

Electronic Appendix

Table 1. National forests in the western US and region, abbreviation and total area.

National Forest	Region	Code	Area (ha)
Angeles	5	ANF	283,494
Apache-Sitgreaves	3	APS	853,842
Arapaho and Roosevelt	2	ARP	450,179
Ashley	4	ASF	567,032
Beaverhead-Deerlodge	1	BD	1,443,910
Bighorn	2	BNF	621,622
Bitterroot	1	BIT	673,207
Black Hills	2	BKF	1,276,230
Boise	4	BOF	1,051,740
Bridger-Teton	4	BTF	1,403,080
Caribou-Targhee	4	CTF	795,247
Carson	3	CAR	642,588
Cibola	3	CIB	1,297,960
Clearwater	1	CLW	1,192,050
Cleveland	5	CONF	227,097
Coconino	3	COC	813,907
Columbia River Gorge	6	CRG	756,664
Colville	6	COL	1,142,440
Coronado	3	COR	742,515
Custer	1	CNF	789,696
Dakota Prairie Grasslands	1	DPG	518,544
Deschutes	6	DES	605,749
Dixie	4	DIF	620,831
Eldorado	5	ENF	320,884
Fishlake	4	FIF	572,234
Flathead	1	FLT	1,071,840
Fremont-Winema	6	FRW	722,915
Gallatin	1	GAL	872,716
Gifford Pinchot	6	GIP	815,840
Gila	3	GIL	1,370,800
Grand Mesa, Uncompahgre and Gunnison	2	GMUG	1,827,910
Helena	1	HEL	470,889
Humboldt-Toiyabe	4	HTF	991,038
Idaho Panhandle	1	IPNF	1,056,760
Inyo	5	INF	825,922
Kaibab	3	KAI	647,835
Klamath	5	KNF	763,781
Kootenai	1	KONF	809,922
Lake Tahoe Basin	5	TMU	601,739

Lassen	5	LNF	792,601
Lewis and Clark	1	LC	1,061,080
Lincoln	3	LIN	510,610
Lolo	1	LOLO	911,332
Los Padres	5	LPF	434,050
Malheur	6	MAL	432,441
Manti-Lasal	4	MLF	1,779,210
Medicine Bow-Routt	2	MBRTB	834,784
Mendocino	5	MNF	818,267
Modoc	5	MDF	438,487
Mt Baker-Snoqualmie	6	MBS	369,388
Mt. Hood	6	MTH	281,541
Nebraska	2	NNF	787,731
Nez Perce	1	NEZ	1,111,550
Ochoco	6	OCH	747,755
Okanogan-Wenatchee	6	OKW	338,386
Olympic	6	OLY	611,828
Payette	4	PAF	886,277
Pike-San Isabel	2	PSI	1,005,840
Plumas	5	PNF	578,900
Prescott	3	PRE	571,044
Rio Grande	2	RGNF	1,604,200
Rogue River-Siskiyou	6	RRS	417,012
Salmon-Challis	4	SCF	1,242,680
San Bernardino	5	BDF	327,019
San Juan	2	SJNF	847,501
Santa Fe	3	SFE	695,385
Sawtooth	4	SWNF	2,748,550
Sequoia	5	SQF	470,466
Shasta Trinity	5	SHF	1,095,580
Shoshone	2	SHO	999,144
Sierra	5	SNF	572,627
Siuslaw	6	SIU	1,021,320
Six Rivers	5	SRF	441,187
Stanislaus	5	STF	477,267
Tahoe	5	TNF	79,489
Tonto	3	TON	1,201,050
Uinta-Wasatch-Cache	4	UWC	1,177,710
Umatilla	6	UMA	1,724,690
Umpqua	6	UMP	726,216
Wallowa-Whitman	6	WAW	539,430
White River	2	WRVR	1,004,630
Willamette	6	WIL	118,274

Table 2. Annual area burned and average fire size and associated coefficient of variation (CV) by Forest Service Region in the western US. Data from Short (2013).

Region	Annual area burned (ha)	CV (%)	Mean fire size (ha)	CV (%)
1	5653	70	2829	71
2	2156	70	1989	63
3	6277	98	1942	47
4	7929	118	2577	92
5	5838	88	3119	53
6	4110	130	3831	170
Overall	--	37	--	26

Table 3. Proportion of total area burned attributable to lightning versus anthropogenic ignitions by Forest Service western regions. Data from Short (2013).

Average Proportion of Total Area Burned		
Region	Anthropogenic	Lightning
1	0.13	0.87
2	0.28	0.72
3	0.27	0.73
4	0.20	0.80
5	0.49	0.51
6	0.18	0.82

Table 4. Results of ranking the 82 western national forests and the identification of the top 20 in terms of wildfire exposure from simulation outputs. The ranking was performed with simulation outputs since empirical data are insufficient to obtain robust estimates of key exposure parameters. See 2. *Methods* for detailed information on wildfire exposure variables.

Region	NF Name	Mega-fire probability ^a	HiBP (%)	WUI	Predicted	No.	MFRI departure (%)	Overall rank
				area burned (ha)	pop. exposure	high risk HUC6 ^b		
3	Tonto	0.1052	0.23	146.7	317.9	105	163	1
5	Los Padres	0.0668	0.17	107.4	118.0	69	672	2
5	Angeles	0.0777	0.98	631.5	1161.6	44	56	3
5	San Bernardino	0.0964	0.54	482.5	538.2	16	62	4
5	Cleveland	0.0744	0.74	884.3	1960.1	17	-16	5
4	Uinta-Wasatch-Cache	0.0588	0.2	99.6	106.2	65	236	6
3	Coronado	0.0512	0.09	82.5	105.7	36	724	7
4	Salmon-Challis	0.1394	0.23	64.4	14.5	146	67	8
5	Sequoia	0.0569	0.1	138.4	76.8	5	531	9
5	Shasta Trinity	0.0608	0.06	62.8	38.2	7	1012	10
3	Cibola	0.0202	0.04	70.2	58.6	21	1523	11
3	Gila	0.1061	0.06	48.0	23.1	5	886	12
4	Humboldt-Toiyabe	0.0163	0.18	108.2	174.6	103	295	13
2	Black Hills	0.0266	0.01	94.9	62.8	0	1473	14
3	Prescott	0.0286	0.08	93.3	65.6	18	577	15
5	Sierra	0.0085	0.05	119.0	47.7	7	1804	16
6	Okanogan-Wenatchee	0.0799	0.02	137.2	57.9	0	303	17
4	Sawtooth	0.0904	0.46	29.6	11.2	102	64	18
5	Six Rivers	0.0231	0.08	37.4	20.3	9	1676	19
1	Bitterroot	0.0751	0.05	322.4	108.4	0	31	20
3	Coconino	0.0254	0.04	43.1	42.3	8	1162	21
5	Klamath	0.0513	0.12	22.0	9.3	40	901	22

5	Mendocino	0.0469	0.17	27.1	24.5	33	525	23
5	Plumas	0.0184	0.02	57.8	34.2	1	1669	24
4	Boise	0.0788	0.07	48.8	31.9	12	162	25
4	Dixie	0.0524	0.26	17.8	20.1	40	360	26
3	Apache-Sitgreaves	0.0351	0.06	22.6	12.2	17	1177	27
4	Caribou-Targhee	0.0472	0.07	42.2	20.7	52	212	28
3	Lincoln	0.0182	0.05	27.1	36.4	6	1356	29
3	Santa Fe	0.0147	0.03	57.3	35.0	7	1020	30
5	Tahoe	0.0188	0.02	38.0	19.8	0	1575	31
5	Modoc	0.0619	0.36	14.2	2.8	48	417	32
5	Eldorado	0.0112	0.01	28.3	29.0	0	1513	33
4	Fishlake	0.0582	0.4	12.6	4.3	80	95	34
5	Stanislaus	0.0028	0.01	20.8	21.9	0	3109	35
1	Kootenai	0.0422	0.03	42.0	12.3	1	283	36
6	Deschutes	0.0059	0	23.0	11.9	0	2188	37
5	Lassen	0.0178	0.02	11.7	5.1	4	2140	38
4	Bridger-Teton	0.0358	0.05	23.4	7.7	7	338	39
1	Nez Perce	0.0563	0.11	29.9	4.4	14	43	40
1	Lolo	0.0436	0.05	12.1	7.0	25	389	41
2	San Juan	0.0093	0.01	13.4	7.1	1	1738	42
1	Idaho Panhandle	0.0115	0.02	25.1	13.4	0	1003	43
6	Rogue River-Siskiyou	0.0055	0.02	13.2	4.7	0	5760	44
2	Pike-San Isabel	0.0155	0.02	4.7	4.5	6	3332	45
5	Inyo	0.0255	0.09	12.3	5.0	3	787	46
4	Manti-Lasal	0.0229	0.11	12.9	5.7	12	466	47
6	Umatilla	0.0328	0.02	7.4	4.9	0	693	48
1	Helena	0.0113	0.01	17.1	9.6	0	854	49
1	Flathead	0.0278	0.01	17.3	6.3	0	268	50
6	Ochoco	0.0220	0.01	14.1	5.5	0	564	51
4	Payette	0.0783	0.07	11.4	2.6	3	106	52
2	Arapaho and	0.0038	0	6.3	3.4	0	4672	53

	Roosevelt							
2	Medicine Bow-Routt	0.0250	0.03	1.4	0.9	0	2680	54
1	Beaverhead-	0.0327	0.02	6.0	1.4	0	1077	55
	Deerlodge							
3	Kaibab	0.0077	0.02	6.3	4.5	0	1654	56
6	Fremont-Winema	0.0299	0.02	4.7	1.2	0	1230	57
2	Nebraska	0.0258	0.03	0.4	0.2	57	1296	58
2	White River	0.0042	0.01	4.9	3.2	0	2391	59
6	Wallowa-Whitman	0.0699	0.02	4.7	1.2	0	433	60
2	Grand Mesa,	0.0082	0.03	5.0	2.0	1	1563	61
	Uncompahgre and							
	Gunnison							
6	Colville	0.0048	0.01	5.3	1.6	0	2103	62
5	Lake Tahoe	0.0033	0	3.7	3.5	0	2069	63
1	Dakota Pr	0.0224	0.01	0.1	0.0	0	4300	64
1	Gallatin	0.0160	0.02	12.3	3.5	2	373	65
1	Custer	0.0208	0.02	1.4	0.8	5	1079	66
3	Carson	0.0071	0.01	2.5	1.3	0	1593	67
2	Bighorn	0.0092	0.02	9.3	2.7	0	563	68
2	Rio Grande	0.0000	0	1.8	0.3	0	11813	69
2	Shoshone	0.0142	0.01	6.7	2.2	0	529	70
4	Ashley	0.0117	0.02	4.4	1.7	0	776	71
6	Malheur	0.0077	0.01	0.6	0.3	0	1811	72
6	Siuslaw	0.0002	0	0.6	0.2	0	2932	73
1	Lewis and Clark	0.0059	0	1.1	0.5	0	1349	74
6	Olympic	0.0000	0	0.2	0.2	0	2781	75
1	Clearwater	0.0255	0.06	0.2	0.1	9	136	76
6	Umpqua	0.0051	0	0.5	0.2	0	1331	77
6	Columbia River	0.0025	0.01	1.7	1.1	0	673	78
	Gorge							
6	Mt Baker-Snoqualmie	0.0000	0	1.2	1.4	0	649	79

6	Gifford Pinchot	0.0000	0	0.1	0.0	0	1532	80
6	Mt. Hood	0.0017	0	1.2	0.6	0	596	81
6	Willamette	0.0004	0	0.3	0.1	0	1008	82

^a Annual probability of a wildfire >20,000 ha.

^b High risk was defined as subwatersheds in the 75th percentile for both burn probability and conditional flame length.