

**Oregon Department of Forestry Certified Burn Manager**

**ODF Burning & Smoke Management Website Overview**

COLLEGE OF FORESTRY Oregon State University

Photos credit: John Puntches

Presentation developed by John Puntches

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https://oregon.gov/odf

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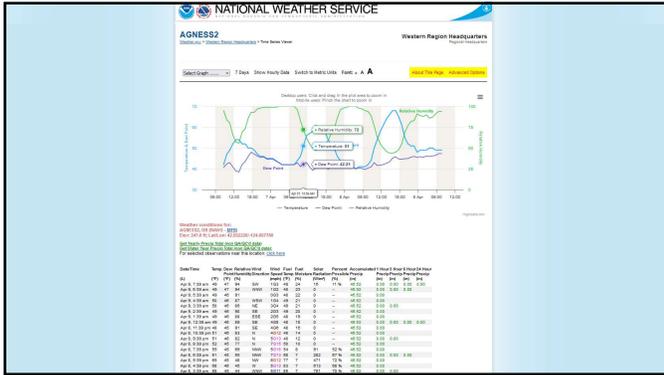
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Weather Data and Forecasts

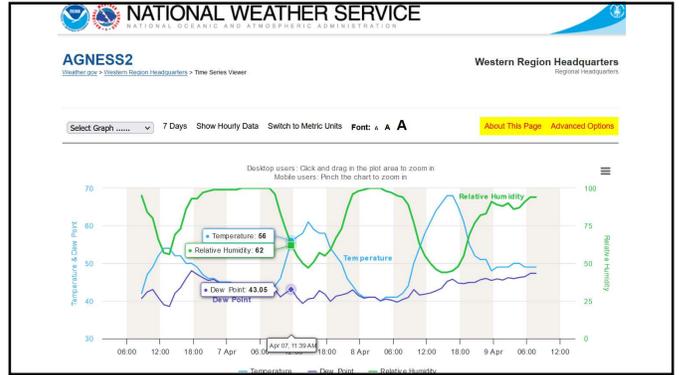
Selected ASOS and RAWS stations

Station	Recent Weather	NWS Forecast	NDFD Meteogram	NDFD Meteogram	Locator Map
Agness	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Albion	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Ashtland Airport	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Baldler Creek	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Bald Knob-Lookout	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Bald Mt.	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Black Rock	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Blue Canyon	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Blue Ridge	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Board Hollow	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Board Creek	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Boulder Creek	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Blue Rabbit	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Browns Well	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Bush Creek	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Burkey	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Bushhorn Springs	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Burnt Ridge	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map
Colton Lake	Recent	Forecast	Meteogram 12	Meteogram 34	Yahoo Map

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Weather conditions for:  
**AGNESS2, OR (RAWWS - MFR)**  
 Elev: 247.0 ft; Lat/Lon: 42.552220/-124.057780

Get Yearly Precip Total (from QA/QC'd data)  
 Get Water Year Precip Total (from QA/QC'd data)  
 For selected observations near this location: [click here](#)

Date/Time	Temp (F)	Dew Point (F)	Relative Humidity (%)	Wind Speed (mph)	Wind Direction	Fuel Temp (F)	Moisture (%)	Solar Radiation (W/m²)	Possible Precip (in)	1 Hour Precip (in)	3 Hour Precip (in)	6 Hour Precip (in)	24 Hour Precip (in)
Apr 9, 7:30 am	49	47	94	SW	1G3	49	24	16	11%	46.52	0.00	0.00	0.00
Apr 9, 8:30 am	49	47	94	WNW	1G2	48	23	0	--	46.52	0.00	0.00	0.00
Apr 9, 9:30 am	49	48	91		0G3	48	22	0	--	46.52	0.00		
Apr 9, 4:30 am	50	46	87	WSW	1G4	49	21	0	--	46.52	0.00		
Apr 9, 3:30 am	50	46	86	NE	3G4	49	21	0	--	46.52	0.00	0.00	
Apr 9, 2:30 am	49	46	90	SE	2G3	49	20	0	--	46.52	0.00		
Apr 9, 1:30 am	49	46	88	ESE	2G5	48	19	0	--	46.52	0.00		
Apr 9, 12:30 am	49	46	89	SE	4G8	48	18	0	--	46.52	0.00	0.00	0.00
Apr 8, 11:30 pm	48	45	91	SE	4G6	48	18	0	--	46.52	0.00		
Apr 8, 10:30 pm	51	46	83	N	4G12	48	14	0	--	46.52	0.00		
Apr 8, 9:30 pm	51	46	82	N	5G13	48	12	0	--	46.52	0.00	0.00	
Apr 8, 8:30 pm	52	45	77	N	7G15	50	10	0	--	46.52	0.00		
Apr 8, 7:30 pm	55	45	69	NNW	5G18	54	8	91	52%	46.52	0.00		
Apr 8, 6:30 pm	61	45	55	NNW	7G18	66	7	282	67%	46.52	0.00	0.00	0.00
Apr 8, 5:30 pm	65	45	48	NW	6G12	77	7	471	72%	46.52	0.00		
Apr 8, 4:30 pm	68	45	45	W	5G13	83	7	613	68%	46.52	0.00		
Apr 8, 3:30 pm	68	45	44	WNW	5G11	85	7	781	70%	46.52	0.00	0.00	
Apr 8, 2:30 pm	66	43	44	W	5G10	82	8	841	72%	46.52	0.00		
Apr 8, 1:30 pm	64	43	46	W	5G10	80	8	856	72%	46.52	0.00		
Apr 8, 12:30 pm	61	42	50	E	4G7	75	10	754	67%	46.52	0.00	0.00	0.00
Apr 8, 11:30 am	59	42	55	N	1G5	65	13	496	46%	46.52	0.00		

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Forestland classification  
 Forest benefits  
 Recreation  
 Forest resources

**Fuel load estimating tools**

- Digital Photo Series (DPS), a web-based project to provide the Natural Fuels Photo Series data in electronic form
- Series photo series for quantifying forest residues in the Douglas-Fir-Hemlock type of the Willamette National Forest
- Photo series for quantifying natural forest residues in common vegetation types of the Pacific Northwest
- Handbook for Inventorying Downed Woody Material
- Guidelines for Estimating Volume, Biomass, and Smoke Production for Piled Slash
- Predictions of the behavior and resistance to control: For use with photo series for the Douglas fir-hemlock type and the coastal Douglas fir-hemlock type
- Predictions of the behavior and resistance to control: For use with photo series for the ponderosa pine type, ponderosa pine and associated species type, and lodgepole pine type
- Series photo series for quantifying forest residues in coastal Oregon forests: second-growth Douglas-fir, western hemlock type, western hemlock-Sitka spruce type, and red alder type
- Predicting fuel consumption from prescribed burns on conifer clearcuts in western Oregon
- Piled fuels biomass & emissions calculator
- SIMPLE Fuel Loading Tool (download) down load on photohost Google browser
- SIMPLE Transact tab sheet and instructions
- SIMPLE Transact video

Contact  
 Stacy McCenter  
 Mitigation Program Manager  
 503-791-0296  
 Email

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**Fuel-Loading Tool Home Page**

Click on Burn Type Below:

**Piles** **Broadcast & Underburns**

Video Tutorials Showing How To:  
[Use the Piles Calculator](#) [Use the Broadcast & Underburns Calculator](#)

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**Simple Fuel-Loading Tool Broadcast & Underburns**

Video Tutorials Showing How To:  
[Do a Transact](#) [Use this Simple Fuel-Loading Calculator](#)

Simple Fuel-Loading Tool Technical Files:  
[Transact Instructions/Tally Sheet](#) [Reference Guide \(Equations\)](#)

Unit name: \_\_\_\_\_

- What is the *primary fuel species* for downed woody debris (DWD)?  
 \_\_\_\_\_
- How many *feet* is your transect for counting .00"-24" DWD?  
 (6 to 10; inc. of 1) \_\_\_\_\_
- How many *pieces* of .00"-24" DWD did  
 \_\_\_\_\_

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for downed woody debris (DWD)?

2.

Douglas-fir; Chinkapin; Walnut

3. Other Fir; Pine; Cedar; Spruce; Poplar

4. Juniper; Maple; Ash; Larch

5. Hemlock; Other Softwood

Hickory

Madrone; Oak

Tanoak

Other Hardwood; Birch; Elm

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8. How many *feet* is your transect for counting  $\geq 3.00"$  DWD? (35 to 66; inc. of 1)

9. *Sound pieces* ( $\geq 3"$  diameter):

a. *How many* did you count? (0 to 100; inc. of 1)

b. *Average diameter* (inches)? (3 to 100; inc. of 1)

10. *Rotten pieces* ( $\geq 3"$  diameter):

a. *How many* did you count? (0 to 100; inc. of 1)

b. *Average diameter* (inches)? (3 to 100; inc. of 1)

11. What is the *average slope* (%) of your transect? (0 to 110; inc. of 1)

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15. What is the *primary fuel species* for litter?

16. What is the *average depth* (inches) of the litter? (0 to 24; inc. of .1)

17. What *percent of the ground* is covered by litter (0 to 100; inc. of 1)

18. What is the *average depth* (inches) of the duff? (0 to 36; inc. of .1)

19. What *percent of the ground* is covered by duff? (0 to 100; inc. of 1)

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15. What is the *primary fuel species* for litter?

16.  (inches) of the litter? (0 to 24; inc. of .1)

17.  *percent of the ground* is covered by litter (0 to 100; inc. of 1)

18.  (inches) of the duff? (0 to 36; inc. of .1)

19.  *percent of the ground* is covered by duff? (0 to 100; inc. of 1)

20.  *fuel species?*

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13. *Sound stumps* ( $\geq 3"$  diameter):

a. Average *stumps* per acre? Note: 10 x (stumps per .1 acres) (0 to 200; inc. of 1)

b. Average *height* (inches)? (1 to 72; inc. of 1)

c. Average *diameter* (inches)? (3 to 72; inc. of 1)

14. *Rotten stumps* ( $\geq 3"$  diameter):

a. Average *stumps* per acre? (0 to 200; inc. of 1)

b. Average *height* (inches)? (1 to 72; inc. of 1)

c. Average *diameter* (inches)? (3 to 72; inc. of 1)

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18. What is the *average depth* (inches) of the duff? (0 to 36; inc. of .1)

19. What *percent of the ground* is covered by duff? (0 to 100; inc. of 1)

20. What is the *primary shrub species*?

21. What *percent of the ground* is covered by the primary live shrub species? (0 to 100; inc. of 1)

22. What is the *average height* (inches) of the primary live shrub species? (0 to 72; inc. of 1)

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18. What is the *average depth* (inches) of the duff? (0 to 36; inc. of 1)

19. What *percent of the ground* is covered by duff? (0 to 100; inc. of 1)

20. What is the *primary shrub species*?

21.

22.

None (Skip Questions 21 & 22)

Broadleaf

Evergreen

Sage/Bitterbrush

Submit Clear Inputs Fuel-Loading Home

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Smoke management forecasts

- Western Oregon & Deschutes National Forest (subscribe via email)
- Klamath Falls & Lakeview (subscribe via email)
- Northwest Oregon (subscribe via email)
- Standard guidance matrix

Smoke management forms

Outdoor burning

Check with your local ODF district, forest protective associations or local fire department before burning debris. Burn permits are required on all ODF-protected lands during fire season. Many areas prohibit all burning when fire danger increases.

Map of smoke-regulated areas

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SMOKE MANAGEMENT FORECAST AND INSTRUCTIONS  
SALMON FORESTRY WEATHER CENTER  
OREGON DEPARTMENT OF FORESTRY

ISSUED: Monday, April 8, 2024 2:30 PM Pete Parsons

\*\*\*\*\* Instruction Zones Update \*\*\*\*\*

The National Weather Service is changing borders and numbering of their fire zones. ODF will use the previous zone boundaries for smoke management and not change with the updates.

A link to ODF's smoke forecast zones is at the bottom of the instructions in the Special Notes section. (<https://www.oregon.gov/odf/fire/documents/smoke-forecast-zone-map.pdf>)

1. DISCUSSION AND FORECAST FOR THE WESTERN OREGON AREA FORECAST ZONES 601-623 and 639

SHORT-TERM DISCUSSION

A building upper-level ridge was not strong enough to prevent a warm front from bringing light rain to the extreme NW zones by early this afternoon and spreading clouds as far south as SW Oregon. Light rain will extend south to about a line from Newport to Corvallis this evening with clouds extending to the California border.

The upper-level ridge builds slightly on Tuesday. Areas of morning light rain north early will give way to partly cloudy skies. Expect mostly sunny skies south. Temperatures will warm to near average north and to about 5°F above average south. Freezing levels will rise to 6-7000 feet, but the air aloft should remain cool enough for good daytime mixing. Transport winds will be mostly westerly across the northern zones, veering to the NW across the southern zones.

EXTENDED DISCUSSION

The upper-level ridge strengthens slightly on Wednesday with continued westerly flow aloft. Sunny skies should help temperatures warm to about 5°F above average north and 10°F above average south. Freezing levels will rise to 7-8000 feet, which should begin to suppress daytime mixing. Transport winds will slacken and turn NW-N.

The upper-level ridge moves over Idaho on Thursday with SW flow aloft over Oregon. That will force a weak surface thermal trough into western Oregon, initiating a cooling onshore flow across western Oregon. Onshore flow should penetrate Central

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to S-SW over Oregon. That will increase moisture and temperatures aloft, decreasing mixing heights, while also making the air mass aloft more unstable. Showers or thundershowers are possible, mainly in the south. Transport winds will be variable and erratic near showers.

2. DISPERSION

TUESDAY

Zone 601, 602, 603 and 612 (North Coast Range):

MORNING  
Mixing height below 3000 ft early rising to 3500 - 4500 ft by late morning.  
Transport wind WSW to WNW at 8 - 12 mph.  
Surface wind SW to W at 4 - 8 mph.

AFTERNOON  
Mixing height rising above 5000 ft.  
Transport wind similar to morning.  
Surface wind WSW to WNW at 5 - 9 mph.

EVENING  
Mixing height 1500 - 2500 ft.  
Transport wind WNW to WNW at 6 - 12 mph.  
Surface wind WNW to WNW at 5 - 9 mph.

Zone 605-611 and 639 (North Cascades):

MORNING  
Mixing height below 3000 ft early rising to 3500 - 4500 ft by late morning.  
Transport wind WSW to WNW at 10 - 18 mph.  
Surface wind SW to WNW at 6 - 10 mph.

AFTERNOON  
Mixing height rising above 5000 ft.  
Transport wind similar to morning.

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3. BURNING INSTRUCTIONS FOR ALL ZONES IN THE WESTERN OREGON AREA  
- Valid for burning done Tuesday, April 9, 2024.

Coast Range

\*\*\*Avoid ignitions before 11 a.m. in Zone 615, 616, 618, 619 and 620\*\*\*

Zone 601 and 612  
Units should be 1500 tons or less, spaced 3 miles apart, and 5 miles from downwind SSRAs. Restrict units in or near corridors to 750 tons or less.

Zone 602 and 603  
Units should be 750 tons or less, spaced 3 miles apart, and 5 miles from downwind SSRAs. Limit burning in or near corridors. Higher tonnage is possible south of the Sluiskaw River in Zone 603. Call the forecaster.

Zone 615, 618, and 619  
Use standard guidance matrix. (See section 5 below.) Avoid burning directly upwind of the North bend/Coos Bay SSRa.

Zone 616 west of RSW  
Units should be 1500 tons or less, spaced 6 miles apart, and 8 miles from downwind SSRAs.

Zone 616 east of RSW  
Units should be 1000 tons or less, spaced 6 miles apart, and 8 miles from downwind SSRAs. Restrict units to 500 tons or less south of T365.

Zone 620  
Units should be 600 tons or less, spaced 6 miles apart, and 8 miles from downwind SSRAs. Higher tonnage is possible south of the Rogue River. Call the forecaster.

Cascades

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Smoke management forecasts

Smoke management forms

- Smoke registration instruction for landowners
- Smoke registration form - Filable Excel
- Smoke registration form - Printable Excel
- Smoke registration form - Printable Word
- Smoke registration form - Filable form part 1
- Smoke registration form - Filable form part 2
- Smoke registration form - Filable form part 3
- Online smoke audit forms
- Intrusion report guidance A-E
- Intrusion report guidance F
- Smoke intrusion report form 1-4-1-301
- Aerial smoke monitoring form - Filable Excel

Outdoor burning

Check with your local ODF district, forest protective associations or local fire department before burning debris. Burn permits are required on all ODF-protected lands during fire season. Many areas prohibit all burning when fire danger increases.

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**Smoke Management Registration (Part 1 of 3)**

Fire Service Name: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Signature: \_\_\_\_\_

Operator Name (if different than fire service): \_\_\_\_\_

Registration #: \_\_\_\_\_

County: \_\_\_\_\_

Local Authority: \_\_\_\_\_

Longshore: \_\_\_\_\_

Specialty: \_\_\_\_\_

Equipment: \_\_\_\_\_

Signature of Operator: \_\_\_\_\_ Date: \_\_\_\_\_

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**Smoke Management Registration**

**Burn Plan (Registration Part 2)**

Operator: \_\_\_\_\_ Phone: \_\_\_\_\_

Planned Date of Burn: \_\_\_\_\_ Planned Location: \_\_\_\_\_

City/Town: \_\_\_\_\_ Landfill: \_\_\_\_\_/N/A Tons Planned: \_\_\_\_\_ Tons Planned: \_\_\_\_\_

Special Problems and Mitigation Instructions: \_\_\_\_\_

Signature of Operator: \_\_\_\_\_ Date: \_\_\_\_\_

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**Smoke Management Registration**

**Accomplishment Section, (Registration Part 3)**

Operator Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Unit Name: \_\_\_\_\_ Registration #: \_\_\_\_\_

Actual Burn Date: \_\_\_\_\_ Actual Ignition Time: \_\_\_\_\_

Actual Acres Burned: \_\_\_\_\_ Landing R/W Tons Burned: \_\_\_\_\_

Pile Tons Burned: \_\_\_\_\_ Broadcast Tons/Ac. Burned: \_\_\_\_\_

Total Broadcast Tons Burned: \_\_\_\_\_ Total Tons Burned: \_\_\_\_\_

Ignition Duration: \_\_\_\_\_ Achieved Rapid Consumption: \_\_\_\_\_ Shrub Consumption: \_\_\_\_\_

Duff Fuel Moisture: \_\_\_\_\_ Fuel Moisture: \_\_\_\_\_ 1000hrs: \_\_\_\_\_

Fuel Moisture Code:  NFDR-10 (1000hr moisture from NFDRS model)  
 Adj-RH (user adjusted moistures)  
 Weighted (oven weighted samples)

Days Since Significant Rain: \_\_\_\_\_ Wind Speed: \_\_\_\_\_

Additional Comments: \_\_\_\_\_