

Fuel loading creates increased fire **hazard**.

But what is the **major cause** of wildland fire ignitions in the forests of California (rarely discussed)?

**FACT:** More fires are started by equipment – frequently logging equipment – than by natural causes (lightning)

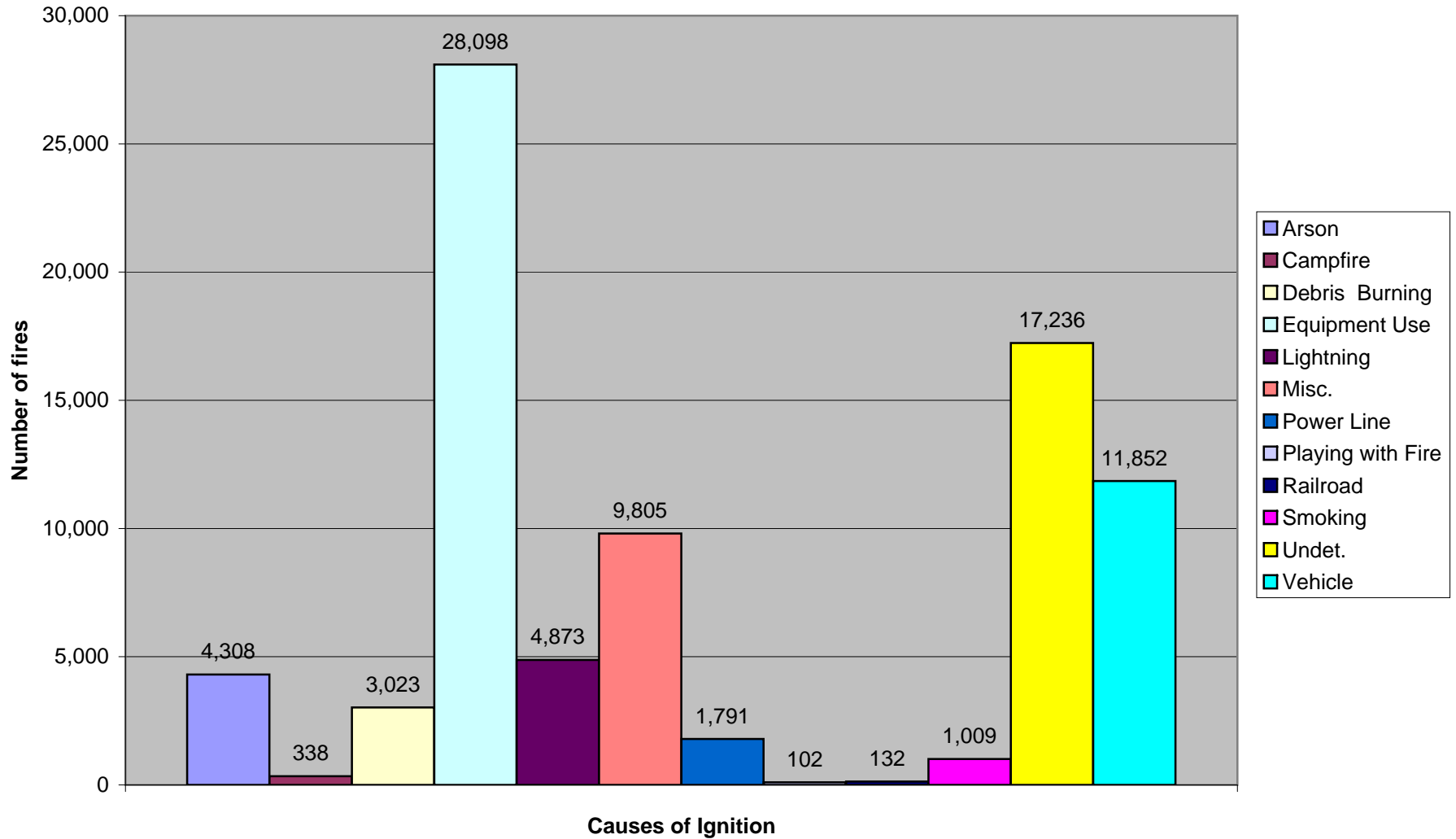
From 2002 – 2008, in the Sierra Nevada/Cascades region of Northern California, **34 percent of all wildland fires were caused by equipment**

During the same time period, in the same region only **5 percent of all wildland fires were caused by lightning**.

**Data source: California State Office of the Fire Marshal, Cal Fire, Resource Agency, Sacramento**

# Causes of Wildland Fires in Sierra Nevada 2002-2008

Source: Cal Fire Office of the State Fire Marshal



## Causes of Wildland Fires in Sierra Nevada 2002-2006

Data Source: Cal Fire Office of the State Fire Marshall 2009

SIERRA NEVADA	Total	Arson	Campfire	Debris Burning	Equipment Use	Lightning	Misc.	Power Line	Playing with Fire	Railroad	Smoking	Undet.	Vehicle
2002													
Amador-EI Dorado	1,975	243	0	75	168	6	823	23	1	0	0	567	68
Butte	3,059	119	2	67	380	20	15	28	0	5	1	2,244	178
Lassen-Modoc	114	0	1	8	6	90	0	6	0	0	0	1	2
Madera-Mariposa	2,462	87	2	7	109	0	371	114	7	0	300	1,288	177
Nevada-Yuba-Placer	2,504	171	1	49	1,835	2	131	213	1	0	0	93	8
Tuolumne-Calaveras	1,842	20	1	853	710	0	58	2	6	0	6	65	121
Tehama-Glenn	894	5	3	5	341	28	4	95	0	3	5	97	310
TOTAL	12,850	645	10	1,064	3,549	146	1,402	481	15	8	312	4,355	864
2003													
Amador-EI Dorado	1,184	6	0	39	591	2	100	21	1	21	1	66	337
Butte	1,127	110	3	2	883	0	77	5	1	1	0	8	38
Lassen-Modoc	1,373	7	0	2	1,107	27	220	0	1	0	0	7	1
Mariposa	1,512	31	0	29	726	642	27	4	1	0	0	45	8
Nevada-Yuba-Placer	701	56	50	96	120	161	137	7	4	0	5	48	17
Tuolumne-Calaveras	3,146	20	0	8	1,609	185	483	7	1	0	6	44	784
Tehama	1,239	0	1	0	91	258	18	6	0	0	3	787	75
TOTAL	10,282	230	54	176	5,127	1,275	1,062	50	9	22	15	1,005	1,260
2004													
Amador-EI Dorado	1,523	25	30	24	233	0	101	283	1	0	11	721	93
Butte	2,186	21	4	19	2,086	14	6	3	0	1	6	23	4
Lassen-Modoc	3,722	1	0	31	3,424	223	25	0	0	0	0	18	0
Madera-Mariposa	3,595	1,410	0	21	528	0	124	15	10	0	0	819	666
Nevada-Yuba-Placer	1,754	21	3	48	1,466	2	42	3	8	2	2	104	54
Tuolumne-Calaveras	8,971	990	22	187	942	0	69	217	4	0	4	3,831	2,705
Tehama-Glenn	1,396	8	5	403	556	30	8	0	1	4	0	284	97
TOTAL	23,147	2,476	64	733	9,235	269	375	521	24	7	23	5,800	3,619
2005													
Amador-EI Dorado	903	345	0	32	36	2	23	114	25	0	26	23	8
Butte	208	20	0	44	67	0	44	1	0	0	0	11	19
Lassen-Modoc	38	0	0	6	14	3	1	0	0	0	0	0	14
Madera-Mariposa	10,951	39	2	20	2178	1167	3203	13	0	0	0	2390	1939
Nevada-Yuba-Placer	358	10	2	14	113	0	47	2	2	5	1	48	116
Tuolumne-Calaveras	1,536	27	0	106	930	26	49	182	3	0	0	115	98
Tehama-Glenn	5,676	40	0	32	3208	0	15	0	2	0	0	91	2288
TOTAL	19,670	481	4	254	6,546	1,198	3,382	312	32	5	27	2,678	4,482

2006													
Amador-El Dorado	1,521	120	111	30	324	1	327	37	0	0	83	267	221
Butte	799	18	0	23	85	5	32	0	6	2	3	155	470
Lassen-Modoc	3,325	0	0	10	38	1,803	0	0	0	0	1	1,267	206
Madera-Mariposa	3,171	77	3	95	1,135	20	111	345	3	0	480	531	371
Nevada-Yuba-Placer	700	37	1	36	445	4	49	9	0	0	4	106	9
Tuolumne-Calaveras	4,168	62	1	97	1,085	4	2,210	19	0	87	4	322	277
Tehama-Glenn	321	0	63	4	143	8	3	1	1	0	2	96	0
TOTAL	14,005	314	179	295	3,255	1,845	2,732	411	10	89	577	2,744	1,554

2007													
Amador-El Dorado	274	25	2	71	44	2	72	2	0	no data	9	47	13
Butte	136	7	1	28	21	0	33	0	0	no data	4	42	4
Lassen-Modoc	142	2	3	30	5	61	32	1	2	no data	3	3	0
Madera-Mariposa	190	10	1	21	24	6	63	0	0	no data	1	64	3
Nevada-Yuba-Placer	288	20	4	56	49	4	71	2	1	no data	2	79	6
Tuolumne-Calaveras	253	13	3	51	41	3	83	1	2	no data	7	49	13
Tehama-Glenn	200	4	6	25	40	0	68	2	2	no data	6	47	0
TOTAL	1,483	81	20	282	224	76	422	8	7	no data	32	331	39

2008													
Amador-El Dorado	311	26	0	61	46	0	111	3	2	0	6	44	12
Butte	126	8	3	21	13	2	36	2	1	0	2	32	6
Lassen-Modoc	101	2	1	6	6	30	43	0	0	0	0	13	0
Madera-Mariposa	156	11	0	18	18	6	41	2	1	0	4	53	2
Nevada-Yuba-Placer	336	11	2	61	44	1	90	1	0	1	6	115	4
Tuolumne-Calaveras	232	22	1	47	22	12	69	0	1	0	3	46	9
Tehama-Glenn	95	1	0	5	13	13	40	0	0	0	2	20	1
TOTAL	1,357	81	7	219	162	64	430	8	5	1	23	323	34

All Total	Total	Arson	Campfire	Debris Burning	Equipment Use	Lightning	Misc.	Power Line	Playing with Fire	Railroad	Smoking	Undet.	Vehicle
Number of Fires	82,794	4,308	338	3,023	28,098	4,873	9,805	1,791	102	132	1,009	17,236	11,852

Source: Cal Fire, Office of the State Fire Marshal, Sacramento 2009

# Wildland Fires in California 2001-2008

## Caused by Humans vs. Caused by Lightning

### CALIFORNIA Wildland Fires\*

[http://www.nifc.gov/fire\\_info/lightning\\_human\\_fires.html](http://www.nifc.gov/fire_info/lightning_human_fires.html)

#### Human Caused Fires By Acres Burned

Year	Northern California	Southern California	
2008	91,022	454,249	
2007	153,154	855,978	
2006	146,999	342,864	
2005	37,658	61,728	
2004	146,720	84,075	
2003	96,415	653,016	
2002	39,560	412,447	
2001	114,996	101,240	TOTAL ALL
TOTAL	826,524	2,965,597	3,792,121

#### Number of Fires Caused by Humans

Year	Northern California	Southern California	
2008	3,407	5,208	
2007	3,093	5,140	
2006	3,676	3,166	
2005	3,010	3,781	
2004	3,613	3,845	
2003	3,795	3,929	
2002	3,789	4,060	
2001	1,060	4,099	TOTAL ALL
TOTAL	25,443	33,228	58,671

#### Lightning Caused Fires By Acres Burned

Year	Northern California	Southern California	
2008	852,133	26,140	
2007	55,394	43,614	
2006	174,654	24,232	
2005	25,417	79,450	
2004	3,689	8,333	
2003	45,624	4,812	
2002	42,688	15,661	
2001	185,212	135,689	TOTAL ALL
TOTAL	1,384,811	337,931	1,722,742

#### Number of Fires Caused by Lightning

Year	Northern California	Southern California	
2008	1,400	174	
2007	574	291	
2006	948	409	
2005	186	272	
2004	670	323	
2003	966	428	
2002	301	179	
2001	2,238	832	TOTAL ALL
TOTAL	7,283	2908	10,191

### SUMMARY

Number of fires started by lightning:	10,191
Number of fires started by humans:	58,671
Number of acres burned, lightning caused:	1,722,742
Number of acres burned, human caused:	3,792,121

\* Source: National Interagency Coordination Center (data collection began in 2001)