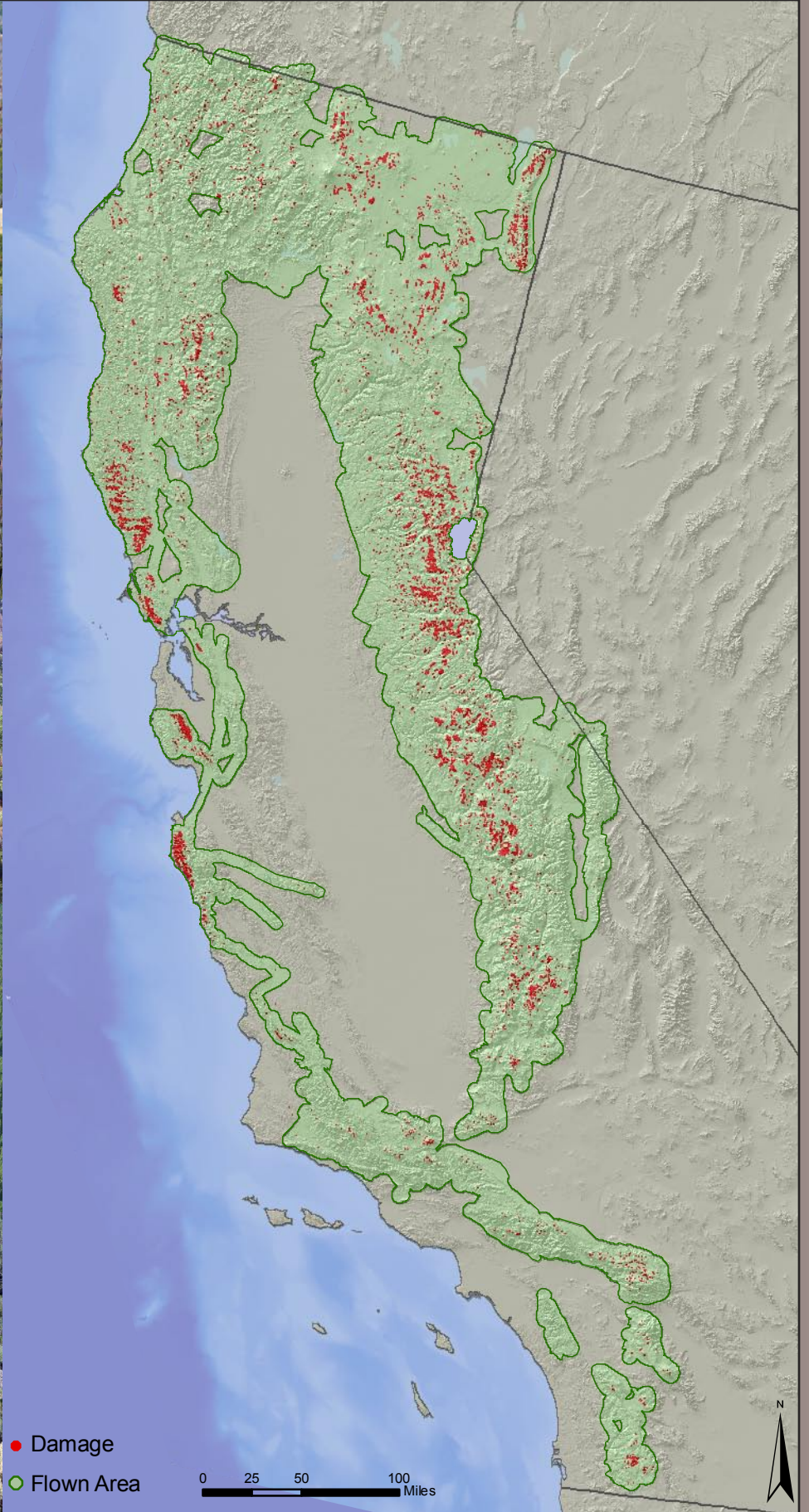


2006 Aerial Survey Results: California



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Prepared by Zachary Heath, Jeffrey Mai & Lisa Fischer
Forest Health Monitoring Programs
3237 Peacekeeper Way, Suite 207
McClellan, California
95652

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Overview

The US Forest Service Forest Health Protection program conducts aerial detection surveys nationally. Surveys have been conducted in the Pacific Southwest Region annually since 1994. Data is collected using a digital aerial sketch mapping system following national protocols in order to provide standardized information on biotic and abiotic damage to California's forested ecosystems.

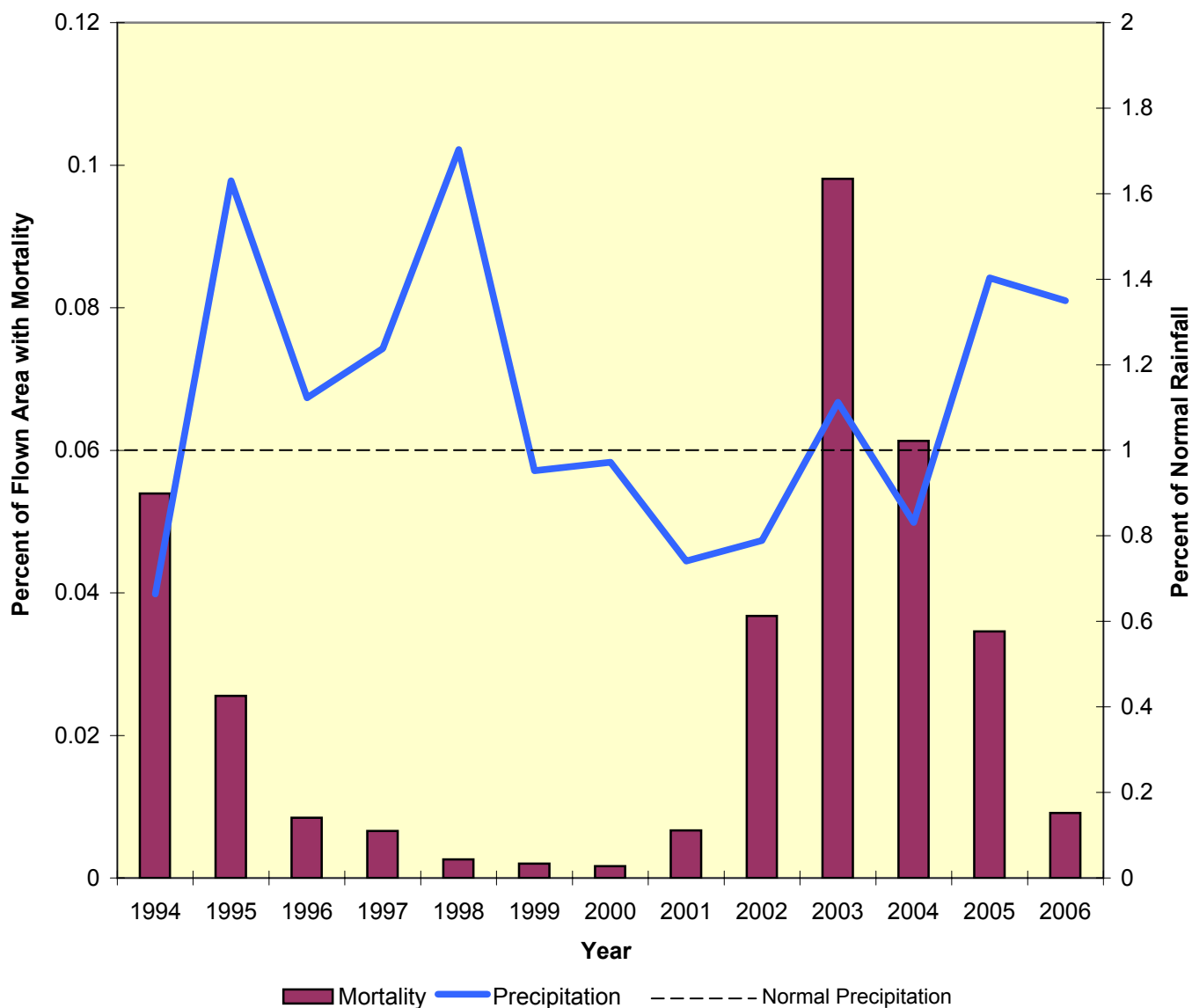
Highlights for 2006...

- The area flown in California increased from approximately 28 million acres during 2005 to approximately 43 million acres in 2006 to include additional State, private, and other Federal lands.
- Approximately 727,000 acres with mortality were observed and mapped in California, including nearly 400,000 acres caused by biotic agents such as bark beetles and diseases.
- Heavy mortality resulting from blackstain root disease, Mountain Pine Beetle and Western Pine Beetle continued to be observed in the northeast portion of the state (Klamath, Modoc, and Shasta-Trinity National Forests).
- Heavy Douglas-fir Tussock Moth (DFTM) defoliation continued in many areas of California, increasing over the past year. Approximately 22,000 acres were mapped with DFTM defoliation (Sierra, Stanislaus, and the Shasta-Trinity National Forests and Yosemite National Park).
- Hardwood mortality related to sudden oak death continues to advance within currently infested counties.

This report contains maps of California displaying all areas surveyed, tables summarizing mapped damage by national forest, national park and county, and a comparison of annual precipitation to the mapped mortality (excluding fire) for all years surveyed.

To learn more about aerial detection monitoring, view standards, metadata, maps and data, go to www.fs.fed.us/r5/spf/fhp.

Region 5 Mortality and Precipitation



This graph displays mapped mortality acreage, excluding fire mortality, as a percentage of the area surveyed each year surveys were flown. Mapped mortality generally increases after years with below average rainfall. The precipitation data is based on average rainfall for the State of California over the past 30 years (Precipitation data source: Department of Water Resources).

Acres with Mortality by National Forest/Park

Unit	Bark Beetle				Fire	Other Agents					Unit
	Pine	Fir	Mix	Total	Total	Pine	Fir	Mix	Hardwood	Total	Total
Angeles	131	2	1	134	53	0	0	0	19	19	206
Cleveland	20	0	2	22	225	0	0	0	2,357	2,357	2,604
Eldorado	3,028	16,055	17,197	36,280	7,927	0	0	3	0	3	44,210
Inyo	613	193	2,220	3,026	6,019	0	0	0	1	1	9,046
Klamath	9,371	1,870	6,423	17,664	45,337	0	0	1	231	232	63,233
Lassen	6,378	1,375	10,558	18,311	1,131	0	0	0	0	0	19,442
Los Padres	896	29	173	1,098	12,180	0	0	1	12,133	12,134	25,412
Mendocino	1,825	10,818	3,637	16,280	18,536	0	0	13	0	13	34,829
Modoc	15,908	570	8,924	25,402	5,602	0	0	17	14	31	31,035
Six Rivers	120	474	349	943	6,989	0	0	1,339	0	1,339	9,271
Plumas	1,205	454	566	2,225	4,249	0	0	0	13	13	6,487
San Bernardino	1,369	7	231	1,607	11,259	5	0	0	1	6	12,872
Sequoia	2,897	5,132	12,293	20,322	6,164	0	0	0	0	0	26,486
Shasta-Trinity	6,273	925	1,287	8,485	96,672	0	0	17	1	18	105,175
Sierra	8,334	2,521	35,951	46,806	2,683	0	0	0	0	0	49,489
Stanislaus	2,772	9,575	14,341	26,688	4,841	0	0	0	1	1	31,530
Tahoe	7,457	13,979	14,088	35,524	1,936	0	0	2	0	2	37,462
Lake Tahoe Basin	1,715	1,587	6,053	9,355	602	0	0	0	3	3	9,960
Total Forest Service	70,312	65,566	134,294	270,172	232,405	5	0	1,393	14,774	16,172	518,749
Golden Gate	0	0	0	0	0	0	0	0	1,878	1,878	1,878
Lassen Volcanic	4,315	656	2,330	7,301	1,769	0	0	0	0	0	9,070
Point Reyes	0	0	0	0	0	0	0	0	252	252	252
Redwood	0	0	2	2	0	0	0	94	0	94	96
Sequoia-Kings	1,766	666	1,464	3,896	7,288	0	0	0	0	0	11,184
Whiskeytown	125	0	0	125	13	0	0	0	0	0	138
Yosemite	4,808	659	9,430	14,897	1,780	0	0	0	0	0	16,677
Total Park Service	11,014	1,981	13,226	26,221	10,850	0	0	94	2,130	2,224	39,295

Unit	Other Mortality-Causing Events:
Angeles	High Water, Hardwood Mortality
Cleveland	Hardwood Mortality
Eldorado	Douglas-fir Mortality
Inyo	Hardwood Mortality
Klamath	Douglas-fir and Port-Orford Cedar Mortality, Bear Damage
Lassen	N/A
Los Padres	Tan-oak Mortality (including P.ramorum), Hardwood and Redwood Mortality
Mendocino	Douglas-fir Mortality
Modoc	High Water
Six Rivers	Douglas-fir and Port-Orford Cedar Mortality, Bear Damage
Plumas	Black Oak Mortality
San Bernardino	High Water, Live Oak Mortality
Sequoia	N/A
Shasta-Trinity	Douglas-fir and Tan-oak Mortality
Sierra	N/A
Stanislaus	Hardwood Mortality
Tahoe	Douglas-fir Mortality
Lake Tahoe Basin	Aspen Mortality
Golden Gate	Tan-oak Mortality (including P.ramorum)
Lassen Volcanic	N/A
Point Reyes	Tan-oak Mortality (including P.ramorum)
Redwood	Douglas-fir and Port-Orford Cedar Mortality, Bear Damage
Sequoia-Kings	N/A
Whiskeytown	N/A
Yosemite	N/A

Number of Dead Trees by National Forest/Park

Unit	Bark Beetle				Fire	Other Agents					Unit
	Pine	Fir	Mix	Total	Total*	Pine	Fir	Mix	Hardwood	Total	Total*
Angeles	356	5	1	362	1,010	0	0	0	121	121	1,493
Cleveland	43	0	6	49	140	0	0	0	1,171	1,171	1,360
Eldorado	5,610	40,672	49,723	96,005	41,436	0	0	7	0	7	137,448
Inyo	1,102	364	6,932	8,398	26,225	0	0	0	23	23	34,646
Klamath	69,838	2,101	15,894	87,833	+ 494,673	0	0	1	420	421	+ 582,927
Lassen	10,204	1,828	14,524	26,556	17,389	0	0	0	0	0	43,945
Los Padres	1,177	24	3,354	4,555	379,987	0	0	1	59,637	59,638	444,180
Mendocino	3,095	24,821	6,515	34,431	841,781	0	0	31	0	31	876,243
Modoc	75,313	1,273	17,001	93,587	61,277	0	0	17	0	17	154,881
Six Rivers	172	494	381	1,047	+ 6,950	0	0	4,058	0	4,058	+ 12,055
Plumas	1,863	1,023	1,277	4,163	224,608	0	0	0	13	13	228,784
San Bernardino	1,611	11	479	2,101	+ 267,717	5	0	0	3	3	+ 269,821
Sequoia	7,409	11,887	37,874	57,170	136,495	0	0	0	0	0	193,665
Shasta-Trinity	19,310	1,256	1,907	22,473	+ 872,906	0	0	70	1	71	+ 895,450
Sierra	15,615	3,490	70,542	89,647	18,127	0	0	0	0	0	107,774
Stanislaus	5,219	21,053	41,385	67,657	44,031	0	0	0	1	1	111,689
Tahoe	27,536	22,490	32,253	82,279	90,224	0	0	4	0	4	172,507
Lake Tahoe Basin	3,400	3,316	22,226	28,942	1,524	0	0	0	15	15	30,481
Total Forest Service	248,873	136,108	322,274	707,255	+ 3,526,500	5	0	4,189	61,405	65,594	+ 2,539,096
Golden Gate	0	0	0	0	0	0	0	0	5,474	5,474	5,474
Lassen Volcanic	7,781	1,310	4,672	13,763	8,870	0	0	0	0	0	22,633
Point Reyes	0	0	0	0	0	0	0	0	339	339	339
Redwood	0	0	3	3	0	0	0	214	0	214	217
Sequoia-Kings	2,214	1,701	3,701	7,616	212,008	0	0	0	0	0	219,624
Whiskeytown	134	0	0	134	13	0	0	0	0	0	147
Yosemite	6,168	1,328	31,605	39,101	37,304	0	0	0	0	0	76,405
Total Park Service	16,297	4,339	39,981	60,617	258,195	0	0	214	5,813	6,027	324,839

* Mortality estimates not made for all burned areas.

Unit	Other Mortality-Causing Events:
Angeles	High Water, Hardwood Mortality
Cleveland	Hardwood Mortality
Eldorado	Douglas-fir Mortality
Inyo	Hardwood Mortality
Klamath	Douglas-fir and Port-Orford Cedar Mortality, Bear Damage
Lassen	N/A
Los Padres	Tan-oak Mortality (including P.ramorum), Hardwood and Redwood Mortality
Mendocino	Douglas-fir Mortality
Modoc	High Water
Six Rivers	Douglas-fir and Port-Orford Cedar Mortality, Bear Damage
Plumas	Black Oak Mortality
San Bernardino	High Water, Live Oak Mortality
Sequoia	N/A
Shasta-Trinity	Douglas-fir and Tan-oak Mortality
Sierra	N/A
Stanislaus	Hardwood Mortality
Tahoe	Douglas-fir Mortality
Lake Tahoe Basin	Aspen Mortality
Golden Gate	Tan-oak Mortality (including P.ramorum)
Lassen Volcanic	N/A
Point Reyes	Tan-oak Mortality (including P.ramorum)
Redwood	Douglas-fir and Port-Orford Cedar Mortality, Bear Damage
Sequoia-Kings	N/A
Whiskeytown	N/A
Yosemite	N/A

Other Damage by National Forest/Park

Unit	Defoliation	Discoloration	Decline	Topkill	Flagging	Breakage	Total
Angeles	0	0	0	8	0	0	8
Cleveland	84	0	0	1	0	58	143
Eldorado	77	0	0	1	10	0	88
Inyo	0	1	0	4	0	0	5
Klamath	1,843	225	0	4	1,729	0	3,801
Lassen	0	0	0	4	0	0	4
Los Padres	0	1	0	200	0	509	710
Mendocino	223	0	0	1	332	0	556
Modoc	0	0	0	3	1	0	4
Six Rivers	240	41	0	1	0	0	282
Plumas	0	0	0	357	16	0	373
San Bernardino	0	0	0	0	0	62	62
Sequoia	74	146	0	6	2	0	228
Shasta-Trinity	1,783	0	0	2	378	0	2,163
Sierra	10,005	0	0	15	274	0	10,294
Stanislaus	2,978	0	0	8	0	0	2,986
Tahoe	205	0	0	3	243	0	451
Lake Tahoe Basin	0	0	0	0	0	0	0
Total Forest Service	17,512	414	0	618	2,985	629	22,158
Golden Gate	0	0	0	0	0	0	0
Lassen Volcanic	0	0	0	0	0	0	0
Point Reyes	0	0	0	0	0	0	0
Redwood	0	0	0	0	0	0	0
Sequoia-Kings	0	0	0	0	0	0	0
Whiskeytown	0	0	0	0	0	0	0
Yosemite	20,400	0	0	2	77	0	20,479
Total Park Service	20,400	0	0	2	77	0	20,479

Unit	Other Damage-Causing Events:
Angeles	Ips Topkill
Cleveland	Fruittree Leafroller Defoliation, Ips Topkill, Snow Damage
Eldorado	White Fir and Lodgepole Defoliation, Scolytis & Ips Topkill, Cytospera Flagging
Inyo	Hardwood Discoloration, Ips Topkill
Klamath	Diploidia defoliation, Conifer Discoloration, Pine Topkill, Cytospera Flagging
Lassen	Ips and Scolytis Topkill
Los Padres	Hardwood Discoloration, Ips Topkill, Snow Damage
Mendocino	Diploidia defoliation, Ips Topkill, Cytospera Flagging
Modoc	Ips Topkill, Cytospera Flagging
Six Rivers	Diploidia Defoliation, Black Oak Discoloration, Conifer Topkill
Plumas	Scolytis Topkill and Cytospera Flagging
San Bernardino	Snow Damage
Sequoia	Diploidia and Black Oak Defoliation and Discoloration, Ips Topkill, and Sugar Pine Flagging
Shasta-Trinity	Douglas-fir Tussock Moth, Ips Topkill, Cytospera Flagging
Sierra	Douglas-fir Tussock Moth, Sugar Pine Topkill, Cytospera Flagging
Stanislaus	Douglas-fir Tussock Moth and Black Oak Defoliation, Ips Topkill
Tahoe	Black Oak Defoliation, Ips Topkill, Cytospera Flagging
Lake Tahoe Basin	N/A
Golden Gate	N/A
Lassen Volcanic	N/A
Point Reyes	N/A
Redwood	N/A
Sequoia-Kings	N/A
Whiskeytown	N/A
Yosemite	Lodgepole Needleminer and Douglas-fir Tussock Moth Defoliation, Ips Topkill, Cytospera Flagging

Acres with Mortality by County

County	Bark Beetle				Fire Total	Other Agents					County Total
	Pine	Fir	Mix	Total		Pine	Fir	Mix	Hardwood	Total	
Alameda	1	0	0	1	1	0	0	0	320	320	322
Alpine*	2,621	4,202	6,645	13,468	0	0	0	0	0	0	13,468
Amador	605	1,372	2,245	4,222	6,371	0	0	4	0	4	10,597
Butte	46	12	0	58	52	0	0	0	317	317	427
Calaveras	64	794	1,817	2,675	59	0	0	0	1	1	2,734
Colusa	244	23	0	267	0	0	0	0	0	0	267
Contra Costa	44	0	0	44	14	0	0	0	687	687	745
Del Norte	24	8	84	116	147	0	0	1,061	0	1,061	1,324
Eldorado	4,682	11,714	13,437	29,833	1,909	0	0	7	4	11	31,753
Fresno	6,345	1,789	24,370	32,504	6,033	0	0	0	0	0	38,537
Glenn	806	1,149	308	2,263	2,746	0	0	2	0	2	5,011
Humboldt	103	386	413	902	6,996	0	0	3,974	4,327	8,301	16,199
Inyo	79	0	0	79	220	41	0	0	0	41	340
Kern	515	1,470	449	2,434	927	0	0	0	0	0	3,361
Lake	129	250	48	427	1,529	0	0	10	43	53	2,008
Lassen	8,985	1,276	9,116	19,377	2,401	0	0	0	0	0	21,778
Los Angeles	148	2	1	151	57	0	0	0	19	19	227
Madera	2,610	906	12,630	16,146	1,460	0	0	0	0	0	17,606
Marin	3	0	0	3	0	0	0	0	7,935	7,935	7,938
Mariposa	4,307	236	5,371	9,914	2,050	0	0	0	0	0	11,964
Mendocino	776	4,839	2,702	8,317	14,671	10	0	204	5,706	5,920	28,908
Modoc	11,476	368	5,626	17,470	4,990	0	0	17	0	17	22,477
Mono*	477	209	0	686	583	0	0	0	1	1	1,270
Monterey	159	10	0	169	0	0	0	4	21,676	21,680	21,849
Napa	4	0	0	4	5	0	0	1	19	20	29
Nevada	4,584	2,929	5,380	12,893	226	0	0	6	0	6	13,125
Orange	1	0	0	1	0	0	0	0	0	0	1
Placer	1,538	12,063	8,285	21,886	172	0	0	3	0	3	22,061
Plumas	2,685	724	1,798	5,207	4,249	0	0	0	0	0	9,456
Riverside	227	0	0	227	6,458	0	0	0	1	1	6,686
San Benito	10	0	0	10	0	0	0	0	0	0	10
San Bernardino	1,148	7	231	1,386	79,763	5	0	0	1	6	81,155
San Diego	110	0	4	114	864	0	0	0	2,752	2,752	3,730
San Luis Obispo	21	0	0	21	0	0	0	0	131	131	152
San Mateo	0	0	0	0	0	0	0	1	1,153	1,154	1,154
Santa Barbara	113	0	1	114	13,436	0	0	0	61	61	13,611
Santa Clara	59	0	0	59	222	0	0	0	7,664	7,664	7,945
Santa Cruz	81	0	0	81	1	0	0	1	3,326	3,327	3,409
Shasta	4,791	795	6,182	11,768	2,186	0	0	1	16	17	13,971
Sierra	2,497	3,460	3,698	9,655	1,739	0	0	0	0	0	11,394
Siskiyou	18,273	2,094	9,253	29,620	49,956	0	0	324	1	325	79,901
Sonoma	9	0	5	14	58	0	0	12	28,907	28,919	28,991
Tehama	429	2,989	696	4,114	1,975	0	0	2		2	6,091
Trinity	406	2,663	1,109	4,178	95,060	0	0	33	1	34	99,272
Tulare	4,174	4,431	15,147	23,752	13,652	0	0	0	0	0	37,404
Tuolumne	2,152	5,973	11,350	19,475	5,661	0	0	0	1	1	25,137
Ventura	467	0	176	643	0	0	0	0	0	0	643
Yolo	0	0	0	0	0	0	0	0	1	1	1
Yuba	635	1	0	636	143	0	0	1	0	1	680
Total	89,663	69,144	148,577	307,384	329,042	56	0	5,668	85,071	90,795	727,119

* Includes some acreage mapped by Region 4

Estimated Number of Dead Trees by County

County	Bark Beetle				Fire	Other Agents					County
	Pine	Fir	Mix	Total	Total**	Pine	Fir	Mix	Hardwood	Total	Total**
Alameda	7	0	0	7	5	0	0	0	381	381	393
Alpine*	6,012	10,101	20,506	36,619	0	0	0	0	0	0	36,619
Amador	658	2,226	7,919	10,803	32,809	0	0	10	0	10	43,622
Butte	116	24	0	140	478	0	0	0	317	317	935
Calaveras	177	1,055	3,657	4,889	15	0	0	0	1	1	4,905
Colusa	439	23	0	462	0	0	0	0	0	0	462
Contra Costa	44	0	0	44	50	0	0	0	1,179	1,179	1,273
Del Norte	27	19	81	127	2,203	0	0	2,386	0	2,386	4,716
Eldorado	8,381	33,625	36,996	79,002	7,191	0	0	17	6	23	86,062
Fresno	10,693	2,866	45,690	59,249	239,079	0	0	0	1	1	298,329
Glenn	1,336	1,668	465	3,469	35,564	0	0	5	0	5	39,038
Humboldt	309	391	598	1,298	+ 500	0	0	8,990	31,362	40,352	+42,150
Inyo	168	0	0	168	4,999	0	0	0	0	0	5,167
Kern	672	2,018	558	3,248	21,362	0	0	0	0	0	24,610
Lake	263	268	28	559	36,689	0	0	24	20	44	37,292
Lassen	15,768	2,139	10,909	28,816	99,205	0	0	0	0	0	128,021
Los Angeles	354	10	1	365	1,028	0	0	0	122	122	1,515
Madera	5,708	1,003	23,160	29,871	12,560	0	0	0	0	0	42,431
Marin	5	0	0	5	0	0	0	0	118,460	118,460	118,465
Mariposa	5,394	322	19,068	24,784	45,420	0	0	0	1	1	70,205
Mendocino	1,376	12,042	3,647	17,065	628,945	0	0	393	16,670	17,063	663,073
Modoc	30,020	984	36,274	67,278	70,252	0	0	17	0	17	137,547
Mono*	935	162	0	1,097	3,001	0	0	0	23	23	3,706
Monterey	312	5	0	317	0	0	0	7	121,274	121,281	121,598
Napa	18	0	0	18	35	0	0	2	71	73	126
Nevada	19,105	5,247	9,647	33,999	422	0	0	15	0	15	36,039
Orange	4	0	0	4	0	0	0	0	0	0	4
Placer	4,088	19,215	15,980	39,283	914	0	0	7	0	7	40,204
Plumas	3,762	1,778	2,536	8,076	224,641	0	0	0	0	0	232,717
Riverside	234	0	0	234	+ 50,000	0	0	0	1	1	+ 50,235
San Benito	12	0	0	12	0	0	0	0	0	0	12
San Bernardino	1,387	11	479	1,877	+ 850,000	5	0	0	2	7	+ 851,884
San Diego	118	0	8	126	51,035	0	0	0	1,365	1,365	52,526
San Luis Obispo	43	0	0	43	0	0	0	0	61	61	104
San Mateo	0	0	0	0	0	0	0	3	3,256	3,259	3,259
Santa Barbara	334	0	2	336	219,820	0	0	0	26	26	220,182
Santa Clara	175	0	0	175	222	0	0	0	20,369	20,369	20,766
Santa Cruz	252	0	0	252	3	0	0	1	8,526	8,527	8,782
Shasta	10,042	914	6,854	17,810	10,709	0	0	2	15	17	28,536
Sierra	4,315	4,352	7,950	16,617	89,986	0	0	1	0	1	106,569
Siskiyou	95,290	2,398	21,566	119,254	+ 475,000	0	0	54	2	56	+ 594,310
Sonoma	62	0	5	67	125	0	0	12	184,405	184,417	184,609
Tehama	902	7,046	905	8,853	45,798	0	0	3	0	3	54,654
Trinity	884	5,162	2,210	8,256	+ 865,000	0	0	120	2	122	+ 873378
Tulare	9,197	11,213	46,964	67,374	123,873	0	0	0	0	0	191,247
Tuolumne	3,920	12,911	26,428	43,259	53,027	0	0	0	1	1	96,287
Ventura	329	0	1,679	2,008	0	0	0	0	0	0	2,008
Yolo	0	0	0	0	0	0	0	0	1	1	1
Yuba	1,508	1		1,509	1,245	0	0	2	0	2	2,756
Total	245,155	141,199	352,770	739,124	4,303,508	5	0	12,071	507,920	519,996	+ 5,562,330

* Includes some acreage mapped by Region 4

** Mortality estimates not made for all burned areas.

Other Mortality-Causing Events by County

County	Agents
Alameda	Tan-oak and Live Oak Mortality (including P.ramorum)
Alpine	N/A
Amador	Douglas-fir Mortality
Butte	Hardwood Mortality
Calaveras	Hardwood Mortality
Colusa	N/A
Contra Costa	Live Oak Mortality (including P.ramorum)
Del Norte	Bear Damage, Port-Orford Cedar Mortality
Eldorado	Douglas-fir and Black Oak Mortality
Fresno	Black Oak Mortality
Glenn	Douglas-fir Mortality
Humboldt	Tan-oak Mortality (including P.ramorum), Douglas-fir and Port-Orford Cedar Mortality, Bear Damage
Inyo	N/A
Kern	N/A
Lake	Tan-oak Mortality (including P.ramorum) and Douglas-fir Mortality
Lassen	N/A
Los Angeles	Hardwood Mortality, High Water Damage
Madera	N/A
Marin	Tan-oak and Live Oak Mortality (including P.ramorum)
Mariposa	Hardwood Mortality
Mendocino	Tan-Oak Mortality (including P.ramorum), Hardwood and Douglas-fir Mortality
Modoc	High Water Damage
Mono	Hardwood Mortality
Monterey	Tan-oak and Live Oak Mortality (including P.ramorum) and Douglas-fir Mortality
Napa	Tan-oak Mortality (including P.ramorum) and Douglas-fir Mortality
Nevada	Douglas-fir Mortality
Orange	N/A
Placer	Douglas-fir mortality
Plumas	N/A
Riverside	Live Oak Mortality
San Benito	N/A
San Bernardino	Live Oak Mortality, High Water Damage
San Diego	Live Oak and Black Oak Mortality
San Luis Obispo	Tan-oak and Live Oak Mortality
San Mateo	Tan-oak and Live Oak Mortality (including P.ramorum) and Douglas-fir Mortality
Santa Barbara	Tan-oak and Live Oak Mortality
Santa Clara	Tan-oak and Live Oak Mortality (including P.ramorum)
Santa Cruz	Tan-oak and Live Oak Mortality (including P.ramorum) and Douglas-fir Mortality
Shasta	Douglas-fir and Hardwood Mortality
Sierra	Douglas-fir Mortality
Siskiyou	Douglas-fir, Hardwood and POC Mortality
Sonoma	Tan-oak Mortality (including P.ramorum) and Douglas-fir Mortality
Tehama	Douglas-fir Mortality
Trinity	Douglas-fir and Hardwood Mortality
Tulare	N/A
Tuolumne	Hardwood Mortality
Ventura	N/A
Yolo	Live Oak Mortality
Yuba	Douglas-fir Mortality

Other Damage by County

County	Defoliation	Discoloration	Decline	Topkill	Flagging	Breakage	Total
Alameda	0	0	0	0	0	0	0
Alpine*	0	0	233	0	0	0	233
Amador	71	0	0	0	0	0	71
Butte	0	244	0	1	0	0	245
Calaveras	704	0	0	3	0	0	707
Colusa	0	0	0	0	0	0	0
Contra Costa	0	0	0	0	50	0	50
Del Norte	0	0	0	6	0	0	6
Eldorado	35	0	0	10	10	0	55
Fresno	116	0	0	6	91	0	213
Glenn	0	0	0	0	0	0	0
Humboldt	14	150	0	1	0	0	165
Inyo	0	0	0	0	0	0	0
Kern	0	146	0	0	17	0	163
Lake	310	0	0	9	0	0	319
Lassen	0	0	0	3	0	0	3
Los Angeles	0	0	0	8	0	0	8
Madera	4,995	0	0	13	65	0	5,073
Marin	3	12	0	0	0	0	15
Mariposa	18,991	0	0	1	0	0	18,992
Mendocino	5,421	95	0	115	18	0	5,649
Modoc	0	0	0	3	1	0	4
Mono*	0	0	1,942	4	0	0	1,946
Monterey	0	1	0	173	0	0	174
Napa	0	0	0	0	0	0	0
Nevada	0	0	0	3	0	0	3
Orange	0	0	0	1	0	0	1
Placer	1,477	0	0	1	0	0	1,478
Plumas	0	0	0	2	16	0	18
Riverside	0	0	0	1	0	62	63
San Benito	0	0	0	0	0	0	0
San Bernardino	0	0	0	0	0	0	0
San Diego	84	0	0	0	0	347	431
San Luis Obispo	0	0	0	6	0	757	763
San Mateo	0	0	0	0	0	0	0
Santa Barbara	0	0	0	1	0	0	1
Santa Clara	0	0	0	0	0	0	0
Santa Cruz	0	0	0	1	0	0	1
Shasta	88	0	0	3	90	0	181
Sierra	0	0	0	357	243	0	600
Siskiyou	4,303	225	0	7	2,181	0	6,716
Sonoma	54	42	0	0	0	0	96
Tehama	0	0	0	1	332	0	333
Trinity	240	12	0	0	296	0	548
Tulare	138	15	0	2	2	0	157
Tuolumne	8,694	0	0	9	12	0	8,715
Ventura	0	0	0	11	0	0	11
Yolo	0	0	0	0	0	0	0
Yuba	0	0	0	0	0	0	0
Total	45,738	942	2,175	762	3,424	1,166	54,207

* Includes acreage mapped by Region 4

Other Damage-Causing Events by County

County	Agents
Alameda	N/A
Alpine	Aspen Decline
Amador	Douglas-fir Tussock Moth Defoliation
Butte	Black Oak Discoloration, Ips Topkill
Calaveras	Black Oak Defoliation, Ips Topkill
Colusa	N/A
Contra Costa	Live Oak Flagging
Del Norte	Ips Topkill
Eldorado	Lodgepole Defoliation, Ips Topkill, Cytospera Flagging
Fresno	Diploidia Defoliation, Ips Topkill, Cytospera Flagging
Glenn	N/A
Humboldt	Black Oak Defoliation and Discoloration, Redwood and Douglas-fir Topkill
Inyo	N/A
Kern	Black Oak Discoloration, Ips Topkill
Lake	Diploidia Defoliation, Ips Topkill
Lassen	Ips Topkill
Los Angeles	Ips Topkill
Madera	Douglas-fir Tussock Moth Defoliation, Ips Topkill, Cytospera Flagging
Marin	Hardwood Defoliation and Discoloration
Mariposa	Lodgepole Needleminer and Douglas-fir Tussock Moth Defoliation, Ips Topkill
Mendocino	Diploidia and Oak Defoliation, Douglas-fir Topkill, Madrone Flagging
Modoc	Ips Topkill and Cytospera Flagging
Mono	Aspen Decline, White Pine Topkill
Monterey	Madrone Discoloration, Ips Topkill
Napa	N/A
Nevada	Ips and Scolytis Topkill
Orange	Ips Topkill
Placer	Ips Topkill, Black Oak Defoliation
Plumas	Ips Topkill and Cytospera Flagging
Riverside	Ips Topkill, Storm/Snow Damage
San Benito	N/A
San Bernardino	N/A
San Diego	Fruittree Leafroller Defoliation, Storm/Snow Damage
San Luis Obispo	Ips Topkill, Storm/Snow Damage
San Mateo	N/A
Santa Barbara	Ips Topkill
Santa Clara	N/A
Santa Cruz	Animal Damage
Shasta	Douglas-Fir Tussock Moth Defoliation, Ips and Scolytis Topkill, Cytospera Flagging
Sierra	Scolytis Topkill, Cytospera Flagging
Siskiyou	Diploidia and Douglas-fir Tussock Moth Defoliation, Conifer Discoloration, Ips Topkill, Cytospera Flagging
Sonoma	Hardwood Defoliation and Discoloration
Tehama	Ips Topkill and Cytospera Flagging
Trinity	Diploidia and Oak Defoliation, Oak Discoloration, Cytospera Flagging
Tulare	Diploidia and Oak Defoliation, Oak Discoloration, Ips Topkill and Sugar Pine Flagging
Tuolumne	Lodgepole Needleminer and Douglas-fir Tussock Moth Defoliation, Ips Topkill, Cytospera Flagging
Ventura	Ips Topkill
Yolo	N/A
Yuba	N/A