

Oregon Smoke Management Annual Report

2003



"STEWARDSHIP IN FORESTRY"

**OREGON DEPARTMENT OF FORESTRY
FIRE PROTECTION DIVISION
SMOKE MANAGEMENT AND FUELS**

OREGON SMOKE MANAGEMENT
ANNUAL REPORT
2003

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OREGON DEPARTMENT OF FORESTRY

SMOKE MANAGEMENT 2003 ANNUAL REPORT

2003 SUMMARY

- **Acres burned** – In western Oregon 46,017 acres were burned, while 92,679 acres were burned in eastern Oregon. Acres treated in western Oregon is within two percent of the ten year average. Eastern Oregon burning was 79% of the average.
- **Intrusions** – Two light smoke intrusions into a designated area occurred in 2003. One impact was reported from burning in the Klamath-Lakeview voluntary area.
- **Smoke impact** – Eight hours of smoke impact in a designated area were recorded. All impacts were light intensity.
- **Emissions** – In western Oregon emissions continued to gradually decrease, remaining well below the emission goal set for the year 2000. In eastern Oregon emissions slightly from previous years.
- **Visibility** – Visibility impairment of the Class 1 wilderness areas was above normal, due primarily to impacts from wildfires.

INTRODUCTION

The Oregon Smoke Management Plan was developed as a voluntary program in 1969 and adopted as a regulatory program by the State Forester and the Environmental Quality Commission (EQC) in 1972. The plan has gone through several major revisions since then. The last major revision to the plan was completed in 1992. A review committee was established in 2002. This committee has begun an extensive review of the Smoke Management Plan.

The plan's overall purpose is to keep the smoke from forestland prescribed burning from being carried to certain "designated areas" and other areas sensitive to smoke. The plan is a framework through which emission reduction goals were achieved. The State Forester administers the plan, in cooperation with landowners, land management agencies and air quality agencies. The plan applies to state, federal, and private forestland in Oregon. Mandatory smoke management constraints apply to burning in western Oregon, the Deschutes National Forest, and federal forest lands in the Blue Mountains of Northeast Oregon. Voluntary programs are in effect in the Klamath Falls and Lakeview areas, as shown in Figure 1A. The Oregon Smoke Management Plan contains six principle objectives. These objectives are to:

2. Minimize smoke intrusions into designated population areas,
3. Reduce emissions from prescribed burning,
4. Protect visibility in Class 1 wilderness areas during the summer months,
5. Maximize burning opportunities while minimizing emissions, and
6. Coordinate with other state smoke management programs.

2003 PROGRAM HIGHLIGHTS

Overview:

Prescribed burning in western Oregon was below average with a total of 41,206 acres accomplished (see Table 1). In eastern Oregon, acres burned was also below average with 92,679 acres treated. This was just under 80 percent of the average for the last ten years.

1. Protect public health,

Program Review:

An in-depth review of the smoke management program is underway. A review committee consisting of a broad spectrum of interests was formed in late 2002. This group is conducting the most thorough assessment of the smoke management program since its inception in 1969. The committee report is expected in 2004 and will be used to update and modernize the program operations.

Audits:

The Oregon Smoke Management Plan requires an annual audit of approximately one-percent of the slash burns conducted in the restricted area. Approximately one-half of the audits are conducted on the day of the burn and one-half are conducted before the burn. The purpose of these audits is to help monitor the effectiveness of the Oregon Smoke Management Program.

Pre-burn audits were conducted on randomly selected, registered units before burning. Ten pre-burn audits were desired and eight were completed. Burn day audits were conducted on the day the units were burned. The auditors randomly selected units for burn day audits. Ten burn day audits were desired and five were completed.

Audited units were burned in a manner consistent with the burn permits, burn plans and written and verbal instructions in regard to air quality. The majority of units audited were close in reported tonnage burned vs. audited consumption.

Compliance with Air Quality Standards

There were no violations of either the annual or 24-hour PM10 or PM2.5 air quality standards as a result of forestland prescribed burning during 2003. Two units, totaling 59 tons, were burned in the Coast Range during the summer visibility protection period. No visibility impairment from these burns was detected. No burning was conducted elsewhere.

Meteorological Services

Oregon Department of Forestry meteorologists provide weather forecasts and burning instructions and advisories for western Oregon (restricted area), federal lands in northeast Oregon, and voluntary areas around Klamath Falls, La Grande, and Lakeview. ODF meteorologists provided assistance to the Lakeview wood stove smoke control program. Through a cooperative agreement with DEQ they are making the open burning forecast for the Willamette Valley north of Lane County during the period that field burning is not being conducted.

Other forecast services included weather support for significant weather events (heavy rain, wind, etc.). ODF meteorologists provide watches and warnings for potential debris flow landslides caused by excessively heavy rains in western Oregon. Two advisories, and no warnings, were issued in 2001.

PROGRAM ACCOMPLISHMENT DATA

The following tables and figures provide detailed information of smoke management program. The data details accomplishments for 2002 and comparative information with previous years.

Figure 1A

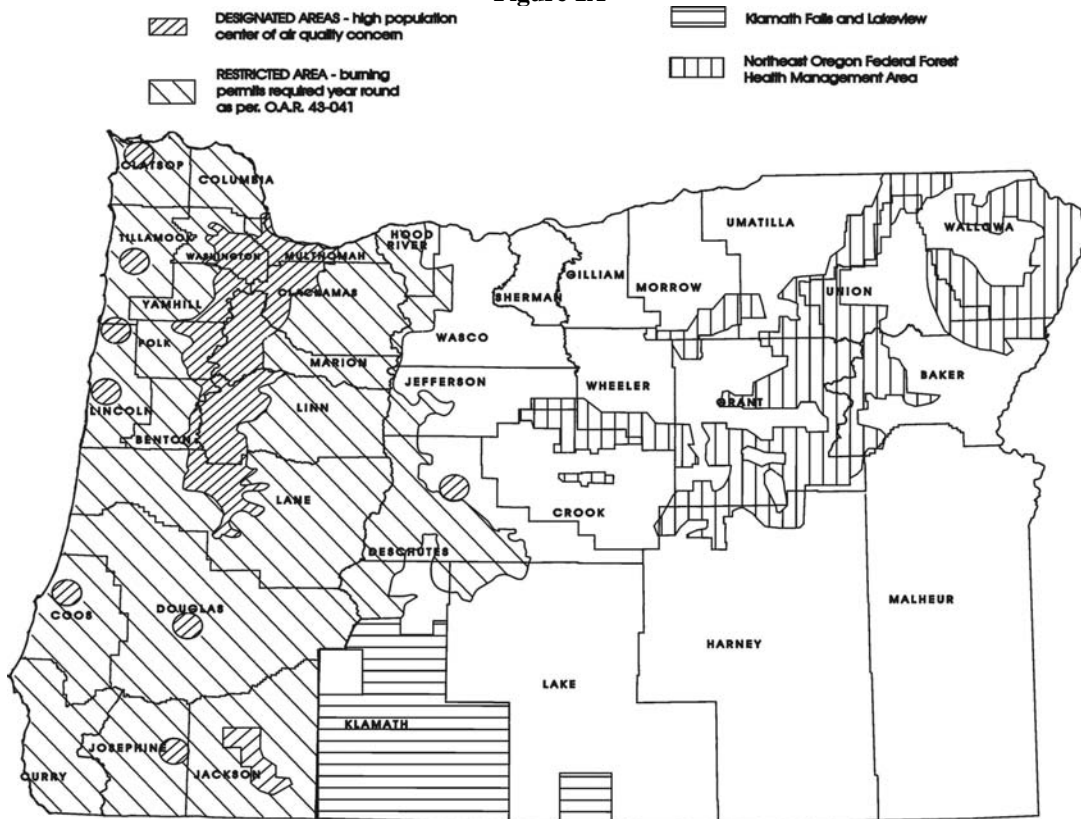
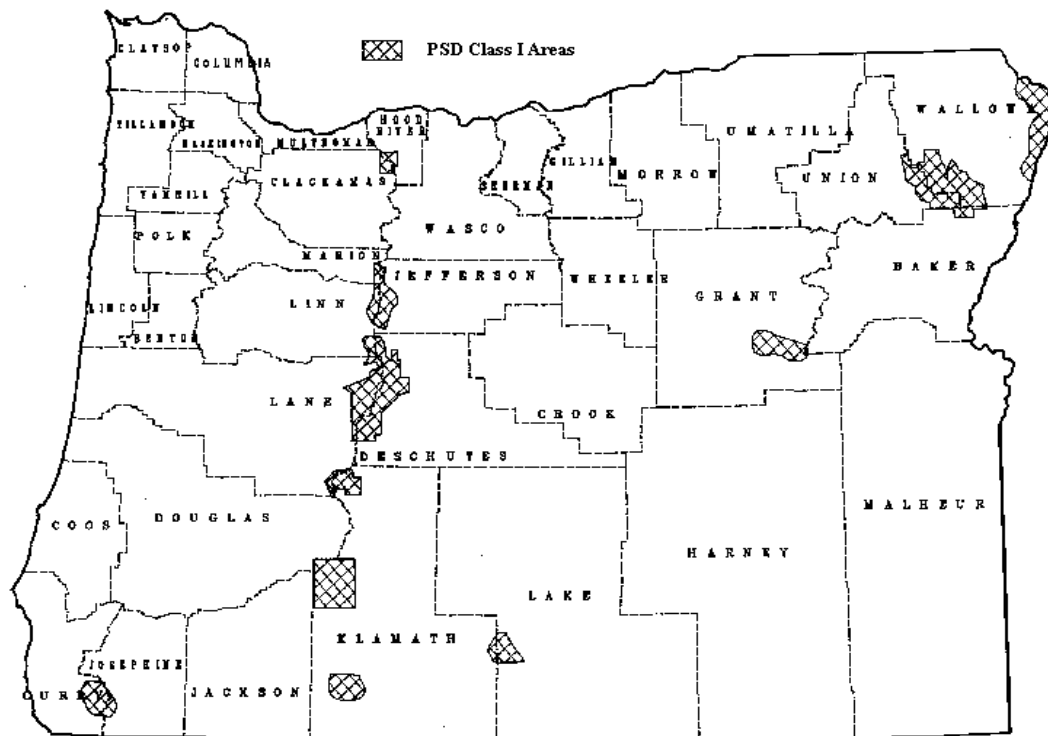


Figure 1B



**TABLE 1
1994-2003 ACCOMPLISHMENT SUMMARY**

Burning totals within the restricted area:

Year	Total No. Units	No. Units Burned	Acres Burned	Tons Burned	No. Intrusions
1994	3,351	2,260	38,366	824,523	7
1995	3,408	2,498	43,237	751,373	6
1996	3,041	2,205	38,755	766,414	6
1997	3,334	2,454	45,641	888,723	4
1998	3,092	2,313	47,494	809,729	3
1999	3,010	2,302	48,292	866,964	8
2000	3,437	2,674	57,035	978,156	4
2001	3,129	2,340	50,319	966,522	4
2002	3,430	2,427	56,713	886,987	1
2003	3,551	2,329	46,017	842,918	2
Average	3,278	2,380	47,187	858,231	5

Burning totals outside of the restricted area:

Year	Total No. Units	No. Units Burned	Acres Burned	Tons Burned
1994	1,749	867	66,360	868,346
1995	2,455	1,482	154,948	780,501
1996	1,699	880	98,799	740,972
1997	1,861	1,049	138,699	1,036,111
1998	1,379	742	128,654	1,730,481
1999	1,418	867	143,876	827,115
2000	938	668	143,387	746,773
2001	1,073	569	61,058	428,133
2002	1,109	698	139,552	678,653
2003	1,288	650	92,679	609,582
Average	1,497	847	116,801	844,667

Figure 2A

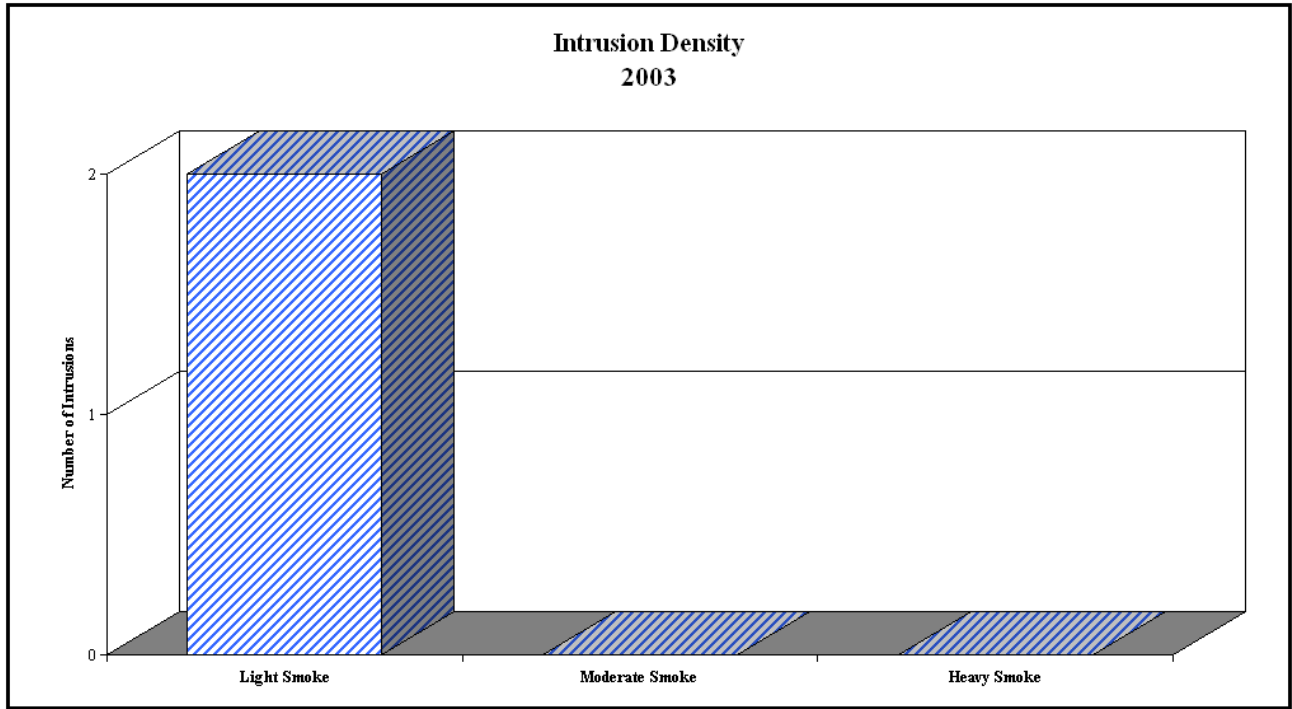


Figure 2B

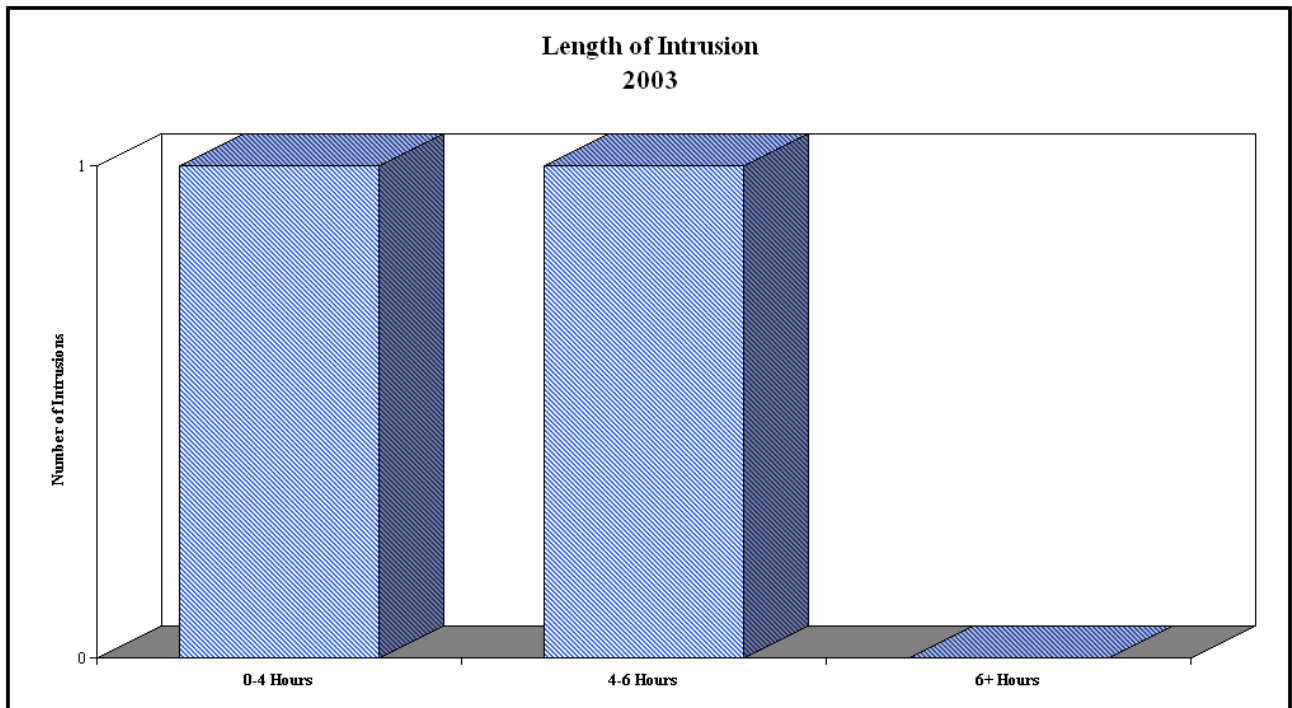


Figure 3A

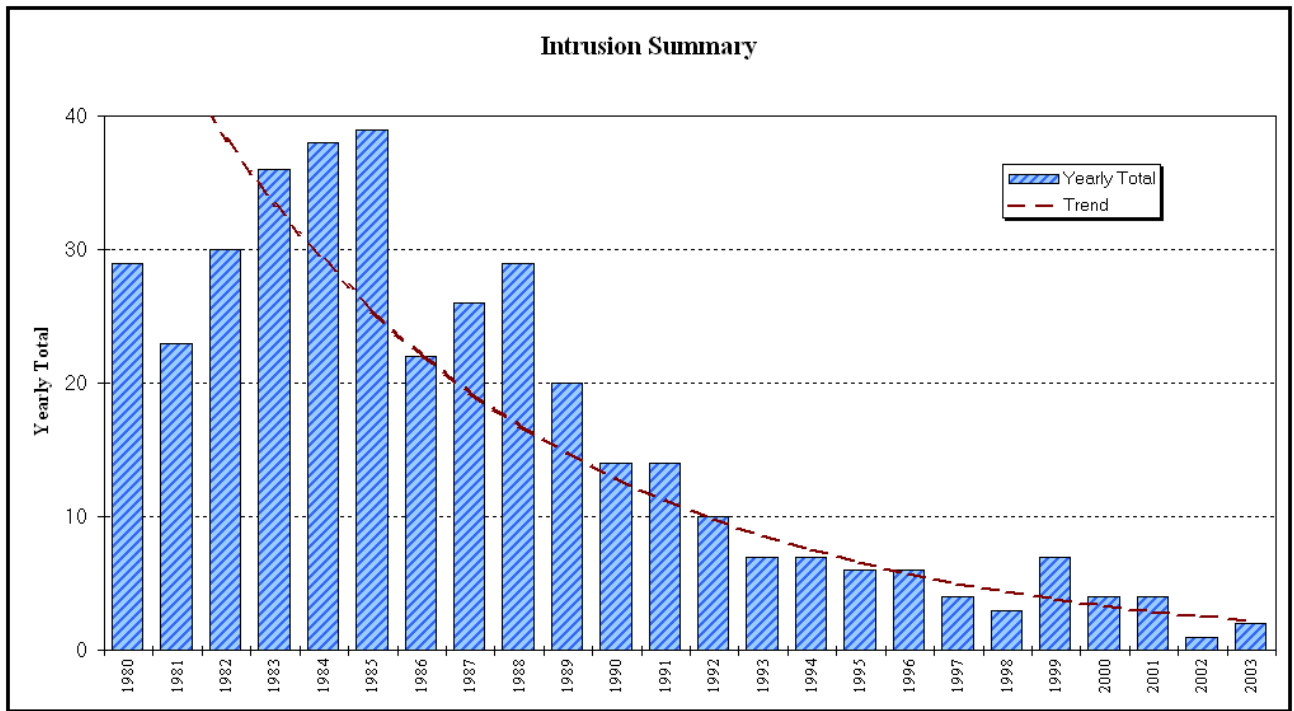


Figure 3B

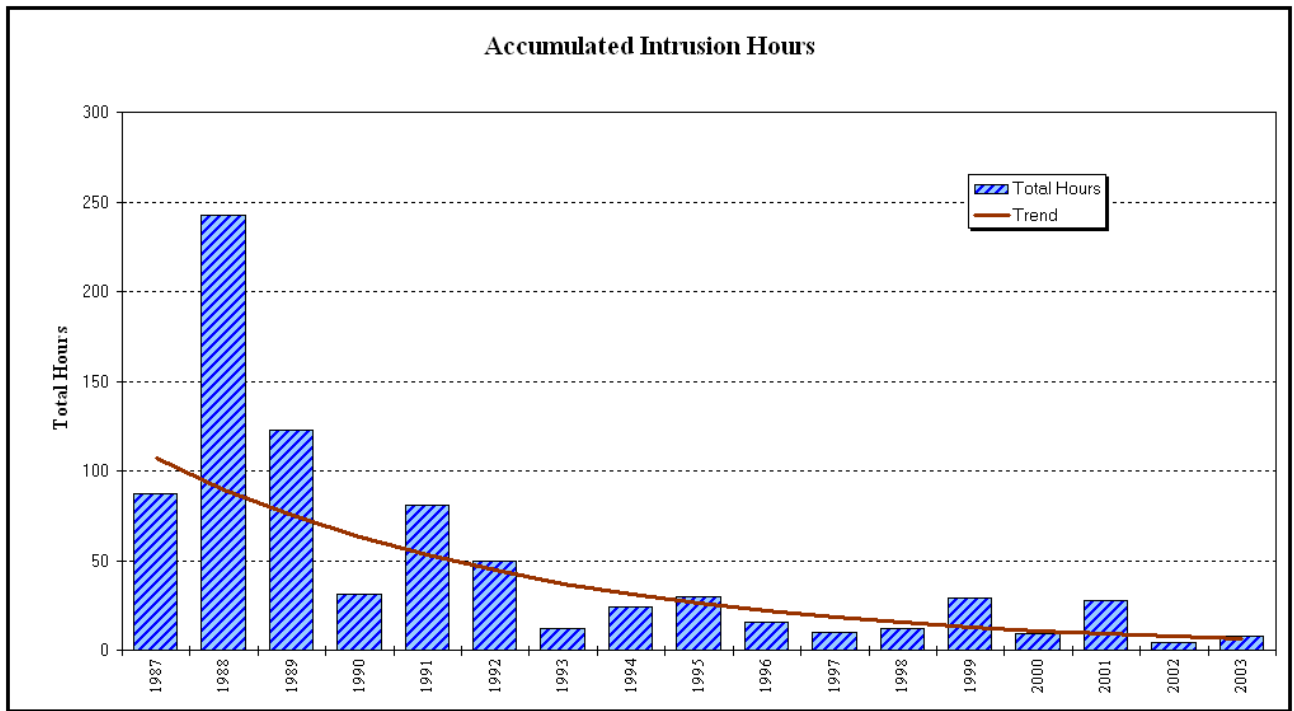


TABLE 2A

SMOKE INTRUSION SUMMARY – 2003

Restricted Area

Date	District/ Forest	Primary Area Affected	Unit No.	Owner Class	Intensity	Length
May 22	West Oregon (Toledo)	Monmouth/Salem	02-553-37658-02 03-553-37235-01	Private BIA	Light	5.5 Hours
May 24	West Oregon (Dallas)	Salem	03-552-30165-00	Private	Light	2.5 Hours

TABLE 2B

PROTECTED AREA SMOKE INTRUSION SUMMARY –2003

Non-Restricted Area

Date	Forest	Area Affected	Owner Class	Intensity	Length
Jun 4	Klamath BLM	Ashland/Rogue Valley	BLM	Unknown	Unknown

Figure 4A

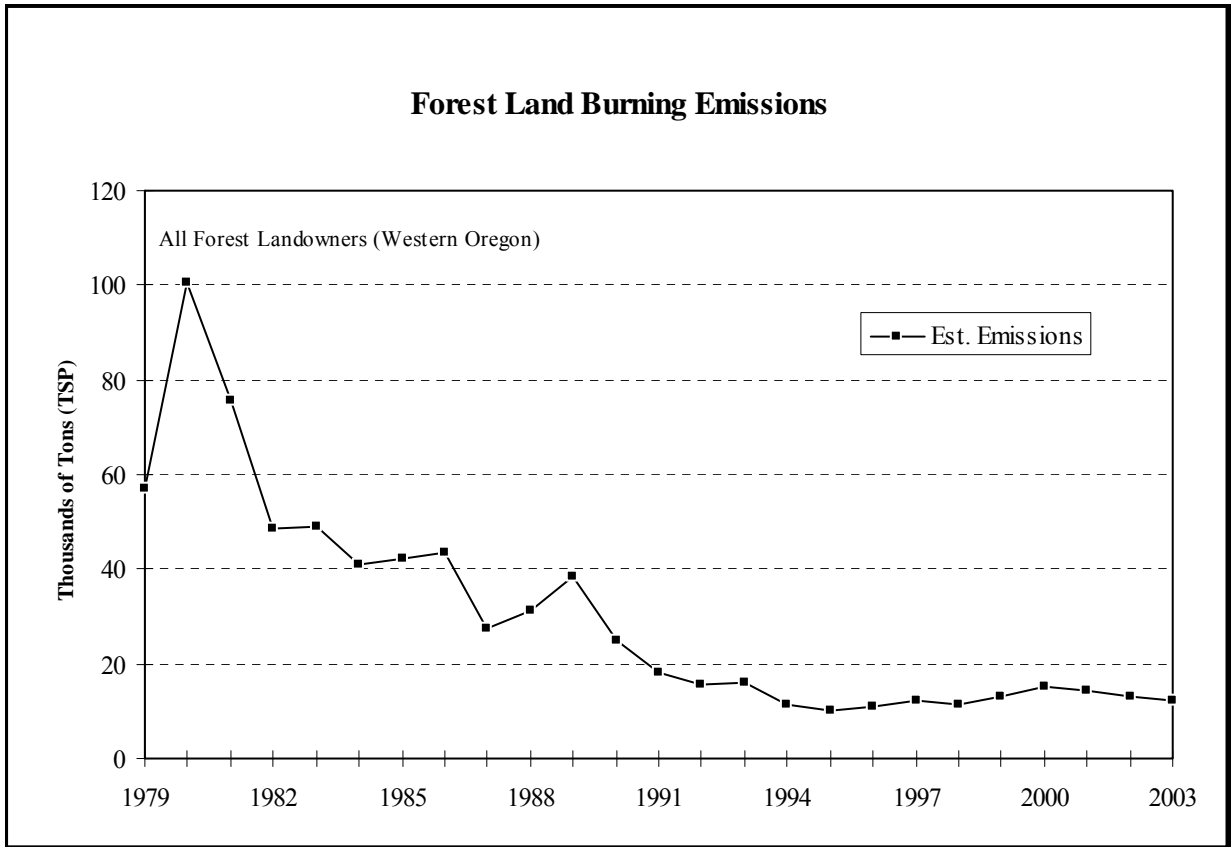


Figure 4B

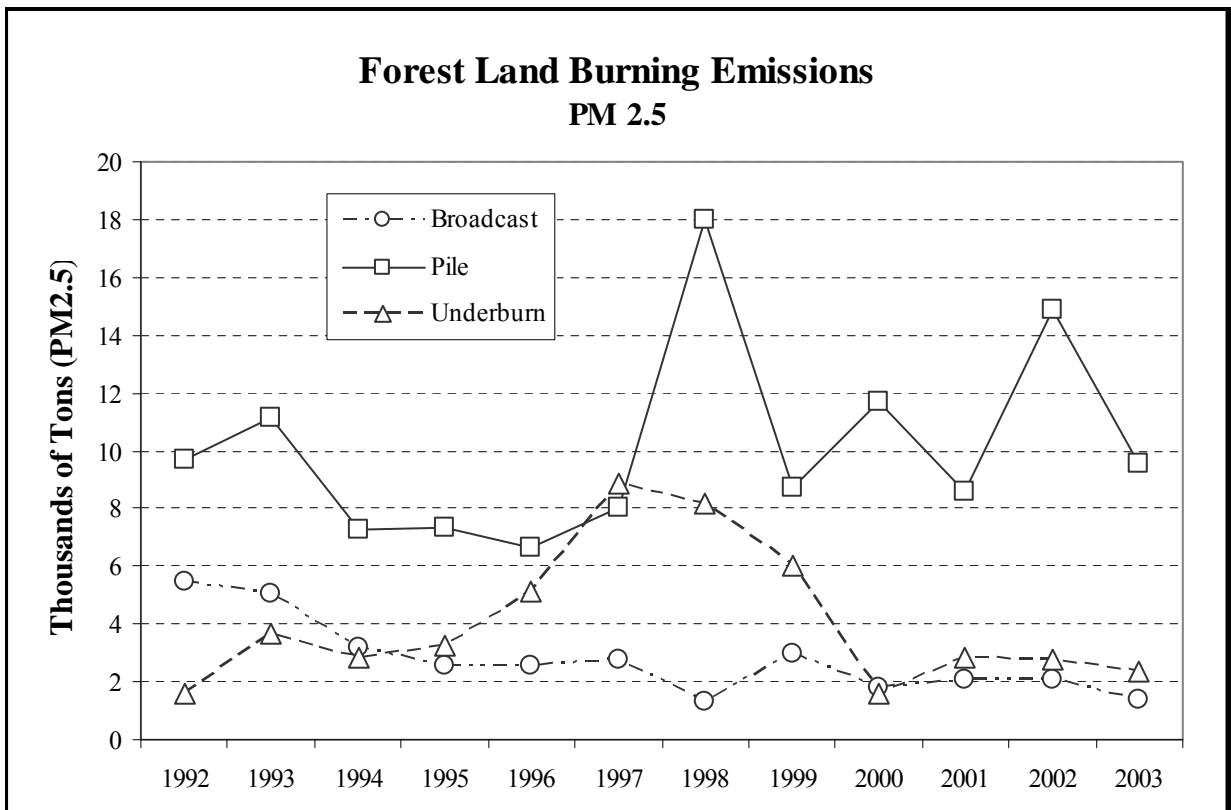


Table 3A

PM2.5 Emissions (Tons) from Broadcast Burning											
District/Forest	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Astoria	83	18	79	37	15	9	6	1	0	0	0
Central Oregon	42	0	0	0	0	0	0	296	0	508	235
Clackamas-Marion	183	101	80	48	43	77	19	98	19		
Coos FPA	900	492	641	527	633	464	758	748	764	583	369
Crater Lake NP	0	0	0	0	0	0	0	0	0	0	0
Deschutes NF	44	13	7	14	5	0	1	1	1	1	0
Douglas FPA	510	413	105	93	249	55	86	137	140	88	58
Eastern Lane	45	26	12	5	26	0	0	32	3	0	0
Forest Grove	119	106	65	42	35	51	31	33	22	14	24
Fremont NF	3	0	0	0	0	0	0	0	54	11	0
Klamath NF	0	0	4	8	18	0	0	0	0	0	0
Klamath-Lake	17	0	1	66	410	0	1,549	0	502	0	102
Linn	128	107	20	0	46	27	9	4	4		
Malheur NF	189	60	255	251	118	61	149	0	69	11	0
Mt. Hood NF	121	56	32	17	13	0	0	0	0	0	39
North Cascade										4	169
Northeast Oregon	0	0	0	0	0	0	0	0	0	11	51
Ochoco NF	11	16	129	27	101	3	9	12	24	82	6
Rogue River NF	181	110	52	0	0	0	18	0	9	0	0
Siskiyou NF	41	99	47	56	108	37	21	32	0	0	0
Siuslaw NF	74	50	7	44	4	59	6	0	0	18	3
South Cascade										22	0
Southwest Oregon	49	40	3	49	59	41	85	17	87	3	2
Tillamook	212	103	68	6	0	0	4	0	0	0	0
Umatilla NF	138	63	61	264	129	23	52	2	51	83	0
Umpqua NF	360	169	172	97	60	1	0	1	12	36	4
Walker Range	0	0	0	0	0	0	0	0	0	0	0
Wallowa Whitman NF	52	17	19	14	169	3	10	29	43	165	11
West Oregon	698	462	414	508	259	236	97	254	165	265	190
Western Lane	245	110	106	49	133	70	75	106	72	143	105
Willamette NF	559	580	185	370	109	65	17	3	0	4	0
Winema NF	66	0	0	0	0	0	0	0	7	0	0
Total	5,072	3,210	2,564	2,593	2,741	1,283	3,003	1,804	2,048	2,052	1367

Table 3B

PM2.5 Emissions (Tons) from Broadcast Burning											
District/Forest	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Astoria	83	18	79	37	15	9	6	1	0	0	0
Central Oregon	42	0	0	0	0	0	0	296	0	508	235
Clackamas-Marion	183	101	80	48	43	77	19	98	19		
Coos FPA	900	492	641	527	633	464	758	748	764	583	369
Crater Lake NP	0	0	0	0	0	0	0	0	0	0	0
Deschutes NF	44	13	7	14	5	0	1	1	1	1	0
Douglas FPA	510	413	105	93	249	55	86	137	140	88	58
Eastern Lane	45	26	12	5	26	0	0	32	3	0	0
Forest Grove	119	106	65	42	35	51	31	33	22	14	24
Fremont NF	3	0	0	0	0	0	0	0	54	11	0
Klamath NF	0	0	4	8	18	0	0	0	0	0	0
Klamath-Lake	17	0	1	66	410	0	1,549	0	502	0	102
Linn	128	107	20	0	46	27	9	4	4		
Malheur NF	189	60	255	251	118	61	149	0	69	11	0
Mt. Hood NF	121	56	32	17	13	0	0	0	0	0	39
North Cascade										4	169
Northeast Oregon	0	0	0	0	0	0	0	0	0	11	51
Ochoco NF	11	16	129	27	101	3	9	12	24	82	6
Rogue River NF	181	110	52	0	0	0	18	0	9	0	0
Siskiyou NF	41	99	47	56	108	37	21	32	0	0	0
Siuslaw NF	74	50	7	44	4	59	6	0	0	18	3
South Cascade										22	0
Southwest Oregon	49	40	3	49	59	41	85	17	87	3	2
Tillamook	212	103	68	6	0	0	4	0	0	0	0
Umatilla NF	138	63	61	264	129	23	52	2	51	83	0
Umpqua NF	360	169	172	97	60	1	0	1	12	36	4
Walker Range	0	0	0	0	0	0	0	0	0	0	0
Wallowa Whitman NF	52	17	19	14	169	3	10	29	43	165	11
West Oregon	698	462	414	508	259	236	97	254	165	265	190
Western Lane	245	110	106	49	133	70	75	106	72	143	105
Willamette NF	559	580	185	370	109	65	17	3	0	4	0
Winema NF	66	0	0	0	0	0	0	0	7	0	0
Total	5,072	3,210	2,564	2,593	2,741	1,283	3,003	1,804	2,048	2,052	1,368

Table 3C

PM2.5 Emissions (Tons) from Underburning											
District/Forest	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Astoria	0	0	0	0	0	0	0	0	0	0	0
Central Oregon	0	0	7	0	3	46	74	0	30	36	0
Clackamas-Marion	0	0	0	0	0	0	0	0	0	0	0
Coos FPA	0	0	0	0	0	0	0	0	0	0	0
Crater Lake NP	0	0	0	0	0	0	0	0	0	22	0
Deschutes NF	49	170	355	281	389	420	287	104	283	105	178
Douglas FPA	0	0	0	0	0	3	0	0	0	1	0
Eastern Lane	0	0	0	0	0	0	0	0	0	0	0
Forest Grove	0	0	0	0	0	0	0	0	0	0	0
Fremont NF	1,403	500	889	2,023	1,007	2,224	2,293	78	501	586	483
Klamath NF	0	0	5	2	25	27	0	0	0	0	0
Klamath-Lake	203	0	20	159	396	1,797	1,053	0	129	0	20
Linn	0	0	0	0	0	0	0	0	0	0	0
Malheur NF	159	251	470	972	2,522	1,071	1,021	11	356	251	265
Mt. Hood NF	76	109	111	104	92	10	102	3	4	0	0
North Cascade										0	0
Northeast Oregon	0	0	0	0	0	0	0	0	0	0	0
Ochoco NF	498	161	662	473	1,314	771	409	330	412	306	0
Rogue River NF	14	76	82	40	52	48	35	11	12	42	117
Siskiyou NF	0	0	9	16	58	6	14	71	8	62	6
Siuslaw NF	0	0	0	0	0	0	0	0	0	0	0
South Cascade										0	0
Southwest Oregon	14	11	3	6	38	54	42	123	103	178	95
Tillamook	0	0	0	0	0	0	0	0	0	0	0
Umatilla NF	216	919	167	498	1,504	766	296	394	59	306	144
Umpqua NF	39	20	10	99	130	150	48	83	155	140	17
Walker Range	0	0	0	0	0	0	0	0	0	0	0
Wallowa Whitman NF	602	437	316	408	1,015	553	251	313	561	557	901
West Oregon	0	0	0	0	0	0	0	0	0	0	0
Western Lane	0	0	0	0	0	0	0	0	0	0	0
Willamette NF	61	30	18	1	26	38	76	67	91	28	67
Winema NF	365	125	136	26	267	185	29	18	138	130	80
Total	3,698	2,808	3,261	5,107	8,838	8,169	6,029	1,605	2,842	2,736	2,374

Table 4
Class 1 Area Visibility Protection Period Burning

Year	Cascade Range			Coast Range		
	No. of Units	Acres	Tons	No. of Units	Acres	Tons
1985	38	579	12,763	125	4,652	56,953
1986	91	1,494	42,809	62	1,504	17,573
1987	20	840	14,564	75	2,483	78,717
1988	11	178	7,107	71	1,921	53,153
1989	3	19	1,268	40	748	17,917
1990	3	50	1,736	48	1,349	39,975
1991	30	805	24,588	83	2,468	76,908
1992	1	32	1,260	1	1	120
1993	46	1,056	29,824	98	2,594	67,390
1994	0	0	0	10	428	9,921
1995	2	80	1,500	6	193	4,431
1996	0	0	0	9	665	14,568
1997	0	0	0	20	430	10,170
1998	23	372	12,418	17	652	9,158
1999	4	39	1,210	6	38	361
2000	0	0	0	0	0	0
2001	0	0	0	9	115	1572
2002	0	0	0	1	3	100
2003	0	0	0	2	4	59

Table 4 Notes:

1. The Visibility Protection Period is defined to be from July 1 through September 15. Before 1992 the Visibility Protection Period was from July 4 through Labor Day.
2. The Cascade Range area includes the following districts and forests: Clackamas-Marion, East Lane, Linn, Mt. Hood NF, and the Willamette NF.

The Coast Range area includes the following districts and forests: Astoria, Forest Grove, Tillamook, West Oregon, West Lane, and the Siuslaw NF.

3. A change in tonnage consumption reporting was established in 1987. Prior year's data was adjusted to conform to the current procedure.
4. An exemption was granted to allow burning in the Cascade Range through July 16, 1993, due to wet conditions during the spring. During this period 930 acres were burned in the Cascade Range and 1,285 acres were burned in the Coast Range.
5. An exemption was granted to allow burning in the Cascade Range through July 23, 1998 due to extremely wet conditions during the spring. All Cascades burning was conducted during this exemption period.
6. An exemption was granted to allow burning in the Cascade Range Monday through Thursday from July 6 through July 22, 1999 due to a deep snow pack and late snow melt in the spring. All Cascades burning conducted during the visibility protection period occurred during this exemption window.

Figure 5

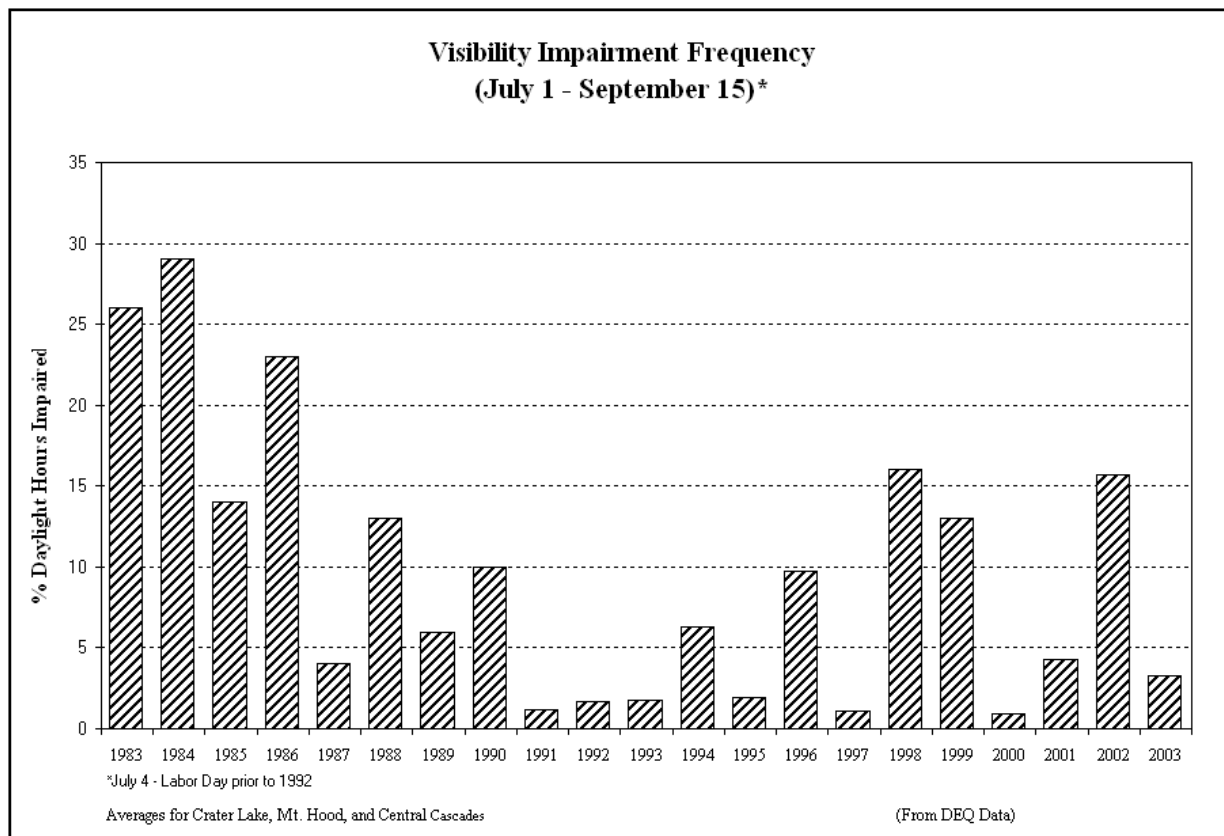


Figure 6

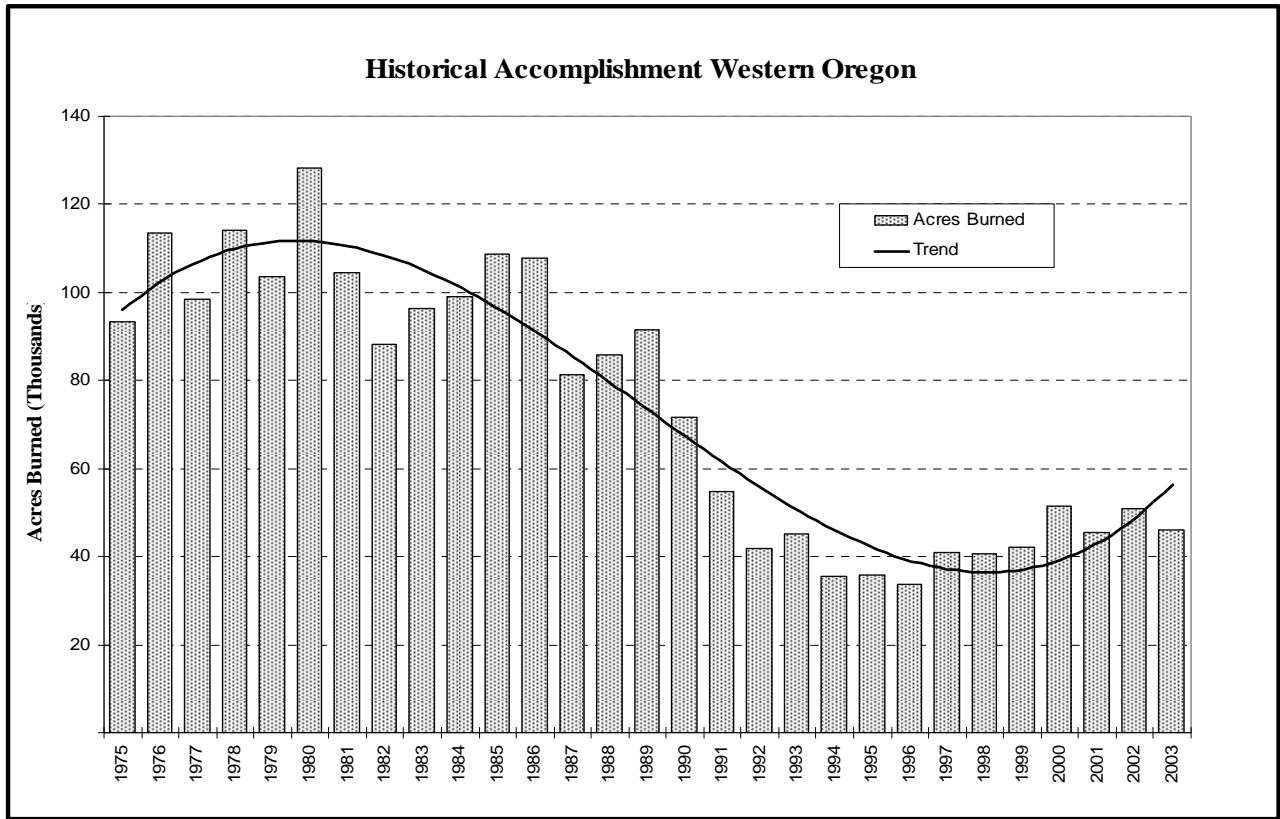


Figure 7

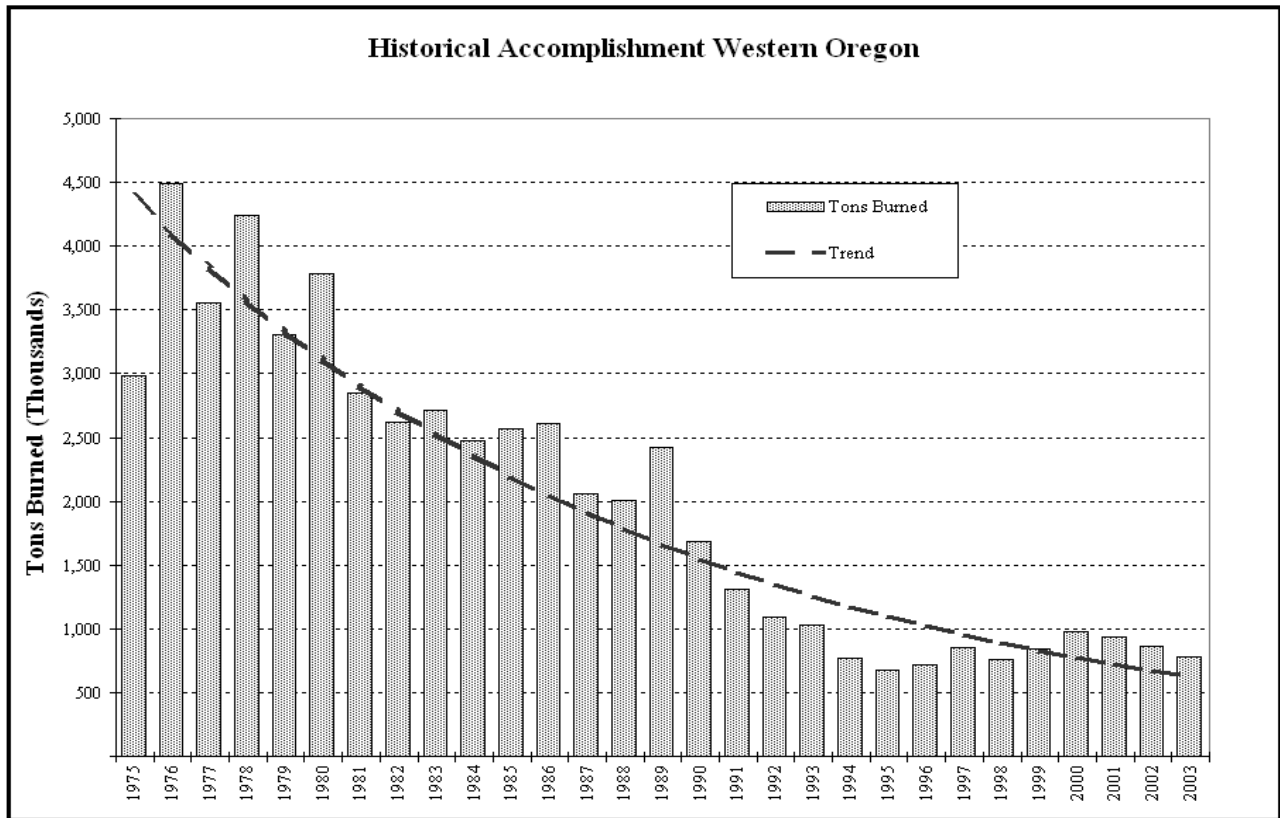


Figure 8A

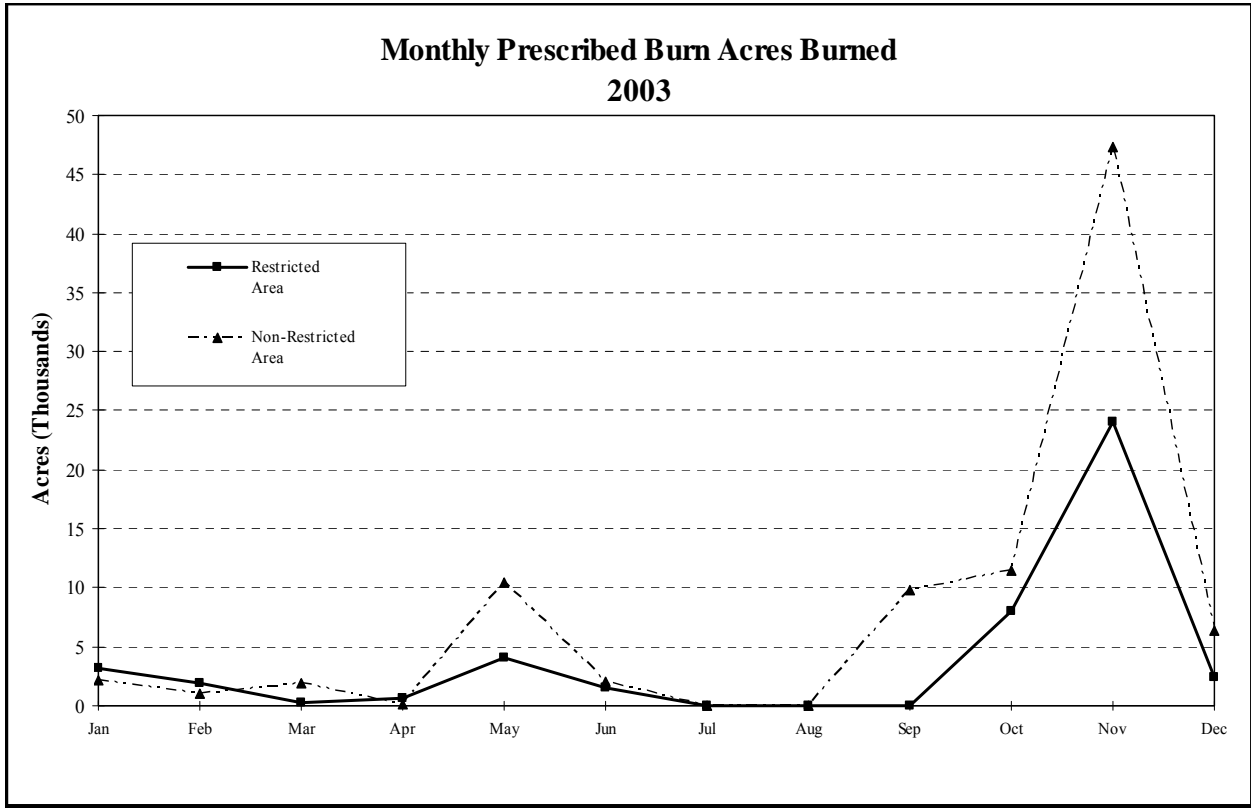


Figure 8B

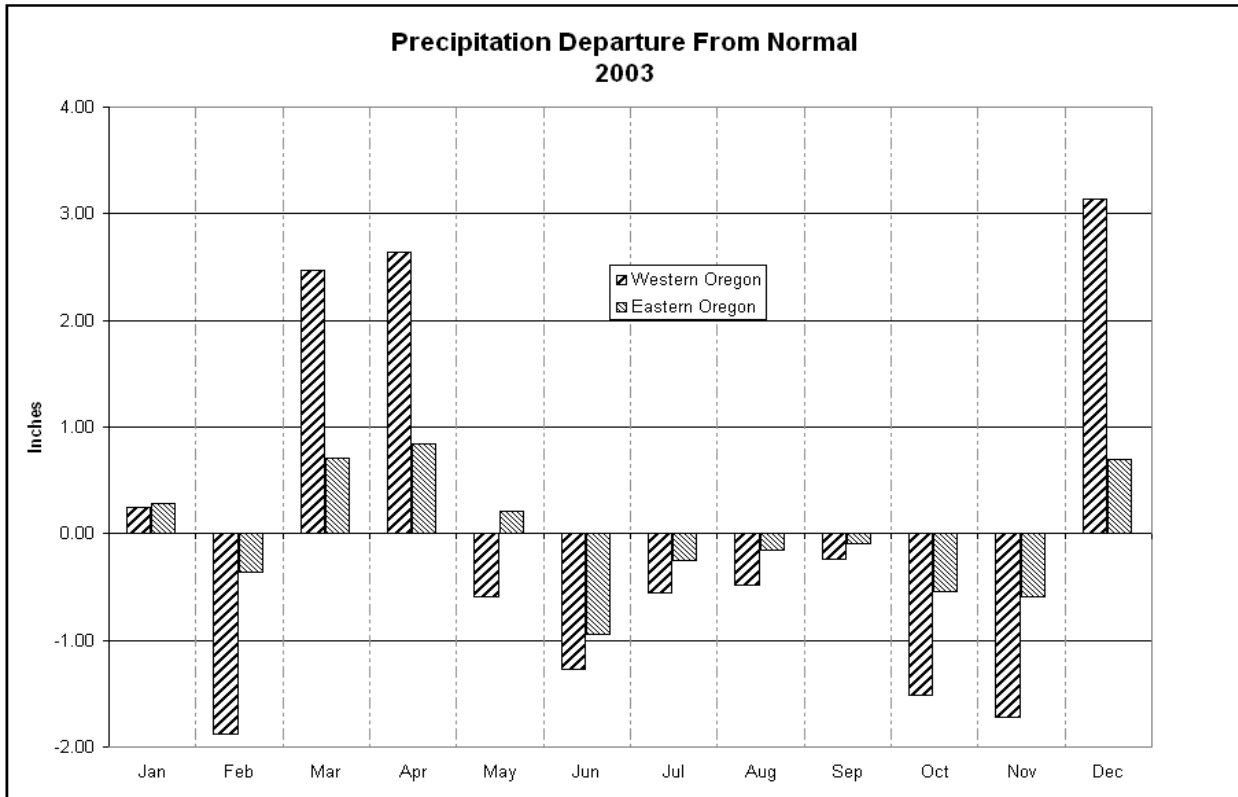


Figure 9

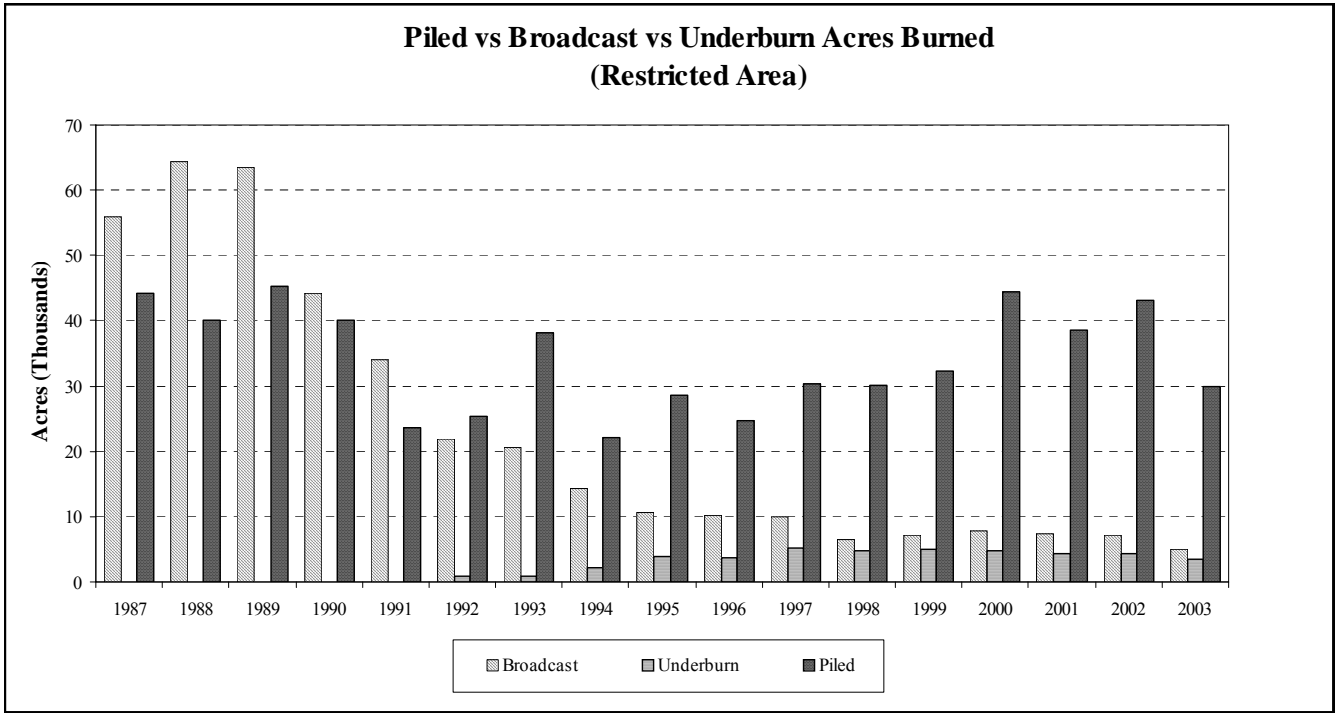


Figure 10

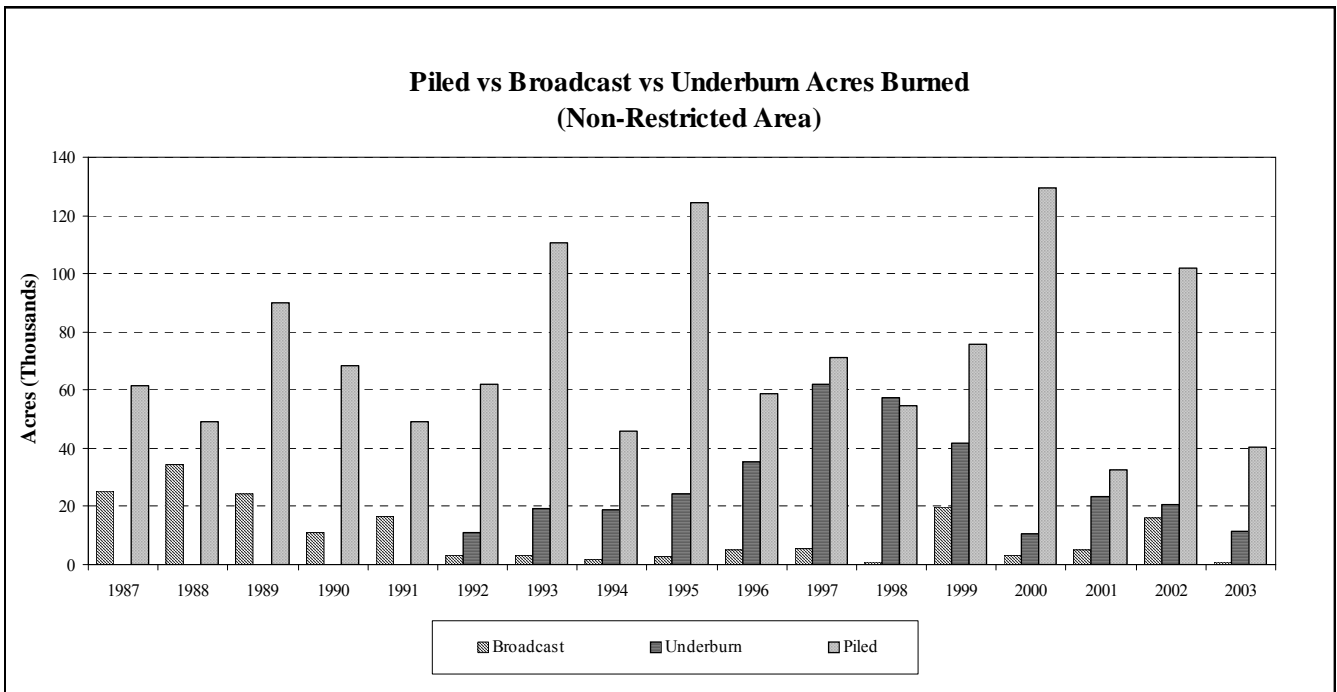


Table 5A
BURN SUMMARY BY DISTRICT -- 2003
(Restricted Area)

District/Forest	Units Burned	Acres Burned	Tons Burned
Astoria	80	2,789	37,209
Clackamas-Marion	42	1,538	17,267
Coos FPA	448	4,802	191,338
Douglas FPA	232	3,236	72,871
East Lane	121	2,556	55,580
Forest Grove	200	3,399	59,884
Linn	143	3,604	84,173
Southwest	267	5,860	61,456
Tillamook	53	709	13,284
West Lane	183	2,994	55,994
West Oregon	263	7,001	120,294
Deschutes NF	139	3,754	19,518
Klamath NF	0	0	0
Mt Hood NF	14	362	3,131
Rogue River NF	51	1,894	24,728
Siskiyou NF	31	440	5,616
Siuslaw NF	6	22	426
Umpqua NF	14	209	4,192
Willamette NF	42	848	15,957
TOTAL	2,329	46,017	842,918

TABLE 5B
BURN SUMMARY BY DISTRICT – 2003
(Non-Restricted Area)

District/Forest	Units Burned	Acres Burned	Tons Burned
Central Oregon	48	15,505	50,761
Klamath-Lake	262	9,618	241,982
Northeast	111	13,460	50,344
Walker Range	12	29,125	43,114
Crater Lake NP	3	230	2,546
Fremont NF	6	6,571	16,300
Malheur NF	32	4,491	17,600
Ochoco NF	2	170	969
Umatilla NF	29	2,321	22,310
Wallowa-Whitman NF	97	8,555	127,394
Winema NF	48	2,633	36,262
TOTAL	650	92,679	609,582

Table 6A
Tons Burned by Month by District
2003
(Restricted Area)

District	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total by District
Astoria										3,855	26,882	6,472	37,209
Clackamas -Marion		200				6,004				8,358	2,705		17,267
Coos	7,507	11,994	283	12	24,942	11,814				1,786	126,664	6,336	191,338
Douglas	1,489	1,050	123	5	1,200	1,548				50	65,413	1,993	72,871
East Lane										2,840	52,740		55,580
Forest Grove	80	137			1,485	552	56	3		11,280	24,340	21,951	59,884
Linn					8					55,304	28,788	73	84,173
Southwest	14,001	1,607	553		2,723						29,492	13,080	61,456
Tillamook						180				1,726	8,583	2,795	13,284
West Lane	132	1,370	2	101	5,893					15,306	32,525	665	55,994
West Oregon	2,010	2,595			3,413	8,596				27,882	74,213	1,585	120,294
Klamath NF													0
Mt Hood NF										3,131			3,131
Rogue River NF	2,209	350			7,019	3,460					11,690		24,728
Siskiyou NF	125	42	3,323	22	774						1,330		5,616
Siuslaw NF										426			426
Umpqua NF						2,939			400	90	763		4,192
Willamette NF		12			2,294	7,152				647	5,852		15,957
Deschutes NF		1,938	632	3,558	6,853					2,046	4,491		19,518
District Total	25,219	18,953	961	118	39,664	28,694	56	3	0	128,387	472,345	54,950	769,350
Forest Total	2,334	2,342	3,955	3,580	16,940	13,551	0	0	400	6,340	24,126	0	73,568
Grand Total	27,553	21,295	4,916	3,698	56,604	42,245	56	3	400	134,727	496,471	54,950	842,918

Table 6B
Tons Burned by Month by District
2003
(Non-Restricted Area)

District	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total by District
Central Oregon			118						31,919		5,068	13,656	50,761
Klamath-Lake	7,121	7,691	4,330		7,960	1,660				19,240	138,216	55,764	241,982
Northeast		5		37	5,921	42				3,818	36,541	3,980	50,344
Walker Range											43,114		43,114
Crater Lake NP										2,546			2,546
Fremont NF					16,300								16,300
Malheur NF		12			2,290					11,315	3,983		17,600
Ochoco NF				720							249		969
Umatilla NF	810				8,705	6,592			1,816	4,387			22,310
Wallowa-Whitman NF					3,822	29,779				90,439	3,354		127,394
Winema NF					22,121					45	14,096		36,262
District Total	7,121	7,696	4,448	37	13,881	1,702	0	0	31,919	23,058	222,939	73,400	386,201
Forest Total	810	12	0	720	53,238	36,371	0	0	1,816	108,732	21,682	0	223,381
Grand Total	7,931	7,708	4,448	757	67,119	38,073	0	0	33,735	131,790	244,621	73,400	609,582

Table 7A
Acres Burned by Month by District
2003
(Restricted Area)

District	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total by District
Astoria										400	1,940	449	2,789
Clack-Marion		102				196				755	485		1,538
Coos	260	463	5	1	1,075	392				21	2,418	167	4,802
Douglas	40	77	29	1	100	99				1	2,672	217	3,236
East Lane										158	2,398		2,556
Forest Grove	10	13			77	41	3	1		516	1,443	1,295	3,399
Linn					2					2,081	1,514	7	3,604
Southwest	2,352	288	75		697						2,250	198	5,860
Tillamook						20				90	453	146	709
West Lane	9	87	1	11	310					671	1,878	27	2,994
West Oregon	105	175			248	500				1,765	4,084	124	7,001
Klamath NF													0
Mt Hood NF										362			362
Rogue River NF	307	66			558	173					790		1,894
Siskiyou NF	32	11	62	1	107						227		440
Siuslaw NF										22			22
Umpqua NF						93			25	25	66		209
Willamette NF		1			60	176				77	534		848
Deschutes NF		323	79	570	789					663	1,330		3,754
District Total	2,776	1,205	110	13	2,509	1,248	3	1	0	6,458	21,535	2,630	38,488
Forest Total	339	401	141	571	1,514	442	0	0	25	1,149	2,947	0	7,529
Grand Total	3,115	1,606	251	584	4,023	1,690	3	1	25	7,607	24,482	2,630	46,017

Table 7B
Acres Burned by Month by District
2003
(Non-Restricted Area)

District	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total by District
Central Oregon			2						9,269		1,350	4,884	15,505
Klamath-Lake	2,119	767	1,928		770	536				740	2,466	292	9,618
Northeast		80		15	489	47				572	11,005	1,252	13,460
Walker Range											29,125		29,125
Crater Lake NP										230			230
Fremont NF					6,571								6,571
Malheur NF		2			1,175					2,390	924		4,491
Ochoco NF				72							98		170
Umatilla NF	18				286	179			520	1,318			2,321
Wallowa-Whitman NF					191	1,478				6,365	521		8,555
Winema NF					949					5	1,679		2,633
District Total	2,119	847	1,930	15	1,259	583	0	0	9,269	1,542	43,946	6,428	67,938
Forest Total	18	2	0	72	9,172	1,657	0	0	520	10,078	3,222	0	24,741
Grand Total	2,137	849	1,930	87	10,431	2,240	0	0	9,789	11,620	47,168	6,428	92,679

TABLE 8A
TONS BURNED BY MONTH WITHIN COUNTY
2003
(Restricted Area)

COUNTY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Benton	3,100					380				8,146	26,342	125	38,093
Clackamas										121			121
Clatsop										3,855	29,272	5,577	38,704
Columbia		137			30	622	56	3		8,073	2,975	4,520	16,416
Coos	5,517	8,743	283	12	13,425	7,248				1,200	86,191	3,015	125,634
Curry	2,216	2,092			3,830					498	23,603	1,419	33,658
Deschutes			632	3,558	3,721					1,170	2,258		11,339
Douglas	1,587	7,445	671	5	8,079	5,885				3,194	85,215	2,470	114,551
Hood River													0
Jackson	13,113	1,837			9,170	3,460					35,376	9,603	72,559
Jefferson					204					149	206		559
Josephine	3,775	994	1,920	22	1,390						6,379	3,477	17,957
Klamath					2,928					758	997		4,683
Lake		1,938									999		2,937
Lane	54	1,680	13	114	5,699	1,951			400	19,668	86,196	665	116,440
Lincoln		385			2,685	5,689				8,158	18,522	1,290	36,729
Linn					1,756	5,201				62,612	21,704	73	91,346
Marion		200			5,866	197				8,340	2,705		17,308
Multnomah		15				20				179	10		224
Polk	13	2,210			1,505	1,765				8,284	16,816	130	30,723
Tillamook					630	110	5			2,323	10,761	6,265	20,094
Wasco										3,010			3,010
Washington	80				905					1,101	7,032	11,074	20,192
Yamhill										5,485	22,796	1,360	29,641
TOTAL	29,455	27,676	3,519	3,711	61,823	32,528	61	3	400	146,324	486,355	51,063	842,918

TABLE 8B

**TONS BURNED BY MONTH WITHIN COUNTY
2003
(Non-Restricted Area)**

COUNTY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Baker					3,822					21,681	3,114		28,617
Crook				720					675		249	14	1,658
Deschutes											5,040	5,220	10,260
Grant		12	118		1,720				875	11,315	2,651		16,691
Harney					570				7,169		1,560		9,299
Hood River												5,662	5,662
Jefferson												2	2
Klamath	7,121	9,251	4,330	156	35,517	1,118				19,285	145,875	45,780	268,433
Lake					9,690						49,551	9,984	69,225
Malheur					5,880								5,880
Morrow	810					336				220		400	1,766
Umatilla										3,235	12,190	2,630	18,055
Union		5		37	41	4,106				45,385	2,396	590	52,560
Wallowa					8,705	31,971				27,243	22,355		90,274
Wasco												2,758	2,758
Wheeler									25,016	880			25,896
TOTAL	7,931	9,268	4,448	913	65,945	37,531	0	0	33,735	129,244	244,981	73,040	607,036

Table 9A
Burn Data by Owner Type
2003
(Restricted Area)

	Private			State			Federal (Except USFS)			USFS		
District/ Forest	Units	Acres	Tons	Units	Acres	Tons	Units	Acres	Tons	Units	Acres	Tons
Astoria	54	1,908	28,239	26	881	8,970						
Clackamas-Marion	41	1,350	11,269	1	188	5,998						
Coos FPA	420	4,567	181,738	27	234	9,565	1	1	35			
Douglas FPA	216	3,136	70,772	4	55	1,320	12	45	779			
East Lane	119	2,500	55,290	0	0	0	1	55	270			
Forest Grove	198	3,375	59,269	2	24	615						
Linn	141	3,573	83,841	1	6	82	1	25	250			
Southwest	133	1,528	35,749	2	10	30	132	4,322	25,677			
Tillamook	45	665	12,084	7	28	770	1	16	430			
West Lane	181	2,991	55,973	1	1	15	1	2	6			
West Oregon	254	6,763	117,247	3	38	400	6	200	2,647			
Klamath NF												
Mt Hood NF										14	362	3131
Rogue River NF										51	1,894	24,728
Siskiyou NF										31	440	5,616
Siuslaw NF										6	22	426
Umpqua NF										14	209	4,192
Willamette NF										42	848	15,957
Deschutes NF										139	3,754	19,518
Totals	1,802	32,356	711,471	74	1,465	27,765	155	4,666	30,094	297	7,529	73,568

**Table 9B
Burn Data by Owner Type
2003
(Non-Restricted Area)**

District/ Forest	Private			State			Federal (Except USFS)			USFS		
	Units	Acres	Tons	Units	Acres	Tons	Units	Acres	Tons	Units	Acres	Tons
Central Oregon	23	5,586	13,309	15	631	5,387	10	9,288	32,065			
Klamath-Lake	230	924	187,481	2	11	70	30	8,683	54,431			
Northeast	108	12,890	40,804				3	570	9,540			
Walker Range	12	29,125	43,114									
Crater Lake NP							3	230	2,546			
Fremont NF										6	6,571	16,300
Malheur NF										32	4,491	17,600
Ochoco NF										2	170	969
Umatilla NF										29	2,321	22,310
Wallowa-Whitman NF										97	8,555	127,394
Winema NF										48	2,633	36,262
TOTALS	373	48,525	284,708	17	642	5,457	46	18,771	98,582	214	24,741	220,835

Figure 11

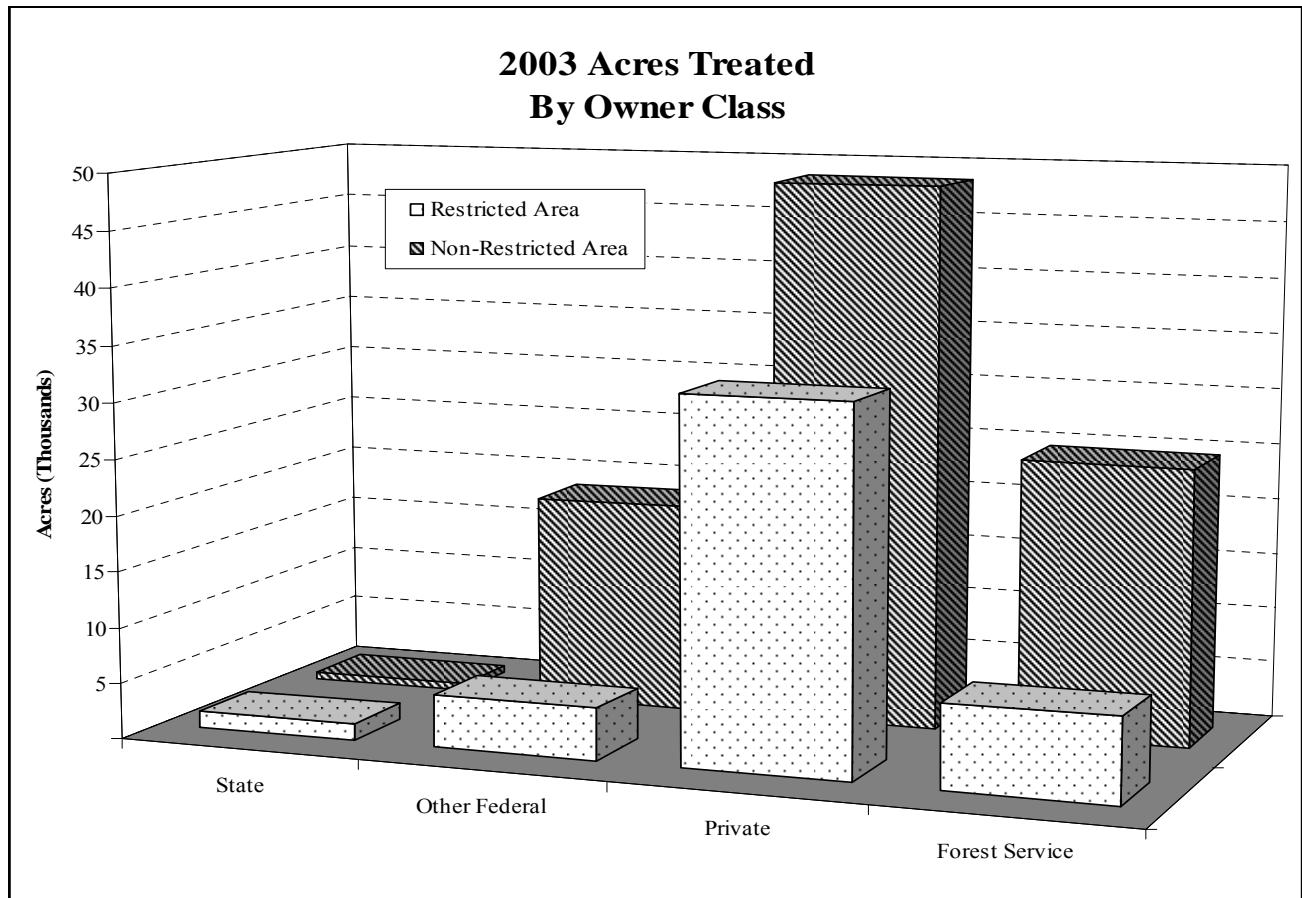


Figure 12A

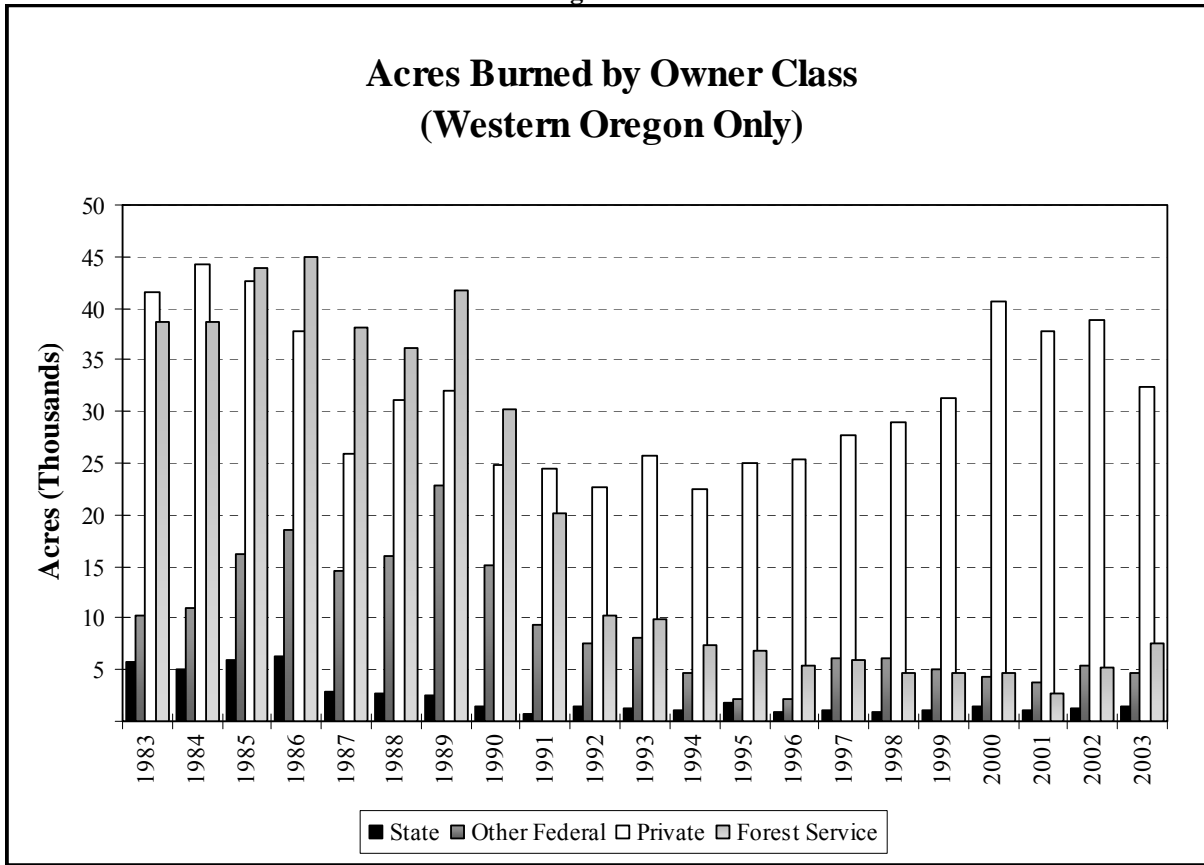


Figure 12B

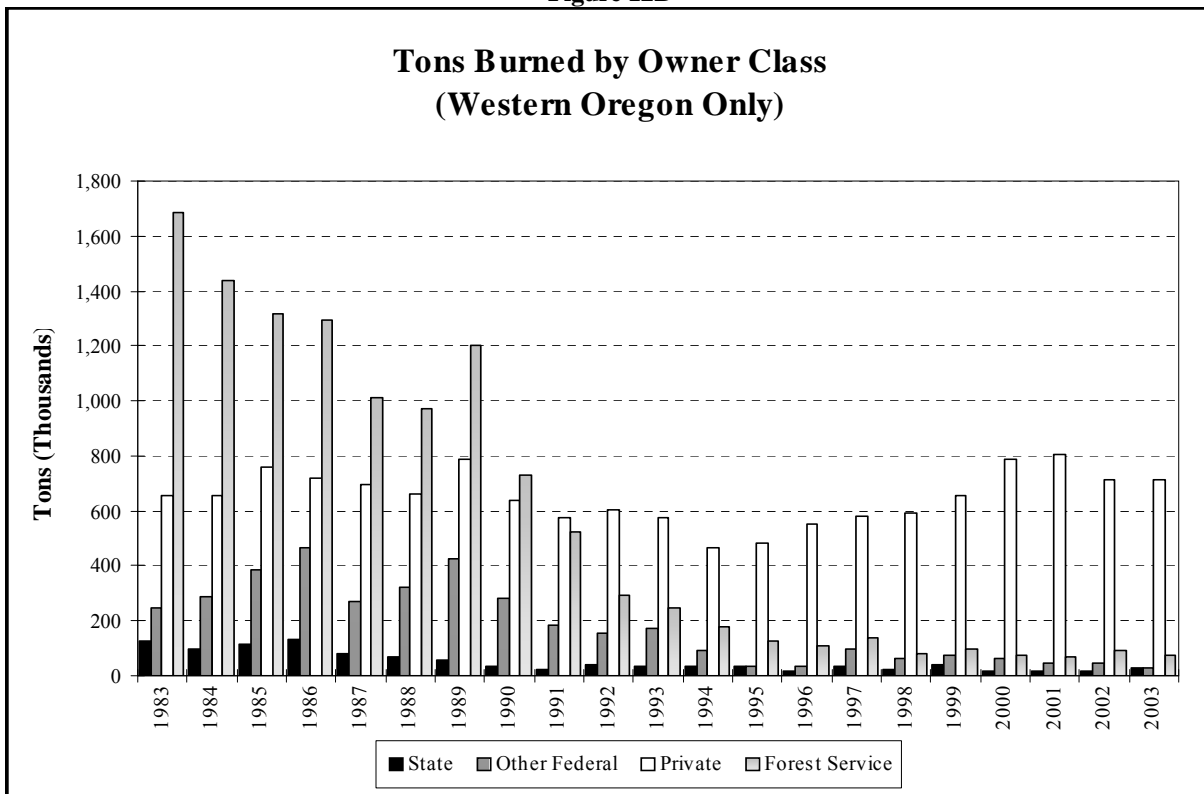


Figure 13A

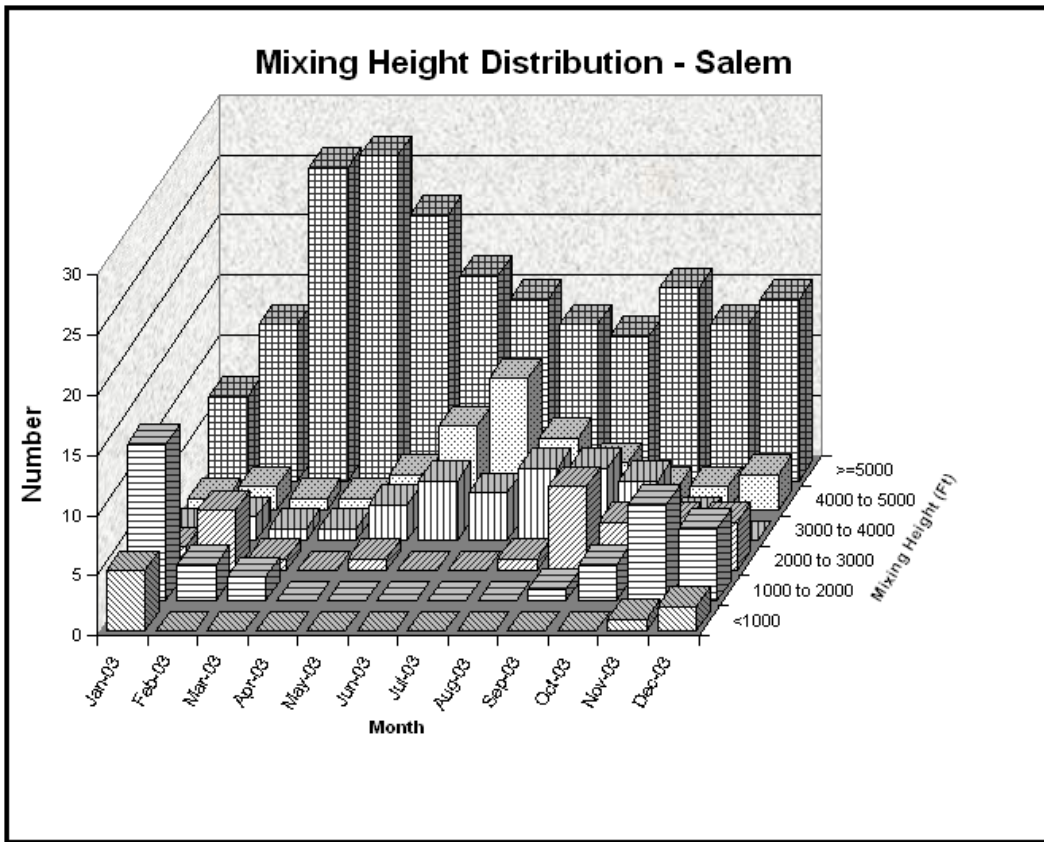


Figure 13B

