

EUREKA FIRE WEATHER



Sims Fire - July 28, 2004

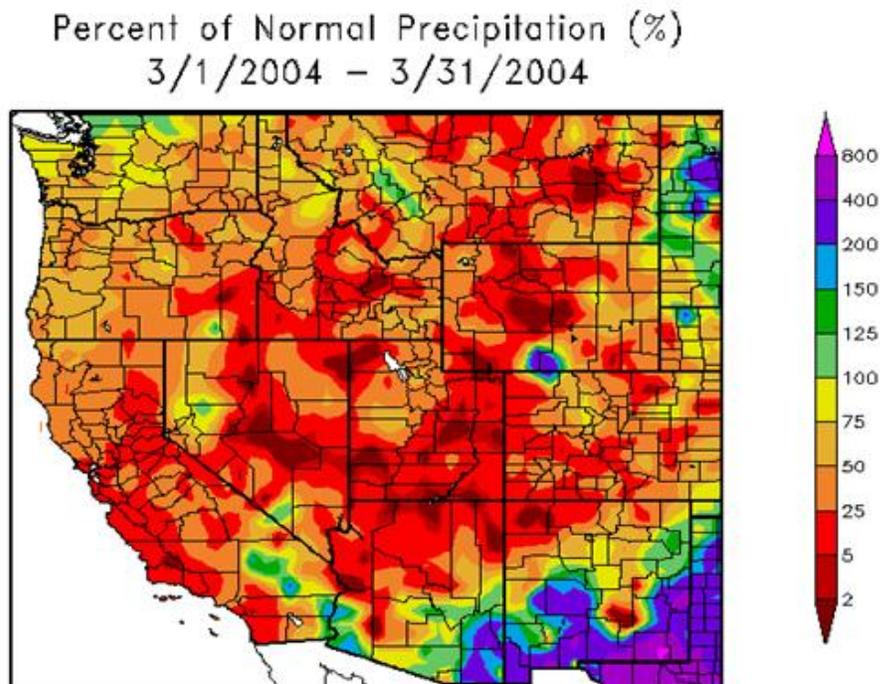
ANNUAL REPORT

2004

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I. FIRE WEATHER OVERVIEW

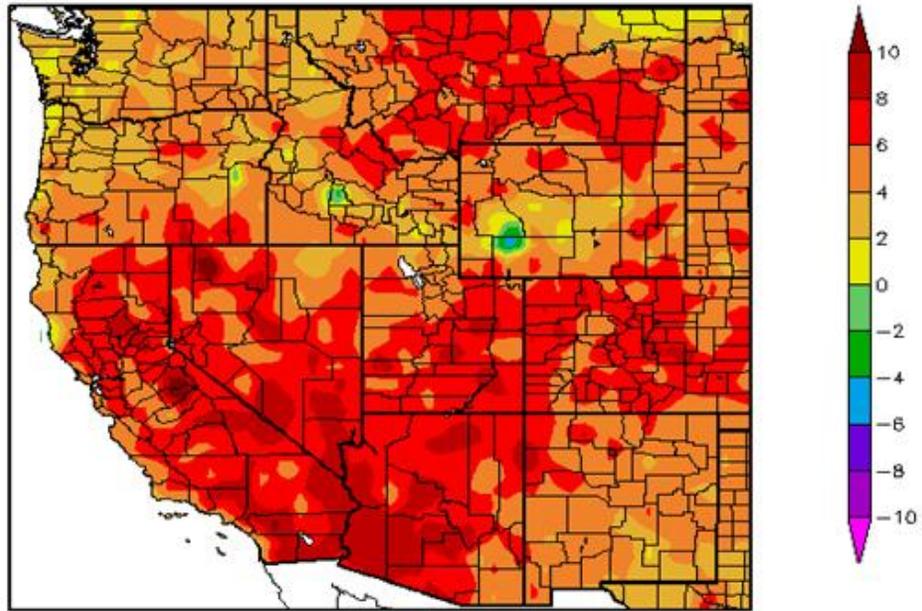
The weather pattern across Northwest California for the 2004 calendar year was drier and warmer than normal. The year started out with an abundance of precipitation as a series of winter storms impacted the region in February. However over the next seven months very little precipitation was recorded. With the exception of August, which recorded slightly higher than normal rainfall, the spring and summer months were well below normal for precipitation and slightly above normal for temperatures.



Generated 11/3/2004 at HPRCC using provisional data.

NOAA Regional Climate Centers

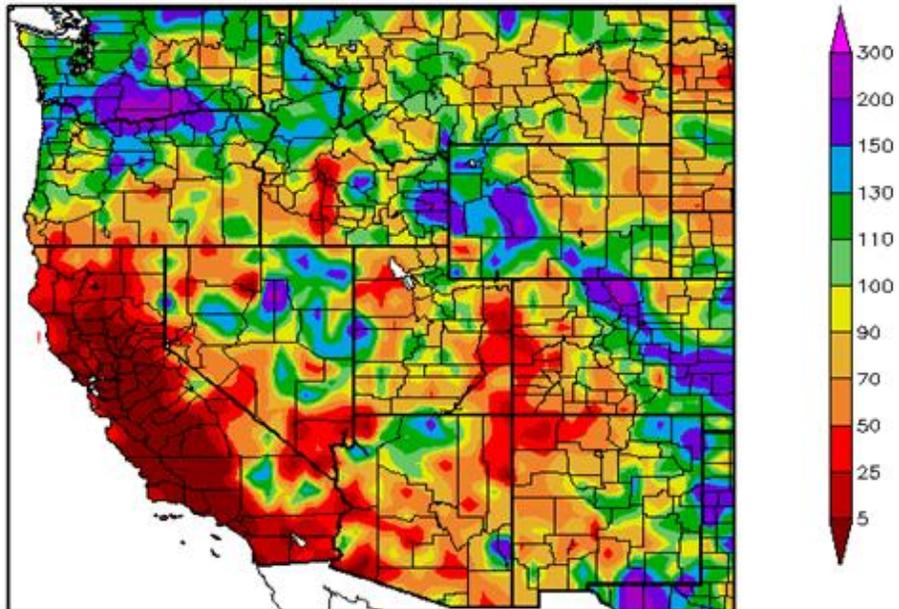
Departure from Normal Temperature (F) 3/1/2004 – 3/31/2004



Generated 11/3/2004 at HPRCC using provisional data.

NOAA Regional Climate Centers

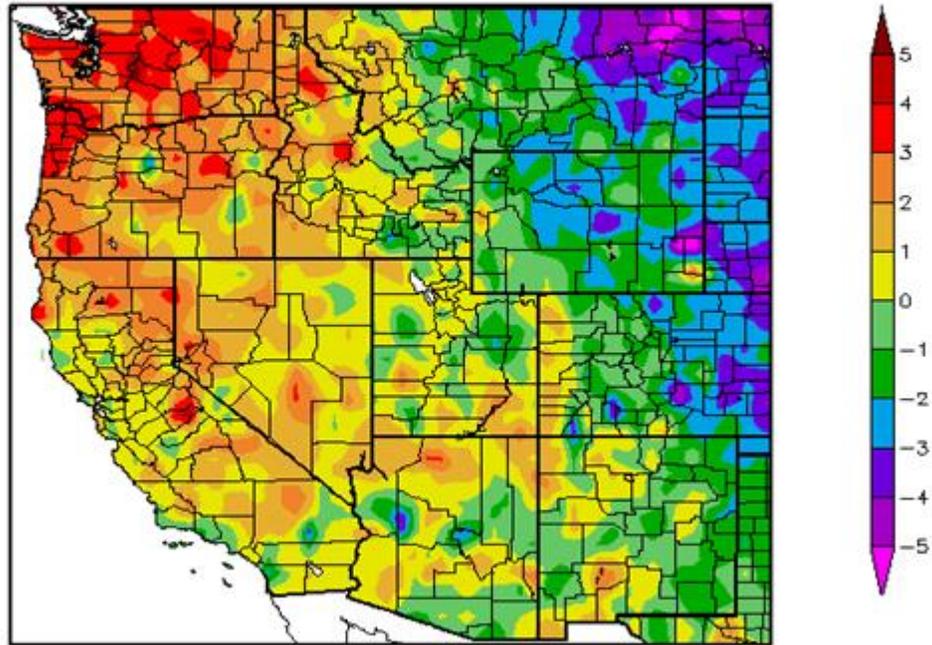
Percent of Normal Precipitation (%) 6/1/2004 – 8/31/2004



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NOAA Regional Climate Centers

Departure from Normal Temperature (F)
6/1/2004 – 8/31/2004



Generated 11/3/2004 at HPRCC using provisional data.

NOAA Regional Climate Centers

The warm and dry trend continued through mid October before two very moist storms brought copious amounts of rain to the area. Dry and warm weather returned for much of November before the pattern shifted to a much cooler and wetter weather regime through the end of December.

With the exception of Alaska, wildfire activity was relatively light both nationally and regionally across Northwest California. An active monsoon surge which brought an outbreak of thunderstorms to districts in September 2003 was largely absent during the summer of 2004. Convective activity was minimal thus very few new fire starts grew to large status. Only one wildfire grew to significant size within Eureka's area of responsibility. The Sims Fire, burned over 4000 acres in both the Six Rivers NF and Shasta -Trinity NF, in turn requiring IMET support for approximately one week. Although lightning activity was low, periods of offshore flow during the late summer months required the issuance of five Red Flag Warnings. The first warning was issued August 25th for extremely dry relative humidity and strong east winds across Interior Mendocino County and Trinity County. Similar off-shore wind patterns occurred in September and early October before heavy rains brought an end to fire season in mid October.

II. RED FLAG WARNING VERIFICATION

Eureka Fire Weather issued a total of 5 individual zone Red Flag Warnings during the 2004 fire season, all for wind and low humidity. The five warnings were issued within interior zones 204 and 276. 5 of the 5 warnings verified, while one warning was issued with no lead time. 4 of the 5 warnings issued were preceded by a Fire Weather Watch. See zone distribution Table 4.1 below.

Of the 5 verified Red Flag Warnings 3 were preceded by a Fire Weather Watch 3 of 5 or **60%**.

- Correct Warnings (Verified) = **5**
- Incorrect Warnings (not verified) = **0**
- Missed Events = **0**

POD (Probability of Detection)...**1.0** (Highest Accuracy = 1)
 CSI (Critical Success Index).....**1.0** (Highest Accuracy = 1)
 FAR (False Alarm Ratio).....**0.0** (Highest Accuracy = 0)

4 of 4 or **100%** of the Fire Weather Watches reached Red Flag Criteria.

The average lead time for all Red Flag Warnings issued was 16.1 hours. The average lead time for the Fire Weather Watches issued was 33.5 hours. No warning or watches were issued for Dry Lightning during the 2004 season.

Table 4.1

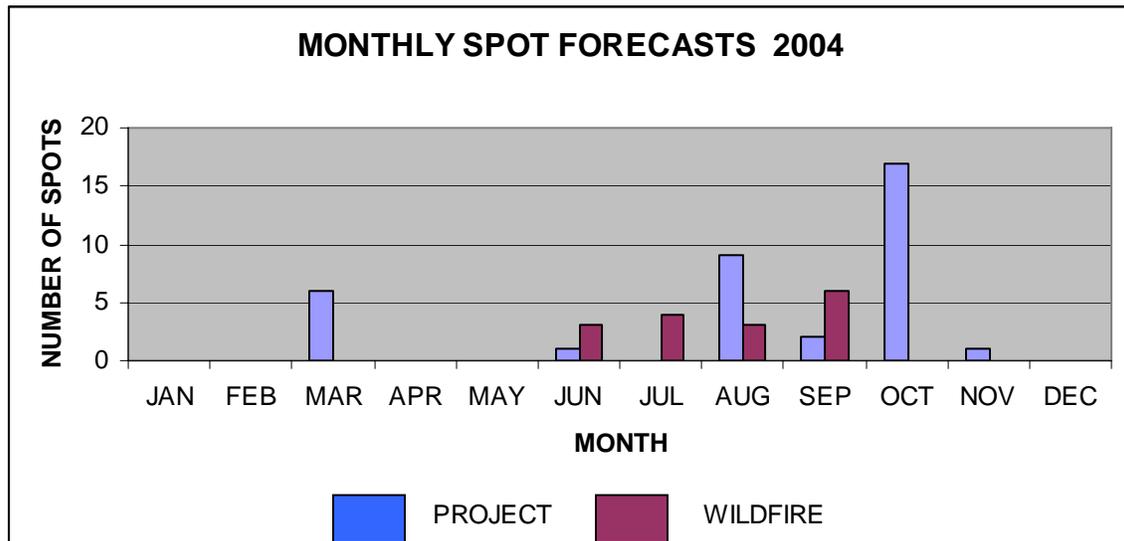
2004 WARNING VERIFICATION								
ZONE	#RFW	Correct RFW	Incorrect RFW	Missed Event	POD	CSI	FAR	Watch
201	0	0	0	0				0
202	0	0	0	0				0
203	0	0	0	0				0
204	2	2	0	0	1	1	0	1
276	3	3	0	0	1	1	0	3
TOTALS	5	4	1	1	1	1	0	4

III. SPOT FORECASTS ISSUED

The National Weather Service Office in Eureka issued a total of 53 site specific or spot forecasts during the year 2004. Of this total, 17 were for wildfires, 34 were for project burns and 2 were issued for a hazmet exercise. Although the total was roughly half the amount issued last year (95), the number of spots issued for project burns tripled compare to 2003. Similar to last year, the majority of spot forecast requests came from the USFS and CDF, with only a small amount distributed between the BLM and the BIA-Hoopa and NPS. (see Fig. 6.1).

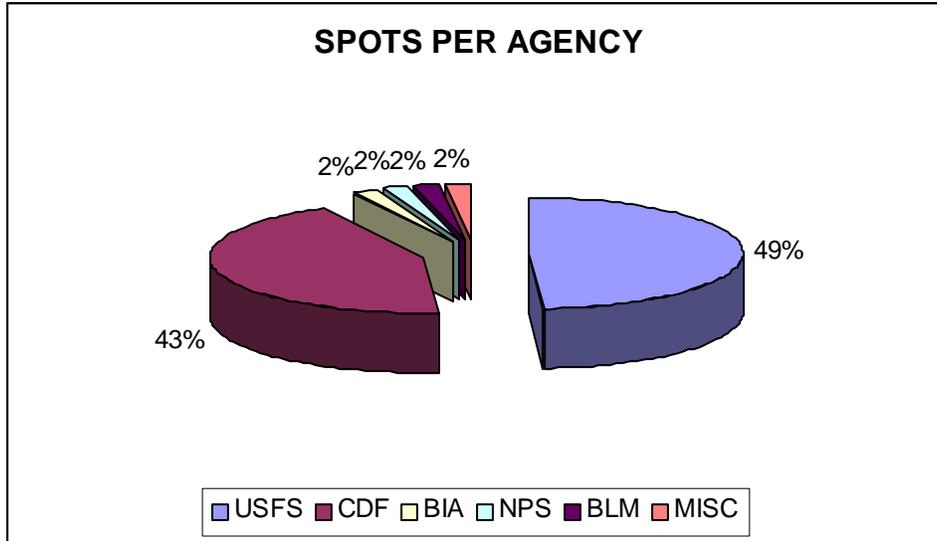
The average spot forecast “Turn-Around Time” was 53 minutes for wildfires and 59 minutes for project burns. This was an improvement of 11-17 minutes from the 2003 average. Turn-Around Time is defined as the elapsed time between a spot forecast request receipt (or notification) and forecast transmission. There were 17 instances where spot forecasts were requested a day or more in advance of ignition time. These cases were omitted from the average Turn-Around Time calculation.

Figure 5.1



SPOT FORECASTS CON'T

Figure 6.1

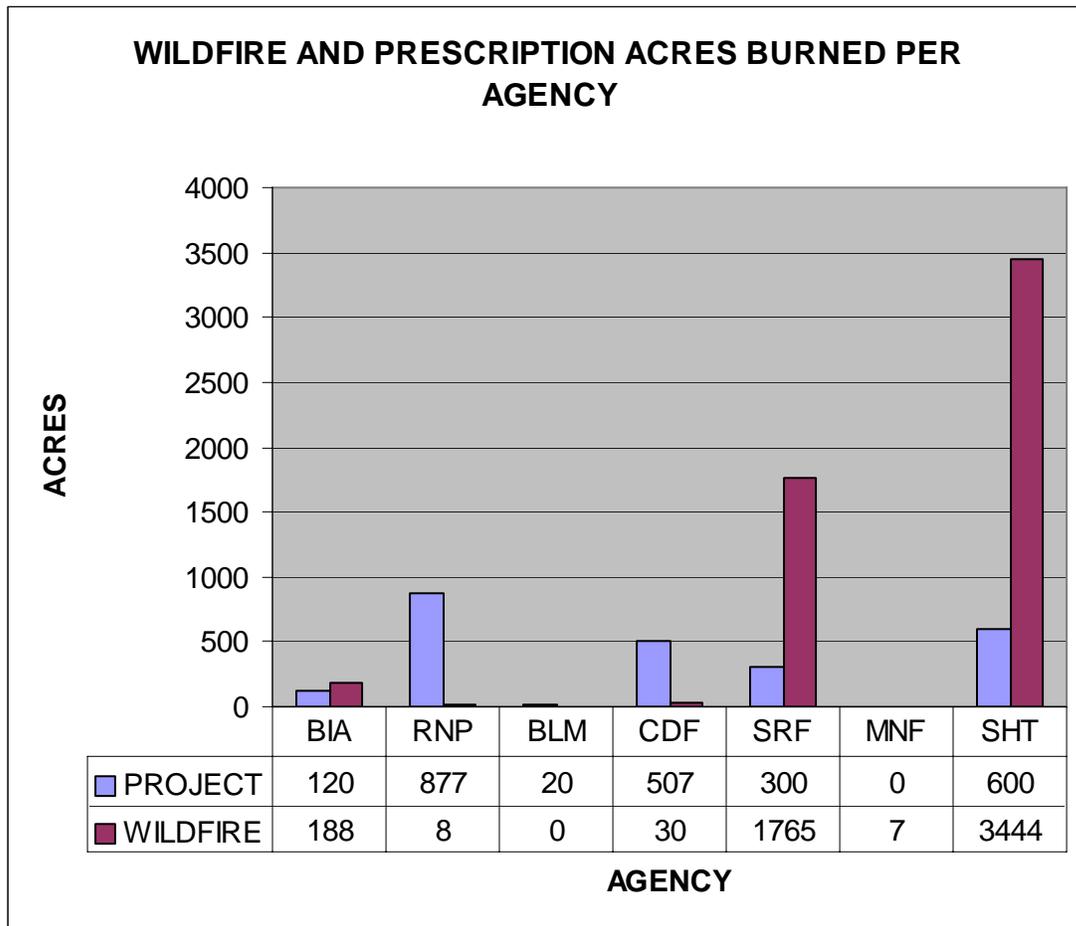


Spots For Wildfires.....	17
Spots For Project Burns.....	34
Spots For Hazmet.....	2
Average Turnaround Time	
For Wildfire.....	53 minutes
For Project Burns.....	59 minutes
 Total Spots	53

IV. WILDFIRE / PROJECT BURN ACTIVITY

Approximately 7,000 acres were burned due to wildfire within Eureka’s area of responsibility during the 2004 calendar year, less than 25% of the 30,000 acres burned last year. Over half of the acres burned occurred at the Sims Fire near Hyampom, CA, spanning across both the Shasta-T and Six Rivers NF’s. Project burning totaled approximately 2,200 acres of which 877 acres were burned by Redwood National Park, while CDF and USFS each burned approximately 600 acres. See Table 4.1 below for complete distribution. Acreage burned due to wildfire totaled 6444 however nearly 3000 acres of this total occurred within WFO Sacramento’s area of responsibility.

Table 4.1



V. INCIDENT METEOROLOGIST ASSIGNMENTS

Eureka Fire Weather participated in 3 IMET assignments during the 2004 fire season. IMET Jeff Tonkin was dispatched to three incidents, all in Alaska. (see table below). IMET support from WFO Eureka totaled 28 days.

Table 5.1

<u>Incident Name</u>	<u>IMET</u>	<u>Dispatch Dates</u>	<u>WFO District</u>
Central Complex	Jeff Tonkin	7/15 - 7/29	Fairbanks
Taylor Complex	Jeff Tonkin	9/1 - 9/10	Fairbanks
Camp Creek Fire	Jeff Tonkin	9/10 - 9/14	Fairbanks

IMET support to fires within Eureka's area of responsibility included Mike Smith (NWS - Sacramento) serving on the Sims Fire from July 29th through August 5th 2004.

VI. 2004 EUREKA FIRE WEATHER PROGRAM SUMMARY

The fire season of 2004 was the second official season of fire weather responsibility for WFO Eureka. Given the very small sample size of data for both years it is difficult to come to any realistic conclusions of performance at this time. The following table illustrates a comparison of activity and performance for the last two years and includes the two year average.

ANNUAL COMPARISON TABLE				
	2003	2004	03-04 Diff	03-04 Ave
Warning / Watch				
Red Flag Warnings Issued:	14	5	-9	9.5
Dry Lightning:	1	0	-1	0.5
Wind/RH	13	5	-8	9
Average Lead Time (hr)	13	20.6	7.6	16.8
Fire Weather Watches Issued:	4	4	0	4
Dry Lightning:	0	0	0	0
Wind/RH	4	4	0	4
Average Lead Time:	N/A	33.5	N/A	33.5
Verification:				
POD	100%	66%	-34%	83
CSI	71%	36%	-35%	53.5
FAR	29%	20%	-9%	24.5
SPOT Forecasts				
Total Issued:	95	53	-42	74
Wildfire:	85	17	-68	51
Average Turn-Around-Time:	1:10	:53 min.	17 min	1:01
Project:	10	34	24	22
Average Turn-Around-Time:	1:10	:59 min	11 min	1:04
IMET Support				
Total Days	48	28	20	38
Nancy	12	0	-12	6
Jeff	36	28	-8	32
Dispatch Days within CWA:	12	8	-4	10

VII. TRAINING, EDUCATIONAL AND OUTREACH ACTIVITIES

Eureka Fire Weather did not participate in any US Forest Service “S” series teaching assignments during the 2004 season. Table 5.2 summarizes various fire weather activities which the fire weather staff participated in.

Table 5.1

Dates	Activity	Agency/User/Audience	Representative	Location
Jan 13-15	UAT Meeting	NWS,GACC,Various Agencies	Nancy	Sacramento
Feb 26th	Fire Wx Lecture	Humboldt State University	Nancy	Arcata
Feb 26th	Pre-Season Meeting	Local Agencies	Jeff, Nancy	Eureka
March 2nd	Red Flag Criteria	NWS,GACC,Various Agencies	Jeff, Brett	Redding
March 15th	Outreach	Shasta T- Weaverville	Jeff	Weaverville
March 22nd	Outreach	CDF - Mendocino Unit	Jeff, John	Laytonville
April 12th	Outreach	Six Rivers NF	Jeff	Mad River
May 17th	ShastaT Meeting	NWS,GACC,ShastaT	Jeff, Nancy	Redding
June 7-8	Pre-Season Meeting	Local Agencies	Jeff, Brett	Smith River
June 8th	Outreach	Six Rivers NF	Jeff, Brett	Smith River
June 15th	Outreach	Redwood NP	Jeff, Brett, Nancy	Orick
July 15-29	IMET	Alaska State Forestry	Jeff	Central, AK
Aug 11-15	IMET	Alaska State Forestry	Jeff	Tok, AK
Aug 11-15	IMET	Alaska State Forestry	Jeff	Big Delta, AK
Oct 14,18	Fire Wx Lecture	Humboldt State University	Jeff, Brett	Arcata
Dec 6,7	UAT Meeting	NWS,GACC,Various Agencies	Nancy	Sacramento

Jeff Tonkin
Fire Weather Program Leader
WFO Eureka, CA