Oregon Board of Forestry – Public Meeting

Wednesday, January 3, and Thursday, January 4, 2024

January 3, Wednesday – Hybrid Public Meeting 9 a.m. – 4 p.m.
The Board will meet for their regular public business meeting at the ODF Headquarters, Tillamook Room - 2600 State St, Salem, OR, 97310

January 4, Thursday – Hybrid Public Meeting 8 a.m. – 10:30 a.m.
The Board will meet for their regular public business meeting at the ODF Headquarters, Tillamook Room - 2600 State St, Salem, OR, 97310

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The Board of Forestry January meeting will be hybrid to allow both in-person and virtual attendance. Each meeting day will be streamed live on the department's YouTube channel. An opportunity for the public to provide live testimony will be available for day one. Sign-up instructions can be found on the Board's meeting website, https://www.oregon.gov/odf/board/Pages/bofmeetings.aspx. Written testimony may be submitted before, or up to two weeks after, the meeting day to boardofforestry@odf.oregon.gov. Please include the meeting date, agenda item number or topic header with the written submission.

The link to view the Board of Forestry Meeting is https://www.youtube.com/c/OregonDepartmentofForestry

Prior meetings' audio and this meeting's written material are available on the web www.oregon.gov/odf/board. The matters under the Consent Agenda will be considered in one block. Any board member may request the removal of any item from the consent agenda. Items removed for separate discussion will be considered after approval of the consent agenda. Public comment will not be taken on consent agenda items.

January 3rd Public Meeting

Consent Agenda

9:00 – 9:01 **A.** **Financial Dashboard Report – September through December 2023**.................... James Short

9:00 – 9:01 **B.** **Field-Andrews Rangeland Fire Protection Association Expansion-Request for Hearing** .... Levi Hopkins

9:00 – 9:01 **C.** **Confidentiality & Inadmissibility of Mediation Communications administrative rulemaking** .... Ryan Miller

9:00 – 9:01 **D.** **Reappointment of Emergency Fire Cost Committee Chair** .... James Short and Nancy Hirsch

9:00 – 9:01 **E.** **Adaptive Management Program Committee Member Terms**. Josh Barnard and Terry Frueh

9:00 – 9:01 **F.** **Monitoring Unit Annual Update** .... Josh Barnard and Adam Coble

Action and Information

9:01 – 9:15 **1.** **State Forester and Board Member Comments**
The department's agency director and board members reserve this time to provide commentary. This is an information item.

9:15 – 11:15 **2.** **Public Comments**
The Board will hear from the public for items on and off the agenda. See page 3 for sign-up details. This is an information item.

11:15 – 11:30 Morning break

11:30 – 12:15 **3.** **2023 Forest Practices Operator of the Year Awards** Jason Pettigrew and Megan Cogswell
Board of Forestry's presentation of the Forest Practices Regional Operator of the Year awards for 2023. The Operator Recognition program encourages protecting forest resources and values by recognizing operators who have excelled in effort, innovation, cooperation,
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consistency, and prevention to achieve or surpass the standards of forest resource protection. This is a ceremonial item.

12:15 – 1:30 Lunch

1:30 – 1:45 **4.** **Forest Trust Land Advisory Committee Testimony** ..... FTLAC Chair or Vice-Chair
The FTLAC is a statutorily established committee that advises the Board on State Forests policy. This is an information item.

1:45 – 2:15 **5.** **Adaptive Management Program Committee Update** ..... Josh Barnard, Terry Frueh, ...Stacey Detwiler, and Seth Barnes
The Department invited the Committee's co-chairs to present an update to the Board on progress made in 2023 and outline the 2024 work plan. This is an information item.

2:15 – 3:00 **6.** **Oregon Forest Resource Institute Update** ..... Cal Mukumoto and Jim Paul
The department invited Oregon Forest Resource Institute (OFRI) Executive Director to refresh the Board on the organization's mission, goals, and structure. Provide an overview of how OFRI operates, the products they provide, and how the organization measures their effectiveness. This is an informational item.

3:00 – 3:30 Afternoon break

3:30 – 4:00 **7.** **Forest Health Unit Annual Update** ..... Adam Coble, Christine Buhl, ...Gabriela Ritokova, and Wyatt Williams
The department provides an overview of the Forest Health program, an update on the aerial survey program and other monitoring projects, impacts of abiotic stress events and a brief update on current outbreaks. This is an informational item.

4:00 – 4:15 Meeting Day One adjourned

January 4th Public Meeting

Action and Information

8:01 – 10:15 **8.** ***Oregon Kitchen Table Outreach and Engagement Report Work Session** ....Board Members and Executive Team
The Oregon Department of Forestry partnered with Oregon Kitchen Table (OKT) to conduct community engagement related to the Forestry Program for Oregon revision and the Department's strategic plan. The Board of Forestry (Board) and department leadership will be introduced to the highlights of OKT's report on the community outreach, engagement, and input received. This is an information item.

10:15 – 10:30 **9.** **Board Meeting Wrap-Up**..... Chair Kelly and Board Members

10:30 Meeting Day Two adjourned

The 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 the 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.

BOARD WORK PLANS: Board of Forestry (Board) Work Plans result from the board's identification of priority issues. Each item represents the commitment of time by the Board of Forestry and Department of Forestry staff that needs to be fully understood and appropriately planned. Board Work Plans form the basis for establishing Board of Forestry meeting agendas. The latest versions of these plans can be found on the Board's website at: https://www.oregon.gov/odf/Board/Pages/AboutBOF.aspx

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 accepts written comments on all agenda items except consent 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, 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.

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.

There may be the opportunity to provide oral comments during a board meeting. Typically, commenters have two to three minutes to make their comments. Those requesting additional time for testimony should contact the Board Support Office at least three days before the meeting. Comment on decision items is limited to 30 minutes per decision item.

Members of the public may be required to register in advance to provide oral comments. Please check the Board meeting webpage for registration requirements and deadlines.

If you are experiencing technical issues or require accommodations, email BoardofForestry@odf.oregon.gov or contact the Board Support Office at (503) 945-7210.

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.

- During consideration of contested civil penalty cases, the Board will entertain oral arguments only if Board members have questions relating to the information presented.
- Relating to the adoption of Oregon Administrative Rules: Under Oregon's Administrative Procedures Act, the Board can only consider those comments received by the established deadline as listed on the Notice of Rulemaking form. Additional input can only be accepted if the comment period is formally extended (ORS 183.335).

GENERAL INFORMATION: For regularly scheduled meetings, the Board's agenda is posted on the web at www.oregonforestry.gov 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 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.

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.

Use of all tobacco products in state-owned buildings and on adjacent grounds is prohibited.

Agenda Item No:	A
Work Plan:	Administrative
Topic:	Financial Dashboard
Presentation Title:	Department Financial Report for September, October, November, and December 2023
Date of Presentation:	January 3, 2024
Contact Information:	James Short, Department Chief Financial Officer (503) 945-7275, 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) 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.

BACKGROUND AND ANALYSIS

This consent item is transparent publishing of the Department's transmittal of monthly financial reports to the Board of Forestry. While executive-level in nature, the financial report provides information on various topics that are either germane,
or have direct impacts on the financial status of the agency, or other administrative functions of the organization during any given month.

This financial report will continue to evolve. As the Department's reporting ability matures and insights into its operational and administrative work improve, this financial report will reflect those improvements. These improvements could include operational or process improvements or introducing new systems and technologies that enhance the Department's administrative capabilities. In addition, Board input will be factored in as the report evolves.

NEXT STEPS

The Board will receive the Department's Financial Report the third week of every month, whether a Board meeting is occurring or not. This will allow the Department to report on the previous month while allowing for the fiscal month closing process to conclude.

ATTACHMENTS

1) Department of Forestry Financial Report for September 2023
2) Department of Forestry Financial Report for October 2023
3) Department of Forestry Financial Report for November 2023
4) Department of Forestry Financial Report for December 2023 (available before meeting)

Oregon
Tina Kotek, Governor

Department of Forestry
State Forester's Office
2600 State St
Salem, OR 97310-0340
503-945-7200
www.oregon.gov/ODF

October 1, 2023

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

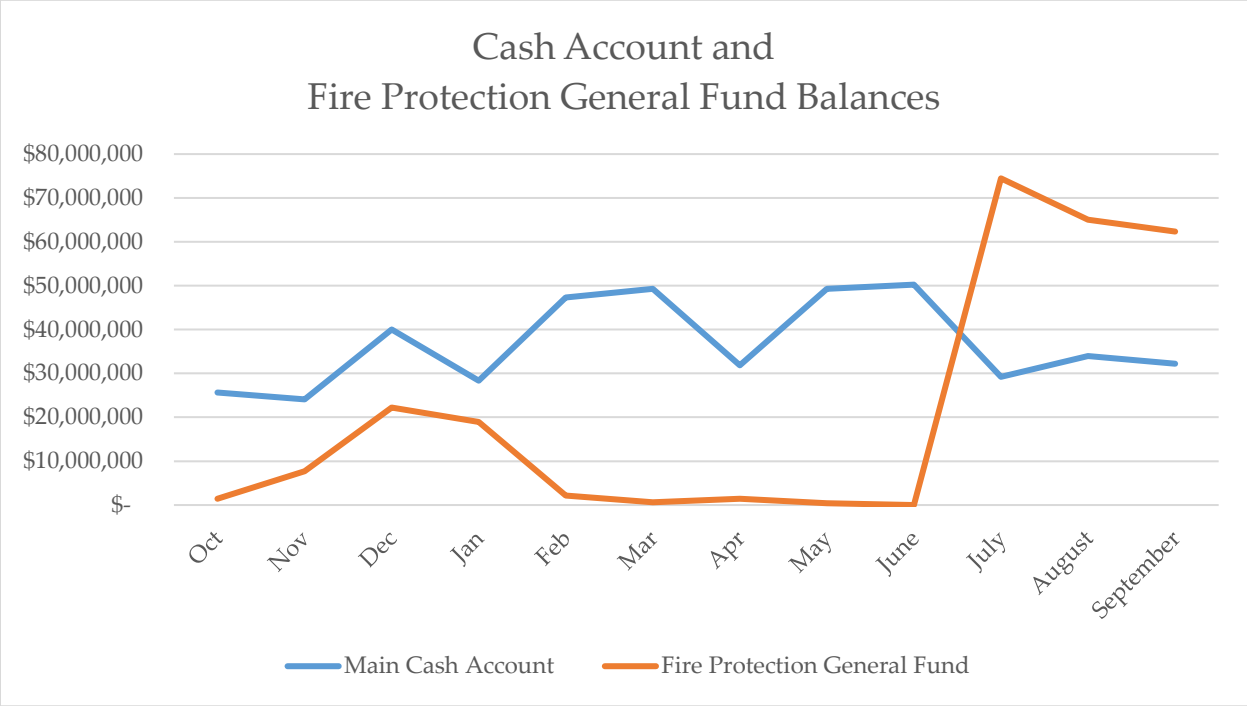
Re: Oregon Department of Forestry (ODF)—Monthly financial condition report

Dear Co-Chairs,

Cash and General Fund Balances

As of September 25, ODF's principal cash account balance was $32.2 million, and the 2023-25 Protection Division General Fund appropriation balance was $62.3 million (Figure 1). Between August and September, the cash account balance had a net decrease of $1.7 million, and the Protection Division General Fund balance had a net reduction of $2.7 million.

Figure 1 - Cash Account and Fire Protection/Cash Flow General Fund Balances as of Sept. 25, 2023



Financial Projections

As a result of fiscal year-end financial reporting activities, the budgetary months of July and August closed in the calendar month of September; thus, the corresponding projections were carried forward from the August 1 financial condition report.

Department representatives met with the Macias, Gini & O'Connell auditors in late September to continue discussions about a new financial projection tool, which was requested to provide more detailed information for monitoring cash flow and projected financial information.

Table 1 - Financial Projections through Sept. 15, 2023 (in thousands)

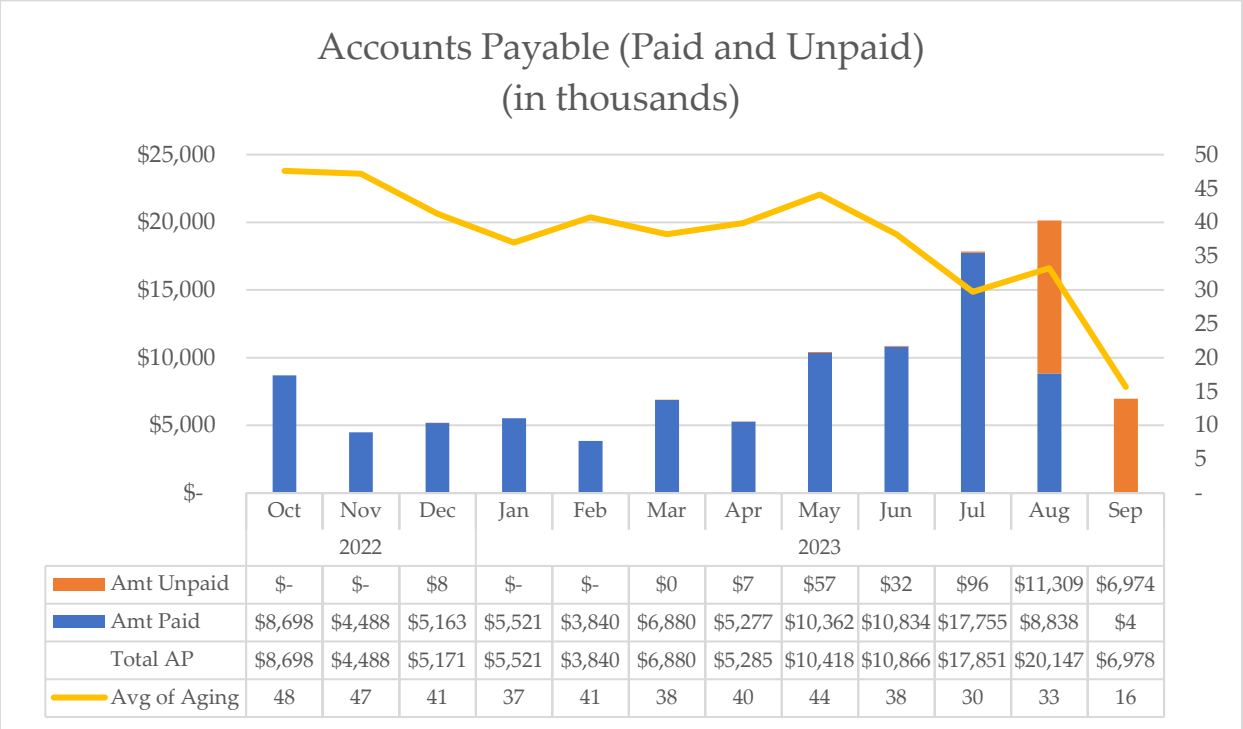
	23-Jul		23-Aug		23-Sep	23-Oct
	Projection	**Actual**	**Projection**	**Actual**	**Projection**	**Projection**
Total Revenue	$20,496	$36,835	$32,425	$37,431	$36,219	$20,848
Total Expenditures	($18,830)	($50,982)	($20,119)	($49,753)	($35,098)	($27,774)
Net Total Exp/Rev	$1,666	($14,147)	$12,306	($12,321)	$1,121	($6,926)
Beginning Cash Balance	$73,122	$28,962	$74,788	$50,756	$53,294	$54,415
End of Month Cash Balance*	$74,788	$50,756	$87,095	$53,294	$54,415	$47,489
Less: Dedicated Funds	($21,751)	($20,990)	($22,078)	($19,475)	($19,516)	($17,032)
End of Month Main Cash Balance	$53,037	$29,766	$65,016	$33,819	$34,899	$30,457
Available GF Appr	N/A	$155,237	N/A	$143,377	$136,385	$129,393
Available Resources	$53,037	$185,002	$65,016	$177,195	$171,284	$159,850

* Includes reconciliation for non-cash revenue and expenditure transactions.

Accounts Payable

Department-wide expenditure activity has increased significantly since the last reporting period as payment teams reconciled and uploaded fire season 2023 invoices to OregonBuys (Figure 2). With many resources associated with the Tyee Ridge Complex fire demobilized in mid-September, payment teams will reconcile and upload corresponding invoices to OregonBuys over the next one to two months.

Figure 2 - Accounts Payable as of Sept. 25, 2023



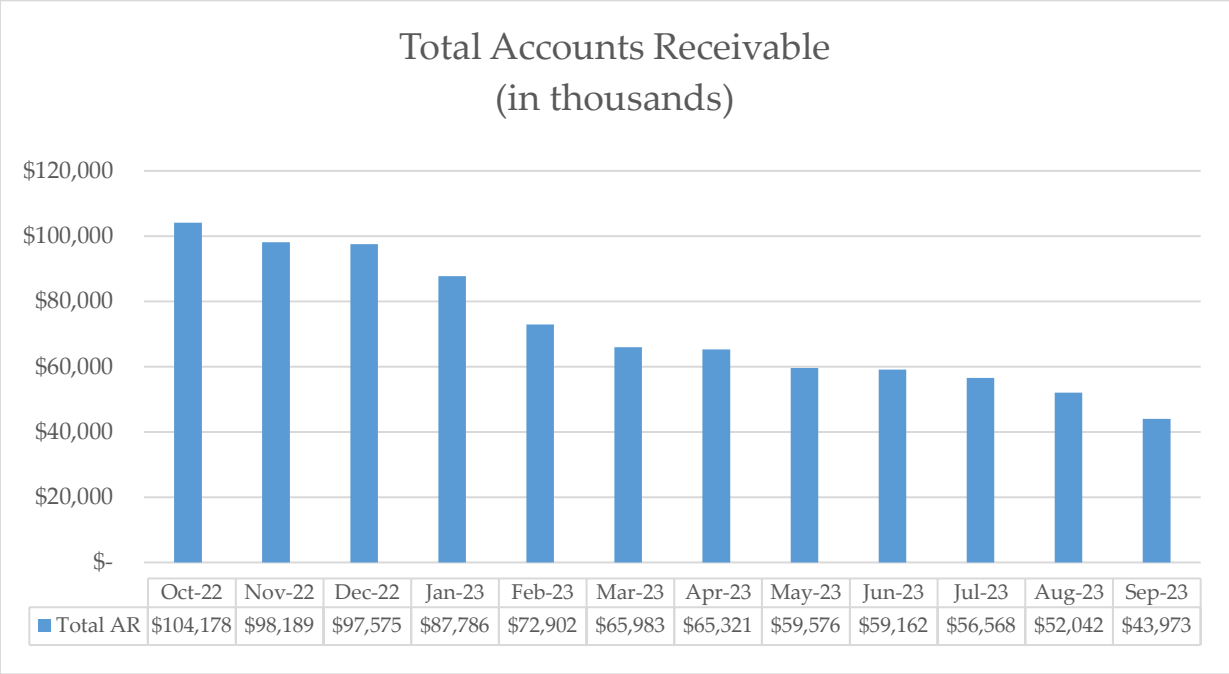
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	2022			2023								
Amt Unpaid	$-	$-	$8	$-	$-	$0	$7	$57	$32	$96	$11,309	$6,974
Amt Paid	$8,698	$4,488	$5,163	$5,521	$3,840	$6,880	$5,277	$10,362	$10,834	$17,755	$8,838	$4
Total AP	$8,698	$4,488	$5,171	$5,521	$3,840	$6,880	$5,285	$10,418	$10,866	$17,851	$20,147	$6,978
Avg of Aging	48	47	41	37	41	38	40	44	38	30	33	16

Accounts Receivable

Between August and September, there was a net decrease of $8.1 million in the total accounts receivable balance (Figure 3). The net decrease was primarily attributable to a FEMA-Public Assistance reimbursement from the Oregon Department of Emergency Management (ODEM) totaling $9.4 million.

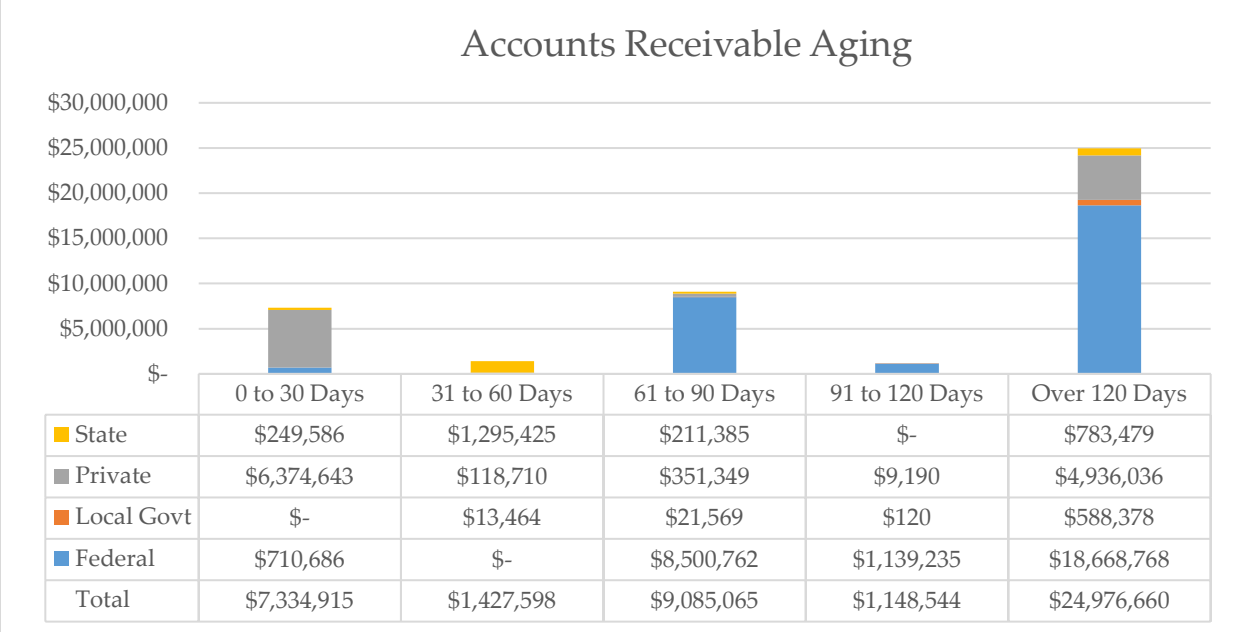
Accounts older than 120 days equate to $25 million or 56.8% of the total balances owed to ODF (Figure 4). Of these accounts, the majority are due from FEMA ($13.3 million), federal partners ($5.4 million), and private parties for cost recovery ($4.7 million).

Figure 3 – Total Accounts Receivable as of Sept. 22, 2023



	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23
Total AR	$104,178	$98,189	$97,575	$87,786	$72,902	$65,983	$65,321	$59,576	$59,162	$56,568	$52,042	$43,973

Figure 4 – Accounts Receivable Aging as of Sept. 22, 2023



	0 to 30 Days	31 to 60 Days	61 to 90 Days	91 to 120 Days	Over 120 Days
State	$249,586	$1,295,425	$211,385	$-	$783,479
Private	$6,374,643	$118,710	$351,349	$9,190	$4,936,036
Local Govt	$-	$13,464	$21,569	$120	$588,378
Federal	$710,686	$-	$8,500,762	$1,139,235	$18,668,768
Total	$7,334,915	$1,427,598	$9,085,065	$1,148,544	$24,976,660

Fire Costs

Table 2 – Gross Fire Cost Summary (red indicates estimates – in millions) as of Sept. 15, 2023

Gross Fire Cost Summary							
Fire Season	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**Total**
Fire Costs	61.35	108.12	33.66	139.85	148.83	52.24	544.05
Currently Invoiced	(0.16)	(0.21)	(0.18)	(13.78)	(4.31)	(7.56)	(26.20)
Outstanding to Invoice	(0.00)	(0.49)	(0.47)	(1.94)	(17.18)	(20.36)	(40.44)

The department recovers some fire costs through two FEMA grants programs; however, not all fire costs are recovered through FEMA. Fire costs may also be collected via cost-share agreements, cooperative agreements, and/or private-party cost recovery. All cost recovery types are included in the numbers provided in Table 2.

FEMA-Public Assistance (PA) grants are awarded to the ODEM who, in turn, passes the funds through to ODF. FEMA-Fire Management Assistance grants (FMAG) are awarded directly to ODF, and the department has immediate access to the funds once obligated.

FEMA grant applications submitted

As of Sept. 25, 47 grant applications totaling $15.1 million have been submitted to FEMA, $14 million (40) of which were FEMA-PA grants. FEMA has obligated all 40 FEMA-PA grant applications pending ODEM audit/review and distribution to ODF.

The seven grant applications totaling $1.1 million submitted through the FEMA-FMAG program are in the final FEMA review stage.

FEMA grant applications not yet submitted

An additional $2.8 million in estimated FEMA-PA and FMAG grant applications (18) have yet to be submitted to FEMA. The 13 FEMA-FMAG applications associated with administrative costs ($1.1 million) cannot be forwarded to FEMA until all ODF and subrecipient grants have been obligated by FEMA.

The remaining five FEMA-PA grant applications ($1.7 million) associated with estimated suppression costs will be submitted to FEMA after completing all cost-share reconciliations.

Sincerely,

Cal Mukumoto
Oregon State Forester

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

Oregon
Tina Kotek, Governor

Department of Forestry
State Forester's Office
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November 1, 2023

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

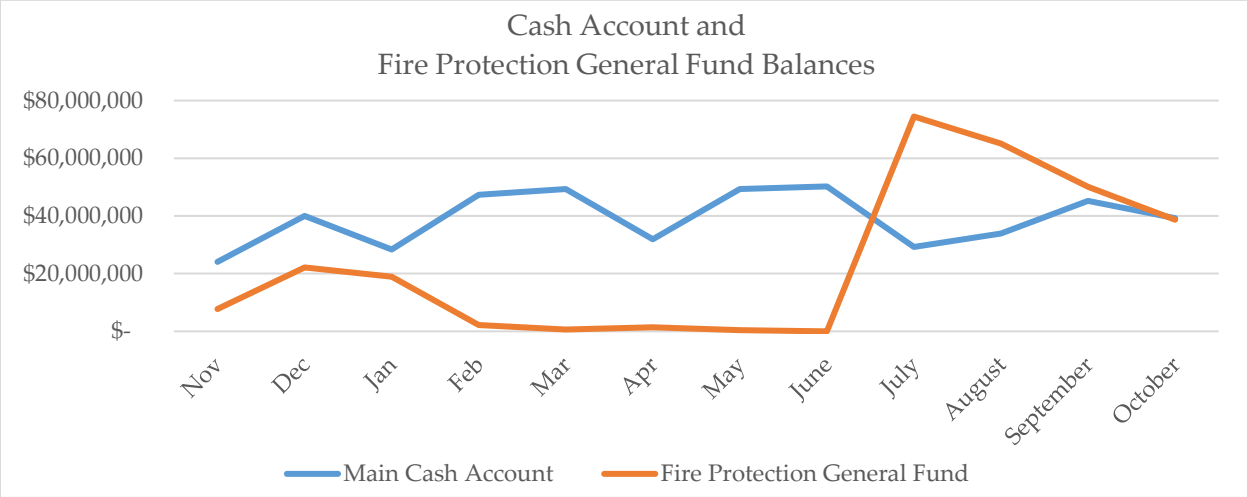
Re: Oregon Department of Forestry (ODF)—Monthly financial condition report

Dear Co-Chairs,

Cash and General Fund Balances

As of October 23, ODF's principal cash account balance was $39.2 million, and the 2023-25 Protection Division General Fund appropriation balance was $38.7 million (Figure 1). Between September and October, the cash account balance decreased by $6 million, and the Protection Division General Fund balance decreased by $11.3 million.

Figure 1 - Cash Account and Fire Protection/Cash Flow General Fund Balances as of Oct. 23, 2023



Financial Projections

Net financial activity for September 2023 resulted in an increase of $378,000 to the department's end-of-month cash balance (Table 1).

Over the next few months, the department will receive an influx of cash due to receipt of annual fire protection assessment revenues, insurance proceeds from fire season 2021, and grant

reimbursements, all of which will be used to offset the gross costs associated with fire season 2023. To mitigate potential cashflow hardships, the department elected to transfer both the fiscal year 2024 and 2025 admin prorate amounts.

Table 1 - Financial Projections through Oct. 13, 2023 (in thousands)

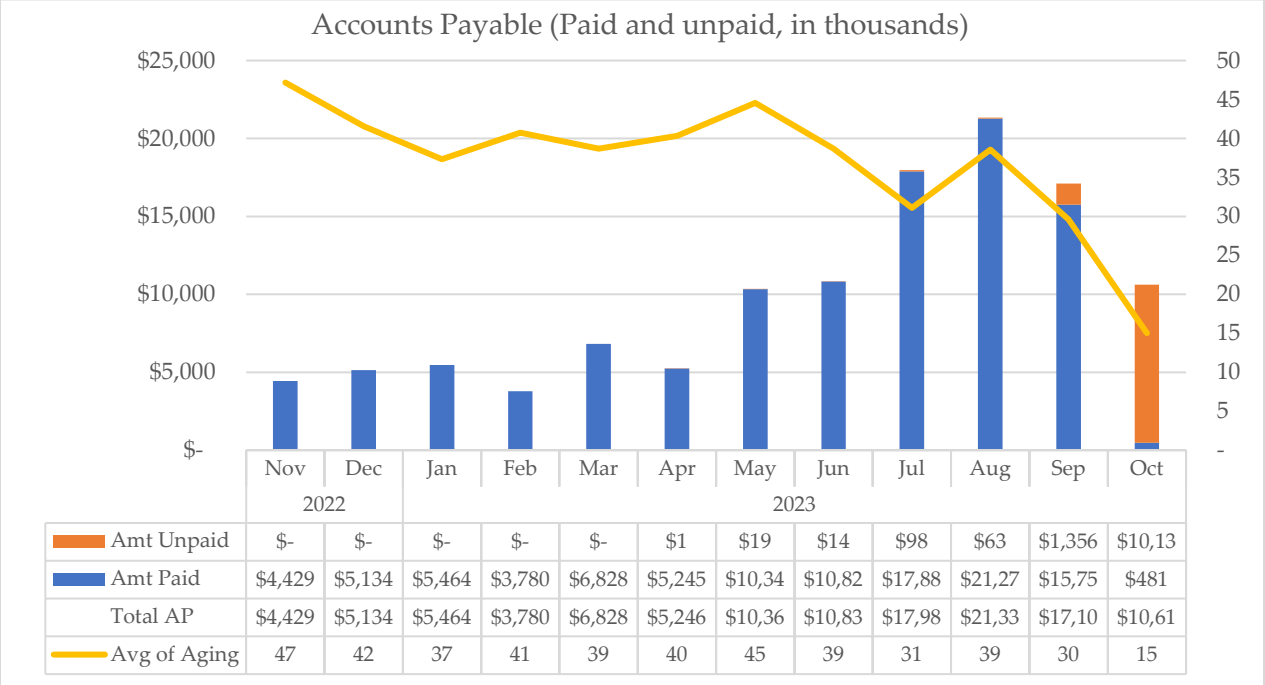
	23-Sep		23-Oct	23-Nov
	Projection	**Actual**	**Projection**	**Projection**
Total Revenue	$36,219	$67,781	$60,078	$41,317
Total Expenditures	($35,098)	($67,402)	($52,511)	($35,575)
Net Total Exp/Rev	$1,121	$378	$7,567	$5,741
Beginning Cash Balance	$53,294	$53,294	$57,222	$64,788
End of Month Cash Balance*	$54,415	$57,222	$64,788	$70,530
Less: Dedicated Funds	($19,516)	($13,821)	($13,824)	($18,824)
End of Month Main Cash Balance	$34,899	$43,401	$50,964	$51,706
Available GF Appr	$136,385	$123,914	$116,922	$109,930
Available Resources	$171,284	$167,314	$167,886	$161,636

* Includes reconciliation for non-cash revenue and expenditure transactions.

Accounts Payable

Department-wide expenditure activity reduced slightly since the last reporting period (Figure 2). Payment teams continue to reconcile invoices related to the Tyee Ridge Complex fires. Payments totaling an estimated $34 million will be made over the next few months.

Figure 2 - Accounts Payable as of Oct. 23, 2023



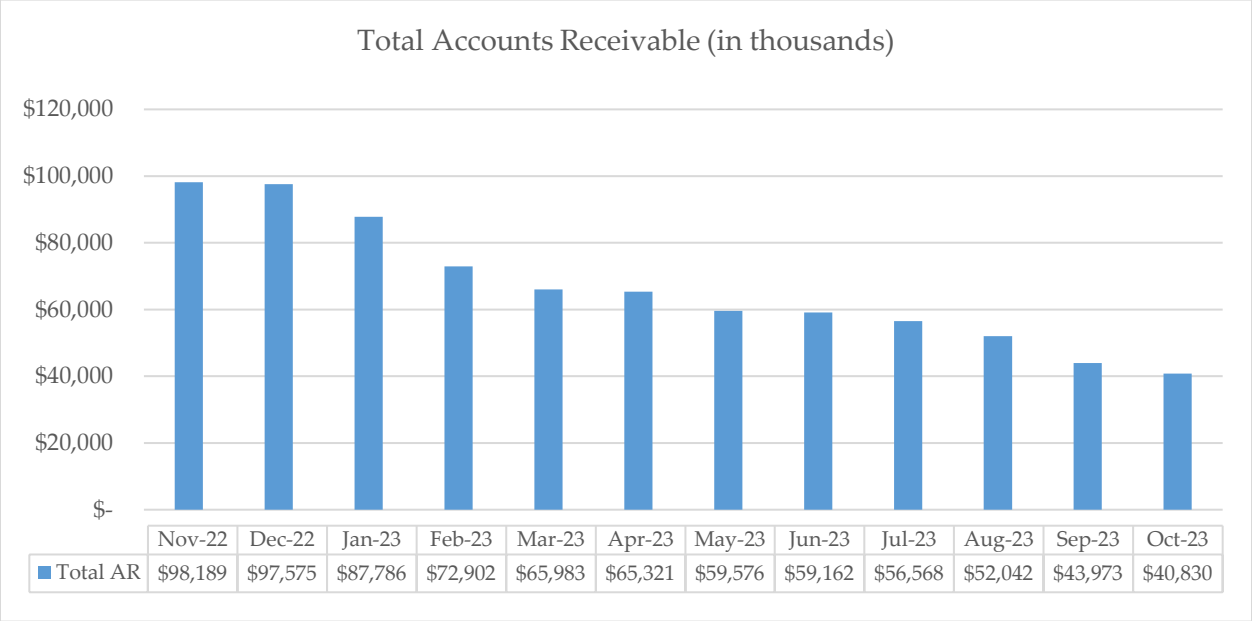
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
	2022		2023									
Amt Unpaid	$-	$-	$-	$-	$-	$1	$19	$14	$98	$63	$1,356	$10,13
Amt Paid	$4,429	$5,134	$5,464	$3,780	$6,828	$5,245	$10,34	$10,82	$17,88	$21,27	$15,75	$481
Total AP	$4,429	$5,134	$5,464	$3,780	$6,828	$5,246	$10,36	$10,83	$17,98	$21,33	$17,10	$10,61
Avg of Aging	47	42	37	41	39	40	45	39	31	39	30	15

Accounts Receivable

Between September and October, there was a net decrease of $3.1 million in the total accounts receivable balance (Figure 3).

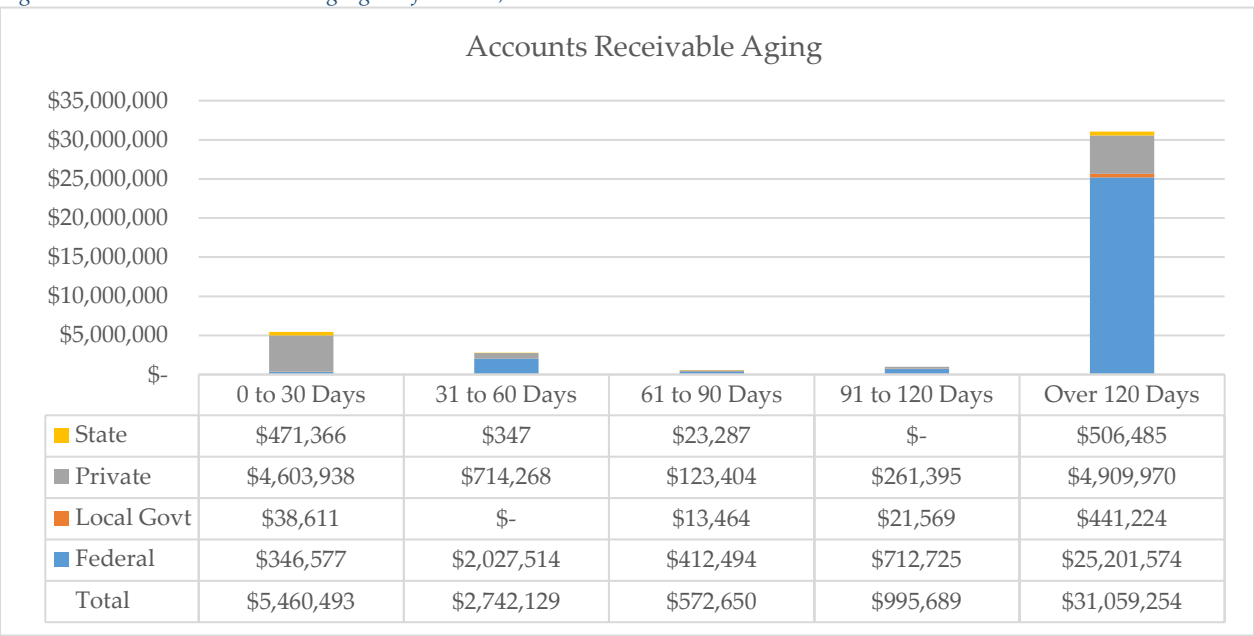
Accounts older than 120 days equate to $31.1 million or 76.1% of the total balances owed to ODF (Figure 4). Of these accounts, the majority are due from FEMA ($14.8 million), federal partners ($10.4 million), and private parties for cost recovery ($4.7 million).

Figure 3 – Total Accounts Receivable as of Oct. 23, 2023



	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23
Total AR	$98,189	$97,575	$87,786	$72,902	$65,983	$65,321	$59,576	$59,162	$56,568	$52,042	$43,973	$40,830

Figure 4 – Accounts Receivable Aging as of Oct. 23, 2023



	0 to 30 Days	31 to 60 Days	61 to 90 Days	91 to 120 Days	Over 120 Days
State	$471,366	$347	$23,287	$-	$506,485
Private	$4,603,938	$714,268	$123,404	$261,395	$4,909,970
Local Govt	$38,611	$-	$13,464	$21,569	$441,224
Federal	$346,577	$2,027,514	$412,494	$712,725	$25,201,574
Total	$5,460,493	$2,742,129	$572,650	$995,689	$31,059,254

Fire Costs

Table 2 – Gross Fire Cost Summary (red indicates estimates – in millions) as of Oct. 20, 2023

Gross Fire Cost Summary							
Fire Season	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Total**
Fire Costs	108.12	33.66	139.85	148.91	52.26	84.19	566.99
Currently Invoiced	(0.21)	(0.20)	(13.78)	(4.28)	(6.68)	(0.35)	(25.50)
Outstanding to Invoice	(0.49)	(0.45)	(1.94)	(17.45)	(20.49)	(74.11)	(114.93)

The department recovers some fire costs through two FEMA grant programs. Fire costs may also be collected via cost-share agreements, cooperative agreements, and/or private-party cost recovery. All cost recovery types are included in the numbers provided in Table 2.

FEMA-Public Assistance (PA) grants are awarded to the Oregon Department of Emergency Management (ODEM) who, in turn, passes the funds through to ODF. FEMA-Fire Management Assistance grants (FMAG) are awarded directly to ODF, and the department has immediate access to the funds once obligated.

FEMA grant applications submitted

As of Oct. 23, 44 grant applications totaling $15.1 million have been submitted to FEMA, $14 million of which were FEMA-PA grants. FEMA has obligated all 38 FEMA-PA grant applications, and they are now pending ODEM audit/review and distribution to ODF.

The remaining six grant applications submitted through the FEMA-FMAG program, totaling $1.1 million, are in the final FEMA review stage.

FEMA grant applications not yet submitted

An additional 21 FEMA-PA and FMAG grant applications totaling an estimated $6.8 million have yet to be submitted to FEMA. This includes estimated fire costs for the 2023 fire season. Twelve FEMA-FMAG applications associated with administrative costs ($747,000) cannot be forwarded to FEMA until all ODF and subrecipient grants have been obligated by FEMA.

Nine FEMA grant applications ($6 million) are associated with estimated suppression costs and will be submitted to FEMA after all cost-share and fire payment reconciliations have been completed.

Sincerely,

Cal Mukumoto
Oregon State Forester

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

Oregon
Tina Kotek, Governor

Department of Forestry
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December 1, 2023

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Joint Committee on Ways and Means
900 Court St. NE, H-178
Salem, OR 97301

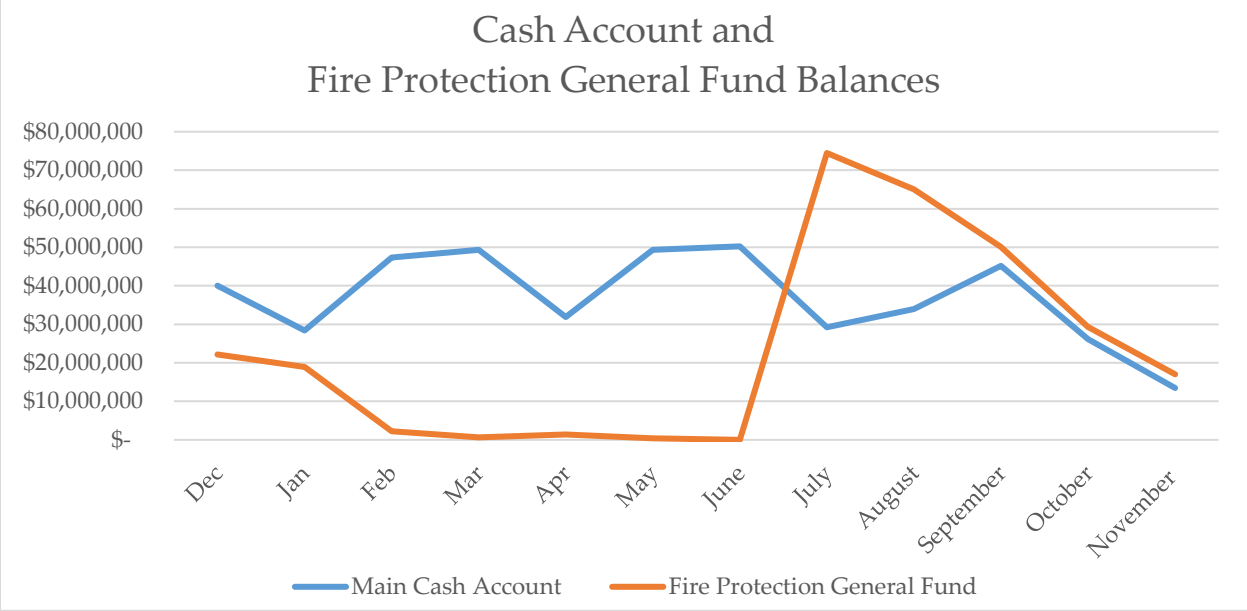
Re: Oregon Department of Forestry (ODF)—Monthly financial condition report

Dear Co-Chairs,

Cash and General Fund Balances

As of November 20, ODF's principal cash account balance was $13.5 million, and the 2023-25 Protection Division General Fund appropriation balance was $17 million (Figure 1). Between October and November, the cash account balance had a net decrease of $12.7 million, and the Protection Division General Fund balance had a net reduction of $12.4 million.

Figure 1 - Cash Account and Fire Protection/Cash Flow General Fund Balances as of Nov. 20, 2023



Financial Projections

Net financial activity for October 2023 resulted in a net decrease of $30.9 million to the department's available resources (Table 1).

To ensure the department had enough cash to process all fire season 2023 associated expenditures, the fiscal year 2025 administrative prorate was transferred ahead of schedule, resulting in actual expenditures exceeding the October projection. Over the next 90 days, the department expects to receive annual fire protection assessment revenue, insurance proceeds from fire season 2021, and grant reimbursements, all of which will replenish the main cash account in preparation for fire season 2024.

Table 1 - Financial Projections through Nov. 20, 2023 (in thousands)

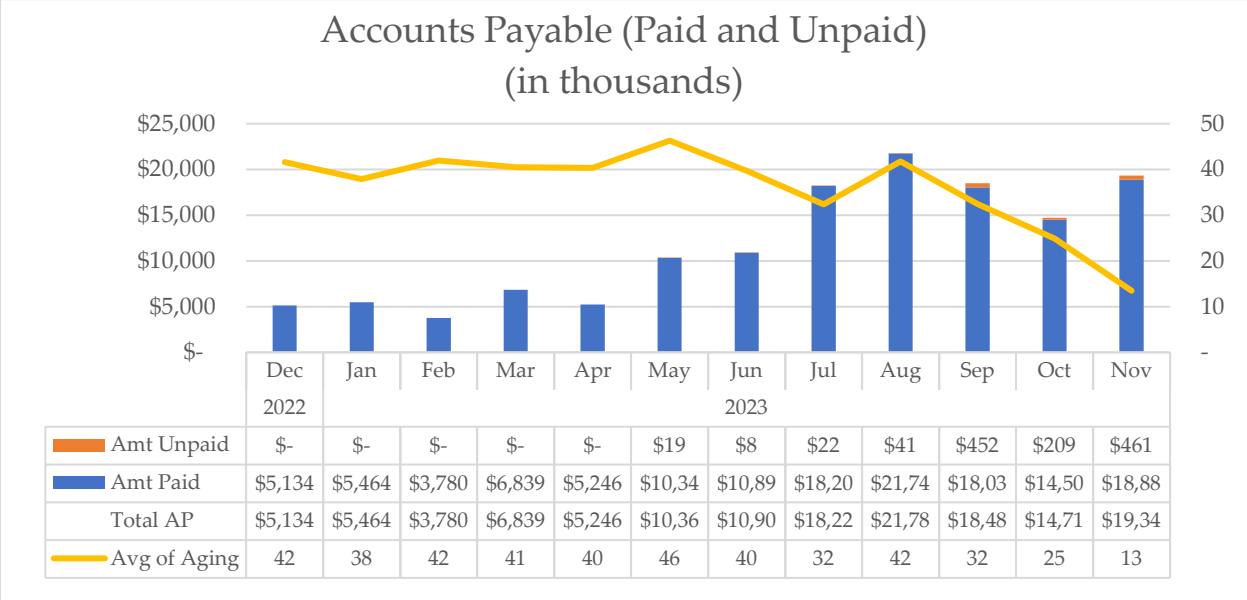
	23-Oct		23-Nov	23-Dec
	Projection	Actual	Projection	Projection
Total Revenue	$60,078	$56,783	$40,056	$68,877
Total Expenditures	($52,511)	($87,693)	($26,864)	($29,419)
Net Total Exp/Rev	$7,567	($30,910)	$13,192	$39,458
Beginning Cash Balance	$57,222	$57,222	$15,480	$28,671
End of Month Cash Balance*	$64,788	$15,480	$28,671	$68,129
Less: Dedicated Funds	($13,824)	($13,315)	($15,257)	($18,257)
End of Month Main Cash Balance	$50,964	$2,164	$13,414	$49,872
Available GF Appr	$116,922	$101,923	$94,931	$87,939
Available Resources	$167,886	$104,087	$108,345	$137,811

* Includes reconciliation for non-cash revenue and expenditure transactions.

Accounts Payable

Department-wide expenditure activity increased since the last reporting period (Figure 2) primarily due to three advances to the Douglas Forest Protective Association totaling $26.7 million related to the Tyee Ridge Complex. Payment teams continue to reconcile invoices related to the complex and estimate an additional $7 million will be advanced over the next few months.

Figure 2 - Accounts Payable as of Nov. 20, 2023



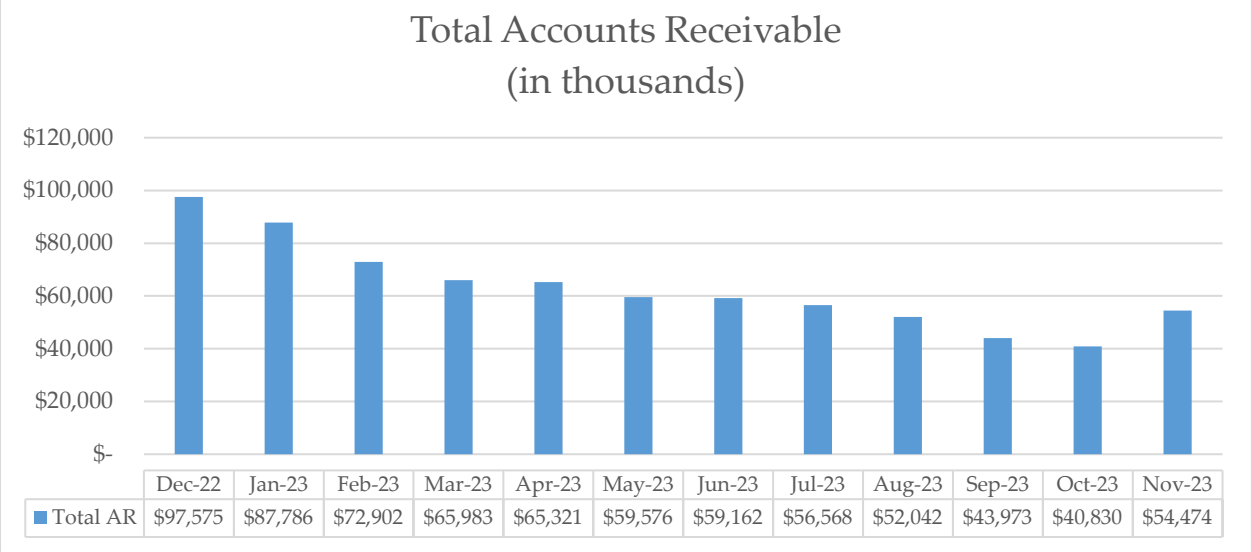
	Dec 2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
		2023										
Amt Unpaid	$-	$-	$-	$-	$-	$19	$8	$22	$41	$452	$209	$461
Amt Paid	$5,134	$5,464	$3,780	$6,839	$5,246	$10,34	$10,89	$18,20	$21,74	$18,03	$14,50	$18,88
Total AP	$5,134	$5,464	$3,780	$6,839	$5,246	$10,36	$10,90	$18,22	$21,78	$18,48	$14,71	$19,34
Avg of Aging	42	38	42	41	40	46	40	32	42	32	25	13

Accounts Receivable

Between October and November, there was a net increase of $13.6 million in the total accounts receivable balance (Figure 3). The increase was primarily attributed to billing BLM for the quarterly Western Oregon Operating Plan (WOOP) agreement and submitting requests for reimbursement to USDA for three Consolidated Payment Grant (CPG) programs.

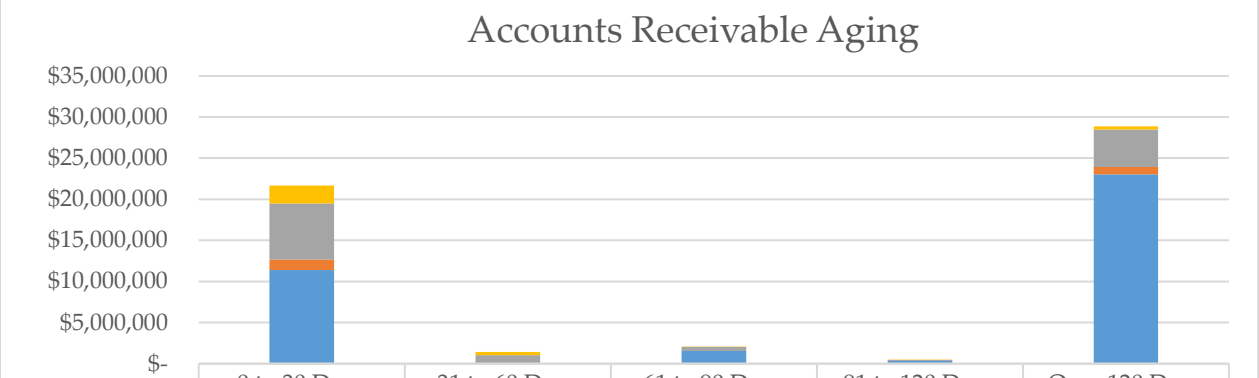
Accounts older than 120 days equate to $28.9 million, or 53% of the total balances owed to ODF (Figure 4). Of these accounts, the majority are due from FEMA ($12 million), federal partners ($11 million), and private parties for cost recovery ($4.3 million).

Figure 3 – Total Accounts Receivable as of Nov. 20, 2023



	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23
Total AR	$97,575	$87,786	$72,902	$65,983	$65,321	$59,576	$59,162	$56,568	$52,042	$43,973	$40,830	$54,474

Figure 4 – Accounts Receivable Aging as of Nov. 20, 2023



	0 to 30 Days	31 to 60 Days	61 to 90 Days	91 to 120 Days	Over 120 Days
State	$2,161,260	$395,962	$347	$21,297	$370,767
Private	$6,839,165	$830,706	$527,411	$16,514	$4,567,878
Local Govt	$1,282,056	$16,392	$-	$13,464	$881,534
Federal	$11,376,437	$181,362	$1,537,399	$411,861	$23,042,230
Total	$21,658,918	$1,424,422	$2,065,157	$463,136	$28,862,410

Fire Costs

Table 2 – Gross Fire Cost Summary (red indicates estimates – in millions) as of Nov. 20, 2023

Gross Fire Cost Summary							
Fire Season	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Total**
Fire Costs	108.12	33.66	139.85	148.95	52.51	87.82	570.91
Currently Invoiced	(0.15)	(0.15)	(11.02)	(4.25)	(5.37)	(0.38)	(21.32)
Outstanding to Invoice	(0.52)	(0.54)	(1.81)	(17.38)	(20.74)	(75.31)	(116.30)

The department recovers some fire costs through two FEMA grant programs; however, not all fire costs are recovered through FEMA. Fire costs may also be collected via cost-share agreements, cooperative agreements, or private-party cost recovery. All cost recovery types are included in the numbers provided in Table 2.

FEMA-Public Assistance (PA) grants are awarded to the ODEM, who, in turn, passes the funds through to ODF. FEMA-Fire Management Assistance grants (FMAG) are awarded directly to ODF, and the department has immediate access to the funds once obligated.

FEMA grant applications submitted

As of Nov. 20, 40 grant applications totaling $12.2 million have been submitted to FEMA, $12 million (37) of which were FEMA-PA grants. FEMA has obligated all 37 FEMA-PA grant applications pending ODEM audit/review and distribution to ODF.

The three grant applications totaling $214,000 submitted through the FEMA-FMAG program are in the final FEMA review stage.

FEMA grant applications not yet submitted

An additional $6.8 million in estimated FEMA-PA and FMAG grant applications (21) have yet to be submitted to FEMA. This includes estimated fire costs for the 2023 fire season. Twelve FEMA-FMAG applications associated with administrative costs ($747,000) cannot be forwarded to FEMA until all ODF and subrecipient grants have been obligated by FEMA.

Nine FEMA grant applications ($6 million) are associated with estimated suppression costs. They will be submitted to FEMA after completing all cost-share and fire payment reconciliations.

Sincerely,

Cal Mukumoto
Oregon State Forester

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

Oregon
Tina Kotek, Governor

Department of Forestry
State Forester's Office
2600 State St
Salem, OR 97310-0340
503-945-7200
www.oregon.gov/ODF

January 2, 2024

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

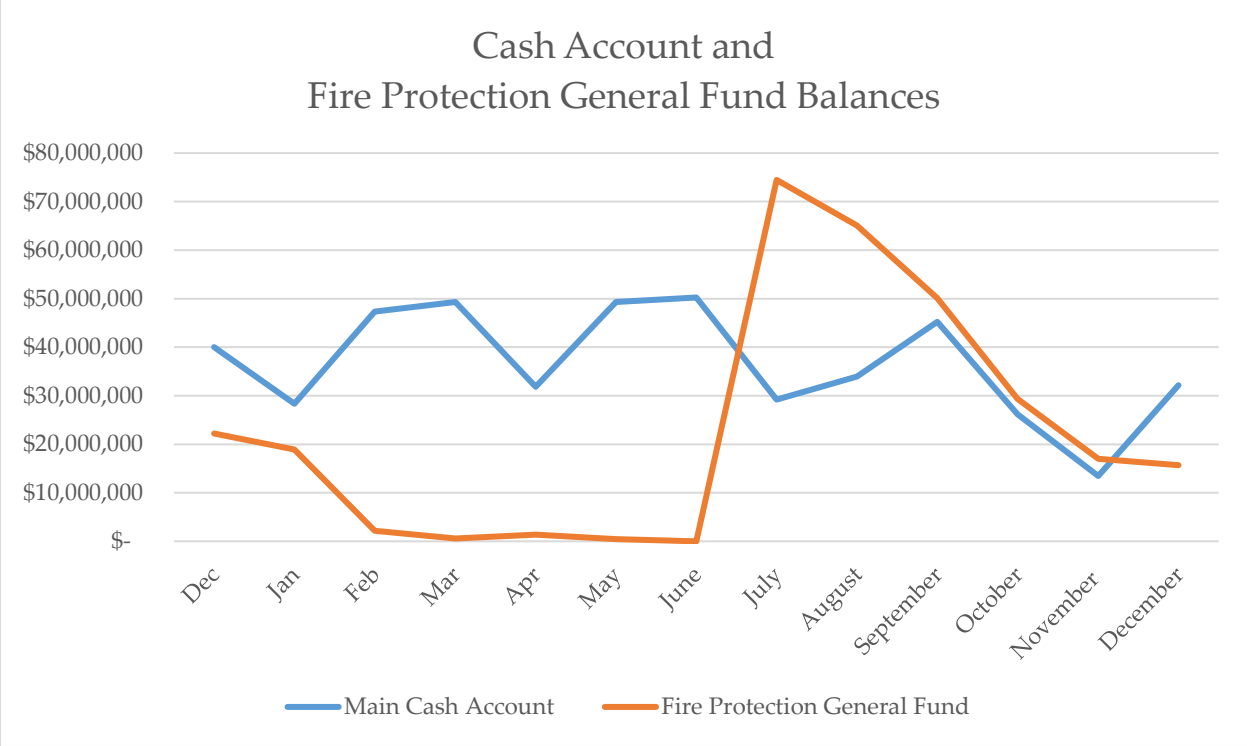
Re: Oregon Department of Forestry (ODF)—Monthly financial condition report

Dear Co-Chairs,

Cash and General Fund Balances

As of December 18, ODF's principal cash account balance was $32 million, and the 2023-25 Protection Division General Fund appropriation balance was $16 million (Figure 1). Between November and December, the cash account balance had a net increase of $18.7 million, and the Protection Division General Fund balance had a net reduction of $1.3 million.

Figure 1 - Cash Account and Fire Protection/Cash Flow General Fund Balances as of Dec 18, 2023



Financial Projections

Net financial activity for November 2023 resulted in a net increase of $16.2 million to the department's available resources (Table 1).

Actual revenues and expenditures for November were respectively $17 million and $14 million more than projected (Table 1) The revenue change was primarily due to receiving more fire protection assessment revenue in November than initially anticipated, which also reduces the revenue projections for December. The expenditure variation was due to making advance payments to the DFPA (Douglas Forest Protective Association) for Tyee Ridge Complex since financial resources were available. Over the next 90 days, the department expects to receive additional annual fire protection assessment revenue, insurance proceeds from fire season 2021, and grant reimbursements, all of which will replenish the main cash account in preparation for fire season 2024.

Table 1 - Financial Projections through Dec 18, 2023 (in thousands)

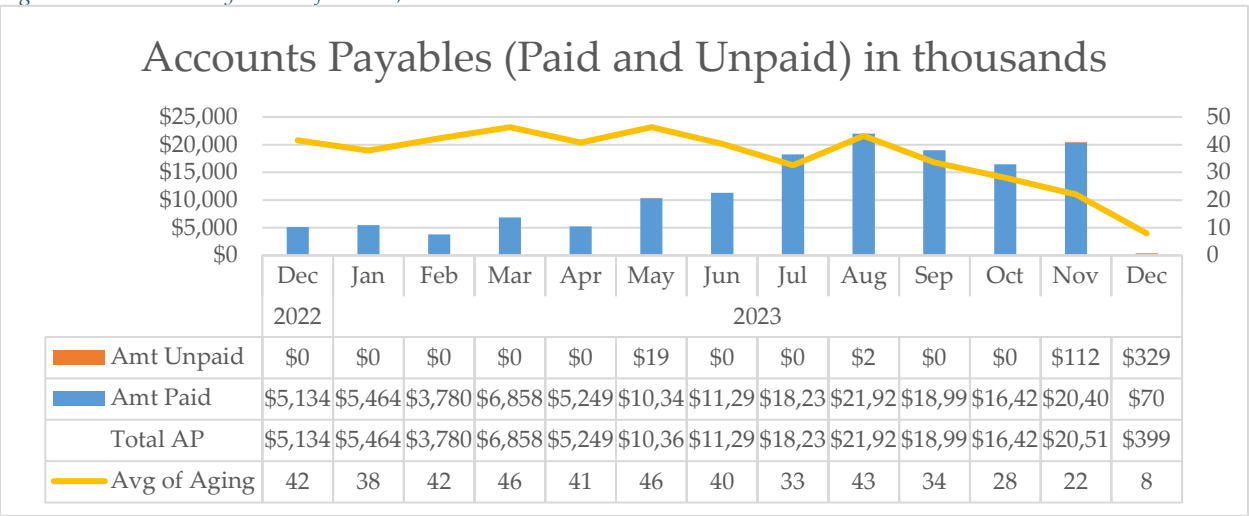
	23-Nov		23-Dec	24-Jan
	Projection	**Actual**	**Projection**	**Projection**
Total Revenue	$40,056	$57,049	$39,565	$48,130
Total Expenditures	($26,864)	($40,852)	($30,986)	($53,991)
Net Total Exp/Rev	$13,192	$16,197	$8,579	($5,861)
Beginning Cash Balance	$15,480	$37,144	$65,525	$74,104
End of Month Cash Balance*	$28,671	$65,525	$74,104	$68,242
Less: Dedicated Funds	($15,257)	($19,134)	($17,250)	($18,250)
End of Month Main Cash Balance	$13,414	$46,391	$56,854	$49,993
Available GF Appr	$94,931	$87,122	$80,130	$73,138
Available Resources	$108,345	$133,512	$136,984	$123,131

* Includes reconciliation for non-cash revenue and expenditure transactions.

Accounts Payable

Department-wide expenditure activity increased since the last reporting period (Figure 2) primarily due to three advances to the DFPA totaling $26.7 million related to the Tyee Ridge Complex. The agency continues to reconcile invoices related to the fire season and additional payments may be made over the next few months.

Figure 2 - Accounts Payable as of Dec 18, 2023

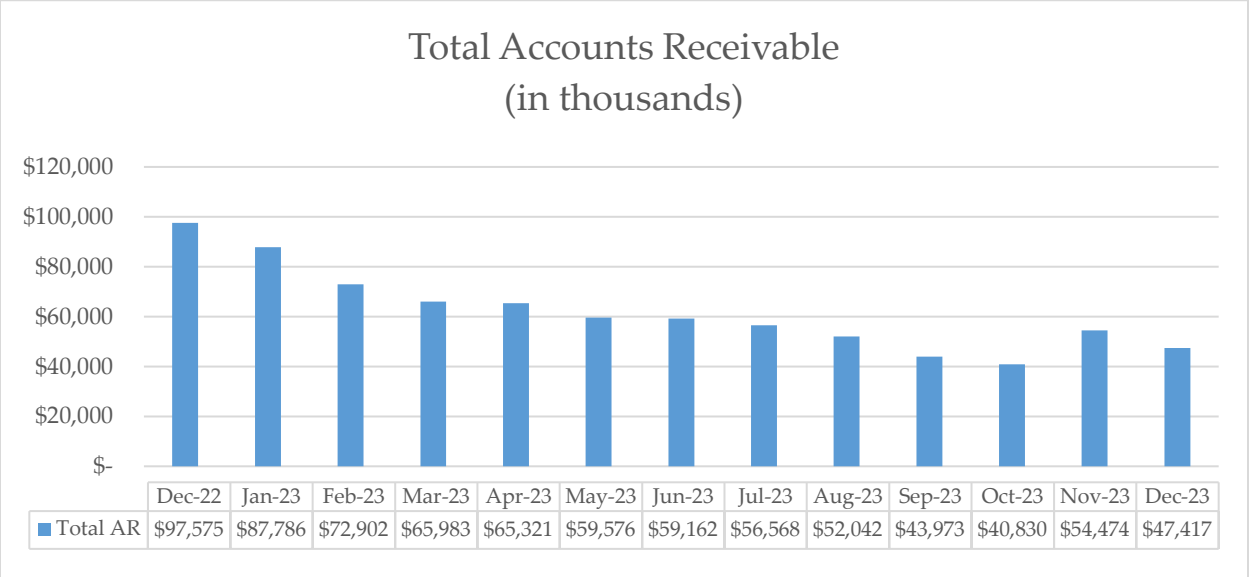


	Dec 2022	Jan 2023	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Amt Unpaid	$0	$0	$0	$0	$0	$19	$0	$0	$2	$0	$0	$112	$329
Amt Paid	$5,134	$5,464	$3,780	$6,858	$5,249	$10,34	$11,29	$18,23	$21,92	$18,99	$16,42	$20,40	$70
Total AP	$5,134	$5,464	$3,780	$6,858	$5,249	$10,36	$11,29	$18,23	$21,92	$18,99	$16,42	$20,51	$399
Avg of Aging	42	38	42	46	41	46	40	33	43	34	28	22	8

Accounts Receivable

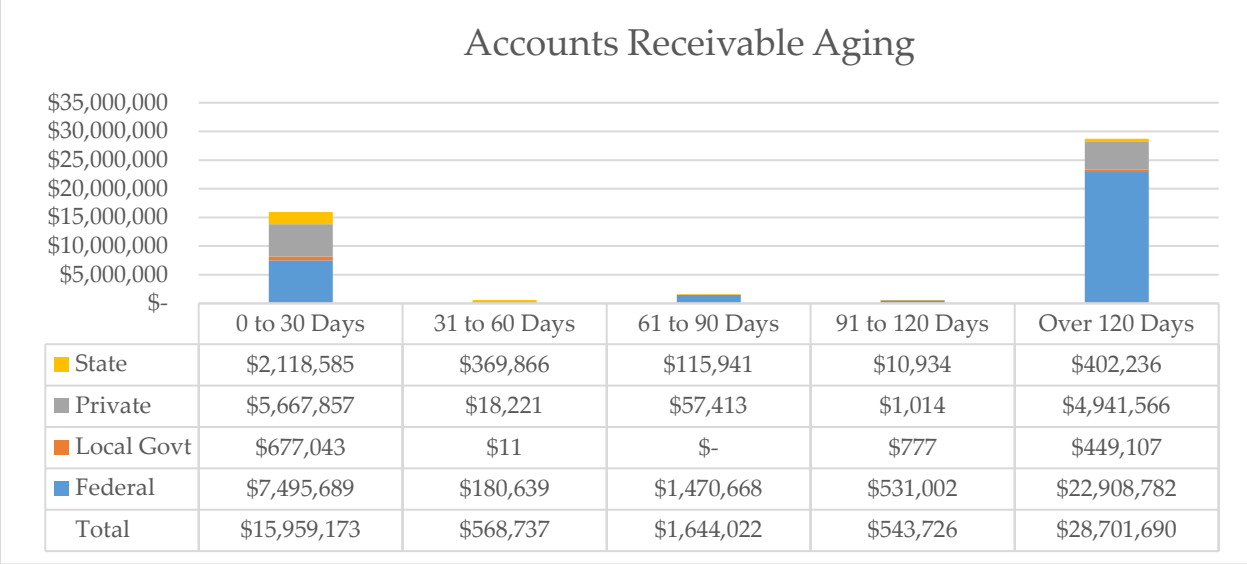
Between November and December, there was a net decrease of $7 million in the total accounts receivable balance (Figure 3). Accounts older than 120 days equate to $28.7 million, or 60% of the total balances owed to ODF (Figure 4). Of these accounts, the majority are due from FEMA ($12 million), federal partners ($11 million), and private parties for cost recovery ($4.9 million).

Figure 2 - Accounts Payable as of Dec 18, 2023



	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
Total AR	$97,575	$87,786	$72,902	$65,983	$65,321	$59,576	$59,162	$56,568	$52,042	$43,973	$40,830	$54,474	$47,417

Figure 4 – Accounts Receivable Aging as of Dec 18, 2023



	0 to 30 Days	31 to 60 Days	61 to 90 Days	91 to 120 Days	Over 120 Days
State	$2,118,585	$369,866	$115,941	$10,934	$402,236
Private	$5,667,857	$18,221	$57,413	$1,014	$4,941,566
Local Govt	$677,043	$11	$-	$777	$449,107
Federal	$7,495,689	$180,639	$1,470,668	$531,002	$22,908,782
Total	$15,959,173	$568,737	$1,644,022	$543,726	$28,701,690

Fire Costs

Table 2 – Gross Fire Cost Summary (red indicates estimates – in millions) as of Dec 18, 2023

Gross Fire Cost Summary							
Fire Season	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Total**
Fire Costs	108.12	33.66	139.85	149.18	53.3	90.19	574.3
Currently Invoiced	(0.15)	(0.15)	(10.98)	(4.08)	(5.47)	(0.44)	(21.27)
Outstanding to Invoice	(0.52)	(0.54)	(1.81)	(17.08)	(20.85)	(77.62)	(118.42)

The department recovers some fire costs through two FEMA grant programs; however, not all fire costs are recovered through FEMA. Fire costs may also be collected via cost-share agreements and cooperative agreements, which are all included in the numbers provided in Table 2.

FEMA-Public Assistance (PA) grants are awarded to the ODEM, who, in turn, passes the funds through to ODF. FEMA-Fire Management Assistance grants (FMAG) are awarded directly to ODF, and the department has immediate access to the funds once obligated.

FEMA grant applications submitted

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The two grant applications totaling $39,000 submitted through the FEMA-FMAG program are in the final FEMA review stage.

FEMA grant applications not yet submitted

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Nine FEMA grant applications ($6 million) are associated with estimated suppression costs. They will be submitted to FEMA after completing all cost-share and fire payment reconciliations.

Sincerely,

Cal Mukumoto
Oregon State Forester

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

STAFF REPORT

Agenda Item No.:	B
Work Plan:	Fire Protection Work Plan
Topic:	Ongoing Topic: Rangeland Protection Association Formation
Presentation Title:	Hearing request to Expand Fields-Andrews RFPA Boundary
Date of Presentation:	January 3, 2024
Contact Information:	Levi Hopkins, Wildfire Prevention and Policy Manager 503-949-3572, Levi.A.Hopkins@odf.oregon.gov

SUMMARY

The purpose of this agenda item is to obtain Board approval to proceed with a public hearing on the subject of expanding the current boundary for the Fields-Andrews Rangeland Protection Association to include additional rangeland not currently protected.

CONTEXT

This is part of the Department's ongoing effort, pursuant to ORS 477.320, to assist rural communities in eastern Oregon to develop wildland fire protection coverage in areas that are currently unprotected.

Rangeland owners in Harney County have provided a letter (Attachment 1) requesting the Board to hold a public hearing about providing protection from fire for rangelands by expanding the current boundary of the Fields-Andrews Rangeland Protection Association (Attachment 2).

BACKGROUND AND ANALYSIS

Rangelands in eastern Oregon present a concern to Forest Protection Districts because of the lack of fire protection. Fires starting on these lands, left uncontrolled, have frequently threatened or spread to forestlands protected by the Department. This creates a dilemma for the district and potential use of district resources on unprotected lands that do not financially support the protection district.

The 2004 Fire Program Review identified assisting local communities in developing fire protection on unprotected lands as a high priority. Rangeland Protective Associations have been formed in 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, Petersburg, Post Paulina, Silver Creek, Twickenham, Vale, Wagontire, Warner Valley, WC Ranches, and Wheeler County.

The area the private landowners are considering for fire protection is interspersed with other land management agencies.

Although the emphasis is protection of private lands, opportunities will exist for partnerships and mutual aid agreements with other entities to strengthen wildland fire protection throughout the area.

RECOMMENDATION

The Department recommends the Board approve the landowners' request to hold a public hearing on the subject of providing protection from fire for rangelands in Harney County, Oregon.

NEXT STEPS

The Department will hold a public hearing and determine the support for providing fire protection in Harney County, Oregon. If there is sufficient support, a request will be made from the landowners to the Board to determine whether the rangeland should be included within a protection system.

If the Board determines that the rangeland should be included in a rangeland protection system, the Board, in cooperation with interested persons, will establish the extent and type of protection to be provided. Such protection shall be commensurate with the values and uses of the rangeland to be protected.

ATTACHMENT

(1) Letter from Fields-Andrews Rangeland Protection Association
(2) Map of current and proposed boundary of the Fields-Andrews Rangeland Protection Association

Oregon Department of Forestry
Salem Headquarters
2600 State Street
Salem, OR 97310

October 27, 2023

Fields-Andrews Rangeland Fire Protection Association

Dear Mr. Mukumoto and the Board of Forestry

The Fields-Andrews Fire Protection Association would like to hold a public hearing to expand our protection boundary to the north to include approximately 4500 additional acres. 3600 acres is BLM, 715 is a private ranch, Folly Farm, and 160 acres is Division of State Lands. The private and state lands are currently unprotected.

Please find the attached map and signature page of interested landowners. Thank you in advance for your consideration.

Director, Andy Gray

Director, Rod Hoagland

Director, Dave Wratchford

Director, Stephen Doman

Director, Dereck Enneberg

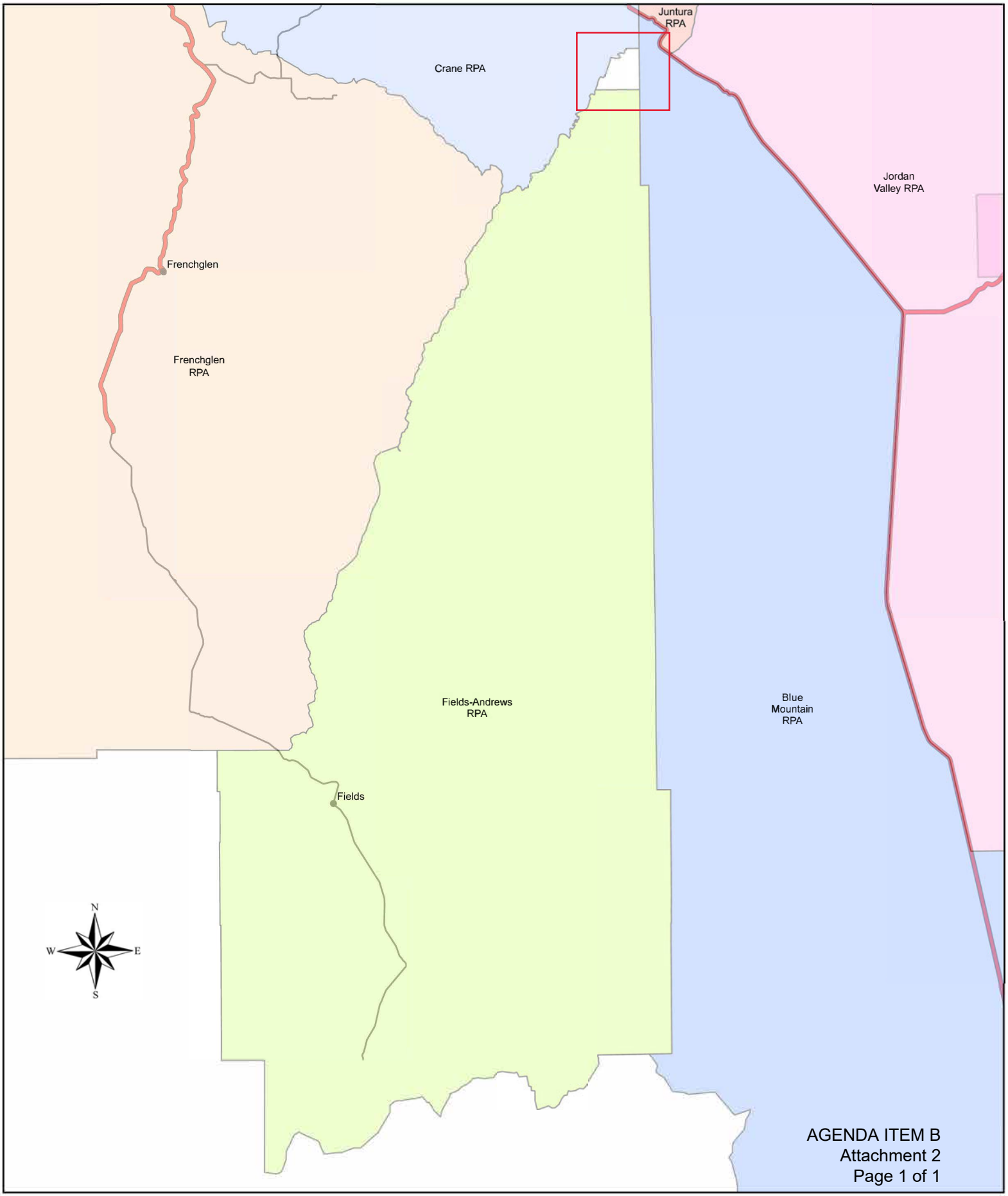
Director , Brittany Enneberg

Director, Mimi German

Land Owner, Ron Atkinson
Signature

CC: Allison Rayburn, ODF Rangeland Fire Program Coordinator

Fields-Andrews Expansion



AGENDA ITEM B
Attachment 2
Page 1 of 1

STAFF REPORT

Agenda Item No.:	C
Topic:	Confidentiality and Inadmissibility of Mediation Communications Administrative Rulemaking
Presentation Title:	Consent Item
Date of Presentation:	January 3, 2024
Contact Information:	Ryan Miller, Admin. Rules Specialist-Protection Div. ryan.miller@odf.oregon.gov

SUMMARY

The purpose of this agenda item is to seek approval from the Board of Forestry (Board) to permanently adopt by reference the Oregon Department of Justice Model Rule, Oregon Administrative Rule (OAR) 137-005-0052. The Protection Division adopted this model rule by reference temporarily to bring the division's administration of contested cases and hearings up to date, in Oregon Administrative Rule 629-041-0200, and is currently effective through 01/07/2024.

CONTEXT

The original version of OAR 629-041-0200, prior to the temporary rule adoption, included many out-of-date references and was not practicably usable by the agency in matters of Mediation Communications under the protection division.

The Department of Justice has adopted a Model Rule that may be used by agencies in accordance with the Administrative Procedure Act. Oregon Revised Statue (ORS) 183.341 (1) allows agencies to adopt all or part of the model rules by reference without complying with the rulemaking procedures under ORS 183.335.

In July of 2023, the Agency adopted the DOJ Model Rule by reference as a temporary rule. Permanent administrative rule adoption of the DOJ Model Rule by reference is the necessary next step prior to the expiration of the temporary rule adoption.

RECOMMENDATION

Board approve the adoption of the DOJ Model rule as defined in 137-005-0052 by reference in OAR 629-041-0200.

Board direct the agency's protection division to proceed with the permanent Oregon Administrative rulemaking filing.

NEXT STEPS

With Board approval, the permanent rule will be filed with the Secretary of State by January 7, 2024.

ATTACHMENTS

(1) Temporary Administrative Order DOF 16-2023
(2) OAR 629-041-0200
(3) OAR 137-005-0052

OFFICE OF THE SECRETARY OF STATE
LAVONNE GRIFFIN-VALADE
SECRETARY OF STATE

CHERYL MYERS
DEPUTY SECRETARY OF STATE
AND TRIBAL LIAISON

ARCHIVES DIVISION
STEPHANIE CLARK
DIRECTOR

800 SUMMER STREET NE
SALEM, OR 97310
503-373-0701

TEMPORARY ADMINISTRATIVE ORDER
INCLUDING STATEMENT OF NEED & JUSTIFICATION

DOF 16-2023
CHAPTER 629
DEPARTMENT OF FORESTRY

FILED
07/12/2023 10:44 AM
ARCHIVES DIVISION
SECRETARY OF STATE
& LEGISLATIVE COUNSEL

FILING CAPTION: Temporary Rule change made by reference to DOJ Model Rule OAR 137-005-0052.

EFFECTIVE DATE: 07/12/2023 THROUGH 01/07/2024

AGENCY APPROVED DATE: 07/10/2023

CONTACT: Ryan Miller
541-620-0341
ryan.miller@odf.oregon.gov

2600 State Street
Salem,OR 97310

Filed By:
Ryan Miller
Rules Coordinator

NEED FOR THE RULE(S):

The current rule 629-041-0200 is out of date with content and references. Updated DOJ Model rule is now available for adoption.

JUSTIFICATION OF TEMPORARY FILING:

The current ruleset, OAR 629-041-0200, is out of date with invalid references. Adoption of the current DOJ Model Rule by reference, OAR 137-005-0052, via temporary rule allows for immediate use of these updated model rules. Permanent Rule Making to follow.

DOCUMENTS RELIED UPON, AND WHERE THEY ARE AVAILABLE:

OAR 137-005-0052 DOJ Model Rule

AMEND: 629-041-0200

RULE TITLE: Confidentiality and Inadmissibility of Mediation Communications

RULE SUMMARY: Collaborative Dispute Resolution Model Rules adopted by reference.

RULE TEXT:
Pursuant to ORS 36.224, the Department of Forestry adopts by reference OAR 137-005-0052 as promulgated by the Attorney General effective as of November 13, 2018.

STATUTORY/OTHER AUTHORITY: ORS 526.016, ORS 526.041

STATUTES/OTHER IMPLEMENTED: ORS 36.220-36.238

PERMANENT FILING

For internal agency use only.

ODF / Protection		629-041-0200	
Agency and Division Name		Administrative Rules Chapter Number	
Hilary Olivos-Rood		hilary.olivos-rood@odf.oregon.gov	503-302-6344
Rules Coordinator		Email	Telephone
Ryan Miller	2600 State St, Salem	ryan.miller@odf.oregon.gov	541-620-0341
Filing Contact	Address	Email	Telephone

FILING CAPTION

Amend 629-041-0200 to adopt by reference OAR 137-005-0052

Agency Approved Date: [ ]

Effective Date: [ ]

Rulemaking Notice Filing Date: [ ]

RULEMAKING ACTION

List each rule number separately (000-000-0000). Attach clean text for each rule at the end of the filing.

ADOPT:

AMEND:

629-041-0200

REPEAL:

RENUMBER:

RULE SUMMARY:

Include a summary for each rule included in this filing.

Amend OAR 629-041-0200 due to outdated rule language and references. 629-041-0200 will now adopt the Model Rule 137-005-0052 "Collaborative Dispute Resolution Model Rules" by reference.

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Department of Forestry

Chapter 629

Division 41
PROTECTION ADMINISTRATION

629-041-0200
Confidentiality and Inadmissibility of Mediation Communications

Pursuant to ORS 36.224, the Department of Forestry adopts by reference OAR 137-005-0052 as promulgated by the Attorney General effective as of November 13, 2018.

[ED. NOTE: To view attachments referenced in rule text, click here for PDF copy.]

Statutory/Other Authority: ORS 526.016 & ORS 526.041
Statutes/Other Implemented: ORS 36.220-36.238
History:
DOF 16-2023, temporary amend filed 07/12/2023, effective 07/12/2023 through 01/07/2024
DOF 3-2005, f. & cert. ef. 1-7-05
DOF 7-2004(Temp), f. 9-10-04, cert. ef. 9-15-04 thru 3-13-05

Please use this link to bookmark or link to this rule.

Oregon State Archives • 800 Summer Street NE • Salem, OR 97310
Phone: 503-373-0701 • Fax: 503-373-0953 • Adminrules.Archives@sos.oregon.gov

Department of Justice

Chapter 137

Division 5
COLLABORATIVE DISPUTE RESOLUTION MODEL RULES

137-005-0052
Mediation Confidentiality

(1) The words and phrases used in this rule have the same meaning as given to them in ORS 36.110 and 36.234.

(2) Nothing in this rule affects any confidentiality created by other law. Nothing in this rule relieves a public body from complying with the Public Meetings Law, ORS 192.610 to 192.690. Whether or not they are confidential under this or other rules of the agency, mediation communications are exempt from disclosure under the Public Records Law to the extent provided in ORS 192.311 to 192.478.

(3) This rule applies only to mediations in which the agency is a party or is mediating a dispute as to which the agency has regulatory authority. This rule does not apply when the agency is acting as the "mediator" in a matter in which the agency also is a party as defined in ORS 36.234.

(4) To the extent mediation communications would otherwise be compromise negotiations under ORS 40.190 (OEC Rule 408), those mediation communications are not admissible as provided in 40.190 (OEC Rule 408), notwithstanding any provisions to the contrary in section (8) of this rule.

(5) Mediations Excluded. Sections (6) - (9) of this rule do not apply to:

(a) Mediation of workplace interpersonal disputes involving the interpersonal relationships between this agency's employees, officials or employees and officials, unless a formal grievance under a labor contract, a tort claim notice or a lawsuit has been filed; or

(b) Mediation in which the person acting as the mediator will also act as the hearings officer in a contested case involving some or all of the same matters; or

(c) Mediation in which the only parties are public bodies; or

(d) Mediation in which two or more public bodies and a private entity are parties if the laws, rule or policies governing mediation confidentiality for at least one of the public bodies provide that mediation communications in the mediation are not confidential; or

(e) Mediation involving 15 or more parties if the agency has designated that another mediation confidentiality rule adopted by the agency may apply to that mediation.

(6) Disclosures by Mediator. A mediator may not disclose or be compelled to disclose mediation communications in a mediation and, if disclosed, such communications may not be introduced into evidence in any subsequent administrative, judicial or arbitration proceeding unless:

(a) All the parties to the mediation and the mediator agree in writing to the disclosure; or

(b) The mediation communication may be disclosed or introduced into evidence in a subsequent proceeding as provided in subsections (c)–(d), (j)–(l), (o)–(p) and (r)–(s) of section (8) of this rule.

(7) Confidentiality and Inadmissibility of Mediation Communications. Except as provided in section (8) of this rule, mediation communications are confidential and may not be disclosed to any other person, are not admissible in any subsequent administrative, judicial or arbitration proceeding and may not be disclosed during testimony in, or during any discovery conducted as part of a subsequent proceeding, or introduced as evidence by the parties or the mediator in any subsequent proceeding so long as:

(a) The parties to the mediation sign an agreement to mediate specifying the extent to which mediation communications are confidential; and,

(b) If the mediator is the employee of or acting on behalf of a state agency, the mediator or an authorized representative of the agency signs the agreement.

(8) Exceptions to Confidentiality and Inadmissibility.

(a) Any statements, memoranda, work products, documents and other materials, otherwise subject to discovery that were not prepared specifically for use in the mediation are not confidential and may be disclosed or introduced into evidence in a subsequent proceeding.

(b) Any document that, before its use in a mediation, was a public record as defined in ORS 192.311(5) remains subject to disclosure to the extent provided by ORS 192.311 to 192.478 and may be introduced into evidence in a subsequent proceeding.

(c) A mediation communication is not confidential and may be disclosed by any person receiving the communication to the extent that person reasonably believes that disclosing the communication is necessary to prevent the commission of a crime that is likely to result in death or bodily injury to any person. A mediation communication is not confidential and may be disclosed in a subsequent proceeding to the extent its disclosure may further the investigation or prosecution of a felony crime involving physical violence to a person.

(d) Any mediation communication related to the conduct of a licensed professional that is made to or in the presence of a person who, as a condition of his or her professional license, is obligated to report such communication by law or court rule is not confidential and may be disclosed to the extent necessary to make such a report.

(e) The parties to the mediation may agree in writing that all or part of the mediation communications are not confidential or that all or part of the mediation communications may be disclosed and may be introduced into evidence in a subsequent proceeding unless the substance of the communication is confidential, privileged or otherwise prohibited from disclosure under state or federal law.

(f) A party to the mediation may disclose confidential mediation communications to a person if the party's communication with that person is privileged under ORS Chapter 40 or other provision of law. A party to the mediation may disclose confidential mediation communications to a person for the purpose of obtaining advice concerning the subject matter of the mediation, if all the parties agree.

(g) An employee of the agency may disclose confidential mediation communications to another agency employee so long as the disclosure is necessary to conduct authorized activities of the agency. An employee receiving a confidential mediation communication under this subsection is bound by the same confidentiality requirements as apply to the parties to the mediation.

(h) A written mediation communication may be disclosed or introduced as evidence in a subsequent proceeding at the discretion of the party who prepared the communication so long as the communication is not otherwise confidential under state or federal law and does not contain confidential information from the mediator or another party who does not agree to the disclosure.

(i) In any proceeding to enforce, modify or set aside a mediation agreement, a party to the mediation may disclose mediation communications and such communications may be introduced as evidence to the extent necessary to prosecute or defend the matter. At the request of a party, the court may seal any part of the record of the proceeding to prevent further disclosure of mediation communications or agreements to persons other than the parties to the agreement.

(j) In an action for damages or other relief between a party to the mediation and a mediator or mediation program, mediation communications are not confidential and may be disclosed and may be introduced as evidence to the extent necessary to prosecute or defend the matter. At the request of a party, the court may seal any part of the record of the proceeding to prevent further disclosure of the mediation communications or agreements.

(k) When a mediation is conducted as part of the negotiation of a collective bargaining agreement, the following mediation communications are not confidential and such communications may be introduced into evidence in a subsequent administrative, judicial or arbitration proceeding:

(A) A request for mediation, or

(B) A communication from the Employment Relations Board Conciliation Service establishing the time and place of mediation, or

(C) A final offer submitted by the parties to the mediator pursuant to ORS 243.712, or

(D) A strike notice submitted to the Employment Relations Board.

(l) To the extent a mediation communication contains information the substance of which is required to be disclosed by Oregon statute, other than ORS 192.311 to 192.478, that portion of the communication may be disclosed as required by statute.

(m) Written mediation communications prepared by or for the agency or its attorney are not confidential and may be disclosed and may be introduced as evidence in any subsequent administrative, judicial or arbitration proceeding to the extent the communication does not contain confidential information from the mediator or another party, except for those written mediation communications that are:

(A) Attorney client privileged communications so long as they have been disclosed to no one other than the mediator in the course of the mediation or to persons as to whom disclosure of the communication would not waive the privilege, or

(B) Attorney work product prepared in anticipation of litigation or for trial, or

(C) Prepared exclusively for the mediator or in a caucus session and not given to another party in the mediation other than a state agency, or

(D) Prepared in response to the written request of the mediator for specific documents or information and given to another party in the mediation, or

(E) Settlement concepts or proposals, shared with the mediator or other parties.

(n) A mediation communication made to the agency may be disclosed and may be admitted into evidence to the extent the agency director, administrator or board determines that disclosure of the communication is necessary to prevent or mitigate a serious danger to the public's health or safety, and the communication is not otherwise confidential or privileged under state or federal law.

(o) The terms of any mediation agreement are not confidential and may be introduced as evidence in a subsequent proceeding, except to the extent the terms of the agreement are exempt from disclosure under ORS 192.311 to 192.478, a court has ordered the terms to be confidential under ORS 17.095 or state or federal law requires the terms to be confidential.

(p) In any mediation in a case that that has been filed in court or when a public body's role in a mediation is solely to make mediation available to the parties the mediator may report the disposition of the mediation to that public body or court at the conclusion of the mediation so long as the report does not disclose specific confidential mediation communications. The agency conducting the mediation or making the mediation available or the mediator may use or disclose confidential mediation communications for research, training or educational purposes, subject to the provisions of ORS 36.232.

(q) An agreement to mediate is not confidential and may be introduced into evidence in a subsequent proceeding.

(r) Any mediation communication relating to child abuse that is made to a person required to report child abuse under ORS 419B.010 is not confidential to the extent that the person is required to report the communication.

(s) Any mediation communication relating to elder abuse that is made to a person who is required to report elder abuse under ORS 124.050 to 124.095 is not confidential to the extent that the person is required to report the communication.

(9) When a mediation is subject to section (7) of this rule, the agency will provide to all parties to the mediation and the mediator a copy of this rule or a citation to the rule and an explanation of where a copy of the rule may be obtained. The agreement to mediate also must refer to this rule. Violation of this provision does not waive confidentiality or inadmissibility.

Statutory/Other Authority: ORS 36.224, OL 2015 & ch 114 (SB 189)
Statutes/Other Implemented: ORS 36.224, 36.228, 36.230, 36.232, OL 2015 & ch 114 (SB 189)
History:
DOJ 25-2018, minor correction filed 11/13/2018, effective 11/13/2018
DOJ 13-2015, f. & cert. ef. 10-27-15
DOJ 7-2015(Temp), f. 5-22-15, cert. ef. 5-26-15 thru 11-21-15

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Agenda Item No.:	D
Work Plan:	Agency Administration Work Plan
Topic:	Reappointment to Emergency Fire Cost Committee
Presentation Title:	Reappointment of Brennan Garrelts
Date Presented to Board:	January 3, 2024
Contact Information:	James Short, Chief Financial Officer 503-302-8478, James.Short@odf.oregon.gov Nancy Hirsch, Emergency Fire Cost Committee Administrator 503-881-5255, Nancy.Hirsch@odf.oregon.gov

SUMMARY

The purpose of this agenda item is to recommend the reappointment of Brennan Garrelts (current chairperson) on the Emergency Fire Cost Committee (EFCC).

BACKGROUND

Oregon Revised Statute (ORS) 477.440 directs that the Board *shall appoint an Emergency Fire Cost Committee consisting of four members, who shall be forest landowners or representatives of forest landowners whose forestland is being assessed for forest fire protection within a forest protection district. At least one member shall be selected from each forest region of the state. Members of the Emergency Fire Cost Committee shall be appointed by the board for four-year terms.*

ORS 477.445 gives authority to the Emergency Fire Cost Committee (EFCC) to *supervise and control the distribution of funds from the Oregon Forest Land Protection Fund*. The Oregon Forest Land Protection Fund (OFLPF), established by ORS 477.750, is used to equalize (reimburse) emergency fire suppression costs expended in protecting forestland statewide by forest protection districts, both state and association. The annual expenditure limit of the OFLPF is $13.5 million which includes up to $10 million for emergency fire suppression costs, up to $3 million for statewide severity resources, with the remaining available for administration/operating costs and up to a fifty-percent contribution towards any annual premium for catastrophic suppression cost insurance policy. If there is any unspent authority the EFCC may consider strategic investments in the state's complete and coordinated fire protection system.

The current EFCC membership and terms are outlined in Attachment 1. Brennan Garrelts's first term began in January 2020. Consistent with ORS 477.450, the EFCC elected Brennan as their chairperson at their June 2021 meeting. While serving as the EFCC chairperson, Brennan has represented the committee on multiple policy efforts that includes: 2022 Co-chair of ODF's Emergency Fire Funding Task Force which resulted in draft legislative concepts, 2023 EFCC Membership Policy development and approval, and he is currently representing the EFCC on Senator Steiner's Wildfire & Forestry Workgroup. Brennan Garrelts brief biography is in attachment 2.

RECOMMENDATION

The Department recommends the Board make the following appointment:

Reappoint Brennan Garrelts to the Emergency Fire Cost Committee with a term expiring at the end of January 2028.

ATTACHMENTS

1. Emergency Fire Cost Committee Membership
2. Biography Brennan Garrelts

EMERGENCY FIRE COST COMMITTEE MEMBERSHIP
January 2024

	First Term Began	Current Term Began	Term Expires end of month
Brennan Garrelts, Chair	1/20	**1/24**	**1/28**
Chris Johnson	7/18	9/22	9/26
Erik Lease	9/21	9/21	9/25
Kathryn VanNatta	9/23	9/23	9/27

Position recommended for appointment is in **bold**. The appointment term would end September of 2028.

Current members

Brennan Garrelts, Chair
Southwest Region
Coos, Douglas, and Southwest Oregon Forest Protective Associations
Vice President, Lone Rock Timber Co.

Chris Johnson
Eastern Region
Eastern Oregon, Walker-Range and Klamath-Lake Forest Protective Associations
Executive Director of Operations, Shanda Asset Management LLC

Erik Lease
Northwest Region
Northwest Oregon Forest Protective Association
Director of Silviculture & Regeneration for Western Timberlands, Weyerhaeuser

Kathryn VanNatta
Northwest Region
Northwest Oregon Forest Protective Association
Small forest landowner, representing all Oregon small woodland landowners.

Brennan Garrelts Biography

Brennan developed a passion for Oregon's forests early in his youth and spent much of his spare time exploring the public and private forestlands behind his childhood home in Southwest Oregon. In college he sought to continue that passion for a professional career and after receiving his B.A. in Environmental Science from Willamette University, he went on to earn his M.S. in Forest Science from Oregon State University's College of Forestry.

Brennan spent the first decade of his professional career working for the Bureau of Land Management as a Field Forester in Redding, CA and later as a Timber Manager and Assistant Field Manager for the BLM's O&C forestland on the Roseburg, OR District. In 2015, he transitioned to the private sector and began working for Lone Rock Resources, in Roseburg, Oregon as a Harvest Administration Forester. He has since transitioned from this role to Vice-President overseeing Lone Rock's internal logging Company, Government Affairs and Policy, and Lone Rock's Fire Prevention and Suppression on wildland fire.

Throughout his forestry career Brennan has consistently sought to grow his professional wildland firefighter experience and qualifications. He has spent 18 seasons fighting wildland fire in various operational positions from crew member to task force leader. Beginning in the Douglas Complex fires in 2013, Brennan has seen action on 12 large wildland fires and numerous small fires in Oregon. He worked extensively and repeatedly with all three ODF Teams on separate large fires, leading Lone Rock's coordinated attack side by side with ODF. Brennan also serves as the current Chair of ODF's Emergency Fire Cost Committee and immediate Past-President of the Board of Directors for the Douglas Forest Protective Association.

STAFF REPORT

Agenda Item No.:	E
Work Plan:	Forest Resources Division
Topic:	Implementing Legislative Direction
Presentation Title:	Appointments to the Adaptive Management Program Committee
Date of Presentation:	January 3, 2024
Contact Information:	Josh Barnard, Division Chief, Forest Resources Division, ODF, Josh.W.Barnard@odf.oregon.gov; Terry Frueh, Adaptive Management Program Coordinator, Forest Resources Division, ODF, Terry.Frueh@odf.oregon.gov;

SUMMARY

This agenda item is for the Board to renew terms of several Adaptive Management Program Committee (AMPC) members. This is a decision item.

CONTEXT

The legislature directed the board to set up an adaptive management program. The program's purpose is to help inform future rulemaking and support an application for a programmatic habitat conservation plan, and subsequent incidental take permit. The goal of the program is to use best available science to assess the rule effectiveness for protecting several fish and other aquatic species. The program requires the AMPC to direct the work. The AMPC's main functions are to set the research agenda for the program and make recommendations to the Board based on research findings.

BACKGROUND

In February 2020, conservation and forest industry groups offered to revise the Forest Practices Act and administrative rules through a memorandum of understanding to include mediated discussions, known as the Private Forest Accord (PFA). The bill set the timeline and topics for making changes to the Forest Practices Act and rules from which the Board could apply for a programmatic habitat conservation plan (HCP). The accord concluded in late 2021. In March 2022, the legislature adopted the accord recommendations through Senate Bills 1501 and 1502, and House Bill 4055. Senate Bill 1501 incorporated by reference the Private Forest Accord Report dated February 2, 2022. The PFA Report further detailed the recommended changes to the Act and rules and a pathway for an HCP. A key part of the rules is the Adaptive Management Program.

ANALYSIS

Senate Bill 1501 names ten voting and three non-voting organizations on the AMPC. The department solicited names from these organizations to serve as committee members and were asked to consider diversity in the nominations. The Board approved the initial list of AMPC nominees at their November 16, 2022 meeting. Subsequently, the Coalition for Oregon Land Trusts (COLT), Oregon Wild, and the Legislative Commission on Indian Services (LCIS) named interim members to represent them on the AMPC. These interim members have continuously represented their respective organizations since the first AMPC meeting in January 2023. These organizations request that their interim members' terms be renewed as full members. Additionally, the Oregon Small Woodlands Association (OSWA) representative's first term expired on December 31, 2023. OSWA requests that their representative's term be renewed. Biographies of each AMPC member can be found here.

RECOMMENDATION

The department recommends that the Board reappoint the following people to the AMPC as full members:

Member	Organization	Term expires December 31 of:
Wendy Gerlach	COLT	2024
Casey Kulla	Oregon Wild	2025
Jason Robison	LCIS	2027
David Bugni	OSWA	2027

ATTACHMENT

None.

STAFF REPORT

Agenda Item No.:	F
Work Plan:	Forest Resources Division
Topic:	Board Updates
Presentation Title:	Annual Forest Practices Monitoring Update
Date of Presentation:	January 3, 2024
Contact Information:	Josh Barnard, Division Chief, Forest Resources, ODF, josh.w.barnard@oregon.gov Adam Coble, Forest Health and Monitoring Manager, Forest Resources, ODF, adam.coble@oregon.gov

SUMMARY

This agenda item summarizes the Oregon Department of Forestry (ODF) Monitoring work on the 2023-2024 reforestation compliance monitoring study, development of the long-term compliance program and Compliance Monitoring Program Committee, literature review on post disturbance harvesting, and implementation of the 2021 ODF-DEQ Memorandum of Understanding (MOU).

CONTEXT

The Forest Practices Act rules emphasize compliance monitoring of riparian management areas, roads, and steep slopes. ODF Monitoring staff are responsible for implementing the memorandum of understanding (MOU) with the Department of Environmental Quality (DEQ) that was signed in December 2021.

BACKGROUND

In November 2022, staff updated the Board on monitoring program efforts. Topics included implementation of the MOU with DEQ to improve water quality, issuing an RFP for a contract statistician to assess the results of the pilot reforestation compliance monitoring study, and to assist with the development of the design and protocol for the 2023-2024 reforestation study.

ANALYSIS

High-Priority Monitoring Projects

ODF Monitoring staff designed and implemented the 2023-2024 Reforestation Compliance Monitoring Study. In early 2023, a Request for Proposal (RFP) was issued that led to a contract with Mount Hood Environmental (MHE) to assist with the development of study designs and protocols. ODF Monitoring staff began collecting data in October 2023. Future ODF compliance monitoring audits will focus on three prioritized FPA rule sets that include riparian areas, harvesting on steep slopes, roads, and other rules as directed by the OAR 629-678-0110.

The Compliance Monitoring Program Committee was established in early 2023 as an advisory body to the Compliance Monitoring Program. The Committee is made up of representatives from industry, conservations groups, small forest landowners, and individuals well versed in Oregon's forestry rules. ODF Monitoring staff meet with this committee on a quarterly basis to provide

updates on projects, reports completed by staff and MHE, project planning and direction, as well as to discuss feedback provided by the committee.

ODF worked collaboratively with DEQ staff in carrying out the ODF-DEQ MOU. Agency managers and staff met every other month to provide important updates on legislative activities, Total Maximum Daily Load's (TMDL's) by rule, and status updates on Coastal Zone Act Reauthorization Amendments (CZARA). ODF staff participated in the following DEQ Rule Advisory Committees (RAC's): Upper Yaquina Watershed TMDL, Willamette Tributary Temperature TMDL, Lower Columbia/Sandy Temperature TMDL, and the Aquatic Life Toxics advisory committee. ODF and DEQ staff also worked together on the Forestry section for the new draft Coastal Zone Non-Point Source Plan.

Private Forest Accord Associated Work

ODF Monitoring staff worked with other units on identifying informational needs for revised rules and required reporting for new programs. Monitoring staff are also assisting with the Abandoned Road Inventory planning, the E-notification system upgrade development process, internal and external FPA trainings on water quality, and presentations to several local watershed groups, Department of Land Conservation & Development (DLCD), Environmental Protection Agency (EPA), and National Oceanic and Atmospheric Administration (NOAA) on new FPA rules and associated programs. ODF Monitoring staff are conducting a literature review on post-disturbance harvest. The literature review will be provided to the Board in early 2024.

Other Monitoring Work

- Oregon Plan Monitoring Team (OPMT) grant review team participation
- STREAM Team – coordination with state natural resource agencies
- Oregon Water Data Portal Subject Mater Expert (SME) Team participation
- Pesticide Stewardship Partnership Advisory Group participation
- Climate Smart Award planning
- Seed orchard and Emerald Ash Borer (EAB) monitoring support

RECOMMENDATION

This agenda item is informational only.

State Forester and Board Member Comments

Public Comments

Agenda Item No.:	3
Work Plan:	Forest Resources Division
Topic:	Ceremonial Events and Recognitions
Presentation Title:	2023 Forest Practices Operator of the Year Awards
Date of Presentation:	January 3, 2024
Contact Information:	Greg Wagenblast, Policy Analyst, Forest Resources Division 541-525-6462, Greg.Wagenblast@odf.Oregon.gov Megan Cogswell, Policy, Training and Enforcement Unit Manager, Forest Resources Division 503-945-7473, megan.l.cogswell@odf.oregon.gov

SUMMARY

The Board of Forestry recognizes Operators of the Year. This year's award recipients are Leigh Ann Vradenburg, Plikat Logging, Inc. and Ron Staley Enterprises, Inc.

BACKGROUND

The Oregon Forest Practices Act aims to provide for the overall maintenance of air quality, water resources, soil productivity, and fish and wildlife. These forest resources are important to all Oregonians. The Operator of the Year program recognizes operators who voluntarily protect these resources in a conscientious and diligent way. To recognize operators who meet or exceed Forest Practice Act requirements, typically the Board names one Operator of the Year per Region and one or more Merit Award recipients; ODF districts may also issue Letters of Commendation. Program goals are to:

1. Recognize operators who consistently meet or exceed the Oregon Forest Practices Act and voluntarily raise industry standards; and,
2. Improve public understanding of the Forest Practices Act, its administration, and its effectiveness in protecting natural resources.

PROCESS

Anyone may nominate candidates for the Operator of the Year. Agency staff screen the nominees for minimum requirements. The Regional Forest Practices Committees review the nominations for their region. Each committee chooses a recipient based on innovative techniques, cooperative spirit, consistent performance, and measures taken to protect forest resources. To make the selection, Regional Forest Practices Committee members tour the sites, review nominations, and watch videos that capture the operator's work.

The 2023 Operators of the Year are:

For the Eastern Oregon Region –
Leigh Ann Vradenburg of Klamath Falls, Oregon earned the award for her efforts collaborating with members of the Klamath-Lake Forest Health Partnership, landowners, operators, and cooperators to accomplish multiple forest health projects. Leigh Ann has demonstrated the willingness time and time again to take the lead to address the various challenges associated with forest health and stewardship in the area. She exhibits tremendous effort, energy, and knowledge to the work that she does improving Oregon's forests. Leigh Ann continually leverages creative thinking as it relates to the necessities of the forests, the operator, and operations for many successful outcomes. Leigh Ann's success is through the relationships she has established with local contractors and operators. She has been a true steward of the forest, coordinating multiple operators and projects while working to educate non-industrial and industrial forest owners to benefit the Klamath basin forests.

Southwest Oregon Region–
Plikat Logging, Inc. of Camas Valley, Oregon earned the award for its diligent planning and harvesting practices. The company has a record of long-term conscientious logging practices that meet or exceed the Oregon Forest Practices Act (FPA). Plikat took on an operation with many protected resources in Douglas County. The operation bordered 3 fish-bearing streams, had numerous challenges including winter logging, and required multiple harvesting techniques including downhill yarding. Their thoughtful planning and innovative techniques allowed them to protect Riparian Management Areas (RMA) and successfully harvest the unit with no damage to any of the soil and water resources. Additionally, Plikat had additional challenges managing for public access to the Doerner Fir in an adjacent timber stand during their operation (one of the tallest known trees in the world which is not a redwood). Plikat maintained excellent communication and coordination with the BLM and the landowner to manage public access and safety while maintaining the roads for public use when the operation was complete.

Northwest Oregon Region –
Ron Staley Enterprises, Inc. of Sweet Home, Oregon earned the award for their efforts as a consistently conscientious logging company. Owner Ron Staley walked the unit prior to operating to review the site and plan how to protect resources involved as well as reviewing road and landing locations. The company is innovative in their utilization of new tools and technologies for harvesting. The operation had numerous protected resources including multiple segments of medium and small fish bearing streams, existing roads with fish crossings located within Riparian Management Area's (RMA) and several areas with steep, shallow soil slopes adjacent to the RMA's of streams. Staley elected to move his yarder multiple times, working from both sides of an RMA to avoid yarding logs over or through an RMA. Three road crossing culverts that were blocking fish passage were replaced with fish passable culverts opening access to additional fish stream habitat. Staley empowers his staff to make calls to shutdown hauling to prevent sediment delivery to waters of the state from wet weather conditions.

PUBLICITY

The department recognizes the operators through news releases, social media posts, and at annual statewide industry events, including the Associated Oregon Loggers Convention, the Oregon Logging Conference, and the Oregon Small Woodland Association Conference.

All nominees met or exceeded Forest Practices laws and improved Oregon's forests in multiple ways, from enhancing fish and wildlife habitat to forest management planning for private landowners to improving fire safety and forest health, and safeguarding water quality and soil.

Merit Award and Letter of Commendation recipients will be recognized at local functions. The Merit Award recipients for 2023 are:

- Rude Logging LLC of Prairie City, OR – Eastern Oregon Region Merit Award
- Weber Logging and Construction, Inc. of Roseburg, OR - SW Oregon Region Merit Award
- Don Hamann, Inc. of Butte Falls, OR - SW Oregon Region Merit Award
- Pellham Cutting, Inc. of St. Helens, OR – NW Oregon Region Merit Award
- Big O Logging Inc. of Birkenfeld, OR – NW Oregon Region Merit Award

All of the videos for the merit award winners can be found at: Oregon Department of Forestry - YouTube *(https://www.youtube.com/@OregonDepartmentofForestry)*

Staff will give a brief presentation, including videos, and operator recognition.

- Leigh Ann Vradenburg:
  Eastern Oregon Operator of the Year for 2023, Winner - Leigh Ann Vradenburg - YouTube
  (https://www.youtube.com/watch?v=KNzSAI9hxHA)

- Plikat Logging, Inc.:
  Southwest Oregon Operator of the Year for 2023, Winner - Plikat Logging, Inc. - YouTube
  (https://www.youtube.com/watch?v=uDTXNMX1goA)

- Ron Staley Enterprises, Inc.:
  Northwest Oregon Operator of the Year for 2023, Winner - Ron Staley Enterprises - YouTube
  (https://www.youtube.com/watch?v=cvQRqwA4EUM)

RECOMMENDATION

The Department recommends the Board of Forestry present the recipients with plaques uniquely recognizing each operator for excellent forestry work.

STAFF REPORT

Agenda Item No.:	4
Topic:	Forest Trust Land Advisory Committee
Presentation Title:	FTLAC Testimony to the Board of Forestry
Date of Presentation:	January 3, 2024
Contact Information:	John Sweet, FTLAC Chair and Coos County Commissioner Erin Skaar, FTLAC Vice-Chair and Tillamook County Commissioner

On behalf of the Forest Trust Land Advisory Committee (FTLAC), comments and additional information may be provided on State Forest Lands business.

STAFF REPORT

Agenda Item No.:	5
Work Plan:	Forest Resources Division
Topic:	Implementing Legislative Direction
Presentation Title:	Update on the Adaptive Management Program Committee (AMPC) from the AMPC Co-chairs
Date of Presentation:	January 3, 2024
Contact Information:	Josh Barnard, Division Chief, Forest Resources Division, ODF, Josh.W.Barnard@odf.oregon.gov; Terry Frueh, Adaptive Management Program Coordinator, Forest Resources Division, ODF, Terry.Frueh@odf.oregon.gov; Seth Barnes, Co-chair, AMPC; Stacey Detwiler, Co-chair, AMPC.

SUMMARY

This Adaptive Management Program Committee (AMPC) Co-chairs will report on the progress of the AMPC's work in their first year and outline their work for the coming year.

CONTEXT

The legislature directed the board to set up an adaptive management program. The program will help inform future rulemaking and support an application for a programmatic habitat conservation plan, and subsequent incidental take permit. The goal of the program is to use the best available science to assess the effectiveness of rules for protecting several fish and other aquatic species. Statute[1] lists the following functions of the AMPC:

(a) "Guide the adaptive management process.

(b) Set the research agenda of the Independent Research and Science Team established in section 38 of this 2022 Act and recommend to the board the team's budget.

(c) Assess the scientific findings in a report prepared by the team and prepare a report that identifies alternative actions, including no action, to address resource issues identified in the team's report.

(d) Submit the committee's reports to the board.

(e) Assist the board in the ongoing process of identifying and modifying resource objectives.

(f) Review reports related to compliance monitoring and enforcement.

(g) Submit recommendations to the board concerning rule adjustment, guidance or training.

(h) Strive for full consensus in committee decision-making."

[1] section 36(7), chapter 33, Oregon Laws 2022

BACKGROUND

In February 2020, conservation and forest industry groups offered to revise the Forest Practices Act and administrative rules through a memorandum of understanding to include mediated discussions, known as the Private Forest Accord (PFA). The bill set the timeline and topics for making changes to the Forest Practices Act and rules from which the Board could apply for a programmatic habitat conservation plan (HCP). The PFA concluded in late 2021. In March 2022, the legislature adopted the PFA recommendations through Senate Bills 1501 and 1502, and House Bill 4055. Senate Bill 1501 incorporated by reference the Private Forest Accord Report dated February 2, 2022. The PFA Report further detailed the recommended changes to the Act and rules and a pathway for an HCP. The HCP has a statutorily-mandated approval deadline of Dec. 31, 2027. A key part of the rules is the Adaptive Management Program, of which the AMPC is a key participant.

ANALYSIS

Since the AMPC's first meeting in January 2023, they have:

- Developed their charter;
- Elected co-chairs;
- Nominated the initial members to the IRST;
- Determined their initial list of research topics:
  (a) Literature review for eastern Oregon steep slopes;
  (b) Requirements of baseline and trend monitoring of road rules; and
  (c) Amphibians.
- Finalized their first research question to send to the IRST to develop a scoping proposal.

In 2024, the AMPC will focus on:

- Finalizing research questions on each of their initial research topics; and,
- Working with the IRST to finalize the research agenda for the Board's approval.

RECOMMENDATION

This item is information only.

ATTACHMENT

None

STAFF REPORT

Agenda Item No:	6
Presentation Title:	Oregon Forest Resources Institute Update
Date of Presentation:	January 3, 2024
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SUMMARY

The Oregon Forest Resources Institute (OFRI) last reported to the Board of Forestry in September 2019. The Oregon Forest Resources Institute (OFRI) presentation will cover OFRI's Vision, Mission, and Goals. The report will also give the Board an overview of OFRI's products and how OFRI measures their effectiveness.

CONTEXT

The Oregon Forest Resources Institute (OFRI) supports the forest sector and the stewardship of natural resources by advancing Oregonians' understanding of the social, environmental, and economic benefits of Oregon's forests. OFRI partners with more than 100 organizations (including ODF) and individuals on their educational programs, publications, and videos, including state and federal agencies, conservation groups, private businesses, nonprofit organizations, universities, and schools.

RECOMMENDATION

This item is for information only.

STAFF REPORT

Agenda Item No.:	7
Work Plan:	Forest Resources Division
Topic:	Board Updates
Presentation Title:	2023 Forest Health Report
Date of Presentation:	January 3, 2024
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SUMMARY

This agenda item provides an overview of the Oregon Department of Forestry (ODF) Forest Health work on major insects, disease, and other damaging agents affecting Oregon forests in 2023, as required by Oregon Revised Statute (ORS) 527.335.

CONTEXT

The Board of Forestry's (Board) 2011 Forestry Program for Oregon defines a healthy, vital forest landscape as one that maintains its functions, diversity, and resiliency within the context of natural and human disturbances and can provide people with the array of values, uses, and products desired now and in the future. The Board supports protecting and improving the health and resiliency of Oregon's dynamic forest ecosystems, watersheds, and airsheds (Goal F). The Board's objectives for Goal F include promoting resilient forest landscape conditions and management practices that will lead to reductions in adverse impacts from forest insects and diseases (Objective F.7). The Board's guiding principles and philosophies include a commitment to continuous learning, evaluating and appropriately adjusting forest management policies and programs based upon ongoing monitoring, assessment, and research (Value Statement 11).

BACKGROUND

Topics included in the 2023 Forest Health Report: review of the Forest Health program including results from aerial survey and other monitoring projects and status updates on the impacts of major biotic and abiotic (heatwave, drought, storm damage, climate change) stressors.

ANALYSIS

Core business and high-priority Forest Health projects include:

- **Annual aerial detection surveys for insects and disease**: The annual statewide aerial survey was conducted in 2023 and results are forthcoming in the annual Forest Health Highlights report.

- **Abiotic stressors:** Climate change impacts such as chronic drought stress, intensifying wildfires, and acute storm events continue to contribute to widespread tree mortality and reduction in resilience to secondary insects and disease. We continue to develop guidance on best practices to improve stand resilience to prevent impacts from these stressors, as well as guidance on any possible mitigation strategies. One example includes the Drought fact sheet.

- **Biotic stressors:**
    - **Insects:** The majority of tree damage and mortality from insects and diseases, as detected by aerial and ground surveys, is from native bark beetles attacking Douglas-fir, true fir, and pines that are drought-stressed or growing on fringe habitat. Guidance is directed toward preventative management to reduce impacts from primary stressors such as decreasing stand density, switching to species or genotypes better suited to the site, and reducing fuels buildup.
    - **Diseases:** The department has been working with partners on detecting, delimiting, and treating an expanding Sudden Oak Death (SOD) infestation in the northern extent of the disease occurrence near Port Orford and Humbug State Park, Oregon. ODF staff have identified treatment areas that include 600 acres in Port Orford and 225 acres in Humbug State Park. A total of 413 samples have been collected and 79 of those samples tested positive for SOD. Test results indicated that most of the infections have been the relatively new North American 2 (NA2) variant of the disease.

- **High priority invasive species:**
    - **Emerald ash borer (EAB):** Multiple surveys reveal that EAB is established within a 6-square mile area of Forest Grove and is confirmed in natural stands of wild Oregon ash along the Tualatin River and Gales Creek. Oregon Department of Agriculture (ODA) continues to lead the state's response through EAB Task Force which meets monthly. ODF publishes a monthly bulletin highlighting the work of the EAB Task Force. An ODA quarantine on Washington County prohibits the movement of ash material out of the control area unless certain conditions are met. ODF is monitoring surrounding areas with long-term plots and by coordinating a statewide trap survey. EAB has had a minimal impact on traditional forest operations. However, in the coming years, EAB will continue to spread and affect low-elevation areas as well as Oregon's communities and municipalities where ash is a common component of the urban/rural forests. More information about EAB detections can be found at the EAB dashboard, managed by ODA.
    - **Mediterranean oak borer (MOB)** has been detected in traps in the Willamette Valley since 2018 and caused Oregon white oak mortality in 2022. This insect vectors a wilt pathogen and has been responsible for killing thousands of valley and blue oaks in Napa County and surrounding areas since 2019. A multi-agency team is working on monitoring MOB presence and pathways, slowing the spread, and investigating additional management strategies. Additional information on MOB can be found in the MOB press release and MOB Survey Dashboard, managed by ODA.

- **Worked with landowners, cooperators, and other agencies to provide technical assistance, support, and education.**
- **Annual and other reports, publications**: 2022 Annual Forest Health Highlights (see attachment), fact sheets and technical documents.
- **Attendance at local, state, and national forest health meetings and conferences.**

RECOMMENDATION

This agenda item is informational only.

ATTACHMENTS

(1) 2022 Annual Forest Health Highlights

Forest Service
United States Department of Agriculture

Oregon Department of Forestry
Forest Health

Pacific Northwest Region

Forest Health Highlights in Oregon - 2022

FOREST HEALTH HIGHLIGHTS IN OREGON - 2022

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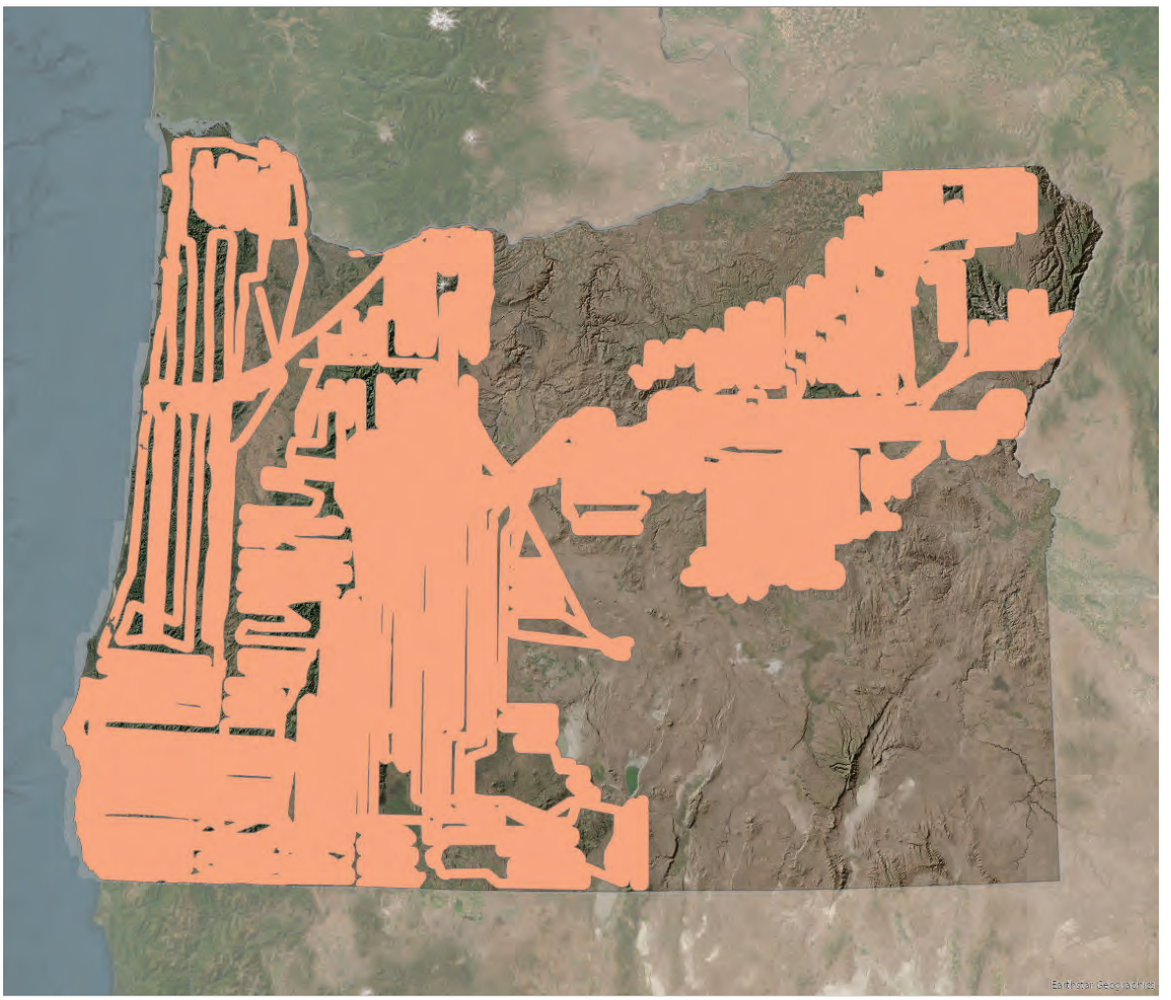
Cooperative Aerial Survey: 2022 coverage area



Map above: In 2022 the cooperative USFS and ODF *aerial survey covered 33 million acres.*

Front cover: *Historic levels of true fir mortality were observed in 2022, as a result of ongoing hot droughts, and in some areas, a combination of drought, root disease, and attacks from fir engraver beetle and balsam woolly adelgid (Danny DePinte, USFS).*

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LANDOWNER RESOURCES

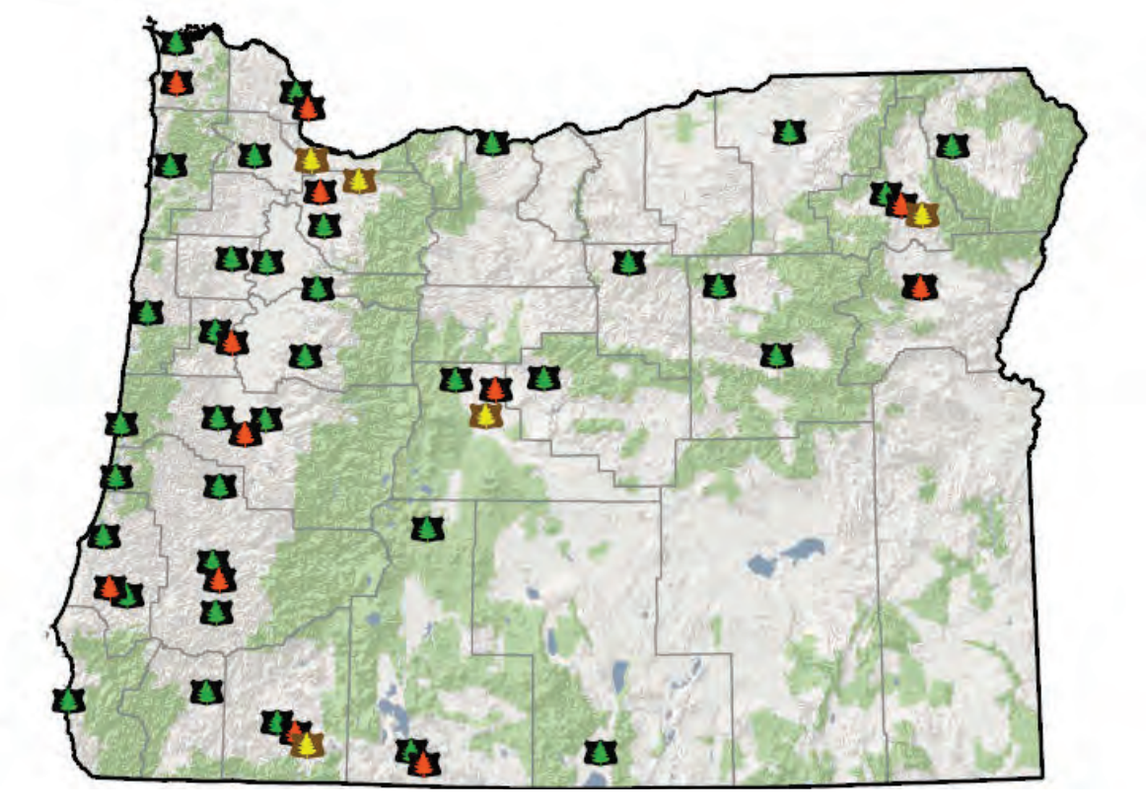


Figure 1. Map of ODF (black badge with green tree), USFS (brown badge with yellow tree), and OSU (black badge with orange tree) unit offices.

OREGON DEPARTMENT OF FORESTRY (ODF):

Connect with your local ODF stewardship forester to get stand management guidance, diagnose and troubleshoot issues, and learn about incentive programs: https://tinyurl.com/ODF-forester

Connect with the ODF Forest Health team to diagnose and manage abiotic stressors, insects, diseases, weeds, and other invasive species. Visit the ODF Forest Health website for fact sheets and training videos: https://tinyurl.com/odf-foresthealth

USDA FOREST SERVICE (USFS):

(Federal agencies and Tribes only) Connect with USFS Forest Health Protection specialists to diagnose and manage abiotic stressors, insects, diseases, weeds, and other invasive species: https://www.fs.usda.gov/goto/r6/foresthealth

OREGON STATE UNIVERSITY (OSU) FORESTRY EXTENSION SERVICE:

Connect with your local OSU Forestry Extension agent to get stand management guidance and to diagnose and troubleshoot forest health issues: https://tinyurl.com/OSU-forester

FORESTRY IN OREGON

Forestry has a long and storied history in the Pacific Northwest, especially in Oregon which, at 63 million acres, is almost 50% forestland. These numbers have remained unchanged since 1953. These forests vary from: family-owned forests that are handed down across generations; large tracts of productive industrial land; and untouched wilderness. Oregon offers a diversity of forests ranging from mossy, rain-drenched coastal ecosystems to arid ecosystems of central Oregon to part-year snow-covered high elevations along the Cascades and northeast mountain ranges (Fig. 2). Oregon's forests consist of federal (60%), private (35%), state (3%), tribal (1%), and other public (1%) ownerships.

Western Oregon is characterized by high rainfall and dense coniferous forests along the Pacific coastline, the Coast Range, and western slopes of the Cascade Range. Eastern Oregon largely consists of lower density, semi-arid forests and higher elevation desert. Oregon forests are primarily dominated by conifers such as Douglas-fir, true fir, western redcedar, western hemlock, lodgepole and ponderosa pine, among others. The most abundant hardwoods are bigleaf maple, red alder, Oregon white oak, and black cottonwood.

Figure 2. Diversity of Oregon forests (Christine Buhl, ODF).

Oregon strives to ensure that timber production is sustainable and limits negative impacts to our natural resources. Oregon was first in the nation to create laws regulating forest practices. The Forest Practices Act (FPA, OAR 629 Est. 1971) guides non-federal, public, and private landowners on how best to manage their forestlands to preserve ecosystem function and resilience while utilizing this renewable resource. A comprehensive overhaul of the FPA began in 2021 when representatives for conservation groups, timber industries, and small woodland owners held mediated discussions to recommend new wildlife resource protection standards for non-federal forestlands. These changes were presented in a legislative package, the Private Forest Accord (SB 1501 & 2, HB 4055), which was passed in early 2022.

Federal lands are managed under Northwest Forest Plan policies (Est. 1994) and some private forest landowners follow additional growth and harvest requirements as part of various certification programs (e.g., Sustainability Forestry Initiative, American Tree Farm System, Forest Stewardship Council, etc.).

In recent years Oregon forests have been pushed to the limit due to climate change and initiatives have been created to address this ongoing issue. Efforts to address climate change impacts on forestry, e.g., reducing carbon loss and increasing carbon capture, include the USFS Climate Change Roadmap for federal lands and the ODF Climate Change and Carbon Plan for non-federal lands.

2022 FOREST HEALTH SUMMARY

Abiotic, insect, and disease disturbance agents can cause significant tree mortality, growth loss, and damage in Oregon forests each year. Many insects and diseases are native and widely present on the landscape and only present a problem when tree defenses are reduced. Often a complex of factors contribute to tree stress and weakened defenses (Manion 1991 decline spiral model). Insects and diseases can play a critical role in maintaining healthy, functioning forests by weeding out unhealthy trees, contributing to decomposition and nutrient cycling, and creating openings that enhance forest diversity and wildlife habitat. **A healthy forest is dynamic and includes insects, diseases, and natural wildfire cycles. However, in recent years climate change impacts such as ongoing hot droughts have increased susceptibility to opportunistic insect and disease agents.**

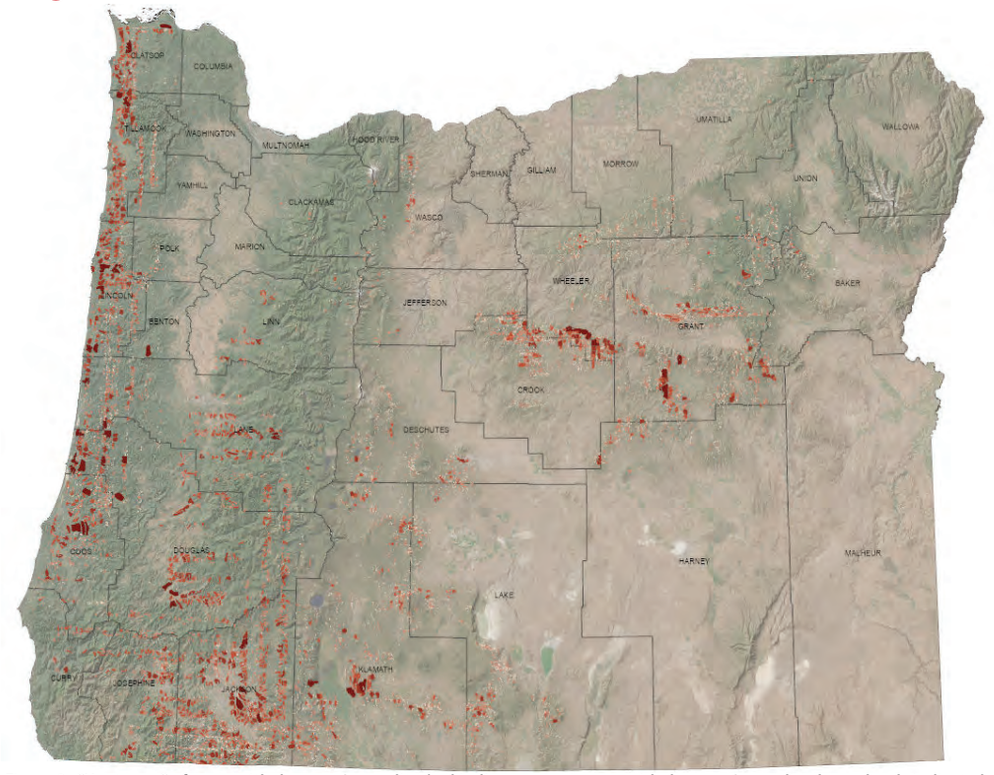


Figure 3. "Heat map" of acres with damage/mortality (red indicates many acres with damage/mortality, lower levels indicated in orange) as caused by insects, diseases, and abiotic (excluding wildfire) agents as identified by the 2022 aerial survey.

This report highlights major agents of damage and mortality in Oregon forests over the past year and provides updates on chronic issues. Much of this information is typically obtained from aerial and ground surveys and monitoring traps. We also rely on reports from ODF, USFS and OSU forestry staff from offices around the state (page 1 and back cover) as well as from public and private forest landowners and land managers, and members of the general public. Damage and mortality trends (Fig. 5) and maps (Figs. 3 & 6) obtained from a combination of aerial survey data (Fig. 4) and site visits indicate that hot drought stress is one of the main underlying causes of tree dieback and decline - often followed by subsequent attack by opportunistic insects such as bark beetles. Landscape-level stress conditions from droughts produce a pulse of weakened trees that lend themselves to bark beetle population outbreaks that may spill over into healthy trees. Another widespread stressor that weakens trees and further predisposes them to the effects of droughts and reduces resilience to insects is root disease. Although root diseases can persist and impact trees for many years, they are hard to detect via aerial surveys and require extensive ground surveys to detect and evaluate. Going forward we must incorporate projections of changing climate when deciding tree species placement and density, to give trees the best chance of long-term success. Aerial surveys identified the largest amounts of tree damage and mortality in areas that have been enduring the highest levels of persistent drought (Fig. 3).

2022 FOREST HEALTH SUMMARY

In 2022, we continued to see the negative direct and indirect impacts of persistent droughts. Historic levels of tree mortality, specifically in true fir species (over 1 million acres with true fir mortality) were observed across the state. True fir species are some of our least drought-tolerant conifers and in some areas, years of wildfire suppression have allowed them encroach into areas that cannot sustain them in a changing climate. True fir mortality is marked in surveys as "fir engraver" (bark beetle) to maintain historical consistency, however, this mortality is known to result from a complex of factors typically starting with damage from drought and/or root disease and ending with fir engraver beetles and, in some areas, balsam woolly adelgid.

There are some caveats to the aerial survey data shown in our tables, figures and maps. Data obtained via aerial survey are not comprehensive but it can give a long-term, watershed-scale overview of trends across Oregon. Damage from some agents, such as diseases, is not fully captured via aerial survey and other damage may be missed due to the timing of the survey. Comparison of trends across years has also been complicated by disruptions to normal data collection that has resulted in fewer acres being flown in 2020 (altered data collection process due to COVID-19 safety measures) and in 2021 (staffing shortages and wildfire disruption).

In 2022, we observed over 2.7 million acres of damage and mortality from insects, diseases and non-wildfire abiotic stressors (Fig. 4). This total was 70% higher than the 10-year average (note, this figure stays about the same when we remove 2020 and 2021 data which covered a smaller footprint and thus observed less damage). In 2022, as with most years, cumulative totals for acres with damage from non-wildfire abiotic stressors, insects, diseases are higher than those for wildfire damage. In some years, acres with insect-caused tree mortality (often paired with underlying drought stress) is comparable or even higher than acres with wildfire-caused tree mortality. Luckily, management strategies to promote tree resilience and maintain stand health also combat mortality from drought stress, insect infestation, and high intensity wildfires.

As noted above, many diseases such as foliar and root diseases are not easily observable via our general aerial surveys. However some diseases totals are captured: the "young conifer mortality" survey (prev. "bear" survey) has been shown to reflect as much as 80% root disease as the causal agent (Taylor et al. 2019), specialty surveys that are flown in addition to the general survey to observe pathogens that cause Swiss needle cast (flown every other year) and Sudden Oak Death (multiple flights a year).

Acres with tree damage / mortality											
Year	Unknown agent	Abiotic (non-wildfire)	Young conifer mortality	Disease (excluding SNC)	Insect	Wildfire	Total (excluding wildfire)	Total	10-year avg. (excluding wildfire)	10-year avg.	Total acres surveyed
2013	3,036	238	24,925	19,452	296,180	350,786	343,831	694,617	788,178	1,396,184	36,409,942
2014	6,105	75	39,111	32,963	497,206	984,629	575,460	1,560,089	788,178	1,396,184	36,131,000
2015	3,007	2,976	59,121	34,538	527,088	685,809	626,730	1,312,539	788,178	1,396,184	36,027,078
2016	3,245	51	40,047	21,199	586,960	192,557	651,501	844,058	788,178	1,396,184	36,099,637
2017	635	4,811	29,072	9,998	523,208	644,141	567,724	1,211,865	788,178	1,396,184	35,263,946
2018	240	2,128	22,072	11,910	666,214	883,338	702,565	1,585,903	788,178	1,396,184	36,151,968
2019	4,448	13,625	25,841	12,311	694,066	78,989	750,292	829,281	788,178	1,396,184	35,672,506
*2020**	*343,138*					*1,141,613*	*343,138*	*1,484,751*	*788,178*	*1,396,184*	*11,905,453*
2021	29,332	149,733	34,756	4,863	360,322	672,345	579,006	1,251,351	788,178	1,396,184	24,782,940
2022	27,879	26,016	14,480	41,043	1,974,746	445,858	2,741,530	3,187,388	788,178	1,396,184	33,418,549

Figure 4. Raw data obtained from 2013-2022 annual general aerial survey. Note, insect damage often indicates underlying stress from a different primary causal agent such as drought and some agents such as various diseases are not fully captured during surveys. In 2020, data were collected across a greatly reduced area via the Scan and Sketch method ("Scan and Sketch" in 2020 Forest Health Highlights) and agents were difficult to verify and were thus combined as "unknown". Annual totals and 10-year averages are shown with and without the inclusion of wildfire acreage totals.

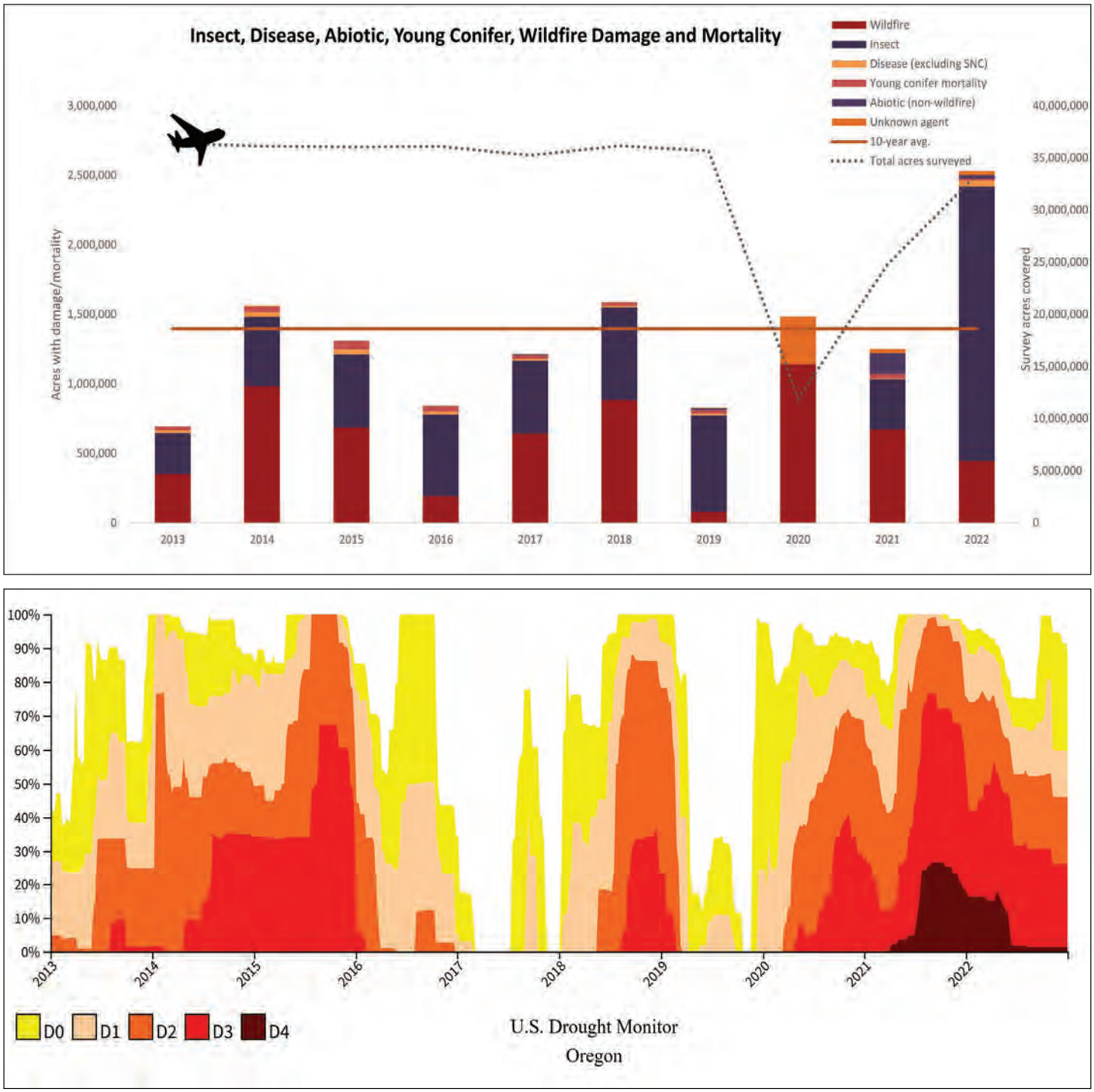


Figure 5. Top: 10-year trends in acres with damage from abiotic, insect and disease agents observed in the general aerial survey, as well as from wildfire damage. Note, all aerial survey metrics indicate acres "with" not "of" damage because undamaged trees are often intermixed within a mosaic of damaged and dead trees. Damage/mortality from some agents such as diseases is not shown here because they are either hard to observe via aerial survey or that data are collected via specialty surveys (e.g., Swiss needle cast and Sudden Oak Death surveys) that are not flown on the same annual schedule as the general survey. Data for those agents are detailed in the pathology section of this report (starting on page 28). Wildfire damage/mortality (data obtained from Northwest Interagency Coordination Center) is an influential factor on current and future forest health conditions and is shown, in addition to other forms of abiotic damage, for comparison. Wildfire trends are detailed starting on page 17.

Bottom: Average statewide drought trends for Oregon (U.S. Drought Monitor; Rankings are D0: abnormally dry, D1: moderate, D2: severe, D3: extreme, and D4: exceptional drought). Drought has been an underlying stressor to trees across the state for many years. Often there is a lagged response in tree damage/mortality of a year or more after drought events. Cause and effect comparisons can be made by between the figures above, in which tree mortality tends to increase in the years after increased drought levels. Sudden or prolonged droughts can be particularly damaging to trees.

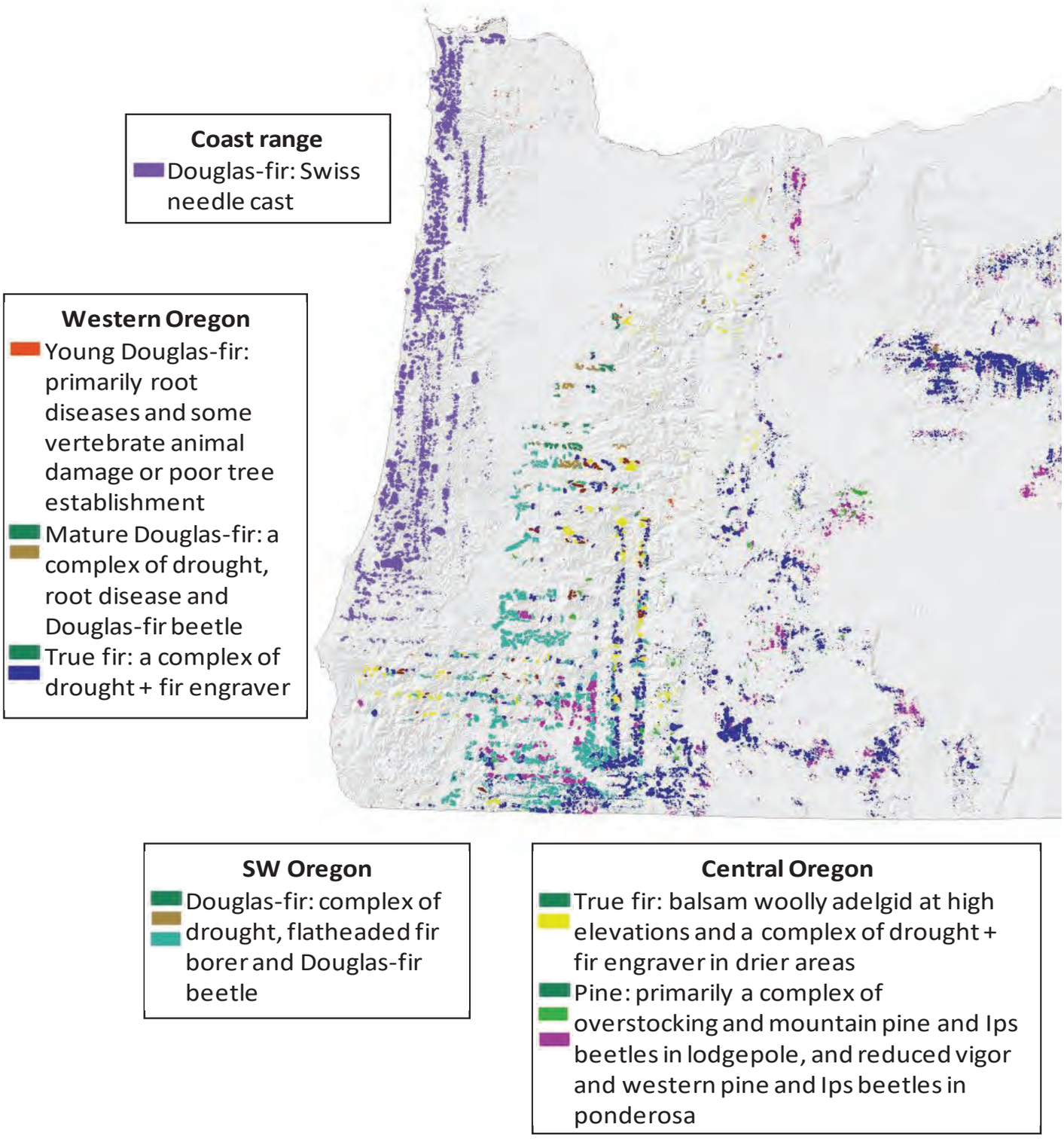
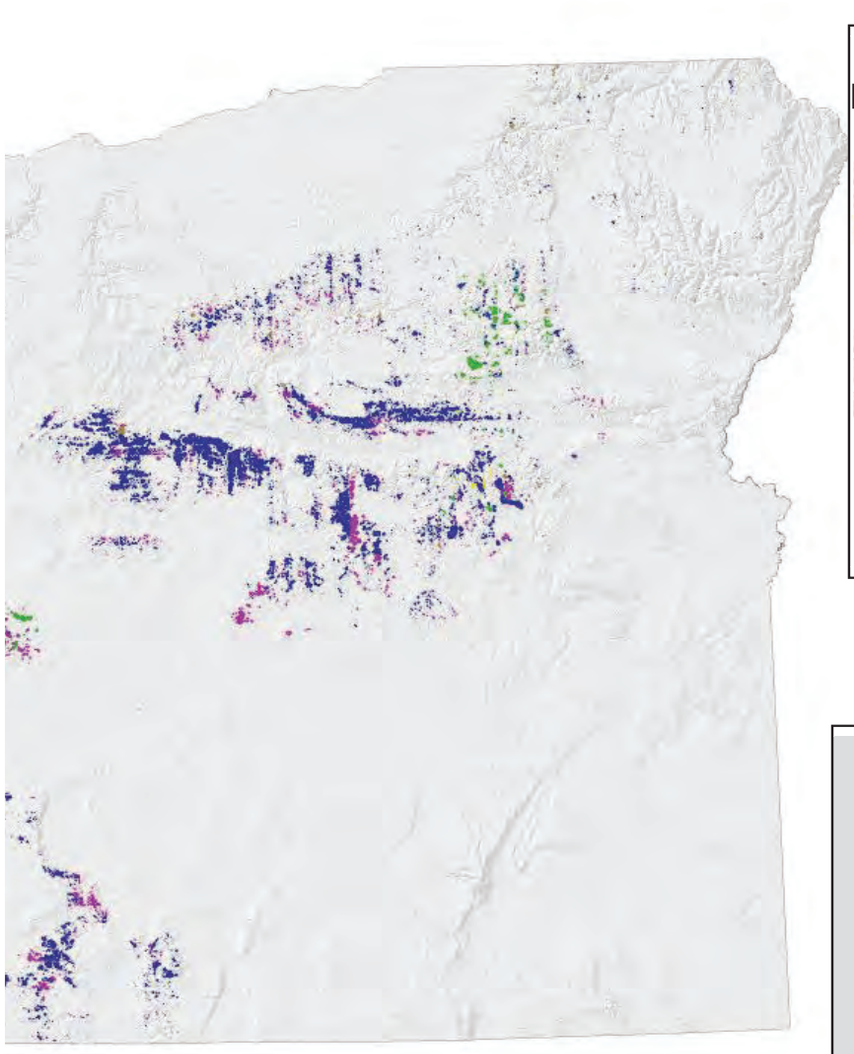


Figure 6. Map of tree damage and mortality as mapped by the 2022 general aerial survey and Swiss needle cast survey. Only the largest contributors to damage and mortality are shown. The most common primary and secondary agents of tree damage and mortality are listed for each region of the state. Often, tree mortality is a result of a complex of multiple different agents, starting with the most damaging and followed by less damaging agents that can only attack when tree defenses become exhausted.



Eastern Oregon

- Douglas-fir: spotty Douglas-fir tussock moth defoliation
- True fir: balsam woolly adelgid at high elevations and a complex of drought + fir engraver in drier areas
- Pine: primarily a complex of overstocking and mountain pine and Ips beetles in lodgepole, and reduced vigor and western pine and Ips beetles in ponderosa pine

Agents of tree mortality not captured via aerial survey:

- Root diseases
- Smaller-scale defoliators such as some fungal diseases and a few insect defoliators (larch casebearer, pandora moth, sawflies, etc.)
- Dwarf mistletoe
- Wildfire damage (more comprehensive data are available from the Northwest Coordination Center)

SURVEYS, MONITORING AND OTHER PROJECTS

Aerial Detection Survey (ADS)
In the 1940's there was a strong interest in maintaining timber economies, and growing concern for the health of our region's forests in relation to impacts on the timber supply. During the same time the aviation industry was developing. The combination of interests spawned creation of the region's aerial survey program that has been collecting data on forest damage from insects, diseases, abiotic and other stressors across Oregon and Washington for 75 years and counting.

Each year, USFS and ODF cooperatively conduct forest health surveys across all forested parts of the state to quantify tree damage and mortality from insects, diseases, and abiotic stressors (e.g., weather, climate, natural disasters). Wildfire damage from current year fires across all ownerships is captured more comprehensively by the Northwest Interagency Coordination Center and is included in our report's figures. Two observers board small fixed-wing aircraft, such as Cessnas, ODF's twin engine Partenavia, or USFS's Kodiak, and collect data using a Digital Mobile Sketch Mapping (DMSM) system (Fig. 7). Each observer records forest damage 1-2 miles out from their side of the plane and approximates the location and area of damage, intensity of damage, host tree species, and suspected damage agent(s).

During a typical survey season, the "general" forest health survey covers roughly 28 million acres with additional "specialty" surveys for damage agents that may not appear during the course of the general survey or are more sporadic such as: Swiss needle cast (SNC), sudden oak death (SOD), Pandora moth, oak looper, and invasive plants such as gorse. With these additional surveys, the agencies may cover a total of 35 to 41 million acres each year. In 2020, COVID-19 posed health risks to staff and survey was conducted via a different method (visually scanning high-resolution imagery of Oregon to map damage, see "Scan and Sketch" in 2020 Forest Health Highlights) In 2021, only 80% of the normal coverage area was surveyed due to disruption from wildfire and staffing shortages (See "Aerial Detection Survey" in 2021 Forest Health Highlights).

The 2022 season started with nearly normal operations despite staffing shortages and the general survey covered over 33 million acres (Fig. 8). The SNC survey, which is typically flown every other year but has been disrupted since 2018, was folded into the general survey due to weather delays. Aerial observers estimated 2.7 million total acres with damage in the general survey which comprised 7% of the total surveyed area. Historic levels of damage were seen in true fir. Recorded acres with damage (adjusted by area flown) increased over 200% from what was observed in 2021. This sudden increase in damage may be attributed to compounded impacts of chronic ongoing hot droughts, acute events such as scorch from the 2021 heat dome, and subsequent attack of weakened trees by opportunistic insects and diseases.

Although our data collection software is evolving to more accurately capture the amount of damaged trees we are reporting acres *with and not of* damage. Like wildfire, not all trees in the damage footprint are dead. The area of recorded damage represents a mosaic of live and dead trees. Teasing out tree species in mixed forests can also be difficult. Additionally, aerial sketch mapping survey work can be subjective to individual surveyors and data should be applied at a landscape level. Additional data for aerial surveys the past 75 years can be found on the USDA USFS ADS web page for Region 6; these data consist of products such as Disease Detection Survey Maps, IDS Geospatial Data, and IDS acreage summaries. The USFS recently created an ArcGIS Online story map and dashboard data summarizing the 2022 survey effort for Oregon and Washington.

ADS resources:
- ADS video: https://youtu.be/XPrKjWaoeeA
- ADS data, maps, storymap: https://tinyurl.com/FHAerialSurvey

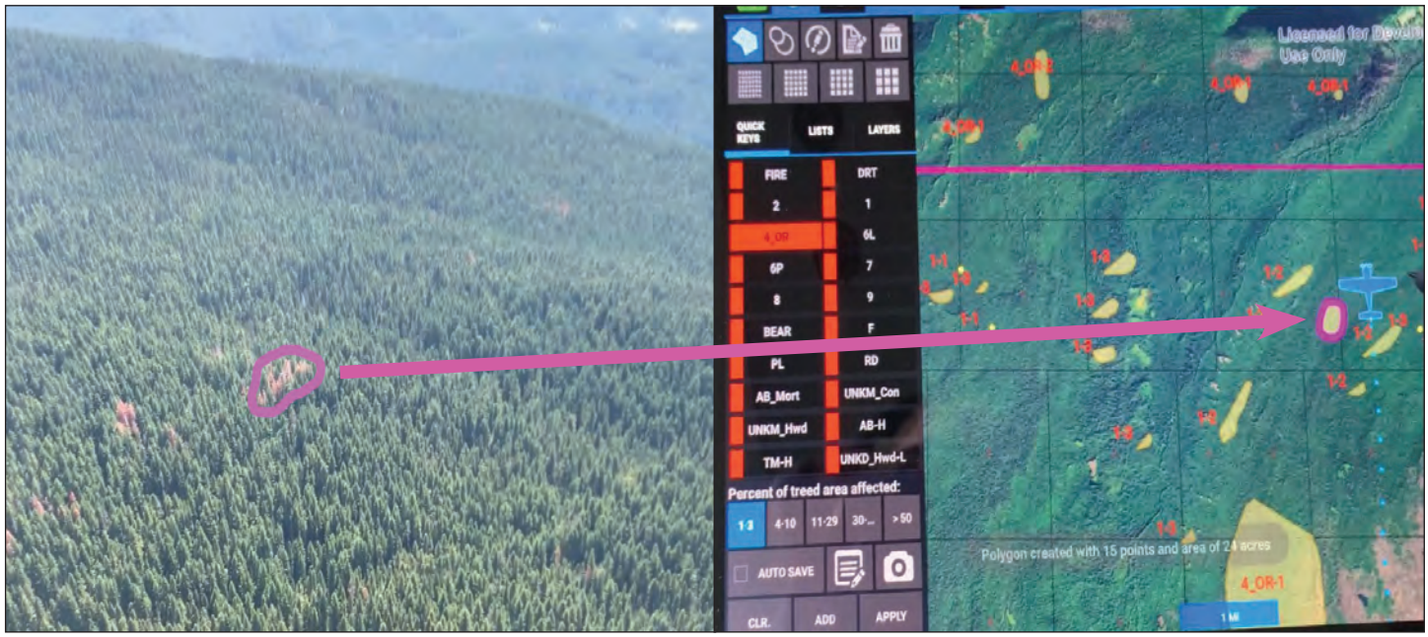


Figure 7. Tree morality (left, circled in pink) is captured in DMSM software by drawing this area at the correct location on a Samsung tablet (right, circled in pink) (Christine Buhl, ODF).

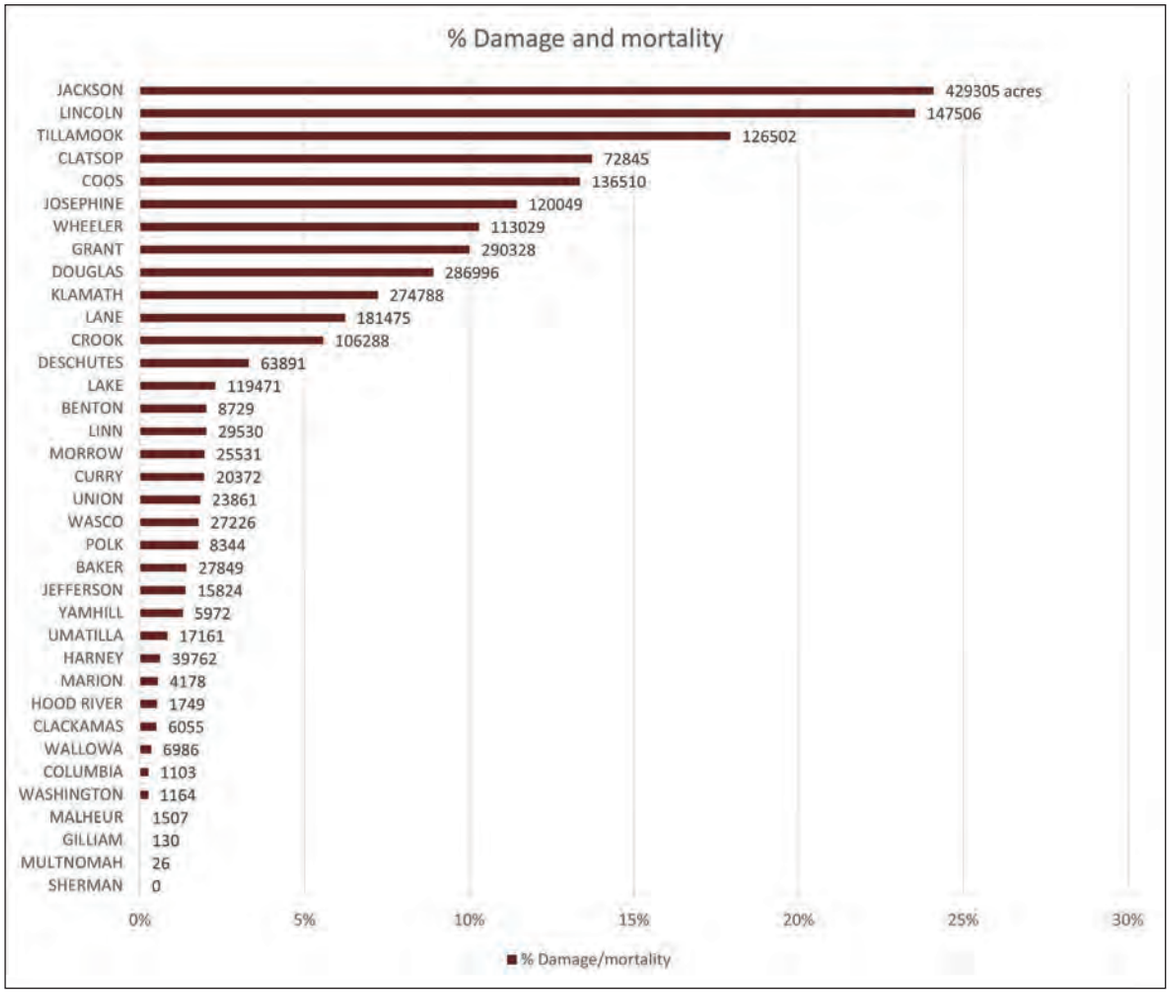


Figure 8. Percent forest damage and mortality by county as detected in the 2022 aerial survey. Bars indicate percent acres of damage relative to the size of the county (not limited to only forested portions). Labels indicate total number of damage / mortality for each county. The majority of the damage detected in Jackson county is related to drought, and the damage in Lincoln and Tillamook is related to Swiss Needle Cast.

SURVEYS, MONITORING AND OTHER PROJECTS

Hazard Tree
Pathologists with ODF and the USFS evaluate tree hazards and provide regular trainings to ensure that trees at risk of failure, due to root and stem rots or other defects, are removed to protect those working and recreating in the woods. ODF annually assesses state forest lands for hazards in recreation areas and assists the Oregon Parks and Recreation Department with hazard tree training to ensure that state parks have trained staff available to identify hazard trees.

Bark beetle landowner incentives cost share program
Each year, federal funds are allocated for bark beetle prevention and mitigation treatments such as thinning, pine slash management, and anti-aggregation pheromones. Some of these funds are applied on federal lands and others are allocated to ODF for non-federal landowners at a 1:1 match. In 2022, USFS applied bark beetle mitigation treatments on 2,235 acres on federal lands and ODF added another 29 acres across 4 non-federal ownerships. This cost share program may also support removal of living trees that were recently damaged by wildfire to prevent their subsequent infestation by bark beetles. Apply for cost share funds on non-federal lands: https://tinyurl.com/ODFcostshare

Douglas-fir tussock moth (DFTM) trapping
This ongoing monitoring trap system (Est. 1979) detects increases in moth numbers and can predict building outbreaks or determine status of current outbreaks of DFTM (Fig. 9) in eastern Oregon (see page 26).


Figure 9. DFTM larvae (Christine Buhl, ODF).

Oregon Forest Pest Detector program
Since 2013, the USDA-funded Oregon Forest Pest Detector (OFPD) program, coordinated and led by OSU Extension Forestry, has trained arborists, landscapers, park workers, and other professionals to identify the early signs and symptoms of priority invasive forest insects (http://pestdetector.forestry.oregonstate.edu). Using a combination of online presentations, face-to-face seminars, and field training courses, over 500 professionals have been trained as "First Detectors" of emerald ash borer, Asian longhorned beetle, and other exotic forest insects. In 2022, a new course for Mediterranean oak borer (see page 22) was developed and presented in Grants Pass. The OFPD works with the Oregon Invasive Species Council to utilize the Oregon Invasive Species Online Hotline reporting system (https://oregoninvasiveshotline.org) to submit a report and photograph of potential invasive species while in the field. The overall goal is to detect key forest invaders early in their invasion. The success of OFPD has been the result of in-person training at field courses where students can test their knowledge on signs and symptoms of specific exotic invasive species. Additionally, the in-person training offers hands-on experience with tree and insect samples and a chance to have Q&A dialogue with course instructors and participants.

Western redcedar (WRC) dieback mapping and monitoring
Results from a collaboration between Oregon and Washington that identified locations and isolated causes of WRC dieback, indicate a direct link to drought conditions: https://tinyurl.com/WRCStorymap

Forest Health education resources:
- All OSU Tree School courses: https://extension.oregonstate.edu/tree-school/tree-school-online-class-guide
- Forest insect pests: https://tinyurl.com/TreeSchool-insectpests
- Forest bees: https://tinyurl.com/TreeSchool-bees
- Forest diseases: https://tinyurl.com/TreeSchool-diseases

Forest Pollinator Projects

Over 800 species of native, wild bees occur in Oregon, many of which can be found in and along forests (Fig. 10). The Oregon Bee Project (OPB) is a pollinator protection task force established by the Oregon legislature in 2015 and includes OSU, and Oregon Departments of Agriculture, Forestry, Fisheries and Wildlife, and Transportation. OBP works to increase our understanding of, and enhance and conserve habitat for, native, wild bees and other pollinators across Oregon through research and monitoring, outreach, pesticide training, and landowner projects.

There are many ways for landowners and the general public to get more involved in efforts to understand what bees occur where, what plants they are visiting, and to enhance pollinator health and habitat:

Pollinator resources:

- Guidance on enhancing pollinator habitat in forests: https://woodlandfishandwildlife.com/ publications/insect/forest-bee-pollinators

- Guidance on creating pollinator habitat in forests: https://extension.oregonstate.edu/collection/bees-woods

- Guidance on creating pollinator habitat in forests: https://extension.oregonstate.edu/pollinator-stew-ard#:~:text=The%20OSU%20 Pollinator%20Steward%20Program,or%20creating%20new%20pollinator%20habitat

- Volunteer to collect data on bee populations and plant visitation: https://www.oregonbeeproject.org/bee-atlas

- Dedicate pollinator habitat on zoned timber land: https://www.oregonlaws.org/ors/527.678

- OSU's PolliNation podcast: https://extension.oregonstate.edu/podcast/pollination-podcast

Figure 10. Top: Pollinator foraging on native farewell-to-spring (Clarkia amoena) flowers on pollinator habitat established in the Clatop State Forest. Leafcutting bees have also cut out snippets of petals (arrow) to use as building material for their nests which are created in pithy plant stems or pre-exisiting holes in wood. Bottom (circled): Entrance holes to pollinator ground nests in the forest understory (Christine Buhl, ODF).

ABIOTIC AGENTS

Climate and weather are often primary contributors to tree health and forest conditions. Events that stress trees reduce growth and decrease their ability to defend themselves or rebound from insects, diseases, and other secondary stressors. Healthy trees can defend themselves from insects and diseases with pitch which provides chemical and mechanical defenses. Pitch contains chemicals that repel, trap, and drown insects. Pitch can also seal off wounds to prevent infestation by pathogens that cause diseases, and, further, it has anti-microbial properties and can compartmentalize and contain pathogens. When moisture levels are low, trees create less pitch and are less defended.

HEALTHY TREES = RESILIENT TREES

One of the major reoccurring stressors in Oregon forests has been ongoing drought as a result of climate change. The fact that we are experiencing changes in temperature is not unprecedented, however the rate of change is. Earth's climate patterns are affected by multiple different variables. There are natural, alternating periods of cooling and warming, and currently earth is in a warmer phase. Also El Niño (warm phase) and La Niña (cool phase) are periodic fluctuations in sea surface temperatures and overlying atmosphere that can alter climate, typically for a period of two years. 2022 was the *third* year of La Niña which, in this region, causes cooler and wetter winters. In some areas we benefited from these conditions although much of region was still in a state of drought. Our last La Niña event occurred from 2016-2018, but the last time it occurred for a span of three years ("Triple dip") was from 1998-2001.

Along with chronic conditions, we have acute events that have placed stress on trees. In 2021, we experienced a heat dome event (page 14) that caused heat stress and singed tree crowns. On April 11, 2022, a late winter snowfall (Fig. 11) contributed multiple inches of wet and heavy snow in many areas and caused power outages and tree breakage. This was the first time snow had been recorded as late as April in the Portland metro region.

Figure 11. Spring flowers doused with snow in Portland, where higher elevations received as much as 6 inches (Blake Benard).

Microclimate due to site factors also exacerbates chronic or acute climatic conditions and events. Oregon has a diversity of forest ecosystems due to variations in latitude, elevation, topography, and proximity to the ocean and mountains (rain shadow effects). All of these factors play a role in determining the impacts of altered temperature and precipitation (rain and snow) levels. Additionally, soil and ground cover type, local water use, and watershed dynamics can place different pressures on water storage capacities. Tree stocking levels influence the competition among trees for the availability of water resources. Some tree species have strategies to tolerate drought better than others, however trees can tolerate drought for only so long and repeated droughts compound this stress.

Changing climactic conditions are not just about record highs and lows. Their impacts are felt even more strongly due to their timing, duration, frequency, and rate of change. For example,

1. Droughts during active growing periods (spring) can be more damaging than if they occur during dormant periods (winter)
2. Short droughts can be tolerated by some species that have evolved the ability to reduce water loss through leaves. As this limits photosynthesis this strategy does not work during prolonged droughts
3. If there are back to back years of drought and trees don't get a reprieve to rebuild damaged tissues, they may never catch up even if a drought period is punctuated by adequate precipitation, and 4) sudden changes in heat or precipitation can shock trees even if changes are moderate.

Drought

2022 tied 2014 as the 8th warmest year, and was 0.7 °F warmer with 1.11 inches less precipitation than average from 1896-2022. Some months, such as October 2021, were cooler and wetter than average for most of the state but November returned to warmer and drier conditions than average. Snowpack water equivalent at the start of December was <50% of the 1991-2020 median throughout the Cascades and all other mountain ranges in Oregon. Conditions improved in the second half of the month and in January snowpack water equivalent, relative to the 1991-2020 median, increased to 140-200% of the average from central-northern Cascades and >500% in some areas of the southern Cascades. Despite this influx of snow, peak snowpack in Klamath was reached in January, and was only 67% of the historic average for peak snowpack levels, then quickly declined.

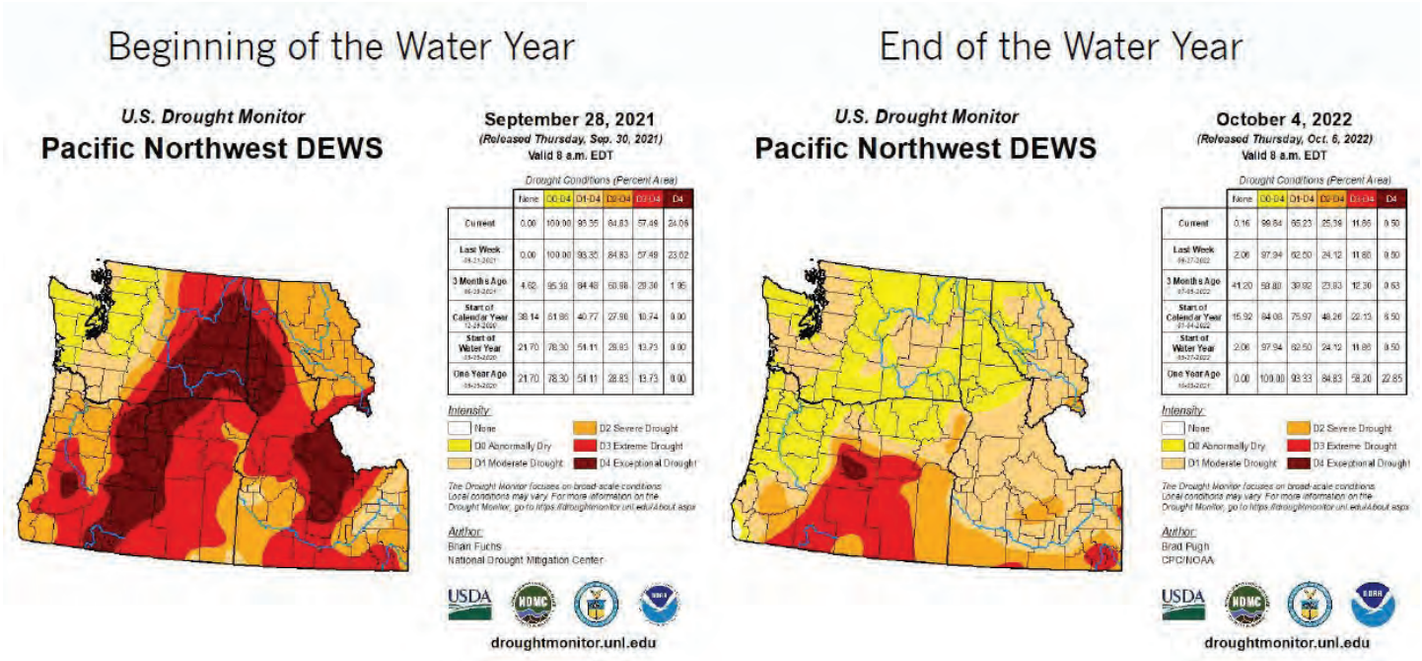


Figure 12. Average drought ratings for the Pacific Northwest from the beginning to the end of the previous "water year" (Sept 2021 to October 2022) relative to the average normal based on 115 years spanning from 1895 to 2010 (Western Regional Climate Center).

Spring conditions were unseasonably cool and April through June conditions were the 17th coldest and 2nd wettest on record relative to the 1991-2020 average. Despite cooler temperatures, precipitation was still lacking and from March-June drought was declared for Douglas and Jackson counties as well as all counties east of the Cascades. The period from July-September was the warmest and 7th driest relative to 1991-2020 averages. In summary, during the water year (September 30, 2021 to October 1, 2022) Oregon experienced above normal temperatures and below normal precipitation. Predictions from the National Weather Service Climate Prediction Center indicate that Oregon will experience a wetter and cooler spring and a warmer than normal summer in 2023.

ABIOTIC AGENTS

2021 Heat wave / Heat dome continuing impacts

Figure 13. 2021 scorched foliage (Danny DePinte, USFS).

In 2021, Oregon experienced an anomaly termed the "heat dome" that resulted in a multi-day record heat wave across the state. Temperatures in Portland reached 108°F on June 26th, then 112°F and 116°F over the next two days. The greatest intensity of damage occurred on the youngest (branch tips) and most exposed (south- and west-facing aspects, forest edges, along pavement) tree tissues. Regions unaccustomed to high temperatures, such as the coast, were also heavily affected. In 2022, damage from this event was still visible during aerial surveys. Coniferous trees that experienced foliage scorch in 2021 (Fig. 13) either dropped scorched needles or they turned from red to brown and looked dingy from the air during 2022 surveys. Despite this damage, many trees still produced viable buds on at least part of their crowns and flushed needles as usual. Although we did not observe widespread mortality in 2022 from the 2021event, it is another layer of stress for our droughted trees.

Climate change and drought resources:

- Oregon Water Resources Department's monthly drought summary email: https://tinyurl.com/drought-report
- Oregon Climate Change Assessment (published every two years): https://blogs.oregonstate.edu/occri/ oregon-climate-assessments
- Drought impacts on forests and pests: https://youtu.be/wHZ1G5wH4r8
- National Drought Mitigation Center drought symptoms reporting survey: https://go.unl.edu/cmor_drought
- University of Washington Climate Impact Group Earthlab, Climate projection tool: https://cig.uw.edu/resources/analysis-tools/pacific-northwest-climate-projection-tool

Figure 14. Symptoms of drought (left to right): flagging (dying branches), thinning crown and stress cones, asymmetrical crown (from uneven foliage then twig and branch loss), and topkill (note the progression of mortality) (Christine Buhl, ODF).

How are trees impacted by drought?

Symptoms of drought stress (Fig. 14) often progress slowly relative to mortality from bark beetles which can occur within the span of a year. Symptoms of drought are direct manifestations of damage to water collection and translocation tissues. Water is collected by roots and transported throughout the tree via a network of tubes (vascular tissues) then released from pores in leaves (stomata) into the atmosphere (Fig. 15).

Dry or windy conditions can increase water loss from leaves. Drought stress can strain or collapse vascular tissues or cause dieback of roots. It can take many years for trees to rebuild these tissues during which time they have fewer tissues to actively absorb water for the tree. Trees can tolerate drought for a short period by closing stomata to reduce water loss to the atmosphere, but this halts photosynthesis which starves the tree. Trees may also prematurely drop leaves to reduce the amount of tissues that both consume and release moisture, but this also reduces photosynthesis. Interruptions to photosynthesis reduce both growth and resources allocated toward defense which makes trees less resilient to other stressors such as insects, diseases, mechanical damage, etc. For most trees, there are no long-term drought tolerance solutions and prolonged or repeated droughts often result in mortality, sometimes years later. Although drought conditions did somewhat improve in some areas of Oregon, it takes more than one or two years of more moisture for trees to recover. Even if moisture availability increases, trees may be too damaged from prior drought stress for roots and vascular tissues to function.

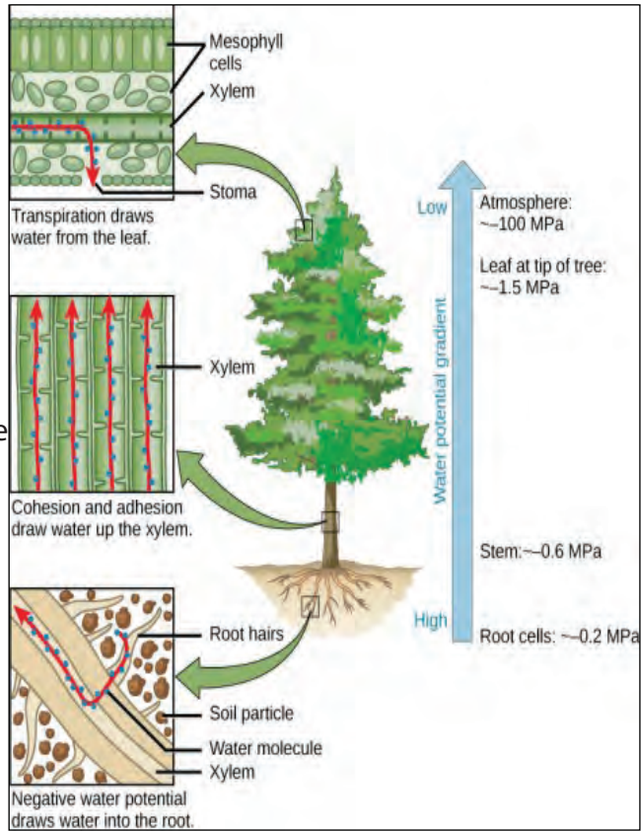


Figure 15. Trees absorb moisture via roots in the soil and translocate it throughout the canopy via a network of tubes (vascular tissues, xylem). When droughts occur, roots die back and these tubes collapse so that even if precipitation increases they may too damaged to access it. Water loss occurs through "breathing" pores in leaves (stomata) and can be hastened via wind and heat. Resistance and tolerance to droughts varies among tree species due to variations in physiology and responses. More extensive root systems and periodic closure of stomata to reduce water loss can help trees avoid drought stress - but only for so long (Model courtesy of OpenStax and used under Creative Commons license).

Overview of drought impacts on trees: https://sflonews.wordpress.com/2021/08/12/drought-and-tree-mortality-in-washingtons-conifers/

Ensuring that trees have the best chance for success results from a healthy start and promoting ongoing resiliency:

1. Plant: Native species, seed sources local to your region, and species adapted to the various conditions and micro-climates (soils, aspect, sun or wind exposure, etc.) at your site. Pay attention to which species are doing well where. Do not continue to replant with species that are struggling to survive or don't naturally regenerate. Stay within your seed zone as much as possible. It may be okay to go outside of seed zones slightly if necessary (east-west 1-2 zones; north-south 1 zone; from down slope (but not up)). Seedlot selection tool: https://www.climatehubs.usda.gov/hubs/northwest/topic/seedlot-selection-tool. Establish seedlings with care to give them the best start to a long and productive life.
2. Maintain: Plan for stand density that can tolerate climate change and extreme weather events. Discuss spacing with ODF, OSU or other forestry consultants (page 1) to account for a warming climate, inconsistent precipitation, and realistic pre-commercial thinning and harvest timelines. Reduce competition from other competing plants especially grasses and invasive species. Do not fertilize during droughts because increased growth increases moisture requirements.
3. Prevent and control: Manage fuels. Reducing unnatural wildfire risk prevents fire-damaged and beetle-susceptible trees. Be aware of the major insects and diseases that occur in your tree species and in your region (pgs. 36-37). Follow management guidance. Remove weak, injured or extremely stressed trees.

ABIOTIC AGENTS

Wildfire

The wildfire season started off slowly but late season fires in Oregon and assistance provided to other states such as Alaska, Texas, and Washington kept crews busy (Fig. 17). In 2022, approximately 445,000 acres were damaged by wildfire, which was 34% lower than acres damaged in 2021 and 27% lower than the 10-year average (Fig. 18). The largest fires were caused by lightning: Double Creek near Enterprise totaled 170k acres and Cedar Creek near Oakridge totaled 130k acres (Fig. 18). 96% of ODF wildfires were kept at 10 acres or less, in large part due to early detection from heat detection monitoring from Forward Looking InfraRed (FLIR) cameras affixed to the ODF survey plane (Fig. 16).

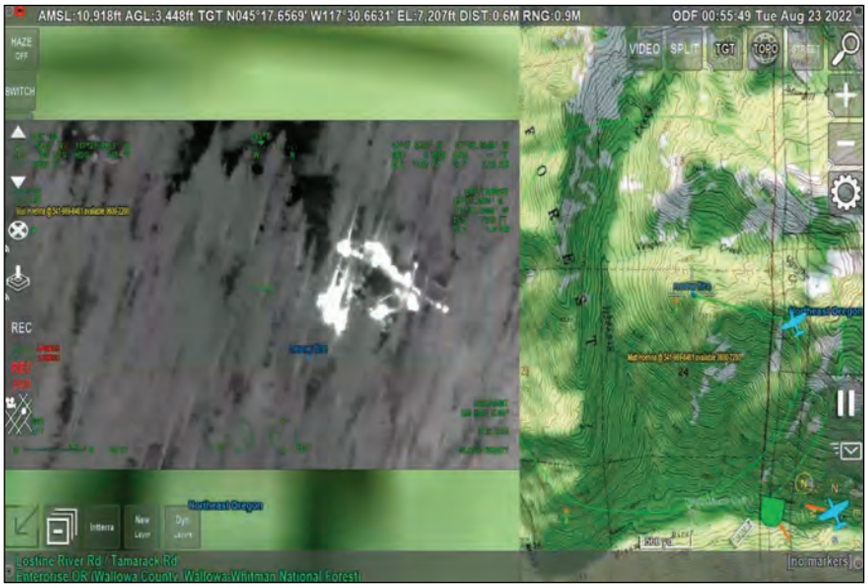


Figure 16. Clockwise from top: 1) Split-screen Augmented Reality System (ARS) screenshot showing the infrared image (L side) of a newly detected fire start and its corresponding position on the map, 2) Fire as seen through night vision goggles, 3) Steel & plexiglass "cage" that houses the FLIR unit when it is retracted into the cabin of the ODF plane. The observer sits next to this unit, 4) ODF Partenavia plane that is affixed with FLIR camera (Cole Lindsay, ODF).

Wildfire resources:

- Post-fire mortality estimation guide: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd1013251.pdf
- ODF fuels reduction cost share program: https://tinyurl.com/ODFcostshare
- ODF "Help After Wildfire": https://www.oregon.gov/odf/fire/Pages/afterafire.aspx
- OSU Extension Fire Program: https://extension.oregonstate.edu/fire-program
- OSU Extension wildfire webinars: https://extension.oregonstate.edu/fire-program/online-webinar-guide
- Oregon Statewide Wildfire Response & Recovery: https://wildfire.oregon.gov
- Make your home Firewise: https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/ Firewise-USA
- ODF KOG Reduce risk of wildfire starts: https://keeporegongreen.org

Figure 17. Scenes from wildfire. Left: Fishhawk Loop (Dan Goody and Matt Catton, ODF), Right: Rum Creek (Marcus Kauffman, ODF).

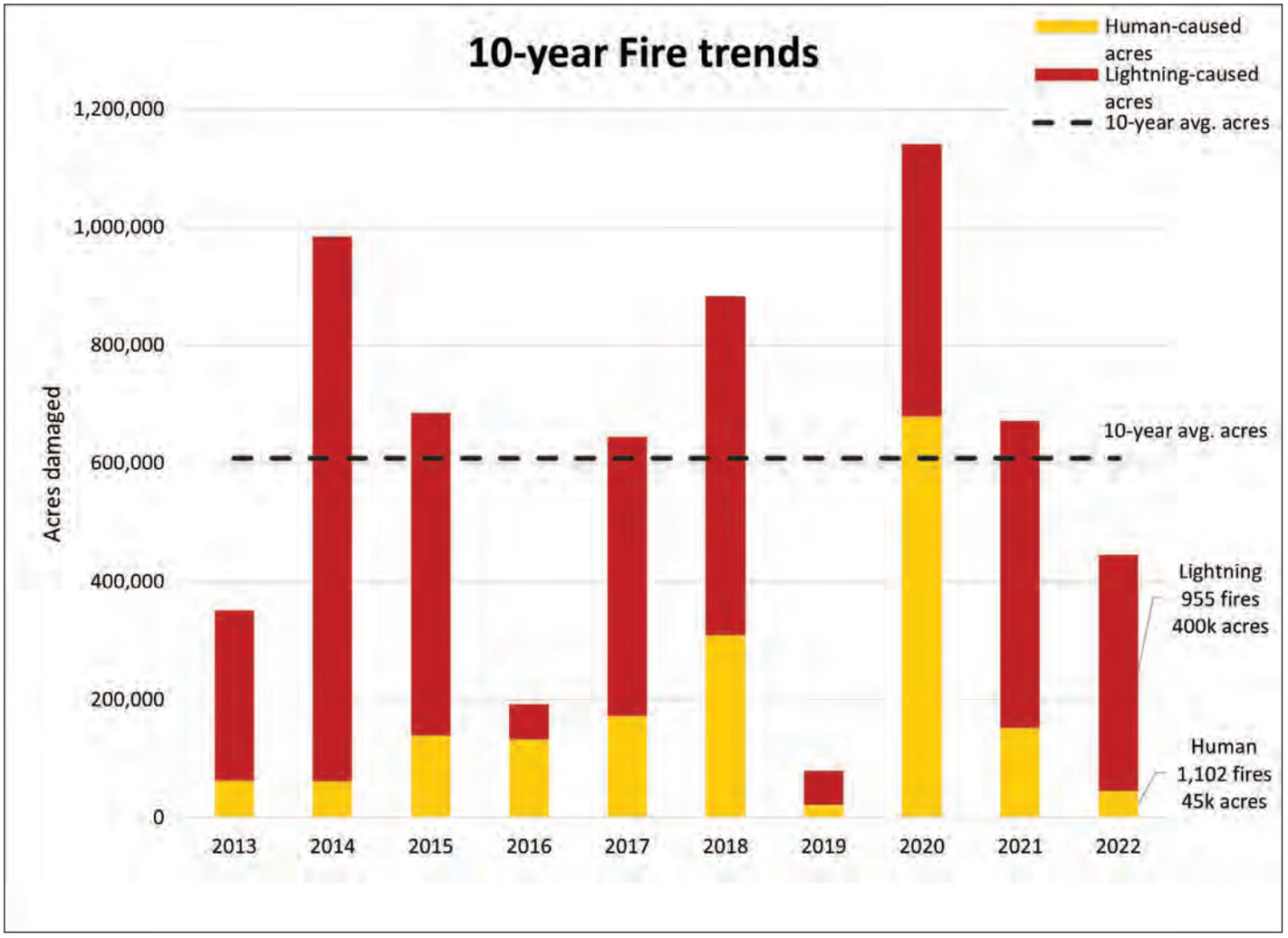
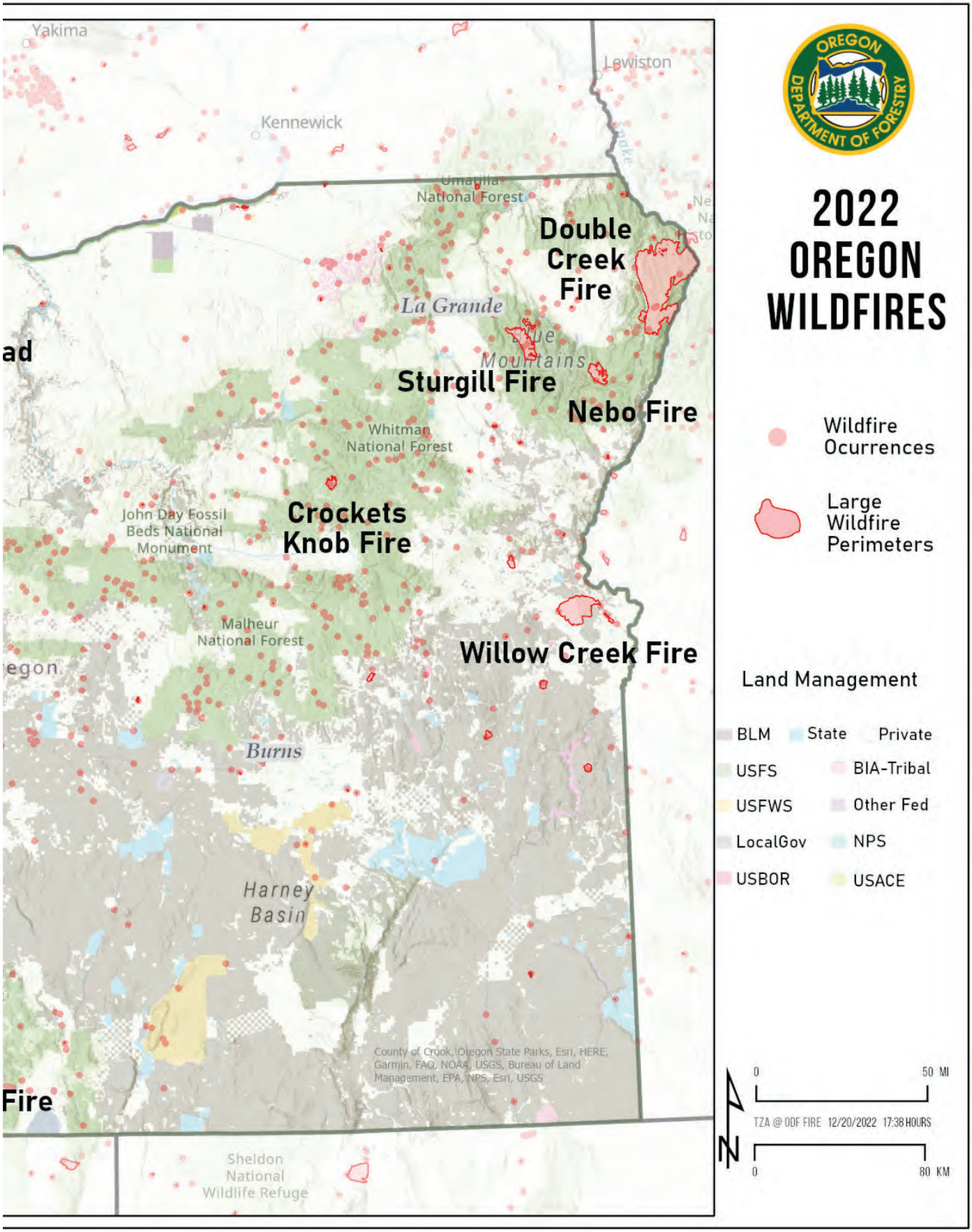


Figure 18. 10-year wildfire trends, across all ownerships and all protection teams (USFS, BLM, ODF, tribal, etc.).

Figure 19. Map of statewide wildfires in 2022 (Teresa "TzA" Alcock, ODF).


Yakima
Kennewick
Lewiston
National Forest
Double Creek Fire
La Grande
Mountains
Sturgill Fire
Nebo Fire
Whitman National Forest
John Day Fossil Beds National Monument
Crockets Knob Fire
Malheur National Forest
Willow Creek Fire
Burns
Harney Basin
Sheldon National Wildlife Refuge
County of Crook, Oregon State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, Bureau of Land Management, EPA, NPS, Esri, USGS
OREGON DEPARTMENT OF FORESTRY
2022 OREGON WILDFIRES
Wildfire Ocurrences
Large Wildfire Perimeters
Land Management
BLM
State
Private
USFS
BIA-Tribal
USFWS
Other Fed
LocalGov
NPS
USBOR
USACE
0
50 MI
TZA @ ODF FIRE 12/20/2022 17:38 HOURS
0
80 KM

FOREST INSECTS

Healthy trees are defended trees. Tree defenses include mechanical and chemical defenses in foliage and wood that prevent infestation, mitigate damage, or kill insects. For trees to produce these defenses they must have their growth requirements met, sparing additional resources that producing defenses requires. Droughts, in particular, impact defenses because trees require moisture for tree pitch, their main defense, which acts as a mechanical barrier that traps insects and also contains chemicals that are repellent or toxic to insects and the microbes and fungal pathogens that insects may vector.

ODF Insect pest guide: https://www.oregon.gov/odf/Documents/forestbenefits/InsectPestDiagnosis.pdf
ODF forest pest fact sheets and videos: http://tinyurl.com/ODF-ForestHealth

Beetles

In recent years the majority of tree damage and mortality has been detected in the tree genus *Abies*. also known as "true fir" species. The primary causes include chronic hot droughts, root disease, balsam woolly adelgid and subsequent attack by fir engraver beetles (*Scolytus ventralis*). Many of these sites are becoming marginal for tree growth due to climate change and the spread of balsam woolly adelgid. In 2022, we observed historic levels of true fir mortality across much of its range although mortality was greatest in SW and Central Oregon, particularly in drier areas. It should be noted that fir is more abundant in some areas due to encroachment following fire exclusion. Much of this damage is and has been historically recorded as fir engraver damage. Fir engraver bark beetle does not typically have the ability to kill healthy trees, but can kill stressed trees, and the most common underlying stress (and primary cause of tree mortality) in true firs is drought and/or root disease.

Other beetles that typically kill stressed trees include Douglas-fir beetle (DFB, *Dendroctonus pseudotsugae*) and flatheaded fir borer (FFB, *Phaenops drummondi* prev. *Melanophila*) in Douglas-fir, and Ips (*Ips* spp.), western pine beetle (*Dendroctonus brevicomis*) and mountain pine beetle (*Dendroctonus ponderosae*) in pine. As with fir engraver, these beetles are native and widely present on the landscape at endemic levels. However, if there's a large availability of stressed trees, beetle populations can build into unnaturally large levels that may spill over into healthy trees and overcome their defenses. In recent history, ongoing hot drought has predisposed trees to infestation and mortality from these beetles. For example, in recent years southwest Oregon has perhaps been hit the hardest by intense and frequent droughts. Fallout has included large

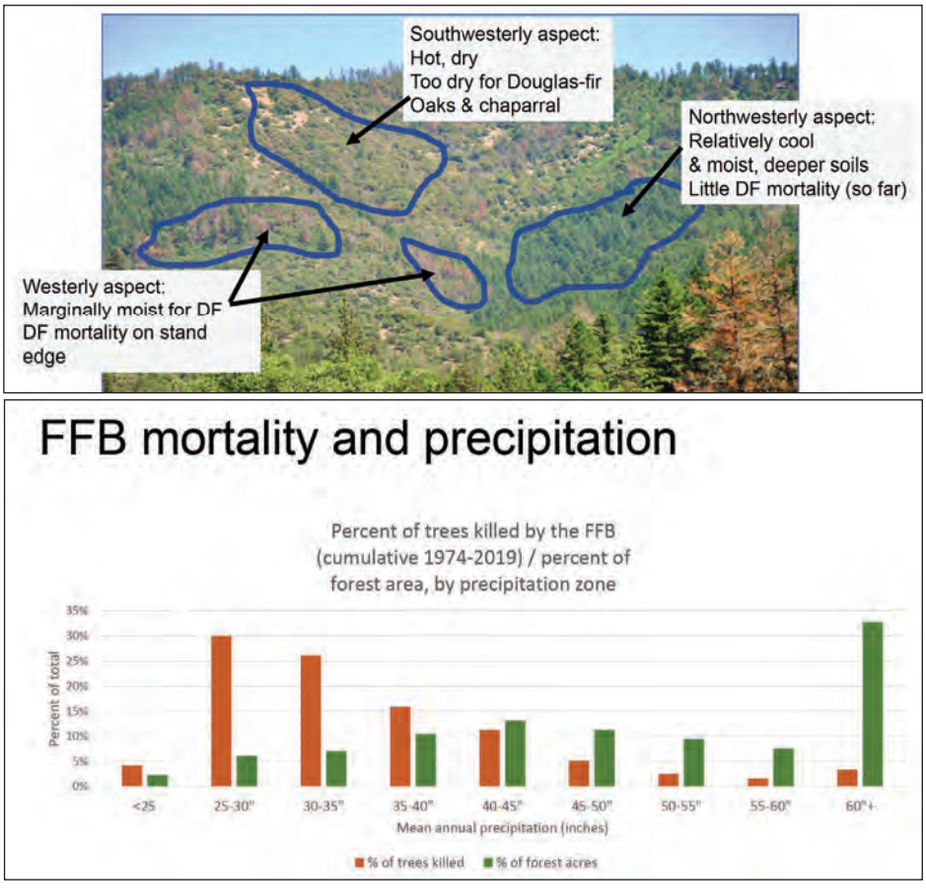


Figure 20. Top: areas on the landscape that have microclimates or conditions that stress trees, making them more susceptible to FFB. (Ellen Goheen, USFS & Max Bennett, OSU). Bottom: annual precipitation and % acres with tree mortality identified in aerial surveys as flatheaded fir borer (orange) and percent forest cover in these areas (green) (Max Bennet, OSU). Note, trees are marked in surveys as "flatheaded fir borer" are more often a complex of drought, FFB and/or DFB.

swaths of Douglas-fir mortality particularly on harsh sites such south-facing slopes, forest edges, dry low-elevation areas, and areas with shallow soils (Fig. 20). These trees suffer from the primary stress of decreased precipitation and secondary impacts of infestation by opportunistic FFB and DFB (Fig. 20). In some of these areas, fire exclusion has allowed Douglas-fir encroachment or increased abundance at less suitable, droughtier sites.

Bark beetle management: Other landscape-level stressors such as storms and wildfires also damage trees and increase their susceptibility to pests. It is important to identify and target the primary source of tree stress for management. Focusing on controlling beetles alone provides only a short-term solution or more likely doesn't help at all. The primary methods of management or mitigation of these pests is preventative because control measures are far too expensive or not effective at the stand level. To reduce pest susceptibility, management strategies should target enhancement of tree resiliency to drought and wildfire by reducing stand density and fuels buildup. Management of other high-stress situations that attract pests should also be addressed:

- Root disease pockets should be managed by switching to alternate species, buffer cuts, increased sanitation to prevent spread, or more targeted strategies depending on the specific pathogen
- Fresh pine slash should be treated to prevent Ips beetle outbreaks: https://www.oregon.gov/odf/Documents/forestbenefits/Slashmanagement.pdf
- MCH anti-aggregant pheromone should be applied right before the April following storm damage or wildfire to prevent DFB outbreaks: https://www.oregon.gov/odf/Documents/forestbenefits/MCH_2016.pdf

Cost share funds are available for bark beetle prevention and mitigation treatments such as thinning, pine slash management, and anti-aggregation pheromones: https://tinyurl.com/ODFcostshare.

Figure 21. Left to right: bark beetle infestation signs and symptoms include frass, pitch streams, pitch tubes, and exit holes (Christine Buhl, ODF).

It is important to identify if you are dealing with bark beetles which can kill trees, versus woodboring beetles that just cause defect, and if bark beetles are still present. Bark beetles infest only living trees and move through their life cycles typically within a year or less. It is important to recognize the signs and symptoms (Fig. 21) of infestations to employ mitigation techniques in a timely manner and reduce population outbreaks in areas of active beetle infestation. Bark beetles can identify the "smell" of a tree species and determine if it's under stress. They can also communicate chemically with their species to attack en masse and regulate population numbers. All of which make them effective at opportunistically attacking stressed

trees. When they burrow into a tree they kick out brown (not white) sawdust or "frass" because they are chewing through bark and only etching the surface of wood itself. If the tree has enough moisture to produce pitch, you may see small pitch globs/tubes (pine), thin pitch streams (Douglas-fir) or pitch droplets (true fir) on the outer bark. If beetles are not drowned by pitch they will create feeding galleries under the bark that have distinct, species-specific patterns. Bark beetles kill trees by girdling vascular tissues with their galleries and clogging these tissues with vectored fungi. When adult offspring chew their way out of trees they create many tiny, perfectly round exit holes about the size of the tip of a ballpoint pen. Some woodborers (e.g., ambrosia beetles) make similarly-sized exit holes however those holes continue through the bark and into the wood. By the time a tree's foliage has turned red, bark beetles are often already gone.

Woodboring beetles (e.g., ambrosia beetles, longhorned beetles/roundheaded borers and jewel beetles/flatheaded borers) can be confused with bark beetles, although most woodborers don't typically kill trees but can cause defect by tunneling into wood, and ambrosia beetles vector fungal stains. Woodborers commonly attack severely stressed trees such as those injured by rot or wildfire (https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd1013251.pdf). Woodboring beetles kick out white frass because they tunnel into wood. Other signs include extensive tunnels, and round or oval exit holes that may be as wide as a pencil eraser.

NEW EXOTIC PEST DETECTION:

Mediterranean oak borer (MOB, *Xyleborus monographus*) is an exotic ambrosia beetle that is a recent arrival to North America. These tiny beetles carry fungi in specialized pits near their mouths, which they use to inoculate tunnels in sapwood of hardwood hosts. The fungi that grow in the tunnels are then fed on by developing larvae (Fig. 22). MOB vectors several fungal species; one in particular, *Raffaela montetyii*, is pathogenic on numerous oak species, including Oregon white oak (*Quercus garryana*), in both its native range of Europe and its introduced range in North America.

Figure 22. MOB galleries in wood (left) from adult MOB beetle (center) whose damage causes canopy dieback and mortality in oak trees (right) (University of California Riverside).

In 2019, large populations of MOB were observed killing valley oak (*Quercus lobata*) in Napa and Sonoma counties of Central California. The insect has probably been present in California since the early 2010s. While no reports of oak mortality have been reported in Oregon, the insect has been detected in increasing numbers in traps. In 2018 a single MOB was captured in an ODF trap in Multnomah County. In 2021, a second MOB individual was captured in an ODA trap in Marion County. In 2022, the ODF Forest Health unit assisted ODA in a surveillance program, and 21 MOB specimens were captured in traps at seven sites across four counties: Marion, Clackamas, Washington and Multnomah.

In May of 2022, the ODF Forest Health Unit, in conjunction with USFS and OSU Forestry Extension, led an early detection training for natural resource professionals at Rogue Community College Redwood Campus in Grants Pass. Participants learned the signs and symptoms of MOB and how to report suspect trees.

NEW EXOTIC PEST DETECTION: Emerald ash borer (EAB, *Agrilus planipennis*)
On June 30, 2022, a suspected emerald ash borer infestation at Joseph Gale Elementary School in Forest Grove was reported to ODF. ODF Forest Health staff visited the site on the same day and observed 16 symptomatic ash trees and collected insect samples which were confirmed to be EAB. EAB adults were abundant and observed feeding on foliage of the affected trees. On July 1, ODF Forest Health staff collected foliage samples from four symptomatic trees at the site, placed four EAB traps on the school premises, and collected additional adult specimens. Additional infested ash trees were discovered on July 1 in the neighborhood surrounding the school, including one native Oregon ash (*Fraxinus latifolia*). On July 2 an arborist removed and chipped the 16 infested trees. Within a 24-hour period, over 300 adult beetles were captured in the EAB traps placed at the school. Based on the progression of tree decline and signs of the insects in the tree, ODF and other agencies concluded that the infestation had been present at the site for at least three years.

Figure 23. Left: Common symptoms of EAB infestation include canopy thinning and topkill, epicormic shoots from the trunk, and bark splits (not shown) (Leah Bauer, USFS). Right: A key exterior sign of EAB infestation is 1/8 inch, D-shaped exit holes (Christine Buhl, ODF). EAB spends only a very small portion of its life outside of a tree and is not often seen outside of the summer flight period. Larvae and their serpentine galleries can be found under the bark most of the year. Very few non-pest insects similarly affect ash trees.

On July 5, the Oregon interagency emergency response plan for EAB, which was first published in 2018, was activated. ODA became the lead agency in the response effort and formed an interagency task force comprised of over 40 local, state, federal agencies, as well as non-profit organizations and academic institutions. Guided by a steering committee, the EAB Task Force met once a month starting in August. The agencies organized and coordinated work through seven subcommittees: Survey and Monitoring, Wood Waste and Wood Utilization, Communications, Integrated Pest Management, Training, Research, and Funding.

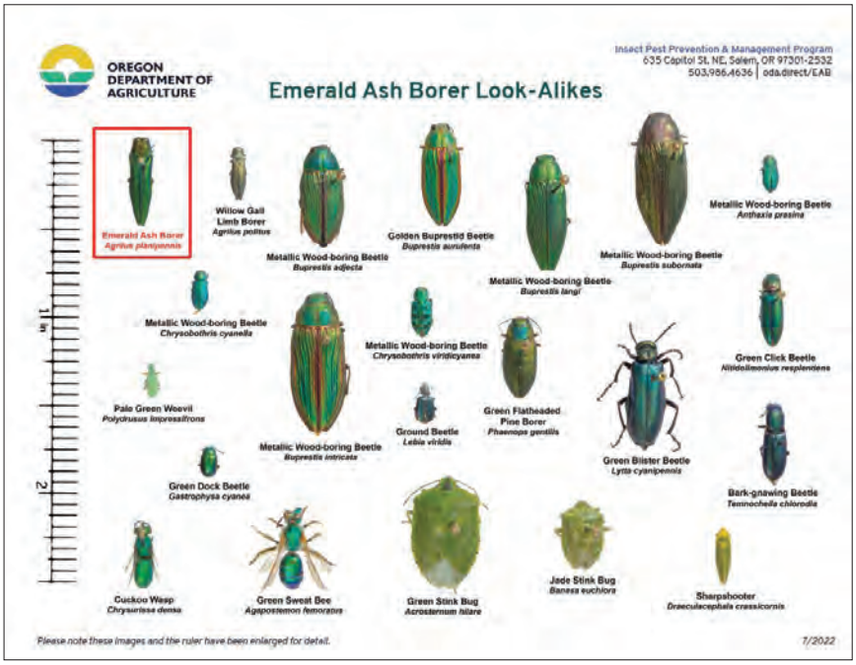
Under the Survey and Monitoring subcommittee, ODA developed an interagency tree survey where trained professionals could inspect individual ash trees, note the presence/absence of EAB signs and symptoms (Fig. 23)and upload the recorded data to a real-time public dashboard. From the initial detection on June 30 to the end of the year, over 3,000 ash trees in Washington County and other locations in Oregon were inspected for EAB by numerous local, state and federal agencies. As of January 2022, over 50 EAB-infested trees have been detected in this interagency survey. The USDA Animal Plant Health Inspection Service (USDA APHIS) and ODF placed purple panel traps in Washington county. One ODF trap in Forest Grove was positive for EAB while all others were negative. On December 20, ODA adopted a temporary 180-day quarantine, limiting the movement of ash, olive and white fringe tree material out of Washington County.

Several other efforts to preserve ash on our landscape are in progress. ODF and USFS developed a seed-collecting project for Oregon ash that began prior to this first EAB detection. This project aims to collect ash seeds from populations in Oregon before EAB causes widespread mortality. Seeds are stored in freezers for genetic conservation (USDA Seed Lab, Fort Collins) and resistance research (USFS Dorena Genetic Resource Center and USDA Agricultural Research Service, Ames, IA). In 2022, approximately 450,000 seeds were collected from 134 trees across western and southern Oregon. These seeds were added to 2019 collections (350,000 seeds from 100 trees). In April, ODF Forest Health staff assisted a team of researchers from Penn State University to collect foliage samples of Oregon ash from over 200 individual trees across the state. The research will focus on mapping the genome as well as documenting the population genetics of the tree species – a first for Oregon ash.

Figure 24. Ash tree seeds (samaras) (Christine Buhl, ODF).

EAB resources:

- Report suspected infestations to Oregon Invasives Online Hotline: https://oregoninvasiveshotline.org/ *(Review what EAB and ash trees look like and include location and image in report, Fig. 25)*
- EAB ID and look-alikes: https://www.oregon.gov/oda/programs/IPPM/SurveyTreatment/Documents/EABLookAlikes.pdf
- Ash tree ID: https://extension.oregonstate.edu/gallery/recognizing-ash-trees-oregon-washington-northern-california
- EAB fact sheet: https://tinyurl.com/odf-eab
- Map of monitoring locations and infestations: https://geo.maps.arcgis.com/apps/dashboards/e6ff6b60f63b4c489cdee61315a85535
- Oregon's EAB Readiness and Response Plan: https://www.OregonEAB.com
- http://www.oregon.gov/ODF/ForestBenefits/Pages/ForestHealth.aspx
- https://extension.oregonstate.edu/collection/emerald-ash-borer-resources
- https://www.oregoninvasivespeciescouncil.org/eab



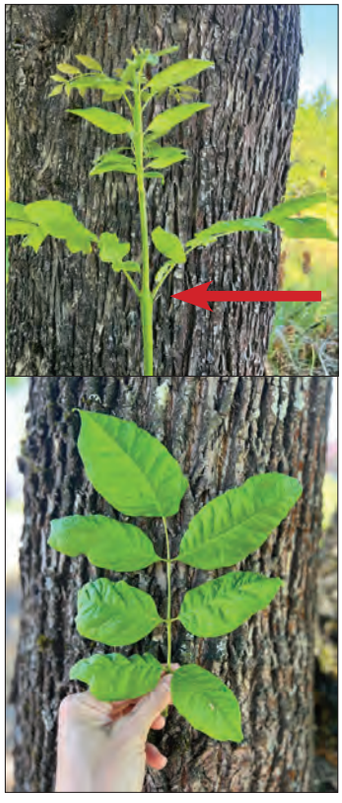


Figure 25. Left: EAB relative to look-alikes found in Oregon (ODA). Right: Features used to identify ash include: (top) opposite branching (branches mirror each other in their position on the main stem), (bottom) compound leaves (5-9 leaflets attached to one stem), lattice-like bark as trees mature, and single-winged seeds (Fig. 24) (Christine Buhl, ODF).

EAB history in the United States

Since 2001, EAB has become the most destructive invasive forest insect pest in the United States. It attacks and feeds on ash (and some other relatives in the Oleaceae family such as fringree and olive – although at a lesser degree). Since its introduction into the Great Lakes Region in the 1990s, it has spread to over 35 states, killing over 100 million ash trees, threatening extinction of a number of eastern U.S. ash species. Until the discovery in Oregon, the furthest known western extent of EAB was Boulder, Colorado. EAB spreads long distances through firewood and ash nursery stock. In 2021, APHIS dropped the federal quarantine for interstate movement of EAB and EAB-infested material.

There is a significant risk of emerald ash borer to Oregon's riparian forests. In Oregon, a native and susceptible ash, grows widely across the western part of the state in riparian areas, in habitats occupied by threatened and endangered species and other rare species. Rapid mortality of this native tree caused by EAB is expected to cause changes in riparian plant communities, increase stream temperatures, and alter food webs. Oregon ash is also grown by some tree farmers as a specialty niche crop for forest products or for conservation and restoration efforts. Pockets of ash often occur in areas unsuitable for our other native tree species and the loss of these stands would reduce the ecological and aesthetic value of these areas. If this current infestation follows patterns seen in eastern states, EAB will likely decimate this small but important market, as well as wild ash stands within approximately 10 years. Moreover, rapid ash mortality in Oregon's cities and urban forests will cause significant economic strain on local governments and property owners.

In Oregon, surveys for EAB have occurred sporadically when federal funding was available starting in 2005. ODF alone placed nearly 1,000 traps for EAB during 2013-2015. No EAB were detected in Oregon until June 30, 2022, in Forest Grove.

In 2015, OSU Forestry Extension, ODF, ODA, USFS, and APHIS launched the Oregon Forest Pest Detector program (https://extension.oregonstate.edu/ofpd) to train natural resource professionals on how to recognize and report suspected EAB. To date, over 500 natural resource professionals have taken the training.

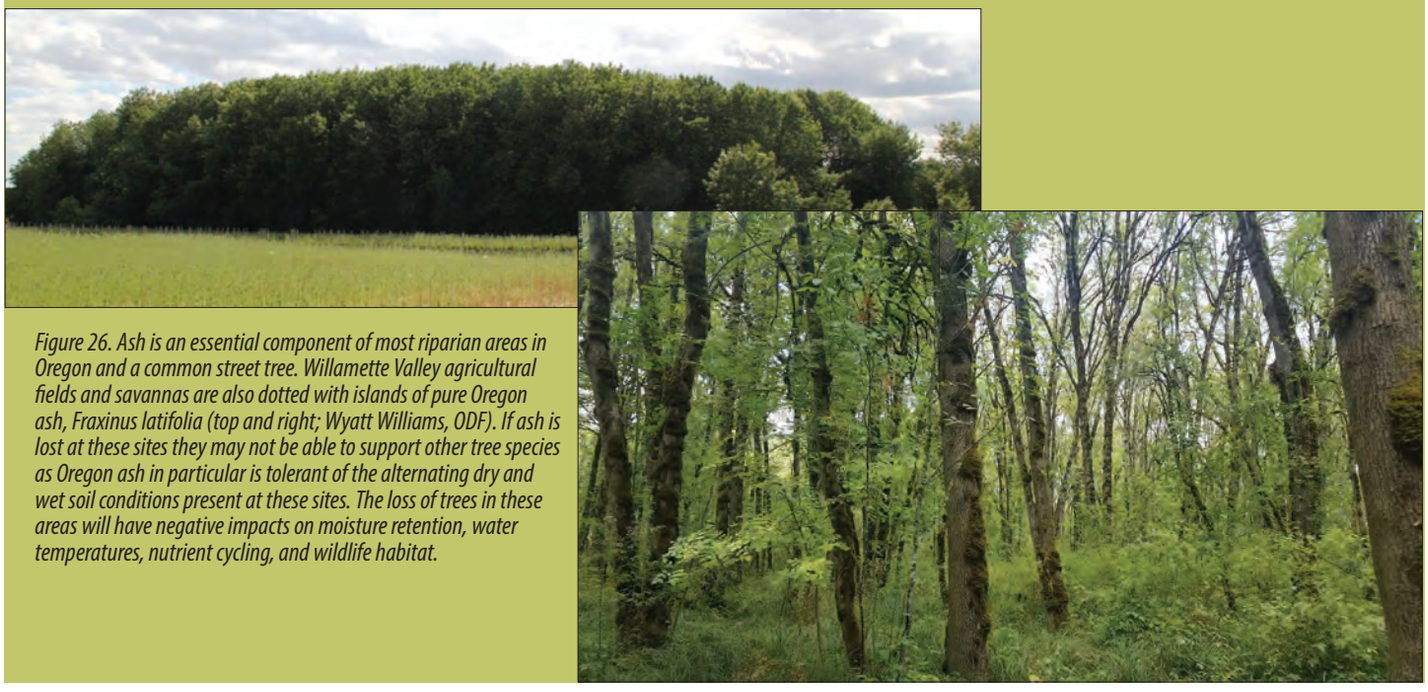


Figure 26. Ash is an essential component of most riparian areas in Oregon and a common street tree. Willamette Valley agricultural fields and savannas are also dotted with islands of pure Oregon ash, Fraxinus latifolia (top and right; Wyatt Williams, ODF). If ash is lost at these sites they may not be able to support other tree species as Oregon ash in particular is tolerant of the alternating dry and wet soil conditions present at these sites. The loss of trees in these areas will have negative impacts on moisture retention, water temperatures, nutrient cycling, and wildlife habitat.

Defoliators

At the end of summer and into the fall, white oaks in the Willamette Valley started showing noticeable damage from oak lace bugs (*Corythucha arcuata,* Fig. 27) (https://oregonforestry.wpengine.com/2022/11/08/browning-leaves-on-oregon-white-oak-may-be-due-to-damage-from-the-invasive-oak-lace-bug). Oak leaves were mottled yellow to brown and the undersides of leaves contained tiny black droplets of excrement, cast skins, and oak lace bug adults and nymphs. These insects, which are native to other parts of the U.S., were first identified in Oregon in 2015 and have become established in Oregon. This recent uptick in populations may have resulted from favorable conditions for the insect such as mild winters, declines in natural enemy populations, or an abundance of a oaks with reduced defenses. It is common to see brown patches of leaves throughout oak crowns due to a myriad of foliage-attacking insects or damage from squirrels peeling branches in search of grubs. All of these insects, including oak lace bug, are mainly causing superficial damage because they do not harm buds, and because white oaks are deciduous and lose their leaves each year to flush new leaves as normal the following year.

Figure 27. Oak lace bug signs and symptoms include: (left) yellow-stippled leaf, (middle) adults and black excrement droplets, (right) 1/8" transparent adult (Christine Buhl, ODF).

The major conifer defoliators that caused damage in 2022 include balsam woolly adelgid (BWA, *Adelges piceae*) in true fir, Douglas-fir tussock moth (*Orgyia pseudotsugata*) in Douglas-fir and true fir, and pandora moth (*Coloradia pandora*) and sawflies (*Neodiprion* spp.) in pine. These defoliators are periodic except for BWA which is a chronic pest. BWA is native to Europe but has been long-established in Oregon, particularly in higher elevation trees where control or sanitation is difficult (Fig. 28). True firs tend to hold onto their dead, dry foliage for longer than other conifers therefore extensive mortality from this insect can also contribute to increased wildfire risk. Other than BWA, outbreaks from all of the other defoliators are in decline or on the verge of collapse in most areas. DFTM outbreak initiation was staggered and so some areas are still experiencing some high trap catches and noticeable defoliation.

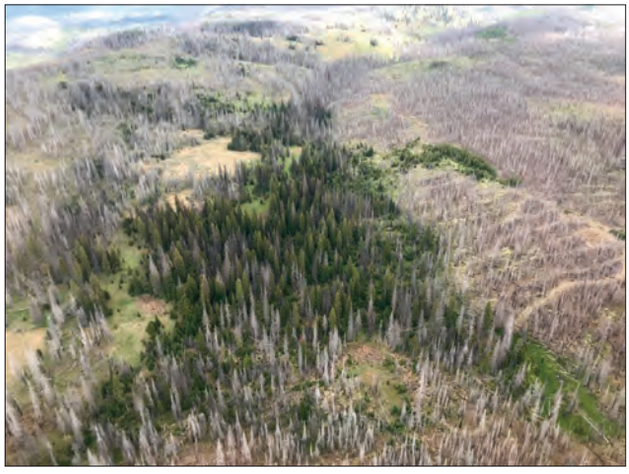


Figure 28. True fir trees damaged and killed by BWA (ODF).

Defoliation that caused lacey-looking leaves in alder from alder flea beetle (*Macrohaltica ambiens* prev. *Altica ambiens*) was also observed in some areas. These insects do not harm buds and, as these trees are deciduous, they will drop leaves at the end of the year and reflush new leaves as normal the next spring.

Non-established exotic pest: Spongy moth (prev. European gypsy moth, *Lymantria dispar dispar*) is the European subspecies and is established in eastern parts of the U.S. and routinely found in Oregon. Flighted

spongy moth is the Asian subspecies (prev. Asian gypsy moth, *Lymantria dispar asiatica*), which is not established in the U.S. but is occasionally detected in western states from overseas imports. Both subspecies feed on several hundred species of trees and shrubs and flighted spongy moth can also feed and develop on conifers. Spongy moth females are flightless however flighted spongy moth females can fly (up to 50 miles). Since the 1970s Oregon has deployed monitoring traps across the state for early detection and swift eradication using insecticide treatments. In the last several years, state funding for this large trapping program has been generated from the Oregon Lottery. In 2022, seven spongy moths were found in traps (Clatsop, Columbia, Washington and Benton counties) and delimitation trapping for potential eradication efforts will take place next year. Follow-up delimitation of a flighted spongy moth trap catch from 2020 on Sauvie Island, OR yielded no additional individuals in 2021 or 2022. Despite frequent introductions into the state, to date, infestation of each subspecies found in Oregon has been successfully eradicated.

Figure 29. WSDA staff in sting-proof suits destroying a NGH nest (WSDA).

Other insects

Non-established exotic pest: Northern giant hornet (*Vespa mandarinia,* NGH), previously called Asian giant hornet aka "murder hornet", is an exotic species from east Asia. It is the largest hornet in the world and can reach up to 2 inches in length. It often nests in forested areas and feeds on tree sap. It also attacks honeybees, which are often kept in forested areas. There is concern around this insect establishing due to its aggression toward honey bees and potential human health risk due to their large nests and large venom load.

NGH was first reported in northern Washington in 2019, and has been found in Canada in previous years. Washington State Department of Agriculture (WSDA) has employed intensive eradication techniques that include trapping, and following hornets back to their nests which are then destroyed by staff wearing sting-proof suits (Fig. 29). NGH has been observed attacking paper wasp nests which are being targeted as sentinel monitoring sources. In 2022, no hornets or nests were found. The hornet has never been found in Oregon. This insect is often mistaken for many other species that are found in Oregon such as cicada killers (Sphecidae), sawflies, bald-faced hornets, and yellow jackets (Fig. 30). Features that distinguish NGH are its large head and overall size. ODA trapped for hornets in 2021 and 2022 with plans to trap again in 2023. In 2022 ODA deployed 120 hornet traps across 13 counties in Oregon, with the majority placed in Multnomah County. To date, no hornets have been found in Oregon. If you think you have found NGH please report it to the Oregon Department of Agriculture using their online reporting system: https://oda.fyi/HornetReport. They can also be contacted at plant-entomologists@oda.oregon.gov or 503-986-4636

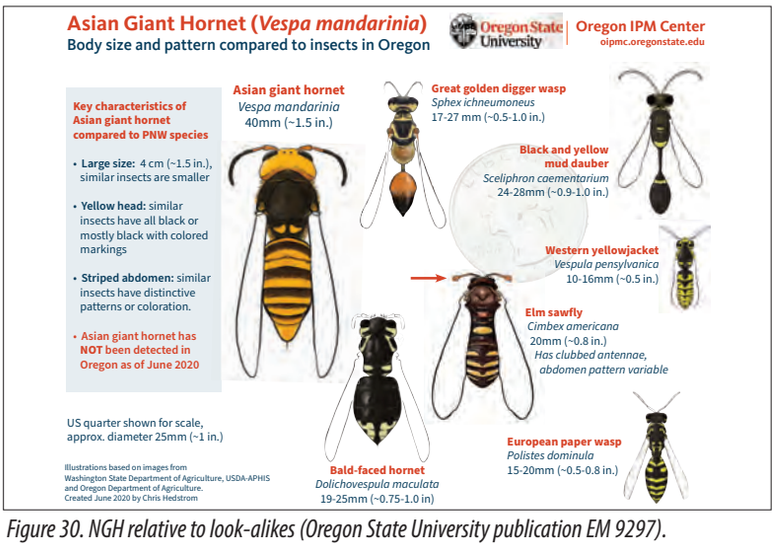


Figure 30. NGH relative to look-alikes (Oregon State University publication EM 9297).

NGH resources:

- Online identification form: https://oda.direct/InsectID
- https://www.oregon.gov/odf/Documents/forestbenefits/asian-giant-hornet-1.pdf
- https://www.oregon.gov/odf/Documents/forestbenefits/asian-giant-hornet-2.pdf

FOREST DISEASES

Figure 31. Ponderosa pine with stem infection of dwarf mistletoe (Gabriela Ritokova, ODF).

Gilchrist State Forest (GSF) is a 65,000-acre State Forest in Klamath County and managed by the Oregon Department of Forestry. It was previously managed by a family forestry company followed by industry before being acquired by the State. Ponderosa pine and lodgepole pine dominate the forest, while sugar pine is abundant at higher elevations. One of the primary forest pests influencing the timber value and productivity of trees in the forest is dwarf mistletoe. **Dwarf mistletoes** are native parasitic flowering plants that infect conifers. Although a few plants in a tree crown have no real impact on the tree, a severely infected tree with abundant infections has reduced growth and stem deformation and may have tree-top and branch dieback. On the positive side, dwarf mistletoes benefit wildlife by creating habitat and nesting sites. On the GSF, two dwarf mistletoes are present: western dwarf mistletoe (*Arceuthobium campylopodum*) on ponderosa pine (Fig. 31) and lodgepole pine dwarf mistletoe (*A. americanum*) (Fig. 32). These two species are generally host-specific, although western dwarf mistletoe has been observed infecting lodgepole pine on several occasions.

Using a systematic grid of locations across the forest, trees were sampled using the Hawksworth dwarf mistletoe rating system, where each tree crown is divided into thirds. Each third is assigned a number between 0 and 2 (0 = no dwarf mistletoe, 1 = <50% of the branches infected, 2 = >50% of branches infected). Each third is summed for a total tree rating of 0 (no infections) to 6 (severely infected). We found western dwarf mistletoe and lodgepole pine dwarf mistletoe were common on ponderosa and lodgepole pine but were not everywhere. No dwarf mistletoe was observed on sugar pine. A total of 6,345 trees were surveyed in 39 plots, 7.9% of ponderosa pine and 9.4% of lodgepole pine were infected indicating a manageable situation. The mistletoe distribution across the forest suggests a generally clustered presence, with significant areas being free of dwarf mistletoe (Fig. 34). The incidence of dwarf mistletoe consisted of western dwarf mistletoe in 33% of plots and lodgepole pine dwarf mistletoe in 33% of plots. Of the trees that were infected, the average dwarf mistletoe rating was 3.6 for ponderosa pine and 2.3 for lodgepole pine, indicating that where dwarf mistletoe occurs, it can be severe. Figure 33 (from Hawksworth and Wiens 1996) lists the growth losses associated with the rating of individual trees.

Figure 32. Witches broom symptom (i.e., dense mass of overgrowth) in ponderosa pine caused by dwarf mistletoe (left) and mistletoe in lodgepole (right) Gabriela Ritokova, ODF).

Percent growth of infected trees							
Arceuthobium species	**Host**	**Class 1**	**Class 2**	**Class 3**	**Class 4**	**Class 5**	**Class 6**
A. americanum	*P. contorta*	100	100	100	94	80	59
A. campylopodum	*P. ponderosa*	100	100	98	86	73	50

Figure 33. Relative rates of diameter growth in relation to the intensity of infection by Arceuthobium as quantified with the 6-class dwarf mistletoe rating system (DMR). From Hawksworth and Wiens 1996. Note: Diameter growth rates of uninfected trees taken as 100%. Percentages based on averages of several studies throughout the western United States (adapted from Hawksworth and others 1992).

Dwarf mistletoe spreads by an explosive discharge of the seed, which propels the seeds up to 35 feet. This differs from most of the world's mistletoe which is dispersed by birds. Dwarf mistletoe distribution is generally aggregated on the landscape, and severely infected trees will occur in distinct infection centers. This manner of seed dispersal means that forest composition, density, and structure control the local spread of dwarf mistletoe. Dwarf mistletoe spreads into uninfected areas at a rate of about 2 feet/year. However, non-host trees block the spread, while very dense stands of host trees slow the spread. In uneven aged stands, the dominant canopy position trees may be infected, and they can "rain down" seeds from above and infect regenerating trees.

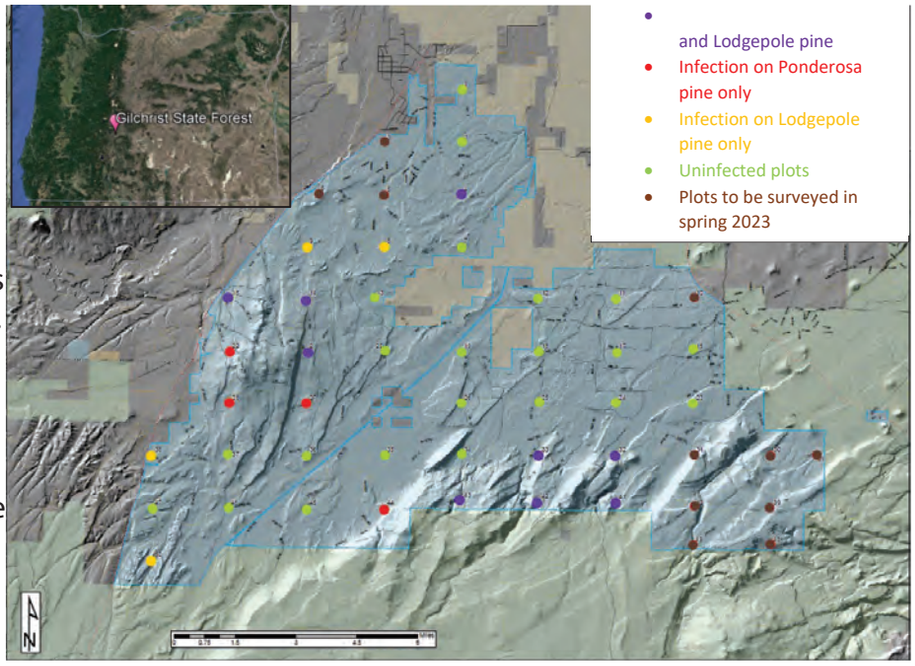


Figure 34. Map of mistletoe plot distribution on the GSF. Purple dots signify infections on ponderosa and lodgepole pines, red dots are infections on ponderosa and yellow dots are infections on lodgepole, green dots represent uninfected plots and brown dots are plots to be surveyed in spring 2023.

The primary natural control of dwarf mistletoe is fire. Fire history and patterns control the overall distribution of dwarf mistletoe on the landscape. The GSF area likely had a combination of regular low-intensity fire burn through ponderosa pine-dominated areas and mixed severity fires in areas with pure lodgepole pine or the mixed forests of ponderosa, lodgepole, and sugar pine. Although fire is very important in defining where dwarf mistletoe occurs, fire suppression has removed fire as an active control agent for dwarf mistletoe and replaced it with forest management and harvesting practices. High-grading (i.e., removal of high-value trees and often leaving behind lower quality or less vigorous trees) can allow the persistence and spread of dwarf mistletoe, while fire suppression increases the density and homogeneity of host species.

Foresters in the GSF are returning to a sustainably harvested, uneven-aged structure model to manage the dwarf mistletoe. The goal is to limit the negative impacts of dwarf mistletoe on overall timber production but not eradicate the native plant. Silvicultural techniques to reduce stand-level dwarf mistletoe ratings include minimizing the retention of heavily infected overstory leave-trees, cutting and thinning heavily infected understory trees, planting non-host trees around infection areas or around heavily infected leave-trees, applying prescribed fire, and creating gaps where heavily infected trees are aggregated.

FOREST DISEASES

Sudden Oak Death (SOD) is caused by the non-native pathogen *Phytophthora ramorum*. In Oregon, it kills tanoak (*Notholithocarpus densiflorus*) readily, by causing girdle-creating canker lesions on the main stem (Fig. 35) and threatens the species throughout its natural range. *P. ramorum* has a broad host range of over 100 plant species, including several species native to Oregon's forests. The pathogen survives in Oregon's wet and cool coastal climate, spreading during rainy and windy periods from trees onto other trees, shrubs, and adjacent vegetation. The disease can be spread by wind as far as 3-5 miles per year. Humans contribute to disease spread by moving infected material, whole plants, plant parts, or infested soil.

Figure 35. SOD symptoms: canker lesions underneath the bark (Gabriela Ritokova, ODF).

The disease was first discovered in coastal southwest Oregon forests in July 2001. Since then, an interagency team has continued to slow the spread of the pathogen through a program of early detection and treatment of infected and adjacent host plants. Treatments include cutting and burning infected and potentially exposed host material. The spread of *P. ramorum* is managed through the designation of a SOD Generally Infested Area (GIA) and SOD quarantine area under the authorities of the ODA (ORS 603-052-1230) and USDA APHIS (7 CFR 301-92). These state and federal quarantines regulate the intrastate and interstate movement of host plant material outside the quarantine area. Oregon regulations require infested sites on state and private lands to undergo eradication treatment.

Oregon SOD staff conduct multiple surveys throughout the year to monitor disease spread and detect new infestations. These include aerial surveys, ground-based transects, and stream monitoring. In 2022, multiple fixed-wing aerial surveys to monitor disease spread and detect new infestations covered a total of over 420,000 acres. This special survey, conducted annually (with the exception of the 2020 and 2021 COVID-affected years), is staffed by ODF and USFS surveyors, who fly a 2-mile grid from the California border to the Curry/Coos County line. Other SOD survey and detection (see SOD GIS dashboard) efforts continued in, and adjacent to, the SOD quarantine area throughout 2022. These include monitoring at 60 stream bait sites, aerial imagery interpretation of 379,000 acres, and 469 acres of ground transect surveys for the permitted harvesting of disease-free tanoak. Tanoak harvest is only allowed by landowner petition to the Oregon Department of Agriculture for a special permit under OAR 603-052-1230, Oregon's *P. ramorum* quarantine.

Following detections outside of the SOD Quarantine in 2021, in 2022 ODF continued to aggressively treat all known NA2 infestations in the Port Orford area with large buffers of 300-600 feet (Fig. 36). No new *P. ramorum* infestations were detected outside of the SOD Quarantine Area in 2022 (Fig. 37). From 2001 through 2022, eradication treatments have been completed on more than 8,200 acres at an estimated cost of over $35 million.

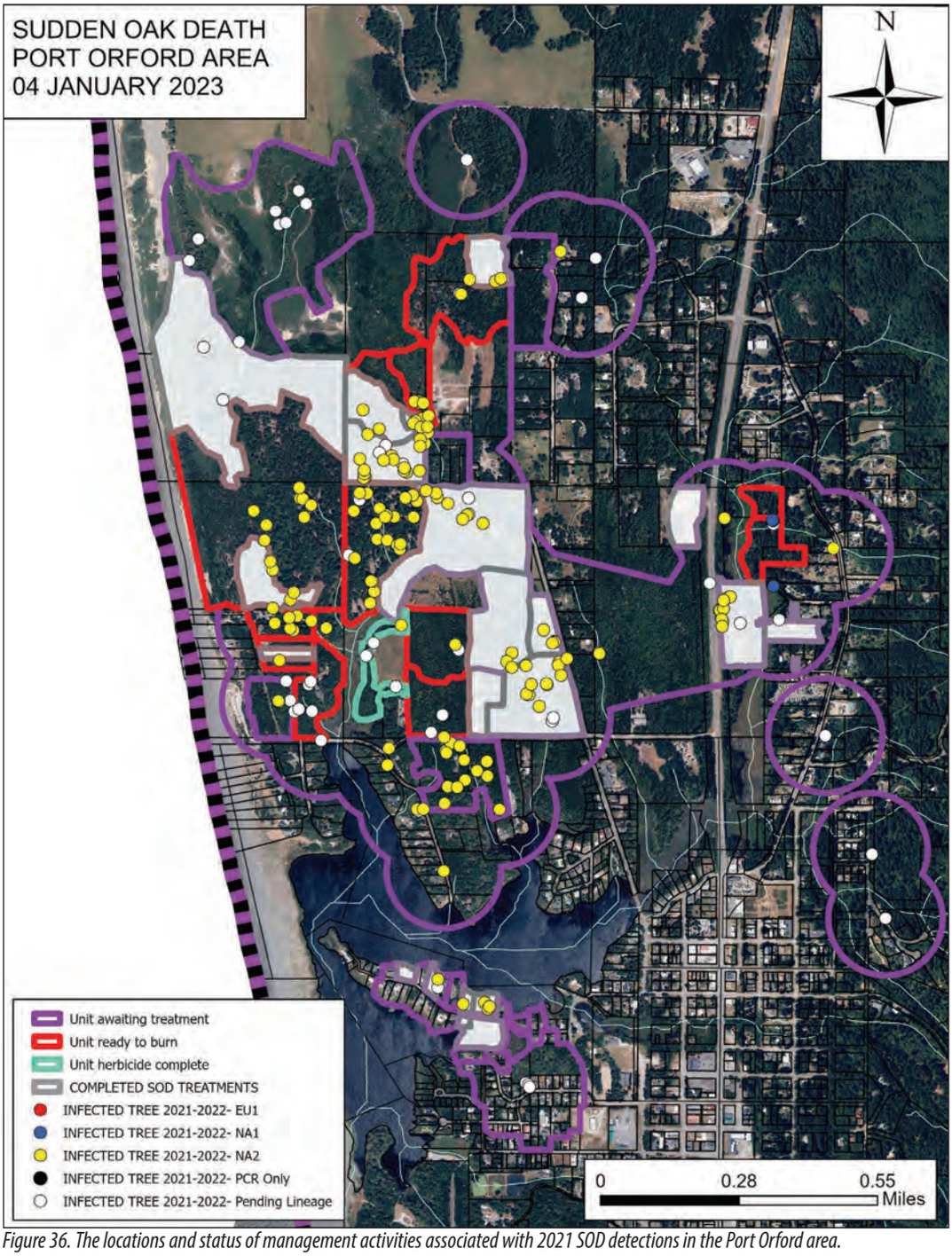


Figure 36. The locations and status of management activities associated with 2021 SOD detections in the Port Orford area.

Sudden Oak Death resources:
SOD GIS dashboard: https://tinyurl.com/oregonsod
Forest operations guide within SOD quarantine areas: https://tinyurl.com/9zvmdbht
Additional information:
https://www.oregon.gov/oda/programs/PlantHealth/Pages/SODProgram.aspx
https://catalog.extension.oregonstate.edu/em9216
https://www.aphis.usda.gov/plant_health/plant_pest_info/pram
https://www.suddenoakdeath.org/

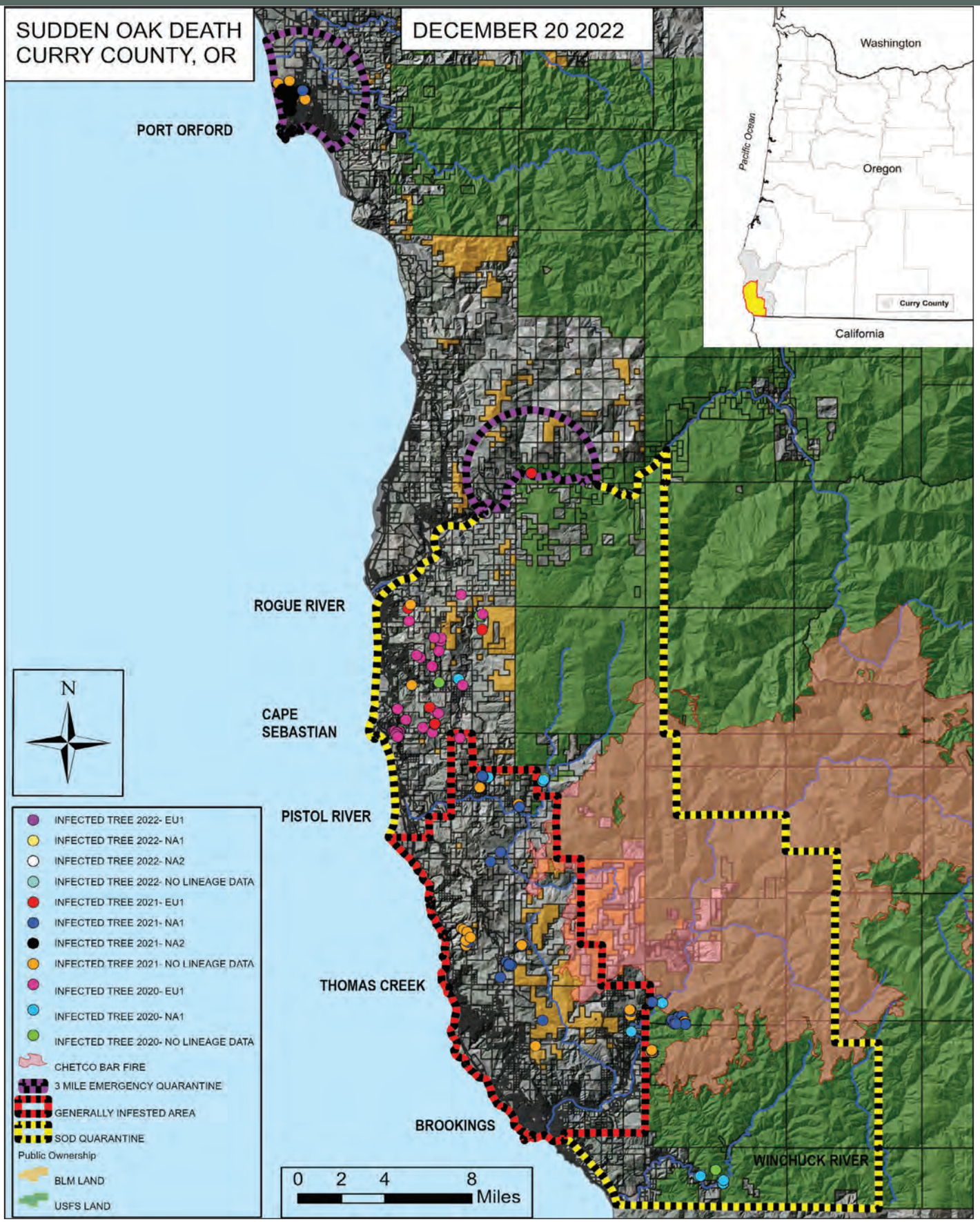


Figure 37. Map of the SOD Generally Infested Areas (red) and quarantine area (yellow). EU1 and NA1 are two different lineages of P. ramorum. In Europe, the EU1 lineage kills or damages conifer tree species and is considered more aggressive than the NA1 lineage.

Sooty bark disease (SBD) of maple (Acer) is caused by the fungus *Cryptostroma corticale* and has only recently emerged as a growing urban forest concern in the Pacific Northwest and British Columbia. Prior to this recent emergence, the pathogen was introduced to Europe from its native range in the Great Lakes Region, where it's considered a saprophyte, surviving on dead and decaying organic matter. In Europe *C. corticale* has been causing dieback primarily in Sycamore maples (*Acer pseudoplatanus*), although several other species have been confirmed as hosts in the Pacific Northwest, including natives such as bigleaf maple (*A. macrophyllum*) and Pacific dogwood (*Cornus nuttallii*), and non-natives such as red maple (*A. rubrum*), and horse chestnut (*Aesculus hippocastanum*). In Oregon, the pathogen was found in Bend on Norway maple (*Acer platanoides*), and Freeman maple (*Acer* × *freemanii*) (Fig. 38), and on vine maple (*Acer circinatum*) in the Portland area. Infected trees had dieback symptoms and visible fungal growth on bark surfaces (Fig. 38) and beneath the bark (Fig. 39).

Figure 38. Freeman maple with signs of SBD (Brent Oblinger, USFS).

The fungus infects and kills smaller branches, then spreads into the heartwood, causing cankers and ultimately killing the tree. It thrives at higher temperatures and appears after hot summers or prolonged drought periods. The disease is not found in high elevations or near coastal areas with cooler and wetter weather patterns. Under conducive environmental conditions, the fungus rapidly grows within the tree, causing tree bark to split open, revealing stromatal tissue covered with dark grey-black spore masses resembling soot. These spores can be carried long distances by wind. They may cause an allergic reaction in susceptible people, which has been a problem for those working around diseased maples. Arborists, loggers, or millworkers working with infected plant material should wear personal protective equipment to minimize spore inhalation and avoid contracting hypersensitive pneumonitis.

Figure 39. Bigleaf maple tree with sooty bark disease signs (sunken black fungal mats (Rachel Brooks, WDNR).

The distribution, host range, and impact of SBD in Oregon are currently unknown. A statewide field survey and subsequent research are needed to determine the distribution of SBD and the long-term consequences this pathogen will have on our forest and urban ecosystems. ODF, USFS, OSU, and municipal staff and arborists are collaborating in the survey effort, monitoring, and research development of this emerging threat. In the spring and summer of 2023, the collaborators aim to conduct surveys throughout Oregon and provide disease diagnostics.

FOREST DISEASES

Swiss needle cast (SNC), an endemic foliar disease of Douglas-fir, is caused by the fungus *Nothophaeocryptopus gaeumannii*. This disease has been prominent in coastal Douglas-fir forests since the 1990s, particularly along the northern Oregon coast. Early research attributes epidemic levels of SNC to: post-harvest species-conversion to Douglas-fir within coastal stands, changes in climate, and planting of off-site seed sources from areas with lower disease pressure and tolerance.

Figure 40. SNC causes foliage loss and sparse yellow crowns in Douglas-fir, reducing volume growth (Gabriela Ritokova, ODF).

Healthy Douglas-fir trees typically retain foliage for 3-7 years, however, SNC-infected trees suffer from premature needle loss and the most infected trees may retain as little as one year of foliage. Premature needle loss is most obvious in the tops of trees during the late spring prior to bud break, resulting in yellowing needles and sparse crowns (Fig. 40). Infected trees appear yellow and can be identified via aerial survey (Fig. 41-43).

Premature foliar loss has a significant effect on the growth and yield of infected Douglas-fir plantations. A 2008 analysis of SNC-related volume growth loss found that 10-30 year old Douglas-fir plantations along the northern Oregon coast were experiencing an average annual cubic volume growth loss of approximately 22%, with the most infected stands exhibiting volume growth losses of as high as 50%. Subsequent analyses have shown that volume growth losses in the Oregon Coast Range exceed 190 million board feet per year. Although SNC rarely kills Douglas-fir, it can reduce its growth to the point where it can be outcompeted by species such as western hemlock. The effect of SNC on canopy density and light penetration can have profound effects on stand development, and differentiation and development of wildlife habitat and structure both within and below the tree canopy.

SNC research continues on a network of 106 plots distributed throughout the Oregon Coast Range and into southwest Washington that was established in 2013-2015 by the Swiss needle cast Research Cooperative at Oregon State University. This network was established to provide updated information on disease severity and distribution, Douglas-fir growth and yield, and provide a framework for addressing other SNC research

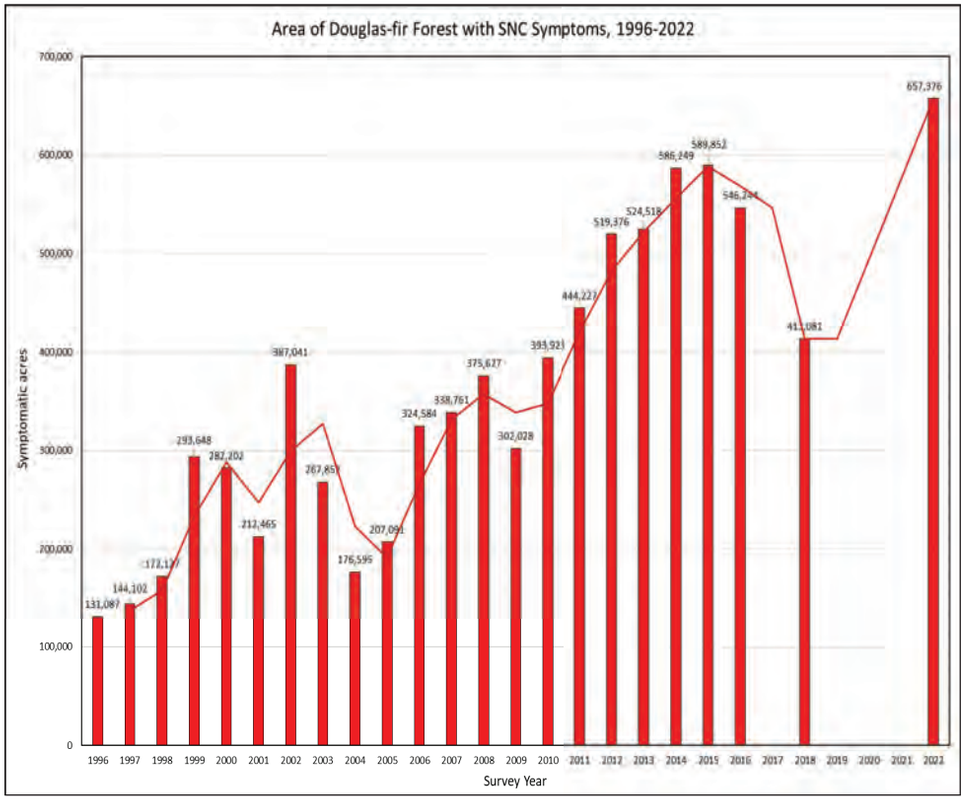


Figure 41. Area of Douglas-fir forests in western Oregon with symptoms of SNC detected during aerial surveys flown in spring 1996 – 2022. Some years (2017, 2019-2021) SNC was not surveyed due to changes in methods and COVID-19 interruptions.

questions. The first remeasurement of the updated plot network has already shown that cubic volume growth losses in the most heavily infected stands are at about 35%, a lower value than originally estimated in 2008. This lower number is thought to be due to the post-harvest replacement of Douglas-fir with western hemlock in coastal zones that are subject to the greatest intensity of disease pressure and demonstrating the poorest growth performance. Remeasurement data from the plot network has been used to estimate diameter and height increment modifiers, enabling the simulation of SNC-infected stands with growth models.

Figure 42. Heavily infected Douglas-fir stand with brown symptoms to the right of a green stand of western hemlock which is resistant to SNC.

Swiss needle cast resources:
http://tinyurl.com/odf-foresthealth
https://sncc.forestry.oregonstate.edu

Figure 43. Map of areas with SNC symptoms detected in 2022 during SNC aerial survey.

IMPORTANT INSECT AND DISEASE PESTS

	DOUGLAS-FIR	TRUE FIR	PINE
INSECTS	 • Douglas-fir beetle • Douglas-fir tussock moth • Western spruce budworm • Flatheaded fir borer • Cooley spruce gall adelgid* • Douglas-fir pole & engraver beetles*	 • Douglas-fir tussock moth • Western spruce budworm • Fir engraver beetle • **Balsam woolly adelgid**	 • Ips beetles (pine engraver & California five-spined) • Mountain pine beetle • Western pine beetle (ponderosa only) • Pine butterfly • Black pineleaf scale • Sequoia pitch moth*
DISEASES	• Laminated root rot • Blackstain root disease • Armillaria root disease • Swiss needle cast • Rhabdocline needle cast • Douglas-fir dwarf mistletoe • Heart and stem decays	• Annosus root disease • Interior needle blight • Fir needle rust • Fir broom rust • Heart and stem decays	• **White pine blister rust** (5-needle pines) • Diplodia tip blight • Dothistroma needle blight • Western gall rust • Blackstain root disease • Armillaria root disease • Pine dwarf mistletoes

	TANOAK	WHITE OAK	MAPLE
INSECTS	• **Spongy moth complex** 	• **Spongy moth complex** • **Mediterranean oak borer** • Oak looper* • Gall-making wasps & flies* • Leaf miners* 	• **Asian longhorned beetle** • **Spongy moth complex** • Various defoliators* 
DISEASES	• **Sudden oak death** (*Phytophthora ramorum*) • Armillaria root disease	• Armillaria root disease • Inonotus trunk rot	• Tar spot • Ganoderma trunk rot • Armillaria root disease • Sooty bark disease

*Secondary or aesthetic pests that are not typically tree-killers
BOLD: non-native, exotic insects and diseases

IN NATIVE OREGON TREES

HEMLOCK	SPRUCE	'CEDARS'	LARCH
 • Western hemlock looper	 • Spruce beetle • **Spruce aphid** • Cooley spruce gall adelgid*	 • Cedar bark beetles* • Amethyst borer* • Western cedar borer*	 • **Larch casebearer**
• Annosus root disease • Hemlock dwarf mistletoe • Hemlock needle rust • Heart and stem decays	• Spruce broom rust • Heart and stem decays	• **Port-Orford-cedar root disease** (POC only) • Cedar leaf blight (western redcedar only)	• Larch needle cast • Larch needle blight • Larch dwarf mistletoe

ALDER	ASH	POPLAR	MADRONE
• **Spongy moth complex** • Western tent caterpillar* • Alder flea beetle* 	• **Emerald ash borer** • **Spongy moth complex** 	• **Spongy moth complex** • **Satin moth*** • Webworm* 	• **Spongy moth complex** • Webworm* 
• Armillaria root disease • Nectria canker • Alder collar rot • Heart and stem decays		• Heart and stem decays	• Madrone leaf blight • Madrone branch dieback • Madrone stem cankers

Don't know your tree? ID here:

Oregon tree ID: https://oregonstate.edu/trees/name_common.html

FOREST HEALTH CONTACTS

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2600 State Street, Salem, OR 97310
https://tinyurl.com/odf-foresthealth

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Gabriela Ritokova	Pathologist	(503) 798-2404	gabriela.ritokova@odf.oregon.gov
Wyatt Williams	Invasive Species Spec.	(503) 798-5436	wyatt.williams@odf.oregon.gov
Harold Stevens	Aerial Survey Spec.	(503) 302-4259	harold.a.stevens@odf.oregon.gov

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STAFF REPORT

Agenda Item No.:	8
Topic:	*Oregon Kitchen Table Outreach and Engagement Report Work Session
Date of Presentation:	January 4, 2024
Contact Information:	Cal Mukumoto, State Forester Mike Wilson, State Forest Division Chief Joy Krawczyk, Public Affairs Director

SUMMARY

The Oregon Department of Forestry has partnered with Oregon Kitchen Table (OKT) (a program of the National Policy Consensus Center at Portland State University) to conduct community engagement related to the Forestry Program for Oregon revision and the Department's strategic plan. The Board of Forestry (Board) and department leadership will be introduced to the highlights of OKT's report on the community outreach, engagement and input received.

CONTEXT

In November 2022, the Board of Forestry initiated a joint effort with Department leadership to establish a subcommittee to develop a new strategic plan for the agency. The subcommittee recognized after the values assessment exercise conducted at the October 2022 Board retreat, the need to hear from Oregonians on what they value, what they envision, and what benefits or identities are tied to Oregon's forests. The Department affirmed with the Board on March 8, 2023, the aims and intent for the community engagement, with a particular focus on community members who are traditionally left out of policy decision-making spaces and processes. To assist the Board subcommittee, the department partnered with Oregon Kitchen Table to oversee this work and over the past year, the Department's Planning Division offered updates on OKT's progress, challenges, and opportunities.

Oregon Kitchen Table will present high-level themes that arose out of the recent engagement and will offer opportunities for the Board to directly engage in 2024. This work session for the Board and Department's Executive Team will be moderated by OKT with assistance from agency leadership as they consider how they may utilize the input received, how it can inform their work, and what more can be learned. This discussion will contribute to the development of the Department's plan to internally engage their agency staff and externally interface with the public at large in finalizing the joint strategic plan. As before, the Board subcommittee will be encouraged to offer guidance throughout the work session and seek clarification from others.

ATTACHMENT

(1) Oregon Kitchen Table Community Engagement and Outreach Timeline

FORESTS IN OREGON: COMMUNITY ENGAGEMENT

Updated Timeline DEC 2023

SEP

Engagement activities

- 9/7 - Survey launch

OCT

Complete Engagement activities

NOV

Analyze input

DEC

Draft report

JAN

Share common themes and perspectives

FEB

Meaning making and follow up engagement

MAR

Finalize OKT report

BOARD OF FORESTRY

Makes and shares decisions

Oregon's KITCHEN TABLE

Board Meeting Wrap Up