



Spring-Burning Comparison

Jan – Jun	Total Tons Burned	Acres Burned	Units Burned	Ignitions
2019*	168,377	26,207	187	628
2020	77,029	15,275	143	425
2021	172,683	31,700	236	583
2022	61,648	11,227	90	321
2023	106,904	18,021	231	581
2024	194,071	27,460	227	608
2025	145,627	24,918	173	501
7-Year Avg	132,334	22,115	184	521

Based on Smoke Data System database

^{*} Rule change 3-1-19



Annual-Burning Comparison								
Jan – Dec	Total Tons Burned	Acres Burned	Units Burned	Ignitions				
2022	902,275	125,784	1,400	2,919				
2023	1,079,329	155,972	1,594	3,538				
2024	1,033,277	147,407	1,376	3,218				
2025 (so far)	145,627	24,918	173	501				
3-Year Avg	1,004,960	143,054	1,457	3,225				

Based on Smoke Data System database

≈ 7 times more tonnage is burned in the fall vs the spring!



1 "Smoke Intrusion (Bend)"

Caused by 1 Burn (West Bend Project)

23 "Smoke Incidents"

Caused by 19 Different Burns

Additional investigations without "Smoke Incidents"

Thresholds for Smoke Intrusions (SSRAs) & Smoke Incidents

1-hr PM2.5*

24-hr PM2.5 24-hr NAAQS Exceedance

 $70 \mu g/m3$

26 µg/m3

 $35 \mu g/m3$



1 "Smoke Intrusion (Bend)"

Caused by 1 Burn (West Bend Project)

Date(s)	SSRA	Hrs	1-hr Peak PM 2.5 (µg/m3)	24-hr PM 2.5 (բզ	Owner g/m3)
6/3	Bend	24*	229.7	28.1	USFS

Thresholds for Smoke Intrusions (SSRAs) & Smoke Incidents

1-hr PM2.5*

24-hr PM2.5 24-hr NAAQS Exceedance

 $70 \mu g/m3$

26 µg/m3

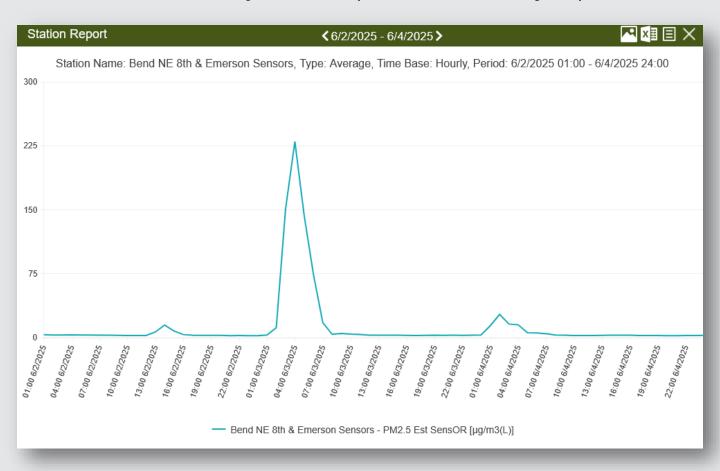
 $35 \mu g/m3$

(ending 0400 PST) (*24-hr intrusion)



1 "Smoke Intrusion (Bend)"

Caused by 1 Burn (West Bend Project)





23 "Smoke Incidents"

Caused by 19 Different Burns

Any smoke from prescribed burning entering an SSRA is at least a "Smoke Incident"

Thresholds for Smoke Intrusions (SSRAs) & Smoke Incidents

1-hr PM2.5*

24-hr PM2.5 24-hr NAAQS Exceedance

 $70 \mu g/m3$

26 µg/m3

 $35 \mu g/m3$



23 "Smoke Incidents"

Caused by 19 Different Burns

Non SSRAs must meet or exceed the "Smoke Intrusion" threshold for SSRAs to have a "Smoke Incident."

Thresholds for Smoke Intrusions (SSRAs) & Smoke Incidents

1-hr PM2.5*

24-hr PM2.5 24-hr NAAQS Exceedance

 $70 \mu g/m3$

26 µg/m3

 $35 \mu g/m3$



23 "Smoke Incidents"

#	Date(s)	Time begin PST (24 hr)	Duration (hrs)	Peak PM _{2.5} (μg/m³)	Area Affected	Responsible Agency	Burn size (tons); Location (TRS)
							4-16: 1673 tons (239 acres at 7 tons
							per acre) understory burning;
							3S 36E S7 (3600' elevation);
							Ignition 1230 - 1530 PDT
							4-17: 960 tons (160 acres at 6 tons
							per acre) understory burning;
							3S 36E S8 (3600' elevation);
							Ignition 1142 - 1515 PDT;
1	4-18	0000	9	21.5	La Grande	USFS	Overnight smoldering
							1650 tons (275 acres) understory
							burning;
							35S 7E S13&24 (5000' elevation);
							Ignition 1100 - 1545 PDT;
2a	4-21	2200	5	124.6	Chiloquin	USFS	Overnight smoldering
2b	4-22	0700	3	27.4	Klamath Falls	USFS	Same burn as above
							1870 tons (187 acres) understory
							burning;
	4-21	1800	1	23.3			10S 38E S26 (1245' elevation);
	4-22	0400	4	53.1			Ignition 1100 - 1601 PDT;
3	4-23	0300	5	13.4	Baker City	USFS	Overnight smoldering



23 "Smoke Incidents"

#	Date(s)	Time begin PST (24 hr)	Duration (hrs)	Peak PM _{2.5} (µg/m³)	Area Affected	Responsible Agency	Burn size (tons); Location (TRS)
							1288 tons (161 acres) understory
							burning;
							10S 36E S13 (4400' elevation);
							Ignition 1100 - 1500 PDT
							750 tons (150 acres) understory
							burning;
							10S 36E S13 (5000' elevation);
							Ignition 1100 - 1530 PDT;
4	4-24	0200	4	16.3	Baker City	USFS	Overnight smoldering
							1300 tons (173 acres) understory
							burning;
							21S 11E S23 (4700' elevation);
							Ignition 1030 -1430 PDT;
5	4-24	0700	1	87.4	Sunriver	USFS	Overnight smoldering
							484 tons (121 acres) understory
							burning;
							2N 44E S29 (4500' elevation);
							Ignition 1200 - 1600 PDT;
6	4-25	1800	13	20.7	Enterprise	USFS	Overnight smoldering



23 "Smoke Incidents"

#	Date(s)	Time begin PST (24 hr)	Duration (hrs)	Peak PM _{2.5} (μg/m³)	Area Affected	Responsible Agency	Burn size (tons); Location (TRS)
							1413 tons (471 acres) underburn;
							18S 11E S18 (4400-4600' elevation);
	4-25	2000	7	24.0			Ignition 1000 - 1400 PDT;
7	4-26	2000	12	29.2	Bend	USFS	Overnight smoldering
							1000 tons (200 acres) understory
							burning;
							10S 38E S25 (4000' elevation);
							Ignition 1048 - 1520 PDT;
8	5-1	2300	12	43.5	Baker City	USFS	Overnight smoldering
							2000 tons (500 acres) understory
							burning;
							3N 45E S18 (4700' elevation);
							Ignition 1230 - 1825 PDT;
9	5-1	2200	9	26.9	Enterprise	USFS	Overnight smoldering



23 "Smoke Incidents"

#	Date(s)	Time begin PST (24 hr)	Duration (hrs)	Peak PM _{2.5} (μg/m³)	Area Affected	Responsible Agency	Burn size (tons); Location (TRS)
					Bend		
					(NE 8th &		
					Emerson)		
					Other areas of		333 tons (111 acres) understory
					Bend		burning;
				203.5*	had smaller		18S 11E S32 (4200' elevation); Ignition 1025 - 1440 PDT;
10	5-6	2000	13	(1-hr exempt)	impacts	USFS	Overnight smoldering
							512 tons (128 acres) understory
							burning;
							34S 8E S31 (5200' elevation);
							Ignition 1100 - 1720 PDT;
11a	5-9	0100	1	95.4	Chiloquin	USFS	Ovenight smoldering
11b	5-9	0400	7	20.3	Klamath Falls	USFS	Same burn as above



23 "Smoke Incidents"

#	Date(s)	Time begin PST (24 hr)	Duration (hrs)	Peak PM _{2.5} (μg/m ³)	Area Affected	Responsible Agency	Burn size (tons); Location (TRS)
					Bend		
					(NE 8th &		
					Emerson)		
					Other areas of		1250 tons (250 acres) understory
					Bend		burning; 21S 11E S26 (4800' elevation);
					had smaller		Ignition 1020 - 1600 PDT;
12	5-9	0100	10	32.1	impacts	USFS	Ovenight smoldering
					Bend		
					(Ponderosa		
					Elementary)		
					Other areas of		580 ton (145 acres) understory
					Bend		burning;
					had smaller		21S 11E S26 (4800' elevation); Ignition 1111 -1621 PDT;
13	5-10	0200	7	61.1	impacts	USFS	Overnight smoldering
							200 tons (23 acres) understory
					Ashland		burning;
	5-8 &	1900	3	19.7	(Fire		39S 1E S17 (3000' elevation); Ignition 1000 - 1400 PDT;
14	5-9	0400	2	7.6	Department)	USFS	Initial & smoldering impacts



23 "Smoke Incidents"

#	Date(s)	Time begin PST (24 hr)	Duration (hrs)	Peak PM _{2.5} (μg/m ³)	Area Affected	Responsible Agency	Burn size (tons); Location (TRS)
							320 tons (40 acres) understory
					Ashland		burning;
							39S 1E S17 (3000' elevation);
	5-9 &	1500	6	36.1	(Fire		Ignition 1000 - 1530 PDT;
15	5-10	0400	4	13.9	Department)	USFS	Initial & smoldering impacts
					Bend		
					(Pump Station)		
					Other areas of		708 tons (236 acres) understory
					Bend		burning;
					had smaller		21S 11E S20&29 (4300' elevation);
							Ignition 1100 - 1507;
16	5-23	0600	2	43.7	impacts	USFS	Overnight smoldering
							348 tons (58 acres) understory
							burning;
							35S 7W S1 (1600' elevation);
							Ignition 900 - 1500 PDT;
17	5-22	1100	5	13.7	Grants Pass	BLM	Initial smoke



23 "Smoke Incidents"

Caused by 19 Different Burns

#	Date(s)	Time begin PST (24 hr)	Duration (hrs)	Peak PM _{2.5} (µg/m³)	Area Affected	Responsible Agency	Burn size (tons); Location (TRS)
					Bend		
					(Pump Station)		
					Other areas of		632 tons (158 acres) understory
					Bend		burning;
					had smaller		14S 9E S24 (3300' elevation);
					_		Ignition 1000 - 1300 PDT;
18	6-2	1200	4	20.6	impacts	USFS	Initial smoke

Burn #18 - near Sisters

Caused "Smoke Incident" in Bend



Burn #19 - West Bend Project burn on 6-2-25

Caused "Smoke Incidents" in Redmond and Bend (in addition to "Smoke Intrusion" in Bend on 6-3)

#	Date(s)	Time begin PST (24 hr)	Duration (hrs)	Peak PM _{2.5} (µg/m ³)	Area Affected	Responsible Agency	Burn size (tons); Location (TRS)
							565 tons (113 acres) understory
							"West Bend" burning;
							18S 11E S27 (4000' elevation);
	6-3	0400	4	27.7			Ignition 1000 - 1412;
19	6-4	0300	4	8.4	Redmond	USFS	Overnight smoldering
					Bend		
					(NE 8th &		
					Emerson)		
					Other areas of		
					Bend		
	6-4	0000	7	26.9	had smaller		
19b	6-5	0100	6	14.1	impacts	USFS	Same burn as above
					Bend		
					(Pump Station)		
					Other areas of		
					Bend		
					had smaller		
190	6-5	2300	10	9.1	impacts	USFS	Same burn as above



Smoke Incident Notes

- 20 of the 23 were in SSRAs (often the result of overnight smoldering)
- Burning would have resulted in 20 "Smoke Intrusions" before the 2019 rule change
 - All 3 West Bend Burns (4/24; 5/6; 6/2) caused "Smoke Incidents" in SSRAs

Smoke Intrusion (1) Notes

- 24-hr intrusion in Bend on 6/3
- Caused by smoldering from West Bend Project Burn on 6/2
 - Impacts to the public were minimized!
- Coordinated effort between multiple agencies and the public
 - Optimal weather pattern utilized for smoke dispersion
 - Short "ignition window" and "active burn mop-up"
 - Community Response Plan developed/utilized



Smoke Management Program's Dual Mandate

- Maximize prescribed burning opportunities
- Minimize smoke emissions and smoke impacts to the public

Moving Forward Proactively

- Focus less on what has happened (i.e., reporting on smoke)
- Focus more on Community Response Programs (i.e., preparing for smoke)
 - Your Feedback is Welcome!

