

SACRAMENTO FIRE WEATHER



2014 ANNUAL SUMMARY

January completed a 13-month dry period that was one of the driest, if not the driest, period(s) on record. Consequently, Gov. Brown declared California in a State of Emergency due to drought. To make matters worse, January also had two significant northerly (foehn) wind events that helped dry fuels even further. ERCs were nearing peak summertime values with several forests within elevated staffing levels.

February-April finally saw the return of some precipitation for a belated wet season. Even so, northern interior California experienced well below precipitation amounts for a third straight water year (October-September) with very minimal snowpack. Several Fuel and Fire Behavior Advisories were issued for northern California again this year.

The pattern dried out again by May with only a few weak systems early in the month. Even with some cooler days due to frontal systems, May and June were still around 5 F above normal with several wind and RH events. July/August brought 4 upper level Low systems over northern California that triggered Red Flag Warning events for scattered thunderstorms and/or abundant lightning. The King Fire impacted the Eldorado and Tahoe National Forests by growing 50,000 acres within a 24 hour period in mid-September, more than tripling its acreage at the time. Although southwest flow aloft is typically not a critical Red Flag pattern, the fire area did exhibit low teens to single digit humidity values leading up to the fire start. However less than two weeks later, a cool, wet storm system brought 4 days of precipitation, cool temperatures, and high humidity that greatly retarded the King Fire perimeter expansion. Even though it was post-2014 fire season, December 2014 did bring above normal precipitation. So, hopefully this translates into an above normal wet season.

RED FLAG WARNING VERIFICATION FOR 2014

MONTH	FIRE WX WATCHES¹	RED FLAG WARNINGS¹	
		Wind / RH	Lightning
January	5	8	0
May	0	5	0
June	9	10	0
July	3	0	13
August	27	0	21
September	0	11	0
October	7	13	0

A= the number (#) of correct warnings	Prob of Detection (POD) = A / (A+C)
B= the # of incorrect warnings	False Alarm Ratio (FAR) = B / (A+B)
C= the # of events not warned (missed)	Critical Success Index (CSI) = A / (A+B+C)

¹ Red Flag Warnings/Fire Weather Watches are measured based on fire weather zones. One weather event can equal multiple zones.

2014 Red Flag Warnings¹

	Wind/RH	Lightning	Total or Average
Red Flag Warnings	47	34	81
Correct Warnings	40	19	59
Incorrect Warnings	7	15	22
Missed Warnings	1	0	1
POD Red Flags	98%	100%	98%
CSI Red Flags	83%	56%	72%
FAR Red Flags	15%	44%	27%
Red Flags Lead Times	18.8 hours	26.8 hours	21.35 hours

2014 Fire Weather Watches¹

	Wind/RH	Lightning	Total or Average
Number of Fire Weather Watches	21	30	51
Number of Watches Verified	7	17	24
Lead time of verified Watches	66.1 hours	11.5 hours	27.4 hours

SPOT FORECASTS ISSUED FOR THE YEAR 2014

NWS Sacramento issued 492 spot forecasts last year with 155 for wildfires.

TYP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SPOT	TMIN
PRE	7	47	26	8	12	48	4	3	31	20	64	54	324	40.5
WIL	15	0	3	2	2	13	31	31	39	17	2	0	155	35.5
WFU	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
SAR	0	1	0	0	1	0	0	0	0	0	0	2	4	28.7
HAZ	0	0	0	1	0	4	1	0	0	2	0	1	9	30.7
TES	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
TOT	22	48	29	11	15	65	36	34	70	39	66	57	492	36.9

INCIDENT METEOROLOGIST DISPATCHES FOR 2014

Incident Name	IMET	Dispatch Dates (Days)	Fire Weather District
Hunter Fire	Mike Smith	5/28-5/30 (3)	Hanford, CA
Carpenter 1 Fire	Jason Clapp	7/7-7/11 (5)	Sacramento, CA
Bully Fire	Mike Smith	7/12-7/21 (10)	Sacramento, CA
French Fire	Jason Clapp	7/28-8/6 (10)	Hanford, CA
Yellow Point Fire	Mike Smith	9/5-9/13 (9)	Portland, OR
King Fire	Jason Clapp	9/15-9/30 (16)	Sacramento, CA

IMET	Number of Days Deployed on Incidents
Jason Clapp	31
Mike Smith	22
Total NWS Sacramento IMET Deployed Days	53

FIRE WEATHER TRAINING ASSIGNMENTS IN 2014

The training courses taught and/or attended, locations, agency served and instructors follow:

Course Name Taught	Location	Date	Agency Served	Instructor
National Aerial Firefighting Academy II (NAFA II)	McClellan	1/8	USFS	Mike Smith
National Aerial Firefighting Academy II (NAFA II)	McClellan	1/11	USFS	Mike Smith Jason Clapp
Wildland Fire Calc S-390	Magalia	1/13-14	CALFIRE	Mike Smith
National Aerial Firefighting Academy II (NAFA II)	McClellan	1/15	USFS	Mike Smith Jason Clapp
Basic Fire Behavior S-290	Rancho Cordova	2/3-4	Various	Mike Smith
Basic Fire Behavior S-290	McClellan	2/4-5	USFS	Jason Clapp
Wildland Fire Calc S-390	Auburn	3/11	CALFIRE	Mike Smith
Wildland Fire Calc S-390	Magalia	2/24-25	CALFIRE	Mike Smith
Wildland Fire Calc S-390	Auburn	3/3-4	CALFIRE	Jason Clapp
Adv Wldnd Fire Calc S-590	Tucson	3/10-21	Various	Mike Smith
Basic Fire Behavior S-290	Ione	4/14-15	CALFIRE	Mike Smith
Adv Wldnd Fire Calc S-490	Folsom (ISO)	4/15-16	CALFIRE	Mike Smith
WIMS/NFDRS	McClellan	4/16	USFS	Jason Clapp
Basic Fire Behavior S-290	Sonora	4/29-30	USFS	Mike Smith
Basic Fire Behavior S-290	McClellan	11/4-5	USFS	Mike Smith
Basic Fire Behavior S-290	Ione	11/17-18	CALFIRE	Mike Smith
Course Name Attended	Location	Date	Agency Sponsor	Student
RT-130	MiWok	4/1	USFS	Jason Clapp
IMET Workshop	Boise	4/7-11	NWS	Mike Smith
IMET Workshop	Virtual	4/14-18	NWS	Jason Clapp