

JANUARY BURN CONDITIONS SET RECORDS

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If you can't remember the last time there were this many fires around Oklahoma, it probably isn't just your memory playing tricks on you. Statewide, January 2006 is posting some record numbers on the Oklahoma Mesonet's fire danger model (<http://agweather.mesonet.ou.edu/models/fire/>). Ninety-seven of the 104 Mesonet stations that have been continuously operated since 1997, when the model was developed, reported their highest January values of burning index on record. Fifty-eight of those stations also reported their highest January Keetch-Byram Drought Index (KDBI) values on record.

Burning index is a measure of a fire's intensity, rate of spread, and height of flames. Values greater than 40 indicate conditions where fires may get out of hand. As values exceed 80, even equipment such as brush pumpers become ineffective at putting out the fires.

From January 1st through the 18th, 85 Mesonet sites have recorded a burning index on one or more days exceeding 80. Sixty-eight of these sites have had values over 100. By comparison, over the previous 9 years, only 31 sites had *ever* exceeded 80 in January, and just 8 sites topped out over 100. The 'average station' in Oklahoma this January has a peak burning index of 106 – 49% higher than any previous January.

The Keetch-Byram Drought Index, which measures the dryness of the upper soil layers, has an average peak this month of 433, with 10 stations exceeding 600. Values over 400 contributes to the intensity of wildfires, and when KDBI reaches over 600 even the roots of plants buried in the soil can burn.

Normally, this time of year, KDBI values are less than 200 nearly statewide, and only routinely exceed 400 during the summer months. High KDBI values in Eastern Oklahoma during January have not been recorded since 1997 – until this year. Burning Index usually peaks in September, although high-fire conditions have been recorded at all times of the year.

There are many ways of measuring drought and wildfire intensity, but by whatever measure you choose, Oklahoma is dry. Very dry.

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NAME	COUNTY	Jan 2006	Jan 2006	BI Max	KDBI Max	BI	KDBI
		Burning Index	KDBI	(1997-2005)	(1997-2005)	Difference	Difference
Acme	Grady	169	519	97	589	72	-70
Ada	Pontotoc	103	405	66	315	37	90
Altus	Jackson	156	306	123	563	33	-257
Antlers	Pushmataha	70	650	50	186	20	464
Apache	Caddo	108	370	76	563	32	-193
Arnett	Ellis	111	505	73	499	38	6
Beaver	Beaver	91	271	88	586	3	-315
Bessie	Washita	82	293	77	494	5	-201
Bixby	Tulsa	99	527	44	103	55	424
Blackwell	Kay	147	311	69	483	78	-172
Boise City	Cimarron	126	452	88	469	38	-17
Bowlegs	Seminole	52	512	37	195	15	317
Breckinridge	Garfield	127	247	62	490	65	-243
Bristow	Creek	97	305	62	189	35	116
Buffalo	Harper	66	232	118	635	-52	-403
Burbank	Osage	114	470	68	505	46	-35
Burneyville	Love	127	535	91	594	36	-59
Butler	Custer	67	263	71	572	-4	-309
Byars	Garvin	140	496	73	304	67	192
Calvin	Hughes	105	420	61	122	44	298
Camargo	Dewey	107	480	101	520	6	-40
Centrahoma	Coal	103	392	75	308	28	84
Chandler	Lincoln	119	491	66	173	53	318
Cherokee	Alfalfa	75	207	117	663	-42	-456
Cheyenne	Roger Mills	101	354	97	574	4	-220
Chickasha	Grady	108	504	59	493	49	11
Clayton	Pushmataha	73	556	44	234	29	322
Cloudy	Pushmataha	89	606	56	101	33	505
Cookson	Cherokee	40	504	36	60	4	444
Copan	Washington	93	400	66	419	27	-19
Durant	Bryan	131	662	74	182	57	480
El Reno	Canadian	136	338	81	430	55	-92
Erick	Beckham	108	415	82	518	26	-103
Eufaula	McIntosh	138	663	57	200	81	463
Fairview	Major	112	408	81	528	31	-120
Foraker	Osage	109	425	73	480	36	-55
Fort Cobb	Caddo	173	412	97	586	76	-174
Freedom	Woodward	117	223	102	493	15	-270
Goodwell	Texas	114	427	95	659	19	-232
Guthrie	Logan	135	337	64	188	71	149
Haskell	Muskogee	61	622	46	136	15	486
Hectorville	Okmulgee	131	471	53	120	78	351
Hinton	Caddo	129	215	91	633	38	-418
Hobart	Kiowa	115	225	98	430	17	-205
Hollis	Harmon	102	320	112	546	-10	-226
Hooker	Texas	92	421	82	583	10	-162
Hugo	Choctaw	113	646	73	151	40	495

Idabel	McCurtain	122	593	67	345	55	248
Jay	Delaware	46	509	37	99	9	410
Kenton	Cimarron	97	472	83	446	14	26
Ketchum Ranch	Stephens	163	490	91	234	72	256
Kingfisher	Kingfisher	74	261	58	402	16	-141
Lahoma	Major	87	311	64	458	23	-147
Lane	Atoka	123	575	73	168	50	407
Madill	Marshall	106	547	73	354	33	193
Mangum	Greer	92	258	85	604	7	-346
Marena	Payne	51	300	71	405	-20	-105
May Ranch	Woods	80	364	61	504	19	-140
McAlester	Pittsburg	116	664	64	399	52	265
Medford	Grant	119	385	81	471	38	-86
Medicine Park	Comanche	137	426	89	590	48	-164
Miami	Ottawa	123	490	54	362	69	128
Minco	Grady	183	495	97	435	86	60
Mt Herman	McCurtain	61	629	34	224	27	405
Newkirk	Kay	99	186	90	506	9	-320
Ninnekah	Grady	141	424	85	546	56	-122
Nowata	Nowata	101	393	58	149	43	244
Oilton	Creek	46	404	38	345	8	59
Okemah	Okfuskee	112	439	57	178	55	261
Okmulgee	Okmulgee	52	541	42	265	10	276
Pauls Valley	Garvin	113	438	67	363	46	75
Pawnee	Pawnee	53	341	67	303	-14	38
Perkins	Payne	116	361	57	315	59	46
Pryor	Mayes	58	552	38	180	20	372
Putnam	Dewey	97	260	96	530	1	-270
Red Rock	Noble	119	273	77	354	42	-81
Retrop	Washita	127	262	118	533	9	-271
Ringling	Jefferson	159	486	83	380	76	106
Sallisaw	Sequoyah	105	525	65	231	40	294
Seiling	Woodward	93	474	69	443	24	31
Shawnee	Pottawatomie	130	471	68	213	62	258
Skiatook	Osage	47	212	38	230	9	-18
Slapout	Beaver	102	470	68	445	34	25
Spencer	Oklahoma	101	442	42	147	59	295
Stigler	Haskell	140	592	75	254	65	338
Stillwater	Payne	124	336	66	413	58	-77
Stuart	Pittsburg	130	557	57	231	73	326
Sulphur	Murray	134	430	64	233	70	197
Tahlequah	Cherokee	112	581	58	356	54	225
Talihina	LeFlore	109	484	63	232	46	252
Tipton	Tillman	104	487	66	597	38	-110
Tishomingo	Johnston	118	429	101	195	17	234
Vinita	Craig	127	600	62	349	65	251
Walters	Cotton	117	519	68	490	49	29
Washington	McClain	130	556	72	403	58	153
Watonga	Blaine	97	195	78	432	19	-237
Waurika	Jefferson	127	367	77	441	50	-74

Weatherford	Custer	50	241	72	584	-22	-343
Webbers Falls	Muskogee	61	664	50	175	11	489
Westville	Adair	121	583	70	107	51	476
Wilburton	Latimer	116	597	70	204	46	393
Wister	LeFlore	94	518	45	270	49	248
Woodward	Woodward	93	319	62	462	31	-143
Wynona	Osage	114	443	65	320	49	123
AVERAGES		106	433	71	373	35	60

Notes:

- (1) BI = Burning Index; high values indicate more severe burn conditions
- (2) KDBI = Keetch-Byram Drought Index
- (3) Jan 2006 = The highest values of BI and KDBI recorded by each Mesonet site from January 1-18, 2006
- (4) Max = The highest values of BI and KDBI recorded in the month of January by each Mesonet site for 1997 through 2005
- (5) Difference = January 2006 value minus the previous maximum; positive numbers indicate new records
- (6) Average = Average of all Mesonet sites (104 stations)