

Oregon Smoke Management Annual Report

2002



"STEWARDSHIP IN FORESTRY"

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

OREGON SMOKE MANAGEMENT
ANNUAL REPORT
2002

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OREGON DEPARTMENT OF FORESTRY

REPORT OF SMOKE MANAGEMENT ACTIVITIES FOR 2002

2002 SUMMARY

- **Acres burned** – In western Oregon 56,713 acres were burned, while 139,322 acres were burned in eastern Oregon. In both areas this was about fifteen percent above the ten year average.
- **Intrusions** – One smoke intrusion into a designated area occurred in 2002. This is the lowest impact recorded since the inception of the program. One impact into a northeast Oregon protected community was reported.
- **Smoke impact** – Four hours of smoke impact in a designated area were recorded. Of this there was only one hour of moderate impact.
- **Emissions** – In western Oregon emissions decreased slightly from that of the past few years. In eastern Oregon emissions were near that of recent years, increasing a little from 2001.
- **Visibility** – Visibility impairment of the Class 1 wilderness areas increased, due 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. A comprehensive review was begun in 2002. The review committee final report was issued in September 2005. This resulted in a major rewrite of the plan.

The plan's overall purpose is to facilitate burning while minimizing emissions and smoke impacts. The State Forester administers the plan, in cooperation with landowners, land management agencies and air quality agencies. The plan applies on most state, federal, and private forestland in Oregon, although specific levels of regulation are dependent on location and ownership.

The objectives of the Oregon Smoke Management Plan are to:

1. Prevent smoke resulting from prescribed burning on forestlands from being carried to or accumulating in smoke sensitive receptor areas or other areas sensitive to smoke, and to provide maximum opportunity for essential forestland burning while minimizing emissions;

2. Coordinate with other state smoke management programs;
3. Comply with state and federal air quality and visibility requirements;
4. Protect public health; and
5. Promote the reduction of emissions by encouraging cost effective utilization of forestland biomass, alternatives to burning and alternative burning practices.

2002 PROGRAM HIGHLIGHTS

Overview:

Prescribed burning in western Oregon was above average with a total of 56,713 acres accomplished (see Table 1). In eastern Oregon, acres burned was also above average with 139,322 acres treated was about 115 percent of the average for the last ten years.

Audits:

The Oregon Smoke Management Plan requires an annual audit of approximately one-percent of the slash burns conducted in the restricted area. The audits are divided between those conducted on the day of the burn and fuel loading audits conducted prior to the burn. The purpose of the audits is to assess the effectiveness of the Oregon Smoke Management Program.

Seven pre-burn audits were conducted on randomly selected, registered units before burning and seven burn day audits were accomplished when units were being burned.

These audits confirmed that units were burned in a manner consistent with the burn permits, burn plans and written and verbal instructions in regard to air quality. For the majority of pre-burn audits the reported fuel loadings agreed closely with that estimated by the auditor.

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 2002. Only one unit was burned during the summer visibility protection period. No impacts from this burn were detected.

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.

Additionally, ODF meteorologists provided assistance to the Lakeview wood stove smoke control program, issued the open burning forecast for the Willamette Valley north of Lane County during the period that field burning was not being conducted, and other forecast services included weather support for significant weather events (heavy rain, wind, etc.).

ODF meteorologists provided watches and warnings for potential debris flows caused by excessively heavy rains in western Oregon. One debris flow advisory was issued in 2002.

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 and is based on the plan provisions that were in effect during that year.

Figure 1A

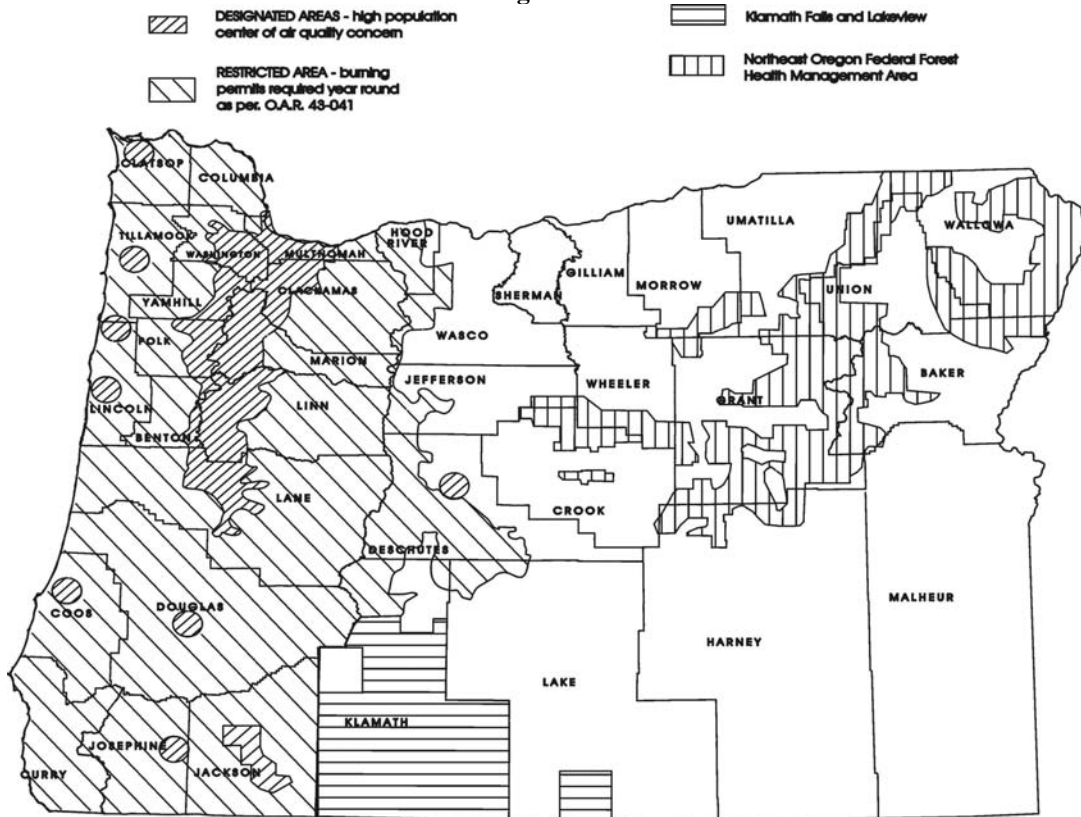


Figure 1B

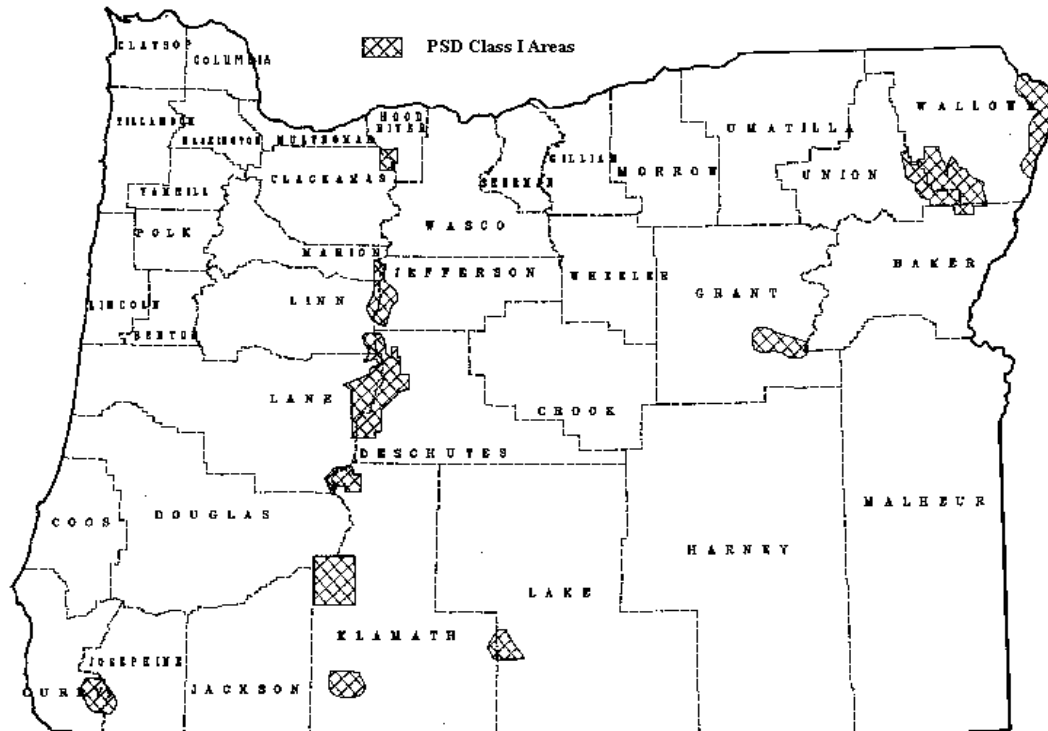


TABLE 1
1993-2002 ACCOMPLISHMENT SUMMARY

Burning totals within the restricted area:

Year	Total No. Units	No. Units Burned	Acres Burned	Tons Burned	No. Intrusions
1993	3,990	2,824	59,653	1,112,184	7
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
Average	3,322	2,430	48,551	885,158	5

Burning totals outside of the restricted area:

Year	Total No. Units	No. Units Burned	Acres Burned	Tons Burned
1993	2,140	1,392	132,832	1,452,155
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
Average	1,582	921	120,817	928,924

Figure 2A

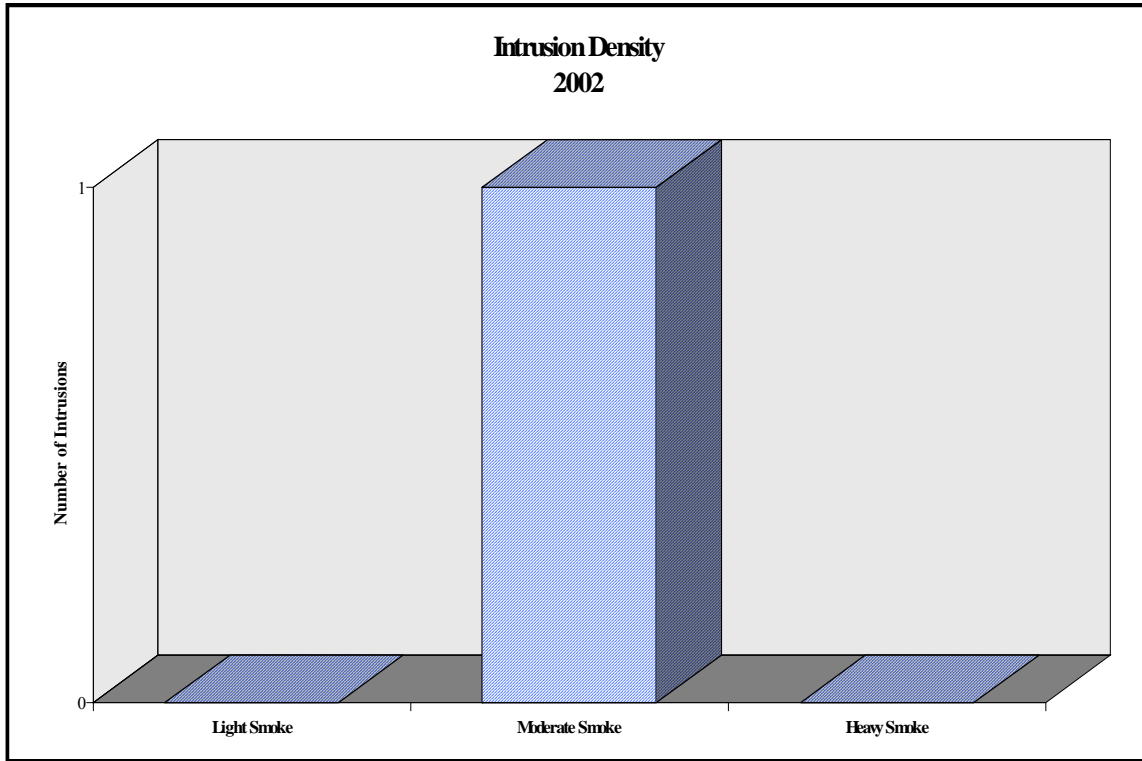


Figure 2B

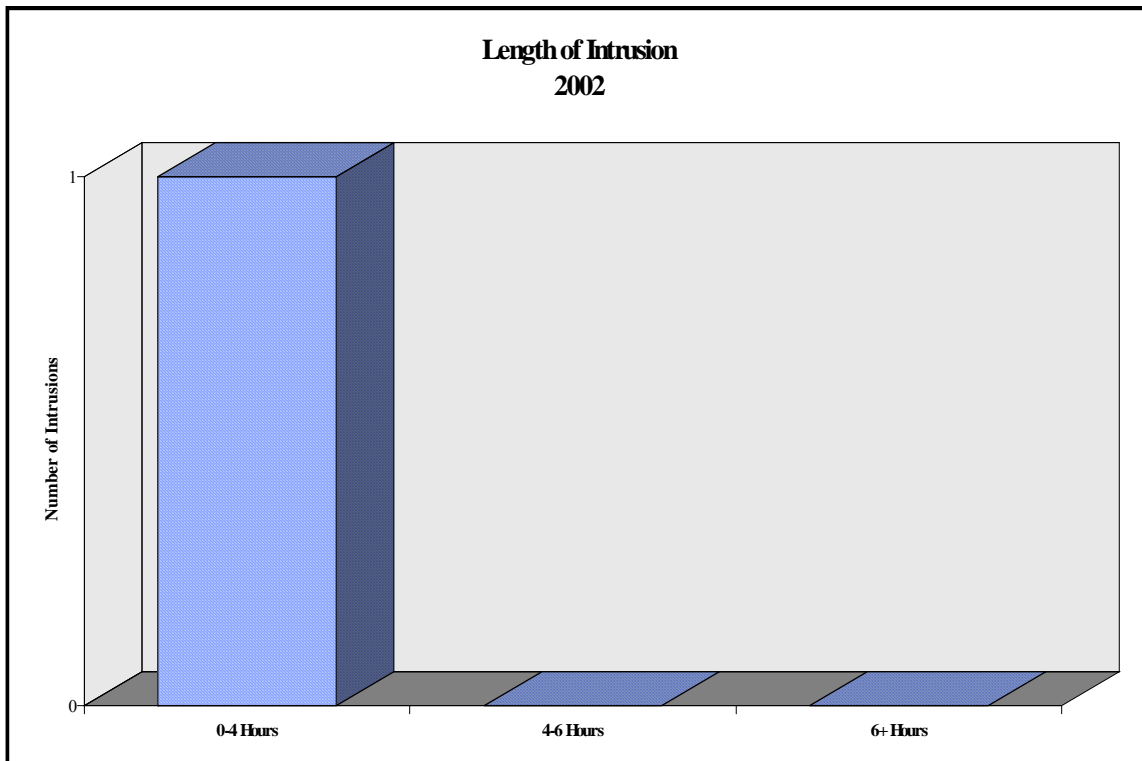


Figure 3A

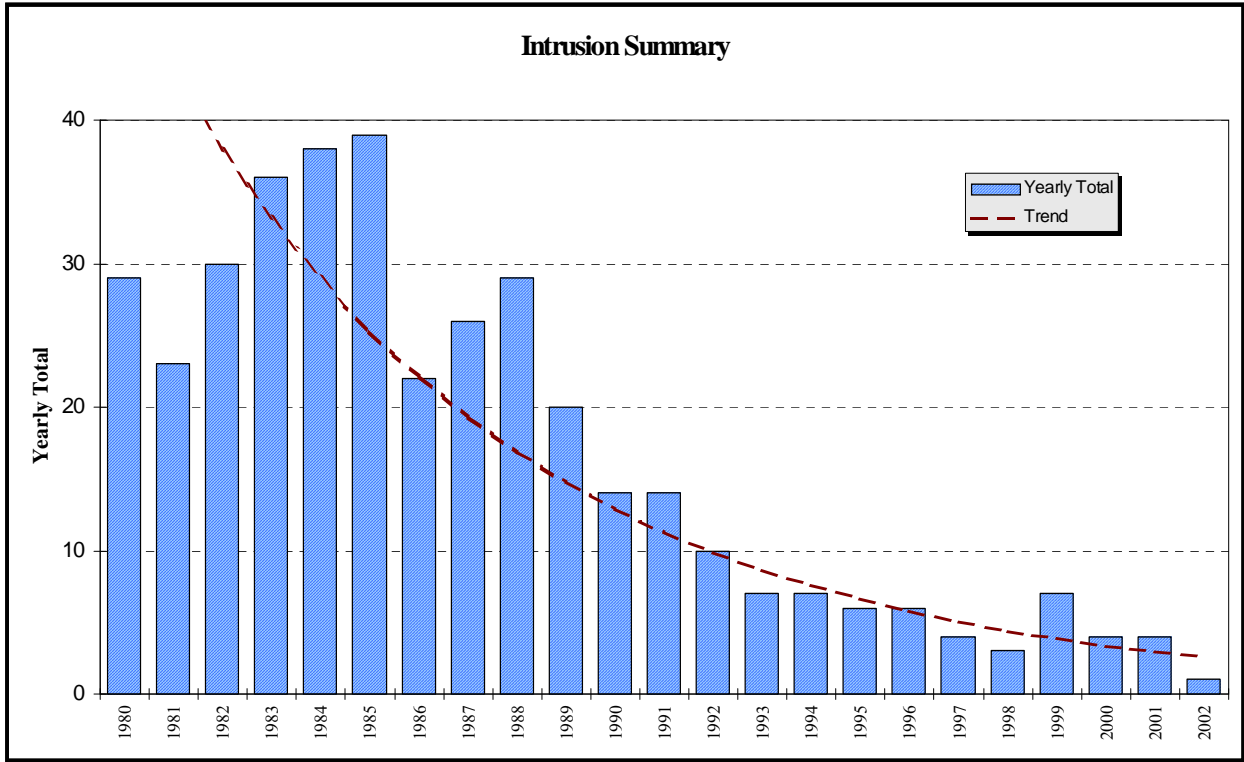


Figure 3B

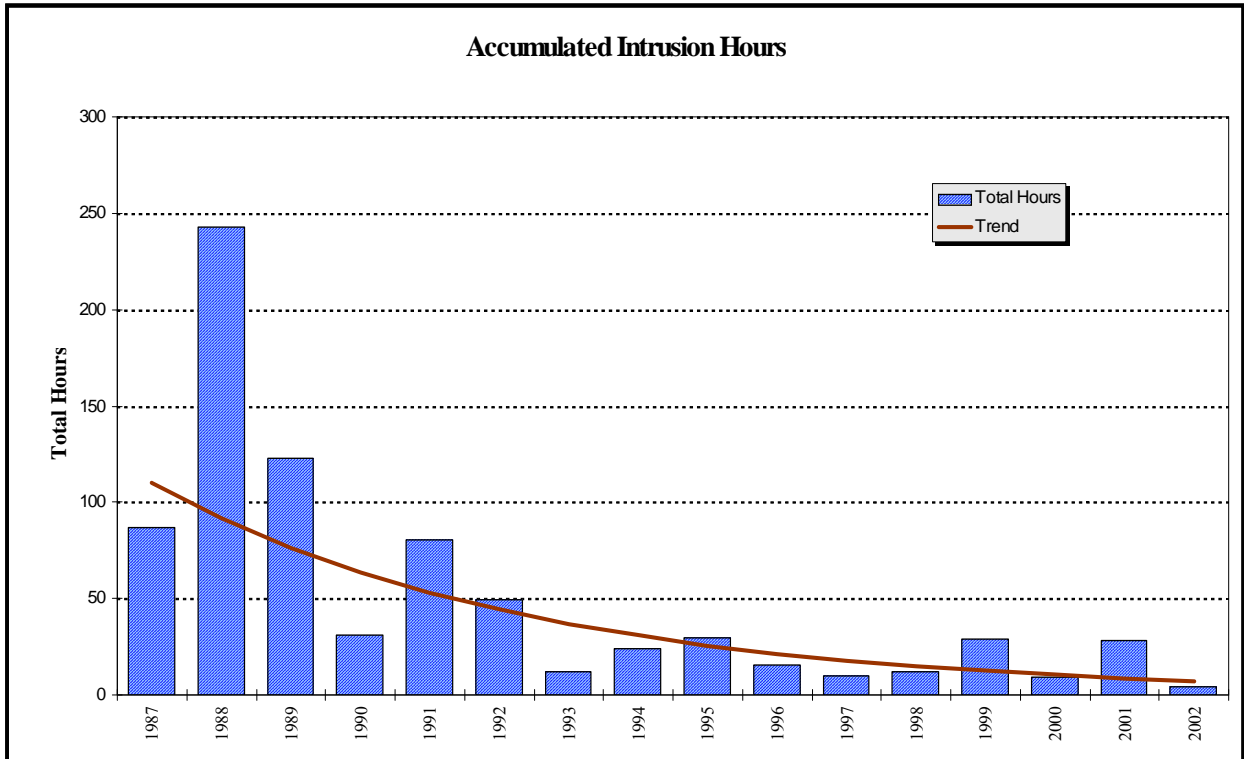


TABLE 2A

SMOKE INTRUSION SUMMARY – 2002

Restricted Area

Date	District/ Forest	Primary Area Affected	Unit No.	Owner Class	Intensity	Length
April 4	West Lane	Eugene	01-781-50083-01 01-781-50925-01	Private	Moderate	4 Hrs total, 1 Moderate 3 Light

TABLE 2B

PROTECTED AREA SMOKE INTRUSION SUMMARY –2002

Non-Restricted Area

Date	Forest	Area Affected	Owner Class	Intensity	Length
Oct 13-14	Wallow-Whitman	La Grande	USFS	Light/Moderate	13 Hrs

Figure 4A

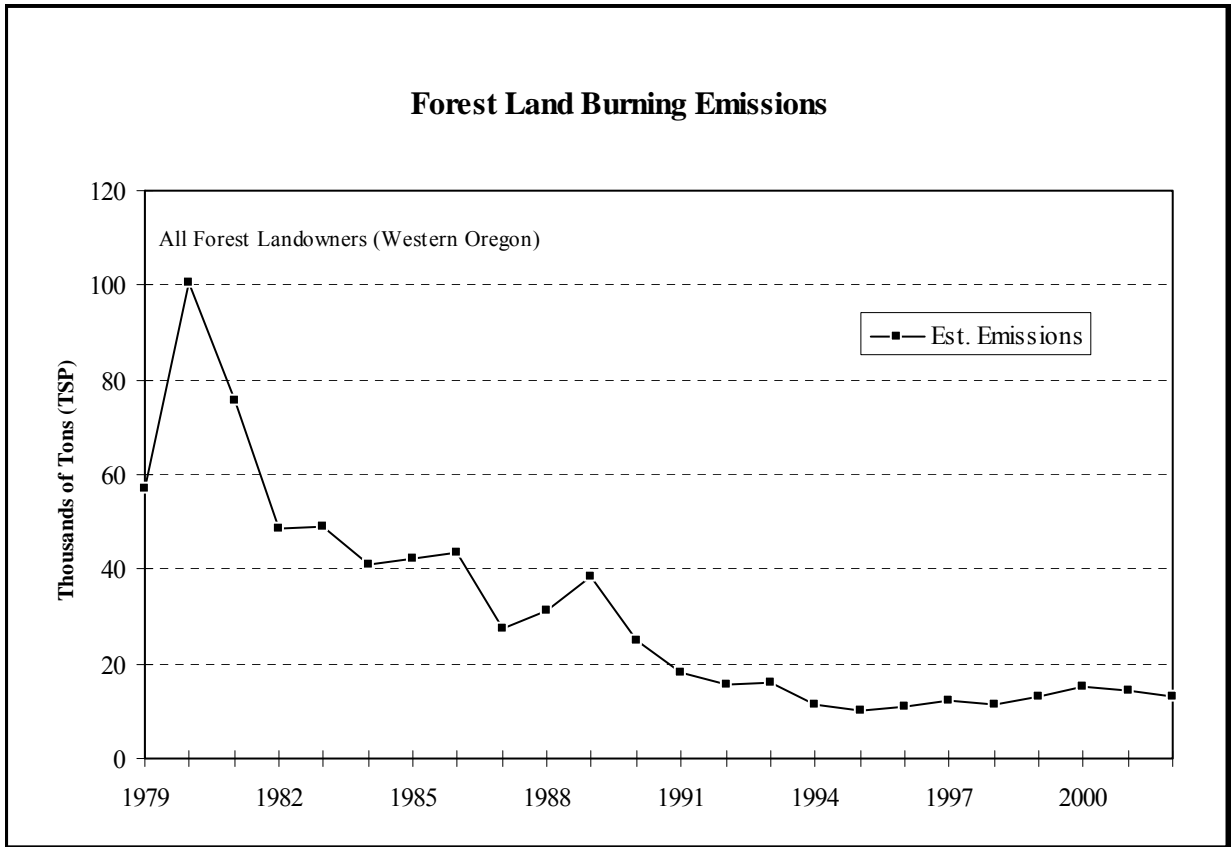


Figure 4B

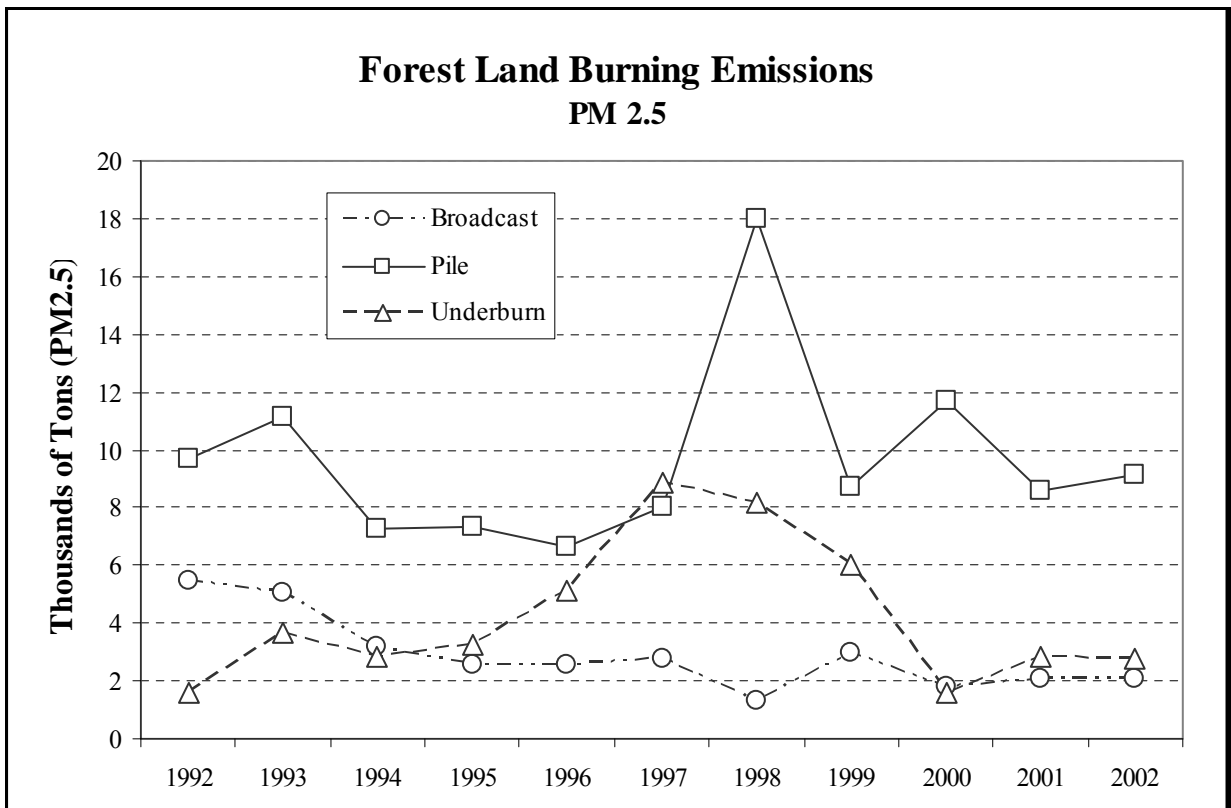


Table 3A

PM 2.5 Emissions (Tons) Broadcast											
District/Forest	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Astoria	65	83	18	79	37	15	9	6	1	0	0
Central Oregon	58	42	0	0	0	0	0	0	296	0	508
Clackamas-Marion	223	183	101	80	48	43	77	19	98	19	0
Coos	1011	900	492	641	527	633	464	758	748	764	583
Crater Lake NP	0	0	0	0	0	0	0	0	0	0	0
Deschutes NF	185	44	13	7	14	5	0	1	1	1	1
Douglas FPA	307	510	413	105	93	249	55	86	137	140	88
Eastern Lane	176	45	26	12	5	26	0	0	32	3	0
Forest Grove	134	119	106	65	42	35	51	31	33	22	14
Fremont	2	3	0	0	0	0	0	0	0	54	11
Klamath	29	0	0	4	8	18	0	0	0	0	0
Klamath-	0	17	0	1	66	410	0	1549	0	502	0
Linn	154	128	107	20	0	46	27	9	4	4	0
Malheur NF	205	189	60	255	251	118	61	149	0	69	11
Mt. Hood NF	121	121	56	32	17	13	0	0	0	0	0
North Cascade											4
Northeast Oregon	0	0	0	0	0	0	0	0	0	0	11
Ochoco NF	18	11	16	129	27	101	3	9	12	24	82
Rogue River NF	162	181	110	52	0	0	0	18	0	9	0
Siskiyou NF	204	41	99	47	56	108	37	21	32	0	0
Siuslaw NF	172	74	50	7	44	4	59	6	0	0	18
South											22
Southwest Oregon	117	49	40	3	49	59	41	85	17	87	3
Tillamook	234	212	103	68	6	0	0	4	0	0	0
Umatilla NF	127	138	63	61	264	129	23	52	2	51	83
Umpqua	200	360	169	172	97	60	1	0	1	12	36
Walker Range	0	0	0	0	0	0	0	0	0	0	0
Wallowa-Whitman NF	83	52	17	19	14	169	3	10	29	43	165
West Oregon	751	698	462	414	508	259	236	97	254	165	265
Western Lane	267	245	110	106	49	133	70	75	106	72	143
Willamette NF	437	559	580	185	370	109	65	17	3	0	4
Winema NF	19	66	0	0	0	0	0	0	0	7	0
Total	5,461	5,070	3,211	2,564	2,592	2,742	1,282	3,002	1,806	2,048	2,052

Table 3B

PM 2.5 Emissions (Tons) Pile											
District/Forest	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Astoria	141	171	388	251	121	427	355	486	261	539	325
Central Oregon	1712	1350	1181	322	710	523	11264	651	503	312	522
Clackamas-Marion	66	94	88	32	55	154	53	208	387	446	0
Coos FPA	581	760	823	826	905	880	1023	945	1146	1152	1078
Crater Lake NP	0	0	0	0	0	0	0	0	0	0	0
Deschutes NF	271	530	281	360	272	126	132	140	268	106	92
Douglas FPA	201	253	137	256	298	262	322	381	353	537	443
Eastern Lane	387	328	458	310	621	694	734	920	727	528	709
Forest Grove	128	268	240	298	374	326	415	336	535	640	612
Fremont NF	183	2	0	74	0	8	0	0	1	0	1
Klamath NF	21	0	5	3	0	0	0	0	0	0	0
Klamath-Lake	65	148	198	261	202	50	322	150	478	34	542
Linn	683	589	591	446	495	677	597	829	1233	1169	0
Malheur NF	170	268	15	412	137	116	184	103	76	24	189
Mt. Hood NF	324	198	57	80	42	21	97	42	196	3	210
North Cascade											233
Northeast Oregon	2060	2989	399	813	188	1488	144	397	581	368	471
Ochoco NF	0	69	7	119	217	98	170	286	130	7	10
Rogue River NF	114	91	13	51	24	95	49	53	39	2	150
Siskiyou NF	130	65	7	34	12	138	8	29	23	32	25
Siuslaw NF	5	2	0	0	3	0	1	9	8	0	3
South Cascade											1138
Southwest Oregon	154	97	39	50	70	271	302	333	461	268	399
Tillamook	57	41	39	46	92	66	20	122	115	84	73
Umatilla NF	5	75	22	19	0	0	0	9	11	10	50
Umpqua NF	145	289	193	83	16	47	78	68	27	93	19
Walker Range	115	1033	1257	580	524	42	43	340	1559	107	448
Wallowa-Whitman NF	129	32	20	32	25	14	71	164	159	83	171
West Oregon	472	573	239	480	686	679	834	1127	1128	1053	1038
Western Lane	258	151	135	208	313	510	517	464	757	625	316
Willamette NF	422	159	144	200	92	148	214	120	121	26	61
Winema NF	701	495	294	662	142	169	35	15	388	323	145
Total	9,700	11,120	7,270	7,308	6,636	8,029	17,984	8,727	11,671	8,571	9,470

Table 3C

PM 2.5 Emissions (Tons) Underburn											
District/Forest	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Astoria	0	0	0	0	0	0	0	0	0	0	0
Central Oregon	24	0	0	7	0	3	46	74	0	30	36
Clackamas-Marion	4	0	0	0	0	0	0	0	0	0	0
Coos FPA	1	0	0	0	0	0	0	0	0	0	0
Crater Lake NP	0	0	0	0	0	0	0	0	0	0	22
Deschutes NF	69	49	170	355	281	389	420	287	104	283	105
Douglas FPA	0	0	0	0	0	0	0	0	0	0	1
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	102	1,403	500	889	2,023	1,007	2,224	2,293	78	501	586
Klamath NF	0	0	0	5	2	25	27	0	0	0	0
Klamath-Lake	247	203	0	20	159	396	1,797	1,053	0	129	0
Linn	0	0	0	0	0	0	0	0	0	0	0
Malheur NF	76	159	251	470	972	2,522	1,071	1,021	11	356	251
Mt. Hood NF	29	76	109	111	104	92	10	102	3	4	0
North Cascade											0
Northeast Oregon	0	0	0	0	0	0	0	0	0	0	0
Ochoco NF	157	498	161	662	473	1,314	771	409	330	412	306
Rogue River NF	14	14	76	82	40	52	48	35	11	12	42
Siskiyou NF	8	0	0	9	16	58	6	14	71	8	62
Siuslaw NF	0	0	0	0	0	0	0	0	0	0	0
South Cascade											0
Southw est Oregon	1	14	11	3	6	38	54	42	123	103	178
Tillamook	0	0	0	0	0	0	0	0	0	0	0
Umatilla NF	105	216	919	167	498	1,504	766	296	394	59	293
Umpqua NF	9	36	20	10	99	130	150	48	83	155	140
Walker Range	0	0	0	0	0	0	0	0	0	0	0
Wallow a-Whitman NF	698	602	437	316	408	1,015	553	251	313	561	557
West Oregon	4	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	20	61	30	18	1	26	38	76	67	91	28
Winema NF	0	365	125	136	26	267	185	29	18	138	130
Total	1,568	3,696	2,809	3,260	5,108	8,838	8,166	6,030	1,606	2,842	2,736

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

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

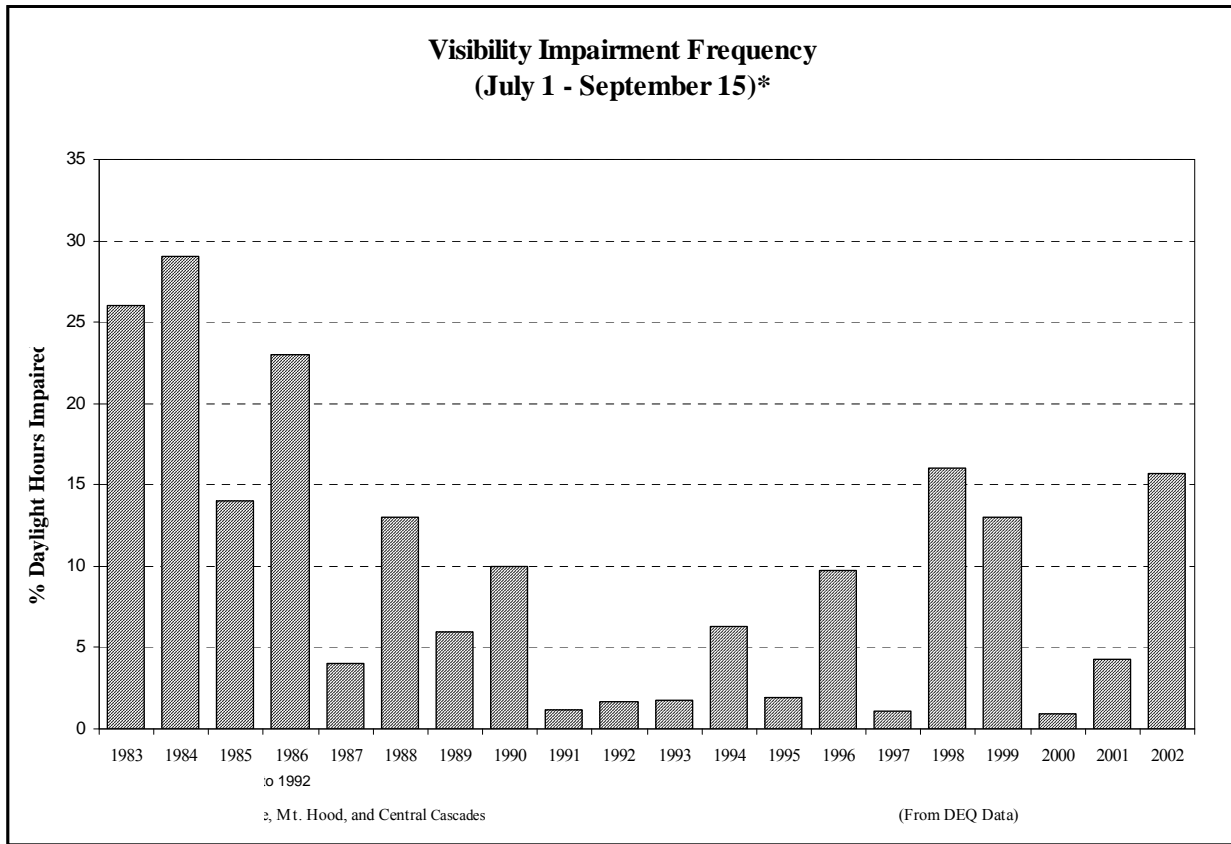


Figure 6

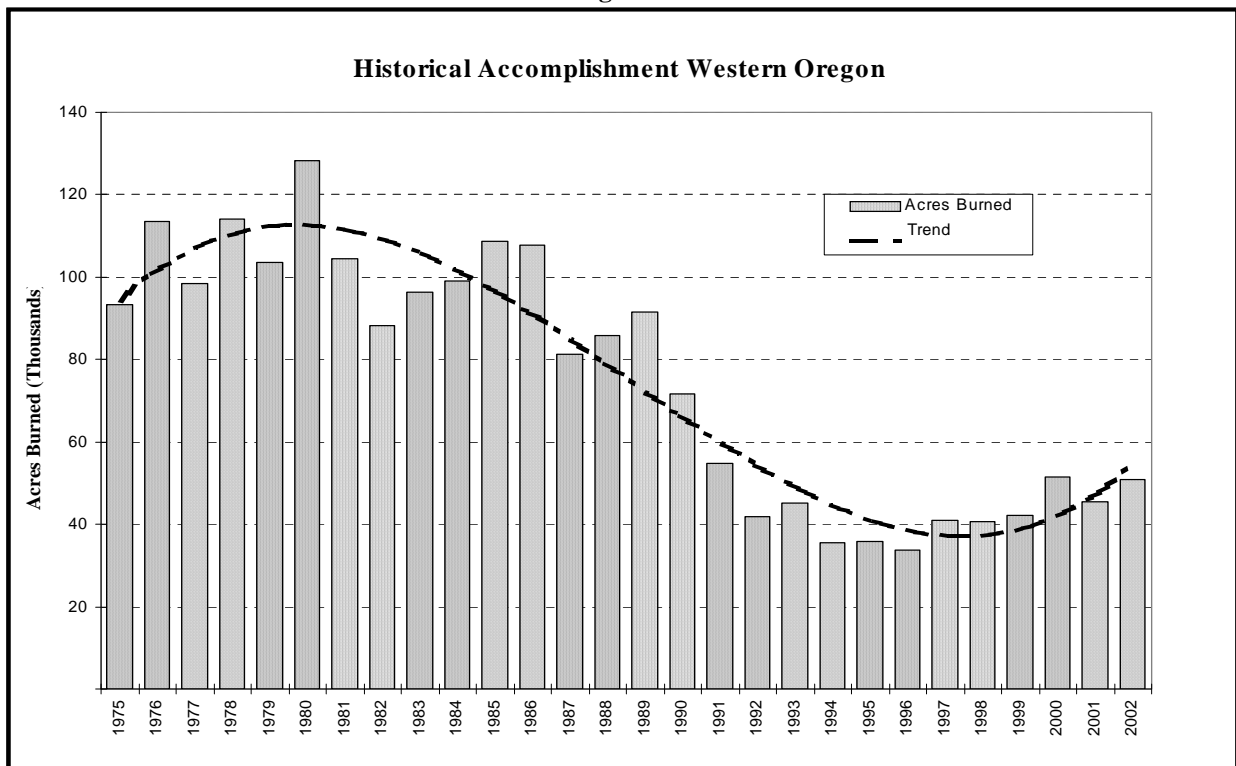


Figure 7

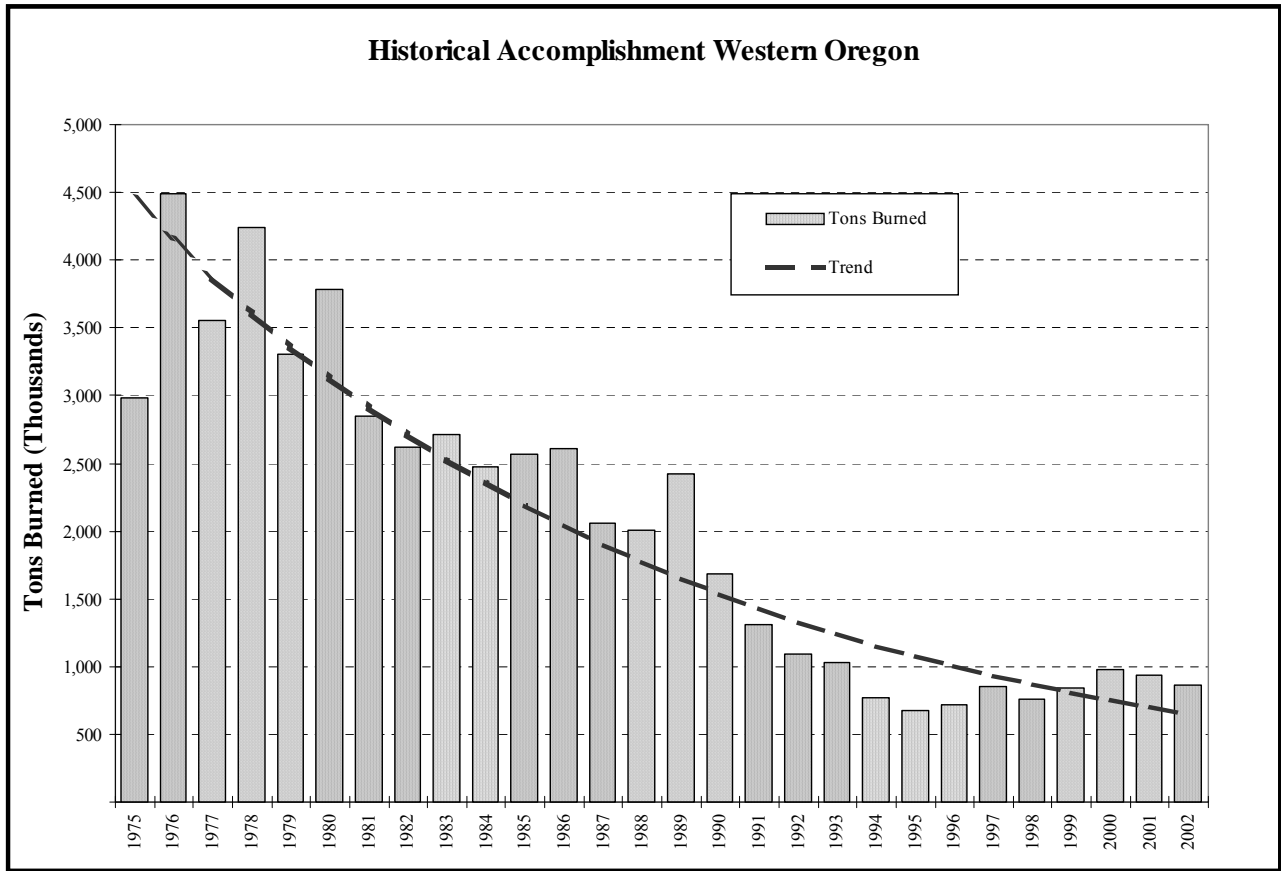


Figure 8A

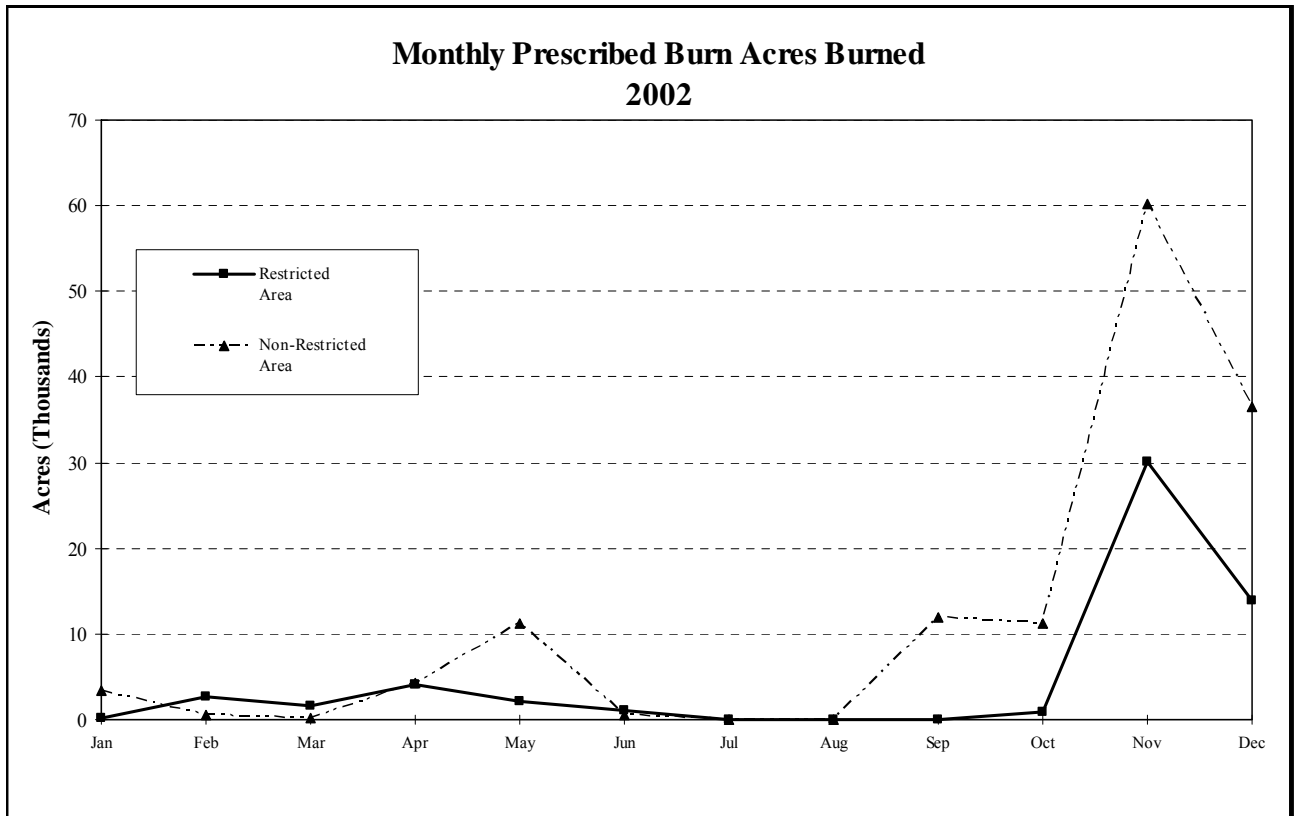


Figure 8B

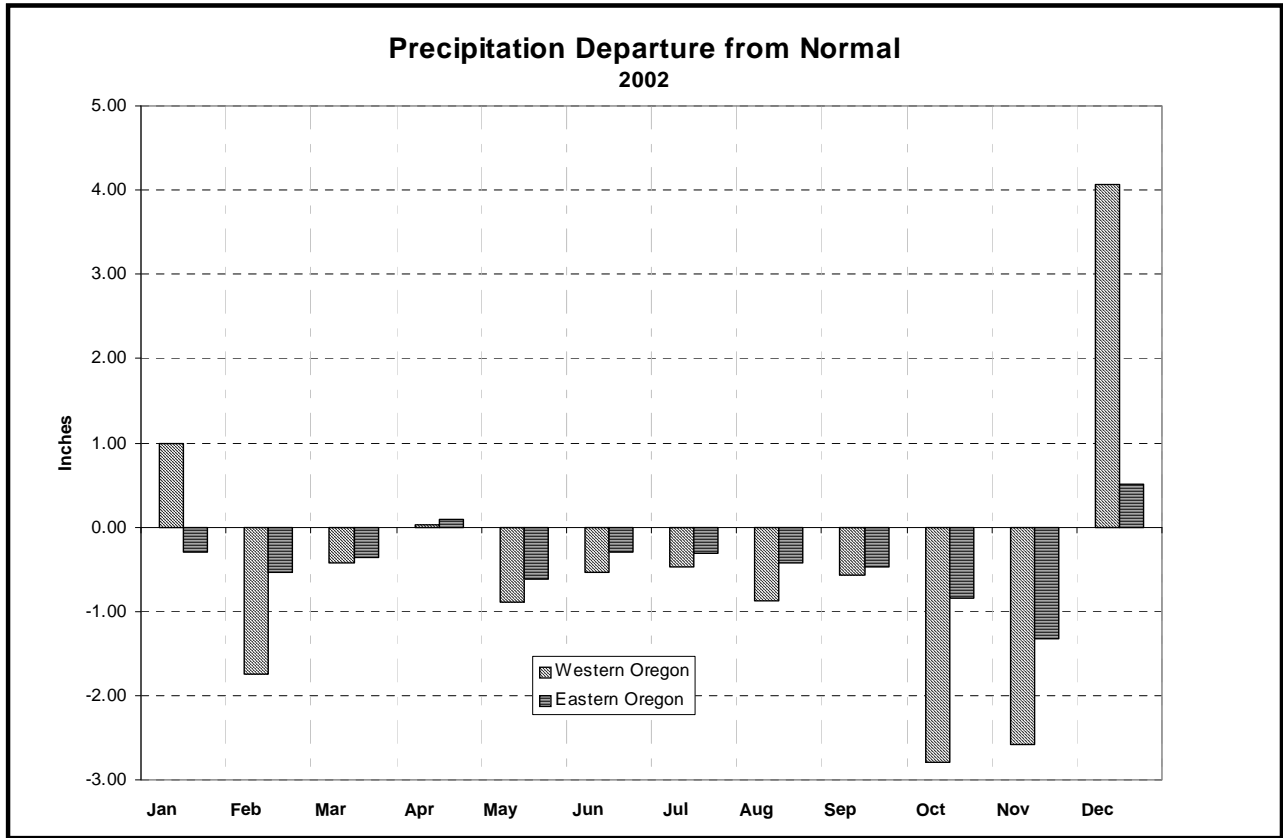


Figure 9

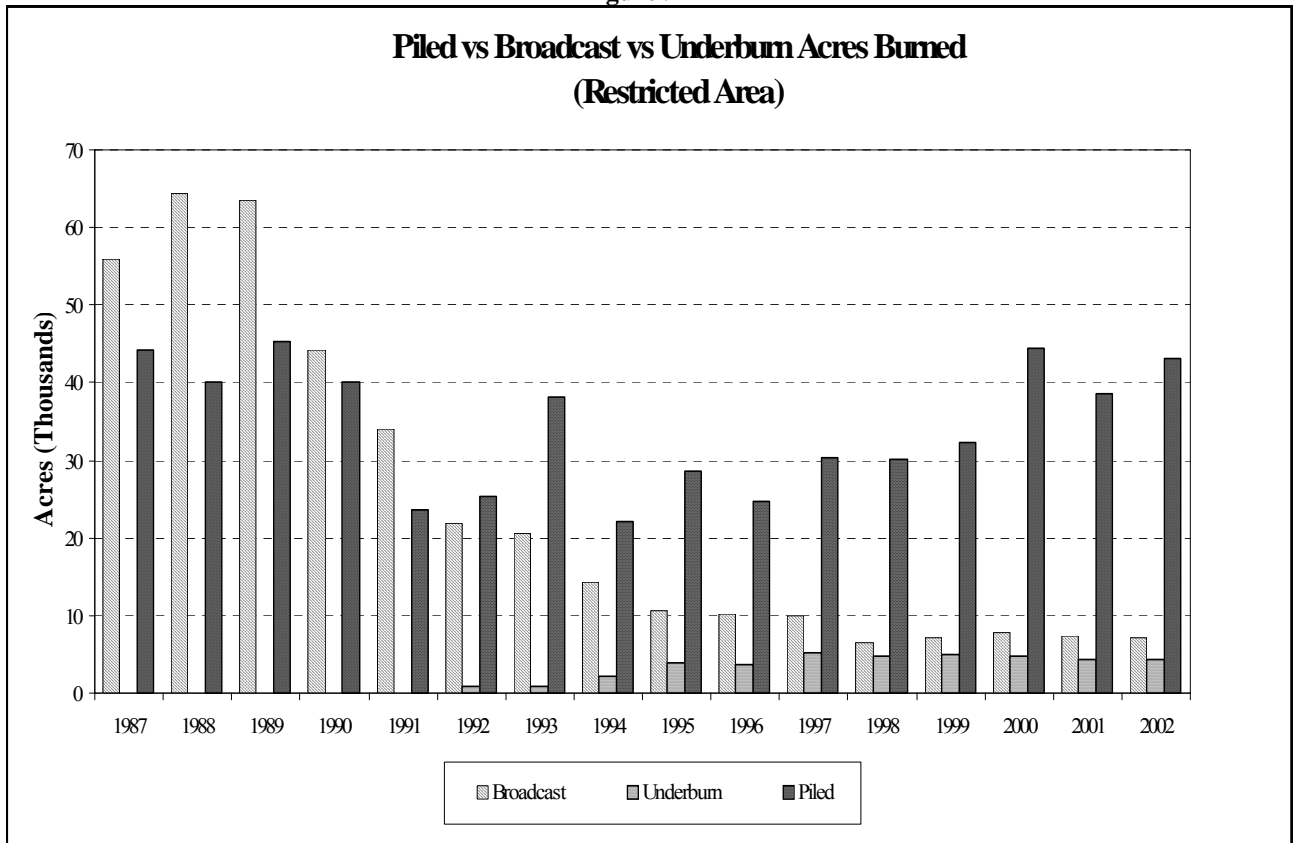


Figure 10

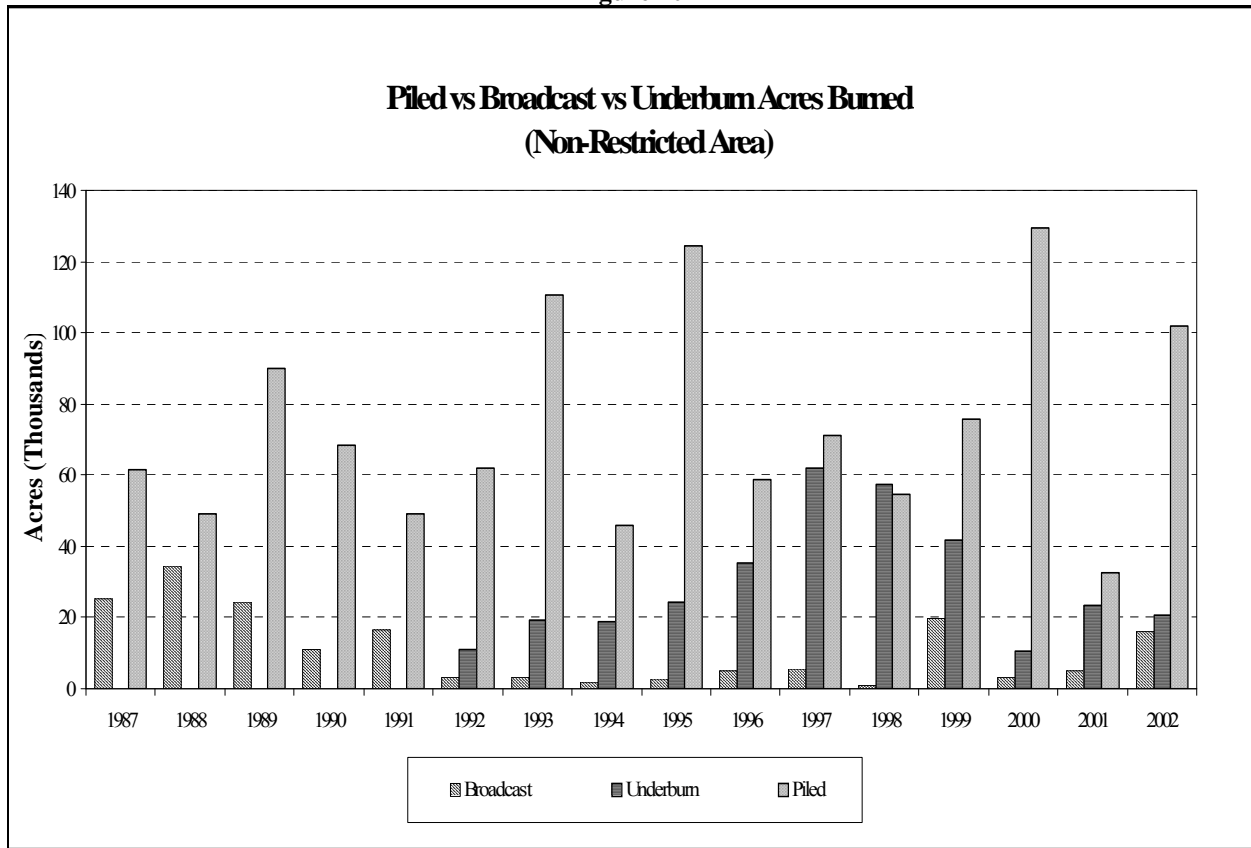


Table 5A
BURN SUMMARY BY DISTRICT -- 2002
 (Restricted Area)

District/Forest	Units Burned	Acres Burned	Tons Burned
Astoria	73	2,792	27,813
Clackamas-Marion	72	2,016	33,895
Coos FPA	474	5,889	208,520
Douglas FPA	179	3,486	51,416
East Lane	162	3,190	62,274
Forest Grove	141	3,887	59,189
Linn	146	5,285	101,601
Southwest	287	7,497	67,111
Tillamook	30	667	6,730
West Lane	136	3,731	41,968
West Oregon	262	7,099	114,678
Deschutes NF	250	5,874	19,470
Klamath NF	0	0	0
Mt Hood NF	23	1,267	17,956
Rogue River NF	55	1,900	25,891
Siskiyou NF	47	666	6,531
Siuslaw NF	10	116	2,970
Umpqua NF	26	909	28,010
Willamette NF	54	442	10,964
TOTAL	2,427	56,713	886,987

TABLE 5B
BURN SUMMARY BY DISTRICT – 2002
 (Non-Restricted Area)

District/Forest	Units Burned	Acres Burned	Tons Burned
Central Oregon	64	32,885	133,536
Klamath-Lake	61	21,196	68,403
Northeast	126	23,783	79,441
Walker Range	34	28,047	45,745
Crater Lake NP	3	230	2,546
Fremont NF	6	6,403	64,355
Malheur NF	110	8,123	57,947
Ochoco NF	44	4,088	30,963
Umatilla NF	55	3,033	26,558
Wallowa-Whitman NF	137	8,726	115,414
Winema NF	58	3,038	53,745
TOTAL	698	139,552	678,653

Table 6A
Tons Burned by Month by District
2002
(Restricted Area)

District	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total by District
Astoria										20	15,089	12,704	27,813
Clackamas -Marion					20	686					18,801	14,388	33,895
Coos	2,387	10,042	10,237	26,756	21,195	2,618					90,614	44,671	208,520
Douglas	10	542	136	572	1,445						33,627	15,084	51,416
East Lane											38,780	23,494	62,274
Forest Grove		600	400		120	790	100			288	30,399	26,492	59,189
Linn					16					80	69,647	31,858	101,601
Southwest	335	6,492	1,950	11,042	1,990						29,932	15,370	67,111
Tillamook		50								40	5,465	1,175	6,730
West Lane		359	620	5,547	3,433	1,532				1,170	18,242	11,065	41,968
West Oregon		946		3,169	2,612	10,122				3,830	67,725	26,274	114,678
Klamath NF													0
Mt Hood NF											903	17,053	17,956
Rogue River NF	194	313	751	3,130	8,405						9,198	3,900	25,891
Siskiyou NF			1,701	1,217	1,286	150					1,240	937	6,531
Siuslaw NF										2,749	62	159	2,970
Umpqua NF				1,757	13,850	1,104			11	3,950	7,338		28,010
Willamette NF			13	26		4,579				157	5,901	288	10,964
Deschutes NF	593	359	601	2,961	3,867					100	8,511	2,478	19,470
District Total	2,732	19,031	13,343	47,086	30,831	15,748	100	0	0	5,428	418,321	222,575	775,195
Forest Total	787	672	3,066	9,091	27,408	5,833	0	0	11	6,956	33,153	24,815	111,792
Grand Total	6,892	9,326	9,586	13,958	109,050	26,947	10,109	254	24	371,870	383,999	24,507	886,987

Table 6B
Tons Burned by Month by District
2002
(Non-Restricted Area)

District	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total by District
Central Oregon					3,501				38,950	6,036	29,782	55,267	133,536
Klamath-Lake											54,990	13,413	68,403
Northeast	10	430	550	120	1,593					9,214	59,307	8,217	79,441
Walker Range	5357										12,654	27,734	45,745
Crater Lake NP						310				696	1,540		2,546
Fremont NF				2,520	61,680					55	100		64,355
Malheur NF				300	32,220	1,925				2,865	18,823	1,814	57,947
Ochoco NF				1,974	1,776					19,247	7,608	358	30,963
Umatilla NF					6,457	3,865				11,901	3,167	1,168	26,558
Wallowa-WWhitman NF		40		6,841	26,784	1,456			5,490	51,786	18,154	4863	115,414
Winema NF				7,174	23,846					4,885	17,056	784	53,745
District Total	5367	430	550	120	5,094	0	0	0	38,950	15,250	156,733	104,631	327,125
Forest Total	0	40	0	18,809	152,763	7,246	0	0	5,490	90,739	64,908	8,987	348,982
Grand Total	5367	470	550	18,929	157,857	7,246	0	0	44,440	105,989	221,641	113,618	676,107

Table 7A
Acres Burned by Month by District
2002
(Restricted Area)

District	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total by District
Astoria										5	1880	907	2792
Clack-Marion					3	32					1022	959	2016
Coos	52	417	433	1144	787	101					2041	914	5889
Douglas	6	205	7	44	48						2277	899	3486
East Lane											2228	962	3190
Forest Grove		16	22		7	24	3			19	2068	1728	3,887
Linn					3					2	3611	1669	5285
Southwest	6	918	465	1160	216						3456	1276	7497
Tillamook		1								4	531	131	667
West Lane		29	37	314	247	121				95	1654	1234	3731
West Oregon		42		239	206	646				307	3984	1675	7099
Klamath NF													0
Mt Hood NF											119	1148	1267
Rogue River NF	110	238	72	305	301						614	260	1,900
Siskiyou NF			145	152	121	6					99	143	666
Siuslaw NF										102	9	5	116
Umpqua NF				33	246	23			11	124	472		909
Willamette NF			2	2		100				17	307	14	442
Deschutes NF	28	439	151	534	385					98	2829	1410	5,874
District Total	64	1,628	964	2,901	1,517	924	3	0	0	432	24,752	12,354	45,539
Forest Total	138	677	370	1,026	1,053	129	0	0	11	341	4,449	2,980	11,174
Grand Total	202	2,305	1,334	3,927	2,570	1,053	3	0	11	773	29,201	15,334	56,713

Table 7B
Acres Burned by Month by District
2002
(Non-Restricted Area)

District	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total by istrict
Central Oregon					389				11,490	704	3,039	17,263	32,885
Klamath-Lake											20,027	1,169	21,196
Northeast	110	419	100	171	656					2,276	17,396	2,655	23,783
Walker Range	2,435										8,782	16,830	28,047
Crater Lake NP						62				58	110		230
Fremont NF				120	6,270					11	2		6,403
Malheur NF				300	2,630	65				197	4,383	548	8,123
Ochoco NF				293	224					2,346	1,207	18	4,088
Umatilla NF				440		284				1,840	317	152	3,033
Wallowa-Whitman NF		143		824	2,146	56			383	3,338	1,689	147	8,726
Winema NF				381	574					140	1,631	312	3,038
District Total	2,545	419	100	171	1,045	62	0	0	11,490	3,038	49,354	37,917	106,141
Forest Total	0	143	0	1,951	12,090	144	0	0	394	6,156	9,384	1,025	33,411
Grand Total	0	562	100	2,122	13,135	206	0	0	11,884	9,194	58,738	38,942	139,552

TABLE 8A
TONS BURNED BY MONTH WITHIN COUNTY
2002
(Restricted Area)

County	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Benton				400		1,568					23,921	10,596	36,485
Clackamas											13,063		13,063
Clatsop										20	15,563	12,704	28,287
Columbia					80		100			288	12,695	11,042	24,205
Coos	2,781	5,291	1,268	20,154	13,346	2,618				90	63,599	22,365	131,512
Curry	38	7,804	5,367	750	206						14,796	9,982	38,943
Deschutes	585	359	601	2,499	1,349					7	3,184	1,177	9,761
Douglas	195	2,411	4,790	7,642	19,490	1,319				5,988	53,484	25,732	121,051
Hood River													0
Jackson	494	4,213	2,701	6,829	8,852						32,572	12,520	68,181
Jefferson	8			112	1,012						1,375	579	3,086
Josephine	417	2,892	1,800	8,641	2,454	150				19	7,477	4,191	28,041
Klamath				683	1,173					128	2,520	397	4,901
Lake											1,397	325	1,722
Lane		435	2,064	6,017	1,590	5,359			11	4,071	66,018	31,711	117,276
Lincoln		946	1,130	1,615		4,181				3,100	13,254	4,720	28,946
Linn				5	26					950	80,536	20,196	101,713
Marion			13	10	10	686					8,781	12,654	22,154
Multnomah											120	147	267
Polk			290	1,276	1,819	892					22,435	6,448	33,160
Tillamook		50								40	7,552	5,836	13,478
Wasco												17,053	17,053
Washington			200		40	490					5,748	5,107	11,585
Yamhill		600	200	1,125	793	4,081					19,657	5,661	32,117
Total	4,518	25,001	20,424	57,758	52,240	21,344	100	0	11	14,701	469,747	221,143	886,987

TABLE 8B

**TONS BURNED BY MONTH WITHIN COUNTY
2002
(Non-Restricted Area)**

County	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Baker		40		6,841	26,444	1,456				29,426	13,229	4,832	82,268
Crook				2,564	5,277				2,800	18,657	6,922		36,220
Deschutes									17,500		8,296	50,667	76,463
Grant				300	15,420	1,925				3,465	4,275	2,031	27,416
Harney					16,800				12,250	5,436	26,899	149	61,534
Hood River											8,645	3,896	12,541
Klamath	1,800			32,479	60,221	310				5,581	82,941	37,201	220,533
Lake	4,500			2,520						55	7,186		14,261
Morrow					1,120					6,129		2,110	9,359
Umatilla					3,866	3,865				8,827	21,357	5,025	42,940
Union	10	430		120	1,873				5,490	6,495	9,789	1,837	26,044
Wallowa			550		1,531					25,154	33,123	436	60,794
Wasco											490	704	1,194
Wheeler									6,400		686		7,086
Total	6,310	470	550	44,824	132,552	7,556	0	0	44,440	109,225	223,838	108,888	678,653

Table 9A
Burn Data by Owner Type
2002
(Restricted Area)

District/ Forest	Private			State			Federal (Except USFS)			USFS		
	Units	Acres	Tons	Units	Acres	Tons	Units	Acres	Tons	Units	Acres	Tons
Astoria	61	2,226	17,264	12	566	10,549						
Clackamas-Marion	71	1,961	33,536	1	55	359						
Coos FPA	444	5,672	201,979	27	193	5,085	3	24	1,456			
Douglas FPA	173	3,325	49,293	2	16	205	4	145	1,918			
East Lane	160	3,188	62,166	0	0	0	2	2	108			
Forest Grove	136	3,818	57,586	5	69	1,603						
Linn	139	4,975	98,533	5	242	719	2	68	2349			
Southwest	115	2,421	30,446	3	6	55	169	5,070	36,610			
Tillamook	25	590	6,270	5	77	460						
West Lane	134	3,724	41,894	0	0	0	2	7	74			
West Oregon	256	6,953	112,648	2	84	520	4	62	1,510			
Klamath NF												
Mt Hood NF										23	1267	17,956
Rogue River NF										55	1900	25,891
Siskiyou NF										47	666	6,531
Siuslaw NF										10	116	2970
Umpqua NF										26	909	28,010
Willamette NF										54	442	10,964
Deschutes NF										250	5,874	19,470
Totals	1,714	38,853	711,615	62	1,308	19,555	186	5,378	44,025	465	11,174	111,792

**Table 9B
Burn Data by Owner Type
2002**

District/Forest	Private			State			Federal (Except USFS)			USFS		
	Units	Acres	Tons	Units	Acres	Tons	Units	Acres	Tons	Units	Acres	Tons
Central Oregon	33	19,232	68,463	13	351	4,235	18	13302	60,838			
Klamath-Lake	57	20083	64,728	1	1	422	3	1,112	3,253			
Northeast	123	23,607	75,355				3	176	4086			
Walker Range	34	28,047	45,745									
Crater Lake NP							3	230	2,546			
Fremont NF										6	6,403	64,355
Malheur NF										110	8,123	57,947
Ochoco NF										44	4,088	30,963
Umatilla NF										55	3033	26,558
Wallowa-Whitman NF										137	8726	115414
Winema NF										58	3,038	53,745
TOTALS	247	90,969	254,291	14	352	4,657	27	14,820	70,723	410	33,411	348,982

(Non-Restricted Area)

Figure 11

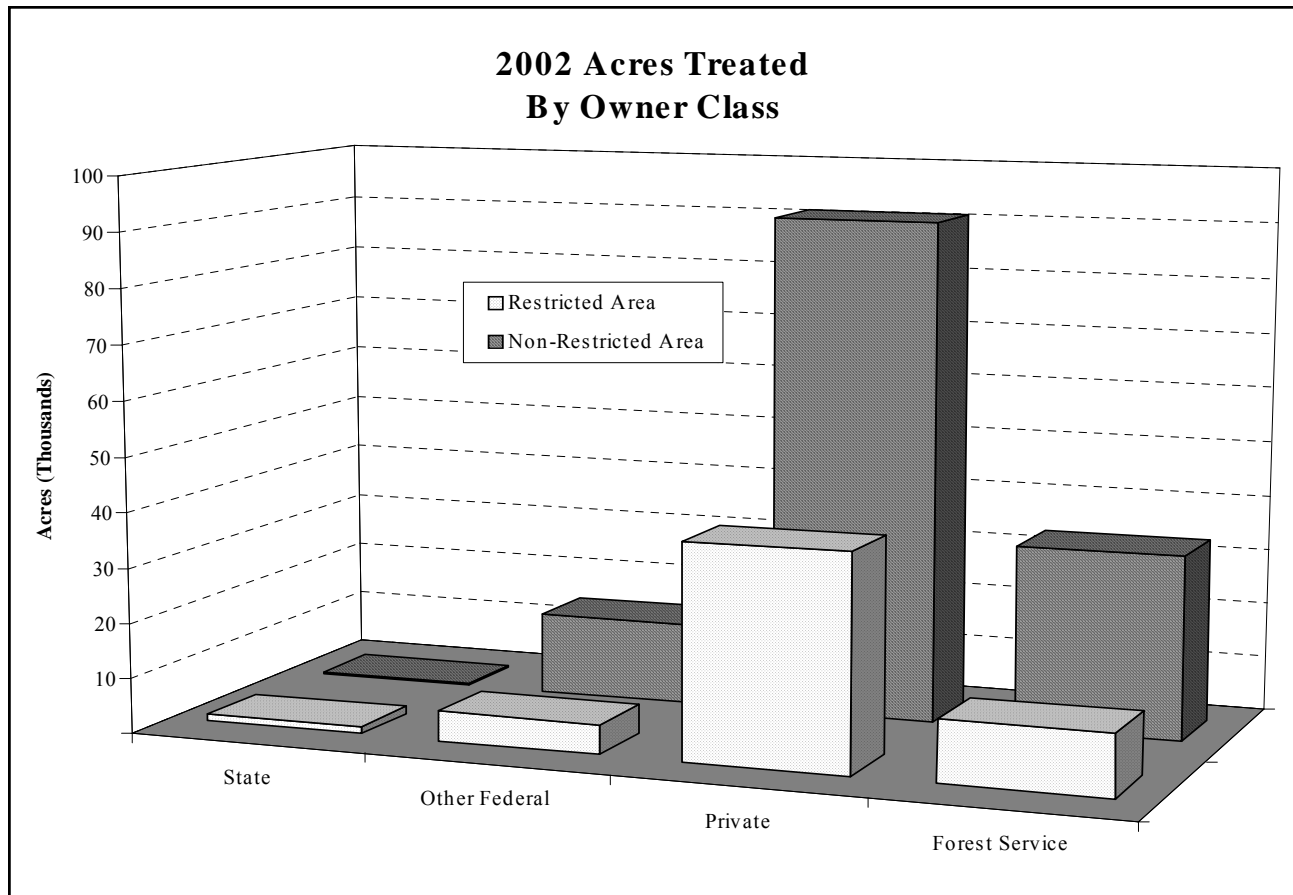


Figure 12A

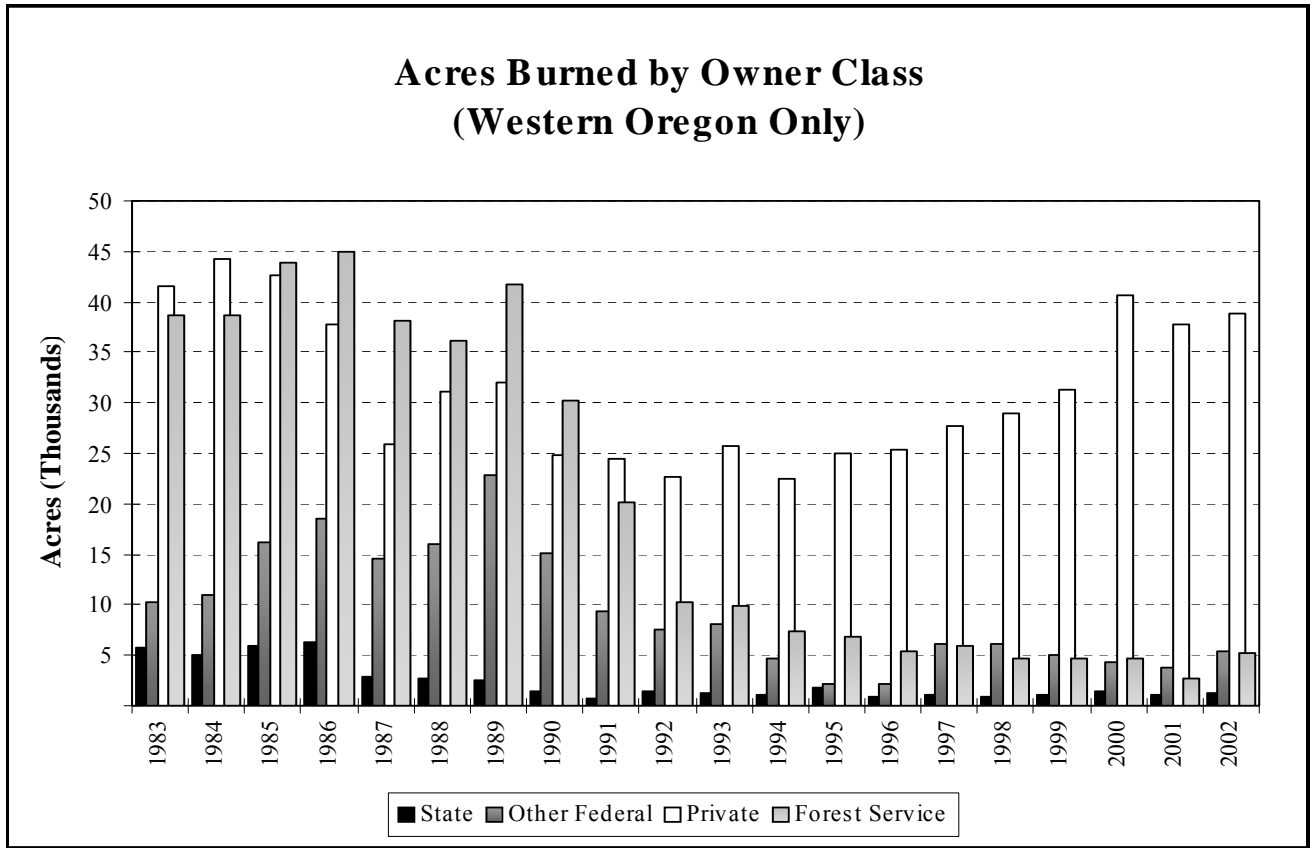


Figure 12B

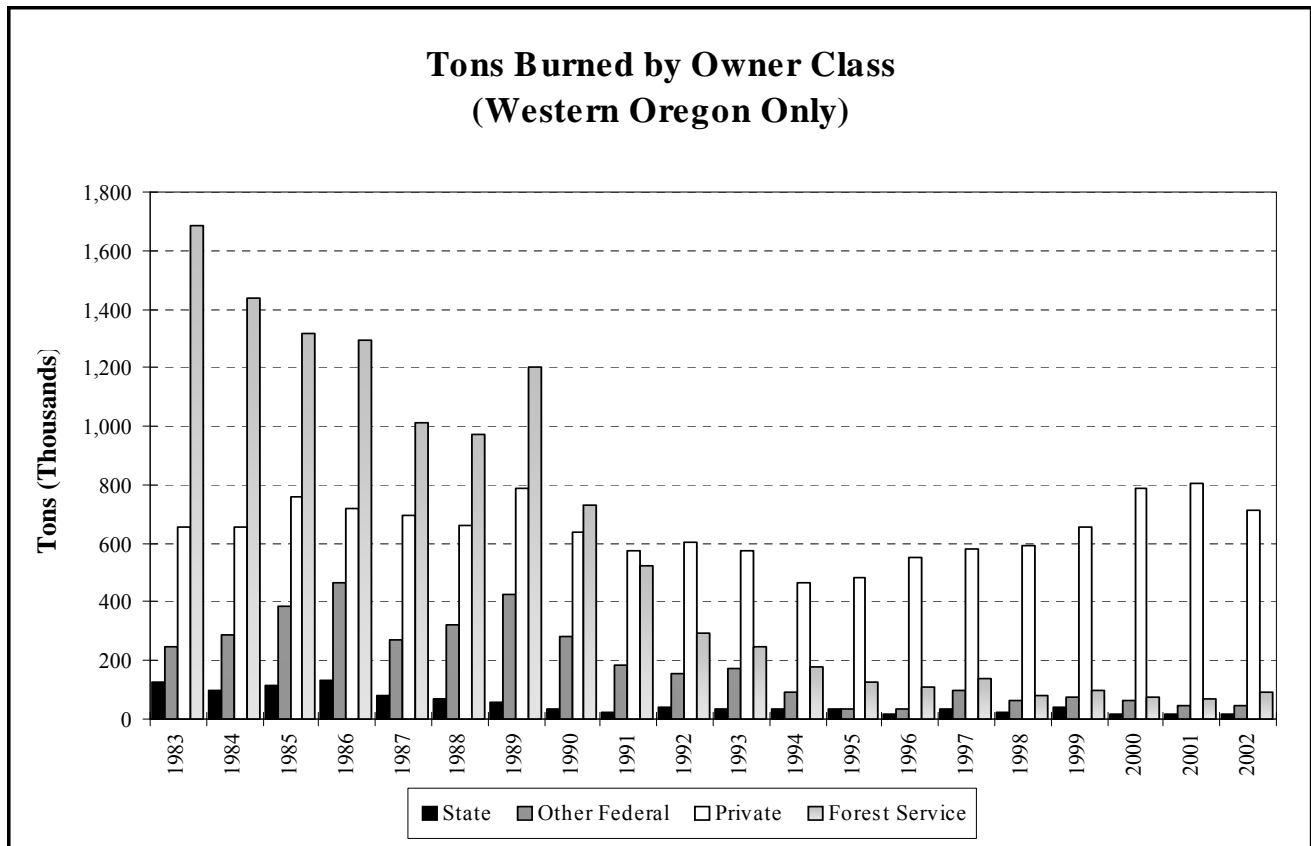


Figure 13A

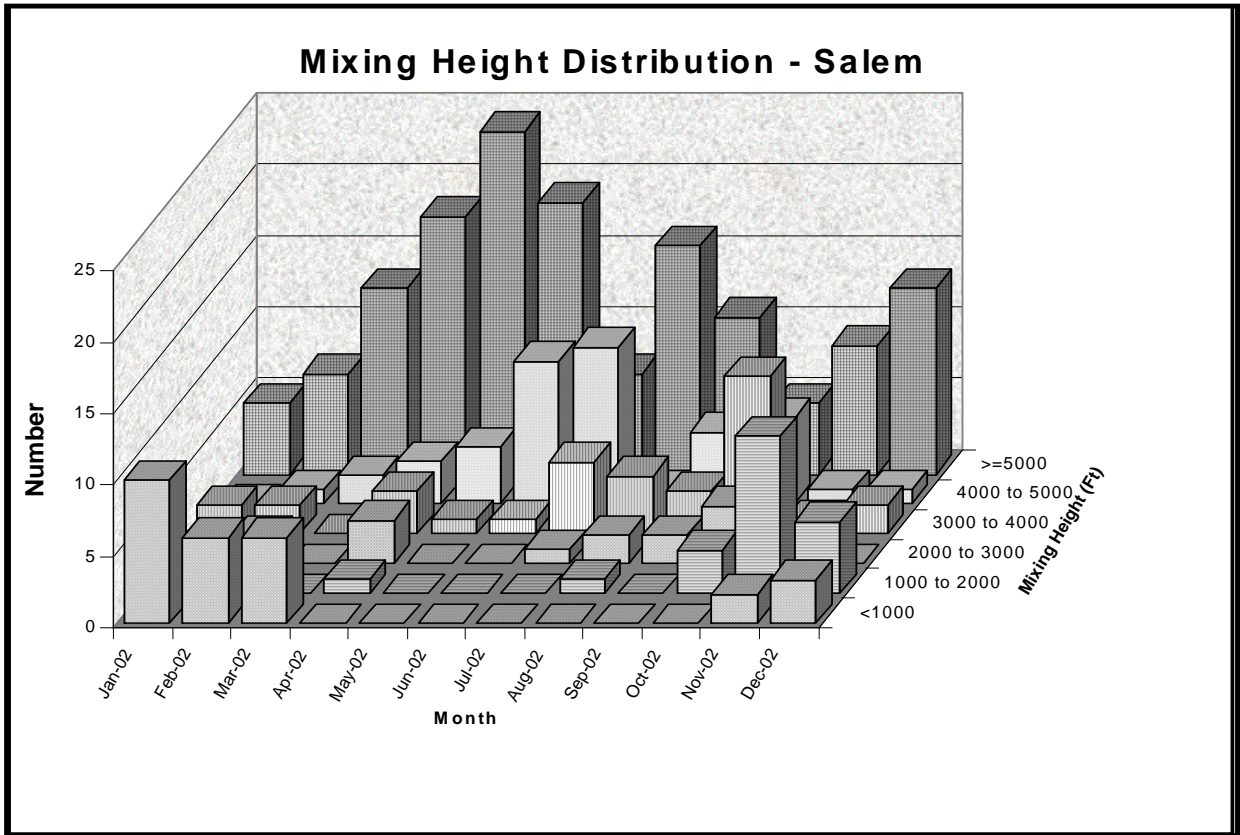


Figure 13B

