Use Research and Monitoring

~~Conduct~~Monitor visitor use ~~research and monitoring~~of program assets to inform decisions related to the recreation, education, and interpretation program ~~management, leverage capacity of future investments into recreational.~~, Support efforts to diversify program funding mechanisms, contribute to program sustainability, and help the program describe and deliver its contribution to GPV and resilient ecosystems.

a. Regularly collect and analyze data on how visitors use state forest recreation, education, and interpretation facilities and programs to guide decisions and improve services.

Intent

The intent of the strategy is to prioritize infrastructure ~~and services and enhance support for the program~~upgrades, design new programs, and demonstrate the value of investments to stakeholders.

Strategy: ~~Recreation, Education, and Interpretation~~ Community Engagement

~~Enhance~~ Build partnerships and community ~~*engagement* to foster partnership development,~~connections to increase investment, ~~and sense of ownership, as well as the capacity to advance recreation, education, and interpretation program goals.~~

~~Through these connections the~~ collaboration, and support for recreation, education, and interpretation ~~program can engage~~programs.

Intent

The intent of this strategy is to create a sense of shared ownership around the mission, vision, and brand of the recreation, education, and interpretation program through collaboration and engagement with diverse audiences ~~and potential,~~ partners, ~~which in turn fosters~~and stakeholders that creates community ~~collaboration and~~ connections, develops broad support for ~~the work of the program and~~ ~~promotes~~and investment in the program ~~and associated activities. Creating strong community connections~~, and increases ~~the diversity, capacity, and adaptability of recreation, education, and interpretation services~~our collective capacity.

~~3.2.4~~3.2.5 ~~5:~~ Visual Resources



ts are near some of Oregon's major cities. Several *scenic* highways and d attract people to recreational infrastructure including many

campgrounds and extensive trail networks. Sightseeing is popular in state forests, and visual resources play a major part in the quality of experience in social activities, such as camping, trail use, fishing, wildlife watching, rafting, and driving. Visual resources enhance the quality of social benefits and attract tourists whose spending supports the local tourism economy and contributes to revenues.

~~The~~

In many places, smaller parcels of state forest lands are not readily distinguishable from other surrounding forestlands by visitors. By contrast, the Clatsop and Tillamook State Forests~~, the largest~~ are large, consolidated blocks of state forest lands~~, are the state lands most likely~~that are signed and well-known to many visitors and dominate *viewsheds* ~~and be recognized as state forests by the public as they visit the area. In many places, state forest lands blend with the surrounding forest~~along some busy travel corridors, especially between Portland and ~~are not recognized as state land by visitors.~~ the Oregon Coast. Goals for retaining visual buffers from timber harvest are balanced with goals for maintaining safe conditions for motorists and recreationists.



~~State forest lands provide a unique experience as these lands are~~

~~actively managed and provide for a wide range of forested settings. Visitors can expect to see settings that contain views of regeneration harvest with leave trees and snags, harvest buffers to protect resources, streams and rivers, and forest stands in stages from newly planted seedlings to mature trees. The varied views from state forest lands reflect the social, economic, and environmental values for which these forest lands are managed.~~

State forest lands are also home to state-designated *scenic waterways*, which are designated to create a balance between protecting ~~the~~ natural resources, scenic value, and recreational use of these rivers.

Santiam State Forest. On state forest lands visitors can expect to see a wide range of forested settings, streams, rivers, lakes, and other scenery.
Credit: Zak Stone.

Scenic Highways, Byways, and Visually Sensitive Corridors

State forest lands are a major part of the view along some stretches of Highway 6 and Highway 26 in the Oregon Coast Range. Along major highways, the immediate visual foreground is protected either by Oregon Department of Transportation-owned scenic buffers or by statute. Many highways in western Oregon are designated as scenic for the purpose of visual corridor management (ORS 527.755) and are within or adjacent to state forest lands.

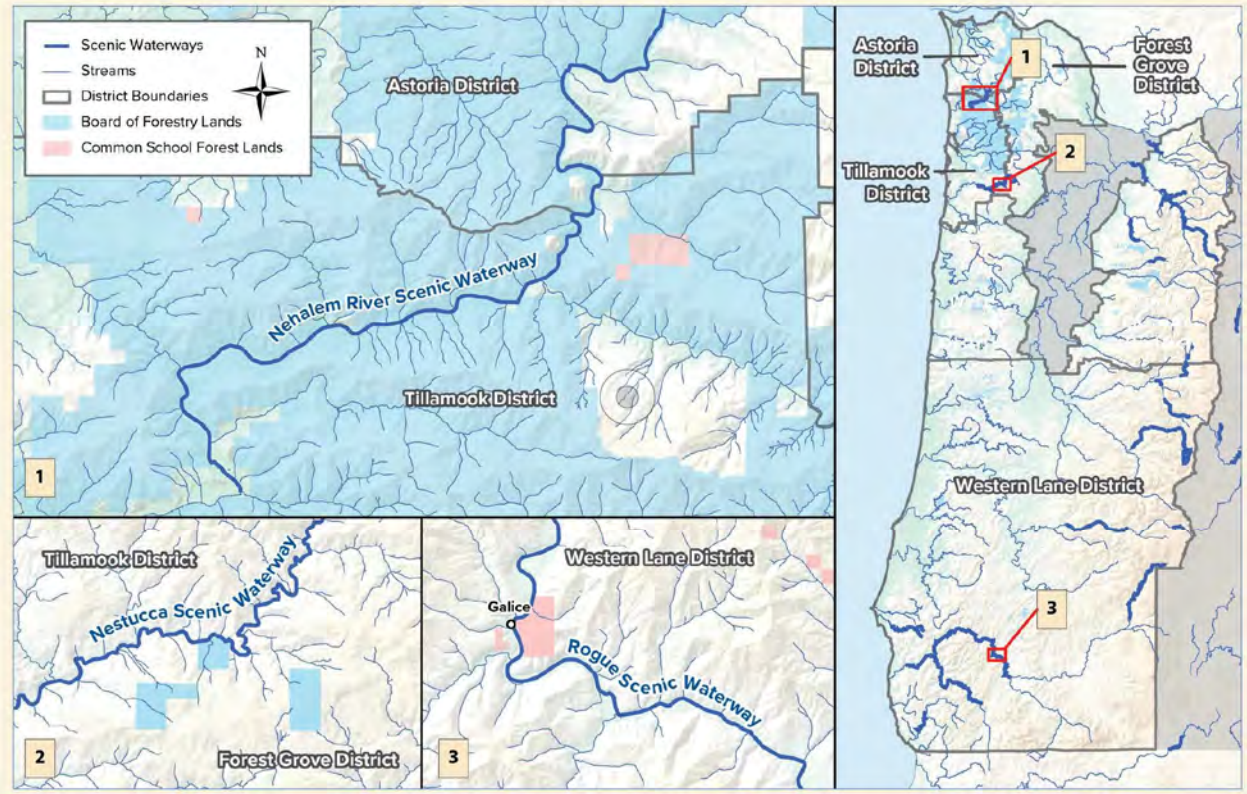
Special rules apply to timber harvest in *visually sensitive corridors*. Goals for retaining scenic buffers are balanced with goals for maintaining motorist safety. Additionally, Highway 6, located in the Tillamook State Forest, is designated as a portion of the Trees to Sea Scenic Byway and must be maintained as a scenic corridor per the *Trees to Seas Highway 6/131 Scenic Byway Corridor Management Plan* (ODF 2018).

~~WESTERN OREGON STATE FORESTS MANAGEMENT PLAN~~

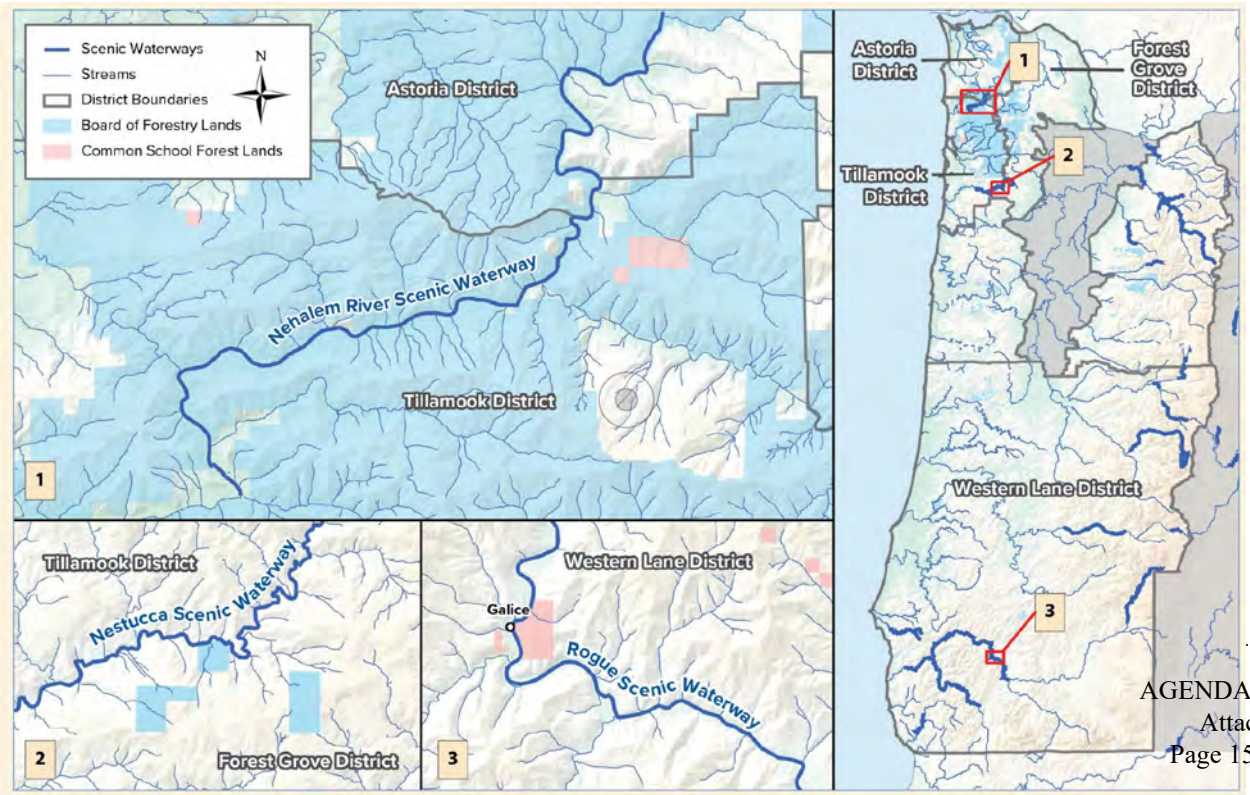
Scenic Waterways

There are three state scenic waterways ~~located~~ on or adjacent to state forest lands. Management of lands in and adjacent to designated scenic waterways is subject to the provisions of ORS 390.805 to 390.925, and administrative rules adopted by the Oregon Parks and Recreation Department. The first designated waterway is the Nestucca River Scenic Waterway in Forest Grove and Tillamook Districts (designated by ORS 390.826(11); OAR 736-040-0041) (Figure 3-~~64~~). The second state scenic river is a 17.5-mile section of the Nehalem River located in the Clatsop and Tillamook State Forests (designated by Executive Order 2019-05; OAR 736-040-0120). The third state scenic river is the Rogue River Scenic Waterway (designated by ORS 390.826(9)) located adjacent to CSFL in the Western Lane district near the small town of Galice (16 miles northwest of Grants Pass). This same reach is also part of the Lower Rogue National Wild and Scenic River, which is one of eight rivers established under the passage of the Wild and Scenic Rivers Act in 1968.

FIGURE 3-64
Scenic Waterways. Scenic-designated segments of the Nestucca, Nehalem, and Rogue Rivers flow through the planning area.



~~CSFL near the small town of Galice (16 miles northwest of Grants Pass) and near the well-known Grave's Creek Boat Launch are located within the corridor of the collocated Lower Rogue National Wild and Scenic River (established by Public Law 90-542) and Rogue River Scenic Waterway (designated by ORS 390.826(9)). The Lower Rogue National Wild and Scenic River was one of eight rivers established under the passage of the Wild and Scenic Rivers Act in 1968.~~



Goal: Visual Resources

Manage forests in ways that value scenery and a range of forested settings ~~to meet~~based on emphasis area~~management objectives~~.

Strategy: Scenic Classification System and Considerations

Implement the scenic classification system defined in the FLMCS as Special Use and apply state and federal regulations to integrate scenic considerations into management decisions.

Special Integrate scenic considerations into management decisions where compatible with safety considerations, other resource priorities, harvest plans and operational needs. Scenic emphasis areas are mapped as part of the FLMCS based on classification criteria for visual sensitivity. Classification criteria may include factors such as number of viewers, viewing distance, viewing angle, landform, vegetation, water and uniqueness. Table 3-3 provides examples of visual sensitivities.

TABLE 3-3
Examples of Visual Sensitivities used to Map Scenic Emphasis Areas as Part of the FLMCS

Visual Sensitivity	Examples
High	Areas where state and federal regulations apply such as scenic highways and scenic waterways.
Moderate	Portions of the viewshed visible from established campgrounds, high use vistas, viewpoints along major highways, urban views, and heavily used recreation areas.

Intent

The intent of this strategy is to provide views of a wide range of managed forest settings, including areas where scenic considerations are regulated by law. Active management of state forest lands provides a unique experience where visitors can expect to view a range of forest conditions ranging from newly planted seedlings to stands of large, mature trees; management activities including thinning and regeneration harvests with leave trees, snags, and resource buffers; and natural features like streams, rivers, lakes, and waterfalls. The varied scenes experienced on state forest lands reflect the social, economic, and environmental co-benefits that come from these working forests.

~~3.2.5~~3.2.6 Forest Resource 6: Special Forest Products



Hand-picked Chantrelle mushrooms ~~*(Cantharellus formosus).*~~. Special forest products provide social and economic benefits for communities.

Special forest products are ~~those~~ non-timber products that are collected for personal and commercial uses. They include firewood and other products identified by the BOF (ORS 530.050 and 164.813; OAR 629-028). In western Oregon State forest lands, special forest products include, but are not limited to, ~~beargrass (*Xerophyllum tenax*),~~bear grass, evergreen boughs, cedar shakes, cones, ferns, firewood, moss, mushrooms, vine maple cuttings, poles, Oregon ~~grape (*Mahonia spp.*), salal (*Gaultheria shallon*),~~ grape (*Mahonia spp.*), salal (*Gaultheria shallon*), and Pacific yew ~~and Pacific yew (*Taxus brevifolia*)~~ Credit: ODF.

bark.

The special forest products industry makes an important contribution to Oregon's economy, cultural values~~,~~ (Section 3.2.3, *Cultural and Historic Resources*, for more details), and social wellbeing. The ~~quantity and quality~~types of products vary among districts. Managing special forest products as a viable, sustainable commodity program, compatible with other forest resources, provides economic and social benefits for local communities and allows the special forest products industry to adapt and serve changing needs over time.

Goal: Special Forest Products

Provide opportunities for sustainable harvest of special forest products for ~~recreational,~~ personal~~,~~ and commercial use.

Strategy: Special Forest Products Harvest

Sell permits for sustainable commercial harvest of special forest products ~~and.~~ Provide the public with information on locations and acceptable collection limits of products for personal use, consistent with other goals and the protection of forest resources.

Intent

The intent of this strategy is to provide opportunities to harvest special forest products that are compatible with other resource goals, while complying with ORS 530.050 and 164.813. The permitting process is used to guide personal or commercial users to specific areas of the forest where special forest products are available and harvest is unlikely to affect other resources (e.g., sensitive wildlife areas, campgrounds).

~~3.2.6~~3.2.7 Forest Resource 7: Mining, Agriculture, Grazing, Administrative Sites





Tillamook Forest Center is a modern education and interpretive center in the heart of the Tillamook State Forest.
Through hands-on exhibits, attractive riverside and forest trails, and educational offerings, visitors take a journey through the history of Oregon's forests, the power of wildfire and the art and science of sustainable forest management today.
Credit: ODF.

Mining, agriculture, grazing, and *administrative sites* provide direct economic benefits by generating income and revenue, and indirect social benefits by supplying education and interpretation facilities and materials for developing and maintaining the transportation network. The mineral, oil, and gas potential of western Oregon state forest lands is largely unknown. Few systematic surveys have been conducted for most commodities, and no regional geochemical studies have been conducted to define or eliminate areas of possible metal mineralization

~~[Tillamook Forest Center.]~~

~~metal mineralization. Mineral~~Generally, except where a prior reservation exists, minerals and geothermal resources are owned by the State of Oregon and are managed jointly by ~~DSL~~the State Forester ~~and no regional geochemical studies have been conducted to define or eliminate areas of possible~~ and the Department of State Lands (ORS 530.050(2) and ORS 273.551). ~~Revenues derived~~ODF's share of revenues or royalties from ~~the sale of~~ these ~~mineral~~ resources ~~are allocated~~under ORS 530.110 and 530.115 is typically distributed to the Common School Fund ~~(~~by operation of ORS 273.780~~).~~ and 273.785(4), while the counties' share of such revenues under Chapter 530 are distributed to the counties under ODF's revenue distribution statutes. Development of subsurface mineral resources may still require easements or special use permits issued by ODF and other agencies.

~~However,~~

ODF may use soil, clay, stone, sand, and gravel for constructing or repairing roads or other state facilities (ORS 530.050). State forest lands ~~have provided high-quality~~can provide rock for local road surfacing ~~and ballast rock. This rock~~, which is an important resource for road construction, road improvement, and road maintenance ~~of roads~~.

Although state laws permit agriculture and grazing on state forest lands if those uses are compatible with other forest resources, the topography of state forest lands is generally not suitable for most agricultural uses. Historically, under the open-range laws, all of the districts in western Oregon allowed grazing on burned or logged areas. As forests were re-established, grazing diminished. Open-range grazing ended in the early 1980s, and grazing is now almost non-existent on state forest lands.

Goal: Permit Mining, Agriculture, Grazing, Administrative Sites

Permit mining, agricultural use, development and use of administrative sites, and livestock grazing when these uses are compatible with other forest resource goals.

Strategy: Special Use Permit Evaluation

Consider mining, agricultural use, administrative sites, and livestock grazing on a case-by-case basis, such that use is not detrimental to the best interest of the state, is allowed by law, and is compatible with ODF resource management policies and plans.

3.1.4 Soils and Geology



Soil composition. Dynamic processes, such as forest succession, wind, and fire affect the accumulation of organic matter and available nutrients in the soil. Credit: ODF

Intent

The intent of this strategy is that proposals for uses such as mining, agriculture, grazing, and administrative sites be considered only after consultation with a staff biologist, an aquatic and riparian specialist, a land specialist, planners, and districts to ensure alignment with ORS 530.050. The purpose of the consultation is to evaluate whether these uses are compatible with other forest resource goals and with maintaining forests. Potential subclasses include Administrative Sites, Agriculture, Grazing Wildlife Forage, Easements, Energy and Minerals, or Transmission.

3.2.8 Forest Resource 8: Geology and Soils



~~siting and conditions~~**Dynamic processes, such as forest succession, wind, and fire affect the accumulation of organic matter and available nutrients in the soil.**

Credit: ODF.

The landscape upon which forest management ~~of any scale~~ occurs is ~~controlled~~affected by ~~a~~ historic geologic ~~process~~processes and their resulting *formations*. Volcanic activity, sediment deposition, *uplift*, soil formation and erosion are the driving forces that have given western Oregon its unique terrain. The soils~~—the most visible of the~~, which are derived from geologic and biological materials~~—are~~ and form the bedding from which Oregon's forests grow~~ providing~~, provide many ~~ecosystem services key to delivering all three types of GPV. For example, timber and other plant community production is determined largely by the soil characteristics, slope aspect, and access, as well as precipitation. Road and other recreation infrastructure~~ ecosystem services that are key to maintaining resilient forests. Tree and other plant community productivity is determined mainly by soil characteristics and soil health. Road and recreation infrastructure depend on soil and topographic

characteristics for stability~~,~~ and seasonal accessibility~~, and visual resource offerings.~~. Inoperable areas ~~and landslide-prone areas, while less opportune for vegetation harvest~~that are not available for active management due to unstable slope characteristics, provide other ecosystem functions such as wildlife habitat and carbon storage. ~~Soils and near-surface formations are moveable parts of the landscape. Landslides, part of the natural erosive process, are a testament to the changing nature of the terrain and can affect, or be affected by, forest management.~~

Geology

~~Volcanic activity below the surface of the ocean and offshore of Oregon, in conjunction with deposition of marine sediments derived from volcanoes in the Cascades Range to the east, produced a submarine assemblage of volcanic rocks layered with marine siltstones, sandstones, and mudstones.~~

~~Compression by *tectonic* activity uplifted and moved this assemblage of material east, where it added to the ancient Oregon coastline. This uplift occurred later in the northwestern most portion of~~ The planning area ~~(north of the present day Tillamook Highlands) and, as a result, that area received *deposition* of much younger marine sediments than other areas.~~

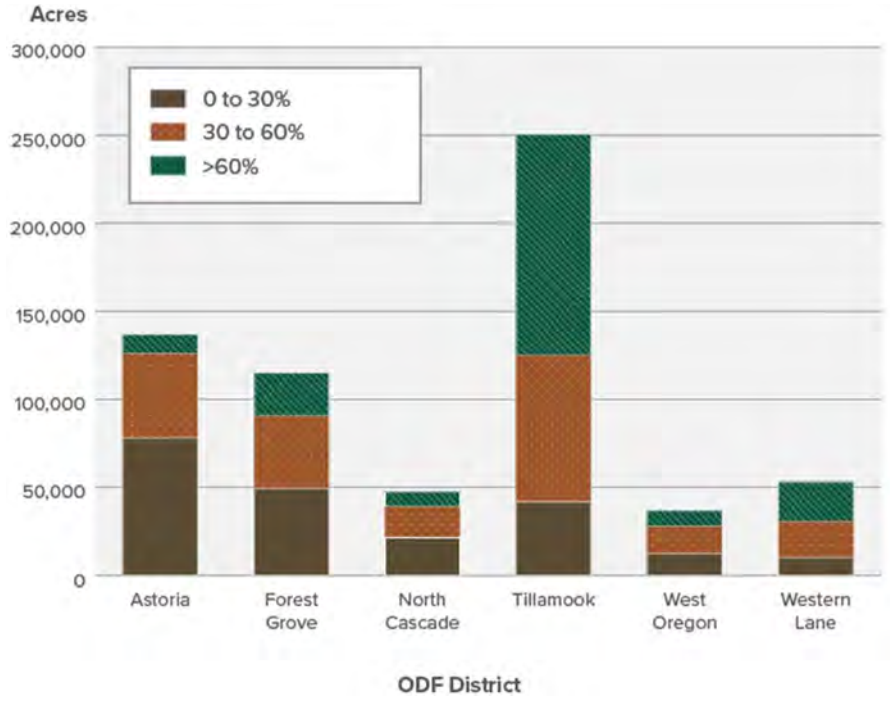
~~Concurrently, huge volumes of fluid basalt (flood basalts)~~includes a diverse mix of terrain and soil types owing to a variety of geologic processes over time. Submarine volcanic activity, deposition of marine siltstones, sandstones and mudstones, and uplifting have resulted in mountainous terrain across most of the planning area. In addition, fluid basalts from volcanic activity further east flowed down the ancestral channel of the Columbia River Gorge~~,~~ into the ~~developing low area~~lower areas of the Willamette Valley~~,~~ to the margins of the present ~~margin of the~~ coastline throughout much of the northern ~~portion of the planning area. These flood basalts seem to be absent in the area of the Tillamook Highlands and further south, indicating that those areas were probably topographically higher at the time.~~

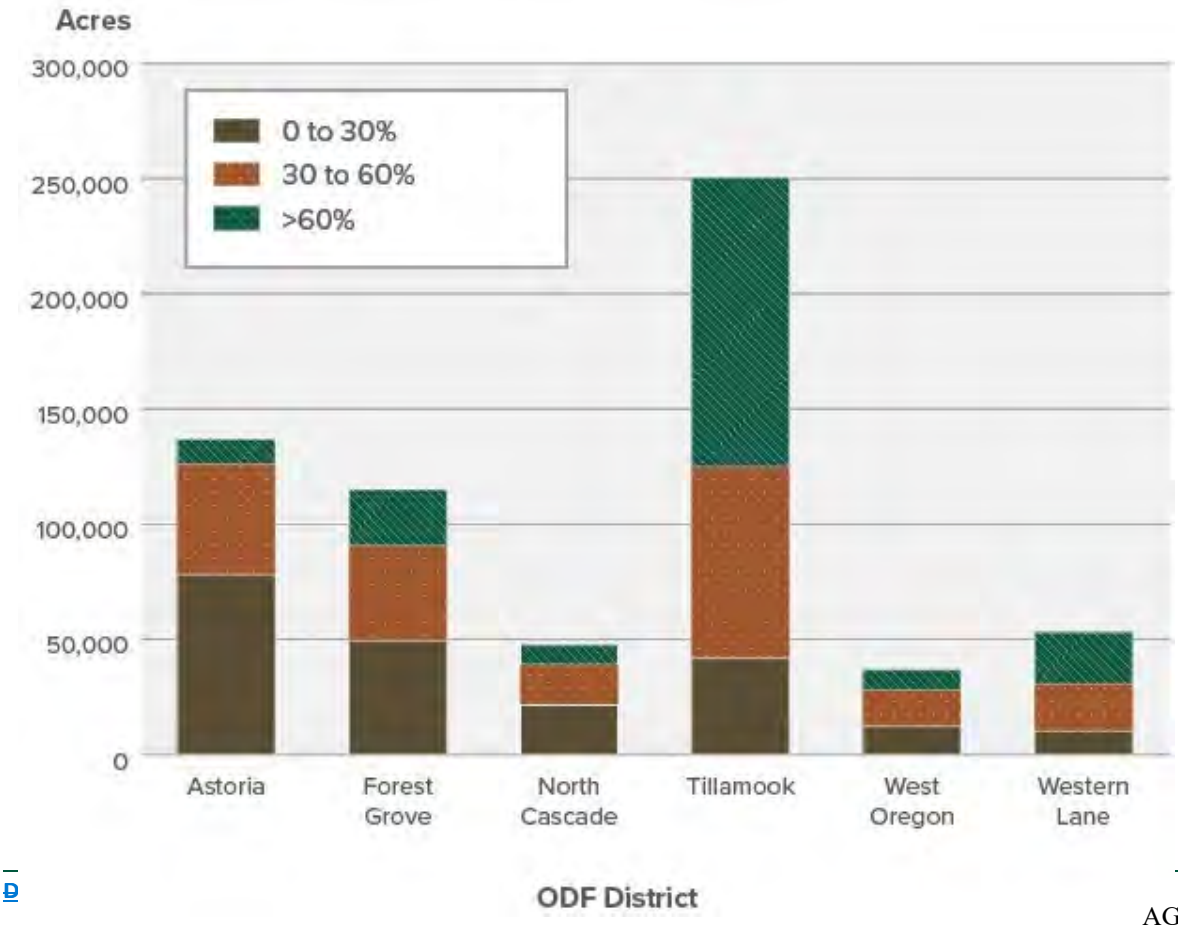
area of the planning area. Erosion ~~has modified this uplifted terrain to today's highly *dissected* topography. Landslides, along with down-cutting and transport of sediment by streams fueled by~~from heavy precipitation~~, produced the~~ and landslides transported large amounts of sedimentary material downstream, resulting in the deeply incised and complex topography that is the present-day Oregon Coast Range. ~~Concurrent tectonic activity produced periodic large~~ Periodic earthquakes ~~, which may have~~ triggered many ~~of the largest, most~~large, deep-seated ~~ancient~~ landslides ~~observable in the planning~~that exist throughout this area today. ~~Large swaths of land in the northern portion of the planning area were extensively altered by these landslides.~~

Concurrent with erosion along the shaping of coastal mountains, volcanism formed the high Cascade volcanic mountains were formed along the eastern marginedge of the planning area. After volcanism, major changes toFollowing their formation, the topography were not only affectedwas further shaped by erosion processes similar to the coastal mountains, but also by glaciationthe formation and subsequent receding of glaciers.

The net effect of geology, erosion, and climate is apparent in the distribution of slope steepness across the planning area. Nearly 33% of state forest lands have a slope greater than 60% (Figure 3-7).5). Steeper slopes are generally more prone to landslides as a result of harvest and road construction, more difficult to safely operate on, and can be less productive for tree growth in general. Where steep slopes are prevalent, logging and building access roads is more costly, and some areas are inoperable and excluded from timber harvest planning.

FIGURE 3-~~75~~75
Slope Steepness across the Planning Area. The highest percentage of steeper slopes in the planning area are ~~on~~in the Tillamook and Western Lane Districts.





Source: Oregon Lidar Consortium 2007–2020.

Soils

There are three general soil types: those formed from underlying volcanic formations, those from underlying marine formations, and those from alluvium (unconsolidated materials deposited by streams and rivers). Alluvial soils are a very minor portion of planning area soils and are wholly contained with RCAs. Soils are almost always thinner along ridgetops and thicker in *swales* due to faster and deeper weathering of underlying formations, which are wetter for longer periods, and gradual downslope soil movement, which increases soil depth in low areas. All soils contain organic and biological components in addition to ~~the mineral fraction described below~~minerals.

Soils formed on volcanic formations in the planning area are classed predominantly as gravels ~~with some sand and very few silt-sized materials~~. These soils are very well drained, often occur on the steepest slopes in the planning area, and tend to be thinner than soils formed from marine formations or alluvium. The highest concentration of volcanic soils is in the Tillamook Highlands, the Cascade foothills, and near the Columbia River. While these soils

are still suitable for growing trees, they tend to be less productive than deeper soils that store more water and nutrients.

Soils formed on underlying marine sedimentary formations are predominantly silts, sands, and clays with minor amounts of gravel. (Figure 3-6). These occur in many areas outside the Tillamook Highlands. These soils are well drained on hillslopes but can be wet most of the year in low-lying areas. Water permeates through these fine-grained soils much slower than the volcanic soils owing. They occur on relatively flat locations in the planning areadue to their fine-grained texture.
These soils tend to be highly productive, due their retention of water and nutrients.

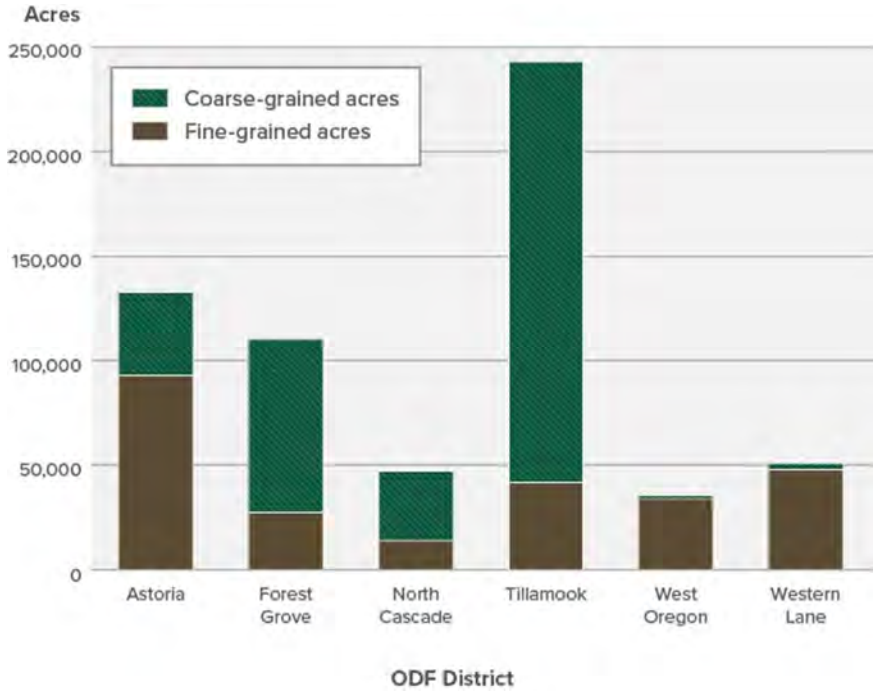
FIGURE 3-6. Forest Soils Developed on Marine Siltstones in Less Rugged Coastal Areas. Past geologic processes create many different layers in the soil, which contribute to different forest types and management actions.

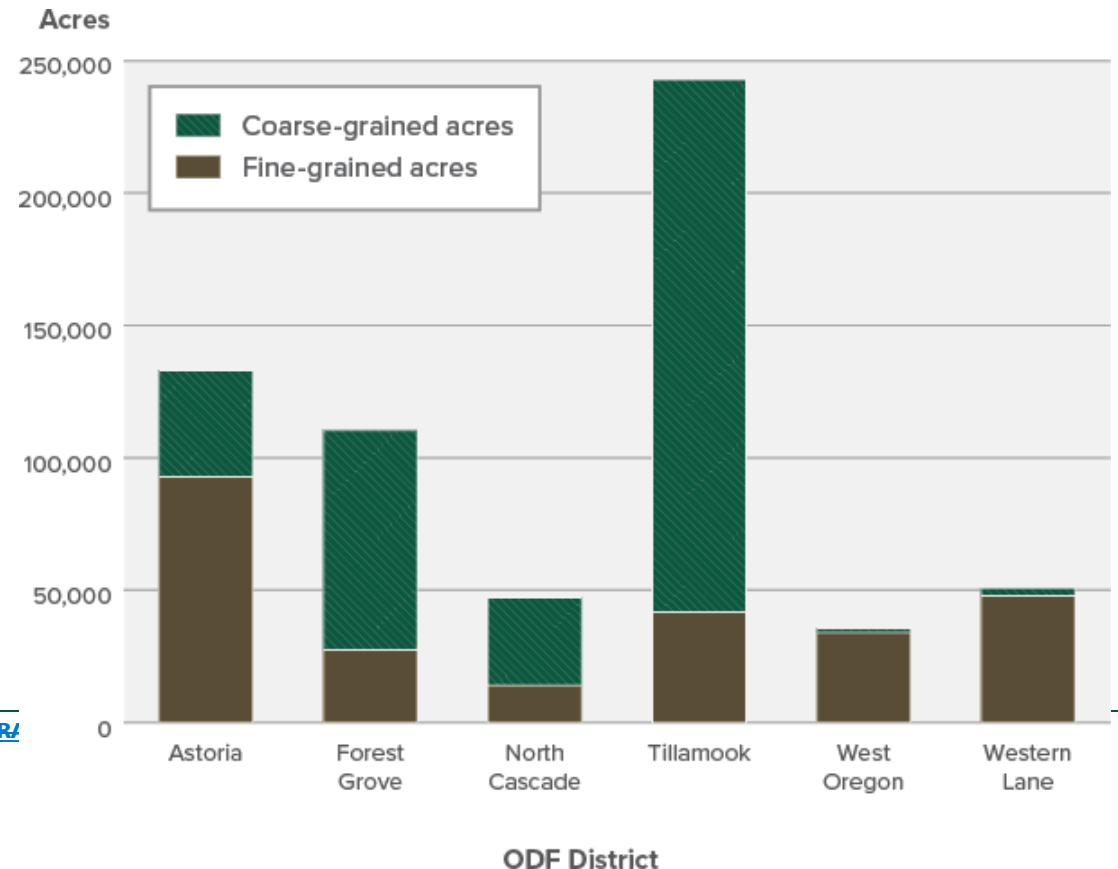


Source: ODF.

Due to the influence of ancient volcanism, the Forest Grove, North Cascade, and Tillamook Districts have predominantly coarse-grained soils, while the remaining districts' soils are fine-grained and were derived from softer marine sediments (Figure 3-~~8~~7).

FIGURE 3-~~8~~7
Fine- and Coarse-Grained Soils by District. The Tillamook District has the highest proportion of coarse-grained soils in the planning area.





Source: ODF analysis of underlying geology in Oregon Department of Geology and Mineral Industries (DOGAMI) 2015.

Some locations have the ability to grow timber more easily than others. Forest site productivity is controlled by a complex relationship among topography, slope, aspect, soil depth, porosity, biology, and the availability of nutrients in the soil. Dynamic processes, such as forest succession, wind, and fire affect the accumulation of organic matter ~~and available~~ nutrients in the soil. The amount and *composition* of organic matter affect soil fertility. Small materials such as needles and twigs have the highest concentration of nitrogen. Large materials such as downed trees influence soil ~~nutrient availability~~nutrients and soil moisture and can stabilize soils on moderate and steep slopes. *Downed wood* is an important component of forest soils, providing nutrients, habitat, carbon storage, and soil structure that promote both storage and transport of water. Retention standards for downed wood during timber harvest activities are detailed in the WOSF HCP.

~~Most of the Coast Range soils vary from "highly productive" (Site Class I) for Douglas-fir to "limited in potential productivity" (low Site Class III). However, there are Site Class IV and V soils, many of which are located on or near steep rocky outcrops. Soils in the western Cascades vary from high productivity~~

(Site Class II) to Site Class V for both Douglas-fir and western hemlock. *Site class* productivity depends largely on soil profile depth, gravel content, topographic position, and to some extent, soil parent material. However, in general, the parent materials of these soils all provide a potential basis for high productivity. Site class productivity has a more complex genesis than a simple relationship to geology and topography.

While forests in the Oregon Coast Range are widely recognized as some of the most productive in the world, there is local variation, based on the attributes discussed above. Productivity of locations along the Western Cascades can be slightly lower. The most productive sites have deeper, nutrient-rich soils, which remain moist during dry periods. The least productive sites occur on and near steep rock outcrops that lack organic nutrients and dry out quickly.

Slope Stability

~~All types of~~ Soil movement ~~occur~~, from gradual creep to landslides, occurs in both managed and unmanaged forests. Landslides ~~occur in both mature forest and recently harvested areas, sometimes in conjunction with other anthropogenic influences such as forest roads. Slides can deliver~~are a natural part of ecosystem processes, delivering woody debris along with gravels, sands, and silt-sized material to streams. These organic and inorganic components can contribute positively to the aquatic ecosystem.

~~Landslides occur when a mass of soil, rock, and debris moves downward, generally together, at similar rates. In forest management, it is useful to discuss two main categories: *shallow rapidly moving landslides* and *slow deep-seated landslides*. Examples of *mass wasting processes* of rapid and slow-moving~~ Landslides are ~~apparent across all areas, in all ownerships and management jurisdictions in northwest Oregon. Slides are the~~a dominant erosional process in the planning area~~.~~

~~Shallow rapidly moving landslides usually only involve soils and remove them entirely, along with the vegetation they support, from a steep slope. Underlying geologic formations usually form the base of these slides. Once the soil begins to move, the slide mass rapidly accelerates downslope, often entering a stream and traveling through the stream gully for thousands of feet. As the debris passes it scours soil and entrains boulders and woody debris, increasing in volume. These slides impart large forces when moving and can destroy, and sometimes remove, structures such as homes, concrete road barriers, and guardrails.~~

~~These slides then deposit material where the stream gradient becomes less steep, where the gully widens, or where a stream junction becomes too sharp for the *debris torrent* to make a turn. Often, the larger components of the resulting debris deposit may settle permanently due to the size of the host stream. In larger streams or rivers, the debris can shift and remobilize during subsequent high-water events, which will scatter the debris downstream over time.~~

~~Shallow, rapidly moving landslides can be caused or affected by forest management activities. Poor road-building practices with a major influence on *slope stability* include placement of fills on steep~~

~~slopes, ill-conceived *culvert* placement, poor maintenance, and failure to recognize and plan for landslide during road alignment planning and.~~, and timber harvest and road-building activities can increase the rate of occurrence of ~~these types of slides.~~landslides compared to unmanaged areas. This makes management around potential landslide areas a key focus for land managers. For a limited period after canopy removal, the frequency of slides increases in western Oregon (Turner et al. 2010; Robison et al. 1999). ~~Data from landslide inventories after the major precipitation events in 1996 (Table 3-2) illustrate the effect~~Slides that initiate and move through harvested terrain, may not deliver the same component of beneficial woody debris important for the aquatic system, depending on the amount of tree retention along the debris flow track during harvest. To mitigate this risk, ODF assesses potential landslide areas

during the planning of management activities and applies standards described in the WOSF HCP to both reduce the risk of slope failure and ensure that landslides that may occur deliver woody debris to the aquatic system. Table 3-4 shows the landslide density associated with 100-year storm intensity as a function of stand age and slope ~~on landslides. Background landslide density can be inferred by examining data for the unmanaged stands (>100 years old).~~.

~~Between 13 and 26 slides per square mile occurred in the largest storms in stands over 100 years old.~~

Comparing unmanaged stands to those in the <10-year-old age class implies that slide densities can increase on recently harvested steep terrain.

TABLE 3-24
Landslide Density Associated with 100-Year Storm Intensity as a Function of Stand Age and Slope. Both the age of a stand and the slope steepness affect the likelihood of slide initiation during large storms.

Stand Age (years)	Landslide Density per Square Mile (steepest slopes)	Landslide Density per Square Mile (all slopes)
0 to 9	51.2	12.913
10 to 30	22.4	7.2
31 to 100	19.2	6.57
Greater than 100	26.2	12.813

Source: Robison et al. 1999.

The second type of landslide—slow-moving, deep-seated—can shift portions of the ground surface up to 20 feet each year. These phenomena commonly move 1,000 to tens of thousands of cubic yards of material, slowly changing drainage patterns, destroying road grades, and in some cases deforesting large areas.

Within the planning area there are also hundreds of examples of these deep-seated landslides, a few of which are active and many more that are prehistoric and presently not moving. Almost all of these examples arewere caused naturally caused, many probably initiated by large off-shoreoffshore earthquakes. However, some forest practices can affect the initiation and movement of these slides. These practices include large topographic modification such as quarrying, *aggregate* stockpiling, placement of large fills, and construction of large road cuts, especially along the bottom edges of these features. Since these practices are relatively rare, the potential for destabilization of slopes and initiation of a deep-seated slide is low in northwest Oregon forests.These practices include large topographic

modifications such as quarrying and stockpiling rock and creating large slope cuts or placing large amounts of fill material during road construction, especially along the bottom edges of these landslides. ODF mitigates these risks by assessing the landscape for the presence of deep-seated landslides and applies BMPs to avoid practices that might trigger their movement.

Goal: Soil Health

Maintain natural soil processes, protect soils from damage, and increase soil carbon and other nutrients.

Strategy: Soil Protection

Follow BMPs during forest operations, such as road building, timber harvesting, trail construction, and site preparation to ensure protection of soils against erosion and loss of organic materials and soil structure.

3.1.5 Carbon



Growing trees sequester carbon. Forests provide long-term storage of carbon in trees, snags, downed wood, vegetation, and soils.
Credit: ODF

a. Use BMPs to protect against erosion and loss of soil structure during harvesting, site preparation, and road and trail construction, improvement, and maintenance. Evaluate and refine the effectiveness of BMPs through adaptive management.

b. Implement downed wood, snag, and leave-tree retention practices as specified in the WOSF HCP to recruit organic content into soils across emphasis areas.

Intent

The intent of this strategy is to plan and implement management activities that protect and maintain the organic content of soils on a landscape scale and to increase carbon, water, and nutrient storage. Management activities protect against erosion and loss of soil structure by using BMPs during harvesting, site preparation, and road and trail construction, improvement, and maintenance. The effectiveness of BMPs is evaluated and refined through adaptive management.

This strategy applies across emphasis areas. For example, in General Stewardship areas, downed wood, snag, and leave-tree retention practices contribute to recruitment of organic content into soils as those materials break down over time. In areas with an environmental emphasis, stands remain largely intact with harvest prescriptions designed to increase the growth of large trees that will eventually die and decay resulting in continual recruitment of organic material into the soil. In HCAs, passive management plays a role through natural disturbances such as insect and disease processes, windthrow, and mass-wasting along with regular trees growth and senesce. RCAs also build soil stability through continued recruitment of large woody debris, mostly through passive management, as trees in these buffer zones grow large and slowly senesce over time.

Goal: Slope Stability

Minimize and mitigate negative impacts on public safety, transportation infrastructure, and aquatic resources from landslides that may be triggered by management activities.

Strategy: Landslide Evaluation and Protections

Use the planning and assessment tools described under the Transportation System goal and the WOSF HCP strategies as described under the Functional Aquatic and Riparian Habitat Resources FMP goal.

Intent

The intent of this strategy is to reduce risks to people and resources associated with landslides while supporting beneficial ecological outcomes in appropriate scenarios.

3.2.9 Forest Resource 9: Carbon



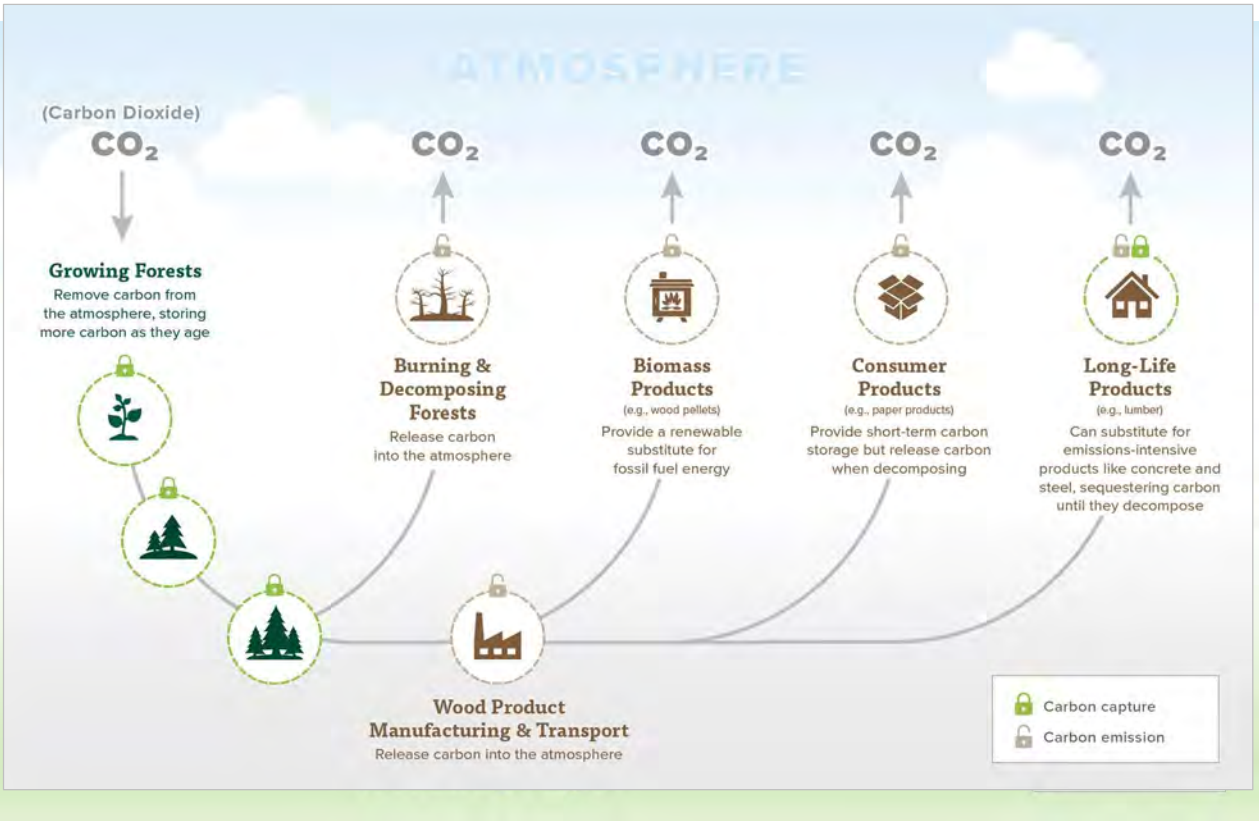
Growing trees sequester carbon. Forests provide long-term storage of carbon in trees, snags, downed wood, vegetation, and soils.
Credit: ODF.

Forests provide carbon storage and sequestration as ecosystem services. Carbon storage and sequestration help mitigate climate change by reducing the amount of greenhouse gases in the atmosphere. Greenhouse gas mitigation supports ~~sustainable GPV delivery~~resilient forest ecosystems by assisting with slowing the pace of climate change ~~to allow~~and allowing systems ~~time~~ to adapt to climate change consequences, such as ~~increased severity and frequency of drought~~droughts, extreme heat, wildfire, insect and disease outbreaks, and storms~~ that can otherwise damage timber, other plants, habitats, drinking water quality and quantity, air quality, infrastructure, and diminish human health and safety~~.

Forest vegetation sequesters carbon dioxide from the atmosphere in living tissues and provides long-term storage of carbon in trees, snags, downed wood, other plants, and soils~~. Areas managed as HCAs would be long-term stores for carbon dioxide. Areas of land managed for timber harvest have trees that actively sequester carbon while they grow and shift to static carbon storage as trees are harvested and transformed to wood products. Timber harvest will result in a portion of sequestered carbon released back into the atmosphere through burning or decay of harvest residuals and harvest operations~~ (Figure 3-~~9). Carbon stored in wood products can serve as short-term or longer-term sinks depending on their use and longevity. Harvesting trees reduces the *carbon sequestration* capacity of the forest, but replanting seeds and seedlings after harvest maintains a landscape of actively growing trees to again act as carbon sinks as they age.~~8).

Forests in the Oregon Coast Range and Western Cascades have the capacity to accumulate some of the highest densities of carbon on Earth through their productivity. ~~*Forest carbon* is distributed among different *carbon pools*, of which~~ (Keith et al 2009). *Live trees* ~~is~~are the largest store of carbon (Table 3-5) and the component most affected by management ~~(Table 3-3).~~via timber harvest and reforestation.

FIGURE 3-98
Paths of the Forest Carbon Cycle. Forest vegetation sequesters carbon dioxide from the atmosphere in living tissues and provides long-term storage of carbon in trees, snags, downed wood, other plants, and soils.



Source: **ODF.**

TABLE 3-35
Forest Carbon Pools. Approximate percentage of carbon stored in each pool on state forest lands in the Oregon Coast Range.

Forest Carbon Pools	Description	Percentage [a]
Live trees	Roots, bole, branches, bark, and foliage of live trees	44.8%
Standing dead trees	Roots, bole, branches, and bark of snags	2.5%
Fallen dead trees	Logs and large branches lying on the forest floor, larger than 3 inches diameter	6.6%
Forest floor	Litter, duff, and low vegetation	2.8%
Soil	Organic material, excluding coarse roots	43.3%

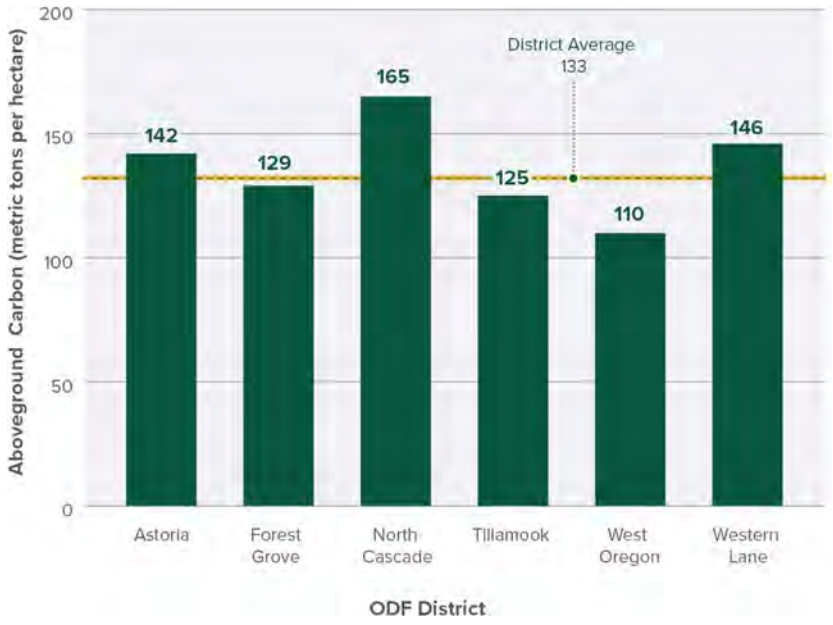
[a] Percentage ~~includes some~~calculation is from Forest Inventory and Analysis plots on ODF and other state-owned lands ~~outside of ODF jurisdiction.~~ in the Oregon Coast Range.

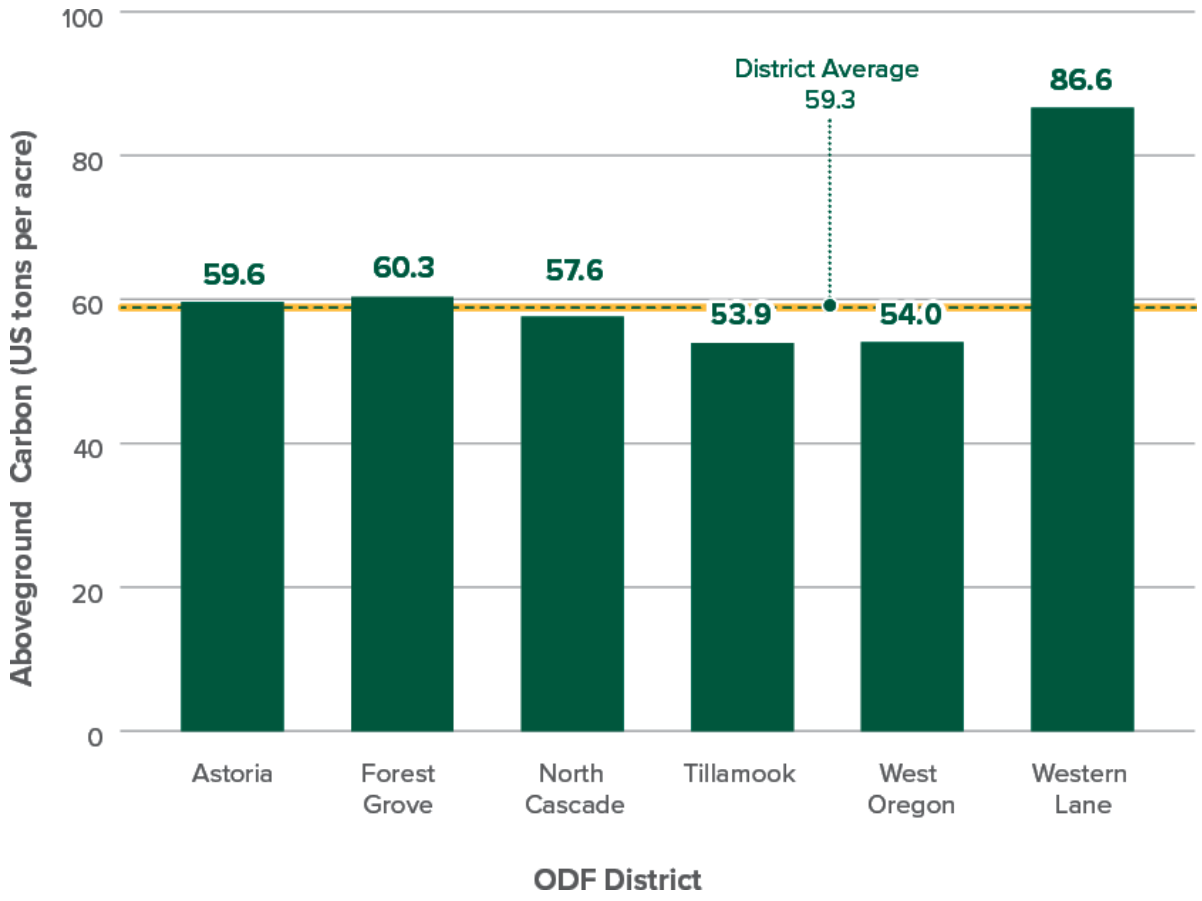
Source: Christensen et al. 2019

Forests continue to sequester carbon as trees grow. ~~State forest lands have~~Western Oregon state forests store an average of ~~132.5 metric~~ 59.3 tons of carbon per acre aboveground ~~carbon per hectare (mT/ha) stored~~ in live trees. Estimates of average aboveground carbon storage varies by district due to stand types, ecoregions, and management history (Figure 3-~~109~~).

~~Strategies for improving carbon storage could include older stands in HCAs and RCAs, and encouraging long-lived wood products, restoring underproductive stands, or treating harvest residuals differently. Across the landscape, *conservation areas* will sequester and store a substantial amount of carbon in the forest. In contrast, other areas have a production emphasis and are actively managed for wood product production, which sequester carbon as the forest regenerates. Restoring underproductive stands and treating harvest residuals differently can also increase carbon storage. These silvicultural strategies will interact with other forest resource goals through co-benefits and trade-offs, which are evaluated during implementation planning and adaptive management. Ecological silviculture practices that can be employed are planting alternative tree species, planting in alternative planting spaces and densities, planting multiple species, to increase the adaptability under changing climate, and maintaining sustainable forests that serve to sequester carbon.~~

FIGURE 3-~~109~~
Estimated Average Aboveground Carbon in ~~Woody Biomass~~Live Trees across ODF Districts. Data are based on the ~~2020~~2022 Forest Inventory and Analysis ~~Plots~~estimate on western Oregon state forests.





Note: Some data in this figure were collected prior to the 2020 Labor Day fires~~.~~, estimated from plots measured in 2013–2022.
Source: ~~ODF 2022b~~USFS 2024.

Goal: Carbon Sequestration and Storage

Contribute to climate change mitigation through carbon sequestration and storage on state forest lands and ~~carbon storage~~ in harvested wood products.

Strategy: Long-term Carbon Storage

Implement ~~silviculture treatments and~~ management ~~actions~~activities that improve long-term carbon storage~~. Evaluate proposed actions~~ in the forest and in harvested wood products.

a. Consider carbon sequestration as part of IP development. This can be done through modeling carbon processes in forest activity planning, restoring underproductive timber stands, and passively managing forests with ~~respect to~~high carbon storage ~~relative~~potential in HCAs and RCAs.

~~a.~~b. Include management options to promote adaptation to ~~baseline state forest land carbon inventory~~climate change in the management approach (Chapter 2, *Management Approach*, and Section 3.1.3, *Forest Resilience*). This includes managing stands to withstand drought and disturbances, maintain climate-adapted trees, and provide continuity of ecosystem services as the climate warms.

Intent

In alignment with the CCCP, the intent of this strategy is to ~~consider~~ promote climate change mitigation by integrating carbon sequestration and long-term carbon storage ~~impacts and benefits in the decision process in concert with other goals. Some areas of the forest will see limited or no harvest or timber management,~~ with other resource goals and strategies. Areas of land managed for timber production contain both trees that actively sequester and store carbon while they are growing, as well as trees that continue to store carbon when they are manufactured into wood products. Timber harvest results in a portion of sequestered carbon released back into the atmosphere through burning of fossil fuels during harvest operations and burning or decay of slash.

Carbon stored in wood products can serve as short-term or longer-term storage depending on their use and longevity. Harvesting trees reduces carbon storage in the forest in the short term, but reforestation after harvest maintains a landscape of actively growing trees to sequester and store carbon as they age. HCAs and RCAs can also serve as long-term stores for carbon as a co-benefit of managing for late-seral forest habitat conditions.

Strategy: Carbon Monitoring and Markets

Model the impact of management on carbon sequestration and storage in forest planning, monitor carbon pools through time, and explore additional potential revenue sources from carbon markets.

a. Forecast and monitor carbon sequestration and storage.

b. Where compatible with other forest resource goals, participate in carbon offset markets to diversify revenue streams. Share revenues derived from ODF participation in carbon offset markets or other carbon finance products with county partners pursuant to ORS 530.110, as described in the *Timber Management* section.

Intent

The intent of this strategy is to have predicted and monitored carbon sequestration and storage as a key component of state forests' inventory to inform forest planning and report the long-term carbon storage in the forest and harvested wood products. Participation in carbon markets or exploring other carbon finance products can help diversify revenue sources for state forests management and provide

additional revenue to counties and local taxing districts while supporting many other ecosystem services (e.g., ~~HCAs, RCAs, and inoperable areas. Forest managers make decisions on silviculture treatments and the timing of harvest to best achieve a suite of goals and objectives.~~air quality, wildlife habitat).

~~3.2.7~~3.2.10 Forest Resource 10: Air Quality



A healthy and productive forest ecosystem provides clean air, which is an important ecosystem service that supports the health and ~~safety~~wellbeing of ~~affected communities~~Oregonians. In ~~addition~~contrast, if air quality is poor, ~~tourists may delay or cancel their visits, which could have~~ this has a negative impact on ~~the tourism economy in~~health, safety, and local ~~communities.~~

and state economies. Wildfires and *prescribed burns* can adversely affect air quality. Advanced planning and consideration of best burning practices during prescribed burns protect air quality and the associated health risks to the public.

Air quality is regulated under the federal *Clean Air Act*, the primary law regulating air quality. Under the law, the U.S. Environmental Protection Agency (EPA) sets the National Ambient Air Quality Standards (NAAQS). In Oregon, the Oregon Department of Environmental Quality (DEQ) develops and carries out the *State of Oregon Clean Air Act Implementation Plan* (OAR 340-200-0040) to meet the NAAQS. This State Implementation Plan also includes the Oregon Regional Haze Program (OAR 340-223), which protects visibility in *Class I areas*. Class I areas include national parks and certain wilderness areas (OAR 629-048-0005(5)).

Timber harvest results in a large quantity of ~~debris~~ material, such as limbs,

t his material is an
o important pool of carbon,
p serves as an input of
s organic matter to humus
, and soil, and provides
habitat for a variety of
a organisms. In some cases,
n this leftover slash can be a
d barrier to tree planting, be
a increase fire hazard risk,
n and increase the potential
o for pest infestations (Buhl
n et al. 2021). Where the
- quantity and spatial
m distribution of residual
e debris poses enough of an
r impediment to achieving
c management goals,
h prescribed burns may be
a used as a tool to remove
n this material. This burning
t can affect air quality and is
a regulated under the
b federal *Clean Air Act*, the
l primary law regulating air
e quality.slash impedes
Under the law, the U.S. Environmental Protection Agency (EPA)
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~~sets the National Ambient Air Quality Standards (NAAQS).~~

~~In Oregon, the Oregon Department of Environmental Quality (DEQ) develops and carries out programs to meet the NAAQS. Two air quality plans affect forest management directly: the *Oregon Smoke Management Plan* (OAR 629-048) and *Oregon Clean Air Act Implementation Plan* (OAR 340-200-0040). The *Oregon Smoke Management Plan* is intended to comply with the *Oregon Visibility Protection Plan* (OAR 340-200-0040 (5.2)).~~

~~The *Oregon Smoke Management Plan*~~

Mount Jefferson as seen from the Santiam State Forest on a high visibility day.
Credit: ODF.

achieving management goals, prescribed burns may be used as a tool to mitigate the impacts of slash accumulation.

ODF regulates prescribed burning on all forest lands in Oregon, including federal, state, and privately owned lands~~.~~ through the *Oregon Smoke Management Plan* (OAR 629-048). Some of its ~~objectives are to protect public health,~~

objectives are to protect public health, minimize smoke intrusions into designated population areas, reduce emissions from prescribed burning in western Oregon, and ~~protect visibility in *Class I areas*. Class I areas include national parks and certain wilderness areas (OAR 629-048-0005(5)).~~comply with state and federal air quality and visibility requirements.

Current annual levels of burning on state forest lands represent less than 10% of the total burning annually on all ownerships west of the Cascade Crest. Prescribed burning on state forest lands is estimated to contribute much less than 1% of the air pollution in western Oregon cities (ODF ~~2021~~2021b).

~~When burning is used on state forest lands, slash is typically piled on a landing and burned. This results in less burning overall and more woody debris left in *harvest units*. For units that are burned, the prescribed burns are generally scheduled in the fall.~~

Goal: Air Quality

Maintain and protect healthy air quality.

Strategy: Smoke Management

Follow ~~OAR 629-048 on~~ Smoke Management rules (OAR 629-048) and ~~*Air Quality Control Program*~~the *State of Oregon Clean Air Act Implementation Plan* (DEQ ~~2022a~~2022), which includes planning guidance, visibility objectives, and ~~best practices~~BMPs, as well as information on regulated and sensitive areas and special protection zones to reduce smoke and smoke-related consequences.

Intent

The intent of this strategy is to minimize the public's health risks related to smoke from prescribed burning by encouraging the minimization of emissions and the avoidance of smoke intrusions.

Strategy: ~~Reduce~~Slash Management and Alternative Burning Practices

~~Dispose of~~Treat slash and debris in ~~other~~ manners other than burning, when feasible.

a. Retain slash in harvest units where fire risk is low and complimentary to other forest resource goals (e.g., Soil Health)

~~a.~~b. Explore cost-effective alternatives to burning, such as selling to small-diameter timber markets, using high-efficiency incinerators, and exploring methods of converting slash to other uses, such as biofuels or *biochar*.

Intent

The intent of this strategy is to minimize the public's health risks from prescribed burning by minimizing emissions and avoiding smoke intrusions.

~~3.2.8~~3.2.11 Forest Resource 11: Aquatic and Riparian Resources



Juvenile coho salmon (*Oncorhynchus kisutch*). Aquatic and riparian ecosystems provide essential habitat and resources for many species, including food and drinking water for humans *(Homo sapiens)*.

~~Management of~~ Resilient and properly functioning aquatic and riparian ~~resources contributes to a sustainable forest ecosystem that protects ecological processes and ecosystem services, provides resilience to climate change, and serves~~ecosystems provide many ~~communities. Aquatic and riparian processes~~ co-benefits that support ~~all three types of~~ GPV. In addition to ~~the~~ environmental ~~benefit of providing life-sustaining habitat to many species, major~~benefits, social activities~~,~~ such as fishing, swimming, and sightseeing depend on healthy, functioning waterways. For example, the commercial and recreational fishing industry, which is a significant component of Oregon's regional economy, relies on healthy rivers and

Credit: Wild Salmon Center.

~~sightseeing, depend on these resources in the planning area. Whereas downstream, the commercial fishing industry, which is a major component of the regional economy, relies on spawning habitat and cold water sources, originating in headwater~~ streams ~~such as those found in the planning area.~~ Properly functioning aquatic and riparian systems also protect drinking water quality~~,~~ and quantity~~, and reduce flood risk to downstream infrastructure~~ by reducing erosion,

~~Forest~~

~~Resource~~

~~Goals~~

~~and~~

~~Strategies~~

~~attenuating peakflows, and providing shade, thereby sustaining additional social and economic benefits associated with access and public health.~~

regulating air and stream temperatures, and replenishing groundwater supplies. Aquatic resources include, but are not limited to, surface waters such as

rivers, streams, lakes, springs, ~~seeps,~~ and *wetlands*, and subsurface waters contained in aquifers or subsoils. ~~Aquatic ecosystems interact closely with the surrounding terrestrial systems, both at the landscape scale and at the scale of *stream reaches* and~~ Riparian areas~~. The *riparian area* is the zone of influence~~ are transitional zones between ~~the~~ terrestrial and aquatic environments~~.~~ where the

~~In headwater streams, the riparian zone is particularly important as streams are narrow and riparian vegetation contributes strongly to shading and terrestrial organic inputs to the food web. From headwaters to downstream, riparian forests influence water temperature, filter contaminants (sediments, etc.), and provide inputs like woody debris and fine and course sediments that improve structure of habitat for some species and reduce erosion and downstream flood risk. Conversely, the structure and *composition* of riparian forests can be influenced by the aquatic environment, such as the influence of floods on forest dynamics and the *deposition* or erosion of material in the floodplain. Major disturbance events, such as floods and landslides, are natural processes that can add key elements, such as wood, boulders, and gravel, that maintain stream ecosystems. With climate change, stream temperature, floods, and droughts are expected to increase. A functioning riparian area increases the streams' adaptive capacity to deliver the multitude of ecosystem services derived from forest waterbodies. Therefore, the health of the aquatic system depends on forest management practices that recognize, maintain, and enhance the functions and processes that compose these terrestrial-aquatic interactions at a variety of spatial scales.~~

~~The level of influence ODF can have on protecting, restoring, and enhancing aquatic resources is commensurate with the proportion of the *watershed* it manages. Figure 3-11 depicts the distribution of ODF-managed lands across watersheds in the northwest districts, where ODF manages the most contiguous lands.~~

~~WESTERN OREGON STATE FORESTS MANAGEMENT PLAN~~

~~FIGURE 3-11~~
~~Watersheds Overlapping with Northwest Districts and FMP Planning Area.~~ ~~The median percentage of ODF-managed lands in northwest districts by HUC-12-sized[1] is 26% (range <1% to 100%).~~



[1] Hydrologic Unit Code (HUC)-12 watersheds are the smallest sized watershed delineated by the U.S. Geological Survey.

Waters and Protection Classification

At the time of FMP publication, the FPA Water Protection Rules classified waters for the purpose of applying protection measures, especially riparian buffers, in compliance with the *Clean Water Act* (OAR

~~629-635-0200; DEQ 2021, 2018). *Stream classification* is based on fish and drinking water use, persistence of flows, and stream discharge size. The total length of streams on state forest land in the planning area is approximately 8,500 miles. Approximately 40% of the streams are classified as perennial, and 15% are classified as fish-bearing. Within the planning area, almost 50% of all streams by length, with an estimated 3,500 miles, are in the Tillamook District. The Astoria and Forest Grove Districts have the second- and third-highest concentration of streams, with 1,911 and 1,297 miles of streams, respectively (ODF 2022c).~~

~~Headwater streams are small streams at the highest end of a watershed. Due to their smaller channel widths, headwater streams are especially sensitive to changes in the surrounding riparian areas. These small streams serve important functions in maintaining water quality and quantity, providing habitat for aquatic species (sometimes only seasonally), and contributing to watershed-level processes (Olson et al. 2007).~~

~~In both fish-bearing and non-fish-bearing waters, wood pieces can slow stream velocities, reduce soil erosion, trap and store sediment and organic matter, and store water higher in the overall watershed. In-stream wood recruitment and retention will facilitate the creation of steps and pools, which creates areas of slower water velocities where sediment sorting contributes to high-value habitat for fish, amphibians, and other aquatic organisms. Wood also creates cover from predation and complex habitats for all life histories of aquatic species. Forestry practices that promote wood recruitment include preserving riparian forest, retaining trees within harvested stands, and selective slope-buffering. Headwater streams can also serve as spawning areas, *refugia* from high water, and refugia from high stream temperatures particularly in summer for some *species of concern*.~~

~~Habitat Conditions~~

~~The current conditions in aquatic systems and riparian forests are a product of soils and hydrology, and have been shaped over time by disturbances, such as wildfire, windthrow, drought, landslides, logging, and road building. According to recent studies conducted by ODFW, the overall condition of riparian and stream habitats in Oregon's coastal streams, which include state forest lands, indicate a lack of woody debris in streams and large conifers in riparian areas, compared to historical values (ODFW 2019). These results are a legacy of the area's history of large fires and historic logging practices, which included harvest and road building in riparian forests and removal of woody debris from streams, resulting in an abundance of young riparian forests in many watersheds. Increased riparian protections and active stream restoration projects during recent decades have begun to ameliorate degraded conditions on state forestlands.~~

~~Riparian vegetation can help regulate water temperature and velocities, reduce sedimentation, provide habitat for aquatic associates and nutrients for aquatic systems.~~vegetation and microclimates are influenced by year-round, or seasonal water and soils that are saturated by flowing surface water for all or portions of the year.

Properly functioning riparian areas provide important ecosystem benefits and contribute to shading of surface waters that regulate water temperatures, bank stabilization, and enhanced water quality by filtering of water pollutants. Removal of riparian vegetation can increase water temperature and have cascading effects



on water quality and quantity that negatively affect ~~fish, recreation, and drinking water. Table 3-4 summarizes the extent of water temperature impairment in the planning area by district. Climate change is expected to exacerbate water quality issues by increasing stream temperature and decreasing summer low flows, which can concentrate other *pollutants*~~native aquatic species, recreation, and domestic drinking water. Natural disturbance in riparian areas such as high flow events, windstorms, debris flows, and other ecological processes create complex aquatic habitats by contributing woody debris, creating suitable fish spawning areas, and depositing organic materials that maintain properly functioning stream ecosystems.

Climate change models predict a rise in air and stream temperatures resulting in disrupted precipitation and streamflow, creating significant challenges to native aquatic species and their habitats. Changes may not occur evenly in all habitats or through time, but the occurrence of less-suitable environmental conditions for native species may increase overall.

Properly functioning riparian areas provide important ecosystem services, including creating complex habitats and regulating water quality.
Credit: Erik Moberly, ODF.

Maintaining and enhancing the functional components of aquatic ecosystems relies on strategic long-range planning and adaptive management approaches that focus on reducing the vulnerability of native aquatic species and their habitats to climate change. Aquatic enhancement projects support the persistence of native aquatic species by maintaining and restoring aquatic and riparian habitats to address impacts from climate change. Projects are prioritized to increase resistance to and resilience against the expected effects of climate change to achieve the greatest benefits to native aquatic species. In addition, ODF supports the implementation of aquatic enhancement projects through partnerships with local and regional stakeholders in the planning area. ODF's ability to directly influence aquatic conditions are tied to the portion of watershed it manages. Most of the subwatersheds with substantial ODF ownership are in the North Coast Districts as shown in Figure 3-10.

~~TABLE~~FIGURE 3-~~4~~10

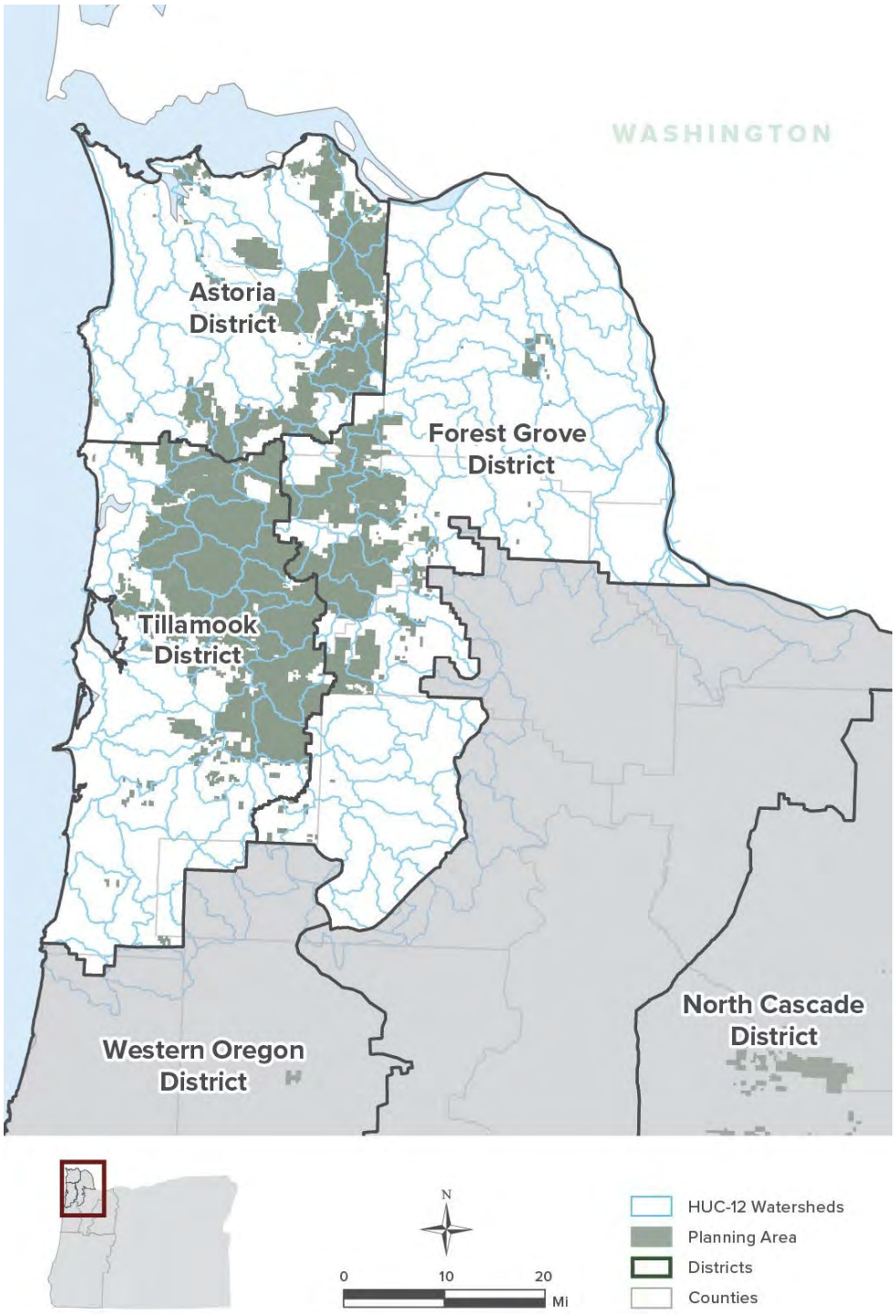
~~Water Temperature Impairments.~~ ~~Percentages of planning area within watersheds that have temperature impairment, indicating waters are warmer than DEQ standards for either part of the year, particularly during spawning of salmonids, or year-round.~~

~~District~~	~~Percent of Planning Area in Temperature Impaired Watersheds~~
~~Astoria~~	~~46%~~
~~Forest Grove~~	~~37%~~
~~North Cascade~~	~~9%[1]~~
~~Tillamook~~	~~18%~~
~~West Oregon~~	~~31%~~
~~Western Lane~~	~~18%~~

~~Source: DEQ 2022b.~~

~~[1] Water temperature impairment classifications in North Cascade District predate the 2020 wildfires.~~

Watersheds Overlapping with North Coast Districts and the Planning Area. The median percentage of ODF-managed lands in northwest districts by HUC-12-sized [a] subwatersheds is 26% (range <1% to 100%).



[a] Hydrologic Unit Code (HUC)-12 subwatersheds are the smallest-sized watershed delineated by the U.S. Geological Survey.

Classification of Waters for Protection

The FPA Water Protection Rules classifies waters by matching the physical characteristics and beneficial uses of a water body to a set of appropriate protection measures, in compliance with state regulations intended to meet the Clean Water Act (OAR 629-635-0200; DEQ 2021, 2018). Stream classification is based on flow permanence, fish presence, permitted private and public domestic water use, and average annual flow. For purposes of protection, streams are classified into five beneficial categories including fish use, non-fish use, perennial, seasonal, and domestic water use. Streams are also further classified by a waterbodies size including small, medium, and large. For purposes of classification, a stream is considered to have domestic water use only if a water use permit has been issued by the Oregon Water Resources Department (OWRD).

Aquatic and Riparian Habitat Conditions

Aquatic and riparian ecosystems occur adjacent to one another and have been shaped over time by human and natural disturbances. Physical habitat assessments conducted by ODFW indicated a lack of large wood in streams and large conifers in riparian areas compared to ideal large wood requirements (ODFW 2019). This is a result of the planning area's history of large fires, past logging practices, and in-stream large wood removal practices, resulting in younger riparian forests and a lack of large wood in streams and many riparian areas. Larger riparian buffer protections and an active stream restoration program during recent decades have begun to improve degraded historic conditions on aquatic and riparian ecosystems in the planning area.



ODF implements stream enhancement projects to improve the health of aquatic ecosystems benefit native aquatic species.
Credit: ODF.

Threatened ~~and~~or Endangered ~~Fish~~ Species and ~~Other Aquatic~~ Species of Conservation Concern

~~At least 28~~Numerous native aquatic species ~~of fish~~ occur either in the planning area or ~~downstream of~~adjacent to state forest lands ~~and, therefore, may be influenced by state forest management. Some *evolutionarily significant units* (ESUs) or~~. These include distinct populations of coho salmon (*Oncorhynchus kisutch*), Chinook salmon (*Oncorhynchus tshawytscha*), steelhead trout (*Oncorhynchus*

mykiss), and ~~Oregon chub (*Oregonichthys cramer*)~~chum salmon (*Oncorhynchus keta*), all of which are listed as threatened ~~or endangered~~ under the federal Endangered Species Act (ESA) or are under

review for listing. ~~At least 32 species of reptiles and~~ Additionally, several native aquatic amphibians, such as torrent salamanders (*Rhyacotriton* spp.) and coastal tailed frog (*Ascaphus truei*) also occur in the planning area~~, including species~~. Many of ~~concern and species~~these are also under review for federal listing or are designated as sensitive species in the *Oregon Conservation Strategy* (~~Oregon Conservation Strategy~~ODFW 2016). ~~Approximately half of these species, such as torrent salamanders and the coastal tailed frog, depend on the aquatic environment for at least part of their life cycle. Of these fish and amphibian species, nine fish are listed as threatened or endangered under the state or federal ESA, two amphibians are state listed as sensitive species.~~

~~ODF's~~ ODF's species of concern policy and associated species ~~of concern~~ list was developed ~~using~~in 2010 and updated in 2025 and is used for identifying strategies for managing habitat for these species. The policy identifies aquatic and terrestrial species that need immediate and focused conservation efforts and informs the development of conservation tools. The species list was established from multiple sources including federal and state lists of threatened, endangered, and *candidate species*, as well as the *Oregon Conservation Strategy* (ODFW 2016) and ODFW's sensitive species list (ODFW 2021). ~~They identify species that need immediate and focused conservation effort. The list is a component of ODF's species of concern operational policies and is updated semi-regularly and will be~~The policy and associated list are updated as needed and captured in IPs as state and federal lists are updated, or as new data or science ~~becomes~~become available. ~~Species of concern identified as part of this FMP's associated policies are currently present or have the potential to be present on state forest lands.~~

~~Stream Restoration~~

~~Although protection of riparian areas improves conditions over the long term, direct restoration projects such as *culvert* replacements, road decommissioning, and in-stream placement of woody debris can accelerate the recovery of degraded aquatic systems (e.g. O'Neal et al. 2016; Hoffman and Dunham 2007; Whiteway et al. 2010). Recognizing American beavers (*Castor canadensis*) can enhance in-stream and riparian habitat through dam construction activities; stream restoration opportunities may also be~~

~~Improving~~ Aquatic ~~Organism Passage.~~ Habitat Enhancement



Culvert replacements like this one on Warner Creek (Astoria District) improve aquatic organism passage~~, which increases~~ and restore habitat ~~accessibility and habitat quality~~connectivity.

Credit: ODF.

~~identified in areas able to support beaver colonization where impounded water would benefit~~

Aquatic habitat enhancement projects focus on restoring ecosystem functions and accessibility for native aquatic species. The placement of appropriately sized wood in streams, addressing fish and wildlife species.passage barriers, riparian planting, and road/trail im



projects that restore properly functioning fish habitat, fish passage, and water quality conditions. ODF is committed to enhancing aquatic habitats and has implemented thousands of aquatic habitat enhancement projects over the past few decades.

The Oregon Watershed Enhancement Board (OWEB) maintains the most comprehensive online reporting system to track projects that improve habitat for native rrent information can be found on the Oregon Watershed OWEB. Activities on state forest lands that contribute to y the Oregon Water Enhancement BoardOWEB) include itat, as well as and road-related projects that provide ect road-drainage systems from streams, and minimize 3-511). For more information on the condition of road-stream interactions, see Forest Resource 2: *Transportation*.

~~information on the condition of road-stream interactions, see *Transportation*. ODF is committed to ongoing stream restoration on state forest lands as described in the HCP and the strategies below.~~

~~TABLE~~

FIGURE 3-5

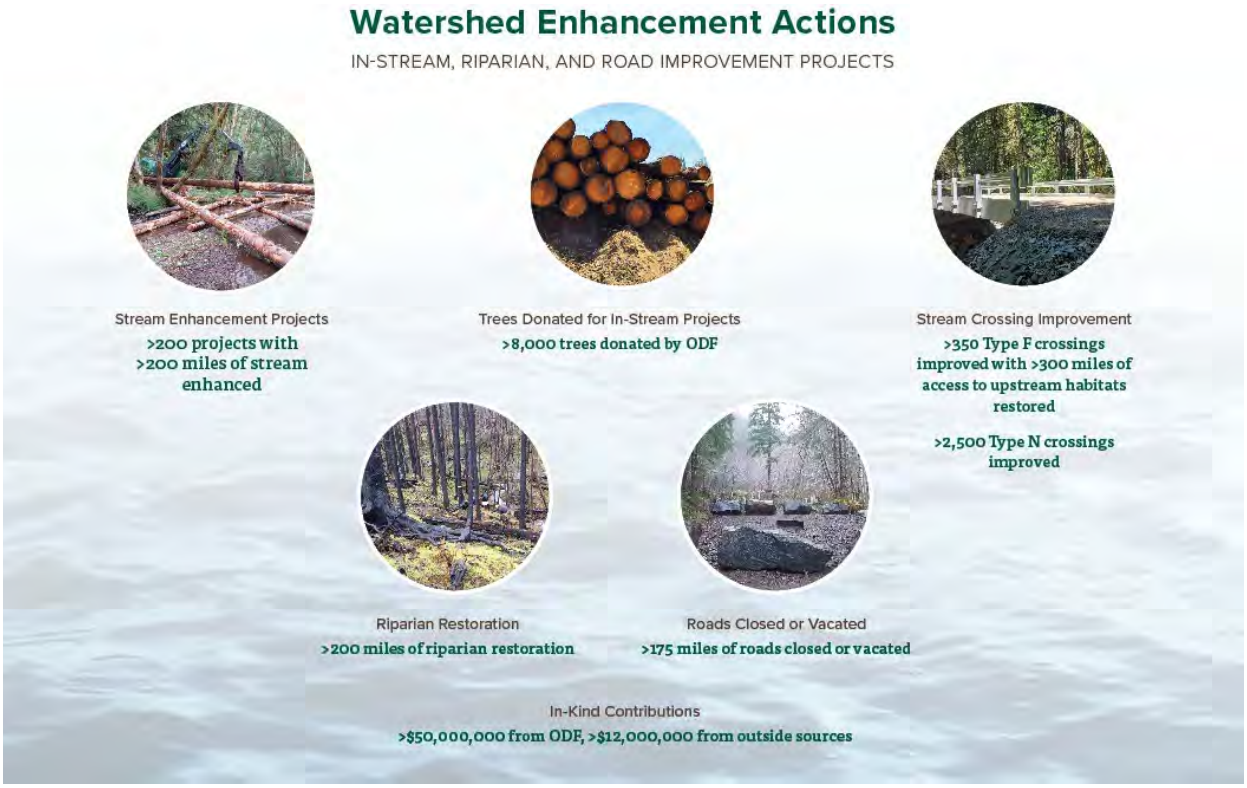
~~Selected In-Stream and Road Projects by District Reported to Oregon Water~~11 Watershed Enhancement ~~Board (~~Actions. In-stream, riparian, road improvement, and donations tracked by OWEB, 1995–**~~2020).~~** ~~The Oregon Water Enhancement Board maintains an inventory of Oregon watershed restoration actions intended to improve habitat for aquatic species and water quality~~2025.

~~Stream Enhancement Projects~~	~~District~~			
	~~AT, FG, TL~~	~~NC, WO~~	~~WL~~	~~Total~~
~~Number of In-stream Projects~~	~~106~~	~~29~~	~~66~~	~~201~~
~~Number of Trees Donated~~	~~3,874~~	~~1,362~~	~~2,382~~	~~7,618~~

Miles of Stream Enhanced	85	32	57	173
Number of Fish Barriers Removed	252	48	51	351
Miles of Fish Access Restored	192	44	50	286
Number of Type N Crossing Fixed	1,626	600	113	2,339
Number of Road Relief Culverts Installed	3,574	717	188	4,479
Miles of Road Closed or Vacated	113	11	43	167
Miles of Road Improved or Relocated	1,005	108	67	1,180
ODF In-kind Contribution ($)	$39,818,227	$4,446,162	$3,252,727	$47,517,116
Other Contributions ($)	$5,228,014	$885,347	$4,761,886	$10,875,247

Source: OWEB 2021

AT = Astoria; FG = Forest Grove; TL = Tillamook; NC = North Cascade; WO = West Oregon; WL = Western Lane



Drinking Water

~~Forests produce the highest quality and most sustainable sources of fresh water on Earth (NRC 2008; Neary et al. 2009; Creed et al. 2011). Oregon's extensive and diverse forests generally produce very high-quality water—~~An important ~~social, economic,~~component of aquatic and ~~environmental benefit.~~

~~Drinking water must meet specific regulatory and engineering standards. Timber harvest, road~~riparian area management~~, and related activities can affect the supply, storage, and quality of water through various mechanisms. These mechanisms include altering annual average water yield (Moore and Wondzell 2005); changing timing, duration, and magnitude of peak flows (Grant et al. 2008); severity of summer low flows (Coble et al. 2020); the quantity of sediment yield to intakes and reservoirs; and various water quality parameters (Institute for Natural Resources 2020). Thus, forest management has the potential to affect the operations and planning of water suppliers and their ability to provide clean water to their customers especially as climate changes.~~

~~Drinking water quality is regulated by EPA through the Safe Drinking Water Act. In Oregon, DEQ and the Oregon Health Authority (OHA) implement the Safe Drinking Water Act through a partnership instituted by the Drinking Water Protection Program (DEQ 2022c). While OHA ensures that customers receive drinking water that meets Safe Drinking Water Act standards, DEQ protects the sources of drinking water by implementing the Clean Water Act. DEQ assists~~ includes the protection of permitted private and public water ~~suppliers by identifying *source areas* of drinking water, developing source water assessments, and assisting in the development of place-based plans to reduce pollutants. A source area is the area in which a watershed delivers water to a water system.~~

~~The potential for ODF to affect drinking water in the planning area depends largely upon the percent of the drinking water source area under ODF management (Coble et al. 2020; Grant et al. 2008; Institute for Natural Resources 2020). Less than 1% of Oregon surface water drinking water source areas are located on ODF lands (DEQ 2017). It is possible to compare the planning area with the Drinking Water Protection Program's public water systems (PWS) (i.e., systems that serve more than three homes or connections) source areas to identify PWSs where ODF has the potential to affect public drinking water in the planning area. Three of Oregon's Public Water Systems have more than 45% of their source area on ODF lands: Timber Water Association, Hillsboro-Cherry Grove PWS' in Forest Grove District, and Jewell Sd #8 PWS in Astoria District (DEQ 2019). Very few community drinking water intakes are supplied from state forest lands. There are eight municipal or quasi-municipal~~ supplies. Stream ecosystems are dynamic and can experience fluctuations in water quality and quantity due to natural and human factors. Forest management activities can affect the quality, supply, and storage of this key ecosystem service through various mechanisms. Currently, there are 125 permitted private or public domestic points of diversion on ~~ODF lands: three in the Astoria District, three in the Tillamook District, one in the Forest Grove District, and one in the North Cascade District.~~

~~Although not regulated by EPA, *private and domestic drinking water* can also be affected by forest management. However, only approximately 6% of known private and domestic water system intakes in Oregon are located on state or locally~~ and adjacent ~~lands (OWRD 2023). There are 125 private or domestic points of diversion on ODF lands~~to state forest lands in six districts with Tillamook and Astoria Districts having the most ~~at 62 and 32, respectively (OWRD 2023). While these numbers are based on the most current data available, the number of drinking water intakes and source areas may change over time.~~(OWRD 2023).

~~The FPA contains rules and the HCP contains conservation strategies that protect water quality. The FPA protects both private and domestic drinking water intakes and prevents *non-point source* pollution from entering water supplies. DEQ reviews the FPA for sufficiency to implement the Clean Water Act (DEQ 2021). By protecting riparian and aquatic ecosystems, many of the HCP conservation strategies are also protecting drinking water quality.~~

~~At the time of writing, the FPA water protection rules and the HCP conservation strategies pertain to water quality and sediment delivery, but not to annual average water supply or to the timing, magnitude, or duration of peak and low flows. In cases where state water quality standards are not met, DEQ may issue additional requirements, such as total maximum daily loads (TMDLs). The following goal and strategies serve to ensure that management is more aware of their potential impact on drinking water and coordinates with DEQ where waters may be impaired.~~

EPA provides federal oversight and approves water quality standards that are used to assess whether the quality of Oregon's rivers and lakes is adequate for drinking water and other beneficial uses such as recreation and fisheries. The Clean Water Act requires states to adopt water quality standards designating beneficial uses of the state's waters, including drinking water, and to set criteria designed to protect those uses. Surface and groundwater quality standards are regulated by DEQ.

Any forest operations on forestlands within the state must be conducted in full compliance with the rules and standards of the Environmental Quality Commission related to air and water pollution control (ORS 527.724). ODF is a Designated Management Agency for discharges of pollutants from *non-point sources* from forest operations, such as sediment from forest roads (OAR 340-042-0080(2)). The FPA contains rules that regulate harvest practices, road construction and maintenance, and the use of

chemicals and other petroleum products on state forest lands to minimize the likelihood of management activities adversely affecting water quality. Forest operations are also subject to other laws and rules administered by state agencies to protect the beneficial uses of waters of the state.

Goal: Functional Aquatic and Riparian Habitat Resources

Protect, maintain, and enhance aquatic and riparian ~~resources,~~systems that support ~~the life history needs of~~native aquatic and riparian~~-dependent fish and wildlife~~ species.

Strategy: Aquatic and Riparian Habitat Improvements

c. Limit management activities in RCAs as described in the WOSF HCP.

d. Plan forest management activities that protect, maintain, and enhance riparian habitat function.

e. Design aquatic habitat enhancement projects that restore in-stream habitat processes, features, and complexity.

f. Manage stream temperatures by planting trees and riparian plants as needed to improve stream shading.

g. Plant species favored by American beaver (*Castor canadensis*) in appropriate locations to promote dam construction that improves aquatic condition and function.

h. Control the introduction and establishment of non-native plant species.

Intent

The intention of this strategy is to promote properly functioning and resilient in-stream and riparian habitats for native fish and wildlife species. Riparian management strategies, detailed in the WOSF HCP, ensure ecosystem processes and resilience are maintained to support increased stream shading, contributions of organic matter, sediment trapping and chemical filtration, and bank stabilization. Biological and ecosystem responses resulting from riparian management strategies, such as moderating and reducing fluctuations in water temperatures, large wood inputs, reducing sediment delivery, and resilience to climate-driven stressors and disturbance events effectively improves water quality and creates suitable habitats for native fish and wildlife species.

Stream enhancement projects increase the quality and quantity of important habitat elements such as pools, spawning gravels, and off-channel habitats creating more productive rearing, spawning, and refugia habitats for aquatic ~~and riparian-dependent species~~species. Biological and ecosystem responses resulting from stream enhancement projects, such as increased growth and survival rates, reproductive success, and resilience to climate-driven stressors and disturbance events, increase overall aquatic species production in the planning area.

Strategy: Aquatic Organism Passage

Maintain and improve stream-crossing structures like culverts and bridges, to support native aquatic species, improve hydrologic processes, and increase stream connectivity.

a. Follow a prioritization process for stream-crossing upgrades based on physical and biological elements.

b. Identify and evaluate stream-crossing upgrades and end-of-life replacements as part of the IP process and/or in collaboration with local and regional partners.

c. Design and maintain all new and replacement fish passage projects to meet or exceed state and federal fish passage criteria.

Intent

The intent of this strategy is to ensure stream-crossing structures provide unimpeded upstream and downstream passage to maintain habitat connectivity for native resident and *anadromous* fish and other aquatic organisms while providing sufficient transport of expected flows, woody debris, and other materials. Reconnecting fragmented aquatic habitats allows fish to access previously blocked spawning and rearing habitat, promotes biodiversity and genetic flow, supports nutrient cycling, and acts as refugia from warmer downstream water temperatures and high-water events.

Strategy: Headwater Processes

Maintain the hydrologic, *geomorphic*, and ~~enhance headwater~~ ecological processes of *headwater* systems that ~~collectively trap~~shape the physical and ~~store~~biological communities of aquatic and riparian ecosystems.

d. Support the long-term addition of woody debris, coarse and fine sediment, nutrients, and other organic materials to aquatic and riparian ecosystems over time.

e. Minimize direct impacts from forest management activities.

f. Acquire greater scientific understanding of rare and *endemic species* occurrences and habitat use in headwater streams.

Intent

The intent of this strategy is to protect the critical ecological functions of headwater systems. Headwater streams comprise most of the overall length of the stream networks in the planning area. Their critical ecological functions include trapping sediments and pollutants, which result in improved water quality and sustain the health of the entire watershed. Headwater streams also capture large amounts of organic matter~~, and export wood, substrate, and food to~~ and nutrients, which support healthy microbial communities and populations of macroinvertebrates, which, in turn, support production of fish and wildlife species downstream ~~reaches~~. In most cases, headwaters are fed by groundwater, which provides unique cold-water refugia for many aquatic species.

Strategy: ~~Functional~~ Landslide Processes

~~Maintain functional~~Protect landslide-prone areas to reduce the risk of landslides triggered by management activities and ensure that landslides that do occur contain large wood, in order to reduce adverse impacts of landslides on water quality and aquatic habitat and promote development of downstream physical habitat and biological communities of aquatic and riparian ecosystems.

a. Protect slope features that are potential sources of debris flows using the steep slope strategies detailed in the WOSF HCP.

b. Facilitate landslide processes ~~including sediment routing and~~ that contribute to the development of complex aquatic and riparian habitats.

Intent

The intent of this strategy is avoid triggering landslides and to promote the delivery of woody debris ~~supply~~, course sediment, and other organic materials to aquatic systems that facilitate the creation of complex habitats for ~~slopes that could fail by identifying slopes that could fail and retaining trees on those slopes~~aquatic species and recycle fresh minerals and nutrients back into the ecosystem where landslides occur. The assessment of slope hazards and the potential for delivery uses the best science, professional expertise, and field observations to assess risk of failure.

Strategy: Wetlands and Lakes

Maintain the ~~natural functions~~ ecological function and ~~attributes~~value of wetlands~~, allow for new wetlands to form over time,~~ and ~~restore degraded wetlands where~~lakes.

a. Avoid and minimize disturbances to soil conditions, bank stability, and drainage patterns during management activities.

b. Apply appropriate live tree, vegetation, and snag and downed wood retention measures consistent with ~~other resource goals~~the FPA.

Intent

The intent of this strategy is to protect and maintain the unique hydrological and habitat functions of wetlands and lakes such as sediment trapping, nutrient absorption, flow regulation, and groundwater recharge. Intact and functional wetlands and lakes provide vast amounts of resources for resident and migratory fish and wildlife species and are home to various endemic flora and fauna. Minimizing disturbances to vegetation, live trees, snags, and downed wood, and preventing the drainage or alteration of wetlands and lakes provides invaluable benefits to aquatic and terrestrial species that rely upon the functionality of these unique habitat features on the landscape.

Strategy: Threatened and Endangered Species and Other Species of Conservation Concern

Protect, maintain, and enhance habitat structure and function for threatened and endangered species and other *species of conservation concern*. ~~The following considerations are used to implement this strategy.~~

a. Comply with state and federal ESA requirements ~~and~~, recovery plans, and implementation of WOSF HCP conservation actions.

a.b. Adopt management approaches that contribute to the persistencesurvival and recovery of threatened and endangered species and other species of conservation concern.

- Implement the HCP and associated conservation actions targeted to benefit the species covered under the *Incidental Take Permit*.

b.c. Conduct species assessments during IP development and related revisions to determine which species warrant special consideration and whether existing conservation measures are adequate.

Strategy: Aquatic Organisms

d. Incorporate Collaborate across ownership boundaries to meet common aquatic organism passage considerations into transportation planning and engineering design processes to meet conservation goals.

Intent

The intent of this strategy is to contribute to the recovery and long-term persistence of threatened, endangered, and other species of conservation concern by complying with state and federal passage criteria ESA requirements. Implementation of this strategy and conservation actions identified in the WOSF HCP ensure that aquatic and riparian habitats are managed in a way that meets all legal requirements and that listed and imperiled species persist in the planning area. Determining whether conservation actions, as described in the WOSF HCP, are contributing to species recovery is addressed through effectiveness monitoring. Staying informed about potential future ESA candidate species or other species of conservation concern helps plan for future habitat conservation requirements.

Strategy: Partnerships for Habitat

Foster Promote and support partnerships with other state and federal government agencies, Tribes, universities, and Tribal Partners, academic institutions, non-governmental organizations, adjacent landowners, and the forest industry to plan, and implement, and monitor aquatic and riparian habitat improvement and effectiveness monitoring projects.

a. Collaborate with local stakeholders and regional partners to develop and implement watershed planning initiatives and strategic action plans.

b. Implement conservation actions that benefit native aquatic and riparian habitats and ecosystem function, and to conduct.

Intent

The intent of this strategy is to protect and enhance aquatic and riparian habitats through voluntary and mutually beneficial partnerships. Collaborative processes create greater alignment of each stakeholder's vision and responsibilities associated with planning and implementing complex ecological outcomes than those achieved by a single organization. Partnerships with stakeholders holding different regulatory authorities allow for more efficient navigation of multi-layered regulatory landscapes, improve compliance efficiency, and accelerate project timelines. Leveraging financial resources, promoting sound science and data sharing, and providing professional expertise and guidance provide partnerships the ability to enhance larger areas rather than fragmented patches across the planning area.

Goal: Water Quality and Quantity

Protect, maintain, and enhance water quality and quantity for native fish and wildlife species and permitted private and public domestic drinking water sources.

~~Strategy:~~ Water Quality Standards

Ensure state and federal water quality standards support the beneficial uses of waters of the state.

a. Limit forest management activities in RCAs as detailed in the WOSF HCP.

b. Improve road and trail system drainage to avoid transporting fine sediments and contaminants from roads and trails to streams.

c. Establish measurable goals to meet state and federal water quality standards.

~~a.~~d. Support research ~~that fills gaps in scientific knowledge~~and monitoring to better understand the interactions between forest vegetation conditions and water quality.

~~Goal~~*Intent*

The intent of this strategy is to minimize adverse impacts on water quality through conservation actions detailed in the WOSF HCP. Management standards that are designed to maintain and improve water quality through reducing sediment inputs to streams, reducing stream temperatures, and reducing erosion support healthier ecosystems that contribute to high-quality aquatic habitats for fish and other species. Degraded water quality can have detrimental effects on metabolism and growth, reproduction, and disease resistance often resulting in reduced production and survival of aquatic organisms.

~~Strategy~~: Total Maximum Daily Loads

Ensure Total Maximum Daily Load (TMDL) standards are met to maintain and restore water quality.

a. Control water pollution and improve impaired waterways by limiting management in RCAs as detailed in the WOSF HCP and applying BMPs for transportation system and forest management.

b. Monitor forest management activities that have the potential to contribute pollutants to waterways and implement mitigative measures where necessary.

Intent

The intent of this strategy is to reduce non-point source pollution from waters of the state through reducing pollutants identified in TMDL IPs that direct management strategies. Conservation actions identified in the WOSF HCP protect and improve impaired waters of the state by reducing solar radiation and sediment inputs into streams, support in-stream enhancement projects, and adhere to BMPs and other pollutant control measures associated with forest management activities.

~~Strategy~~: Drinking Water

Protect~~, maintain, and enhance~~ forest ~~drinking water sources for private and domestic use.~~

~~Strategy: Drinking Water Effects Analysis~~

~~Develop and incorporate~~ drinking water ~~effects analysis into planning processes to identify and protect~~ sources for permitted private and public domestic drinking water ~~source catchments~~use.

a. Ensure permitted domestic drinking water sources are integrated into planning forest management activities.

b. Limit forest management activities in RCAs.

c. Hydrologically disconnect road and trail systems from streams.

d. Ensure chemical application on state forests complies with the FPA and EPA labeling to prevent harm to human health, non-target vegetation, and other forest resources.

e. Engage with local community members to communicate drinking water protection approaches and provide information regarding planned forest management activities.

Intent

The intent of this strategy is to minimize sediment and pollutants from entering streams that overlap with ~~the planning area~~permitted private and public domestic drinking water sources. Reducing organic and inorganic pollutants from entering streams and adversely affecting water quality is be achieved through conservation actions detailed in the WOSF HCP and Division 620 of the FPA reducing the costs associated with treatment and public safety risks.

~~***Strategy: Department of Environmental Quality Total Maximum Daily Loads***~~

~~Follow DEQ-issued TMDLs, including any additional site- or source-specific DEQ TMDL Implementation Plans, and *monitoring* and reporting requirements.~~

~~3.2.9~~3.2.12 Forest Resource 12: Wildlife

Blacktail deer near Roseburg, Oregon. Many species of wildlife are found in Oregon's state forest lands—individual species use different stand types and habitat features at varying spatial scales.
Credit: ODF



Blacktail deer near Roseburg, Oregon. Many species of wildlife are found in Oregon's state forest lands.
Credit: ODF.

Like aquatic and riparian resources, management of wildlife habitat contributes to ~~all three types of~~ resilient forest ecosystems and GPV. Protecting and enhancing wildlife habitat not only sustains the wildlife communities themselves but also the social and economic benefits derived from them. Abundant wildlife enhances recreation, subsistence, and cultural activities such as bird-watching and hunting. These activities contribute to the local tourism economy and tax revenues from ~~licensing fees.~~ licensing fees.

Habitat Condition

The amount and quality of habitat for different species results from interactions between natural processes and management history. Environmental gradients, underlying geology, species distributions, and natural disturbance have always provided for variability in vegetation types across state forest lands in western Oregon. Extensive disturbances, such as wildfire and windstorms, ~~continue to~~also influence ~~species' habitat.~~habitats. Disturbances over smaller areas, such as insect and disease outbreaks, create spatial heterogeneity within and among individual forest stands.

~~Forest Resource, Goals, and Strategies~~

As described in Section 3.1.1, *Forest Condition*, many of the state forest lands in western Oregon have a legacy of repeated, large wildfires or had been extensively logged prior to acquisition by the State. Managing the current landscape for multiple values including timber production, forest health, aquatic systems, and wildlife habitat has ultimately produced a complex mosaic of stand types and ages and within-stand habitat features. The variety of stand types resulting from ODF's management of state forest lands provide well-dispersed diverse habitat across the landscape at regional scales, and broad *connectivity* to and between older forests on federal lands, as well as habitats where comparatively little other public forest lands exist (e.g., on the North Coast including the Tillamook and Clatsop State ~~Forest~~Forests). Young stands and associated early-seral characteristics are important for diverse game and

non-game wildlife species, including many species of state or federal concern (Swanson et al. 2014). Older stands ~~on the landscape~~ foster and support a variety of late-seral associates, such as northern spotted owls (*Strix occidentalis caurina*), marbled murrelets (*Brachyramphus marmoratus*), and red tree voles (*Arborimus longicaudus*). Forests in mid-*seral stages* (e.g., 30–80 years old) provide habitat for most native forest species, including early and late-seral associates, and enhance broader landscape function (Swanson et al. 2014). Current ODF forest inventory data document the age class distribution of state forest lands and provide insight into the range of habitat types provided in them (Section 3.1.1, *Forest Condition*).

~~Current ODF forest inventory data document the age class distribution of state forest lands and provide insight into the range of habitat types provided therein (*Forest Condition*).~~ Additional variation in stand composition and structure due to stand development, management history, site productivity, topography, region, and numerous other factors contribute to diversity across spatial scales. For example, rare or unique habitats, such as talus slopes and caves, add to landscape diversity, the broader ecological function, and resilience. There is considerable variation both within and among districts in the relative proportions of tree age classes and associated habitat types on the landscape.
Individual species use different stand types and habitat features at varying spatial scales. Thus, state forest lands provide for diverse habitat across the landscape. Recent harvest practices in young stands have promoted high-quality, complex early-seral habitat. This is important because complex early-seral habitats can support a diverse and unique array of wildlife species from insect pollinators and insect-eating songbirds, to hunting opportunities for forest raptors along *edges* adjacent to older forest stands.



~~Harvest strategies, practices, and prescriptions in young stands have promoted high-quality, complex early seral habitat. This is important because complex early seral habitats can support a diverse and unique array of wildlife species from insect pollinators to a variety of insect-eating songbirds; to hunting opportunities for forest raptors along *edges* adjacent to older stands. With adequate snag retention in harvested units, complex early seral habitats can even~~When adequate numbers of snags are retained in harvested units, young forest habitats can provide denning and nesting cavities for sensitive species, such as fisher (*Pekania pennanti*), ringtail (*Bassariscus astutus*), purple martin (*Progne subis*), and ~~bluebirds~~western bluebird (*Sialia mexicana*).

Mid-seral stands are highly variable in habitat structure and function depending on natural disturbance, management history, and other factors, but all provide some degree of habitat to meet various ~~life-history~~ needs of native wildlife species~~, and~~; they also provide connectivity between other habitat types and across ~~basins~~the landscape. Mid-seral habitat can provide for dispersal and foraging habitat for

resident raptors, as well as cover and overall landscape connectivity for movement of forest carnivores and herbivores. Terrestrial salamanders can also be supported in early and mid-seral landscapes where adequate downed wood is retained (Kluber et al. 2008).

Large-diameter snag previously used as a black bear den, as evidenced by the numerous claw and bite marks surrounding the cavity's entrance.
Credit: ODF.

Late-seral habitats provide for associated wildlife when arranged in a manner that maximizes interior forest, reduces edge effects, and ~~are arranged in a way that~~ minimizes the ~~distance~~distances between *patches* to

~~WESTERN OREGON STATE FORESTS MANAGEMENT PLAN~~

maintain connectivity ~~between mid-seral habitats and older stands~~. The recruitment and retention of large-diameter snags and downed wood is key for all seral stages and patch sizes across the landscape. ~~The data also suggest state~~

ODF forest ~~lands may~~inventory data indicate a lack of habitat on state forests to support ~~late-seral~~old forest-adapted species, such as northern spotted owls and marbled murrelets. Approximately 87% of state forest lands are less than 80 years old. In general, the districts in the central and southern Oregon Coast Range and the Santiam State Forest have a greater proportion of total acreage in older stands. The Tillamook and Clatsop State Forests have comparatively little older forest, largely ~~due to~~because of the extensive fires and logging that occurred prior to state acquisition. Despite large improvements in habitat diversity and quality since then, the state forests' habitat story ~~largely~~ remains one of restoration, rehabilitation, and enhancement in a young forest landscape (Figure 3-1).

General Wildlife Species

Western Oregon state forest lands currently have habitat suitable for most native species found in forests of the Oregon Coast Range and ~~West~~Western Cascades. Vertebrate species known or suspected to be found on, adjacent to, or in some cases, downstream of, state forest lands in both aquatic and terrestrial environments include approximately 270 species, including 63 mammals, 147 birds, 32 amphibians and reptiles, and 28 fishes. This excludes the many species of marine fishes, birds, and mammals that may be found in the estuaries adjacent to state forest lands, unless they use state forest lands for some portion of their life ~~history requirements~~.

Wide-ranging mammals such as deer (*Cervida*e), elk (*Cervus canadensis roosevelti*), American black bear (*Ursus americanus*), cougar (*Puma concolor*), and bobcat (*Lynx rufus*) ~~make~~ use ~~of~~ a variety of habitats in and near state forest lands to meet their ~~life history~~ needs. ~~Forests~~Forest stands are host to most native weasel species (*Mustelidae*), skunks (*Mephitidae*), squirrels (*Sciuridae*), voles (*Microtus*), mice (*Mus*), and other forest-floor small mammals. ~~The full native assemblages of forest~~Native resident and migratory songbirds and raptors, including rare and sensitive species, are present on state forest lands. Upland game birds, such as grouse (*Tetraoninae*), quail (*Odontophoridae*), and Rio Grande wild turkeys (*Meleagris gallopavo intermedia*) are also present. Resident and migratory waterfowl and other aquatic birds ~~are dependent~~depend on riparian, aquatic, and wetland habitats within state forest lands. Mammals such as river otters (*Lontra canadensis*) and American beavers ~~(*Castor canadensis*)~~ make almost exclusive use of these habitats. Many amphibians are associated with aquatic habitats, such as tailed frog (*Ascaphus*) and torrent salamanders ~~(*Rhyacotritonidae*), yet.~~ Other amphibians use terrestrial habitats and are strongly tied to the abundance and quality of downed wood ~~(lungless or~~, such as plethodontid salamanders~~; e.g.,~~ (Oregon slender salamander [*Batrachoseps wright*~~],~~] and clouded salamander [*Aneides ferreus*]). Many birds, reptiles, and some mammals use rocky habitats (including caves or rock



Aquatic Habitat Modified by American Beaver Damming Activity Benefits a Multitude of Aquatic and Terrestrial Wildlife Species.
Credit: ODF.

outcrops) for a variety of ~~life history~~

their needs. Bats (*Chiroptera*) make use of many structures throughout the forest for roosting and hibernation and forage over nearby aquatic habitats.

Threats to wildlife on state forest lands include poaching, illegal dumping, habitat destruction and modification from management activities or public misuse, and extreme natural disturbances. Many of these issues can be addressed via forest planning and management in collaboration with other agencies and stakeholders. The long-term effects of climate change on wildlife are more difficult to assess and address by management. Changes in temperature, precipitation, and other aspects of climate are will likely to alter the quantity and quality of many species' habitats.

address by management. Changes in temperature, precipitation, and other aspects of climate will likely alter the quantity and quality of many species' habitats.

Under GPV, The overarching goal of ODF's strategies for wildlife is to protect, maintain, and enhance habitat for native wildlife species. Restoration and enhancement needs remainexist where fire and subsequent salvage logging or reforestation have reduced the extent or quality of habitat for some species (e.g., in the Tillamook Burn). Vegetation complexity and late-serralold forest features, in particular, will take many decades to develop through both passive and active management. While moving the landscape toward more diverse habitat conditions, some individual species of conservation concern, and their habitats may require special consideration.

Species of Conservation Concern

Species of conservation concern are wildlife species that have been identified as whose long-term persistence is at risk due to declining populations, rarity, or other factors (e.g., having a limited range). Some There are many species of conservation concern that are not protected by federal or state ESAs including birds, bats, and aquatic amphibians. Habitat needs vary for each species; some of these species are associated with late-seral habitats, others (e.g., flycatchers and warblers) are associated more with complex early-seral habitats, and some (e.g., bats) are associated with more specific habitat elements like suitable roost structures or hibernacula. Some species, such as coastal marten and Pacific fisher), appear to be largely missing from forests in the region although habitat for the species seems to be present. These and many others are species of concern to State and federal managers and the public recognize the importance of conserving these species to aid in maintaining ecological integrity and biodiversity.

Numerous public and private entities designate wildlife species of conservation concern for conservation and management, from local to global scales. The U.S. Fish and Wildlife Service, U.S. Forest Service, and U.S. Bureau of Land Management publish relevant lists for the Oregon Coast Range and Cascade Mountains Districts. At the state level, ODFW and the Oregon Biodiversity Information Center (ORBIC) (formerly Oregon Natural Heritage Program) publish state-widestatewide and county lists. ODF's species of conservation concern list was developed with federal and state lists of threatened, endangered, and candidate species, as well as thespecies not protected by federal or state ESAs but included in the *Oregon Conservation Strategy* (ODFW 2016) and ODFW's sensitive species list (ODFW 2021). TheyThese documents identify species that need immediate and focused conservation effortefforts. The list is a component of ODF's species of conservation concern operational policies and is updated semi-regularly and will beis captured in the IPs as state and federal lists are updated or new data or scientific understanding become available. Species of

There are many species of conservation concern that are not protected by federal or state ESAs including birds, bats, and aquatic amphibians. Habitat needs vary for each species; some of these species are associated with late-seral habitats, others (e.g., flycatchers and warblers) are associated more with complex early-seral habitats, and some (e.g., bats) are associated with more specific habitat elements like suitable roost structures or hibernacula. Species of conservation concern identified as part of this FMP's associated policies are currently present or have the potential to be present on state forest lands.

Threatened or Endangered Species

Forest management activities must comply with all federal and state laws, including those related to the protection and conservation of wildlife populations and their habitat (e.g., ~~the~~ state and federal ESAs, federal Bald and Golden Eagle Protection Act, federal Migratory Bird Treaty Act, FPA). Although many laws apply to the management of state forest lands, legal requirements for protection of threatened or endangered species can have ~~some of the most significant effects on planning and operations~~significant effects on planning and operations. The WOSF HCP describes the status and occurrence of three wildlife species listed under state and federal endangered species protection acts, and how management operations are conducted to protect them. These species include northern spotted owl, marbled murrelet, and coastal marten. Threatened or endangered fish species are discussed under *Forest Resource 11: Aquatic and Riparian Resources*.

ODF has an extensive survey history for ESA-*listed species* (i.e., northern spotted owls and marbled murrelets) and continues to monitor activity at known sites on an annual basis. ODF, in various capacities over time, has supported research related to habitat relationships of numerous species (e.g., deer, elk, owls, murrelets, early-seral birds, tree voles) and wildlife responses to forest management practices. (songbirds, small mammals, amphibians). ~~However, because relatively little inventory or monitoring work has been conducted on state lands for non-game~~Some species~~, some species may be present~~ may be present that have not been detected or documented yet (e.g., coastal marten~~).~~), while other listed species are not currently known to be present but could become re-established as a result of habitat improvements, regional population recovery, or



Coastal marten captured with a wildlife camera on the southern Oregon coastline.
Credit: ODF.

potential re-introductions (e.g., ~~Pacific fisher,~~ Oregon spotted frog).

~~The HCP (ODF 2022d) describes the status and occurrence of five wildlife species listed under state and federal endangered species protection acts. Species include northern spotted owl, marbled murrelet, Oregon slender salamander, coastal marten, and red tree vole. Fish are discussed under *Aquatic and Riparian Resources*. There are many other species of concern including birds, bats, and aquatic amphibians. Habitat needs vary for listed species of concern. Some species of concern are associated with late-seral habitats, others (e.g., flycatchers and warblers) are associated more with complex early seral habitats, and others (e.g., bats) are associated with more specific habitat elements like suitable roost structures or hibernacula.~~

Goal: Wildlife

Maintain, protect, and enhance functional and resilient landscapes that provide the variety and quality of habitat types and features necessary for long-term persistence of all native wildlife species.

Strategy: Habitat Diversity

Manage for diverse habitats across the landscape and over time.

a. Manage for a diverse array of seral stages.

b. Protect, maintain, and enhance habitats that account for the range of forest types~~,~~ topography (slopes, aspects, elevations), and habitat features at the district level.

c. Identify and protect rare and unique habitats, particularly those that are fragile, sensitive, or potentially vulnerable to climate change.

Intent

The intent of this strategy is to conserve and enhance diversity as it promotes resilience and ecosystem function, which provides for many ecosystem services (e.g., pest control, pollination) and ~~public~~ co-benefits (hunting, fishing, birding, existence value). Managing for diversity helps ensure the full suite of habitats for native wildlife persist on the landscape in spite of short-term disturbances or chronic perturbations.

HCAs ~~will~~ provide the majority of late-seral stands and the total amount of late-seral forest increases therein over time. Early- and mid-seral stands ~~will~~ exist both inside and outside of HCAs and contribute to the diversity of habitat types on the landscape. Treatment of 30,000 acres of SNC and hardwood-dominant stands over the first 30 years of the WOSF HCP permit ~~will provide~~provides a complex early-seral component in HCAs~~, as will natural disturbances.~~ that is positioned to mature into diverse mid-seral habitat by the end of the WOSF HCP permit term. RCAs and leave-tree strategies provide for some older habitat components outside of HCAs.

Operationally limited areas contribute to diversity and older age classes outside of HCAs. HCAs ~~were~~are designed to account for the range of forest types and topography and most habitat features at the district level. Rare, unique, and otherwise vulnerable habitat types and features outside of HCAs can be addressed with ~~fine filter~~focused strategies (e.g., bat hibernacula) and other policies (e.g., wetlands).

This strategy is also intended to reduce threats to biodiversity by ensuring rare and unique habitats, which often occur in patchy and isolated locations on the landscape, are protected and continue to support the life history needs of vulnerable species. Protecting and maintaining the functionality of these habitats supports the delivery of ecosystem services across state forest lands by providing important resources for highly specialized species of conservation concern.

Strategy: Habitat Complexity

Manage for complex habitats of all ages and types.

a. Promote structural complexity, compositional diversity, and spatial heterogeneity at stand and landscape scales.

b. Adapt standards to regional and stand-level goals (e.g., habitat enhancement, forest restoration, fuels and fire risk, timber production, harvest age), and over time as stand and landscape conditions change.

c. Protect, maintain, and enhance legacy structures, including *old growth* trees, retained green trees, snags, and downed wood. Allow exceptions for hazard tree removal for public safety.

d. Promote vertical canopy layering where habitat restoration or enhancement are primary concerns.

Intent

The intent of this strategy is to conserve and manage for habitat complexity as it enhances function of many ecosystem processes and services. Complexity is a key feature of high-quality habitat at all spatial scales for many species of conservation concern and contributes to forest and habitat resiliency through time. The following considerations are used to implement this strategy.

- Protect, maintain, and enhance *legacy structures*, including remnant old growth trees, residual green trees, snags, and downed wood. Allow exceptions for public safety.
- Promote vertical layering where habitat restoration or enhancement are primary concerns or compatible with other goals and where species composition makes this strategy reasonably attainable.

Stands in HCAs are the foundation for this strategy and will provide the majority of complex stands of mid-to late-seral forest. Management in HCAs (thinningsvariable retention harvests and regeneration harvest of SNC and alder) will enhanceenhances complexity over time and provideprovides for a complex early-seral component. Outside of HCAs, leave-tree strategies, RCAs, and operationally limited areas contribute to stand and landscape complexity. Multi-species plantings inside and outside of HCAs further promote complexity and resilience. Silvicultural prescriptions will vary at the stand-level based on past management, current conditions, and desired future conditionstand goals (e.g., production-emphasis versus habitat emphasis, fuels reduction management needs). These will also vary by district based on forest types, WOSF HCP covered species distribution, ownership patterns, and forest health concerns. Natural disturbances across the planning area introduce complexity and heterogeneity at stand, watershed, and landscape scales.

Strategy: Functional Landscapes

Manage for functional landscapes for native wildlife.

a. Create a variety of patch types, patch sizes, and patch arrangementarrangements over time.

b. Provide for adequate interior forest habitats.

c. Maintain connectivity between habitats, and broad landscape permeability, forto allow for dispersal and migration of diverse wildlife species including species of conservation concern.

d. Foster and maintain redundancy at various ecological scales (e.g., species, stand types).

e. Incorporate WOSF HCP conservation actions inside and outside of HCAs.

Intent

The intent of this strategy is to develophave functional patches and resource arrangements with redundancy to help ensure resistance, resilience, and long-term persistenceresilient, functioning ecosystems that meets persist to provide GPV with climate as environmental conditions continue to change and long-term sustainability in mind. The following considerations are used to implement this strategy.

~~This strategy will mostly be achieved by HCP conservation actions inside and outside of HCAs.~~ HCAs ~~were~~are designed to provide for functional landscapes for the covered species. As habitat develops therein, it ~~will promote~~promotes a variety of patch types, sizes, and arrangement, adequate interior forest habitat, and broadscale connectivity. Outside of HCAs, leave-tree strategies, RCAs, and inoperable areas further enhance landscape function, habitat distribution, and connectivity. Northern spotted owl dispersal habitat connectivity requirements further enhance the function of the areas outside of HCAs. Age ~~-~~class structure outside of HCAs contributes to the variety of patch types on the landscape~~. Redundancy occurs both inside and outside of HCAs and contributes to forest resilience~~.



Female northern spotted owl monitored at a known active site located inside an HCA. Maintaining dispersal habitat outside HCAs facilitates spotted owl movement across the landscape, supporting survival, reproduction, and successful colonization.
Credit: Turnstone Environmental Consultants Inc.

~~Strategy: Rare~~Redundancy occurs both inside and ***~~Unique Habitats~~***
~~Identify, protect,~~outside of HCAs and ~~restore rare and unique habitats, particularly those that are fragile, sensitive, or potentially vulnerable~~contributes to ~~climate change~~forest resilience.

~~The intent of this strategy is to target locations on the landscape that are unique and support the life history needs of vulnerable species.~~

Strategy: Threatened and Endangered Wildlife Species and Other Species of Conservation Concern

Protect, maintain, and enhance habitat for threatened and endangered species and other species of ~~concern. Use the following considerations to implement this strategy.~~conservation concern.

a. Comply with state and federal ESA requirements and adopt management approaches that contribute to the survival and recovery of threatened and endangered species and other species of conservation concern.

b. Implement the WOSF HCP and associated conservation actions targeted to benefit the species covered under the Incidental Take Permit.

c. Conduct species assessments during IP development and related revisions to determine which

species warrant special consideration and whether existing conservation measures are adequate.

d. Collaborate across ownership boundaries to meet common wildlife conservation goals.

e. Support habitats beneficial to pollinator species (including invertebrates) by integrating alternative management practices, where appropriate.

Intent



Fine filters include creating suitable nesting structures like this snag patch in an open, upland meadow restoration site to aid long-term occupancy of purple martin. Artificial nest boxes were also installed to provide immediate nesting opportunities until woodpeckers excavate natural nesting cavities in the decaying wood.
Credit: ODF.

The intent of this strategy is to comply with state and federal ESA requirements and the HCP, while also managing for other species of conservation concern. ~~ODF will implement~~Implementation of this strategy includes management approaches that contribute to the persistence of threatened and endangered wildlife species. Where appropriate, ~~ODF will also apply~~ these approaches can also be applied to ~~the~~species of conservation ~~of species of~~ concern not formally listed under state or federal ESA. Implementation ensures that wildlife habitats are managed in a way that meets all legal requirements and that listed and imperiled species ~~will~~ persist on the landscape using the conservation actions specified in the HCP. While the HCP captures currently listed and some candidate species, ODF will continue to remain informed about any potential future candidate species and species listings.

Applying the above considerations to

management approaches provides a *coarse filter – fine filter* approach to addressing species of conservation concern, while following the directions within the HCP ensures ESA compliance. Other species of conservation concern are determined through regular policy review with assessment of

need for additional fine filter strategies beyond FMP and HCP commitments. This strategy ensures ODF is managing habitat for all native species as required under the GPV rule, while also working to prevent future listings.

HCP commitments provide the majority of ~~tactics needed~~conservation measures to achieve this goal. The ~~HCAs'~~HCAs, leave-tree ~~strategies,~~standards, and northern spotted owl dispersal habitat outside of HCAs~~,~~ and RCAs are the primary coarse filters ~~for~~that address the needs of a variety of species of conservation concern at the landscape level. Additional fine filters are added during IP development and implementation to address species of conservation concern that have habitat requirements inadequately addressed by coarse filters. Fine filters are species- and site-specific, and generally of minor/minimal impact or complementary to operations. Examples include 1) protecting rock outcrops and caves of known use by Townsend's big-eared bats; 2) creating/retaining smaller-diameter, short snags on ridgetops in areas of known purple martin occupancy; and 3) implementing seasonal restrictions near known active peregrine falcon nests.

ODF considers pollinator habitat as part of wildlife habitat restoration efforts for species of conservation concern. Pollination is an important ecosystem service that benefits forest health and resiliency. Pollinators have more specialized habitat needs that can be pursued alongside other management

objectives with small shifts in practices or in areas unsuitable for timber production (Buhl et al 2021). In general, pollinator abundance and diversity may benefit from more open forest canopies and from native plant communities (Hanula et al. 2016). Focus for these practices could be within HCAs and stewardship classes with a subclass designation of cultural resources, plants, research/monitoring, unique threatened or endangered plants, or wildlife subclasses. Where practices are implemented, pollinators would provide ecosystem services to adjacent stewardship areas and nearby agricultural lands (Rivers 2018).

~~3.2.10~~3.2.13 Forest Resource 13: Sensitive Plants

S[illegible]nts. Native plants fill many roles in the forest e[illegible] soils, influence ~~micro-climate~~temperature and h[illegible]



~~Coast Range fawn lily (*Erythronium elegans*). Sensitive and rare plants provide environmental and social benefits and are protected by the Oregon Department of Agriculture Native Plant Conservation Program.~~ ~~Credit: ODF~~

of the surrounding area, support native pollinators, contribute to biodiversity, and are used as cover and forage by many animals. In addition to their ecological functions, some plant species are harvested commercially or for cultural uses. Commercial and cultural uses of understory plants are discussed in the *Special Forest Products* ~~section. This section focuses on threatened, endangered or rare plants (collectively, *sensitive plants*), as listed under the state of Oregon's ESA and administratively protected by the Oregon~~and *Cultural and Historic Resources* sections, respectively.

This section focuses on Oregon's ESA-listed threatened and endangered plant species

Coast Range fawn lily (*Erythronium elegans*). Sensitive and rare plants provide environmental and social benefits and are protected by the Oregon Department of Agriculture Native Plant Conservation Program.

Credit: ODF.

administratively protected by the ODA Native Plant Conservation Program (ORS 564.105; OAR 603-073), and candidate plant species considered for ESA listing (collectively, *sensitive plants*).

~~WESTERN OREGON STATE FORESTS MANAGEMENT PLAN~~

~~Center~~Threats to sensitive plants on state forest lands include habitat loss and fragmentation from

~~The Oregon Biodiversity Information~~ management activities, public misuse (i.e., illegal collection), and competition with invasive species. Many of these issues can be addressed via forest planning and management in collaboration with other agencies and stakeholders. The long-term effects of climate change on sensitive plants are more difficult to assess and address by management. Shifts in temperature, precipitation, and other aspects of climate that reduce water availability and disrupt growing seasons likely alter the habitats that support sensitive plants.

ORBIC provides a list of sensitive plants that may be found on state forest lands, as well as records of known locations. ~~Most~~Many of these species occur in non-forested areas, such as open, high-elevation rocky areas; open meadows; bluffs; and coastal areas. ~~Six~~ Examples of currently known sensitive plant species ~~are known to be present~~ on state forest lands~~:~~ include Coast Range fawn lily (*Erythronium elegans*), Nelson's checkermallow (*Sidalcea nelsoniana*), Saddle Mountain bittercress (*Cardamine pattersonii*), cold-water corydalis (*Corydalis casea*na ssp. *Aquae-gelida*e), Chambers' paintbrush (*Castilleja chambersii*), and frigid ~~shootingstar (*Dodecatheon austrofrigidum*). ODF is not aware of any other state-listed plant species that are likely to occur on state forest lands.~~

shootingstar (*Dodecatheon austrofrigidum*) (ORBIC 2023). ODF is not aware of any other sensitive plant species that are likely to occur on state forest lands.

ODF protects listed plant species in accordance with ~~the~~ state and federal ~~ESAs.~~ESA requirements. ODF has identified ESA-listed species that occur, or are suspected to occur, on state forest lands and continues to update these lists ~~(listings and occurrences)~~ in consultation with the ODA's Native Plant Conservation Program. During operations planning, the districts determine if ESA-listed species occur or are likely to occur on lands where management activities are planned. If so, the district ~~will determine~~then determines whether the proposed management activities are consistent with the conservation program for the ESA-listed species and whether specific protection or mitigation measures are ~~warranted~~needed.

Goal: Sensitive Plants

Ensure the long-term persistence of sensitive plant species.

Strategy: Sensitive Plants

Identify, protect, maintain, and enhance~~, and adaptively manage~~ sensitive plant species populations.

a. During operations planning, determine if ESA-listed plant species occur or are likely to occur on lands where management activities are planned. Implement protection measures as needed.

b. Coordinate with ODA and other agencies as needed to identify sensitive plant occurrences during planning.

c. Coordinate with the Native Plant Conservation Program to remain informed concerning future candidate species and species listings.

Intent

The intent of the strategy is to comply with state and federal ESA requirements, while also managing for other sensitive species. Implementation of this strategy includes management approaches that contribute to the persistence of threatened and endangered plant species. Where appropriate, these approaches can also be applied to the conservation of sensitive species not formally listed under state or federal ESA. Conserving sensitive plant species where they occur on state forest lands promotes genetic diversity that is crucial for maintaining plant survival and adaptability to various environmental conditions. Supporting diverse sensitive plant populations is essential for maintaining the services and resilience of ecosystems.

This chapter described the forest resource conditions and laid out the forest resource management goals and strategies at a high level. Chapter 4, *Guidelines*, provides guidelines on how to implement the goals and strategies.

CHAPTER 4

Guidelines

~~This chapter describes the processes for implementation and revision of the Western Oregon State Forests Management Plan (FMP).~~

Implementation of the *Western Oregon State Forests Management Plan* (FMP) is grounded in the themes established in Chapter 1, *Introduction*, including *greatest permanent value*[1] (GPV), consideration of and *engagement* with all Oregonians, climate *resilience*, *sustainability*, and *adaptive management*. The management approach in Chapter 2, *Management Approach*, together with the *goals* and *strategies* outlined in Chapter 3, *Forest Resources, Goals, and Strategies*, provide strategic direction for carrying out this work. This chapter provides actionable guidance that defines the processes, supporting plans, and engagement mechanisms necessary for asset management, effective implementation, and adaptive management. This guidance will help to ensure that management actions are aligned with the plan's intent, informed by ongoing *monitoring* and evaluation, and responsive to changing conditions.

4.1 Asset Management Guidelines

Assets,[1] as they are discussed in this section, are the tangible resources and infrastructure (e.g., parcels of land, *forest products*~~,~~ and forest roads ~~and related improvements~~, trails, and campground facilities) on state forest lands.

Maintaining or enhancing the value of the assets described in this plan is fundamental to long-term *sustainability* of ~~resources~~benefits described in the ~~*greatest permanent value* (~~GPV~~)~~ rule (Oregon Administrative ~~Rule~~Rules [OAR] 629-035-0020) such as ~~timber,~~forest products that generate *revenue, special forest products, aquatic* and wildlife *habitat*, and ~~recreation. The~~recreational uses. ODF developed asset management *guidelines* ~~discussed in~~for this ~~section align~~FMP in alignment with the Oregon Revised Statutes (ORS), OAR, and Oregon Department of Forestry (ODF) *policy*.

Implementation of the FMP ~~will be~~ consistent with ~~these~~the following asset management guidelines ~~to ensure~~ensures that the asset value of the forest is maintained or enhanced. ~~The guidelines are influenced by the following implementation priorities under which the State Forests Division (Division) is~~

~~operating.~~

- Conserve forest lands by maintaining the state forest land base.

[1] Terms italicized in this document are defined in the Glossary. Defined terms are italicized at the first instance in each chapter.

- Maintain a land exchange and acquisition program to consolidate state forest lands for management efficiencies, economic values, or enhanced *stewardship*.
- Implement marketing strategies that increase the value of forest products.

[1] Terms italicized in this document are defined in the Glossary. Defined terms are italicized at the first instance in each chapter.

- Prioritize and invest in *stand management* activities that increase the quality and quantity of timber and enhance other *ecosystem services*.
- Maintain, develop, and protect investments in infrastructure such as roads, bridges, and facilities, while recognizing that in some cases investments may need to be moved, removed, or decommissioned.
- Maintain existing assets that support recreation, education, and interpretation activities, while recognizing that in some cases investments may need to be moved, removed, or decommissioned.
- Maintain investments in forest inventory, *geographic information system* (GIS) technologies, and timber harvest-tracking technologies that support planning and implementation processes and, contribute to *adaptive management*, and improve overall efficiency and transparency.
- Prioritize and undertake investments in research and monitoring consistent with Section 4.3, *Decision Making, Adaptive Management, Monitoring, and Research Guidelines*.
- Maintain a budgeting and financial management system and practices that tracks track *revenues* and expenses and aids in financial decision-making, and provide transparency to the public.
- Implement and maintain accountability strategies and systems that to ensure the state and other beneficiaries receive anticipated financial and other environmental benefits from the forest are tracked and reported accurately.

4.1.1 Implementation Investment Priorities

Funding levels for plan implementation vary with cyclical economic trends. FMP implementation is primarily funded through timber harvest revenues. There may be periods where revenues limit funding. Annual budget instructions for developing fiscal budgets reflect the *Forest Development Fund* (FDF) balance and the projected FDF balance. The highest level of implementation and investment occurs when the FDF balance exceeds 12 months of operating expenses, and the balance is forecast to be relatively steady or increasing. The lowest level occurs when the FDF balance is has less than 6 months of operating expenses, and the balance is forecast to decrease (Table 4-1). To avoid service level decreases, ODF may seek external federal, state, and non-governmental organization (NGO) funding sources, such as grants or legislative funding through policy option packages or legislative concepts. External opportunities will be considered at any investment level to diversify funding streams and reduce risk associated with poor timber markets. Table 4-1 shows the forest management investment levels based on the revenue forecast and FDF balance.

TABLE 4-1
Forest Management Investment-Level Guidance Based on Revenue Forecast and FDF Balance

	Increasing 3-Year Revenue Forecast	**Decreasing 3-Year Revenue Forecast**
FDF Contains Greater than 12 Months of Operating Expenses	Level 1: Maintain or expand existing investments and fund new strategic investments.	Level 2: Maintain or expand existing investments and explore additional strategic investments.
FDF Contains 6 to 12 Months of Operating Expenses	Level 2: Maintain or expand existing investments and explore additional strategic investments.	Level 3: Invest in deferred maintenance and maintain select strategic investments.
FDF Contains Less than 6 Months of Operating Expenses	Level 3: Invest in deferred maintenance and maintain select strategic investments.	Level 4: Maintain core business and meet legal obligations; no new investments.

Note: Level 1 is the highest level of investment, while level 4 is the lowest.

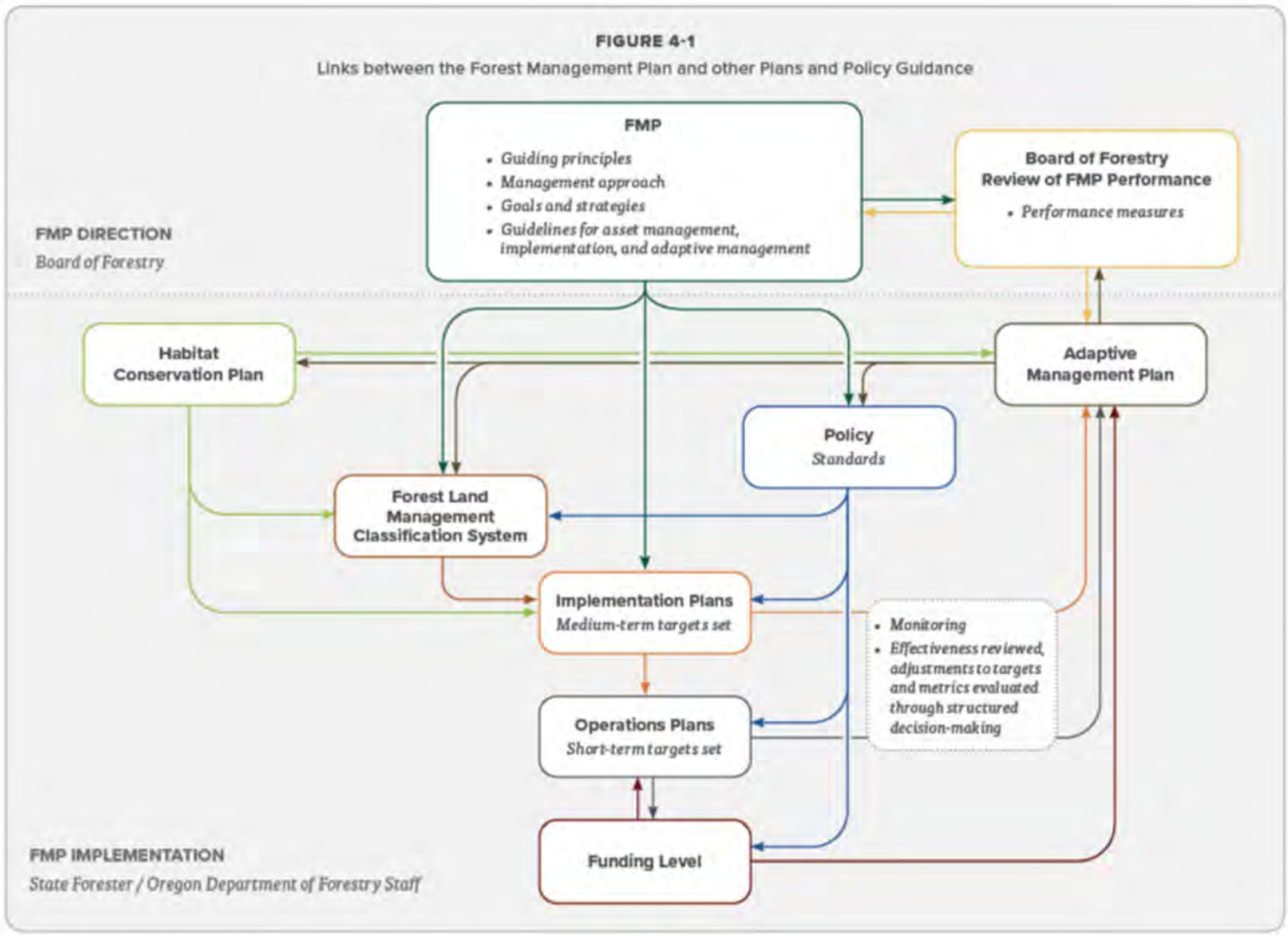
~~External funding sources should be considered at investment level 2 and pursued if the investment level is projected to be at level 3 or level 4.~~

4.2 Implementation Guidelines

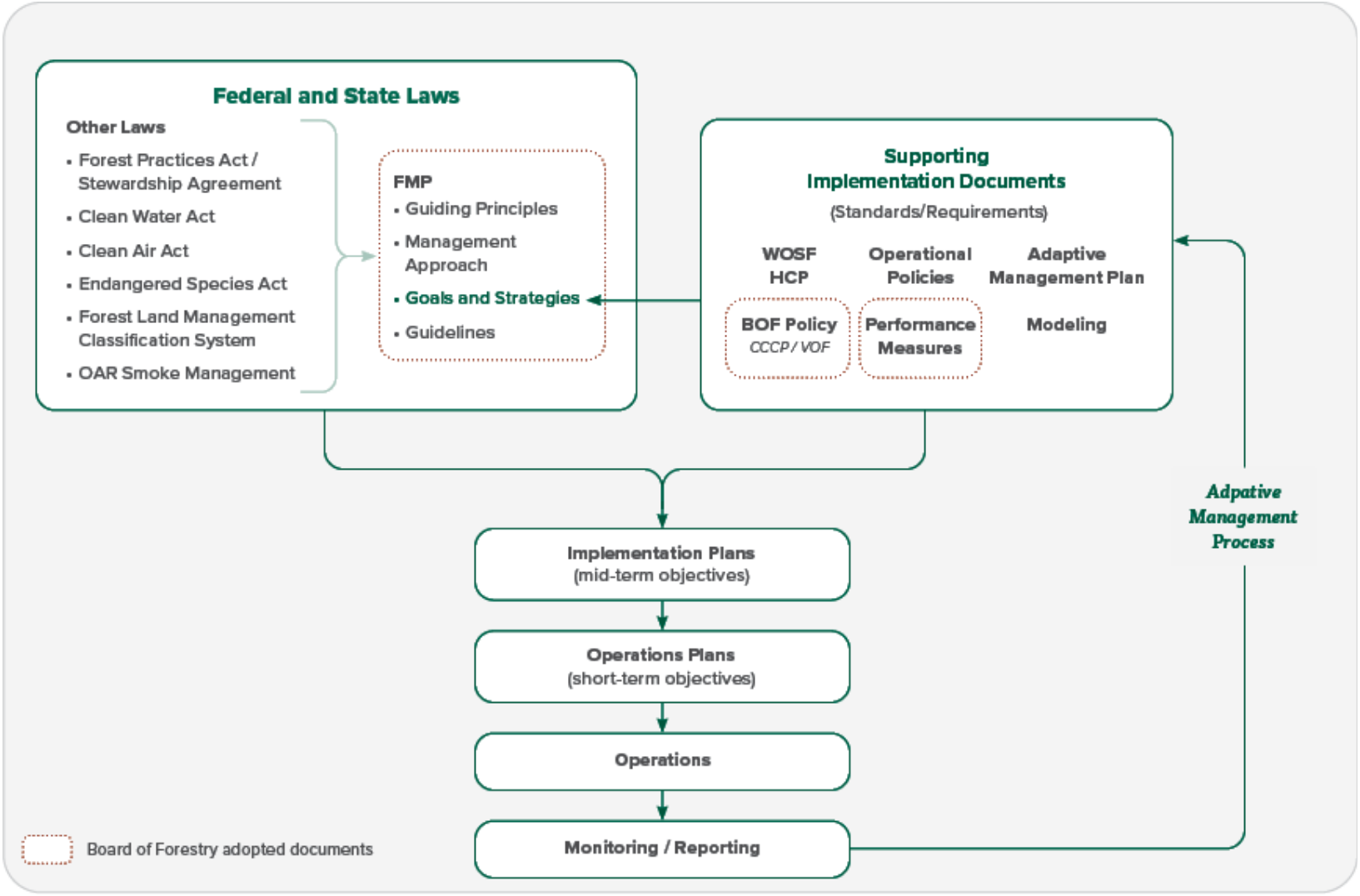
~~The~~ FMP~~, approved by the *Board of Forestry* (the BOF), identifies the resource management *goals* and strategies~~ implementation is carried out through *Implementation Plans* (IPs) that set mid-term (typically 10-year) *objectives*, which are ~~intended to achieve an appropriate blend of resources. GPV is~~then achieved through ~~integration of forest~~on-the-ground management activities ~~through ecologically sustainable management and using an~~described in *Operations Plans* (OPs). Monitoring and reporting are incorporated into all planning levels to inform future planning cycles and practice adaptive ~~framework across~~ management. The *standards,* requirements, and operational direction underpinning these plans are detailed in applicable laws and regulations, the *Western Oregon State Forests*~~. The FMP does not focus on a single *objective*, but considers several key social, environmental, and economic goals at different scales.~~ *Habitat Conservation Plan* (WOSF HCP), *Oregon Board of Forestry* (the BOF) policies (e.g., *Vision for Oregon's Forests* (VOF), *Climate Change and Carbon Plan* [CCCP]), *performance measures, operational policies,* the Forest Land ~~managers are tasked with considering all of the goals and strategies, identifying~~Management Classification System (FLMCS), and ~~addressing *trade-offs*~~other guidance.

These tiered planning levels ensure consistent, compliant, and ~~meeting GPV when implementing~~ goal-driven implementation of the FMP across the ~~FMP. The process for implementing the FMP relies on the following set of tools and processes presented in~~ landscape. Figure 4-1 shows the connections among these plans and the overall implementation process.

FIGURE 4-1
Links among the FMP ~~and~~, Major Example Laws, Other Plans, and Policy Guidance



. This figure provides additional detail of the laws and supporting documents that inform the FMP and implementation ~~is supported by the following elements~~.



Note: The other laws listed in this figure are an example subset of all applicable federal and state laws.

The following planning elements depicted in Figure 4-1 are key to development of the IPs and OPs, and inform monitoring, reporting, and the adaptive management process.

- ~~***Western Oregon State Forests Habitat Conservation Plan* (HCP).~~ The WOSF HCP enables ODF to comply with the federal *Endangered Species Act* ~~(ESA)~~ for certain covered *species* while conducting land management activities on state forest lands west of the Cascade crest. ~~During the development of the HCP, land managers, and partners identified and provided feedback on trade-offs. The~~The WOSF HCP biological goals and objectives ~~document these decisions, which are~~ will be implemented through ~~*Implementation Plans* (IPs) and *Operations Plans* (OPs).~~

- ~~**Performance measures.** *Performance measures* and their targets are developed with direct input from the BOF. Performance measures are monitored and enable the BOF~~IPs and ~~others to track progress toward FMP goals and to maintain accountability~~OPs. The conservation actions within the WOSF HCP provide requirements and standards for ~~management commitments~~a wide range of forest management activities such as retention of *biological legacies* (green trees, *snags,* and *downed wood*); *stream* buffers; steep slope protections; habitat *restoration*; and aquatic passage. These actions also promote forest diversity, complexity, and *connectivity* across the landscape, reinforcing ecological resilience, maintaining *ecosystem functions*, and contributing to the sustainable delivery of ecosystem services and GPV.

- **Operational policies.** ~~While~~The FMP establishes overall goals and strategies; however, the ~~FMP sets certain management~~specific standards~~, primarily associated with~~ for resource protection~~, there are many instances where different management options may achieve FMP goals and IP objectives.~~ are found in other documents that support implementation (Figure 4-1). Operational policies guide decisions within ~~this~~the range of options by ~~defining~~outlining specific procedures and *best management practices* (BMPs) that allow for management flexibility, while ensuring sound management and resource protection. Operational ~~standards describe~~policies include quantitative ~~measures tied to~~standards (e.g., *riparian* buffer widths, upland leave tree requirements) that align with laws and regulations, and FMP and WOSF HCP goals and strategies~~, such as minimum leave trees~~. These policies and standards enable forest managers to develop IPs and OPs and to evaluate *trade-offs*~~.~~ when a range of management options will achieve FMP goals. Operational policies are developed within the State Forests Division ~~at~~(Division) under the direction of the *State Forests Division Chief*.

- ~~**Modeling.** Modeling is used as a decision-support tool to evaluate trade-offs and objective levels at various spatial and temporal scales, and the costs and outputs associated with each scenario. Modeling aids forest managers in evaluating potential effects and making decisions about allocation of resources across uses.~~

- ~~**Implementation Plans.** IPs quantify shorter time periods (for example 8–12 years) associated with objectives for each resource at the district or multiple district-level. IPs describe the management approaches and activities designed to achieve the FMP goals and the HCP goals and objectives. IPs provide linkages among the FMP, HCP, operational policies, and on-the-ground activities that are described in OPs. Trade-offs are assessed and considered at the *landscape* level and are then incorporated into the IPs.~~

- **Board of Forestry policies.** The BOF is mandated to supervise all matters of forest policy and management under state jurisdiction (ORS 526.016). In carrying out this duty, the BOF may establish policies to guide ODF decisions. These policies may have broader applicability and apply to

multiple operational divisions (e.g., the VOF and CCCP) or be limited to one division.

- **Performance measures.** *Performance measures* are selected by the BOF, based on *metrics* that the BOF considers key to ensuring progress toward FMP resource management goals, maintaining accountability for management commitments, supporting the adaptive management process, and aligning with IP and WOSF HCP reporting timelines (Section 4.3, *Adaptive Management Guidelines*).
- **Forest Land Management Classification System ~~(FLMCS).~~** As ~~codified~~described in OAR 629-035-0050, the FLMCS is a method of mapping and describing the *management emphasis* of ~~parcels~~specific areas of state forest lands. ~~The FLMCS is recorded as a GIS layer.~~ The management emphasis ~~identifies the extent to which a parcel of land can be managed for a variety of~~provides context for management activities based on *forest resources* that are present in specific areas. It also identifies when a particular forest resource may need a more focused approach in its management, or possibly an exclusive priority as ~~designated~~described by this FMP, the WOSF HCP, ~~and~~ other laws or commitments~~.~~, and policy choices. This information is used in the development of IPs and ~~during operational planning~~OPs.
- **Modeling.** Modeling is used as a decision-support tool to ensure sustainable harvest over time, evaluate management trade-offs, inform targets for forest resource goals at various spatial and temporal scales, and quantify the costs and outputs associated with management scenarios. Modeling aids forest managers in evaluating potential effects and making decisions about allocation of resources across the landscape.
- **Adaptive Management Plan.** The *Adaptive Management Plan* (AMP) describes the monitoring and reporting process that will ensure FMP resource goals are met during implementation of the FMP.

The AMP grounds monitoring and reporting within an adaptive management framework to inform management decisions and align with IP and WOSF HCP reporting timelines (Section 4.3, *Adaptive Management Guidelines*).

Most of these documents are publicly available on the ODF website.

4.2.1 Implementation Plans

IPs are mid-term (typically 10-year) plans that outline how the FMP strategies will be implemented at a *district* or multi-district scale. These plans integrate the strategies for forest resource goals described in Chapter 3, *Forest Resources, Goals, and Strategies*, and provide additional detail on objectives, management approaches, and activities that will be used. IPs integrate district operations and are used to develop annual OPs and budgets, and to assess progress toward meeting the goals identified in the FMP. Based on monitoring and reporting, IPs will be evaluated and revised to reflect key recommendations from the adaptive management process. IPs will be revised for the next implementation cycle, but may also be revised during a current IP cycle, depending on monitoring *outcomes* or unforeseen circumstances (e.g., large-scale *disturbance* events).

IPs will include the following information.

- Current condition of forest resources.
- Activity levels expressed as objectives to be achieved during the implementation period such as an average annual harvest volume of timber offered for sale.
- Some anticipated management activities are more difficult to quantify over the course of the IP, such as restoration thinning or cultural burning to improve habitat, because they are dependent on external partnerships or reliant on funding that is less certain.
- A description of specific monitoring activities over the course of the IP.

~~4.2.1~~4.2.2 Operations Plans

- ~~.~~OPs describe ~~individual~~the specific projects ~~for achieving expected FMP~~ and ~~HCP outcomes,~~activities over the ~~near~~short term (~~for example~~e.g., 1 to 2 years~~),~~) that align with fiscal budgets and ~~IPs.~~

are consistent with IP objectives. Planned activities and projects may include timber harvest operations; road construction, improvement, and vacating; *reforestation* and *young stand management*; aquatic habitat restoration; development or maintenance of recreational trails or facilities; or monitoring projects. OPs prioritize activities and investments in the forests (e.g., inventory, young stand management, recreation development) on the basis of implementation based on investment levels as described in Section 4.1, *Asset Management Guidelines*.

- **Adaptive Management Plan (AMP).** The AMP describes the adaptive management process used to monitor outcomes, evaluate trade-offs, determine if the strategies are meeting the goals of the FMP and HCP, determine if assumptions used in developing the strategies need to be updated, and inform management decisions.

4.2.24.2.3 Implementation Responsibilities

ODF implements the FMP and WOSF HCP through IPs and OPs. The State Forests Division Chief and, *Area Directors* provide guidance for implementing the FMP and HCP through IPs and OPs. They , *and District Foresters* review IPs, which are approved and signed by the *State Forester*. District Foresters implement the FMP and WOSF HCP within their districts through the approval and oversight of OPs. Table 4-2 describes the tasks and responsibilities for IP and OP development are described in Table 4-2.approval and implementation.

TABLE 4-2
Roles and Responsibilities of Decision-Makers in the Implementation, Operations, and Revision Approval Process

Task	Responsible Party
Approves FMP and performance measures and requests and approve FMP/performance measure revisions	Board of Forestry
Approves IPs and major revisions to FLMCS	State Forester
~~Approves OPs~~Approves Operational Policies specific to the State Forests Division	~~District Forester~~State Forests Division Chief
Approves minor revisions to FLMCS	Area Director
~~Implements IPs~~Approves and implements OPs	District Forester

4.3 ~~Decision-Making,~~ Adaptive Management~~, Monitoring, and Research~~ Guidelines

Adaptive management is "the process of implementing plans in a scientifically based, systematically structured approach that tests and monitors assumptions and predictions in management plans and uses the resulting information to improve the plans or management practices used to implement them (OAR 629-035-0000(2))."

Meeting the goals of the FMP in a changing environment requires "learning by doing," in which ODF assesses and updates the strategies, operational policies, and BMPs through adaptive management ~~within a decision-making framework.~~. The adaptive management ~~is "the process of implementing plans in a scientifically based, systematically structured~~ approach ~~that tests and monitors assumptions and predictions in management plans and uses~~directs the ~~resulting information~~ monitoring process to ~~improve the plans or management practices used to implement them (OAR 629-035-0000(2))."~~

~~*Adaptive management* is "the process of implementing plans in a scientifically based, systematically structured approach that tests and monitors assumptions and predictions in management plans and uses the resulting information to improve the plans or management practices used to implement them (OAR 629-035-0000(2))."~~

~~These guidelines describe how adaptive management informs decisions~~document legal and policy compliance, determines whether strategies are meeting FMP goals, and tests ~~if~~whether the assumptions used in the development of the FMP strategies ~~need updating.~~

The land manager's dedication to learning from management, applying new findings, and acknowledging uncertainty is key to maintaining the social, economic, and environmental benefits of forests (Bormann et al. 2017). While the language of adaptive management is widespread in natural resource management, it is often difficult in practice to change course or evaluate whether an alternative will improve management. More monitoring or greater scientific understanding may not translate into improved management – the uncertainty of outcomes and *diversity* of values and objectives hinder decision-makers (Gregory et al. 2012). Adaptive management needs to be tailored to the agency's mandate and the social decision-making processes within the institution (Minkova and Arnold 2020). Adaptive management, which includes monitoring and research, supportsremain valid under a decision-making framework that guides the use of new information within the agency.

The guidelines for decision-making, adaptive management, monitoring, and research are presented in this section. They are followed by an outline of the accompanying AMP, which describes how ODF integrates new information, designs monitoring projects, reports on *metrics*, and facilitates decision-making. The AMP may be changed as we learn how to improvechanging climate. The process to work more effectively.

4.3.1 Decision-Making Framework

ODF will improve its management by applying *decision analysis*, a process used to simplify decisions by breaking them down into key parts to work through in sequence (Hemming et al. 2022). The PrOACT acronym (Problem, Objectives, Alternatives, Consequences, and Trade-offs) is a popular ordering of the components that go into making a decision (Hammond et al. 2002). These steps for decision analysis have been adapted to many disciplines, and *structured decision-making* (SDM) is the predominant process in natural resource management for making complex, multi-objective decisions that emphasize deliberation, estimating outcomes of alternative actions, and clarifying choices upon which the decision-maker can act (Figure 4-2) (Gregory et al. 2012). One benefit of SDM is that it scales to the decision's complexity, proving useful for a single person or small group brainstorming management alternatives, for a facilitated processbegins with public input at the level of an IP, or for the BOF evaluating the FMP success through performance measures.

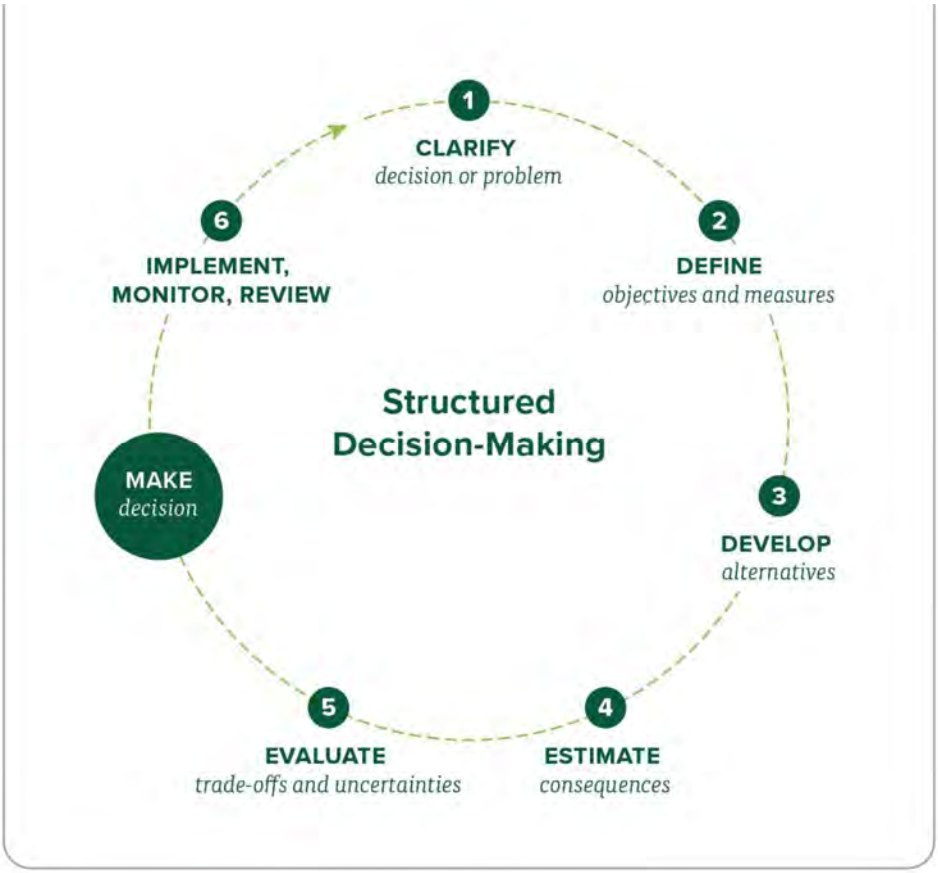
The decision-making framework assesses management questions and trade-offs across multiple objectives for different forest resources; addresses adaptive management needs described in IPs, which quantify specific, measurable resource objectives based on the FMP, HCP, and other policy documents; and updates the learning process following advances in forest management and decision science. goals and strategies, that are achievable within the next 10 years. Monitoring assesses if IP targets are being met and if plans or operational policies could be improved to better meet the IP targets and achieve the goals in the FMP. The resulting information is used by the appropriate decision-makers to revise management plans (Section 4.4, *Decision Authority and Revision Guidelines*).

4.3.1 Performance Measures

Performance measures are a select set of metrics the BOF uses to direct the State Forester on expectations for management of state forests and to evaluate management outcomes to ensure that the FMP continues to provide GPV. The BOF defines the specific measured components that make up the

performance measures. Although the BOF does not approve IPs, desired targets or trends expressed in performance measures will be used to guide ODF's implementation of the FMP. ODF monitors these components and reports the results to the BOF and the public via the BOF webpage. While performance

FIGURE 4-2
Structured Decision-Making Process. The process supports multi-objective decision-making based on deliberation, estimated outcomes of alternative actions, and clear choices upon which decision-makers can act.



Adapted from Gregory et al. 2012 Figure 1.1.

The SDM process (Figure 4-2), whether conducted with ODF staff or external interested parties, has six steps. Previous steps can be revisited during the process to make refinements as needed.

- **Step 1.** Clarify the decision by determining its scope, the relevant management objectives, and the decision-makers.
- **Step 2**. Define the objectives (i.e., "what matters") and the measures that will be assessed if the objectives are met.
- **Step 3.** Develop meaningful management alternatives that approach the problem from different angles that may prioritize different objectives.
- **Step 4.** Estimate the potential consequences, including the uncertainty, of each alternative using technical analysis or expert judgment.
- **Step 5.** Evaluate the trade-offs across multiple objectives and select the preferred alternatives, which may differ among participants, to present to the decision-maker.

- **Step 6.** Monitor the outcomes after the decision is implemented to inform the next iteration of the decision-making process.

Engagement in the SDM process depends on the scope and impact of the decision, with greater public outreach for more significant decisions. Public and Tribal participation provides feedback to the technical working group on objectives, alternatives, consequences and trade-offs.

Adaptive Management

Adaptive management is most relevant to decision-making when management has a high impact on the resource objective, the consequences of management alternatives are uncertain, and resolution of uncertainty affects management decisions (Williams et al. 2009). In this case, the time dedicated to learning from different management treatments reaps benefits that outweigh the potential delay in meeting the resource objective. In a situation where the uncertainty about the effects of management is low or has little effect on decision-making, adaptive management is not as useful. Assessing the potential costs and benefits of engaging in adaptive management can be part of the SDM process. In other words, SDM addresses a wider variety of decision-making situations than adaptive management (Gregory et al. 2012).

Adaptive management can vary in effort and experimental design, but the key component is learning from alternative management treatments (Williams et al. 2009). Generally, *active adaptive management* is for cases with high uncertainty and a need for learning about the cause-and-effect relationship of management on the resource objective. Active adaptive management uses a statistically robust experimental design to evaluate alternative management approaches. In *passive adaptive management*, monitoring data are collected to evaluate the effects of management on a resource. The experiment may not include controls, replicates, or randomized application of *management prescriptions*, so it is more difficult to establish cause and effect (Williams 2011).

Monitoring

There are a variety of monitoring approaches the Division uses depending on the objectives.measures do not encompass all aspects of ODF monitoring and reporting (Section 4.3.2, *Adaptive Management Plan*), their purpose is to provide an up-to-date dashboard for the BOF and the public to easily track management outcomes across a broad range of key ecosystem services provided by state forests. The BOF can evaluate and make recommendations based on the performance reports depending on the need (Section 4.4, *Decision Authority and Revision Guidelines*).

4.3.2 Adaptive Management Plan

The AMP is a separate document from the FMP that provides monitoring workflows and reporting requirements that support implementation of the FMP. The need for an AMP comes from the expanded scope of this FMP that includes adaptive management as a key theme, the WOSF HCP extensive monitoring requirements, and a commitment to accountability to the BOF and all Oregonians.

Monitoring and reporting is updated in the AMP to enable timely management responses to new information. The schedule of specific monitoring and reporting varies, depending on the time frame

required to detect change. Reports of monitoring results will be available on the ODF website.

Monitoring Approaches

ODF monitors the management of state forests for compliance and effectiveness. Compliance monitoring (i.e., *implementation monitoring*) involves gathering information to determine ~~whether~~if the rules, regulations, ~~or requirements~~and policies are being followed during implementation. *Effectiveness monitoring* assesses ~~whether~~if the implementation of management actions ~~has~~produces the intended outcomes, such as ~~tracking whether~~measuring if forest treatments increase ~~occupied habitat of a species of concern. Effectiveness monitoring may require *status monitoring* or *trend monitoring* to judge management success. Status monitoring involves determining the state of a resource (e.g., spotted owl occupancy, snag density) at a point in time. Trend monitoring is an extension of status monitoring, where the change in status over time is examined. Trend monitoring can be used to assess whether management thresholds are being breached (e.g., spread of invasive weeds increased beyond a target density) or whether there appears to be a pattern of change across time (e.g.,~~ habitat quality ~~is increasing) (Hilton et al. 2022).~~or quantity over time for a *species of conservation concern*.

~~Decision-making processes such as SDM may include a monitoring component to evaluate the effects of the decision and the state of the resource. The outcomes of monitoring inform the next iteration of decision-making. The ideal monitoring approach may change with time. As resource~~

objectives, monitoring technology, and the understanding of the system change over time, the accompanying monitoring efforts also need to adjust to continue providing reliable and relevant information. *Adaptive monitoring* is a framework that reassesses monitoring questions and protocols in light of these changes while maintaining the integrity of long-term records (Lindenmayer and Likens 2009).

As an example of how new monitoring may be planned, a snapshot estimate (status monitoring) of a resource is compared with the desired state of the resource to determine if a problem exists (Nichols and Williams 2006). Before monitoring begins, hypotheses are developed about how the larger system affects the resource. The differences among the hypotheses capture the range of possibilities about how the system *functions*. The hypotheses can also affect where and how frequently data are collected. This thoughtful approach helps ensure that the monitoring provides useful information—both an estimate of the resource condition and a test of which hypothesis is best supported. The resource estimate allows the condition of the resource to be evaluated in the absence of temporal data demonstrating a trend, thereby helping to determine whether a management intervention or more targeted monitoring is needed.

The WOSF HCP commitments guide much of the monitoring and span many FMP goals and strategies. Additional monitoring for adaptive management of FMP goals is tracked in the AMP, with prioritization of monitoring projects and expected outcomes developed alongside the IP.

Reporting

The AMP coordinates monitoring projects with their reporting commitments for different plans, such as annual, 5- and 10-year reports for the WOSF HCP, progress toward IP objectives, and performance measures reported to the BOF.

4.3.14.3.3 Research

Research in the context of the FMP is intended to generate reliable scientific information to guide management actions. New research performed by the agency would beODF is designed within a decisionan adaptive management framework. The agencyIn addition, ODF supports and relies on several research cooperative partnerships to advance scientific understanding in strategic areas important for achieving management objectives., such as planting tree species outside their normal range to account for forecast changes in climate, suitable forest *composition* for ecosystem service delivery, and improvements to landscape design to balance benefits across space and time. ODF offers planning support and special use permitting for research performed on state forest lands by scientists outside of the agency.

The decision-making framework describes the process for incorporating new information to ensure that the FMP is using the best available science. Peer-reviewed, published research may change the credibility or applicability of the assumptions that were used to develop the FMP strategies. New information fits into the SDM cycle when assessing the management alternatives, consequences, trade-offs, and uncertainty. Revisiting prior steps in the decision-making cycle is expected when new information is incorporated.

4.3.2 Adaptive Management Plan

The AMP offers direction and administration for (1) facilitating decision analysis and adaptive management; (2) designing monitoring; (3) reporting monitoring results, analyses, and decisions; and (4) identifying and integrating information and decision needs within state forest lands.

The AMP is a separate document from the FMP that provides a current roadmap for monitoring that supports the implementation of the FMP and improves management over time (see box at right). The need for an AMP comes from the expanded scope of this FMP that includes adaptive management as a key tenet of its management approach, a companion HCP with extensive monitoring requirements, and a commitment to accountability to the BOF and all Oregonians. Monitoring, reporting, and decision-making support will be continuously updated in the AMP and reported in a more nimble and integrative manner that enables timely management responses to new information.

Vision for the Adaptive Management Plan

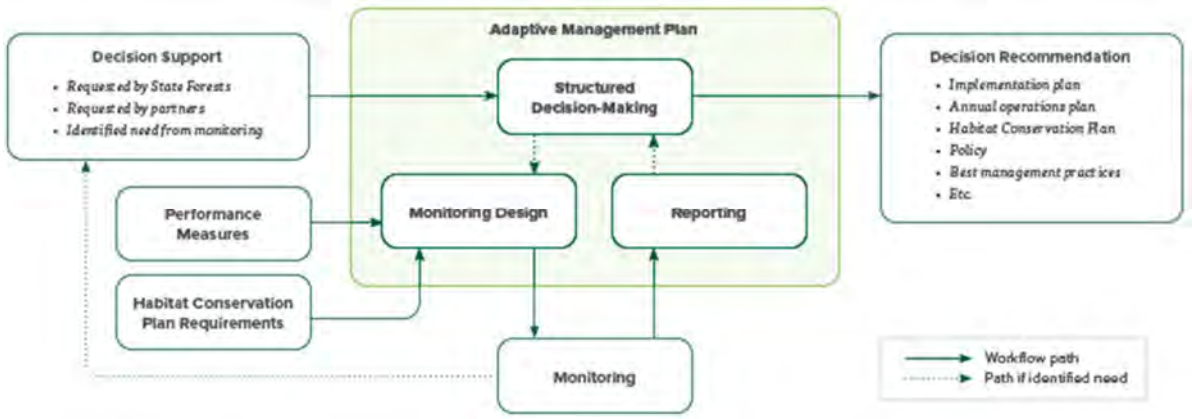
- **Transparent.** Interested parties and ODF staff can easily access current work plans and planning documents for decision-making processes and anticipated timelines for delivering results.
- **Understood.** Interested parties and ODF staff know about the AMP and understand its mission and purpose, and the AMP is written in plain language.
- **Effective.** State Forests manages its lands to achieve Greatest Permanent Value and can make changes to management practices based on new information.
- **Inclusive.** The AMP invites interested and affected parties and ODF staff into its processes and incorporates their feedback.
- **Efficient and timely.** The AMP focuses on informing planning and management via developing adaptive monitoring efforts that deliver useable results as quickly as possible.
- **Responsive.** When State Forests detects issues through monitoring, it works to address manage ment problems creatively, transparently, and effectively.
- **Valued.** Interested parties and State Forests recognize the social and technical benefit that AMP products provides to State Forests and all Oregonians.
- **Reliable.** Decision analysis and monitoring design use the best available science to produce reliable metrics.

Workflows for Decision Analysis, Monitoring, and Assessment of Information Needs

The AMP serves as a hub for information gatheri d plans that incorporate adaptive management in their objectives. With support from the AMP, decisions are made by individuals or groups at the relevant planning level. For example, if monitoring shows the need for a fundamental change in FMP strategies, the decision would be made by the BOF after a formal public involvement process and codified through OARs. A smaller change, for instance in operational policy or management standards, could be made by the State Forests Division Chief after engaging interested parties through the decision-making process, which may suggest monitoring or adaptive management be included.

In the examples shown in the workflow diagram (Figure 4-3), a need for decision support may be identified by State Forests, interested parties, or metrics falling outside a range of acceptable targets identified in the HCP or performance measures adopted by the BOF. The AMP guides the SDM process (Figure 4-2) to develop recommendations for the decision-maker to consider. As shown by the dashed lines in Figure 4-2, SDM may include designing new monitoring and reporting results as needed for decision support. Decisions may affect IPs and OPs through the process described in Section 4.2, *Implementation Guidelines*.

FIGURE 4-3
Adaptive Management Plan Workflow. This workflow shows key AMP roles and how they can affect FMP implementation through decision support, monitoring, and reporting.



Key Monitoring Needs

The AMP designs monitoring, provides reporting, and responds to needs for additional decision support. Monitoring will include HCP compliance and effectiveness monitoring, BOF performance measures, monitoring of FMP strategies, and adaptive management monitoring recommended through potential SDM processes. These measures are called reporting metrics in the AMP, which describes the *strategy* for developing new metrics and tracks how data are collected, analyzed, and reported for each metric. Many reporting metrics will have quantifiable targets and acceptable ranges designated to assess whether management is meeting the desired outcomes that were monitored (i.e., lagging indicators) or that are predicted from modeling (i.e., leading indicators). Monitoring and reporting for the HCP and BOF-adopted performance measures are two major commitments addressed in the AMP (Figure 4-3).

Implementation of the HCP requires a detailed program of monitoring and adaptive management to ensure compliance and verify progress toward achieving the biological goals and objectives (HCP Chapter 6, *Monitoring and Adaptive Management*). The AMP serves as the structure for the adaptive management program required by the HCP to assess data gaps and scientific uncertainty that could affect how species are managed and monitored over time. The *HCP Administrator* at ODF serves as the key coordinator to initiate the process when triggers for action are identified from either over- or under-accomplishment of biological goals and objectives, or when alternative conservation

practices are available. The HCP adaptive management process fits well within the decision-making framework described in Section 4.3.1, *Decision-Making Framework,* with additional regulatory considerations and involvement with the federal permitting agencies.

The performance measures assess the impact state forest lands have on social, economic, and environmental wellbeing. Performance measures adopted by the BOF will include targets and acceptable ranges that will increase the likelihood of progress toward FMP goals. Some performance measures may be supported through new or existing monitoring programs, which will be organized through the AMP. The AMP develops reporting dashboards to track performance measures for the BOF and public and Tribal engagement.

Project Prioritization and Timeline

The AMP contains a broad suite of monitoring and reporting needs to implement, which may be dependent on the Division's resources. Multiple sources (public and Tribal engagement, the Division's business needs, the HCP, and the BOF) identify needs for decision analysis, adaptive management, or monitoring that will be integrated and prioritized for efficiency.

The AMP sets priorities to develop workplans based on the following criteria comparing potential projects.

- Regulatory requirements, such as HCP compliance monitoring.
- Potential impact on GPV.
- Likelihood of influencing future management decisions.
- Degree of uncertainty or knowledge gap.
- Capacity or feasibility of getting answers in reasonable time and at a reasonable cost.
- Efficient integration with ongoing or planned monitoring.
- Potential for research partnerships.

The timeline for reporting decision analysis products and monitoring results aims to complement IP revisions and comprehensive reviews of HCP implementation. The IP is the key opportunity for the decision-making process, public and Tribal engagement, and adaptive management changes based on monitoring. The AMP workflow focuses on IP information needs in the 2 years leading up to planned IP revisions. New information needs will occur outside of the IP and HCP cycles; the AMP is responsive to opportunities to integrate decision analysis into other Division needs.

4.3.3 Performance Measures

Performance measures are a select set of metrics that the BOF will use to evaluate management outcomes with respect to the objectives and intent expressed through the FMP guiding principles, management approach, and goals (Figure 4-1). The performance measures have specific components that will be monitored and reported under the process described in the AMP. Quantifiable targets and acceptable ranges designated by the BOF for performance measures'

components will indicate whether FMP strategies are working as intended to provide GPV. While performance measures do not encompass all aspects of ODF monitoring and reporting, their purpose is to provide an up-to-date dashboard for the BOF and the public to track management outcomes readily across a broad range of key ecosystem services provided by State Forests.

4.3.4 Process Improvement

ODF pursues process improvements to data collection, monitoring, and reporting to provide high-quality and accessible information to ODF staff, the BOF, and the public. This forms the basis for effective planning and assessing progress toward plan goals to ensure continued resilience of state forests in response to known and emerging stressors. Within the limits of budgetary constraints, ODF leverages new technologies to provide increasingly precise and accurate assessments of forest ecosystem conditions at multiple spatial and temporal scales to inform all levels of management, from site-specific operations to overarching policy.

4.4 Decision Authority and Revision Guidelines

As the environment changes, revisions to plans and processes may be necessary to implement adaptive management and to incorporate new information. Different policy contexts and planning levels dictate the process involved, including appropriate authorities.

4.4.1 Forest Management Plan

The BOF reviews the management focus of the FMP no less than every 10 years in light of current social, economic, scientific, and *silvicultural* considerations (OAR 629-035-0020). It may require 10 years or more for monitoring to establish trends. As new information becomes available, it is evaluatedThe BOF evaluates new information in the context of the *guiding principles*, goals, and strategies of the FMP. If implementation of the FMP is not achieving the BOF's desired results, as (e.g., indicated by the from monitoring and reporting of performance measures, the Division will revise), the BOF may respond by directing the State Forester to change implementation of the FMP through revising operational policies. If poor performance or BMPs or adjusting implementation focus. The BOF may initiate an FMP revision if outcomes cannot be corrected through revised operational policies, or if research or monitoring shows the need for a fundamental change in FMP strategies,improved by implementation changes alone. The BOF and the State Forester will weighengage county partners, Tribes, other federal and state agencies, stakeholders and the scientific, operational, Tribal, and public to gather input in a transparent and formal public process to determine if changes are needed to on the FMP. Any changes will then be codified through OARsproposed revision.

4.4.2 Habitat Conservation Plan

The WOSF HCP modificationamendment process is described in the WOSF HCP Chapter 8, *Implementation*.document. Amendments to the WOSF HCP or permit modifications*Incidental Take Permits* are expected to be rare and informed by the adaptive management process as outlined in HCP Chapter 6, *Monitoring and Adaptive Management*.the WOSF HCP. ODF, the U.S. Fish and Wildlife Service,

and the National ~~Oceanic Atmospheric Administration~~Marine Fisheries Service are key decision-makers in the modification process.

4.4.3 Implementation Plan

As new information becomes available through monitoring and reporting, the State Forester may revise IPs in response to changing or unforeseen conditions (e.g., large-scale disturbance events) or development of new or better approaches to implementation identified through adaptive management. Table 4-2 outlines the key decision-makers.

~~4.4.3~~4.4.4 Operational Policy

~~Changes to~~The State Forester or State Forests Division Chief may change operational ~~policy occur~~policies as needed, in response to information from the adaptive management process, changing laws or conditions, new technology, improved management strategies, or new direction from the BOF or ODF leadership. ~~Key decision-makers depend on the policy~~Specific approval authorities depend on the scope of the policy in question, with the State Forester approval of policies that apply broadly to the agency, and State Forests Division Chief approval of policies confined to the State Forests Division. Most operational policies related to the management of state forests under this FMP fall under the authority of the State Forests Division Chief.

~~4.3.4 Implementation Plan~~

~~As new information becomes available, the IP may be revised in response to changing conditions or development of new or better implementation strategies identified through adaptive management. Revisions made at the IP level may include the types or amounts of management opportunities and their spatial arrangement. Key decision-makers are outlined in Table 4-2.~~

4.4.44.4.5 Forest Land Management Classification System

Revisions may be needed to the FLMCS when there is a change to the management emphasis on a parcelan area of land. Examples of such changes include the development of a new campground, a new wild and *scenic river* designation, or the removal of a research area after completion of a project. The District Forester recommends revisions to the Area Director, who may approve minor revisions or review and recommend major revisions to the State Forester for approval. While revisions may take place at any time, major revisions are usually carried out during IP development, and minor revisions are typically applied during OP development. A complete description of the process, including public comment periods can be found in OAR 629-035-0060.
Definitions of minor and major revisions can be found in OAR 629-035-0060.

4.5 Engagement Guidelines

The goals for public involvement in forest land planning are outlined in OAR 629-035-0800080 and include providing information, seeking insight, building understanding, and providing public comment opportunities. The goals For tribal engagement, the goals and strategies are outlined in Chapter 3, *Forest Resource Resources, Goals, and Strategies*, and implementation is described in the IPs and OPs.

The purpose of public engagement is to create a relationship that provides meaningful opportunities to contribute to planning decisions. Engagement is most beneficial during the IP process, when input can have the most influence on the levels and types and location of planned management activities. Engagement opportunities for the IPs occur during the public comment period, which generally occurs during the IP development process, prior to final approval. Input may contribute to setting priorities and identifying general locations of management activities. Input provided atFor the Operations Plan level would focusOPs, engagement opportunities occur during the annual or biennial public comment period, where input typically focuses on smallspecific operations or activities, minor changes, refinements, or clarification of the plan. Additional opportunities for public input occur through BOF meetings. Table 4-3 shows the engagement opportunities, forums, and frequency by plan level and provides examples of types of input received during past engagement.

TABLE 4-3
Engagement Opportunities and Examples

Plan Level Venue	Engagement Areas	Topic	Example Comment
AMPFMP Performance Measures BOF meetings	• Feedback and participation in the SDM process with regard to objectives, alternatives, consequences, and trade-offs • Performance measures adopted for the purpose of BOF to assessassessment of the FMP • Reports on performance measure trends	SDM public engagementPerformance measures BOF public meetingPerformance measure trends	• Our user group would like XYZ objectives included in the decision analysis, and this is how the impact of management alternatives on our user group could be measured.The best available science has changed the understanding of the *adaptive capacity* of forests. The BOF should change the way adaptive capacity is measured and reported by ODF. The BOF should request an evaluation of the trend in the XYZ Performance Measure reported on the public dashboard because objectives for XYZ resource are not being met and management may need to change. The BOF should promote the development and implementation of Tribal engagement policies to ensure ongoing consultation and coordination regarding potential impacts from forest • management activities at every level.The reported trend in *carbon sequestration* is insufficient. We think the BOF should adopt a carbon sequestration target for ODF.

IP Public comment period	• Harvest types, priorities, and general locations • Recreation, education, and interpretation development/activity levels, types, priorities, and general locations • Stream enhancement types, priorities, and general locations • Road assessments, project types, priorities, and general locations • Monitoring and adaptive management priorities	~~**Monitoring prioritization**~~Management activity type and location	• ~~Recreational surveys~~I would like more mountain biking trails, preferably built inside habitat conservation areas to reduce potential conflicts with harvesting. • Harvest objectives need to be increased to provide better economic opportunities in rural communities. • I would like to see more species diversity in newly planted *stands* including hardwoods. • I think reducing road density within a certain *watershed* should be prioritized ~~during this IP to gather information that may be used to reduce conflict between user groups~~. • ~~Integrate Tribal Partners' priorities and practices to ensure protection and proliferation of cultural and natural resources.~~Harvests within habitat conservation areas should focus on young stand thinning. • I recommend managing for complex early-*seral* conditions after *regeneration harvest* in specific watersheds.
		Stream enhancement/road project priority and location	• I propose a specific watershed as a high priority for stream enhancement to align with work being done by a local Watershed Council in the next 5 years to replace non-fish-passable *culverts* and enhance 5 miles of a specific stream.

Plan Level Venue	Engagement Areas	Topic	Example Comment
IPOP Public comment period (annual or biannual)	• Harvest levels, harvest types, priorities, and general locations • Recreation, education, and interpretation development/activity levels, types, priorities, and general locations • Stream enhancement levels, types, priorities, and general locations • Road project levels, types, priorities, and general locations • Monitoring and	Management activity type and locationEfficiency / site-specific information	I would like more mountain biking trails, preferably built inside HCAs to reduce potential conflicts with harvesting. • Work with Tribal Partners to integrate The boundary of a specific timber sale could be extended to the southwest where the terrain flattens out. Extending the boundary would eliminate the need to work through young stands while harvesting the timber during future sales. A specific sale has a potential culturally important plant and animal species (such as bear grass, camas, and spruce root). Work with Tribal Partners to encourage access and co-management opportunities, including cultivation techniques that promote culturally/historic significant attributes, and sharing native seed sources and native seedlings. • Coordinate with Tribal Partners to identify sales that may affect ancestral lands, level significance, and potentialsite that requires certain protection measures that may be needed to protect culturally significant resources.
		Clarification	• I don't understand the terminology being used in this plan. Can you include definitions for BA, shelterwood and MBF in the document? • I'm uncertain about what exactly the stream enhancement entails. Can you provide more details on the project?

	~~adaptive management priorities~~Ensured consistency with the IP and/or FMP • Improved efficiency or effectiveness • Clarified description of planned operations • Additional information or correction of an error • Solution-oriented comments to achieve GPV goals and objectives	~~**Stream enhancement/road project priority and location**~~Solutions-oriented	~~I propose the "generic" watershed as a high priority for stream enhancement and road improvement projects to align with work being done by the "Generic" Watershed Council in the next 5 years to replace non-fish-passable culverts and enhance 5 miles of the "generic" stream.~~ • ~~Engage Tribal Partners in prioritizing and identifying partnership opportunities to protect culturally significant aquatic species, such as salmonids and lamprey.~~This sale area will affect approximately 1 mile of the existing trail. Is it possible to have trails open for use on the weekends? • I am concerned with the amount of dust that comes off the road during log hauling. Can you please use dust abatement measures on the gravel road in front of my house to limit the impact? • This sale includes a domestic water source. I recommend leaving additional leave trees around no-harvest buffers for additional protection. • I am concerned that the proposed timber harvest treatment will not improve habitat for covered species. I recommend increasing leave tree densities to meet specific habitat goals.

Plan Level	Engagement Areas	Topic	Example Comme
OP	• Ensured consistency with the IP and/or FMP • Improved efficiency or effectiveness • Clarified description of planned operations • Additional information or correction of an error • Solution-oriented comments to increase the probability of achieving GPV goals and objectives	Efficiency/effectiveness	The boundary of XYZ sale could b southwest where the terrain flatt the boundary would eliminate through young stands while har during future sal The XYZ sale includes a cultura that requires coordination wi implement XYZ protection
		Clarification	I don't understand the terminol this plan. Can you include de shelterwood and MBF in th XYZ Tribe did not have awarene has potential concerns and w information.
		Solutions-oriented	The XYZ sale area will affect ap mile of the existing trail. I realize working forest and ask for considerations: Limit the timin operation is not active during p season (July–Sept). If this is not trees away from the trail whene all slash removed from the trai equal or better shape than pre-h Have trails open for use on wee

Guidelines

This chapter provided the overarching guidelines for implementing the FMP, evaluating whether the strategies are meeting the goals, and adapting the plans to better meet the goals. Details on how ODF engaged county partners, other state agencies, interested parties, the public, and the *nine federally recognized tribes in Oregon* in the development of the FMP can be found in Appendix A, *Engagement*. Maps of the planning area and district boundaries are found in Appendix B, *Maps*. Visually impaired readers can find descriptions of all FMP figures in Appendix C, *Alternative Text to Figures*. For additional information on supporting plans, policies, tiered planning documents, and reports, please visit the ODF website.

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List of Acronyms and Abbreviations

Acronym	Definition
AMP	Adaptive Management Plan
BMP	best management practice
the BOF	Oregon Board of Forestry
BOFL	Oregon Board of Forestry Lands
CCCP	Climate Change and Carbon Plan
CSFL	Common School Forest Lands
DEQ	Oregon Department of Environmental Quality
Division	State Forests Division
DOGAMI	Oregon Department of Geology and Mineral Industries
DSL	Oregon Department of State Lands
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FDF	Forest Development Fund
FLMCS	Forest Land Management Classification System
FMP	Western Oregon State Forests Management Plan
FPA	Oregon Forest Practices Act
GIS	geographic information system
GPV	greatest permanent value
HCA	habitat conservation area
HUC	Hydrologic Unit Code
HVCA	High Value Conservation Area
IP	Implementation Plan
ITECK	Indigenous Traditional Ecological and Cultural Knowledge
NAAQS	National Ambient Air Quality Standards
OAR	Oregon Administrative Rules
ODA	Oregon Department of Agriculture

Acronym	Definition
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
OHV	off-highway vehicle
OP	Operations Plan
ORBIC	Oregon Biodiversity Information Center
ORS	Oregon Revised Statutes
OWEB	Oregon Watershed Enhancement Board
OWRD	Oregon Water Resources Department
RCA	riparian conservation area
SB	Senate Bill
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SNC	Swiss needle cast
TMDL	Total Maximum Daily Load
VOF	Vision for Oregon's Forests
WOSF HCP	Western Oregon State Forests Habitat Conservation Plan

Glossary

A

Term	Definition
abiotic	Non-living components of an ecosystem.
active management, actively managed	~~Active~~Purposeful application of silvicultural prescriptions and other activities, like reforestation and young stand management, in accordance with the future objectives and current characteristics of forest stands. In contrast, see *passive management*.
adaptation silviculture, adaptive silviculture	Use of silvicultural techniques to increase the forest's ability to adapt to changing conditions and continue to deliver ecosystem services.
adaptive capacity (of ecosystems)	The ability of the system to sustain delivery of desirable ecosystem services under changed climate conditions and other disturbances via resistance and resilience to disturbance or transformative change to an acceptable new equilibrium. The Intergovernmental Panel on Climate Change defines adaptive capacity as the degree to which adjustments in practices, processes, or structures can moderate or offset the potential for damage or take advantage of opportunities created by a given change in climate.
adaptive management	A systematic and rigorous approach to learning from actions, improving management, and accommodating change. Adaptive management is defined as the process of implementing plans in a scientifically based, systematically structured approach that tests and monitors assumptions and predictions in management plans and uses the resulting information to improve the plans or management practices used to implement them (Oregon Administrative Rule [OAR] 629-035-0000). ~~• active adaptive management - A range of alternative management strategies are implemented in an experimental framework so that learning is a primary objective. Even though some alternatives may be suboptimal in achieving management objectives, decision-makers can identify and refine an optimal management strategy through a targeted study that reduces uncertainty~~ ~~passive adaptive management – Outcomes of a single course of action are monitored and the management decisions are adjusted, if needed, based on the results of the monitoring. Learning, or reducing uncertainty, is a secondary objective and alternatives are not tested experimentally.~~

Adaptive Management Plan (AMP)	Describes the monitoring and reporting process that will ensure Western Oregon State Forests Management Plan (FMP) resource goals are met during implementation of the FMP. The AMP grounds monitoring and reporting within an adaptive management framework to inform management decisions and align with Implementation Plan (IP) and *Western Oregon State Forests Habitat Conservation Plan* (HCP) reporting timelines.

~~**Adaptive Management Plan (AMP)**~~Term	~~Describes the adaptive management process used to monitor outcomes, evaluate trade-offs, determine if the strategies are meeting the goals of the Western Oregon State Forests Management Plan (FMP) and *Western Oregon State Forests Habitat Conservation Plan* (HCP), determine if assumptions used in developing the strategies need to be updated, and inform management decisions.~~**Definition**
~~**adaptive monitoring**~~	~~Iterative evolution of a monitoring program in response to new management questions; new or changing environmental or socioeconomic conditions, improved monitoring methods, models, and tools; and experience implementing the monitoring program. See definition for *monitoring*.~~
~~**adaptation silviculture, adaptive silviculture**~~	~~Use of silvicultural techniques to increase the forest's ability to adapt to changing conditions and continue to deliver ecosystem services.~~
administrative ~~sites~~site(s)	Lands where administrative requirements restrict the integrated management of forest resources. These lands include but are not limited to building sites, rock stockpile sites, log storage/sorting sites, and demonstration areas (OAR 629-035-0055 39(c)(B)(i).
aggregate	Sand and pebbles added to cement to make concrete, or that are used in road construction.
~~**archaeological and historic resources**~~	~~Sites, buildings, structures, and artifacts that possess material evidence of human life and culture of the prehistoric and historic past.~~
~~**archaeological or historic object**~~anadromous	~~An object that is at least 75 years old; is part of the physical record of an indigenous or other culture found in the state or waters of the state; and is material remains of past human life or activity that are of archaeological significance, including, but not limited to, monuments, symbols, tools, facilities, technological by-products, and dietary by-products (Oregon Revised Statutes [ORS] 358.905).~~Species, such as salmon, that are born in freshwater, migrate to the ocean to grow into adults, and return to freshwater to spawn.

~~**archaeological or historic site**~~	~~A geographic locality in Oregon, including but not limited to, submerged and submersible lands and the bed of the sea within the state's jurisdiction, that contains archaeological objects and the contextual associations of the archaeological objects with each other, or with biotic or geological remains or deposits (ORS 358.905). Specific types of sites, as defined in Oregon law, are:~~ ~~• pre-historic archaeological site - Created and/or used by humans indigenous to the area before Euro-American inhabitance.~~ ~~• historic archaeological site - Created and/or used by humans since the time of Euro-American inhabitance; usually belowground and/or aboveground diminishing remains.~~ ~~• historic site - Created and/or used by humans since the time of Euro-American inhabitance; usually aboveground structurally intact remains.~~ ~~• site of archaeological significance - Any archaeological site in, or eligible for inclusion in, the National Register of Historic Places as determined in writing by the State Historic Preservation Officer, or any archaeological site that has been determined significant in writing by an Indian tribe (ORS 358.905).~~
aquatic	In or on the water; aquatic habitats are in streams or other bodies of water, as contrasted with riparian habitats, which are near water.
aquatic organism passage, passage, fish passage	Aquatic organism passage is the term for removal or improvement of structures that ~~restricts~~restrict the movement of aquatic animals, such as fish, turtles, amphibians, and insects within and between streams.
aquifer	A sand, gravel, or rock formation that is capable of storing or transporting water below the surface of the ground.
archaeological and/or historic object(s)	An object that is at least 75 years old; is part of the physical record of an indigenous or other culture found in the state or waters of the state; and is material remains of past human life or activity that are of archaeological significance, including, but not limited to, monuments, symbols, tools, facilities, technological by-products, and dietary by-products (ORS 358.905).
archaeological and historic resource(s)	Sites, buildings, structures, and artifacts that possess material evidence of human life and culture of the prehistoric and historic past.

~~area directors~~archaeological and historic site(s)	~~Leads of the two administrative areas covered by this FMP: northwest and southern Oregon. The northwest Oregon area covers Astoria, Tillamook, Forest Grove, West Oregon, and North Cascade Districts. The southern Oregon area covers the Western Lane district.~~A geographic locality in Oregon, including but not limited to, submerged and submersible lands and the bed of the sea within the state's jurisdiction, that contains archaeological objects and the contextual associations of the archaeological objects with each other, or with biotic or geological remains or deposits (ORS 358.905). Specific types of sites, as defined in Oregon law: • Pre-historic archaeological site - Created and/or used by humans indigenous to the area before Euro-American inhabitance.

Term	Definition
	• Historic archaeological site - Created and/or used by humans since the time of Euro-American inhabitance; usually belowground and/or aboveground diminishing remains. • Historic Site - Created and/or used by humans since the time of Euro-American inhabitance; usually aboveground structurally intact remains. • Site of archaeological significance - Any archaeological site in, or eligible for inclusion in, the National Register of Historic Places as determined in writing by the State Historic Preservation Officer, or any archaeological site that has been determined significant in writing by an Indian tribe (ORS 358.905).
Area Director(s)	Lead managers of the two administrative areas covered by this FMP: northwest and southern Oregon. The northwest Oregon area covers Astoria, Tillamook, Forest Grove, West Oregon, and North Cascade Districts. The southern Oregon area covers the Western Lane district.
asset(s)	Tangible resources and infrastructure on state forest lands.

B

B

Term	Definition
basal area	Cross-sectional area of a standing tree bole at breast height. Basal area per acre of all trees in a stand is an important measure of stand density and is related to stand volume.
best management practices (BMPs)	Oregon Forest Practices Act (FPA) rules adopted by the Board of Forestry (BOF) to minimize the impact of forest operations on water quality. These rules ensure that, to the maximum extent practicable, forest operations meet the water quality standards established by the Environmental Quality Commission. The rules focus on reducing nonpoint source discharges of pollutants resulting from forest operations.natural resources, such as water quality or air quality, or human safety, such as trail users.

Term	Definition
biochar	Charred forest material, such as slash or dead plants, which can improve soil productivity and water quality and sequester carbon. The practice of charring forest material and mixing it with soil was used for thousands of years by indigenous people in the Amazonian basin. The practice created rich soils, called "terra preta de Indio", in otherwise infertile soils. Modern technologies use pyrolysis to produce biochar. Pyrolysis prevents harmful emissions and produces valuable byproducts in addition to biochar. Pyrolysis is the thermal decomposition of plant material in the absence of oxygen, which prevents combustion (burning). By preventing combustion, the production process prevents the release of greenhouse gases, particulates, and other toxicants to the atmosphere and instead produces bio-oil and synthesis gas, which are captured and can be used as fuel or precursors to other chemical products. Like coal, biochar is a stable form of carbon that can store carbon in the soil for hundreds to thousands of years.
biodiversity ~~or,~~ biological diversity	The genetic variation and the variety of microbial, fungal, plant, and animal life.
biotic	Any living aspect of the planet.
Board of Forestry (BOF)	The BOF is a seven-member citizen board appointed by the governor and confirmed by the Oregon State Senate. ~~At least one member must reside in each of the state's three administrative regions (east, south, and northwest). No more than three members may receive any significant portion of their income from the forest products industry.~~ The BOF supervises all matters of forest policy in Oregon~~; appoints the state forester~~; adopts rules regulating forest practices; and provides general supervision of the state forester's management of the Oregon Department of Forestry (ODF). The BOF authorizes and directs the State Forester in the management of state forests.

Board of Forestry Lands (BOFL)	BOFL were acquired by the BOF under ORS 530.010–530.040. Most were transferred from counties to the BOF in exchange for a portion of future revenue from the lands. Some lands were acquired by direct purchase.

C

Term	Definition
candidate species	Species being considered by the Secretary of the Interior for listing under the Endangered Species Act as an endangered or a threatened species, but not yet the subject of a proposed rule.
carbon pools	Reservoirs of carbon that have the capacity to both take in and release carbon.
carbon sequestration, carbon storage	The process of capturing and storing atmospheric carbon dioxide.
Class I areas	National park lands and some wilderness areas are designated as federal mandatory Class I areas under the Clean Air Act.

Term	Definition
carbon pools	Categories of carbon reservoirs, such as soil, tree roots, aboveground tree boles, or harvested wood products, that have the capacity to both take in and release carbon.
carbon sequestration	The process of capturing atmospheric carbon dioxide, removing it from the atmosphere where it contributed to global warming. In the forest, sequestration is primarily measured in trees sequestering carbon in their wood through their use of carbon dioxide in photosynthesis
carbon storage	Sequestered carbon is a stable component of various carbon pools within the forest and in wood products, contributing to climate change mitigation by preventing carbon dioxide from being released into the atmosphere. See *carbon pools*.
Class I area(s)	National park lands and some wilderness areas are designated as federal mandatory Class I areas under the Clean Air Act.
Clean Air Act	Federal law passed in 1970 and amended several times since. The authority to implement the act is delegated to states. The Clean Air Act is implemented, in part, through a permit system.
Clean Water Act	Federal law was passed in 1948 under the Federal Water Pollution Control Act but was significantly reorganized and expanded in 1972 and has been known as the Clean Water Act since then. This act, which has been amended several times since 1972 as well, establishes the basic structure for regulating discharges of pollutants into the waters of the United States; states may have their own Clean Water Acts whose standards must meet or exceed the federal mandates.
~~clearcut~~climate change	~~Traditionally, a silvicultural system in which the entire stand of trees is cleared from an area at one time. Some residual trees, snags, and downed wood from the existing stand are retained to meet HCP goals and objectives and FPA requirements. Clearcutting and planting (if needed) result in the establishment of a new even-aged stand of trees.~~Per the United Nations, involves long-term shifts in temperatures and weather patterns. Some shifts are natural, but since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (like coal, oil, and gas), which produces heat-trapping greenhouse gases that build up in the Earth's atmosphere, causing average temperatures around the globe to increase ("global warming").

~~**climate change**~~Term	~~Per the United Nations, involves long-term shifts in temperatures and weather patterns. These shifts may be natural, but since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (like coal, oil, and gas), which produces heat-trapping gases.~~**Definition**
climate change mitigation	Reducing heat-trapping greenhouse gases ~~in~~added to the atmosphere by reducing production from sources (e.g., the burning of fossil fuels for electricity, heat, or transport) ~~of~~ and/or sequestering these gases from the atmosphere, such as through tree growth.
climate-smart forestry	An extension of sustainable forest management developed to guide management of forests in ways specific to climate change adaptation and mitigation efforts and to support climate-affected communities. Climate-smart forestry principles can be enacted through climate-informed silviculture, ~~such as~~which may include reforestation using alternative tree species; reforestation using alternative planting spacings and densities; reforestation using diverse species mix (bet hedging); and leaving legacy trees and downed wood to store carbon on the landscape.
coarse filter~~—~~, fine filter	An operational approach for managing ~~for~~ biological diversity. The coarse-filter component is based on the premise that maintaining a range of seral stages, stand structures, and sizes, across a variety of ecosystems and landscapes, will meet the needs of most organisms. Fine-filter management ~~superimposes~~adds specific management actions for individual species or habitats that require special consideration, such as species with unique or limited distributions.
cohort	A group of trees regenerating after a single disturbance. The age range within a cohort may be as narrow as 1 year (typical with planting under active management) or as wide as several decades~~, depending on how long trees continue invading after a disturbance.~~ (with natural regeneration under passive management).
Common School Fund	A permanent fund or account managed to provide revenues to the common schools. The State Land Board (governor, secretary of state, and treasurer) is the trustee of the ~~Common School Fund (CSF).~~fund.

Term	Definition
Common School Forest Lands (CSFL)	Common School trust lands that have been listed by the State Land Board for the primary goal of managing these lands for the generation of the greatest amount of income for the Common School Fund over the long term, consistent with sound techniques of land management. Common School trust lands that have been listed by the State Land Board for the primary use of timber production are called Common School Forest Lands. Other Common School trust lands are designated as rangelands or for other uses.
composition	~~The nature of something's ingredients or constituents; the way in which a whole or mixture is made up.~~ For an ecosystem, composition refers to the different species of plants and animals that live therein. The dynamic attributes of a forest ecosystem are composition, function, and structure. Composition is the proportion of various species. In contrast, *function* is the processes taking place in the system~~.~~, while *structure* includes kinds and distribution of stand components such as trees, snags, and logs of various sizes and shape.
~~**concept(s)**~~	~~An abstract or generic idea generalized from particular instances.~~
confidential	Limited to persons authorized or entrusted with the information.
conifer forest	These stands occupy most of the state forest lands. ODF classifies conifer stands as those in which conifer tree species compose 50 percent or more of the basal area. Although conifers are the principal species with economic value in these stands, the stands may also include substantial amounts of other vegetation types such as hardwoods, ~~brush, grass~~shrubs, grasses, and ferns, which contribute to a diverse forest ecosystem. These types are either intermixed with the conifers or are in clumps too small to map and inventory separately.
connectivity	A measure of how well different areas (patches) of a landscape are connected by linkages~~, such as~~. For wildlife, habitat patches ~~or~~could be connected by corridors~~.~~ of forest used to move between patches. At a landscape level, the connectivity of ecosystem functions and processes is ~~of equal importance~~considered in addition to the connectivity of habitats, by the spatial arrangement and pacing of management activities.

~~conservation area(s)~~Term	~~Designated land where conservation strategies are applied for the purpose of attaining specific conservation objectives; this may include cultural or biological aspects. In State Forests, conservation areas include habitats used by northern spotted owls and marbled murrelets, riparian conservation areas, rare or unique habitats, and areas requiring special protection for other resource values.~~ ~~Management within conservation areas is aimed at maintaining desired conditions.~~**Definition**
~~cultural resources~~conservation area(s)	~~An aspect of a cultural system that is valued by or significantly representative of a culture or that contains significant information about a culture. A cultural resource may be tangible, a place or space, or a cultural practice. Tangible cultural resources are categorized as sites, buildings, structures, and objects for listing in the National Register of Historic Places and as archeological resources, cultural landscapes, structures, museum objects, and ethnographic resources. A cultural place or space may include areas containing a variety of natural and cultural resources that associated people define as heritage resources, including plant and animal communities, geographic features, and structures. Cultural practices may be associated with plant and animal communities or particular places, acknowledge past events or people, and have significant meaning to practitioners.~~Designated land where conservation strategies are applied for the purpose of attaining specific conservation objectives such as maintaining or improving conditions for species of conservation concern. In State Forests, conservation areas include habitats used by northern spotted owls and marbled murrelets, riparian conservation areas, rare or unique habitats, and areas requiring special protection for other resource values. Habitat conservation areas and riparian conservation areas are defined below and dictated by the WOSF HCP.

~~culvert~~cultural resource(s)	~~Structure that channels water past an obstacle, under a roadway, or to a subterranean waterway. Typically surrounded by soil or road fill (embedded), a culvert may be made from a pipe, reinforced concrete, or other material.~~An aspect of a cultural system that is valued by or significantly representative of a culture or that contains significant information about a culture. A cultural resource may be tangible, a place or space, or a cultural practice. Tangible cultural resources are categorized as sites, buildings, structures, and objects for listing in the National Register of Historic Places and as archeological resources, cultural landscapes, structures, museum objects, and ethnographic resources. A cultural place or space may include areas containing a variety of natural and cultural resources that associated people define as heritage resources, including plant and animal communities, geographic features, and structures. Cultural practices may be associated with plant and animal communities or particular places, acknowledge past events or people, and have significant meaning to practitioners.
~~D~~culvert(s)	Structure that channels water past an obstacle, under a roadway, or to a subterranean waterway. Typically surrounded by soil or road fill (embedded), a culvert may be made from a pipe, reinforced concrete, or other material.

D

Term	Definition
debris torrent, debris flow	Rapid movement of a large quantity of materials, including wood and sediment, down a stream channel. This generally occurs in smaller streams during storms or floods, which scours the streambed.
~~**decision analysis**~~	~~A process used to simplify decisions by breaking them down into key parts to work through in sequence.~~

~~deep-seated landslide~~Term	~~Slides in which the bulk of the slide plane lies below the roots of the forest trees, with a depth ranging from 10 feet to several hundreds of feet. These slides are usually caused by a change in the geologic and hydrologic processes in the area of the landslide, such as seismic shaking or increased levels of groundwater. Once formed, deep-seated landslides can persist for a few years or even centuries. See definition for *landslide*.~~Definition
degraded forest lands, degraded watersheds	~~Degraded forest land conditions are those~~Areas where the forest's biodiversity and ecological processes are diminished or severely constrained. These conditions may exist because of past management practices or large-scale disturbances such as fire, windstorms, floods, and outbreaks of insects or pathogens. ~~Degraded forest land conditions may exist because of past management practices or natural disturbances such as fire, windstorm, floods, and outbreaks of insect or pathogens.~~
demographics	~~Demographics is~~ The collection and analysis of general characteristics about groups of people and populations, such as age, gender, and income.
demonstration ~~forests~~forest(s)	Timberland ~~that is~~ managed for forestry education, research, and recreation. It demonstrates innovations in forest management, watershed protection and restoration, and environmentally sensitive timber harvesting techniques.
deposition	When rocks or particles of soil or silt are carried from one location and placed in another, usually by moving water or wind. The wind or water can physically pick up and carry small particles, and these particles are deposited when there is not enough energy to carry them any longer.
~~density~~desired stand goal	~~The average number of individuals or units per unit of space. In terms of forestry, density is often the number or size of a population (trees, species, etc.) in relation to a unit of space. In silviculture, stand density is measured as the amount of tree biomass per unit area of land. This can be measured as the number of trees, basal area, wood volume, or foliage cover. Also see "stand density" and "stand density index."~~A planning goal that describes the conditions land managers are attempting to achieve over a specified period of time in a given geographic area. In some cases, the land may already be in the desired condition and land managers would focus on maintaining those conditions. If the natural area is not currently in the desired condition, managers may take actions to encourage a different pattern of change over time to reach the desired stand goals. The desired stand goals describe the land or resource conditions of the forest

	given implementation of management direction contained in the plan if goals and objectives are fully achieved.
~~**deposition**~~**dispersal habitat**	~~Deposition is when rocks or particles of soil or silt are carried from one location and placed in another, usually by moving water or wind. The wind or water can physically pick up and carry small particles, and these particles are deposited when there is not enough energy to carry them any longer.~~For northern spotted owls, can be conifer and mixed mature conifer-hardwood stands with a canopy cover greater than or equal to 40 percent but without suitable nesting habitat and contains understory features that inhibits foraging both through decreased visibility of prey (overgrown vegetation or high twig density) or inadequate understory vegetation to support prey species. (Habitat neither suitable for nesting nor foraging.)
dispersed recreation	Areas where camping and hiking are allowed in undeveloped areas, where there are no trail or camping facilities or infrastructure.

~~**desired future condition**~~**Term**	~~A planning goal that describes the conditions land managers are attempting to achieve over a specified period of time in a given geographic area. In some cases, the land may already be in the desired condition and land managers would focus on maintaining those conditions. If the natural area is not currently in the desired condition, managers may take actions to encourage a different pattern of change over time to reach the desired conditions. The desired future condition describes the land or resource conditions of the forest given implementation of management direction contained in the plan if goals and objectives are fully achieved.~~**Definition**
~~**dispersal habitat**~~	~~For northern spotted owls', can be conifer and mixed mature conifer-hardwood stands with a canopy cover greater than or equal to 40 percent but has no suitable nesting habitat and contains understory features that inhibits foraging both through decreased visibility of prey (overgrown vegetation or high twig density) or inadequate understory vegetation to support prey species. (Habitat neither suitable for nesting nor foraging.)~~
dissected	A landscape that has been cut into hills and valleys by the process of erosion.
district(s)	The FMP planning area is organized into management districts. Northwest area districts are Astoria, Tillamook, Forest Grove, West Oregon, and North Cascade. The Western Lane District includes all state forests in Lane County and southwest Oregon.
District Forester	The lead forester for an ODF ~~district. See definition for *field districts* and *ODF*~~management district.
disturbance(s)	A force that causes significant change in an ecosystem's structure and/or composition. Disturbance can be caused by natural events such as fires, floods, extreme winds, earthquakes, and insect or disease outbreaks, or by human activities.
domestic water use	The use of water for human consumption and other household human use.
~~**diversity**~~**dominant, co-dominant**	~~Variety encompassed within a group. In terms of diversity, equity and inclusion (DEI), diversity means honoring and including people of different backgrounds, identities, and experiences collectively and as individuals. It emphasizes the need for sharing power and increasing representation of communities that are systemically underrepresented and under-resourced. These differences are strengths that maximize the state's competitive advantage through innovation, effectiveness, and adaptability.~~The largest-sized trees in a stand with crowns in the forest canopy that receive direct sunlight. Co-dominant implies that multiple species contribute to the dominant canopy layer. Also used as a synonym for primary, for example, in

	describing the most common component of a stand or ecosystem process.
downed wood, woody debris	Fallen trees or pieces of trees on the forest floor or in the stream channel that provide many important functions such as ~~mineral cycling,~~ nutrient ~~mobilization~~cycling, maintenance of site productivity, natural forest regeneration (nurse logs), substrates for mycorrhizal fungal network formation, and diverse ~~habitats~~habitat elements for fish and wildlife species.

E

Term	Definition
ecological silviculture	Silvicultural practices that promote within-stand diversity and complexity found in unmanaged older forests by emulating the stand initiation and development processes that result from small-scale natural disturbances (e.g., windthrow, lightning, insects, disease).

~~E~~

~~**ecological silviculture**~~**Term**	~~Based on the spatial heterogeneity found in unmanaged old forests and seeks to emulate stand initiation and development processes that result from small-scale natural disturbances (e.g., windthrow, lightning, insects, disease) to promote within-stand diversity and complexity.~~**Definition**
ecologically sustainable forest management~~**, ecologically sustainable approach~~	A management approach that focuses on ~~supporting the function of forest ecosystems and processes, to improve capacity to adapt and~~the sustainable delivery of ecosystem services while maintaining the integrity and improving the resilience of the ecosystem.
ecology	The ~~biological science that deals with~~ study of the ~~relations~~interactions of organisms to one another and ~~to~~with their physical environment.
~~**ecosystem function(s) or functioning**~~	~~The many and varied biotic and abiotic processes that make an ecosystem capable of reproducing outcomes over time (e.g., biogeochemical processes, nutrient cycling, decomposition, regeneration, and succession that supports survival of a common set of species over time).~~
~~**ecosystem goods and services**~~	~~Goods produced by ecosystems such as water, food, medicine, fuel, construction materials; and services produced by ecosystems such as clean air, clean water, heat mitigation, flood risk mitigation, water storage, and erosion control.~~
ecosystem(s)	A complex system comprising populations of organisms considered together with their physical environment and the interacting processes that exchange energy and matter between them (e.g., marsh, watershed, lake ecosystems). Ecosystems do not have boundaries fixed in time or space, or fixed biological or physical compositions, because the form and function of ecosystems change at various rates, depending on prevailing environmental factors and their resistance and resilience to disturbances.
ecosystem function(s) or functioning	The many, interacting biotic and abiotic processes that occur within an ecosystem (e.g., biogeochemical processes, nutrient cycling, decomposition, regeneration, and succession).
ecosystem goods and services	Goods produced by ecosystems such as water, food, medicine, fuel, construction materials; and services produced by ecosystems such as clean air, clean water, heat mitigation, flood risk mitigation, water storage, and erosion control.

edge(s)	The point where two different plant communities (different vegetation types, successional stages, or conditions) meet. Edges may be created by a soil or topographical feature of the site, or where short-term effects are created by natural or human-caused disturbances.
effectiveness monitoring	Monitoring designed to evaluate whether a given management action was effective in meeting a stated management objective. See definition for *monitoring*.

emphasis ~~areas~~area(s)	Spatially explicit areas managed with an emphasis ~~in~~on certain resource goals or benefits, such as wildlife habitat improvement or timber production. See *Forest Land Management Classification System (FLMCS)* and Chapter 2 for how the designation, distribution, and management ~~to achieve different combinations of resources goals. Layout~~ of emphasis areas ~~across the landscape supports diversity, connectivity, complexity, and redundancy, which support adaptive capacity for sustained ecosystem services delivery under changing conditions~~contributes to ESFM.

Term	Definition
endangered species	As defined by the Endangered Species Act of 1973 (ESA), any species (including subspecies or qualifying population) that is in danger of extinction throughout all or a significant portion of its range.
Endangered Species Act (ESA)	~~Provides~~Federal and state laws that provide a framework to conserve and protect endangered and threatened species and their habitats both domestically and abroad.
endemic species	Species restricted to a geographic location and found nowhere else in the world.
engagement	The involvement and participatory actions of the public and Tribes in planning and decision-making processes.
engineering	The science or profession of developing and using nature's power and resources in ways that are useful to people (as in designing and building roads, bridges, dams, or machines and in creating new products).
environmental gradient	Changes in physical or chemical characteristics across space, such as elevation, soil characteristics, ground slope, air or stream temperature, soil moisture or humidity, average annual precipitation.
~~equity~~Equipment Restriction Zone (ERZ)	~~The quality of being fair and impartial. As part of DEI, equity acknowledges that not all people, or all communities, are starting from the same place due to historic and current systems of oppression. Equity is the effort to provide different levels of support based on an individual's or group's needs to achieve fairness in outcomes. Equity actionably empowers communities most affected by systemic oppression and requires the redistribution of resources, power, and opportunity to those communities.~~A 35-foot buffer within RCAs where ground disturbance and vegetation removal are minimized to project streambanks and aquatic habitat.
erosion	The geological process in which earthen materials are worn away and transported by natural forces such as wind or water.
ethnobotanical	The scientific study of the traditional knowledge and customs of a people concerning plants and their medical, religious, and other uses.

Term	Definition
Evolutionarily Significant Unit (ESU)	An ESU is a group of stocks or populations that 1) are substantially reproductively isolated from other population units of the same species; and 2) represent an important component in the evolutionary legacy of the species. This term is used by the National Marine Fisheries Service (NMFS) as guidance for determining what constitutes a distinct population segment for the purposes of listing Pacific salmon species under the ESA. For example, the Oregon Coast chinook ESU is a delineation that encompasses all populations of chinook salmon from the Necanicum River on the northern Oregon coast, to Cape Blanco on the south coast.

F

~~F~~Term	Definition
~~**field districts**~~	~~The FMP planning area is organized into management districts, or field districts. Northwest districts are Astoria, Tillamook, Forest Grove, West Oregon, and North Cascade. The southwest district covered in this FMP is Western Lane.~~
financial viability	Achieved over the long term through continued protection and management of the forest asset; achieved over the short term with operational tools that ensure cash flow is available to ODF for sound management of state forest lands.
fine filter	See definition for *coarse filter~~-~~, fine filter*.
fiscal conditions	Describes a government's ability to meet its financial and service obligations. If an agency is able to meet these obligations, it is in good fiscal condition; if not, it may experience fiscal stress.
fish passage	See definition for *aquatic organism passage*.
FMP area	See definition for *planning area*.
forest carbon	Atmospheric carbon dioxide that is ~~assimilated~~sequestered and stored by trees and other vegetation through the process of photosynthesis and released during respiration and decomposition.

Forest Development Fund (FDF)	~~Fund through which all BOF expenditures and revenues are managed.~~Revenue derived from BOFL that is retained by ODF and used as the operating fund for management of BOFL. Note that this fund is tracked independently within ODF's general operating funds but does not exist as a separate account.
~~**forest health, healthy forest landscapes**~~	~~Severity, extent, and frequency of events causing injury or death of trees and other organisms living in the forest; ability of forest to resist or recover from disturbance events; ecosystem health.~~

Term	Definition
forest health, healthy forest landscapes	Forest condition where the severity, extent, and frequency of events causing injury or death of trees and other organisms is minimized; ability of forest to resist or recover from disturbances both natural and manmade.
Forest Land Management Classification System (FLMCS)	As codified in OAR 629-035-~~0050~~00550, a method of describing the management emphasis of parcels of state forest lands. The FLMCS is recorded as a geographic information system (GIS) layer. 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 as designated by the FMP, the WOSF HCP, and other laws or commitments. State forest lands are classified as General Stewardship, Focused Stewardship, Special ~~Stewardship~~Use, or High Value Conservation Areas.
forest product(s)	Products that people take to market or use directly like timber or firewood, mushrooms, and medicinal plants. See *special forest products.*
forest resources	As defined by OAR 629-035-0000, include, but are not limited to: (a) Timber production and harvest; (b) Salmonid, and other native fish and wildlife habitats; (c) Soil, air, and water; (d) Forage and browse for domestic livestock; (e) Landscape effect; (f) Protection against flood and erosion; (g) Recreation; (h) Mining; (i) Use of water resources; and (j) Administrative sites.

Term	Definition
Forest Trust Lands Advisory Committee	An advisory group of elected county commissioners mandated by statute that advise the BOF and state forester on matters related to state forestland managed by ODF. The council represents the 15 counties with state forest lands on policy matters related to the management of the forestlands and distributions of revenues produced from those lands. The counties that receive revenues from these forestlands are Benton, Clackamas, Clatsop, Columbia, Coos, Douglas, Josephine, Klamath, Lane, Lincoln, Linn, Marion, Polk, Tillamook, and Washington. The committee's member roster is established during the middle of November each year when the Council of Forest Trust Land Counties elects their board of directors at the annual meeting of the Association of Oregon Counties.

forestry	The science and practice of establishing, managing, and conserving forests and associated resources in a sustainable manner to meet desired goals, needs, and values.
formation(s)	The action of forming or process of being formed. In geology, a formation is a group of strata, or layers, of the same sort of rock or mineral, or rock having common characteristics. A formation is usually defined distinctive enough in appearance that a geologic mapper can tell it apart from the surrounding rock layers.
fragmentation	The relationship of the landscape matrix to other types of patches; as fragmentation increases, the matrix becomes geometrically more complex. Maximum landscape fragmentation occurs when no dominant patch exists. Fragmentation is also defined as the spatial arrangement of successional stages across the landscape as the result of disturbance and is often used to refer specifically to the process of reducing the size and connectivity of late successional or old growth forests.Process of breaking up forest types or habitat patches into smaller areas and reducing connectivity by impeding the movement of organisms.
function(s), ecological function	An activity or process that occurs in an ecosystem; some typical functions are plant growth, animal reproduction, and decay of dead plants.

G

~~G~~Term	Definition
geographic information system (GIS)	A system for management analysis and display of geographic knowledge that is represented using a series of information sets such as maps and globes, geographic data sets, processing and workflow models, data models, and ~~meta data~~metadata.
geology	The ~~science that deals with~~study of the earth's physical structure and substance, its history, and the processes that act on it.
geomorphic process	The physical and chemical interactions between Earth's surface and natural forces that shape landforms such as stream channels and floodplains over time. These processes are driven by tectonics and volcanism and weathering, erosion, and deposition by water, wind, and ice.
geothermal	Of or relating to the internal heat of the earth.
goals	A concise, broad statement of an organization's end or process that programs are designed to achieve. OAR 629-035-0030 requires that the FMP contain "forest resource management goals, which are statements of what the State Forester intends to achieve for each forest resource within the planning area consistent with OAR 629-035-0020 (Greatest Permanent Value)."
greatest permanent value (GPV)	Healthy, productive, and sustainable forest ecosystems that over time and across the landscape provide a full range of social, economic, and environmental benefits to the people of Oregon as defined in OAR 629-035-0020.

guidelines	A set of recommended or suggested methods or actions that should be followed in most circumstances to assist administrative and planning decisions, and their implementation in the field. They are provided as a broad framework of recommended actions to be taken and, thus, provide some flexibility for decision-making.
guiding principles	The overall rules, goalsaims, and responsibilities that guide the planning process for the northwest Oregon state forests. Guiding principles are required elements for the FMP identified in the Forest Management Planning rule (OAR 629-035-0030).

H

habitat	The resources, conditions, and factors necessary to support living organisms over space and through time. Improving habitat means improving the resources or conditions that support a species' health and longevity or the population's persistence.
habitat conservation area (HCA)	A protected area with site-specific boundaries established by the HCP intended to conserve, maintain, and enhance habitat for the terrestrial covered species.
habitat conservation plan (HCP)	A comprehensive planning document that is a mandatory component of an Incidental Take Permit (ITP) application pursuant to section 10(a)(2)(A) of the ESA. The *Western Oregon State Forests HCP* enables ODF to comply with the federal ESA for certain covered species while conducting land management activities on state forest lands west of the Cascade Crest.
habitat conservation plan (HCP) administrator	Serves as the key coordinator to initiate the process when triggers for action are identified from either over- or under-accomplishment of biological goals and objectives, or when alternative conservation practices are available.
hardwood stand	Found on a minority of state forest lands. ODF classifies hardwood stands as those in which hardwood species comprise more than 50 percent of the tree canopy.
harvest units	Delineated forest parcels that reflect potential logical harvest operation areas considering topography and access. A unit for clearcut and thinning choices.

H

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hardwood stand(s)	Found on a minority of state forest lands. ODF classifies hardwood stands as those in which hardwood tree species comprise more than 50 percent of the stand's basal area.
harvest units	Delineated forest parcels that reflect potential harvest operation areas considering topography and access. A unit for silvicultural prescriptions such as regeneration and thinning harvests.
headwater	The source or uppermost tributaries and wetlands where larger streams begin, located at the higher elevations within a watershed
healthy forest landscapes	See *forest health*.

Term	Definition
historic or historical resources	Defined by state and federal law, these include artifacts, property, and sites: • Historic artifacts - Three-dimensional objects including furnishings, art objects, and items of personal property that have historic significance. Historic artifacts do not include paper, electronic media, or other media that are classified as public records (ORS 358.635). • Historic property - Real property that is listed in the National Register of Historic Places, established and maintained under the National Historic Preservation Act of 1966, or approved for listing on an Oregon Register of Historic Places. • Historic site - Sites created and/or used by humans since the time of Euro-American inhabitance; usually ~~above-ground~~aboveground structural intact remains.
hydrologic processes	Describes how water is exchanged (cycled) through Earth's soil, geology, vegetation, and atmosphere through evaporation, transpiration, condensation, precipitation, infiltration, and subsurface flow. Hydrologic processes relate to how the landscape is shaped by water, for example how streams and floodplains form and change over time.
hydrology	The study of the properties, distribution, and effects of water on the landscape, under the surface, in the rocks, and in the atmosphere.

I

Term	Definition
implementation monitoring	Used to determine if objectives, standards, and management practices specified by law, regulation, policy, or the HCP are being implemented. Implementation monitoring is used to determine whether specified actions or criteria are being met. See definition for *monitoring*.
Implementation Plan (IP)	An ODF plan that describes the management approaches and activities designed to achieve the FMP goals and the WOSF HCP goals and objectives within a ~~shorter~~ timeframe ~~(e.g., 8–12~~of approximately 10 years~~).~~.

Term	Definition
Incidental Take Permit	~~An Incidental Take Permit (ITP) is~~ A federal exemption to take prohibition of Section 9 of the ESA; the ITP is issued by the U.S. Fish and Wildlife Service pursuant to Section 10(a)(1)(B) of the ESA. An ~~ITP~~Incidental Take Permit is also referred to as a Section 10 Permit or Section 10(a)(1)(B) Permit. To take is to "... to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" with regard to federally listed endangered species of wildlife (Section 3(18) of the ESA). Federal regulations provide the same taking prohibitions for threatened wildlife species (50 CFR 17.31(a)).
~~inclusion~~**Indigenous Traditional Ecological and Cultural Knowledge (ITECK)**	~~The action or state of including or of being included within a group or structure. In terms of DEI, inclusion is a state of belonging when persons of different backgrounds, experiences, and identities are valued, integrated, and welcomed equitably as decision-makers, collaborators, and colleagues. Ultimately, inclusion is the environment that organizations create to allow these differences to thrive.~~A body of observations, oral and written knowledge, innovations, practices, and beliefs developed by Tribes through interaction and experience with the environment. ITECK can be developed over millennia, continues to develop, and includes understanding based on evidence acquired through direct contact with the environment and long-term experiences, as well as extensive observations, lessons, and skills passed from generation to generation. ITECK is grounded in social, spiritual, cultural, and natural systems that are frequently intertwined and inseparable, offering a holistic perspective. ITECK is inherently heterogeneous and unique to each Tribe, due to the cultural, geographic, and socioeconomic differences, as well as their history and the surrounding environment.
integrated pest management	A systematic approach that uses a variety of techniques to reduce pest damage or unwanted vegetation to economically and socially tolerable levels. Integrated pest management techniques may include the use of natural predators and parasites, genetically resistant hosts, environmental modifications, and, when necessary and appropriate, chemical pesticides or herbicides.

integrated resource management	The management of two or more resources in the same general area and period of time (e.g., water, soil, timber, grazing, fish, wildlife, and forests). Integrated resource management means that the design and application of management practices must consider the effects and benefits of all of the forest resources in such a way that those effects and benefits lead to achieving the goals in the FMP over time and across the landscape.

L

~~L~~Term	Definition
landscape(s)	In ecological terms, an area of land containing a mosaic of different patches~~, often within which a particular "target" patch is embedded. Also defined as a unit of land with separate plant communities~~ or ecosystems ~~forming~~that interact through ecological ~~units with distinguishable structure, function, geomorphology,~~processes and ~~disturbance regimes~~may change over time.

landscape context	Refers to the spatial relation of different patches (land management, habitat type, ecological processes, hydrological process, etc.) within the landscape and the values, constraints, or risks they impose on each other. See *landscape*.
landslide(s)	The dislodging and fall of a mass of earth and rock. There are many types of landslides, including debris slides, earthflows, rock block slides, slumps, slump blocks, and slump earthflows. The different types of landslides vary tremendously in how they occur, how far they move, what type of materials move, etc.their cause and impact, such as shallow rapidly moving landslides and slow deep-seated landslides.
leave area	An area of standing timber retained among areas of logging activity to satisfy management objectives, such as providing seed source,sources or wildlife habitat, or landscape management constraints.
leave trees	See *live trees*.
legacy structures, legacies, legacy retention, biological legacies	Structural components within a forest stand that are retained during harvest operations, and that provide habitat diversity in the future stand. Examples of legacy structure include live trees, snags, and downed wood.
lifeways	A traditional way of life reflecting an all-encompassing aspect customs, practices, and belief systems. This may include foods consumed, materials collectioncollected, religious practices, and so on.
listed, federally listed, or listed species	Species, including subspecies and distinct vertebrate populations, of fish, wildlife, or plants, listed at 50 CFR 17.11-17.12 as either endangered or threatened.
live trees, leave trees	LiveLiving trees that are retained to provide short-term habitat needs of wildlife species, to serve as a source of future snags and downed wood, and to provide legacy trees in future stands. This term also refers to liveliving trees present in a stand that are legacies of a previous cohort of trees.

M

M

Term	Definition
management emphasis	See *emphasis areas.*
management prescription	The management practices and intensity selected and scheduled for application on a specific area to attain predefined goals and objectives.

mass wasting processes	Down slope movement of rock or soil due to the force of gravity. The four most common types of mass-wasting are falls, slides, flows, and creep. Falls are abrupt movements of rocks that have detached from steep slopes of cliffs. Slides are the movement of a mass of earth and rock from a mountain or cliff and can occur slowly or quickly. Examples of flow type are debris, mud, or earth. Creep (or soil creep) is a slow, long-term mass wasting process. The steeper the slope the faster the creep. Precipitation, chemical weathering, lithology (type of rock), and steepness of slope(s) contribute to mass wasting processes.
metrics	A quantifiable value, characteristic, or condition measured by monitoring programs (see definition for. See *monitoring*).
monitoring	The measurement of metrics—to determine resource status or trends in some aspect, document actions, or test research hypotheses with the goal of environmental quality. aiding adaptive monitoring - Iterative framework that enables monitoring questionsmanagement and protocols to change over time in response to new information or new questions.decision-making.. • Implementation, or compliance, monitoring - Asks the question, "Did we do what we said we would do?" For example, did we leave the number of snags during a timber harvest required by law or policy? • Effectiveness monitoring - Asks the question, "Are the management practices producing the desired results?" For example, are snag retention practices resulting in improved habitat for a species of interest? • status monitoring – Asks the question, "What is the state of the resource?" For example, what is the snag density at a point in time? • trend monitoring – Extension of status monitoring, asks the question, "What is the change in status over time?" For example, how has the snag density changed over time?

N

Term	Definition
native	Indigenous to Oregon and not introduced.
nine federally recognized Tribes in Oregon, Tribal Partners	Representatives of one or more of the nine federally recognized Tribes of Oregon. ORS 182.162–168 define state agencies' relations with federally recognized Tribes in Oregon when an agency develops or implements programs that may affect Tribes. The nine federally recognized Tribes of Oregon are Burns Paiute Tribe; Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians; Confederated Tribes of Grand Ronde; Confederated Tribes of Siletz Indians; Confederated Tribes of the Umatilla Indian Reservation; Confederated Tribes of the Warm Springs Reservation; Coquille Indian Tribe; Cow Creek Band of the Umpqua Tribe of Indians; and The Klamath Tribes.
non-point source	Entry of a pollutant into a body of water from widespread or diffuse sources, with no identifiable point of entry. The source is not a distinct, identifiable source such as a discharge pipe. Erosion is one example of a non-point source.
~~**northwest Oregon state forests**~~	~~Includes all state forest lands in the FMP planning area. See definition for *planning area*.~~
noxious weeds	Terrestrial, aquatic, or marine plants designated by the Oregon State Weed Board under ORS 569.615 as representing the greatest public menace and a top priority for action by weed-control programs.
nutrient cycling	Circulation or exchange of elements, such as nitrogen and carbon~~-dioxide~~, between living and nonliving portions of the environment.

O

Term	Definition
objective(s)	A clear and specific statement of results to be achieved within a defined time period. An objective is measurable and implies precise time-phased steps to be taken and resources to be used, which, together, represent the basis for defining and controlling the work to be done.

Term	Definition
old growth	A forest stand whose typical characteristics are a patchy, multi-layered, multi-species canopy dominated by large overstory trees, some with broken tops and decaying wood; numerous large snags; and abundant downed wood (such as fallen trees) on the ground. In western Oregon, old-growth characteristics begin to appear in unmanaged forests at 175–250 years of age.
operationally limited	By the FLMCS (OAR 629-035-0055), lands where current technology or engineering techniques are considered by the State Forester to be inadequate to reasonably ensure that integrated management practices would not cause significant long-term adverse effects. The State Forester may limit, restrict, or prohibit management activities in these areas as needed to protect forest resources or to accomplish the management goals for surrounding areas.
operational policy(ies)	Documented, specific standards and best practices for implementation and resource protection. Operational policies guide decisions within the range of options by outlining specific procedures and BMPs that allow for management flexibility, while ensuring sound management and resource protection. Operational policies include quantitative standards (e.g., riparian buffer widths, upland leave tree requirements) that align with laws and regulations, and FMP and WOSF HCP goals and strategies. Operational policies are developed within the State Forests Division under the direction of the State Forests Division Chief.
Operations Plan (OP)	~~Describe~~Describes individual projects for achieving expected FMP and WOSF HCP outcomes, over the near term (for example 1~~ to ~~2 years), that align with fiscal budgets and IPs.
Oregon Conservation Strategy	Created by the Oregon Department of Fish and Wildlife to outline a set of priorities and recommendations for addressing Oregon's fish, wildlife, and habitat conservation needs. Strategy species in the Oregon Conservation Strategy are Oregon's species of greatest conservation need because they are experiencing population decline, habitat loss, and other issues that put them at risk.
outcomes	Projected or realized results of management activities conducted during IP and OP implementation.

P

~~**Oregon Conservation Strategy**~~Term	~~Created by the Oregon Department of Fish and Wildlife (ODFW) to outline a set of priorities and recommendations for addressing Oregon's fish, wildlife, and habitat conservation needs. Strategy species in the Oregon Conservation Strategy are Oregon's species of greatest conservation need because they are experiencing population decline, habitat loss, and other issues that put them at risk.~~Definition
~~**outcomes**~~	~~Management or plan outcomes.~~

P

passive management	Typically allows resources to change over time with minimal human intervention. For example, forest stands could be allowed to grow and regenerate along their current successional trajectory—no reforestation, thinning, harvesting, site preparation or prescribed burning activities would be used.
patch(es)	A term fundamental to landscape ecology and silviculture, it is defined as a relatively homogeneous (same/similar) area of habitat or forest stand that differs from its surroundings. Patches are the basic unit of the landscape that change and fluctuate, a process called patch dynamics.
pathogen(s)	A specific causative agent (such as a bacterium, fungus, or virus) of a disease.
~~**people of Oregon**~~	~~People living in the state of Oregon.~~
performance measure(s)	~~Developed by the BOF,~~ A select set of metrics ~~with targets or acceptable ranges~~the BOF uses to evaluate management outcomes to ensure that ~~track progress toward FMP goals and indicate if~~ the FMP ~~strategies are working as intended~~continues to provide GPV. The performance measures have specific components set and monitored by the BOF with trends reported publicly.
planning area, plan area, or FMP area	Approximately 640,000 acres consisting of BOFL, Common School lands, and administrative sites west of the Cascade Crest.
policy	A definite, stated method or course of action adopted and pursued by an entity that guides and determines present and future decisions and actions. A policy establishes a commitment by which an entity is held accountable.

pollutant	A substance of such character and existing in such quantities as to degrade an environmental resource (i.e., water, air, or soil) by impairing its usefulness (including its ability to support living organisms).
population(s)	The organisms that constitute a particular group of a species, or that live in a particular habitat or area. A group of fish (e.g., Nehalem River fall chinook salmon) that spawn in a particular area at a particular time, and that do not interbreed to any substantial degree with any other group spawning in a different area, or in the same area at a different time are considered a population (OAR, Division 7, 635-07-501(38)).

Term	Definition
prescribed burn/burning	Controlled fire burning under specified conditions to accomplish planned objectives; also called slash burning, as a frequent objective is to reduce the amount of slash left after logging. Objectives may include site preparation for planting and reduction of fire hazards or pest problems.
private and domestic drinking water	Systems serving three or fewer homes or connections with a water use permit issued by the Oregon Water Resources Department.
properly functioning aquatic habitat *or* condition	The range of diverse aquatic and riparian conditions over time and space that emulate the habitat conditions that resulted from natural disturbance regimes under which native species evolved. ~~There is no one condition that is properly functioning.~~

~~R~~

R

Term	Definition
reciprocity	Ecosystem services deliver social and economic benefits, and social and economic benefits can be obtained in a way that supports environmental benefits.
redundancy	The duplication of components or functions of a system with the intention of increasing the resilience of the system~~.~~ by assuring that some components remain intact even if a disturbance degrades a similar component elsewhere.
reforestation	~~A management action~~Management to renew tree cover by ~~establishing~~planting and cultivating young trees. This can be accomplished by planting an area with trees or aerial seeding or ~~letting an area naturally seed in. This work is done to maintain appropriate forest cover, achieve a desired ecological condition, and/or restore forests for wildlife, watersheds, and recreational experiences~~passive natural regeneration.
refugia	Areas that remain unchanged while surrounding areas change markedly. The changes could be short term, such as wildfires, elevated stream temperatures, or human activity, or much longer term, such as periods of glaciation. Alternatively, refugia could refer to locations and habitats that support population of organisms that are limited to small fragments of their previous geographic range.

~~**refugia**~~	~~Locations and habitats that support population of organisms that are limited to small fragments of their previous geographic range, and areas that remain unchanged while surrounding areas change markedly (the areas serve as a refuge for those species requiring specific habitats). The changes could be short term, such as wildfires, elevated stream temperatures, or human activity, or much longer term, such as periods of glaciation.~~
regeneration	The process of renewal of a forest or stand of trees, or young trees in a stand.

Term	Definition
regeneration harvest(s), regeneration harvesting	The removal of trees to make regeneration possible or to assist in the development of the established regeneration (young trees). Regeneration harvests can range from a clearcut to a retention cut. A clearcut removes almost all trees from a stand (see definition for *clearcut*) resulting in a new even-aged stand of trees. A retention cut retains more residual trees within the unit (between 33 and 80 square feet of basal area per acre), similar in look to a heavy thinning resulting in a stand with two distinct ages of trees following tree planting.
resilience, resiliency, resilient	~~The ability to recover from the disturbance.~~Broadly, the ability of ecosystems to persist in response to pressure from episodic disturbances (e.g., wildfire) and chronic stress (e.g., warmer temperatures or prolonged drought from climate change). A resilient forest recovers the delivery of ecosystem services in response to multiple pressures.
resistance	The ability of a system to withstand ~~the disturbance~~disturbances.
restoration	Management actions taken to rehabilitate degraded forest lands to properly functioning condition such that lands are delivering ecosystem goods and services such as timber, fish and wildlife habitat, special forest products, carbon sequestration, and drinking water.
revenue(s)	The total income produced by an organization's operations, such as income generated by timber harvest operations.
~~**riparian conservation area (RCA)**~~	~~A protected area with site-specific boundaries established by ODF; the width varies according to the stream classification or special protection needs. The purpose of an RCA is to protect the stream, aquatic resources, and riparian area. Aquatic resources include water quality, water temperature, fish, stream structure, and other resources.~~
riparian, riparian area	Three-dimensional zone of direct influence and/or interaction between terrestrial and aquatic ecosystems. The boundaries of the riparian area extend outward from the streambed or lakeshore.
riparian conservation area (RCA)	A protected area with boundaries established by the WOSF HCP; the width varies according to the stream classification or special protection needs. The purpose of an RCA is to protect the stream, aquatic resources, and riparian area. Aquatic resources include water quality, water temperature, fish, stream structure, and other resources. The WOSF HCP defines the rules that govern RCAs.

S

Term	Definition
salvage harvesting	The utilization of standing or downed trees that are dead, dying, or deteriorating, for whatever reason, before the timber values are lost.
scenic	Providing or relating to views of impressive or beautiful natural scenery.
scenic waterways, scenic river	A river, lake, or segment thereof, including related adjacent land and the airspace above, that has been so designated by or in accordance with the Scenic Waterways Act ~~(ORS 390.805–390.925)~~(ORS 390.805–390.925)
sensitive plants	~~Threatened, endangered, or rare plants (collectively, sensitive plants), as listed under the state of Oregon's ESA and~~Oregon's ESA listed threatened and endangered plant species administratively protected by the Oregon Department of Agriculture Native Plant Conservation Program (ORS 564.105; OAR 603-073~~),~~), and candidate plant species considered for ESA listing.
seral, seral stages	Developmental stages that succeed each other as an ecosystem changes over time; specifically, the stages of ecological succession as a forest develops.
~~**shallow, rapid landslide**~~	~~Debris flow slides that occur in the forest rooting zone, generally less than 10 feet deep. They are typically initiated by intense rainfall and/or rapid snowmelt. Shallow slides usually follow a long saturation period that is punctuated by an intense burst of precipitation over several hours or a few days. At some point, gravity overtakes the hillside and the muddy soil mass breaks loose. See definitions for *landslide* and *debris flow*.~~
silvicultural, silviculture, silvicultural prescriptions	The practice of ~~controlling~~managing the establishment, composition, health, quality, and growth of the vegetation of forest stands~~. Silviculture involves the manipulation, at the stand~~ and ~~landscape levels, of~~ forest ~~and woodland vegetation, and the control or production of stand structures such as snags and downed wood to meet the needs and values of society and landowners such as wildlife habitat, timber, water resources, and recreation~~landscapes.
silviculturally capable	Capable of growing forest tree species, as defined by the Forest Practices Reforestation Suitability Standards as established by the Oregon Forest Practices Act (Silviculturally Capable).

site productivity	A measure of an area's relative capacity for producing timber or other vegetation. Forest site productivity is controlled by a complex relationship among topography, slope, aspect, soil depth, porosity, biology, and the availability of nutrients in the soil.

site class	A measure of an area's relative capacity for producing timber or other vegetation. It is an index of the rate of tree height growth, with lower values indicating faster-growing trees. The site index is expressed as the height of the tallest trees in a stand at an index age. In this document, an age of 50 years is used. The five site classes are defined below. Site class I 135 feet and up Site class II 115–134 feet Site class III 95–114 feet Site class IV 75–94 feet Site class V below 75 feet
slash	Logging debris left in the forest after a harvest such as tree limbs and tops. Sometimes called logging residue.
slope stability	The degree to which a slope resists the downward pull of gravity. The more resistant, the more stable.
snag	A standing dead tree.

Term	Definition
Soil and Water Conservation Districts (SWCD)	The Oregon Department of Agriculture's SWCD Program provides services to the 45 Soil and Water Conservation Districts throughout Oregon. The districts work with local landowners and residents, natural resource organizations, natural resource users, and local, state, and federal governments to conserve natural resources, control and prevent soil erosion, conserve and develop water resources and water quality, preserve wildlife, conserve natural beauty, and promote collaborative conservation efforts to protect and enhance healthy watershed functions. The Oregon Department of Agriculture Soil and Water Conservation District Program offers trainings to help support district operations, directors, and staff. Their staff is also available to provide operational technical assistance by phone, email, or in person. SWCDs in Oregon are governed by an independently elected board of directors.
soil composition	The mixture of minerals, dead and living organisms (organic materials), air and water that make up soil. This mix of ingredients varies from place to place ~~as soil composition varies.~~.
source areas	Areas in which a watershed is delivering water to a water system.
special forest products	Products, other than timber, collected for personal and commercial uses from forests.

species	When referring to the federal ESA, "…any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature" [Section 3(15) of the ESA].Organisms of the same species share similar DNA, physical shape, form, and structure and are capable of producing fertile offspring.
species diversity	Diversity among species in an ecosystem. Species diversity accounts for the number of different species (species richness) and the relative abundance of each species (species evenness).
species of conservation concern	Those species included on federal or state ESA lists, state sensitive species, and ODFW'sthe Oregon Department of Fish and Wildlife's Oregon Conservation Strategy species, which are currently present or have the potential to be present on state forest lands.
stand(s)	A contiguous group of trees or other vegetation in a specific area sufficiently uniform in composition, structure, age, size, or condition, such that it is distinguishable from adjacent areas for management purposes.

Term	Definition
stand density	In silviculture, measured as the amount of tree biomass per unit area of land. This can be measured as the number of trees, basal area, wood volume, or foliage cover.
stand initiation	Begins when new seedlings actively invade or sprout or are planted and begin to grow following 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.
Stand Level Inventory	Acquires and updates state forest vegetation information at the ~~specific site level (~~forest stand~~).~~. This information is used for tactical and operational decision-making. The Stand Level Inventory includes vegetation sampling protocols, forest stand data arranged in a database, computer programs for managing and using the information, and documentation of inventory elements.
stand management	Silvicultural techniques to be applied at the stand level in pursuit of ~~the owner's~~ management objectives. See *silviculture*.
~~**stand(s)**~~	~~A contiguous group of trees sufficiently uniform in composition, structure, age, size, class, distribution, spatial arrangement, condition, or location on a site of uniform quality to distinguish it from adjacent communities.~~
standard(s)	A working principle that establishes the measure of performance extent, values, quantity, or quality for a given activity or item.
State Forester	~~The BOF-appointed chief executive officer and secretary~~The Chief Executive Officer of the State Forestry Department and the Secretary to the BOF (ORS 526.031~~).~~), nominated by the governor and confirmed by the State Senate.
State Forests Division Chief	The head of the State ~~Forest~~Forests Division.

State Historic Preservation Office	Created in 1966 by federal statute. It administers the Statewide Plan for Historic Preservation and submits Oregon's nominations for the National Register of Historic Places.
State Land Board	Composed of the governor, secretary of state, and state treasurer. It was established under the Oregon Constitution to manage Common School Trust Lands and serve as trustee of the CSF.
~~status monitoring~~stewardship	~~A snapshot in time of the status of a variable or resource. For example, status monitoring answers a question like, "how many acres are affected by this insect infestation?" See definition for *monitoring*.~~Responsible management of forest land to ensure its health, productivity, and biodiversity for current and future generations
stocking	A measure of the number of trees or basal area per acre in a stand.

Term	Definition
storied landscape	Within tribal contexts, refers to a multitude of intrinsically linked and deeply held understandings, relationships, and actions between indigenous cultures and the landscapes with which they interact throughout time, including but not limited to ~~creation~~origin stories, landscape features, and wildlife attributes that signal hunting, gathering, planting, and other seasonal use patterns.
strategy(ies)	A carefully considered plan or method, more encompassing and on a larger scale than tactics, for achieving an objective. For the FMP, OAR 629-035-0030 requires "management strategies, which describe how the State Forester will manage the forest resources in the planning area to achieve the goals articulated in the plan. The strategies shall identify management techniques the State Forester may use to achieve the goals of the plan during the implementation phase of the plan."
stream	A water course having a distinct channel that carries flowing surface water during some portion of the year, including associated beaver ponds, oxbows, side channels, and stream-associated wetlands if these features are connected to the stream by surface flow during any portion of the year. Ephemeral overland flow is not a stream because this type of flow does not have a defined channel.
stream classification	Used to apply stream protections. Streams are classified using a combination of ~~Oregon~~ FPA and ~~Western Oregon State Forests~~WOSF HCP classifications.
stream reach	A section of a stream along which similar hydrologic conditions exist, such as channel gradient, form, or other physical parameters.
structure(s)	The physical parts of an ecosystem that can be seen and touched; typical structures in a forest are trees of various sizes, standing dead trees (snags), and fallen dead trees.
~~**structured decision-making**~~	~~A process that supports multi-objective decision-making based on deliberation, estimated outcomes of alternative actions, and clear choices upon which decision-makers can act.~~

successional	A series of changes by which one group of organisms succeeds another group; a series of developmental stages in a plant community.

Term	Definition
sustainability ~~or,~~ sustainable	Sustainability is the ability of an ecosystem to maintain ecological processes and functions, biological diversity, and productivity over time. Sustainable forest management describes forest management regimes that maintain the productive and renewal capacities, as well as the genetic, species, and ecological diversity of forest ecosystems.
swale	Shallow, gently sloping, or depressed area of land that functions to capture and infiltrate runoff, that can collectively serve to reduce erosion and sustain streamflows.
Swiss needle cast (SNC)	A foliage disease specific to Douglas fir caused by the fungal pathogen *Nothophaeocryptopus gaeumannii*. SNC symptoms include yellow needles and decreased needle retention, resulting in sparse crowns and reduced diameter and height growth.

T

Term	Definition
tectonic	Resulting from changes in the Earth's crust.
threatened and endangered species	Endangered species are those plants and animals that have become so rare they are in danger of becoming extinct. Threatened species are plants and animals that are likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Federal and state agencies make formal classifications of wildlife species, according to standards set by federal and state ESAs.
trade-offs	An exchange of one thing for another. Understanding trade-offs is a critical part of decision-making and planning where maximizing benefits ~~to~~from all resources ~~are~~is not ~~attainable~~possible everywhere at the same time.

Term	Definition
Traditional ~~Ecological Knowledge (TEK)~~Cultural Places	~~A body of observations, oral and written knowledge, innovations, practices, and beliefs developed by Tribes through interaction and experience with the environment. TEK can be developed over millennia, continues to develop, and includes understanding based on evidence acquired through direct contact with the environment and long-term experiences, as well as extensive observations, lessons, and skills passed from generation to generation.~~ ~~TEK is grounded in social, spiritual, cultural, and natural systems that are frequently intertwined and inseparable, offering a holistic perspective. TEK is inherently heterogeneous and unique to each Tribe, due to the cultural, geographic, and socioeconomic differences, as well as their history and the surrounding environment.~~The National Historic Preservation Act and the 36 CFR 800 regulations implementing the act refer to "properties of traditional religious and cultural significance." These are geographic places prominent in a particular group's cultural practices, beliefs, or values, when those practices, beliefs or values: (i) are widely shared within the group, (ii) have been passed down through the generations, and (iii) have served a recognized role in maintaining the group's cultural identity for at least 50 years.
transformation	The process of ~~changing the~~an ecosystem changing to a condition that is different from historic structure, composition, or function. Both active and passive management ~~techniques~~ can guide or allow transformation, respectively. ~~In academic literature, "Ecosystem transformation can be defined as the emergence of a self-organizing, self-sustaining, ecological or social–ecological system that deviates from prior ecosystem structure and function." (Thompson et al. 2021)~~
Travel Management Area(s)	Designated areas where it is restricted to operate or to be transported in a motor-propelled vehicle during certain dates as designated by the Oregon Department of Fish and Wildlife.
~~**trend monitoring**~~	~~Designed to uncover change in target variables over space and time. For example, trend monitoring may answer a question like, "How many acres are affected by an insect infestation each year?" See definition for *monitoring*.~~

Tribal Partners, ~~Tribal Nations,~~nine federally recognized Tribes of Oregon	Representatives of one or more of the nine federally recognized Tribes of Oregon. ORS 182.162–168 define state agencies' relations with federally recognized Tribes in Oregon when an agency develops or implements programs that may affect Tribes. The nine federally recognized Tribes of Oregon are Burns Paiute Tribe; Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians; Confederated Tribes of Grand Ronde; Confederated Tribes of Siletz Indians; Confederated Tribes of the Umatilla Indian Reservation; Confederated Tribes of the Warm Springs Reservation; Coquille Indian Tribe; Cow Creek Band of the Umpqua Tribe of Indians; and The Klamath Tribes.

U

Term	Definition

U

understory	The layer of vegetation beneath the main canopy of a forest.
unimpeded access	Provides reasonable opportunity for access, considering publichuman safety, infrastructure, and topographic constraints.
uplift (geologic)	The process by which Earth'sThe process by which Earth's surface slowly rises either due to an increasing upward force applied from below or decreasing downward force (weight) from above.

V

viewshed	An area of land, water, or other environmental element that is visible to the human eye from a fixed vantage point and often is considered valuable or worth preserving for aesthetic reasons.

V

Term	Definition
variable retention harvest	Timber harvest that is a combination of thinned and unthinned areas with regeneration patch cuts to create openings intended to mimic small-scale natural disturbances.
viewshed(s)	An area of land, water, or other environmental element that is visible to the human eye from a fixed vantage point and often is considered valuable or worth preserving for aesthetic reasons.
visually sensitive corridor	The area within 150 feet (measured on the slope) of the outermost edge of the roadway along both sides of the highway.

W

Term	Definition
watershed(s)	An area within which all water that falls as rain or snow drains to the same stream or river. Watersheds can vary greatly in size, from that of a small stream to a larger waterbody.
watershed council(s)	Based in local communities across the state. While natural resource specialists lead the councils, their boards of directors are made up of local community members. They assess and monitor environmental conditions and conduct voluntary conservation projects to restore and enhance the waters and lands for native species and people. They work with local landowners, community members, companies, elected officials and agencies. The Oregon legislature encourages local governments to form watershed councils (ORS 541.910).
watershed restoration project(s)	Per the Oregon Watershed Enhancement Board, specifies involvement of an on-the-ground element such as riparian planting, fish habitat construction, wetland restoration, livestock grazing plans, and water conservation projects that support watershed processes, which support watershed health.
wetland(s)	As defined in Oregon's Forest Practice Rules OAR 629-24-101 (77), wetlands are "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

~~wetland~~Term	~~As defined in Oregon's Forest Practice Rules OAR 629-24-101 (77), wetlands are "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."~~ Definition
windthrow	Trees felled by high winds.
working forest(s)	As defined by Oregon Forests Resources Institute,[1] "forests where the sustainable production of timber is carefully balanced with protecting other important resources such as water quality and wildlife habitat are known as 'working forests.' After timber is harvested from these forests, they are replanted and harvested again in a sustainable process that may span decades, and even lifetimes."

Y

Term	Definition
young stand management	Activities that benefit growth of stands after regeneration harvest or natural disturbance and can include replanting, herbicide application to reduce competition, and precommercial thinning to enhance tree size and growth rate.

[1] https://oregonforests.org/working-forests#:~:text=Forests%20where%20the%20sustainable%20production,sustainable%20process%20that%20may%20span

APPENDIX A

Public Engagement

The engagement process ~~ensures~~ensured that interested parties had opportunities to provide meaningful input on the development of the *Western Oregon State Forests Management Plan* (FMP). This appendix ~~serves as~~is a high-level summary of the stakeholder, public, and tribal engagement efforts, including the engagement approach, goals, and activities.

Goals, Methods, and Key Audiences

A comprehensive strategy for public engagement and communications was developed early in the FMP process. The goals of the stakeholder engagement process ~~include~~included the following items.

- Fully informing counties, Tribes, stakeholders, and the general public throughout the FMP development process.
- Providing counties, Tribes, stakeholders, and the public with opportunities to engage and offer input at multiple levels throughout the process.
- Obtaining a better understanding of what Oregonians care about when it comes to forest management.
- Ensuring state agencies are engaged as an integral part of the process and are supportive of the FMP outcomes.
- Providing clear expectations for how stakeholder and public input will be used and integrated into the FMP.
- Aligning engagement and outreach opportunities with related processes such as the *Western Oregon State Forests Habitat Conservation Plan* (WOSF HCP) National Environmental Policy Act (NEPA) process and other Oregon Department of Forestry (ODF) processes.

~~The Oregon Department of Forestry (ODF)~~ODF developed the FMP through a combination of content development by staff and technical experts and feedback from stakeholders and the public. The process for developing the FMP and integrating feedback from stakeholders and the public is listed below.

- **Internal content development**. ODF worked with staff and technical experts to develop draft content.
- **Internal review**. ODF distributed content to ODF leadership, field staff, executive sponsors, and state partners for review.
- **Internal revisions**. ODF staff and technical experts reviewed internal feedback and revised content.
- **Leadership review and approval**. ODF leadership reviewed revised content and requested additional edits or approved content for external sharing.
- ~~Share~~Shared **content with the Board of Forestry ~~(BOF)~~ and committees**. ODF shared content with the ~~BOF,~~Oregon Board of Forestry (the BOF), Forest Trust Lands Advisory Committee, and State Forests Advisory Committee.
- **External review and input**. ODF shared content with the public and stakeholders for review.
- **Review of external feedback and revisions**. ODF reviewed external input and revised content accordingly.

Key Audiences

The engagement effort sought to involve all potentially affected and/or interested individuals, communities, and organizations. The process involved the following groups.

- The BOF
- Counties, including the Forest Trust Land Advisory Committee (FTLAC)
- Business and economic organizations
- Civic groups
- Conservation and wildlife groups
- ~~Counties, including the Forest Trust Land Advisory Committee~~
- Elected officials
- Existing ODF advisory groups, including the State Forests Advisory Committee
- Federal and state agencies
- General public
- Groups involved in forest management including foresters and fisheries
- Media
- ODF district staff
- Recreational users of the forest

- Small woodland, private forest landowners, and farm and agricultural interest groups
- Tribal representatives
- Timber and forest products industry

The following sections outline the key stakeholder and public engagement activities and include details on the convening interviews, surveys, FMP state agency meetings, meetings open to the public, and stakeholder meetings.

Interviews

~~A variety of stakeholders and~~ County representatives and stakeholders provided their reflections from the past WOSF HCP engagement process, discussed ideas and suggestions for an effective FMP public engagement process, and expressed key interests and concerns related to FMP development. Thirteen virtual interviews took place with individuals of the following entities.

- FTLAC
- 350PDX
- Association of Oregon Counties
- Association of Oregon Loggers
- Cascadia Wildlands
- County Commissioners
- EcoTrust
- ~~Forest Land Trust Advisory Committee~~
- Hampton Lumber
- Oregon Forest ~~and Industry~~Industries Council
- Oregon Wildlife Society
- Rasmussen Group
- State Forests Advisory Committee
- ~~State Forests Advisory Committee and Recreation~~
- The Nature Conservancy
- Trout Unlimited
- Wild Salmon Center
- ~~350PDX~~

Surveys

ODF developed two surveys to gather feedback from the public on draft goals and strategies. For the draft goals survey, participants were asked to rank support for each goal and provide general feedback. ODF then summarized the goals and posted them to the project website. For the draft strategies survey, participants were asked if the strategies were sufficient to meet their corresponding goal. Participants

were also asked to share if the strategies were on the right track, if anything was missing, or if any modifications were needed. A feedback summary was posted to the website. The following is a summary of those results.

- The survey on the Draft FMP Goals was sent out in August 2021; 54 individuals responded, providing a total of 459 comments.
- The survey on the Draft FMP Strategies was sent out in December 2021; 1,344 individuals responded, providing a total of 3,322 comments.
- ODF also solicited email feedback from stakeholders and the public on the Draft FMP Strategies and received 318 email responses.

State Agency Meetings

ODF has continued to work with state agencies throughout the development of the FMP. The FMP state agencies include government agency representatives from the Oregon Department of Environmental Quality, ~~the~~ Oregon Department of State Lands, and ~~the~~ Oregon Department of Fish and Wildlife. Members have been meeting approximately monthly from June 2021 through spring ~~2023~~2026. Members voluntarily work together to provide advice on how the FMP can achieve a mutually acceptable outcome that satisfies, to the greatest degree possible, the interests of all participants. FMP state agencies also serve on the WOSF HCP Scoping Team, allowing for continuity between the two processes.

Meetings Open to the Public

~~Because of COVID-19 concerns~~ODF engaged the public early in the FMP development process, occurring between 2021 and ~~safety precautions~~2023, and during the FMP rulemaking process, starting in 2025. During early FMP development, ODF held public meetings via webinars, because of COVID-19 pandemic concerns. Stakeholders and members of the public were invited to meetings open to the public using ODF's GovDelivery notification system.
GovDelivery was also used to share links to materials, meeting recordings, and surveys.

Five western Oregon FMP meetings open to the public took place between May 2021 and ~~January~~February 2023. The meetings open to the public included updates on the FMP process, presentations, and question-and-answer discussions followed by informal discussions with meeting participants to discuss topics of most interest to participants. During meetings open to the public, ODF answered questions and received comments on the development of the FMP. Following the meetings, comments related to goals and strategies were provided to ODF to inform revisions.

ODF notification to inform stakeholders and the public about the meetings included the following methods.

- Email distributions to interested parties
- Posts on ODF social media including Facebook and Twitter

- Meeting notices via FlashAlert to media in areas that ~~would~~could be ~~potentially~~ covered in the WOSF HCP (including Portland media)
- Posts on the ODF news site
- Posts on the WOSF HCP and FMP project webpages

The meetings open to the public received strong participation and engagement. Attendance ranged from approximately 40 to 90 participants (Table A-1).

TABLE A-1 Public Meetings

Open Public Meeting Date	Attendees	Meeting Purpose
May 6, 2021	Over 70 members of the public attended via webinar	• Provide an introduction to the FMP project and describe the engagement process for this effort. • Provide an update on the WOSF HCP and orientation to the Draft WOSF HCP on the ODF website. • Provide updates on the WOSF HCP NEPA process.
August 10, 2021	Over 70 members of the public attended via webinar	• Provide an update on the FMP project and describe the engagement process for this effort. • Provide an update on the Administrative Draft WOSF HCP. • Provide an update on the WOSF HCP NEPA process.
October 12, 2021	40 members of the public attended via webinar	• Provide an update on the FMP and regional project and describe the engagement process for this effort. • Provide an update on the Administrative Draft WOSF HCP. • Provide an update on the WOSF HCP NEPA process.

Open Public Meeting Date	Attendees	Meeting Purpose
December 7, 2021	Over 50 members of the public attended via webinar	• Provide an update on the FMP and regional project and describe the engagement process for this effort. • Provide an update on the Administrative Draft WOSF HCP. • Provide an update on the WOSF HCP NEPA process.
February 7, 2023	Over 90 members of the public attended via webinar	• Provide an update on the WOSF FMP and describe the upcoming engagement process. • Provide an update on the Administrative Draft WOSF HCP. • Provide an update on the WOSF HCP NEPA process.

As part of the rulemaking process, ODF held two public comment periods. The first public comment period took place from November 1, 2025 through January 31, 2026. The second public comment period took place in June 2026. The first comment period included one virtual public hearing and three in-person public hearings—located in Forest Grove, Tillamook, Eugene—in January 2026. One virtual public hearing was held in June 2026, as part of the second public comment period. ODF revised the draft FMP in consideration of public comments.

Stakeholder Meetings

The project team conducted meetings with interested parties who expressed a cross-section of interests. The purpose of these meetings was to review and discuss FMP goals and strategies or topics as requested. The project team conducted three large meetings and several small meetings as requested. Stakeholder groups included conservation interests, industry representatives, and recreation interests.

ODF held several joint stakeholder meetings to discuss the development of the FMP (Table A-2). These meetings provided an opportunity for stakeholders to learn more about the FMP development process and to provide specific feedback on the draft and strategies of the FMP. Feedback from the meetings was captured in meeting summaries and shared with ODF to inform the FMP. Links to meeting summaries, recordings, and surveys were made available to participants via email.

TABLE A-2 Stakeholder Meetings

Meeting Date	Attendees	Meeting Purpose
Joint Stakeholders		
August 18, 2021	24 stakeholders attended the meeting, 71 comments received	• Review and discuss draft FMP goals.
December 9, 2021	42 stakeholders attended the meeting	• Review and discuss draft FMP strategies on climate change, carbon, drinking water, forest resilience, wildfire, and soil.

Meeting Date	Attendees	Meeting Purpose
December 13, 2021	40 stakeholders attended the meeting	• Review and discuss draft FMP strategies on timber production, restoration, wildlife, aquatics and riparian, revenue, and recreation, education, and interpretation.
Conservation Interests		
June 24, 2021	Two stakeholders attended the meeting	• Discuss drinking water issues related to the FMP.
February 14, 2022	Three stakeholders attended the meeting	• Discuss FMP goals and strategies feedback.
Industry Representatives		
February 17, 2022	Three stakeholders attended the meeting	• Discuss FMP goals and strategies feedback.

ODF also engaged in several meetings and phone calls with individual stakeholders throughout the process to check in on the development of the FMP and to understand their interests, concerns, feedback, and suggestions as they relate to the FMP.

Forest Trust Land Advisory Committee

ODF provided updates on the FMP during the following Forest Trust Land Advisory CommitteeFTLAC meetings.

- May 28, 2021
- August 27, 2021
- September 17, 2021
- October 8, 2021
- December 3, 2021

- February 18, 2022
- August 12, 2022
- February 24, 2023
- April 14, 2023
- August 11, 2023
- November 3, 2023
- February 23, 2024
- May 24, 2024
- November 15, 2024
- May 23, 2025
- November 7, 2025
- December 19, 2025

In fall 2024, the BOF, FTLAC, and State Forests Division (Division) staff discussed potential timber harvest scenarios the Division would model to demonstrate a range of possible trade-offs among resource goals under the proposed FMP and WOSF HCP governance framework. At the June 4, 2025 BOF meeting, Division staff shared the results of the modeled scenarios for discussion between the BOF, FTLAC, and Division staff to assess whether the range of potential outcomes under the proposed FMP could be sufficient to meet greatest permanent value (GPV). Informed by the discussion with FTLAC, the BOF provided feedback to guide the Division in developing subsequent harvest scenarios presented in fall 2025 and winter 2026, which inform future Implementation Planning and contribute to further defining measures for reporting to the BOF on FMP performance.

State Forests Advisory Committee

ODF provided updates on the FMP during the following State Forests Advisory Committee meetings.

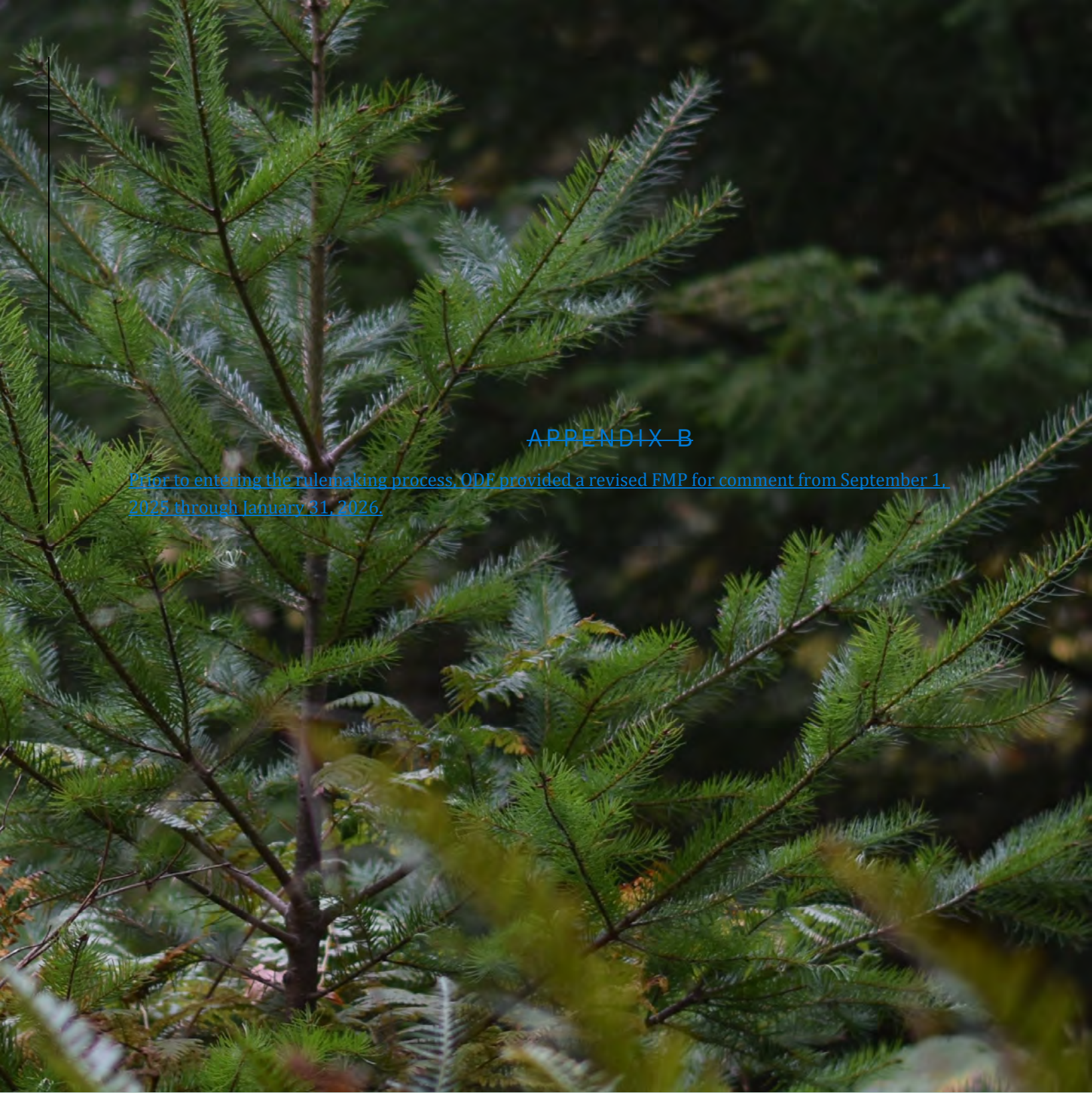
- April 23, 2021
- June 11, 2021
- October 29, 2021
- April 8, 2022
- June 24, 2022
- October 27–28, 2022
- April 7, 2023
- June 1–2, 2023

- October 27, 2023
- March 8, 2024
- May 17, 2024
- October 25, 2024
- October 24, 2025
- March 20, 2026

Tribal Sovereign Nations' Coordination

ODF has engaged Tribal Partners in the government-to-government framework on the development of the cultural resources goals and strategies through six individual tribal workgroup meetings from August 2021 to March 2022. ODF will continue to work with Tribal Partners in this forum to integrate their interests in ODF's planning and implementation processes at every level.

Tribal Partners include the following nine federally recognized Tribes of Oregon: Burns Paiute Tribe; Confederated Tribes of Coos, Lower Umpqua ~~&~~, and Siuslaw Indians; Confederated Tribes of Grand Ronde; Confederated Tribes of Siletz Indians; Confederated Tribes of the Umatilla Indian Reservation; Confederated Tribes of the Warm Springs Reservation; Coquille Indian Tribe; Cow Creek Band of the Umpqua Tribe of Indians; and The Klamath Tribes.



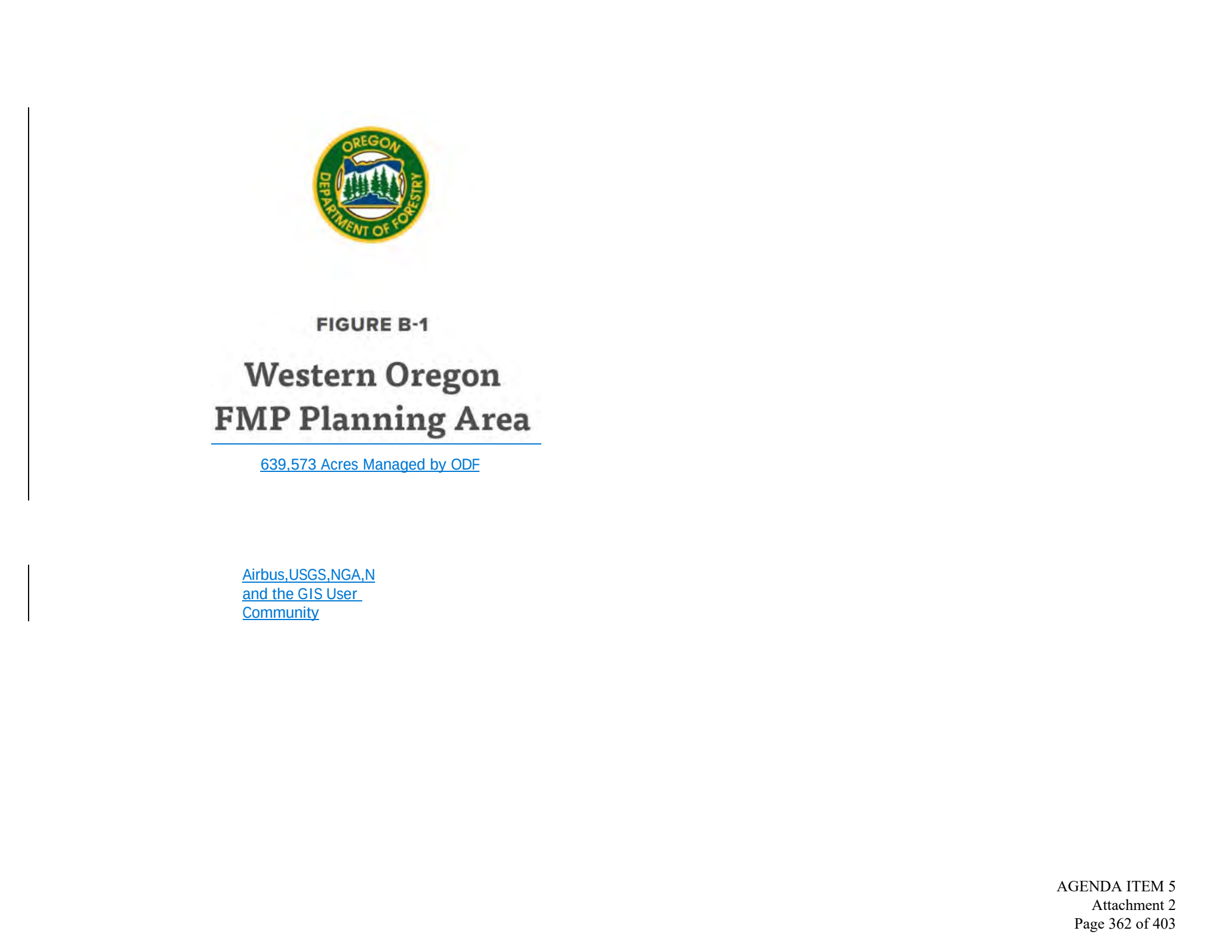
APPENDIX B

Prior to entering the rulemaking process, ODF provided a revised FMP for comment from September 1, 2025 through January 31, 2026.

FIGURE B-1

Western Oregon FMP Planning Area

639,573 Acres Managed by ODF



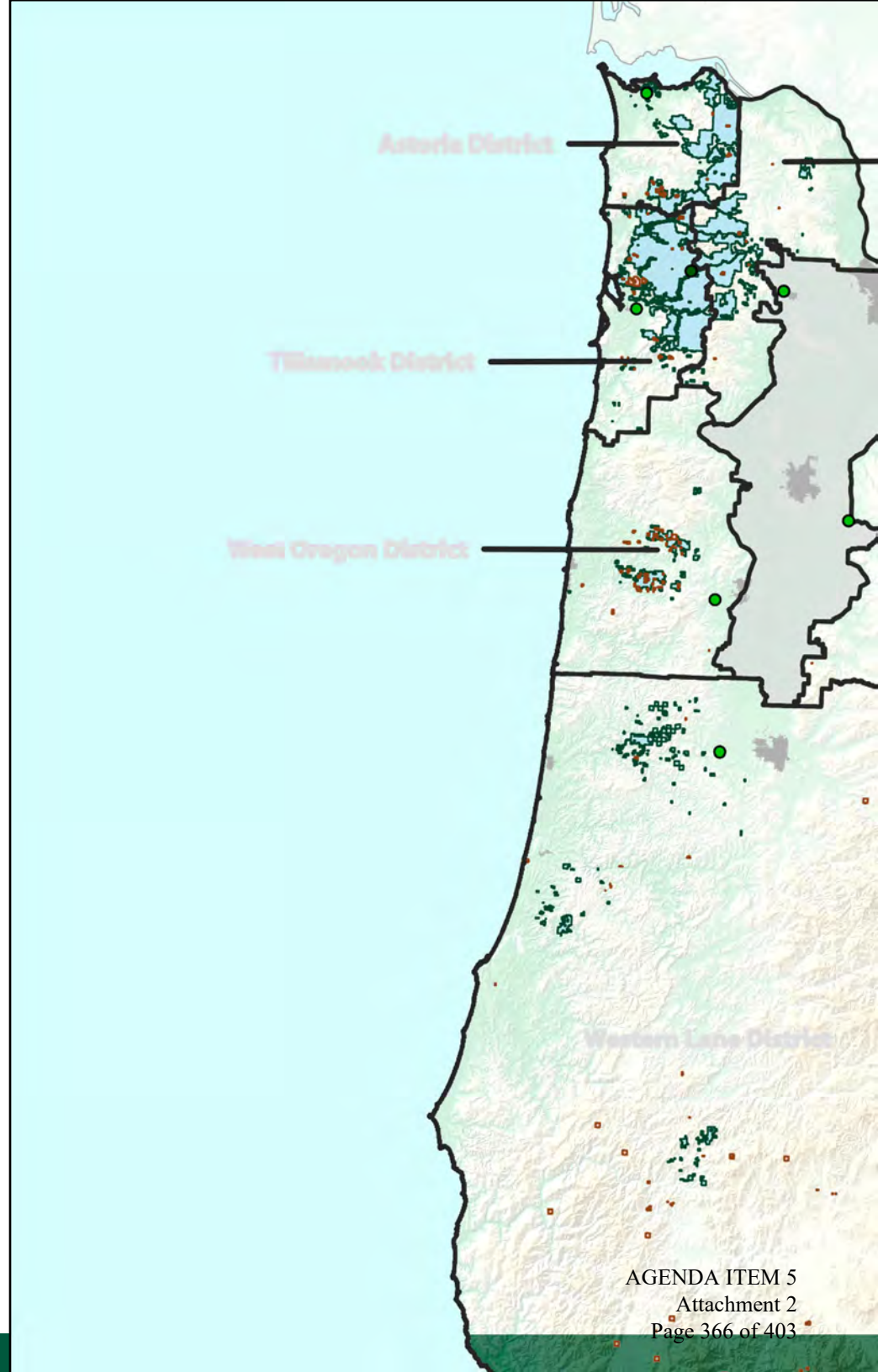

Forest Grove District
WASHINGTON
Astoria
Astoria District
Forest Grove District
Tillamook
Portland
Tillamook District
Salem
Western Oregon District
North Cascade District
Detroit
Corvallis
North Cascade District
Eugene
Florence
Reedsport
Pacific Ocean
Western Lane District

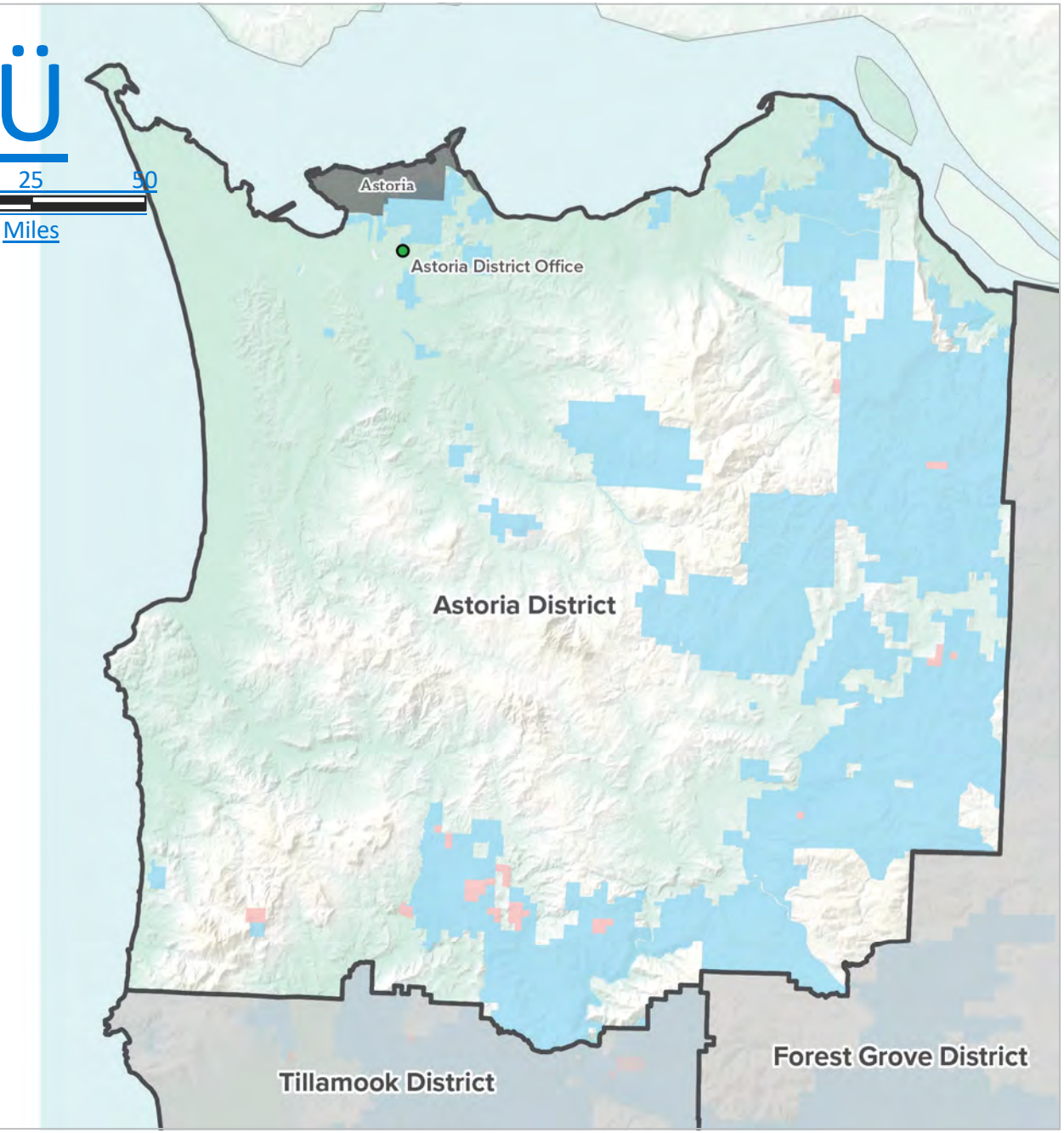
Western ~~Oregon FMP Planning Area~~**Lane District**

~~639,542 Acres Managed by ODF~~

District Boundary City Limit

FMP Planning Area Board of Forestry ~~Lands~~ Common School ~~Forest~~ Lands




Ü
25
50
Miles
Astoria
Astoria District Office
Astoria District
Tillamook District
Forest Grove District

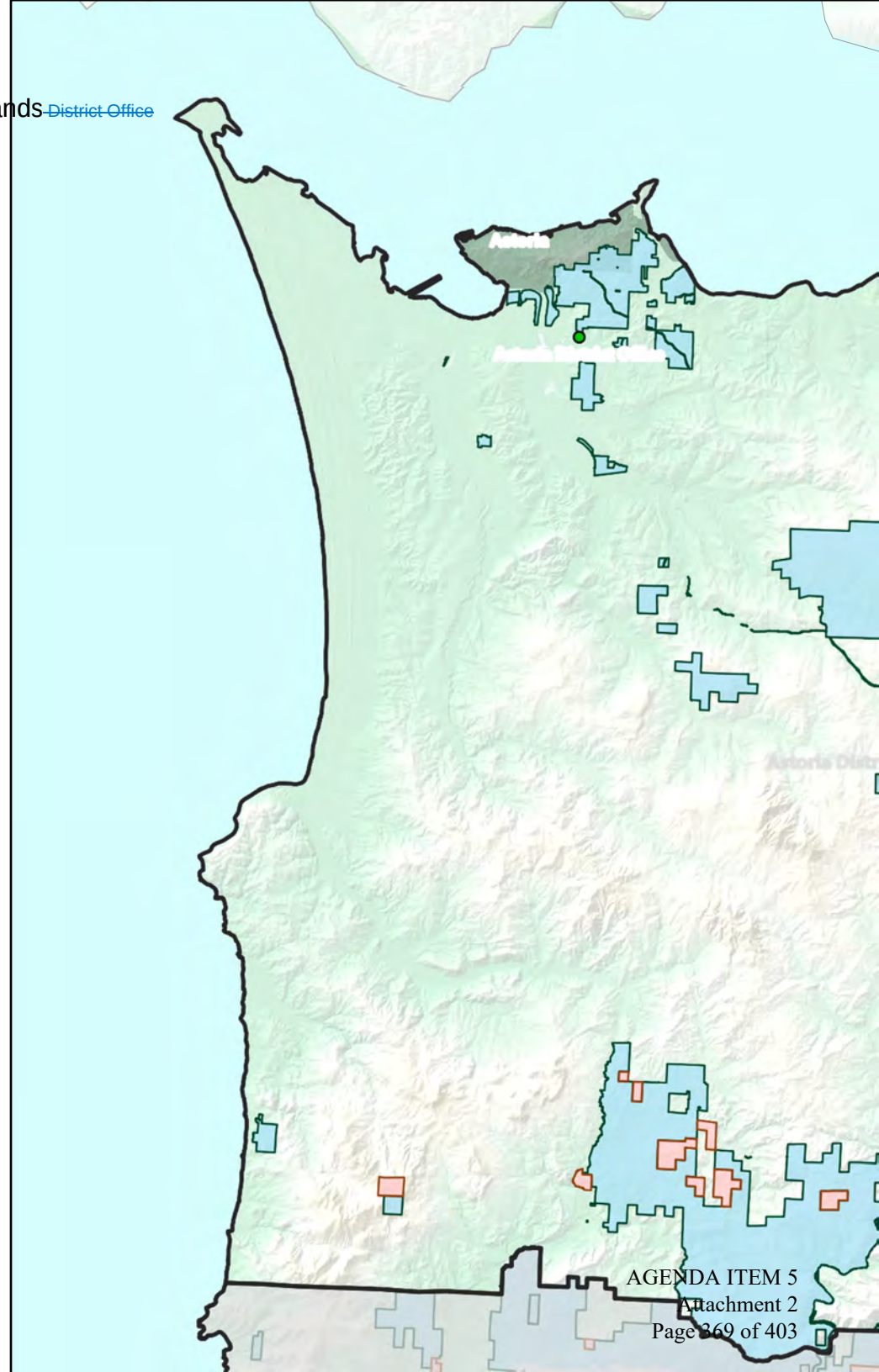
Astoria

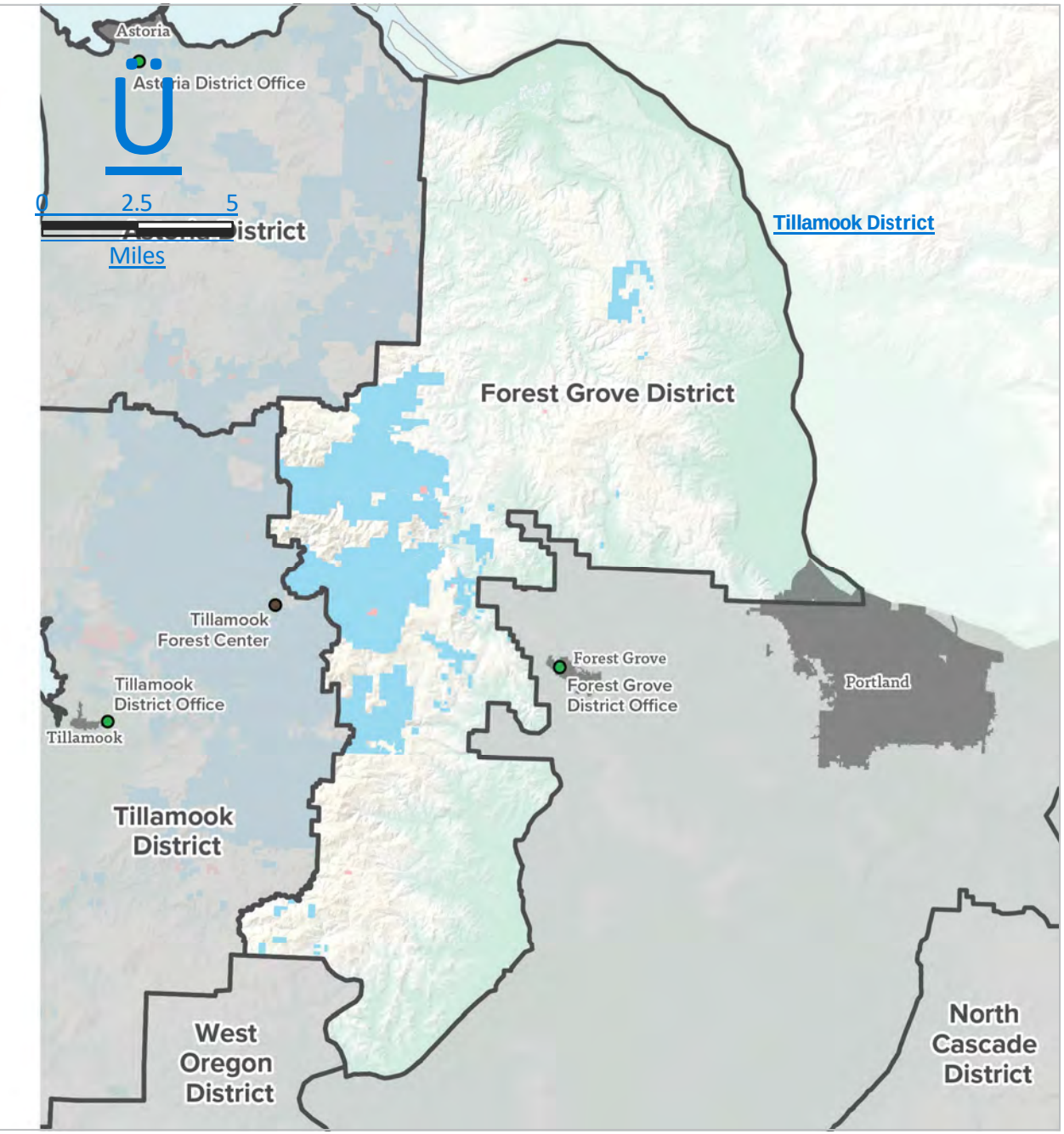
Astoria District Office

Astoria District

District Boundary City Limit

FMP Planning Area Board of Forestry ~~Lands~~ Common School ~~Forest~~ Lands ~~District Office~~





Forest Grove District-
Planning Area

Astoria

Astoria District Office

Astoria District

Forest Grove District

ct

Tillamook Forest Center

Forest Grove District Office

Forest Grove

Portland

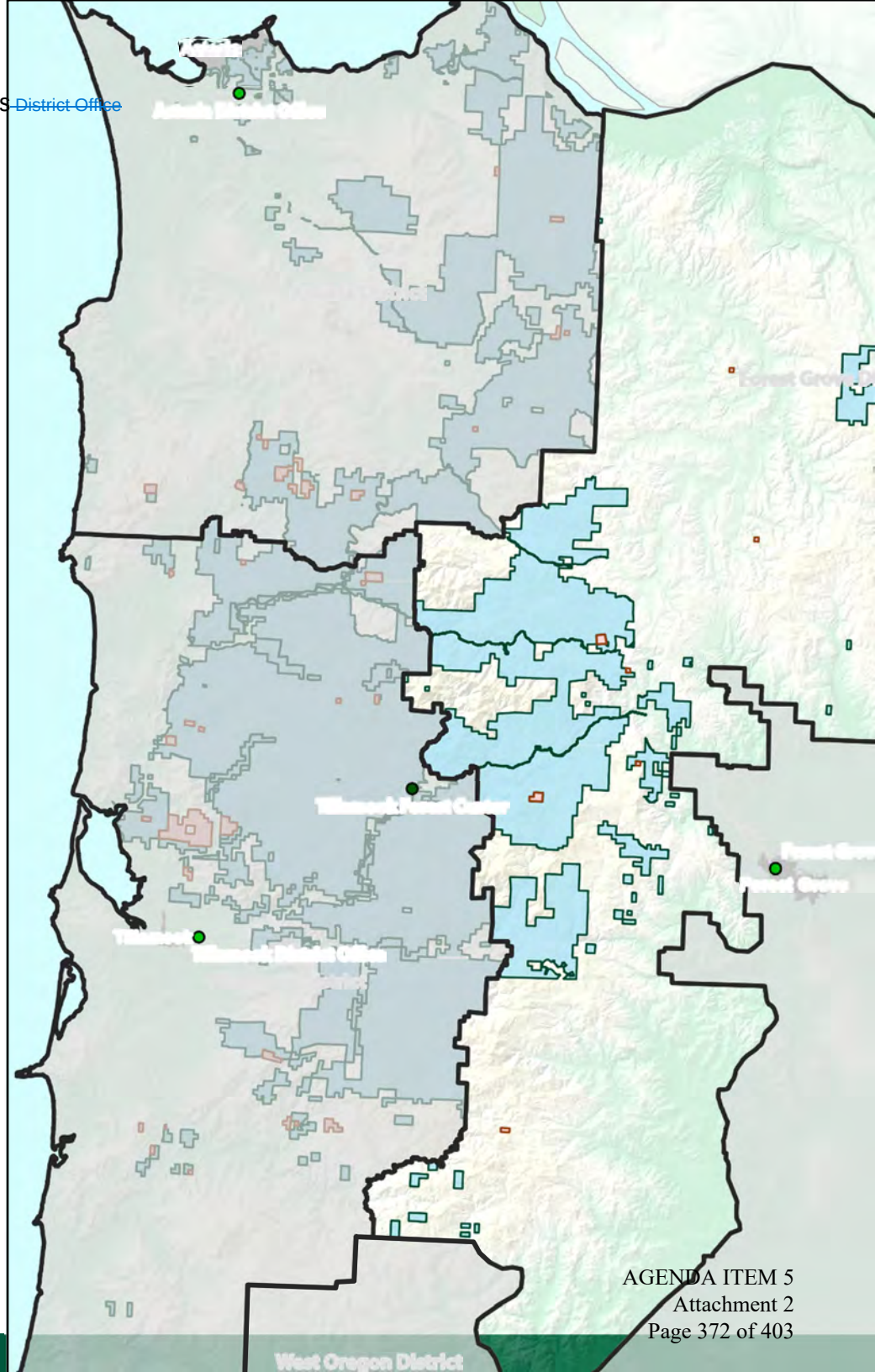
Tillamook

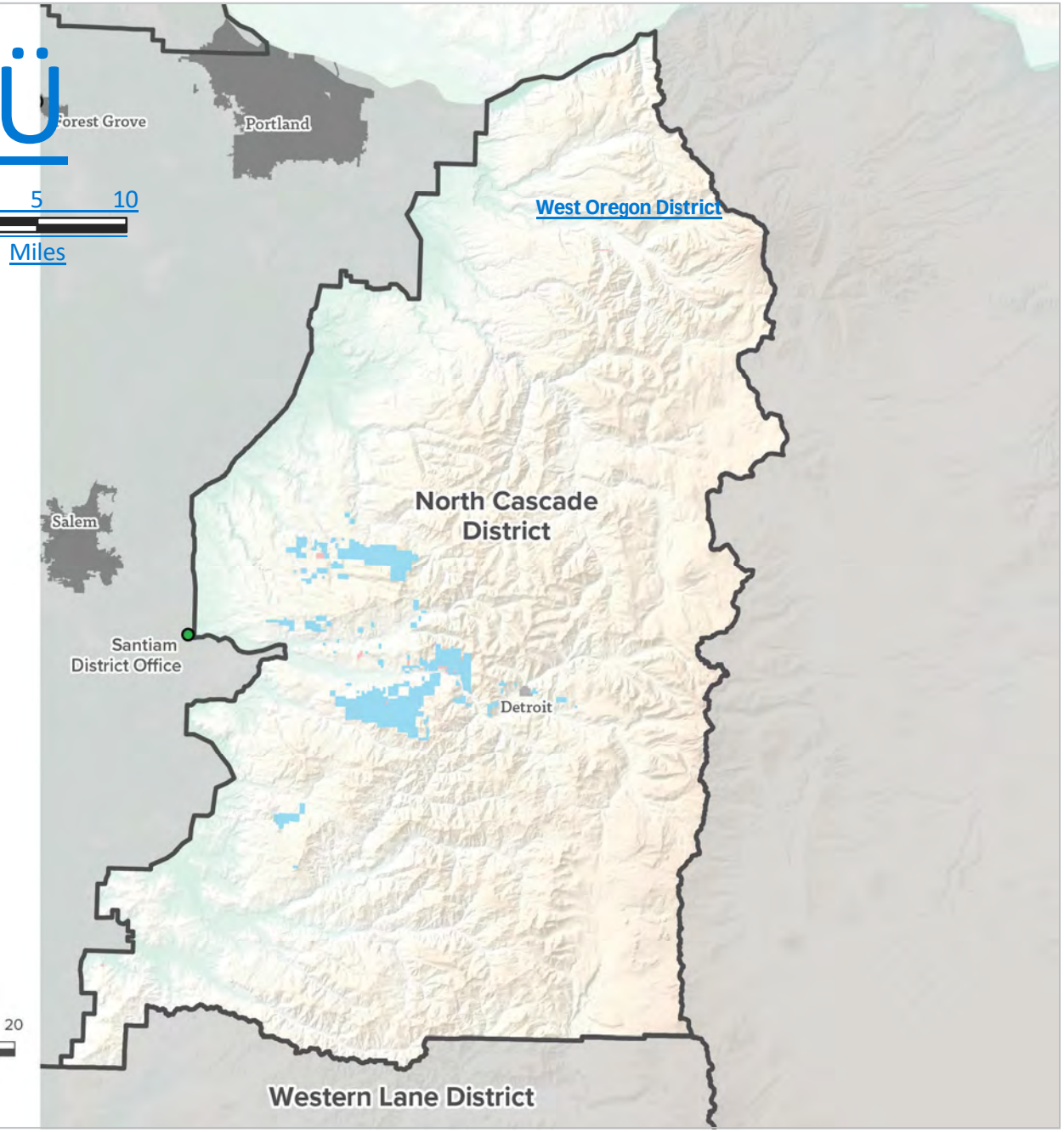
Tillamook District Office

Tillamook District

District Boundary City Limit

FMP Planning Area Board of Forestry ~~Lands~~ Common School ~~Forest~~ Lands ~~District Office~~





North Cascade District-
Planning Area

Forest Grove District

Forest Grove District Office

Forest Grove Portland

rict

Salem

North Cascade District

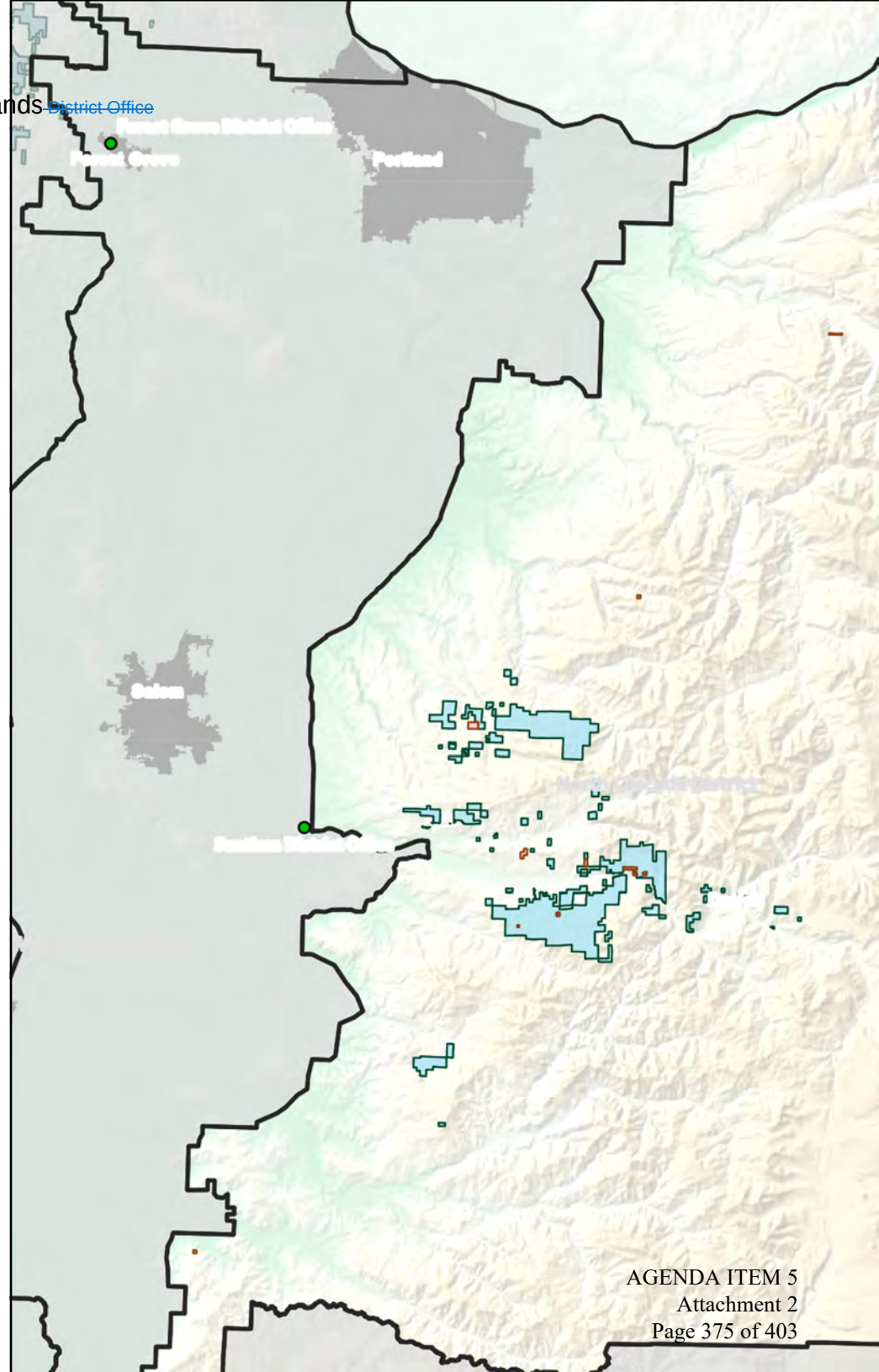
Santiam District Office

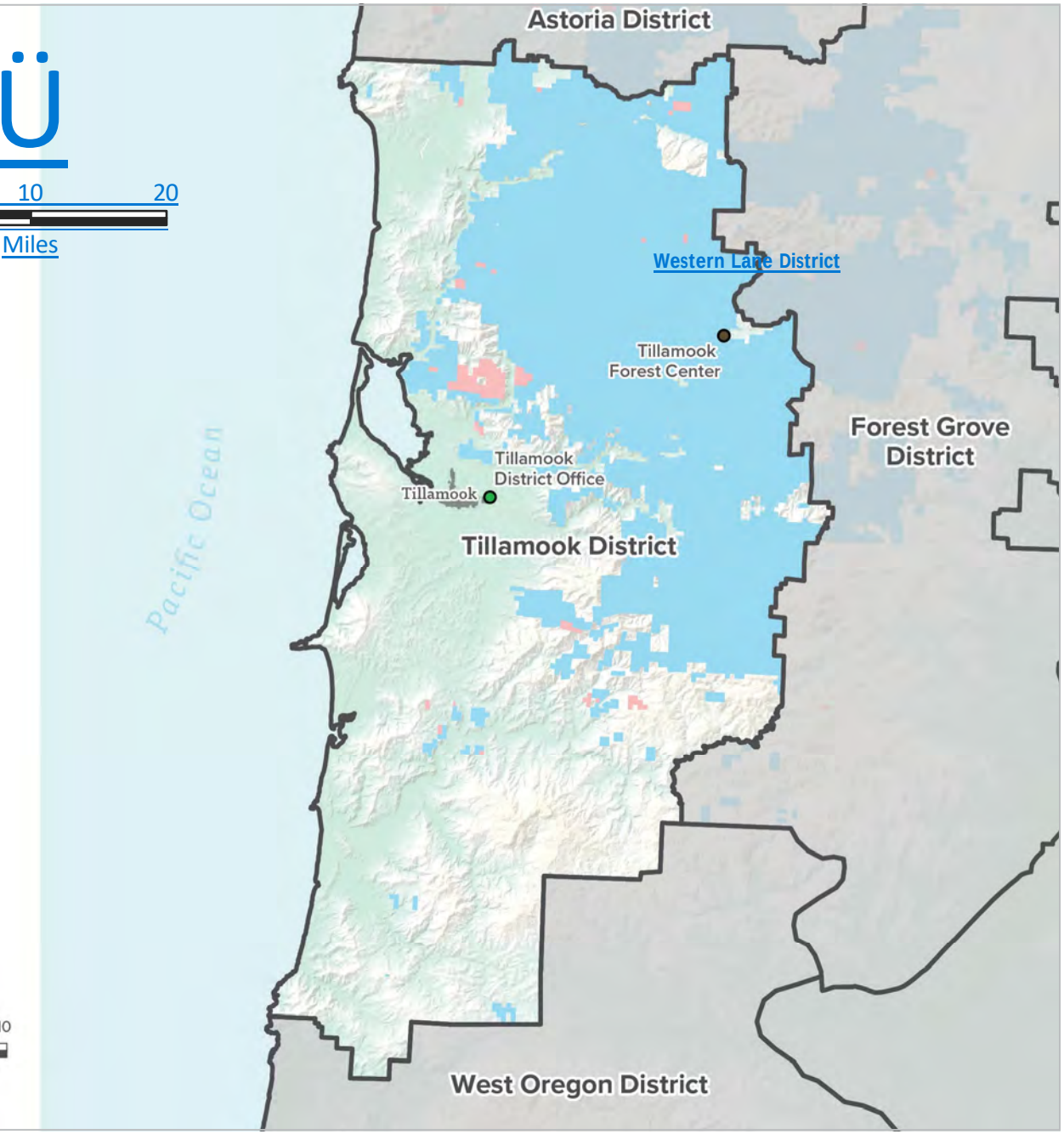
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Forest Grove District

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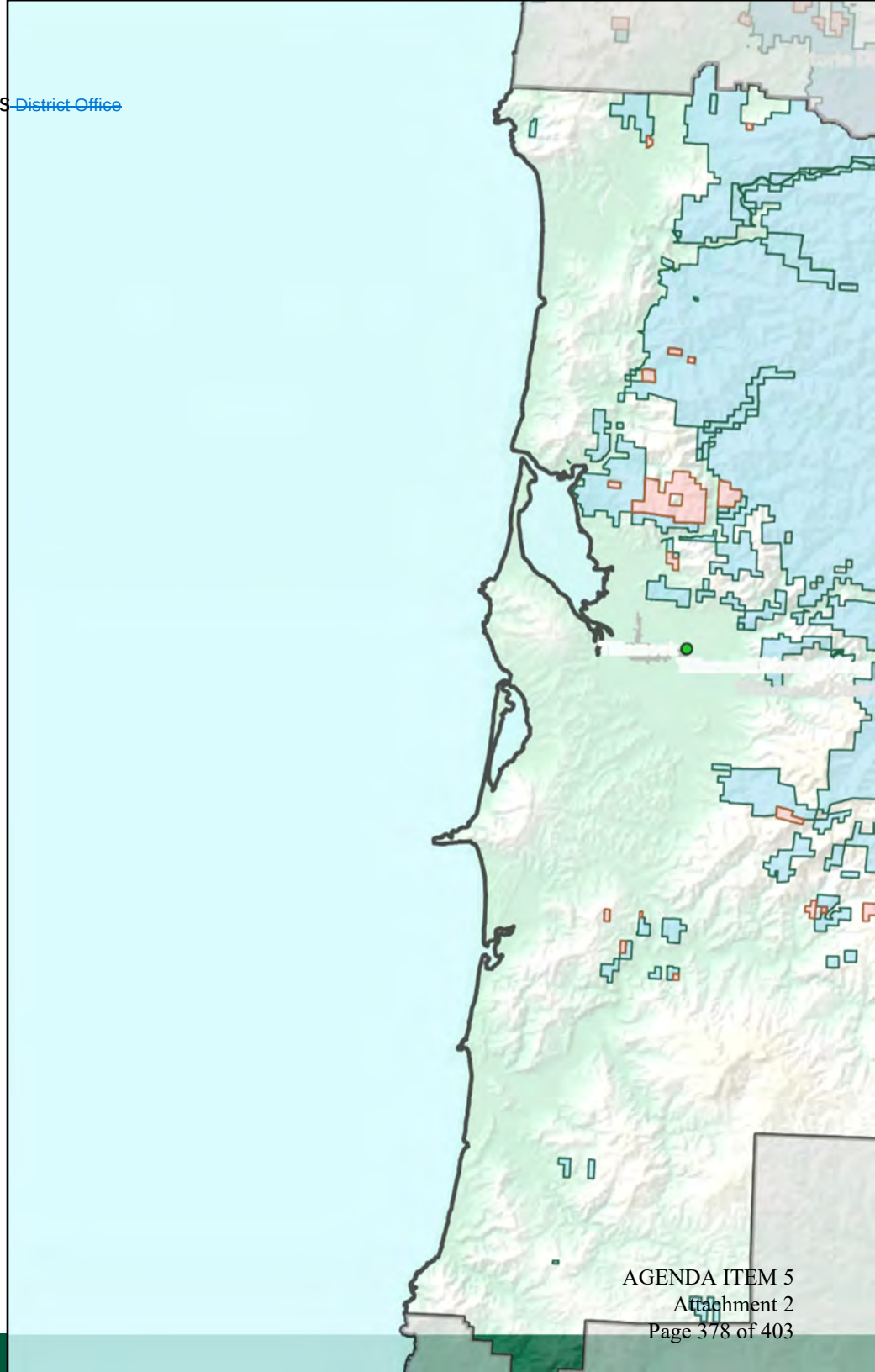
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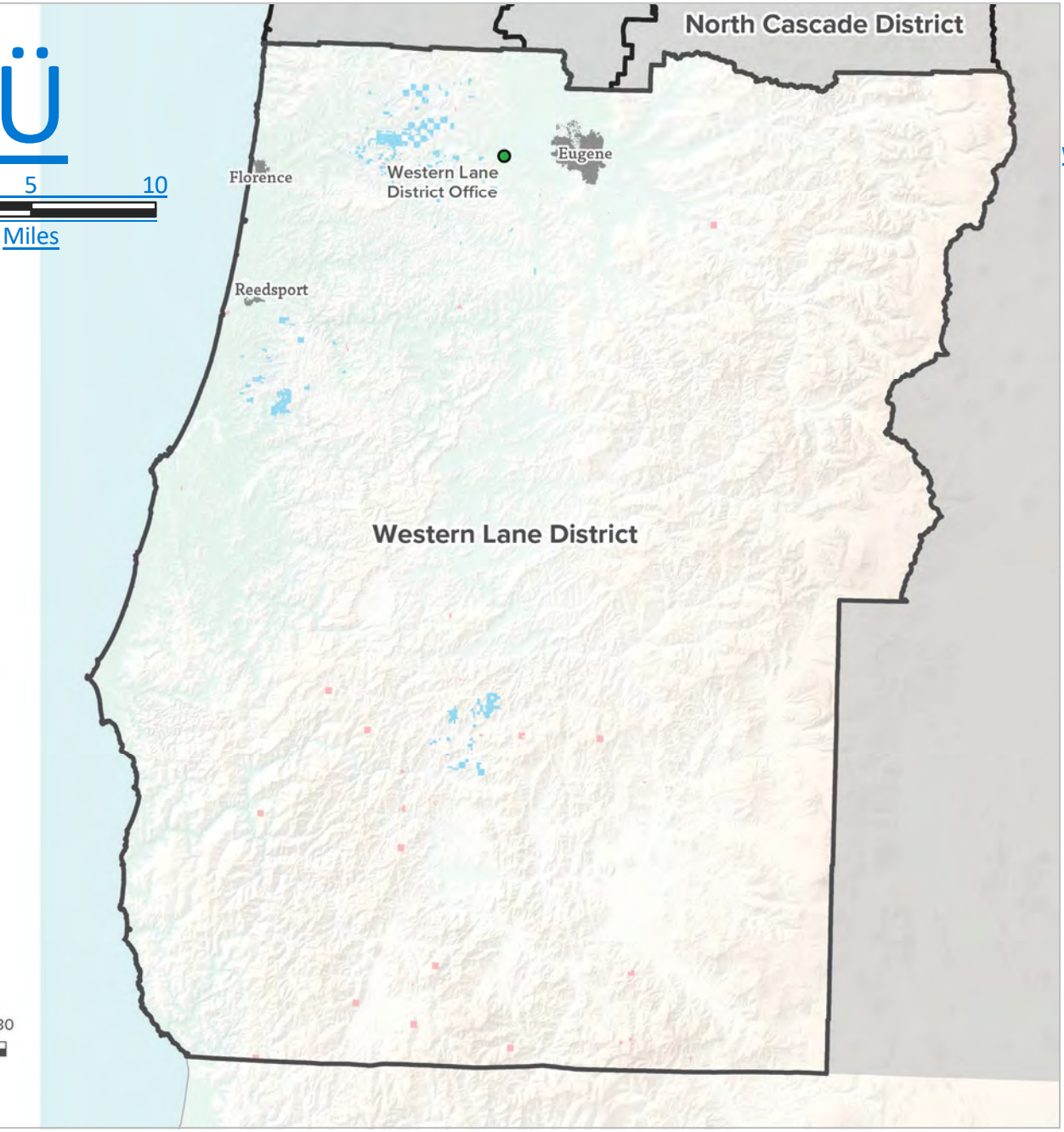
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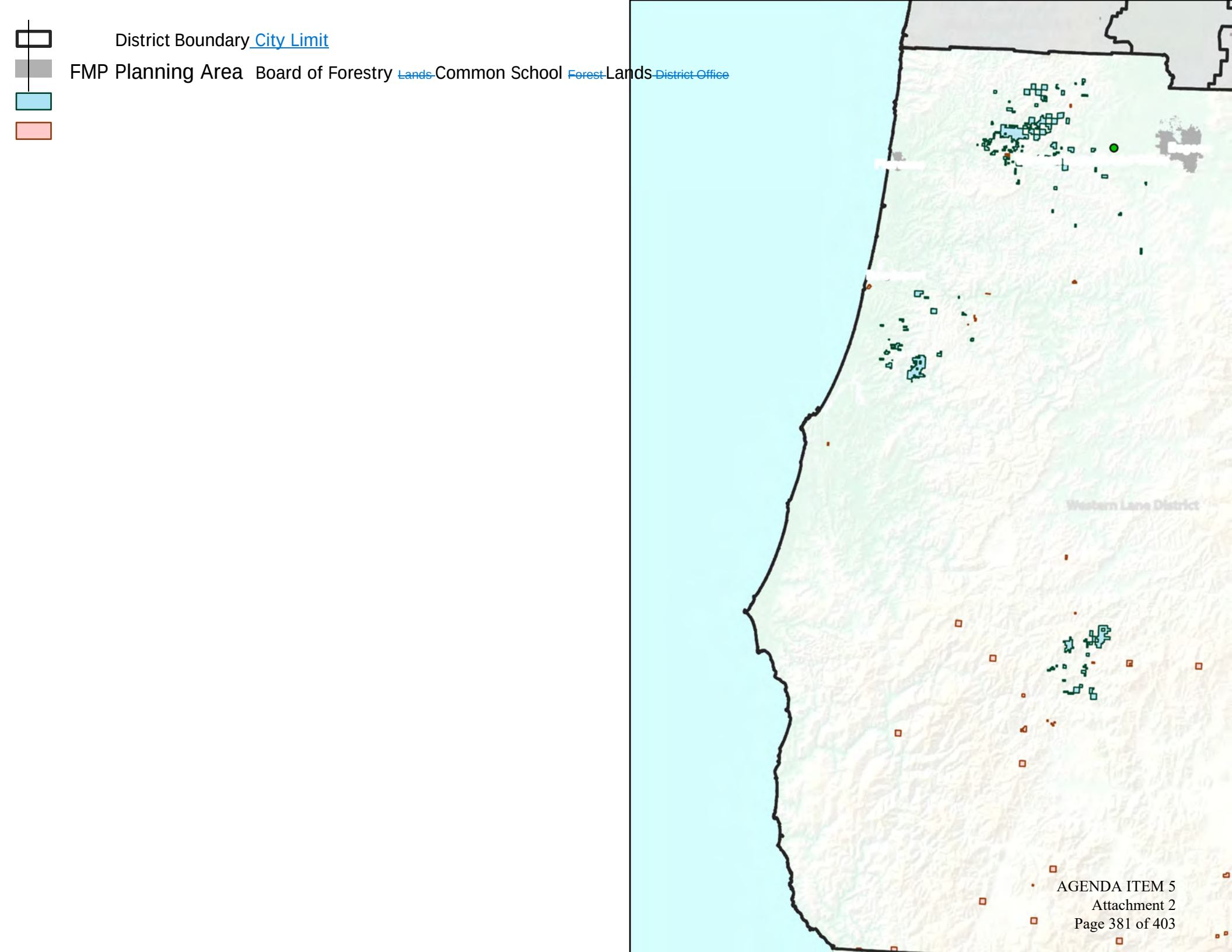
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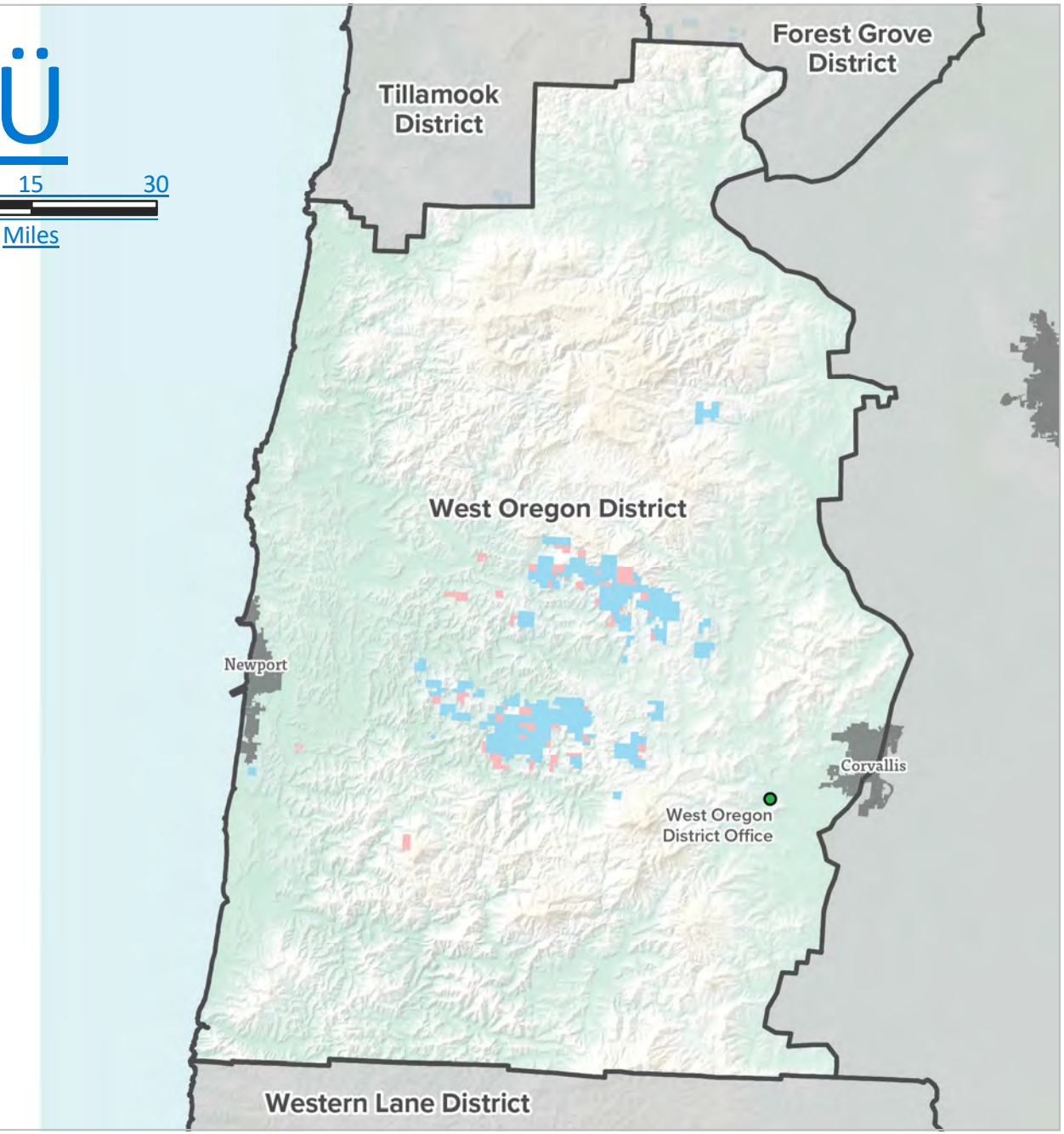
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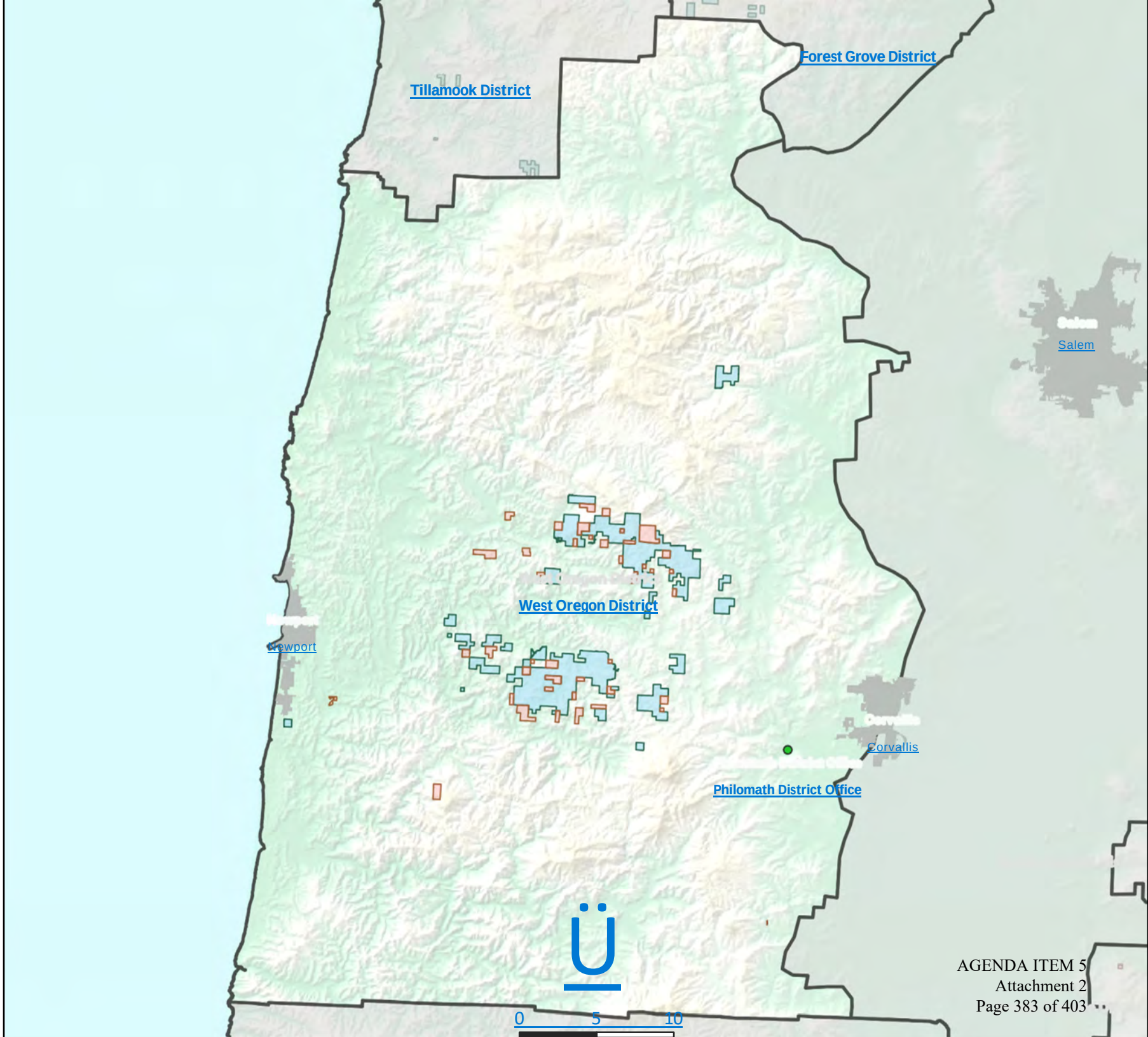
Western Lane District


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Appendix C
Description of Figures

The Oregon Department of Forestry (ODF) makes every attempt to ensure our documents are accessible. Should you need additional assistance, please contact us at ODF.StateForestMP@ODF.oregon.gov for accessibility assistance.

~~Acknowledgements~~

~~No figures.~~

~~Executive Summary~~
Land Acknowledgement

No figures.

Chapter 1 Introduction

Figure Number	Figure Title	Description of Figure

1-1	**Greatest Permanent Value Categories and Icons.** GPV category icons are used throughout Chapter 3*, Forest Resources, Goals, and Strategies*, to indicate connections with social, economic, and environmental resources and concepts.	Examples of social connections include the protection of cultural resources; recreation, education, and interpretation opportunities; and opportunities to collect special forest products (e.g., firewood, edible fungi, and salal). Examples of economic connections include sustainable and predictable production of forest products that support local and regional economies, including revenue generation for local taxing districts and management of state forest lands. ~~forest products that support local and regional~~Examples of environmental connections are healthy, sustainable, resilient forests; properly functioning

Figure Number	Figure Title	Description of Figure
1-2	~~economic, and environmental resources and concepts.~~ **Relationship with Other Supporting Plans and the Planning Process.** This figure provides additional detail about how federal and state laws and supporting implementation documents work in conjunction with the FMP to inform the tiered planning levels of implementation.	aquatic habitats for native fish and aquatic life; habitat for native wildlife; and carbon sequestration and storage. ~~economies, including revenue generation for local taxing districts and management of state forest lands. Examples of environmental connections are healthy, sustainable, resilient forests; properly functioning aquatic habitats for native fish and aquatic life; habitat for native wildlife; and carbon sequestration and storage.~~The FMP provides overall high-level forest management goals and strategies. It is based on federal and state law and the plan itself is a state law. Supporting documents provide additional standards or requirements to implement the FMP. Federal and state laws, including the FMP, as well as the supporting documents, guide IPs, IPs are sub-geographic plans with mid-level objectives, management approach, and activities. IPs guide OPs. OPs include operational and project-level detail. Monitoring and reports are the result of implemented OPs, and those results inform the adaptive management process. The adaptive management process is the process by which supporting documents may be adjusted.

Chapter 2 Management Approach

Figure Number	Figure Title	Description of Figure

2-1	**Social, Economic, and Environmental Reciprocity.** Ecosystem services deliver social and economic benefits, and social and economic benefits can be obtained in a way that supports environmental benefits.	Figure 2-1 is a flowchart that depicts the connections between ecosystems, humans, and the reciprocity between ecosystem services and services to ecosystems. Ecosystem services provided by the ecosystem itself include provisioning services like timber products, food, and clean air and water; regulating services like carbon storage; cultural services like recreational and spiritual benefits; and supporting services like soil formation and pollination. Human actions that can serve ecosystems include protecting services like fish and wildlife habitat protection, enhancing services like thinning, restoring services like stream enhancement projects, and supporting services like natural resource stewardship practices.
~~2-2~~	~~**Ecologically Sustainable Management.** Practices that promote adaptive capacity to secure GPV.~~	~~Figure 2-2 is a flowchart of ecologically sustainable forest management that promotes adaptable, productive, sustainable ecosystems through conservation emphasis areas in a landscape context, management of landscape conditions, and management of stands. Ecologically sustainable forest management aims to provide social, economic, and environmental ecosystem services, such as recreation, education, and interpretation opportunities; properly functioning aquatic habitat for fish and aquatic life;~~

Figure Number	Figure Title	Description of Figure
		~~habitats for native wildlife; clean air and water; and other important services.~~
2-~~3~~2	~~**Emphasis Areas and Their Value to the Ecosystem.** The design of emphasis areas across the landscape supports diversity, connectivity, complexity, and redundancy, which support adaptive capacity of the ecosystem for sustained ecosystem services delivery under changing conditions.~~ **Ecologically Sustainable Forest Management.** Practices that promote adaptive capacity to secure GPV.	~~Figure 2-3 shows three pictures characterizing different forest ages: young, middle-age, and older. All emphasis areas contribute value to the ecosystem. The design of emphasis areas across the landscape supports diversity, connectivity, complexity, and redundancy, which enhance function and improve adaptive capacity. Young forests (depicted by picture of a deer) are sunlight-filled and provide many wildlife species with abundant food resources, including berries, forbs, and grasses. Middle-age forests (depicted by picture of a salamander) are transitional forests contributing to wildlife habitat connectivity as they mature and develop stand characteristics found in older forests. Older forests (depicted by picture of an owl) contain multi-layered canopies, large trees, snags, and downed wood that provide wildlife nesting, roosting, and denning habitats.~~Figure 2-2 is a flowchart of ecologically sustainable forest management that promotes adaptable, productive, sustainable ecosystems through designated emphasis areas, management of landscape conditions, and management of stands. Within emphasis areas, example practices include protection of wetlands and steep slopes. Within Landscapes, example practices include habitat connectivity and structural diversity. Within Stands, example practices include retention and reforestation with diverse or alternate species mixes. Ecologically sustainable forest management aims to provide social, economic, and environmental ecosystem services, such as cultural values, recreation, education, and interpretation opportunities; sustainable and predictable production of forest products that generate revenue and support the economy; properly functioning aquatic habitat for fish and aquatic life; habitats for native wildlife; clean air and water; and other important services.

2-4 Text Box	**Examples** **Subclasses of Emphasis Areas across the Landscape.** Active management**Forest Land Management Classification System.** Each area designated as focused, special, or high value conservation stewardship is integrated acrosscategorized according to subclasses that denote the landscape guided by resource management emphasis areas.	Figure 2-4 shows two aerial views of the same landscape highlighting different subclasses and stewardship classes. View A shows an emphasis on aquatic and riparian habitat subclasses with the stewardship class focused on areas of high value conservation around and near streams in a landscape of partial-cut, variable-density, and regeneration harvest. View B shows recreation subclass emphasis areas, where special stewardship and focused stewardship classes are depicted.The text box lists the subclasses and their FLMCS stewardship class. Administrative sites are classified as Special Use stewardship. Agriculture, grazing, and wildlife forage areas can be classified as Focused Stewardship or Special Use. Aquatic and riparian habitat areas can be classified as Focused Stewardship or High Value Conservation Stewardship. County or Local Comprehensive Plan areas are classified as Special Use. Cultural resources areas are classified as Focused Stewardship or Special Use. Deeds are classified as Focused Stewardship or Special Use. Domestic water use areas are classified as Focused Stewardship or Special Use. Easements are classified as Focused Stewardship or Special Use. Energy and materials areas are classified as Focused Stewardship or Special Use. Operationally limited is classified as Special Use. Plant areas are classified as Focused Stewardship. Recreation areas are classified as Focused Stewardship or Special Use. Research and
2-5	**Application of the Ecologically Sustainable Approach Management to Deliver Ecosystem Services.** The emphasis areas, policies, and strategies are applied across the planning area to support decision-makers as they strive to further improve	Figure 2-5 is an infographic with three text boxes describing different planning and management levels in western Oregon state lands. Box 1: Within the overall planning area, lands are managed according to: Oregon Revised Statutes, Oregon Administrative Rules, Forest Land Management Classification System (FLMCS), Habitat Conservation Plan (HCP), and policies. Box 2: When managing the smaller scales of landscape or planning areas, as informed by emphasis

Figure Number	Figure Title	Description of Figure
		Monitoring areas are classified as Focused Stewardship or Special Use. Transmission corridors are classified as Focused Stewardship or Special Use. Unique Threatened or Endangered Plant areas are classified as HVCAs. Areas with visual values are classified as Focused Stewardship or Special Use. Wildlife habitat areas are classified as Focused Stewardship, Special Use, or HVCAs.
2-3	~~conditions, adapt plans to response to change; and improve performance over time.~~ **Landscape-Level Forest Stand Diversity Contributions to Ecosystem Function**. Management across the landscape supports diversity, connectivity, complexity, and redundancy, which, in turn, supports adaptive capacity of the forest for sustained ecosystem services delivery under changing conditions.	~~area, decisions are made to improve adaptive capacity to climate change; apply Forest Management Plan (FMP) strategies to FMP goals, including carbon storage; meet HCP Conservation Actions across the landscape, including slope protection, legacy components, in-unit downed wood, and leave trees; and meet Implementation Plan targets, including timber harvest level outputs. Box 3: Adaptive management uses a systematic and rigorous approach to learning from actions to improve management plans, decisions, and implementation; and respond to changes in ecosystem and society.~~ Figure 2-3 shows three pictures characterizing different contributions of seral stand conditions: young, middle-age, and older. Stand seral diversity contributes value to the ecosystem. The design of stand seral conditions across the landscape supports diversity, connectivity, complexity, and redundancy, which enhances function and improves adaptive capacity. Young forests (depicted by picture of a deer) are sunlight-filled and provide many wildlife species with abundant food resources, including berries, forbs, and grasses. Middle-age forests (depicted by picture of a salamander) are transitional forests contributing to wildlife habitat connectivity as they mature and develop stand characteristics found in older forests. Older forests (depicted by picture of an owl) contain multi-layered canopies, large trees, snags, and downed wood that provide wildlife nesting, roosting, and denning habitats.

2-4	**Examples of Emphasis Areas across the Landscape.** Active management is integrated across the landscape guided by resource management emphasis areas.	Figure 2-4 shows two aerial views of the same managed landscape highlighting how different timber harvest treatments may be applied in areas with different management emphasis by subclasses and stewardship classes. View A shows aquatic and riparian habitat and wildlife habitat subclasses around and near streams with the stewardship class being HVCAs. View B shows recreation subclass emphasis areas day use sites and the Tillamook Forest Center, where Special Use applies, and trails and dispersed campsites, where Focused Stewardship applies.

Chapter 3 Forest Resources, Goals, and Strategies

Figure Number	Figure Title	Description of Figure
3-1	**Distribution of Stand Ages as a Percentage of Area of Western Oregon State Forests.** Compared to even-aged Stands in the 60–89 year age bracket represent the plurality of stands, forests with uneven-aged stands often supportreflecting the management history of state forest lands. Reforestation following a greaterperiod of salvage logging and a series of wildfires in the early 20th century resulted in a large number of species and are more resistant to windfall and insect outbreaksstands in this age range.	Figure 3-1 is a bar graph showing the age distribution of stands in western Oregon state forests in percentages by 2030-year-old age groups. The percent of acres with stands 0–19 years old is 19.5%, 20–29 years old is 10.5%, 4024%, 30–59 years old is 19.724%, 60–7989 years old is 40%, 90–119 years old is 31.1 10%, and 80–99 years old is 14.3%. The rest of the age-class groupings, from 100120 years or older, are < is 2% of forests.%.
3-2	**Dominant Tree Species Composition in Western Oregon State Forests.** Tree species richness andStand composition affectaffects potential vulnerabilities or resilience to disturbances and stressors such as insect outbreaks, pathogens, fire, windthrow, drought, and climate change.	Figure 3-2 is a bar graph showing the percentpercentage of acres of different tree species in western Oregon state forests in percentages.. The dominant forests are mixed Douglas-fir at 4042%, followed by homogenous Douglas-fir at 27%.31%. Hemlock and mixed hemlock stands are approximately 139%. Hardwoods and mixed hardwoods are 12%. Open and ready for planting is at 5%, and14%. Other species and non-forested lands are at approximately 34%.
Text Box	**State Forests Revenue Disbursement**	The text box shows a pie chart of state forests revenue disbursement. 98% of State Forests Division revenue is generated from timber sales. 63.75% of state forest revenue is distributed to local counties and taxing districts for local services and schools. 36.25% of state forest revenue is retained by the State Forests Division for forest management and restoration.

3-3	**State Forest Roads by District.** There are approximately 4,500 miles of road on state forest lands; approximately 85% of these roads are surfaced (primarily graveled, though	Figure 3-3 is a bar chart showing the miles of state forest roads by district and what portion of those roads are unsurfaced. Astoria District has approximately 1,000 miles of roads of which 7% are unsurfaced, Forest Grove has approximately 800 miles of which 5% are unsurfaced. North Cascade has

Figure Number	Figure Title	Description of Figure
~~3-3~~	~~**Distribution of Quadratic Mean Diameter of Trees in Western Oregon State Forests.** Quadratic mean diameter affects the quality of habitat for some wildlife species and tree bole merchantability.~~some main travel routes are paved).	~~Figure 3-3 is a bar graph showing the distribution of the quadratic mean diameter of trees in western Oregon State forests as a percentage of forest acres. There is approximately 18% of stands that are non-forested or 0.1–4.9 inches. There is 4% that range between 5 and 99 inches, 28% that is 10–14.9 inches, 35% that is 15–19.9 inches, 12% that is 20–24.9 and 3% that is 25 inches or greater.~~approximately 400 miles of which 16% are unsurfaced, Tillamook has almost 1,500 miles of which 18% are unsurfaced. West Oregon and Western Lane Districts each have approximately 350 miles of roads. Approximately 27% of roads for West Oregon and 44% for Western Lane are unsurfaced.
Text Box	**Tillamook Forest Center Annual Overview**	The text box shows average data from fiscal year 2024 and 2025. Approximately 62,700 people visited the Tillamook Forest Center. People gave approximately 3,070 volunteer hours. Approximately 2,700 people participated in education programs and 5,200 people participated in interpretive services.
3-4	~~**Distribution of Dominant Tree Species on Western Oregon State Forests.** Douglas-fir-dominated forests comprise the majority of all districts other than Tillamook, but forests dominated by species other than Douglas-fir or by multiple species exist in all districts.~~ **Scenic Waterways.** Scenic-designated segments of the Nestucca, Nehalem, and Rogue Rivers flow through the planning area.	Figure 3-4 ~~shows two side-by-side maps~~ is a four-panel map showing ~~tree distribution in~~the scenic-designated segments of rivers within different districts ~~on~~of the planning area. One panel shows an overview of western Oregon state forest ~~lands. One map shows the districts in the north~~and the state's scenic-designated water ways. The other panels show details of which ~~includes~~districts have sections of scenic waterways. A segment of the Nehalem River Scenic Waterway flows through the Astoria~~, Forest Grove,~~ and Tillamook~~. The other map shows the districts in the south which includes West Oregon, North Cascade, and~~ Districts. A segment of the Nestucca Scenic Waterway flows through both Tillamook and Forest Grove Districts. And a segment of the Rogue Scenic Waterway flows through Western Lane~~. Douglas-fir-dominated forests comprise most of all districts other than Tillamook, which also has a large proportion of mixed hardwoods and hardwood-dominated forests. However, forests~~

		~~dominated by species other than Douglas-fir or by multiple species are present in all districts~~ District.
3-5	~~**Swiss Needle Cast on State Forest Lands.** Annual observations and 3-year moving average of Swiss needle cast infected acres across state forest management since 2010.~~**Slope Steepness across the Planning Area.** The highest percentage of steeper slopes in the planning area are in the Tillamook and Western Lane Districts.	~~Figure 3-5 is a combination of a bar graph showing acres infected by Swiss needle cast on state forest lands in annual observations from 2010 until 2018 and a line graph showing the 3-year moving average. From 2010 to 2014, the total and average acres infected remained below 40,000. In 2015, the annual observations increased to 70,000 acres and 3-year average increased to 50,000. By 2018, while the annual observation of acres has dropped since 2015 to approximately 55,000, the moving average has continued to increase to above 60,000.~~Figure 3-5 is a bar graph showing acres of each district that are 0–30% slope, 30–60% slope, and >60% slope. Tillamook District has approximately 125,000 acres of the total district area of 250,000 acres that have slopes greater than 60%, the largest area of all districts.
3-6	**Forest Soils Developed on Marine Siltstones in Less Rugged Coastal Areas.** Soils formed on underlying marine sedimentary formations from deep weathering are predominantly silts, sands, and clays with minor amounts of	Figure 3-6 is an annotated photograph of a soil profile, showing the demarcation between underlying geologic formation of marine siltstone below the forest soils composed of silt, clay, and sand. A rock hammer is located in the center of the photo at the line indicating the border between soil and underlying marine silt stone to show scale.

Figure Number	Figure Title	Description of Figure
~~3-6~~	~~**Percent of Planning Area District Lands by Overall Wildfire Risk Category as of 2018.** Risk is a product of the likelihood and consequences of wildfire to infrastructure and natural resources. Wildfire can be either beneficial or detrimental.~~	~~Figure 3-6 is a bar graph that describes the overall fire risk level for each district by percentage of its' land within wildfire risk categories as of 2018. Most district lands are low risk, with 76–85% falling within that category and ≤14% in any of the moderate, high, or very high risk classifications. Two districts have higher wildfire risk than other districts. North Cascade has 55% of its lands at moderate risk and 14% at high risk, with 1% at very high risk. Western Lane has 34% at moderate risk, 12 % at high risk, and 12% at very high risk.~~
~~3-7~~	~~**Scenic Waterways.** Scenic designated segments of the Nestucca, Nehalem, and Rogue Rivers flow through the planning area.~~gravel and can be wet most of the year.	~~Figure 3-7 is a four-panel map showing the scenic designated segments of rivers within different districts of the planning area. One panel shows an overview of western Oregon State forest districts and the state's scenic-designated water ways. The other panels show details of which districts have sections of scenic waterways. A segment of the Nehalem River Scenic Waterway flows through the Astoria and Tillamook Districts. A segment of the Nestucca Scenic Waterway flows through both Tillamook and Forest Grove Districts. And a segment of the Rogue Scenic Waterway flows through Western Lane District.~~
~~3-8~~	~~**Slope Steepness across the Planning Area.** The highest percentage of steeper slopes in the planning area are on the Tillamook and Western Lane Districts.~~	~~Figure 3-8 is a bar graph showing acres of each district that are 0–30% slope, 30–60% slope, and >60% slope. Tillamook District has approximately 125,000 acres of the total district area of 250,583 acres that have slopes greater than 60%, the largest area of all districts.~~
3-~~97~~	**Fine- and Coarse-Grained Soils by District.** The Tillamook District has the highest proportion of coarse-grained soils in the planning area.	Figure 3-~~97~~ is a bar graph showing acres of each district that are either fine- or coarse-grained soils. Astoria, West Oregon, and Western Lane Districts have predominantly fine-grained soils. Forest Grove, North Cascade, and Tillamook Districts have predominantly coarse-grained soils.

3-~~108~~	**Paths of the Forest Carbon Cycle.** Forest vegetation sequesters carbon dioxide from the atmosphere in living tissues and provides long-term storage of carbon in trees, snags, downed wood, other plants, and soils.	Figure 3-~~108~~ is a flow diagram showing carbon dioxide capture and emissions as part of a forest's carbon cycle. Carbon dioxide is removed from the atmosphere as forests grow and age. Carbon dioxide is released by fire, decomposition, biomass products like wood pellets, and short-term consumer products like paper. Long-lived products, like lumber, can sequester carbon until they start to decompose.
3-9	**Estimated Average Aboveground Carbon in Live Trees across ODF Districts.** Data are based on the 2022 Forest Inventory and Analysis estimate on western Oregon state forests.	Figure 3-9 is a bar graph of aboveground carbon in woody biomass measured by US tons per acre. The average aboveground carbon of all districts is 59.3. The aboveground carbon of individual districts are as follows: Astoria is 59.6, Forest Grove is 60.3, North Cascade is 57.6, Tillamook is 53.9, West Oregon is 54.0, and Western Lane is 86.6.
3-10	**Watersheds Overlapping with North Coast Districts and the Planning Area.** The median percentage of ODF-managed lands in northwest districts by HUC-12-sized sub-watersheds is 26% (range <1% to 100%).	Figure 3-10 is a map of the north coast districts within the planning area with Hydrologic Unit Code (HUC)-12 watersheds overlayed. HUC-12s are the smallest-sized watershed delineated by the U.S. Geological Survey.
3-11	**Watershed Enhancement Actions.** In-stream, riparian, road improvement, and donations tracked by OWEB, 1995–2025.	Figure 3-11 shows representative photographs of five types of watershed enhancement projects, along with quantities. ODF has implemented over 200 projects with over 200 miles of stream enhanced; donated over 8,000 trees for in-stream projects; improved over 350 road-stream crossings to enable aquatic organism access to over 300 miles of upstream habitat;

Figure Number	Figure Title	Description of Figure
	sequesters carbon dioxide from the atmosphere in living tissues and provides long-term storage of carbon in trees, snags, downed wood, other plants, and soils.	cycle. Carbon dioxide is removed from the atmosphere as forests grow and age. Carbon dioxide is released by fire, decomposition, biomass products like wood pellets, and short-term consumer products like paper. Long-lived products, like lumber, can sequester carbon until they start to decompose.improved over 2,500 road-stream crossings on other streams to improve water quality; restored over 200 miles of riparian areas; closed or vacated over 175 miles of road; and donated over $50 million in-kind from ODF and $12 million from outside sources.
3-11	**Estimated Average Aboveground Carbon in Woody Biomass across ODF Districts**. Data are based on the 2020 Forest Inventory and Analysis Plots on western Oregon State forests.	Figure 3-11 is a bar graph of aboveground carbon in woody biomass measured by metric tons per hectare. The average aboveground carbon of all districts is 133. The aboveground carbon of individual districts are as follows: Astoria is 142, Forest Grove is 129, North Cascade is 165, Tillamook is 125, West Oregon is 110, and Western Lane is 146.
3-12	**Watersheds Overlapping with Northwest Districts and FMP Planning Area**. The median percentage of ODF-managed lands ownership in northwest districts by HUC-12-sized is 26% (range <1% to 100%).	Figure 3-12 is a map of the FMP planning area districts with Hydrologic Unit Code (HUC)-12 watersheds overlayed. HUC-12s are the smallest-sized watershed delineated by the U.S. Geological Survey.

Chapter 4 Guidelines

Figure Number	Figure Title	Description of Figure

4-1	**Links among the FMP ~~and~~, Major Example Laws, Other Plans, and Policy Guidance**. This figure provides additional detail of the laws and supporting documents that inform the FMP and implementation.	~~Figure 4-1 is a flow diagram showing the connections and feedback between FMP direction and implementation. FMP direction described as falling under the Board of Forestry (BOF), shows two boxes with arrows connecting them in both directions: one for the FMP and one for the BOF review of FMP performance measures. The FMP box in turn connects to a separate section with many interacting components under FMP implementation, which is carried out by the State Forester/ODF Department of Forestry staff. Implementation Plans,~~Figure 4-1 is a flow diagram showing the connections and feedback between federal and state laws, including the FMP, and the tiered planning process. It is a more detailed version of Figure 1-2. It provides an example subset of laws that inform the FMP, including the Forest Practices Act, Stewardship Agreement, Clean Water Act, Clean Air Act, Endangered Species Act, Forest Land Management Classification System, and OAR Smoke Management. The supporting implementation documents are also provided in more detail and include the WOSF HCP, BOF Policy like the CCCP and VOF, OPs, the BOF Performance Measures, Adaptive Management Plan, and modeling. The figure highlights that supporting implementation documents inform the FMP goals and strategies specifically. Both the laws and the supporting documents inform IPs, which set mid-term objectives. IPs, in turn, inform the OPs, which set short-term objectives and guide operations. Monitoring and reporting communicate operations results and inform the adaptive management process, which may influence change of supporting documents.

Figure Number	Figure Title	Description of Figure
		which set medium-term targets are informed by the FMP, FLMCS, HCP, and policies lead to Operation Plans, which set short-term targets. Funding level, Operation Plans, and monitoring lead back to adaptive management plans that are reviewed by the BOF and then informs the FMP, HCP, and FLMCS, and operational policies.
4-2	**Structured Decision-Making Process.** The process supports multi-objective decision-making based on deliberation, estimated outcomes of alternative actions, and clear choices upon which decision-makers can act.	Figure 4-2 is a diagram depicting the circular connection between the five steps for making decisions in a structured process; all steps are connected by a dashed line. After the five steps are taken and a decision is made, step six is to implement, monitor and review, which connects back to step one of the process.
4-3	**Adaptive Management Plan Workflow.** This workflow shows key AMP roles and how they can affect FMP implementation through decision support, monitoring, and reporting.	Figure 4-3 is a workflow diagram for adaptive management, which uses a structured decision-making process that necessitates monitoring and reporting. Monitoring leads to decision support for adaptive management and reporting that will inform any needed structured decision-making. Monitoring is also designed to incorporate performance measures and habitat conservation plans. Decision recommendations through the adaptive management structured decision-making process leads to Implementation Plans, HCPs, policies, best management practices, etc.

Description of Figures

Glossary

No figures.

References

No figures.

Appendix A Engagement

No figures.

Appendix B District Maps

Figure Number	Figure Title	Description of Figure
B-1	**Western Oregon FMP Planning Area,** 639,~~542~~573 Acres Managed by ODF	Figure B-1 is a map of the ~~FMP~~ planning area with all districts managed by ODF that are west of the Cascade Mountains.
B-2	**Astoria District Planning Area,** 136,856 Acres Managed by ODF	Figure B-2 is a map of the Astoria District that is in the north-coast part of the ~~FMP~~ planning area.
B-3	**Forest Grove District Planning Area,** 115,~~004~~009 Acres Managed by ODF	Figure B-3 is a map of the Forest Grove District that is in the northern part of the ~~FMP~~ planning area, east of the Astoria and Tillamook Districts.
B-4	**North Cascade District Planning Area,** 47,475 Acres Managed by ODF	Figure B-4 is a map of the North Cascade District that is in the northern part of the ~~FMP~~ planning area. The North Cascade District is east of Astoria, Tillamook, Forest Grove, and ~~Western~~West Oregon Districts. The district goes as far north as the ~~Astoria~~Forest Grove District and ends in the south at the Western Lane District, but state forest lands are generally east of Salem.
B-5	**Tillamook District Planning Area,** 250,~~583~~589 Acres Managed by ODF	Figure B-5 is a map of the Tillamook District that is in the north-coast part of the ~~FMP~~ planning area, south of the Astoria District and west of the Forest Grove District.
~~B-6~~	~~**Western Lane District Planning Area,** 53,035 Acres Managed by ODF~~	~~Figure B-6 is a map of the Western Lane District that is in the southern part of the FMP planning area. The Western Lane District lies south of all other western districts.~~
~~B-7~~	~~**West Oregon District Planning Area,** 36,587 Acres Managed by ODF~~	~~Figure B-7 is a map of the West Oregon District that is in the western part of the FMP planning area. It is north of the Western Lane District and south of the Tillamook and Forest Grove Districts.~~

Figure Number	Figure Title	Description of Figure
B-6	**Western Lane District Planning Area,** 53,031 Acres Managed by ODF	Figure B-6 is a map of the Western Lane District that is in the southern part of the FMP planning area. The Western Lane District lies south of all other western districts.
B-7	**West Oregon District Planning Area,** 36,613 Acres Managed by ODF	Figure B-7 is a map of the West Oregon District that is in the western part of the planning area. It is north of the Western Lane District and south of the Tillamook and Forest Grove Districts.

STAFF REPORT

Agenda Item No.:	6
Work Plan:	Fire Protection
Topic:	Ongoing Topic; Wildfire Outlook and Readiness
Presentation Title:	2026 Fire Season Outlook and Readiness Report
Date of Presentation:	June 3, 2026
Contact Information:	Michael Curran, Fire Protection Division - Chief 503-480-6675; Michael.Curran@odf.oregon.gov Ron Graham, Fire Protection Division - Deputy Chief of Operations 971-718-6862, Ron.Graham@odf.oregon.gov

SUMMARY

Oregon revised statutes define the Department's Fire Protection Policy, which requires a complete and coordinated system. This system relies on the partnership between the Department and forest landowners with a commitment to ongoing communication and collaboration with many other state and federal agencies. Fire management leaders from the Department will provide a briefing on some of the ongoing coordination and an up-to-date fire season status report during this agenda item. A weather forecast and fire season outlook will also be included in this agenda item

STAFF REPORT

Agenda Item No.:	7
Work Plan:	Fire Protection
Topic:	Annual Topic: Approval of Forest Protection Association District Budgets and Rates
Presentation Title:	Approval of the Forest Protection Association District 2027 Fiscal Budgets and Rates
Date of Presentation:	June 3, 2026
Contact Information:	Michael Curran, Fire Protection Division - Chief 503-480-6675; Michael.Curran@odf.oregon.gov James Short, Chief Financial Officer 503-302-8478; James.Short@odf.oregon.gov

SUMMARY

ORS 477.265 requires the Board of Forestry to annually review the forest protection district budgets and pass final approval on all district budgets including the prorated acreage assessment rates.

CONTEXT

Oregon's wildfire protection system has historically provided an effective and efficient method of addressing the state's fire protection responsibilities – both in initial attack and large fire management needs. The system uses a "complete and coordinated" methodology and is funded through a complex mix of landowner and state general fund dollars. The system provides policy, prevention, and suppression activities at the national, statewide and district levels. The delivery of these services is reviewed annually and predominately funded through the development of fiscal protection budgets in which the costs are proportioned on a legislative determined statutory ratio of landowner and general fund dollars.

Budget Development Process:

Consistent with statutory direction[1], each year in January, the state office and districts begin developing a fire protection budget to fund activities for the upcoming fiscal year (July 1st – June 30th). During the development process, district budget committees[2] analyze and review the draft budget prior to making recommendations to the District Forester. The budget committee then carries the final recommended budget to the Board of Directors of the Forest Protective Association for consideration at the annual spring association meeting. Additionally, each district holds a public budget meeting[3] for any landowners affected by the budget to provide an opportunity for any additional public comments on the budget.

The last step in the district fiscal protection budget process is submittal to the State Forester and then official approval by the Board of Forestry in June. Attachment 1 provides a summary of the fiscal year 2027 recommended budgets.

[1] ORS 477.235 Forester to prepare tentative budget estimates for districts.
[2] ORS 477.240 Advisory and guidance committees
[3] ORS 477.255 Holding of budget meeting; revision and submission for final approval.

BACKGROUND / ANALYSIS

Throughout the development of the fiscal year 2027 budgets and spring association meetings, landowners have expressed appreciation for the level of protection and service they receive from the Associations and the Department. Association meetings have been very collaborative and productive with excellent dialog focusing on important fire protection related topics. Attachments 2 and 3, annual letters to the State Forester and public budget hearing comments, highlight some of the topics discussed at the district budget committee, fire protection association, and public budget meetings. The conversations focused on implementing HB 3940 to help lower and stabilize fire-protection rates, strengthening interagency wildfire cooperation, and supporting facility reconstruction and key staffing needs. However, a re-occurring theme of the need for an updated budget process and template were identified as a key priority for the agency to work on and the importance of keeping a strong landowner collaboration while doing so.

RECOMMENDATION

The Department recommends the Board approve all Fiscal Year 2027 district and association protection budgets as presented in Attachment 1.

ATTACHMENT

(1) FY 2027 Protection Budget Summary, by District, and Area
(2) Letters to the State Forester from Forest Protective Associations
(3) Public Budget Hearing Minutes

Board of Forestry ODF Protection Budget & Assessment Summary

Fiscal Year **2027** **General Fund Split** **50.00%**

		Protected Acres			Budgeted Dollars			Public Rates			Private Rates*			Revenue**
	Class Type	FY2026	**FY2027**	Y/Y Change	FY2026	**FY2027**	Y/Y Change	FY2026	**FY2027**	Y/Y Change	FY2026	**FY2027**	Y/Y Change	**FY2027 PROJECTION**
NORTHWEST OREGON														
Northwest Oregon	Timber	1,761,600	**1,803,176**	2.36%	$6,619,581	**$6,103,429**	-7.80%	$3.39	**$2.42**	-28.55%	$1.48	**$1.21**	-18.44%	**$5,643,126**
West Oregon	Timber	1,085,709	**1,083,753**	-0.18%	$3,803,269	**$3,732,489**	-1.86%	$3.28	**$2.76**	-15.74%	$1.44	**$1.38**	-4.35%	**$3,961,782**
North Cascade	Timber	656,442	**655,838**	-0.09%	$3,286,460	**$3,446,197**	4.86%	$3.93	**$4.31**	9.63%	$1.79	**$2.16**	20.96%	**$3,584,991**
NOA TOTALS & AVERAGES	**Timber**	3,503,750	**3,542,767**	1.11%	$13,709,311	**$13,282,115**	-3.12%	$3.53	**$3.16**	-10.42%	$1.57	**$1.58**	0.81%	**$13,189,899**
SOUTHERN OREGON														
Southwest Oregon	Timber	1,762,010	**1,776,856**	0.84%	$11,741,376	**$12,180,569**	3.74%	$8.71	**$5.42**	-37.75%	$4.23	**$2.71**	-35.99%	**$11,604,416**
	Grazing	131,969	**132,024**	0.04%	$1,117,556	**$905,560**	-18.97%	$1.45	**$1.54**	6.06%	$0.34	**$0.77**	129.17%	
Coos FPA	Timber	1,515,019	**1,511,974**	-0.20%	$9,162,738	**$9,943,925**	8.53%	$5.51	**$5.58**	1.27%	$2.57	**$2.79**	8.56%	**$9,550,116**
	Grazing	72,762	**72,846**	0.12%	$281,541	**$414,330**	47.17%	$3.58	**$4.23**	18.02%	$1.40	**$2.12**	51.21%	
Douglas FPA	Timber	1,416,523	**1,415,168**	-0.10%	$9,135,752	**$10,037,903**	9.87%	$6.56	**$6.36**	-3.11%	$3.14	**$3.18**	1.37%	**$9,632,609**
	Grazing	259,718	**261,834**	0.81%	$908,787	**$992,760**	9.24%	$2.36	**$2.14**	-9.16%	$0.79	**$1.07**	35.81%	
South Cascade	Timber	1,135,137	**1,136,235**	0.10%	$5,412,496	**$6,130,429**	13.26%	$3.98	**$4.42**	11.03%	$1.81	**$2.21**	22.07%	**$6,333,973**
Western Lane	Timber	791,947	**791,841**	-0.01%	$3,247,091	**$3,341,916**	2.92%	$3.73	**$2.26**	-39.33%	$1.71	**$1.13**	-33.83%	**$3,296,037**
SOA TOTALS & AVERAGES	**Timber**	6,620,635	**6,632,074**	0.17%	$38,699,452	**$41,634,743**	7.58%	$5.70	**$4.81**	-15.61%	$2.69	**$2.40**	-10.69%	**$40,417,151**
	Grazing	464,449	**466,705**	0.49%	$2,307,884	**$2,312,650**	0.21%	$2.46	**$2.64**	7.01%	$0.84	**$1.32**	56.78%	
EASTERN OREGON														
Central Oregon	Timber	1,014,737	**938,888**	-7.47%	$7,641,332	**$7,920,585**	3.65%	$7.18	**$5.70**	-20.61%	$3.13	**$2.62**	-16.27%	**$11,815,746**
	Grazing	1,077,145	**1,268,367**	17.75%	$3,307,387	**$3,418,835**	3.37%	$2.75	**$2.83**	2.97%	$0.74	**$1.19**	60.07%	
Northeast Oregon	Timber	836,388	**914,961**	9.39%	$4,600,591	**$5,809,187**	26.27%	$5.88	**$5.45**	-7.25%	$2.48	**$2.50**	0.92%	**$7,195,057**
	Grazing	1,084,419	**1,135,798**	4.74%	$2,036,585	**$1,428,773**	-29.84%	$1.53	**$1.20**	-21.57%	$0.30	**$0.37**	23.33%	
Klamath Lake	Timber	1,032,513	**1,017,213**	-1.48%	$5,907,487	**$6,451,394**	9.21%	$5.47	**$7.02**	28.33%	$2.27	**$3.28**	44.21%	**$8,153,146**
	Grazing	490,174	**491,134**	0.20%	$1,019,735	**$1,123,332**	10.16%	$1.19	**$1.40**	17.48%	$0.30	**$0.47**	56.67%	
Walker Range FPA	Timber	180,467	**183,728**	1.81%	$1,189,693	**$1,240,237**	4.25%	$5.57	**$3.46**	-37.90%	$2.32	**$1.50**	-35.48%	**$1,015,417**
	Grazing	2,505	**2,563**	2.29%	$3,144	**$3,108**	-1.15%	$0.60	**$0.60**	0.00%	$0.30	**$0.30**	0.00%	
EOA TOTALS & AVERAGES	**Timber**	3,064,105	**3,054,791**	-0.30%	$19,339,104	**$21,421,403**	10.77%	$6.02	**$5.41**	-10.24%	$2.55	**$2.48**	-3.00%	**$28,179,366**
	Grazing	2,654,243	**2,897,861**	9.18%	$6,366,851	**$5,974,048**	-6.17%	$1.52	**$1.51**	-0.66%	$0.41	**$0.58**	41.78%	
STATEWIDE TOTALS & AVERAGES														
By Land Class Type	**Timber**	13,188,491	**13,229,631**	0.31%	$71,747,867	**$76,338,260**	6.40%	$5.26	**$4.60**	-12.69%	$2.36	**$2.22**	-6.01%	**$81,786,416**
	Grazing	3,118,693	**3,364,566**	7.88%	$8,674,734	**$8,286,698**	-4.47%	$1.92	**$1.99**	3.55%	$0.60	**$0.90**	50.86%	
Combined Total		16,307,184	**16,594,198**	1.76%	$80,422,601	**$84,624,958**	5.23%	$4.03	**$3.64**	-9.84%	$1.71	**$1.73**	1.27%	

AREA & SALEM BUDGET UNITS* **				**WPA****	**Grazing Relief*****	**OFLPF******		**Already Included In Above Total**
Salem Protection Division	$11,054,515	**$8,850,785**	-19.94%	General Fund Offset	General Fund Offset	Landowner Distribution		**$16,849,784**
Northwest Oregon Area	$350,027	**$359,808**	2.79%	$1,303,257	$750,000	Minimum Surcharge	$3,803,215	
Southern Oregon Area	$623,450	**$668,191**	7.18%			Improved Lot Surcharge	$9,829,297	
Eastern Oregon Area	$731,539	**$685,571**	-6.28%			Harvest Tax	$1,164,015	

LEGISLATIVE APPROVED BUDGET (LAB) ALLOCATION COMPARISON***** **		FY2026	**FY2027**	Y/Y Change
Other Fund (7100) & General Fund (1120) Combined Totals	**LAB Combined Funds Dollars Allocation**	$86,275,127	**$80,505,257**	-6.69%
	Fiscal Year Combined Funds Dollars Budgeted	$93,182,132	**$95,189,313**	2.15%
	LAB Over/Under Budgeted Combined Funds	-$6,907,005	**-$14,684,056**	112.60%
General Fund (1120) Only Totals	**LAB General Fund Dollars Allocation**	$27,105,054	**$39,511,331**	45.77%
	Fiscal Year General Fund Dollars Budgeted	$34,767,122	**$41,816,341**	20.28%
	LAB Over/Under Budgeted General Funds	-$7,662,068	**-$2,305,010**	-69.92%

NOTES

* Lands not owned by publc entities may not be assessed in excess of 50% of the pro rata cost per acre, per ORS 477.230.

** Projected Revenue includes all private, public, agreement, and General Fund. Dollar amount may be lower or higher than budgeted dollars due to landowner Actual Cost Computation (ACC) carryover debit/credit to collection rates, per ORS 477.232.

*** Area and Salem data is only for reference. Per HB3940, Salem and Area budgets are paid for by General Fund and are not included in public or private rates.

**** Wildfire Protection Act (WPA) is only for reference. In accordance with ORS 477.777, Eastside Rate Relief is applied to private landowner timber and grazing rates only, thus private rate is not half of public rate for eastside districts.

*****Grazing Relief is only for reference. Per HB5006, grazing relief is applied to both public and private grazing rates and is an offset to General Fund expenditues also.

******Oregon Forest Land Protection Fund (OFLPF) is only for reference. Per HB3940, OFLPF collects minimum surcharge, improved lot surcharge, and harvest tax that is then disbursed back to distirict budgets and is applied to both public and private timber and grazing rates and is an offset to General Fund expenditues also.

*******Agency budgets are not to exceed funding allocations shown in the Legislative Approved Budget (LAB), per ORS 291.238.

CLACKAMAS-MARION
FOREST PROTECTIVE ASSOCIATION

14995 South Hwy 211, Molalla OR 97038 503-829-2216, FAX 503-829-4736

Organized to Promote Cooperative Forest Protection

"A Partnership with the Oregon Department of Forestry"

Founded 1912, Incorporated December 21, 1936

President:
Roger Beyer
T&R Tree Farm, LLC

Vice President:
Andrew Weathers
Weyerhaeuser Company

Secretary/Treasurer:
Andrew Dobmeier
Clackamas County Forestry Dept.

Directors:
Ron Borisch
Freres Timber, Inc.
Jim Crawford
Fruit Growers Supply Co.
Zach Littlefield
Portland General Electric
Tyson Losli
Port Blakely Tree Farms
Russ Minten
Frank Lumber

Advisory Directors:

Bureau Land Management
Eric Risdal

Marion County Fire Defense Board
Jim Trierweiler

Clackamas County Fire Defense Board
Dan Mulick

Clackamas Farm Forestry Association
Stan Beyer

Keep Oregon Green
Kristen Babbs

Oregon Dept. Fish & Wildlife
Lauri Brewster

Oregon Forest Industries Council
Chad Washington

Mt. Hood National Forest
Dick Shupe

Northwest Oregon Area Director
Don Everingham

Willamette National Forest
John Gladney

February 27, 2026

Kacey KC
State Forester
Oregon Department of Forestry
2600 State Street
Salem, OR 97310

Dear State Forester Kacey,

Congratulations on your appointment to be Oregon State Forester. Our Association looks forward to meeting you and working with you and your team to protect Oregon's forests, especially those in the North Cascades District, from wildfire.

Clackamas -Marion Forest Protective Association (CM-FPA) is one of the twelve forestland owner associations around the state. CM-FPA had primary forest fire fighting responsibility for its members for more than fifty years since its beginning, in 1912, until they contracted with Oregon Department of Forestry (ODF). Since that time, we are advisory to the North Cascades District of ODF in determining the level of protection needed on the district lands, setting the budget to achieve that protection and working with local staff on proper fire danger and protection level during fire season. I have attached a single page document explaining Oregon's association model and history.

As you begin in your role as State Forester, we would like to take the opportunity to bring some items to your attention from our perspective as both large and small landowners in northwest Oregon.

First, we are currently experiencing the worst market conditions for our products in nearly 20 years. Demand for softwood lumber and plywood from our area is the worst since the great recession of 2008. One local mill stopped production entirely last fall and has yet to resume. Others have paused or slowed production intermittently over the past few months. This lack of demand has caused timber prices to fall to historically low levels, which places greater stress on landowners trying to operate their lands sustainably and profitably.

On that note, we are quite hopeful that the new law passed last year, HB 3940, will help to lower and stabilize landowner rates for fire protection. We look forward to helping our local district implement the new law in a manner that won't interrupt or negatively impact our ability to protect our lands and be a part of Oregon's complete and coordinated system of fire protection.

An additional component of our complete and coordinated system is the partnership ODF has with federal and local firefighting agencies. The common theme I heard from all areas around the state was the great cooperation between these different agencies during the past fire season. For the North Cascade District this cooperation is key due to the large urban interface boarding the metro areas and the proximity of Federal lands along the east boundary of the district. We as a board would like to thank the local staff for fostering this relationship and working with their partners to keep fires small. Of particular note, this large urban interface has historically proved to be a significant contributor to fire starts here in the North Cascade District.

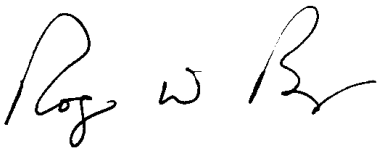
For the state level we request that you continue to strengthen these relationships across the state. Also, the new federal firefighting system, the U.S. Wildfire Service, is a key partner in forest protection for western Oregon. We ask that you meet with the new chief of the agency to make sure the protection of these intermingled federal lands is seamlessly protected with our private lands, keeping costs lower and protection better for all. At the same time, we request you continue to work with other states, maintaining and creating cooperative agreements that will benefit all sides.

Next, I would like to take this opportunity to thank ODF for continuing the task of working to rebuild the Mehama office complex. I understand how difficult this has been for both local and state staff, continuing with their everyday jobs in addition to the added expectation of managing this building project. I just wanted them to know the landowner partners appreciate that they have been able to accomplish this extra burden and at the same time continue to keep the district at an adequate level of preparedness for fire.

The CM-FPA board would also like to thank the department for recently filling two of the vacant district forester positions in the Northwest area, including the North Cascade District. We look forward to working with Chelsey Peters as the permanent new district forester.

In closing, I would like to invite you to attend our annual meeting on April 9th. I understand this may be difficult for you as you settle into your new role as State Forester, but our meeting will be held in Silverton, which is only a few minutes away from the Salem Office. If you are unable to attend this meeting, I look forward to meeting you soon another time.

Sincerely,



Roger Beyer
President, Clackamas-Marion FPA

EASTERN LANE FOREST PROTECTIVE ASSOCIATION

3150 MAIN STREET
SPRINGFIELD, OR 97478

(Incorporated)

President:
Ted Reiss
Giustina Land & Timber Co.

Vice President:
Kenny Rose
Giustina Resources

Secretary:
Mark Willhite
Sierra Pacific Industries

Treasurer:
Dylan Johnson
Weyerhaeuser Company

Directors:
Susan Fricke
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Will Hansen
RDK Land & Timber, LLC

Shane Uffelman
Franklin Clarkson

Advisory Directors:

ODF Area Manager:
Dave Larson

ODF District Forester:
Chris Cline

ODF Unit Forester:
John Flannigan

NW Oregon Interagency Fire Management:
Eric Risdal

Or. Forest & Ind. Council:
Chad Washington

Keep Oregon Green Assn:
Kristin Babbs

Army Corp. of Engineers:
Christie Johnson

March 1, 2026

Kacey KC
Oregon State Forester
Oregon Department of Forestry
2600 State Street
Salem, OR 97310

Dear State Forester Kacey,

Greetings from the Eastern Lane Forest Protective Association (ELFPA), the organization that started private cooperative fire protection and suppression in Oregon in 1904. Beginning as a local cooperative fire protection group, The Booth Kelly Fire Patrol protected life and property during a dangerous period of time for wildfire in the PNW in the early 20th century. Transitioning to ELFPA, our Association built on a solid foundation of wildfire prevention and suppression until 1975 when a new Protection Agreement was struck with the Oregon Department of Forestry to conduct daily operations. Since that time ELFPA has been working in direct cooperation with the South Cascade District through implementation of a Forestland Protection Agreement. Our members range from the largest forestland owner in Oregon to small private landowners with only a few acres. All have worked the land for decades fostering forest health and productivity.

In 2025 we recognized 50 years of successful cooperation with ODF toward our shared goals of limiting damage brought on by uncontrolled wildfire. Over the years all members of the ELFPA have maintained focus on the critical mission of forest and community resource protection. The challenges mount in 2026, but we are well prepared with excellent local ODF leadership towards another successful season.

We are proud that our unwavering commitment has benefited the natural environment and economic conditions in Lane County. As the newest member of Oregon's complete and coordinated system of wildfire prevention and suppression, we welcome you and look forward to collaborating with you and your staff to continue our shared history of service.

Continued..

Please do not hesitate to contact me if you are interested in learning more about the rich history of private cooperative fire prevention and suppression and how relationships like ours form one of the best fire fighting efforts in the country.

Thank you kindly,



Ted Reiss
President
ted@giustinaland.com
541-912-5471

CC: Bev Hansen – ELFPA Business Manager
ELFPA Board of Directors, et al
Michael Curran – Chief, Protection Division ODF
Chris Cline – South Cascade District Forester ODF
Chad Washington – Director of Protection - OFIC

FY27 Budget Hearing- Oregon Department of Forestry Klamath-Lake District 04/23/26 0900-0930

Great. Good morning, everybody.
My name is Teresa Williams, and we'll go ahead and start the budget hearing.
I serve as the Oregon Department of Forestry's District Forester for the Klamath Lake District.
Today I will be serving as the hearing Officer receiving comments on behalf of the Oregon Department of Forestry on the fiscal year 27 budget for the Klamath Lake District.
The hearing is designed to listen and record any comments from the public and not to answer additional questions at this time.
The public hearing will be recorded, and I will present a report to the department at the conclusion of the public hearing scheduled today.
The hearing will conclude at 9:30 AM.
This hearing is now in session and is being recorded to maintain a permanent record.
Today is Thursday, April 23rd, 2026, and the time is 9:00 AM.
As hearing Officer, I will provide a report to the department containing responses recorded during this public hearing.
The department will then forward the oral and written testimonies during the public comment period on to the Board of Forestry. This hearing today is the only opportunity to provide oral testimony.
Written testimony will be accepted by e-mail to Trista Batten at Trista.L.Baton@ODF.Oregon.Gov through 5:00 PM today, April 23rd, 2026.
Written testimony will also be accepted via e-mail addressed to the state Forester at 3200 Delap Rd. Klamath Falls, OR 97601. Mail must be postmarked by 5:00 PM April 23rd, 2026.
Comments received or postmarked after that time will not be reviewed or considered by the department unless the department decides to extend the public comment period for everyone.
If you would like to provide comments at this time, please let us know by raising your hand or turning on your Camera.
If you're online, we will begin taking comments online, then move to in person.
When your name is called, please come forward or unmute your device and turn your camera on if able.
State your name and address for the record.
If you are representing an organization, please state the organization's name.
You may then present your comments, and you will have 3 minutes.
Once finished, please return to your seat and re-mute your device and turn off your camera.
ODF's office specialist Codie Williams and DBM Trista Batten will be assisting me with calling for comments.
Trista, do we have anyone that wishes to provide comments?
Not at this time.
Thank you.
Is there anyone else in the room that would like to provide comment at this time?
OK, seeing that there is none, I declare the public hearing officially closed at 9:30 AM. Thanks.

MINUTES OF PUBLIC BUDGET HEARING
Covering Period
July 1, 2026 to June 30, 2027

Protection Unit:

COOS FOREST PROTECTIVE ASSOCIATION, COOS DISTRICT

In accordance with ORS 477.255, the Public Budget Meeting for the above-named fire district was held on April 9, 2026, at the Coos Forest Protective Association Headquarters in Coos Bay, OR. Ryan Greco, Coos ODF, acted as Chairman, and Nils Storksen, Coos FPA, acted as Secretary.

The following persons were in attendance:

Nils Storksen, Ryan Greco, Tammy Laird

The meeting was called to order by the chairman at 2:00 pm, with the secretary providing an explanation of the meeting's purpose. The chairman invited comments or discussion from those present relative to the budget or protection matters.

There being no comments or discussion regarding the budget or protection matters, the meeting adjourned at 2:30 pm.

Secretary: _____

Attachments: Affidavit of Publication

AFFIDAVIT OF PUBLICATION

The World

Country Media Inc. – Coos County
PO Box 670, Salem, OR 97308

STATE OF OREGON – COUNTY OF COOS

Coos Forest Protective Association

REFERENCE: Ad **424032**

I, Rhonda McKibben, am over the age of eighteen years, and am not party to or interested in the above-entitled matter. I first duly sworn, deposed and say that I am the Legal Clerk for THE WORLD, a newspaper of general circulation, as defined by sections 193.010 and 193.020 O.R.S.; and published in Coos Bay, Oregon, in the aforesaid county and state; that I know from my personal knowledge that the **Notice of Public Hearing** copy was published in the entire issue of said newspaper **2** time(s) in the following issue(s): **3/17 & 3/24/2026**.

Rhonda McKibben

Legal Clerk, Rhonda McKibben, Subscribed and sworn before me on this **24th** day of **March**, 2026.

Austin G. Patterson

Notary Public of Oregon

NOTICE OF PUBLIC HEARING

Pursuant to ORS 477.250, notice is hereby given that a public hearing will be held at the Coos Forest Protective Association District office conference room in Coos Bay, Oregon, on Thursday, April 9, 2026, at 2:00 PM to 3:00 PM, to receive oral and written comments from any interested persons with suggestions, advice, objections or remonstrance's to the proposed budget for the forest protection district. Those persons wishing to participate virtually may do so by contacting dominique.c.ray@odf.oregon.gov to receive a link to join. Written comments may be submitted at the public hearing or submitted via USPS mail (Coos Forest Protective Association, 63612 Fifth Road, Coos Bay, OR 97420 or email (dominique.c.ray@odf.oregon.gov) no later than 5:00 pm on April 8, 2026. A copy of the tentative budget for the Forest Protection District may be inspected during normal working hours. To ensure the broadest range of services to individuals with disabilities, persons with disabilities requiring special arrangements should contact Dominique Ray, at 541-267-3161 at least two working days in advance of the scheduled hearing.

OREGON DEPARTMENT OF FORESTRY
KATE SKINNER, INTERIM STATE FORESTER
3/17 & 3/24/2026 World 424032

OFFICIAL STAMP
AUSTIN PATTERSON
NOTARY PUBLIC - OREGON
COMMISSION NO. 1046412
MY COMMISSION EXPIRES MARCH 26, 2028

Oregon Department of Forestry

FISCAL YEAR 2027 SOUTH CASCADE DISTRICT BUDGET PUBLIC HEARING

April 30, 2026 4:00 pm

- Meeting attended by:
  - Chris Cline - District Forester, South Cascade ODF
    - Served as Chairman
  - Renae Meyer – District Business Manager, South Cascade ODF
    - Served as Secretary

- Meeting called to order at 4:00 PM by District Forester (Chairperson) Chris Cline at ODF South Cascade District Office – 3150 Main Street, Springfield, OR 97478

- District Forester (was prepared) to describe procedures and purpose of hearing as set forth in ORS 477.245 and 477.255.

- District Forester (would have asked) if any interested person would like to make or give any suggestions, advice, objections, or remonstrances concerning the proposed budget for the district?

  - No parties showed up for the budget hearing.

- Meeting was adjourned at 4:30 PM, April 30, 2026.

Respectfully submitted by Renae Meyer 4/30/2026

MINUTES OF PUBLIC BUDGET HEARING

Fiscal Year 26/27

DOUGLAS FOREST PROTECTIVE ASSOCIATION

In accordance with ORD 4773255, the Public Budget Meeting for the above named fire district was held on April 30, 2026 at DFPA Conference room Roseburg, Oregon Department of Forestry. Jill Miller acted as Chairman and Rilee Ellena as Secretary.

The following persons were in attendance:

_____ _____

_____ _____

_____ _____

_____ _____

The meeting was called to order by the Chairman at 2:00 p.m. with an explanation of the purpose of the meeting. The chairman invited any comments or discussion relative to budget or protection matters from those present.

The meeting adjourned at 3:00 p.m.

Rilee Ellena

Rilee Ellena, Secretary

MINUTES OF PUBLIC BUDGET HEARING

Covering Period

July 1, 2026, to June 30, 2027

Protection Unit Northeast Oregon District, in accordance with ORS 477.255, the Public Budget Meeting for the above-named fire district was held on April 22nd, 2026, at 10:00 AM. Northeast Oregon District Office conference room.

Justin Lauer, NEO District Forester acted as Chairperson, Kay Rinker, NEO District Business Manager acted as secretary.

The following persons attended:

No one attended the hearing.

The Chairperson called the hearing to order at 10:00am with an explanation of the purpose of the hearing.

The Chairperson invited any comments or discussion relative to the budget or protection matters from those present.

The meeting was adjourned at 12:00pm

Kay Rinker
_____
Secretary

8. Closing Comments

This item serves as an opportunity for the Board Chair to address any outstanding work.

This is an information item.

9. Acknowledgement of Chair Jim Kelly

This item serves as an opportunity for the Board Chair to address any outstanding work.

This is an information item.