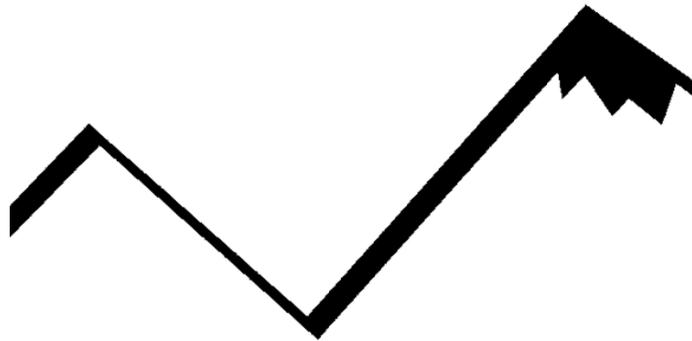
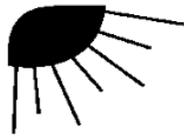


Natural Event Documentation

Corcoran, Oildale and Bakersfield, California
September 22, 2006



San Joaquin Valley Unified
Air Pollution Control District

April 20, 2007

Prepared By

Gary Arcemont, Air Quality Specialist/Meteorologist
Evan Shipp, Project Planner/Meteorologist

Reviewed By

Scott Nester, Director of Planning
Steve Shaw, Supervising Air Quality Specialist

*San Joaquin Valley Unified Air Pollution Control District
1990 E. Gettysburg Avenue
Fresno, California 93726*

(559) 230-5800

www.valleyair.org

TABLE OF CONTENTS

1. Summary.....	5
2. Background.....	6
3. NEAP Criteria.....	7
4. Summary of Natural Event.....	8
4.1 PM10 Data Summary	8
4.2 Cause of PM10 NAAQS Exceedance.....	10
5. Chronological Description of the Natural Event.....	17
6. NEAP Criteria - Meteorological Data.....	24
7. Source-Receptor Relationship	30
8. Emissions Sources and Activity Data.....	32
9. References.....	34
10. Appendix - Supporting Documents	35
10.1 Press Releases and Newspaper Articles.....	35
10.2 Summary of Inspections - September 22, 2006	45
10.3 Meteorological Data for the September 22, 2006 Wind Event.....	47
10.4 Air Parcel Trajectories	52
10.5 National Weather Service Advisories	54
10.6 Climate Summaries	73
10.7 Soil and Crop Maps	76
10.8 Historical Dust Storm Events.....	78
10.9 Calibration Data.....	82

LIST OF FIGURES

Figure 1. San Joaquin Valley PM10 monitors.8

Figure 2. Map of Central California, showing San Joaquin Valley Air Basin boundary in blue. 12

Figure 3. Time series plot of Corcoran and Lemoore wind speed and Corcoran PM10 for September 21 and 22, 2006. 13

Figure 4. Hourly PM10 concentrations on September 22, 2006. 14

Figure 5. Composite MODIS image for September 22, 2006 (approximate time, 11:00 to 12:40 PDT), showing a large area of particulate over the Central and Southern San Joaquin Valley. 15

Figure 6. Transport of smoke from the Day Fire to the San Joaquin Valley on September 18, 2006. 16

Figure 7. Time series plot of Corcoran wind speed and PM10 for September 14, 2006. 17

Figure 8. Surface weather map for 5 am PDT September 14, 2006. Purple shading indicates precipitation. 18

Figure 9. 500 mb map for 05:00 PDT on September 22, 2006 20

Figure 10. Map of California, showing location of Alpaugh. San Joaquin Valley Air Basin boundary is in blue. 22

Figure 11. Central California annual average precipitation in inches. The San Joaquin Valley Air Basin is outlined in black. 25

Figure 12. Backward trajectory for 2 PM PDT on September 22, 2006, showing air parcel trajectories to the Tracy, Corcoran and Bakersfield receptors. 30

Figure 13. PM10 and PM2.5 concentrations at Corcoran and Bakersfield on September 22, 2006. .32

LIST OF TABLES

Table 1. PM10 daily averages in $\mu\text{g}/\text{m}^3$ recorded by Federal Reference Method filter samplers. 9

Table 2. PM10 daily averages in $\mu\text{g}/\text{m}^3$ recorded by continuous analyzers. 9

Table 3. September 22, 2006 PM10 data for Corcoran and Bakersfield, and wind data and weather conditions for monitoring stations in the vicinity of Corcoran. 11

Table 4. PM10 in $\mu\text{g}/\text{m}^3$ recorded by continuous analyzers on September 14, 2006. 17

Table 5. September 22, 2006 PM10 data for Corcoran and Bakersfield, and wind data for Alpaugh, which is located between Corcoran and Bakersfield. 21

Table 6. Summary of large unwanted wildland fires in Central California on September 22. 23

Table 7. Days with precipitation recorded at Hanford, Bakersfield and Fresno for four months prior to September 22, 2006. 24

Table 8. Departure from average monthly temperature (degrees F). 26

Table 9. Average monthly maximum temperature (degrees F). 26

Table 10. Peak wind speeds for September 22, 2006, recorded by National Weather Service stations. 27

Table 11. Peak wind data for September 22, 2006, from Remote Automatic Weather Stations (RAWS). 28

Table 12. Maximum hourly averaged wind data for September 22, 2006. 28

Table 13. Hourly averaged wind data for September 22, 2006, from California Irrigation Management Information System (CIMIS) monitors in the Corcoran area. 28

Table 14. Wind monitoring network sampling parameters. 29

Table 15. Summary of dust-related complaints for September 22, 2006. 33

1. SUMMARY

PM10 exceedances recorded in the San Joaquin Valley on September 22, 2006 meet the criteria for natural events as defined by federal policies. Several factors contributed to the total PM10 concentrations. High winds with gusts up to 40 miles per hour were recorded in the Central San Joaquin Valley, and entrained dust from the desiccated soil in the area. Smoke from unwanted wildland fires added to the particulate loading in the valley. This report demonstrates that without the natural event, there would not have been an exceedance of the PM10 National Ambient Air Quality Standard on September 22, 2006.

A blowing dust event is comprised of entrainment of dust by high winds in the dust source area, and then deposition of dust in receptor areas with lower wind speeds. Once dust is suspended upwind of the monitoring stations, it can be carried downwind by winds that are below the dust entrainment wind speed threshold. The strongest winds and blowing dust were observed to north and west of Corcoran. The blowing dust was transported to the southeast where deposition occurred in Corcoran, Oildale, Bakersfield and other parts of the Central and Southern San Joaquin Valley, where the wind speeds decreased, but continued to be much higher than normal.

The District investigated emission-generating activities during the episode, and found PM10 emissions for BACM controlled sources were approximately constant before, during and after the event. The District concludes that the PM10 exceedance would not have occurred except for the wind-entrained dust and smoke from wildland fires.

2. BACKGROUND

The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Natural Events Action Plan (NEAP) for High Wind Events in the San Joaquin Valley Air Basin* in February 2006. The 1996 EPA memorandum, *Areas Affected by PM10 Natural Events*, describes the requirements for natural event data flagging as well as the requirements for a NEAP. The policy allows air quality data to be flagged so that it does not count toward an area's attainment status if it can be shown that there was a clear, causal relationship between the data and one of three categories of natural events: volcanic and seismic activity, unwanted wildland fires, and high wind events.

The purpose of this report is to demonstrate that there was a clear, causal relationship between the exceedance of the PM10 standard on September 22, 2006 in the San Joaquin Valley Air Basin and a high wind event and unwanted wildland fires, and demonstrate that without the high winds and smoke from unwanted wildland fires, PM10 would not have exceeded the standard. Although a combination of several factors contributed to the total PM10 concentrations, the District concludes that the exceedance would not have occurred in the absence of high winds and unwanted wildland fires.

Data flagging serves multiple purposes. According to the 1986 U. S. Environmental Protection Agency (EPA) guidance document, *Guideline on the Identification and Use of Air Quality Data Affected by Exceptional Events*, knowledge and understanding of what data represent are critical in the overall air quality process. The major thrust of a data flagging system is information exchange, and data flags are meant to prevent the misuse of data. Flagging the September 22, 2006 exceedance will ensure that the data is not misinterpreted.

3. NEAP CRITERIA

The NEAP requires the District, in consultation with California Air Resources Board (ARB) meteorologists, to declare a NEAP episode if the following criteria are met:

- 1. There has been no recent, measurable precipitation in the potential source region for fugitive dust**
- 2. The National Weather Service in Hanford and/or Sacramento has issued either a High Wind Warning, Wind Advisory, or Blowing Dust Advisory for certain parts of the San Joaquin Valley, and the predicted duration of high winds is sufficient to establish a NEAP episode**
- 3. The surface weather maps show a potential for high winds to occur in the near future.**
- 4. Strong winds exist higher in the atmosphere in conjunction with other weather phenomena that can drive the higher wind speeds closer to the surface**
- 5. The 24-hour average PM10 level is forecast to be above the National Ambient Air Quality Standard at one or more San Joaquin Valley sites.**

On September 22, 2006, all of the NEAP criteria were met:

Criteria 1. Precipitation had not been reported in the valley since July 29, 2006, resulting in a dry period of 122 days prior to the event. Precipitation was much below normal in the San Joaquin Valley for four months prior to the blowing dust event. Only a trace of precipitation was reported in Fresno, Hanford and Bakersfield between May 23, 2006 and July 29, 2006.

Criteria 2, Criteria 3 and Criteria 4. Strong winds were reported in the San Joaquin Valley Air Basin. The National Weather Service in Hanford, CA issued a Wind Advisory for the Central San Joaquin Valley, but later cancelled the advisory. Wind gusts to 40 mph were reported in Lemoore, directly upwind of Corcoran, Oildale and Bakersfield on September 22, 2006.

Criteria 5. The PM10 National Ambient Air Quality Standard (NAAQS) was exceeded at Corcoran, Oildale and Bakersfield.

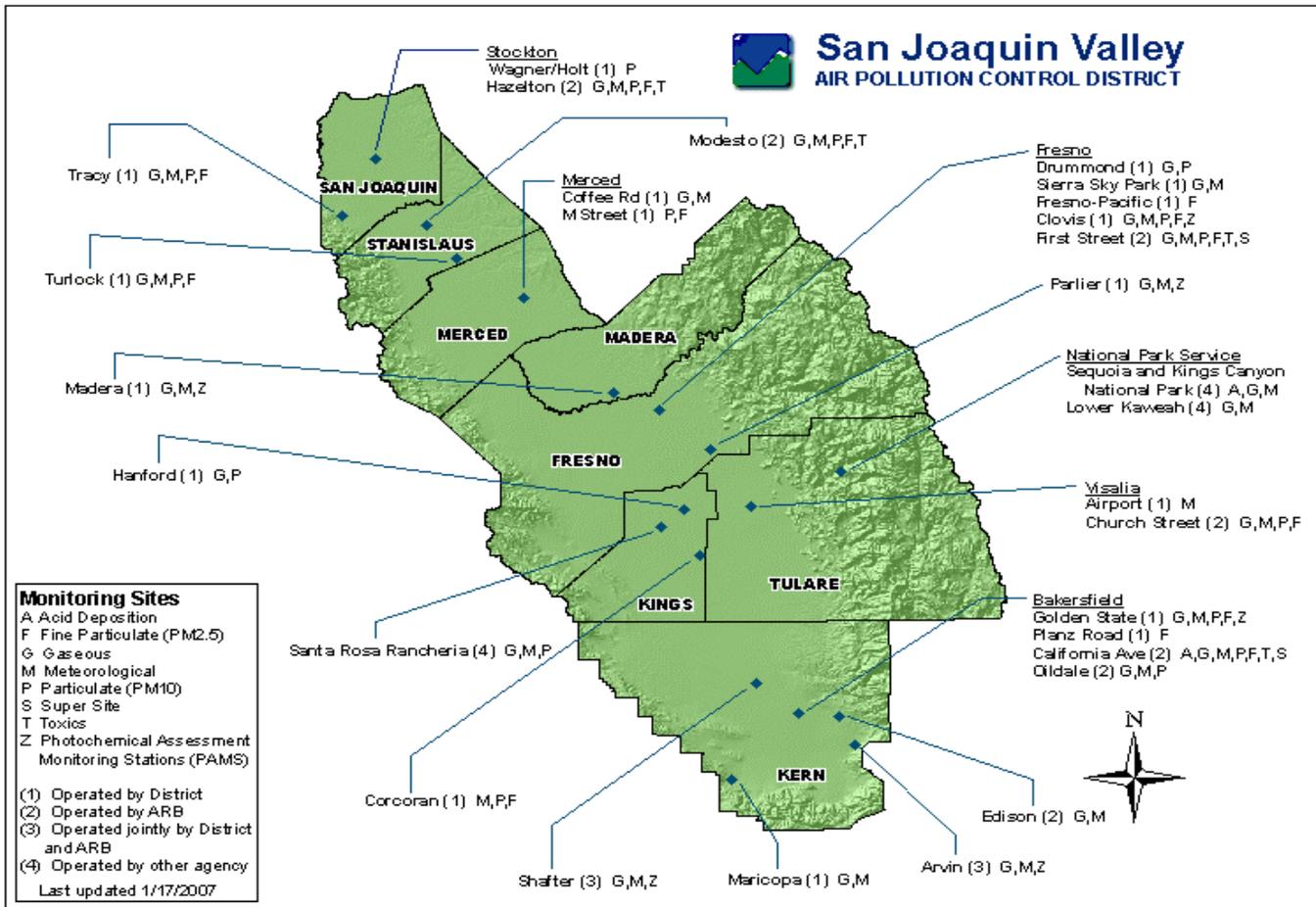
A press release was issued on September 22 with the goal of notifying the public of the natural event in order to protect public health. This press release is provided in the appendix.

4. SUMMARY OF NATURAL EVENT

4.1 PM10 Data Summary

On September 22, 2006, Federal Reference Method (FRM) filter based samplers recorded concentrations in excess of the 24-hour NAAQS for PM10 in the San Joaquin Valley. The NAAQS is 150 µg/m³ rounded to the nearest 10 µg/m³. A map of San Joaquin Valley monitoring stations is provided in Figure 1. Oildale will be considered within the Bakersfield area for the purpose of this analysis.

Figure 1. San Joaquin Valley PM10 monitors.



PM10 concentrations for FRM samplers are shown in Table 1. The PM10 concentration exceeded the NAAQS at Corcoran, Oildale, Bakersfield-Golden State Highway on September 22. The Santa Rosa Rancheria Tribal EPA operates the Santa Rosa Rancheria monitor. The September 20, 2006 sample at was invalidated by the Santa Rosa Rancheria Tribal EPA, due to construction dust emissions produced near the monitor.

Table 1. PM10 daily averages in $\mu\text{g}/\text{m}^3$ recorded by Federal Reference Method filter samplers.

Station	September 20, 2006	September 22, 2006
Stockton - Wagner Holt.	62	
Stockton -Hazelton	80	
Modesto	69	
Turlock	97	
Merced	80	
Fresno- Drummond	67	
Fresno- First St.	70	
Clovis	70	
Corcoran	Scheduled but not collected	215
Hanford	95	
Santa Rosa Rancheria	158 Invalid - Construction	
Visalia	73	
Oildale	Machine Malfunction	162
Bakersfield - Golden State Hwy.	68	157
Bakersfield -California Ave.	Machine Malfunction	

The District collects hourly PM10 concentrations using two types of PM10 monitors, Tapered Element Oscillating Microbalance (TEOM) type monitors and Beta Attenuation Mass (BAM) type monitors. Data recorded by continuous analyzers is presented Table 2.

Table 2. PM10 daily averages in $\mu\text{g}/\text{m}^3$ recorded by continuous analyzers.

Station	Type	Sep 20	Sep 21	Sep 22	Sep 23	Sep 24
Tracy	BAM	83	48	161	42	35
Fresno - First	BAM	71	76	105	81	31
Corcoran	TEOM	112	101	261	120	79
Bakersfield - Golden State	TEOM	71	91	170	148	46

EPA certifies TEOM type monitors to be equivalent to FRM monitors (EQPM-1090-079). TEOM monitors are located at Corcoran and Bakersfield-Golden State. EPA does not consider BAM monitors to be equivalent to FRM monitors. BAMs are used for forecasting purposes, but are not used for attainment determinations. BAM monitors were located at the Fresno-First Street and Tracy monitoring stations. The Tracy BAM was replaced with a TEOM type monitor in October 2006.

4.2 Cause of PM10 NAAQS Exceedance

As described in the District's NEAP and in EPA policy, the following sources of documentation, if available, may be used to establish a clear, causal relationship between an exceedance and a natural event:

- Meteorological data (e.g., wind speed and wind direction to support a source receptor relationship)
- Modeling and receptor analysis
- Videos and/or photographs of the event and the resulting emissions
- Maps of the areas showing sources of emissions and the area affected by the event
- News accounts of the event
- Filter analysis
- In the case of high-wind events, states must document that BACM were required for anthropogenic sources at the time of the high-wind event

In consultation with the ARB, the District compiled documentation of the causal relationship between the PM10 NAAQS exceedance and the natural event. The District has determined that the cause of this PM10 event was a combination of wind driven dust from local and regional sources and smoke from unwanted wildland fires. The primary contributor to the exceedance was blowing dust entrained into the air to the northwest of the Corcoran monitor. Secondary contributors to the exceedance included regional transport of blowing dust from the Northern San Joaquin Valley and smoke from unwanted wildland fires that was transported into the San Joaquin Valley. PM10 emissions for BACM controlled sources were approximately constant before, during and after the event, indicating the significant increase in PM10 concentrations was caused by the wind entrained dust and, smoke emissions from wildland fires. This report will provide evidence of:

- High winds in the Western Fresno County, Kings County and many parts of the Central Valley on September 22, 2006, coinciding with an increase in PM10 at Corcoran and Bakersfield,
- Regional PM10 being transported from the Northern and Central San Joaquin Valley to the Southern San Joaquin Valley,
- Smoke from several large unwanted wildland fires adding smoke to the San Joaquin Valley Air Basin airshed during the event and for days preceding the event.

Table 3 indicates that PM10 at Corcoran rapidly increased from $55 \mu\text{g}/\text{m}^3$ at 4 am to $725 \mu\text{g}/\text{m}^3$ at 10 am, coinciding with a significant increase in the northwest wind speeds reported at monitoring stations in the vicinity of Corcoran (see Figure 2 and Figure 3). A peak gust of 40 mph was reported

at Lemoore at 9:25 am (see, Figure 2, Lemoore is NW of Corcoran). The peak wind speed at Lemoore occurred within the same hour as the peak PM10 concentration of 725 $\mu\text{g}/\text{m}^3$ at Corcoran.

Table 3. September 22, 2006 PM10 data for Corcoran and Bakersfield, and wind data and weather conditions for monitoring stations in the vicinity of Corcoran.

Hour	Bakersfield Golden St. PM10 ($\mu\text{g}/\text{m}^3$)	Corcoran PM10 ($\mu\text{g}/\text{m}^3$)	Corcoran Wind Speed (mph) & Direction	Kettleman Hills Wind Speed (mph) & Direction	Lemoore Weather Conditions	Lemoore Wind Speed (mph) & Direction
0	92	63	NW 5	WNW 9G16	Clear	NW 8
1	89	39	E 2	NW 8G13	Clear	WNW 12
2	79	51	SSE 1	NW 9G15	Clear	WNW 9
3	66	64	SSW 2	WNW 7G11	Clear	N 10
4	81	55	W 4	NW 9G13	Clear	NNW 8
5	81	78	NNW 7	NW 12G29	Clear	NW 10
6	74	170	NNW 7M10	NNW 13G22	Clear	NNW 8
7	104	306	NNW 11M14	NW 14G24	Clear	NW 21
8	78	519	NNW 11M15	NNW 16G24	Clear	NW 21
9	114	531	NW 9M14	N 17	Smoke	NNW 28G35
10	103	725	NW 9M12	NNW 18G27	Smoke	NNW 29G37
11	139	695	NW 9M12	N 20G32	Smoke	NW 23G30
12	168	521	NW 8	N 17G28	Smoke	NNW 17G24
13	196	318	WNW 7	N 14G24	Smoke	NNW 21
14	239	276	WNW 5	N 9G9	Smoke	NNE 14
15	294	247	WNW 6	NNW 8G18	Smoke	NNE 14
16	285	269	NW 5	N 11	Mostly Clear	N 5
17	281	283	NNW 3	NNE 10G17	Mostly Clear	N10
18	270	258	NW 3	NNW 12G16	Clear	NNW 9
19	281	223	NW 5	NNW 9G15	Clear	N 6
20	259	150	NW 4	Not Available	Clear	NW 8
21	221	144	W 2	Not Available	Clear	WNW 7
22	236	138	NW 2	WNW11G16	Clear	WNW 9
23	246	144	NE 2	WNW 7G10	Clear	CALM

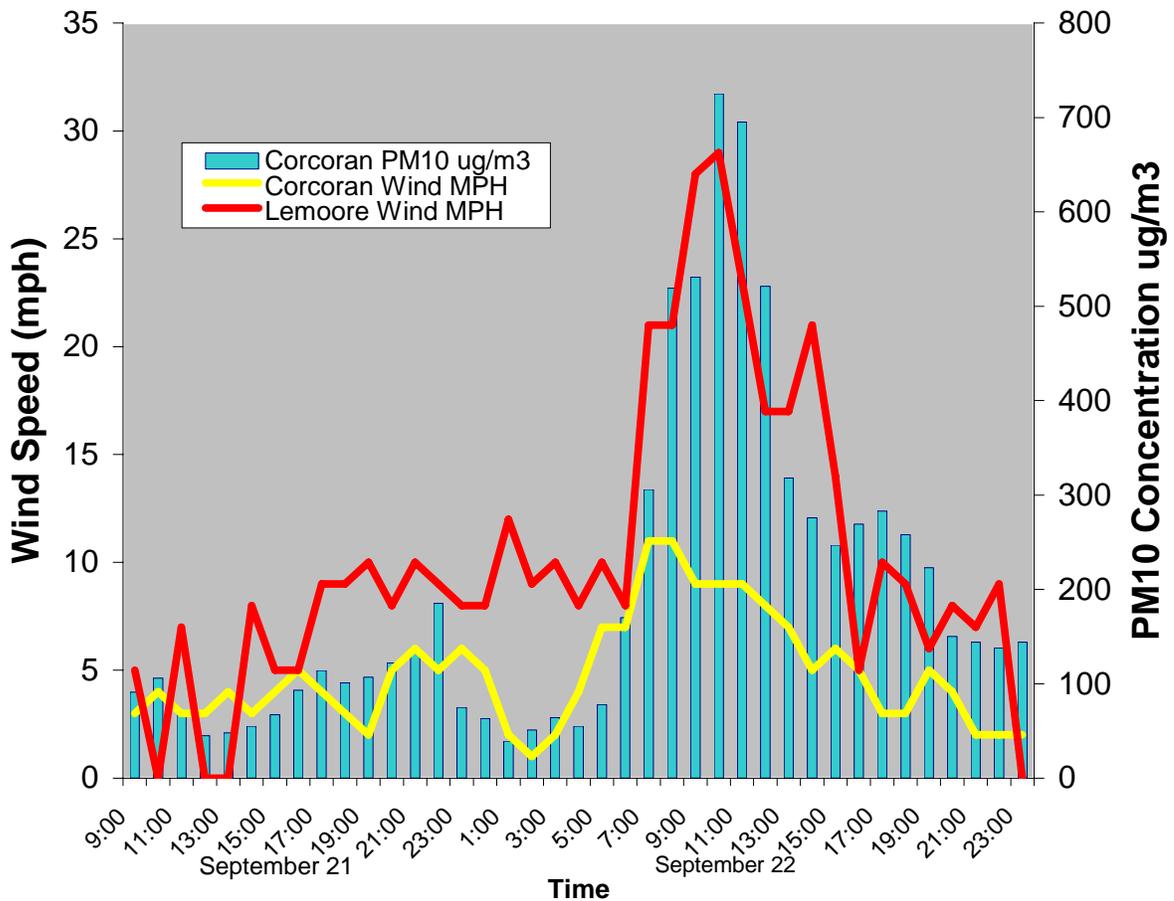
Lemoore reported a wind observation at 9:25 PDT of 28 mph with gust to 40 mph.

Hour 0 is Midnight to 12:59:59 AM, Pacific Standard Time. For Kettleman Hills, Hanford, Lemoore: G = Hourly peak gust, sustained wind is a 10 minute average at beginning of hour. Corcoran wind data is an hourly average. M denotes peak minute average for that hour.

Weather data at Lemoore and Kettleman Hills was obtained through the <http://www.met.utah.edu/mesowest/> website which is supported by the University of Utah, forecasters at the Salt Lake City National Weather Service Office, the NWS Western Region Headquarters, and personnel of participating agencies, universities, and commercial firms.



Figure 2. Map of Central California, showing San Joaquin Valley Air Basin boundary in blue.



Corcoran wind speed is an hourly average. Lemoore wind speed is a 10 minute average at the beginning of the hour. 10 minute averaged wind speed may be higher than an hourly averaged wind speed at the same location.

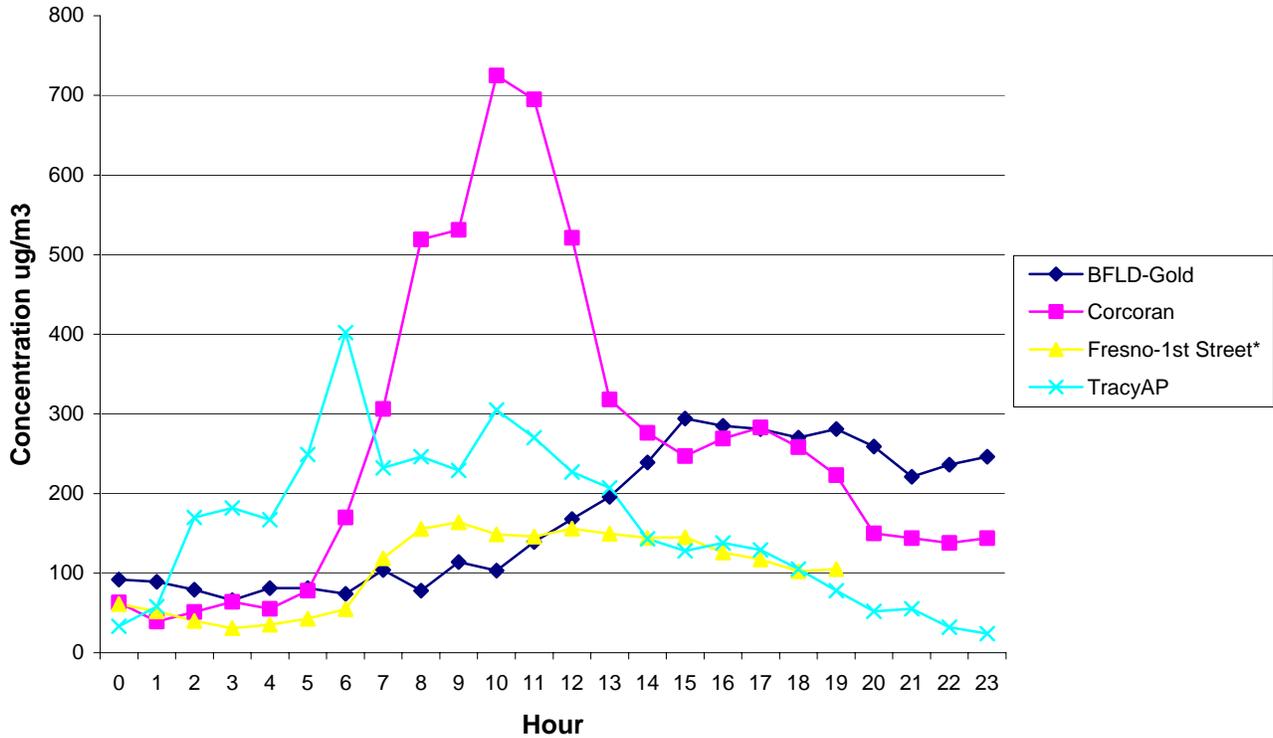
Figure 3. Time series plot of Corcoran and Lemoore wind speed and Corcoran PM10 for September 21 and 22, 2006.

As indicated in Figure 3, hourly averaged wind speeds peaked at Corcoran and was followed by peak PM10, indicating entrainment of dust. A report for the San Joaquin Air Quality Study Agency (Bush, 2004) concluded that winds at speeds at 8 m/s (17.6 mph) could be sufficient to entrain surface soil into the atmosphere. Winds from the northwest gusted to 40 mph in the area to the northwest of Corcoran, which clearly indicates wind was entraining dust into the atmosphere upwind of Corcoran.

The PM10 in the north valley added to the PM10 loading in the south valley, due to PM10 transport to the south valley on the strong northwesterly winds. As shown in Figure 4, PM10 first peaked at Tracy at hour 6, and then peaked at Corcoran at hour 10. The dust and smoke plume that influenced the Corcoran monitor was then transported to the southeast where it was measured by the Bakersfield

monitor at hour 15. PM10 increased gradually at Bakersfield several hours after the PM10 peak at Corcoran, which is characteristic of a plume of dust being transported from a large distance. District management noted that there was a general haze between Corcoran and Bakersfield on September 22, which was due to high winds entraining dust that was overcoming BACM controls.

Figure 4. Hourly PM10 concentrations on September 22, 2006



As indicated in Table 3, trained weather observers at Lemoore Naval Air Station reported smoke at Lemoore from 9 am to 3 pm PDT. This smoke was adding to the total PM10 concentration when the PM10 concentrations were in the 247 to 725 $\mu\text{g}/\text{m}^3$ range. Newspaper articles document smoke in Hanford as well (see section 10.1 in the appendix).

Figure 5 is a Moderate Resolution Imaging Spectroradiometer (MODIS) satellite image that shows a large dense plume of particulate over the Central and Southern San Joaquin Valley at midday on September 22, 2006. To be visible on a satellite image, this plume of particulate over the Central and Southern San Joaquin Valley must have been very significant. The images were collected during the period of peak PM10 at Corcoran, so there is verification that this plume existed by the PM10 monitoring data. MODIS images available for days before and after September 22 do not display the large area of particulate in the Central and Southern San Joaquin Valley, which is corroborated by lower PM10 concentrations on these days.

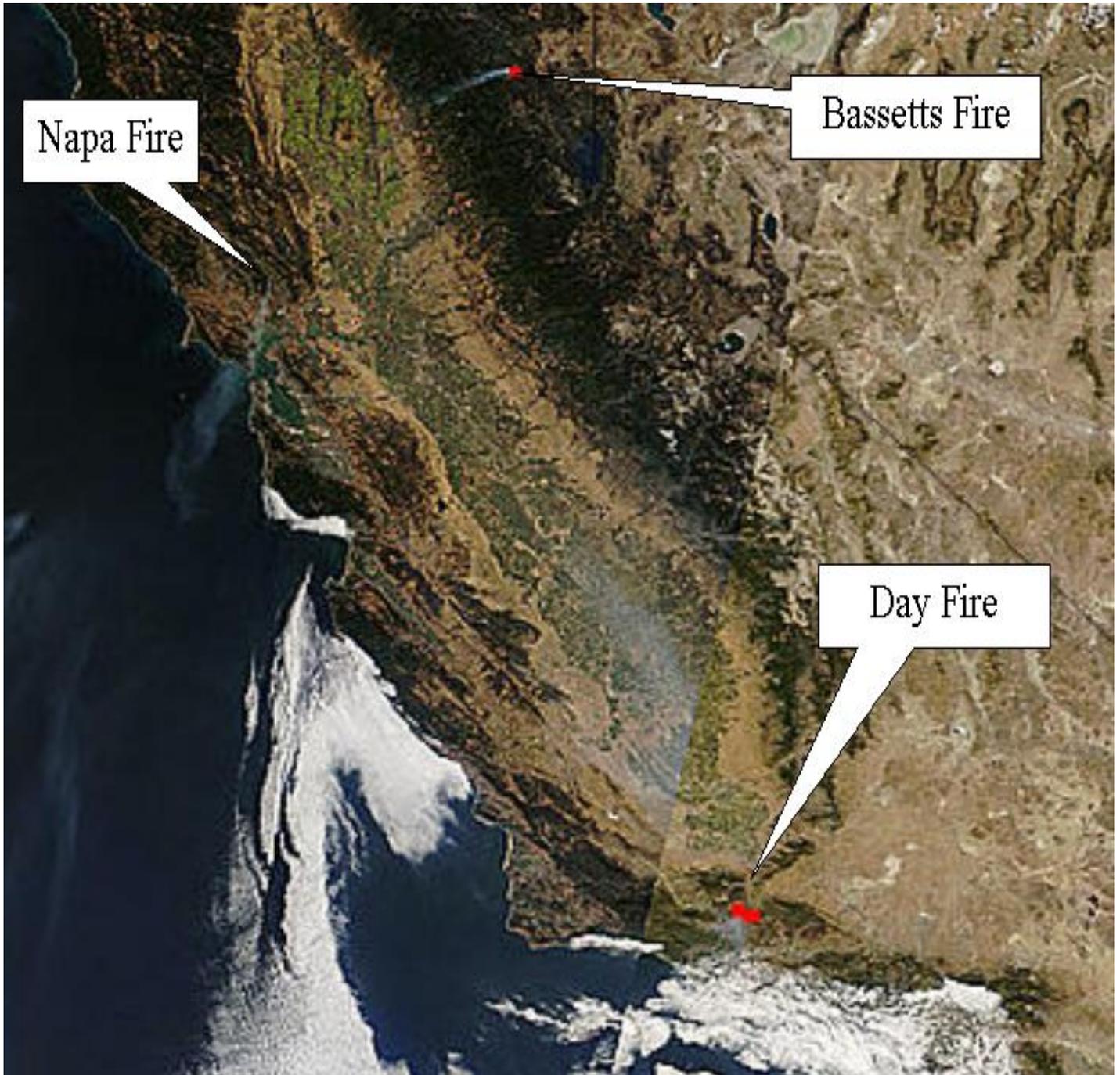


Figure 5. Composite MODIS image for September 22, 2006 (approximate time, 11:00 to 12:40 PDT), showing a large area of particulate over the Central and Southern San Joaquin Valley.

The MODIS satellite images shown in Figure 5, indicate that several large unwanted wildland fires were producing a large volume of smoke on September 22. In addition, a large wildfire in Yolo County near Zamora, CA (northwest of Sacramento, the plume is not visible on the MODIS image) created air-pollution problems in the northern portion of the San Joaquin Valley on September 22, as discussed in the press release provided in section 10.1.



Figure 6. Transport of smoke from the Day Fire to the San Joaquin Valley on September 18, 2006.

MODIS images in Figure 5 indicates that significant amounts of smoke was being produced by the Day Fire in Ventura County, the Napa Fire in Napa County and the Bassetts Fire (a large wildland fire in the north central Sierra Nevada). The contribution from the smoke from the fires to the plume on the satellite images is not considered to be significant. Due to variation in wind direction from day to day, the plume directions can vary significantly. MODIS images indicated the smoke plumes from fires had trajectories to allow smoke to be transported to the Central San Joaquin Valley at times prior to September 22, as shown in Figure 6.

5. CHRONOLOGICAL DESCRIPTION OF THE NATURAL EVENT

September 4, 2006

The Day Fire began at 1:55 PM PDT in the Los Padres National Forest, 12 miles south of Frazier Park, CA.

September 14, 2006

A blowing dust event occurred on September 14, 2006. The event was short lived, so the 24-hour PM10 standard was not exceeded (as shown in Table 4). As shown in Figure 7, PM10 at Corcoran rapidly increased from 53 $\mu\text{g}/\text{m}^3$ at noon to 518 $\mu\text{g}/\text{m}^3$ at 5 pm, coinciding with a significant increase in the wind speeds. However, PM10 dropped to 6 $\mu\text{g}/\text{m}^3$ by 11 pm.

Table 4. PM10 in $\mu\text{g}/\text{m}^3$ recorded by continuous analyzers on September 14, 2006.

Station	PM10 (24 hr)	PM10 Peak Hour
Tracy	71	333
Fresno- First Street	67	422
Corcoran	114	518
Bakersfield - Golden State Hwy.	64	676

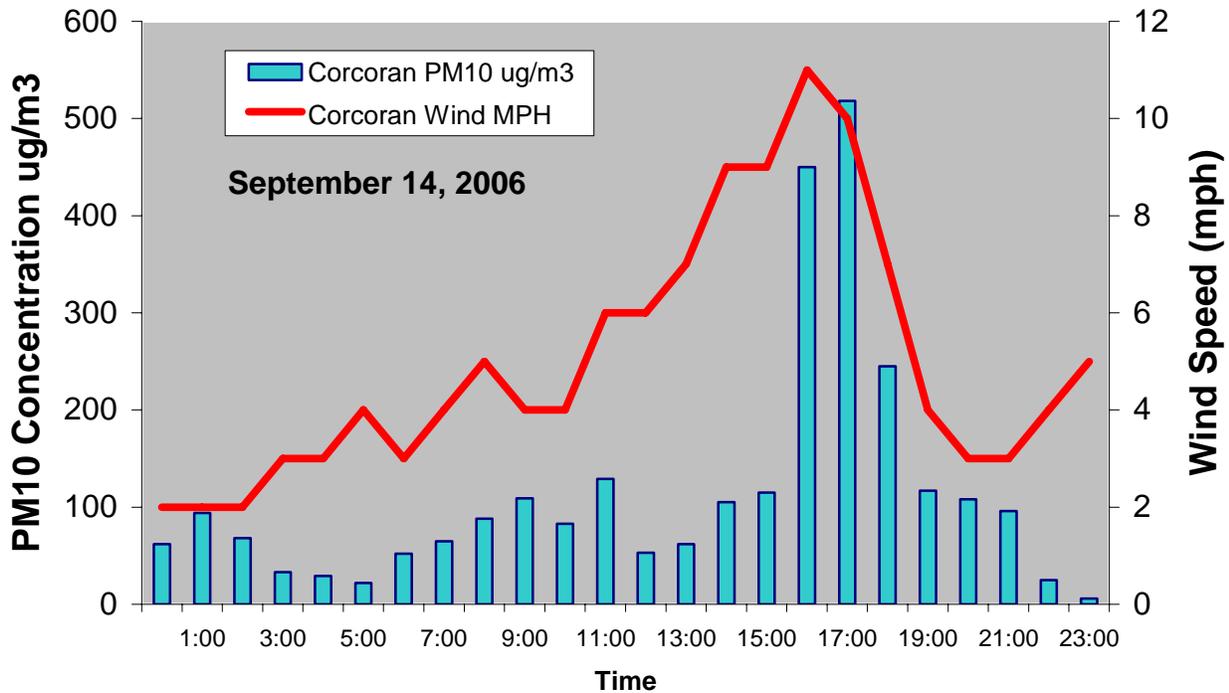


Figure 7. Time series plot of Corcoran wind speed and PM10 for September 14, 2006.

Satellite images indicate a frontal passage contributed to the cause of the high winds. As shown in Figure 8, the surface weather map indicated some light precipitation over the valley, however precipitation was not reported at the surface monitoring stations. Due to low humidity at the surface, precipitation likely evaporated before reaching the ground. A clean air mass followed the front, resulting in a rapid decrease in PM10 concentrations.

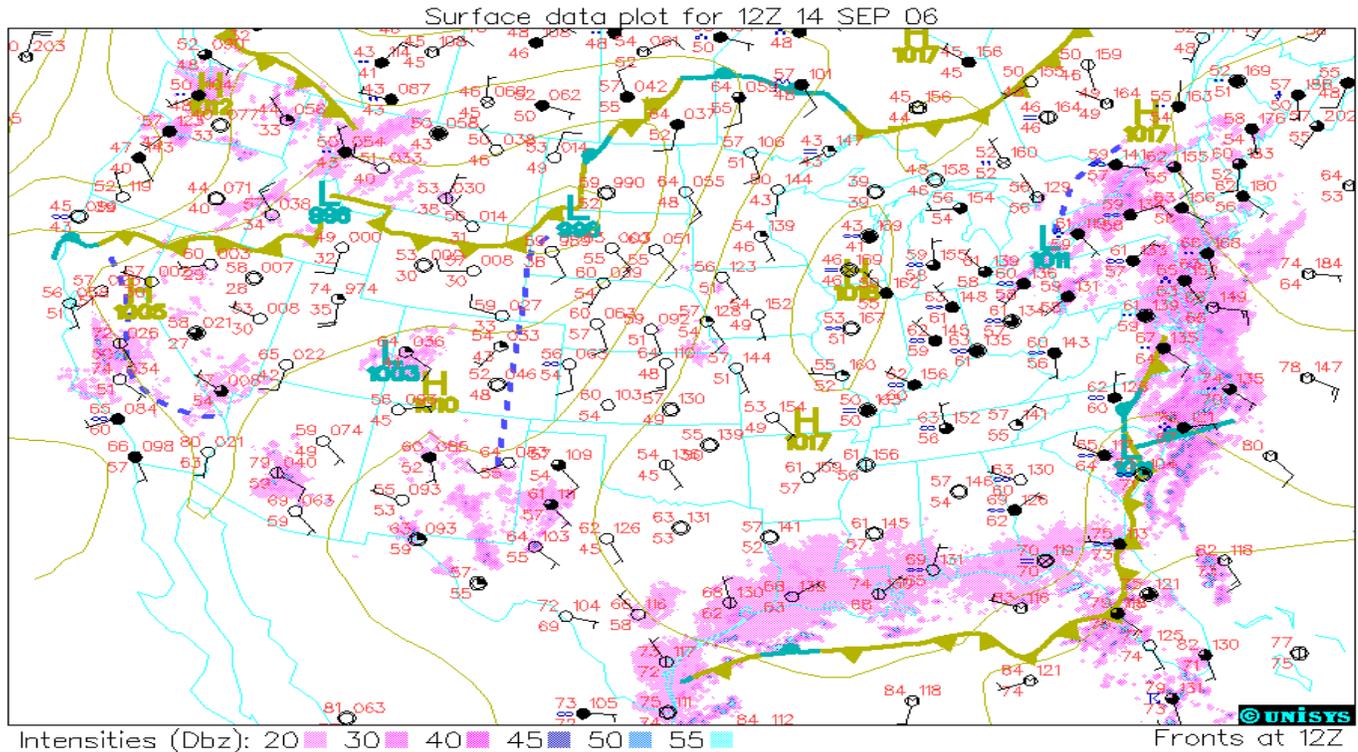


Figure 8. Surface weather map for 5 am PDT September 14, 2006. Purple shading indicates precipitation.

September 18, 2006

A large quantity of smoke was transported from the Day Fire to the San Joaquin Valley, as shown in Figure 6.

September 19, 2006

The Bassetts Fire began at 3:31 PM PDT in Tahoe National Forest, 15 miles east of Downieville, CA

September 20, 2006

The Bassetts Fire reached 2,114 acres at 0:28 PM ET in Tahoe National Forest.

September 21, 2006

Winds in the Central Valley increased on September 21, due to a trough over the Great Basin and in the jet stream over northeast California.

Winds aloft over the Southern San Joaquin Valley at midnight on September 21 reached 60 knots (69 mph) at 10,000 feet, however these winds had not yet mixed to the surface in the Southern San Joaquin Valley (see Lost Hills Profiler data in the appendix).

In the Sacramento Valley, Redding reported northerly winds for most of the day, with surface wind gusts to 34 mph. This is an atypical wind pattern, but does occur several times a year (personal communication with John Snook of the Redding Interagency Fire Weather Center, January 22, 2007). The strong northerly wind is indicative of synoptic forcing where large-scale pressure differences overwhelm the usual south-southeast localized flow from the Sacramento delta.

Activity data for September 21 included raisin tray burning and burning of two 40-acre vineyard removal. PM_{2.5} emissions for agricultural burn totaled 4.4 tons.

A blowing dust complaint was reported in Bakersfield.

September 22, 2006

As shown in Figure 9, a strong upper level trough was positioned over the Great Basin on the morning of September 22, which resulted in the jet stream taking a north-northwesterly trajectory over the Sierra Nevada. 75 knot (86 mph) winds were reported at 17,000 feet AGL over Reno. Winds remained strong in the Sacramento Valley on September 22. Redding reported consistently strong northerly winds, with gusts over 20 mph all day and peak gusts to 44 mph. PM₁₀ concentrations increased significantly in the Sacramento Valley. Sacramento-Del Paso Manor and Sacramento-Health Department recorded 24-hour average PM₁₀ concentrations of 138 and 165 $\mu\text{g}/\text{m}^3$ respectively on September 22. PM₁₀ concentrations in the Sacramento Valley reached an hourly averaged peak of 370 $\mu\text{g}/\text{m}^3$ at 6:00 AM on September 22.

Wind entrained dust was also reported in the northern part of the San Joaquin Valley, based on the 24 hour average PM₁₀ concentration of 161 $\mu\text{g}/\text{m}^3$ reported by the BAM monitor at Tracy. PM₁₀ concentrations at Tracy reached an hourly averaged peak of 402 $\mu\text{g}/\text{m}^3$ at 6:00 AM on September 22. PM₁₀ observed in the Northern San Joaquin Valley was transported south-southeastward in the strong winds and added to the PM₁₀ loading in the Central and Southern San Joaquin Valley.

Winds aloft over the Central San Joaquin Valley at 2 am on September 22 reached 45 knots (52 mph) at 10,000 feet (see Chowchilla profiler data in the appendix). Strong northwesterly winds aloft reached the surface on the west side of the Central San Joaquin Valley and other parts of California's Central Valley as discussed previously. PM₁₀ at Corcoran rapidly increased from 55 $\mu\text{g}/\text{m}^3$ at 4 am to 725 $\mu\text{g}/\text{m}^3$ at 10 am, coinciding with a significant increase in wind speeds.

Table 5 presents wind monitoring data at the Alpaugh California Irrigation Management Information System (CIMIS) monitoring station (between Corcoran and Bakersfield as shown in Figure 10), which

shows a sharp increase in wind speed between hour 6 and 8, indicating much higher than normal winds were reported between Corcoran and Bakersfield.

The Alpaugh monitoring station reported hourly averaged winds recorded at 2 meters. Hourly averaged winds typically are much lower than peak gusts. Wind speed measured at 2 meters would typically be lower than wind speed measured at 10 meters at the same location. This would indicate that the peak gusts at the 10 meter level at Alpaugh were likely much higher than the 15.2 mph peak hourly average at 2 meters, and likely higher than the dust entrainment threshold of 18 mph at 10 meters. Therefore, dust entrainment likely occurred between Corcoran and Bakersfield as well, adding to the plume that influenced the Oildale and Bakersfield monitors.

Weather observers at Lemoore Naval Air Station reported smoke at Lemoore from 9 am to 3 pm PDT. The dust and smoke plume that influenced the Corcoran monitor was transported in the northwest wind to the southeast where it was measured by the Oildale and Bakersfield monitors. Many hours after the PM10 peak at Corcoran, PM10 peaked at Bakersfield.

Figure 9. 500 mb map for 05:00 PDT on September 22, 2006

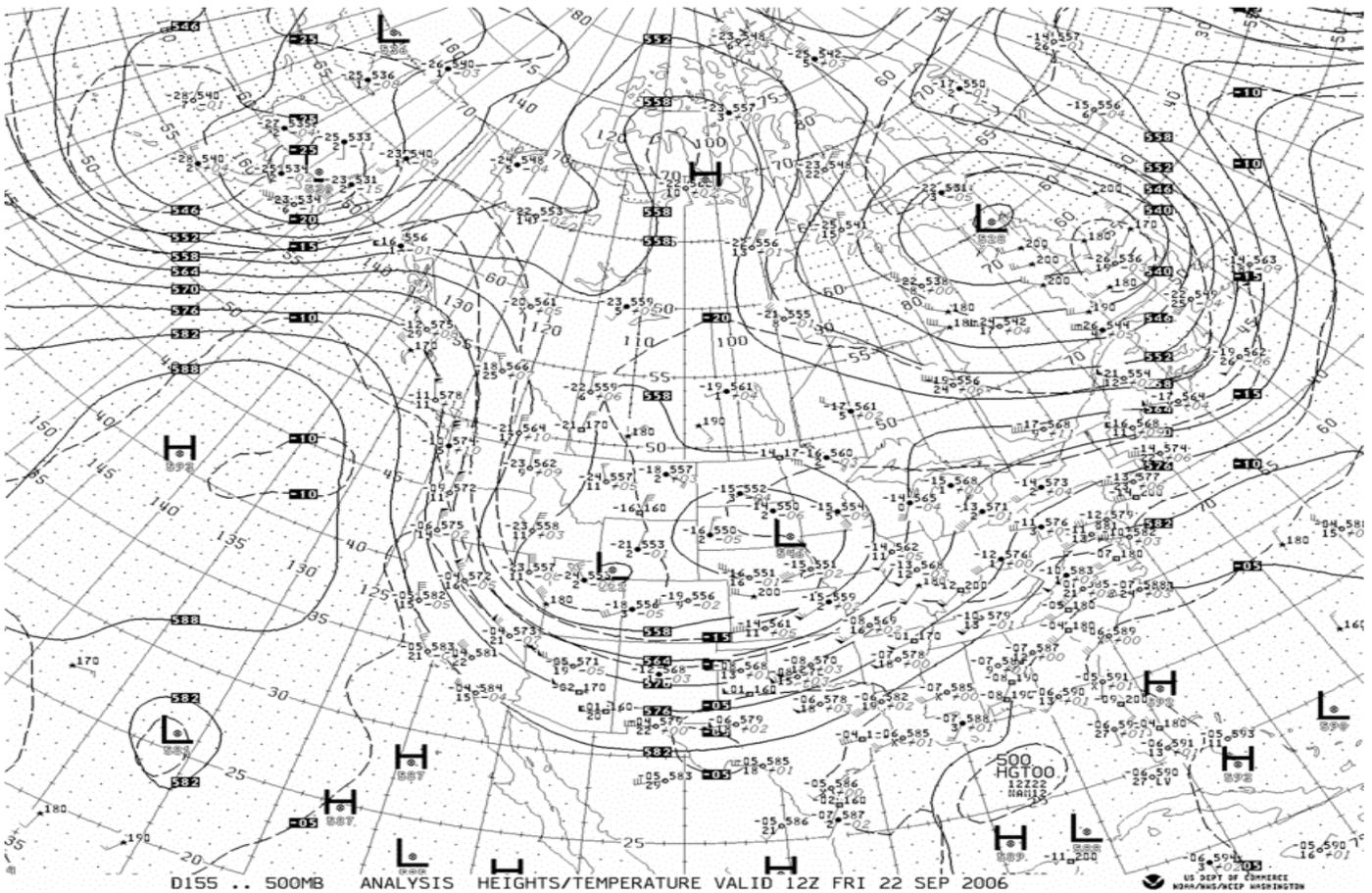


Table 5. September 22, 2006 PM10 data for Corcoran and Bakersfield, and wind data for Alpaugh, which is located between Corcoran and Bakersfield.

Hour	Bakersfield Golden St. PM10 ($\mu\text{g}/\text{m}^3$)	Corcoran PM10 ($\mu\text{g}/\text{m}^3$)	Alpaugh Hourly Averaged Wind Speed (mph) at 2 meters AGL	Alpaugh Wind Direction
0	92	63	3.7	SSE
1	89	39	3.1	SSE
2	79	51	2.8	SSE
3	66	64	2.9	SE
4	81	55	3.4	SW
5	81	78	4.4	W
6	74	170	2.6	WSW
7	104	306	7.7	NNW
8	78	519	15.2	NNW
9	114	531	12.1	NNW
10	103	725	12.3	NNW
11	139	695	12.8	NW
12	168	521	10.8	NW
13	196	318	9.6	NW
14	239	276	9.6	NW
15	294	247	8.1	NW
16	285	269	7.7	NNW
17	281	283	4.4	NNW
18	270	258	3.5	WSW
19	281	223	4.0	W
20	259	150	2.5	NNW
21	221	144	2.7	NW
22	236	138	3.1	W
23	246	144	2.6	SSE

Hour 0 is Midnight to 1 AM, Pacific Standard Time.

Wind data is from the California Irrigation Management Information System (CIMIS) monitors. Wind speed is an hourly average sampled at 2 meters above ground level (AGL). Hourly averaged winds typically are much lower than peak gusts. Wind speed measured at 2 meters would typically be lower than wind speed measured at 10 meters at the same location.

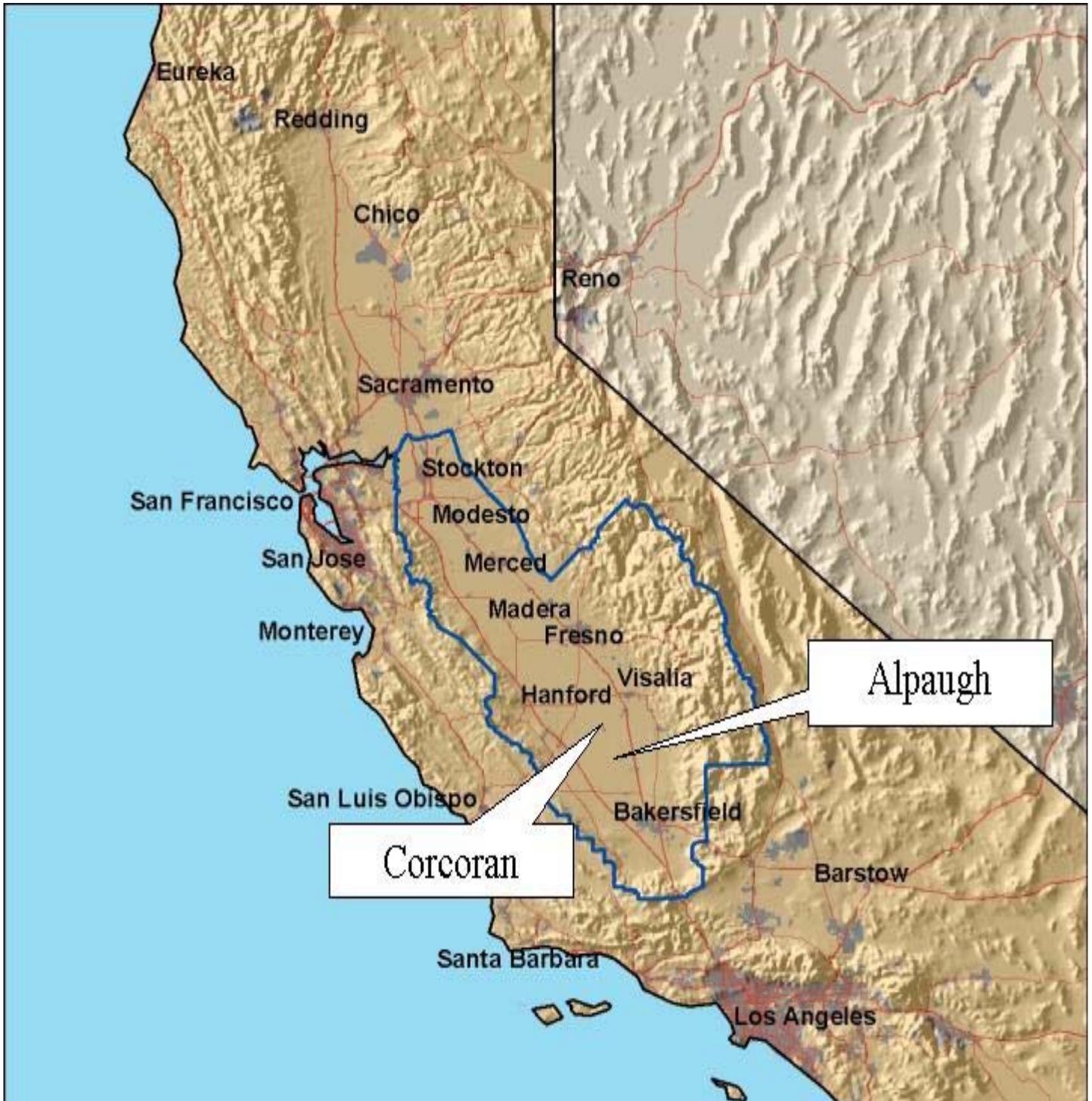


Figure 10. Map of California, showing location of Alpaugh. San Joaquin Valley Air Basin boundary is in blue.

As discussed previously, a large wildfire in Yolo County near Zamora, CA created air-pollution problems in the northern portion of the San Joaquin Valley on September 22, as indicated in the press release in Section 10.1. Incident Status Summary Reports (ICS-209) indicated that several

large unwanted wildland fires shown in Figure 5 were producing a large volume of smoke on September 22. Fire statistics are summarized in Table 6.

Fire	County	Percent Contained	Acreage	Line to Build
Day	Ventura	39	112,257	59 miles
Napa	Napa	30	387	2 miles
Bassetts	Sierra	62	1,660	61 Chains

Table 6. Summary of large unwanted wildland fires in Central California on September 22.

Agricultural Burning was not allowed in the District on September 22.

6. NEAP CRITERIA - METEOROLOGICAL DATA

The following meteorological information is presented to demonstrate that the NEAP meteorological flagging criteria were met.

Criteria 1 - No recent, measurable precipitation in the potential source region for fugitive dust

Precipitation and temperature data is provided to demonstrate that the period preceding the blowing dust event was much drier and hotter than normal. The above normal temperatures dried soils to a greater degree than normal and below normal precipitation also contributed to drier than normal soils. Moisture content of soils is a very significant factor in a blowing dust event. Soils that have lower than normal moisture content during the driest time of the year would be more easily entrained by strong winds. The summer heat dried the soil, which resulted in dusty soil conditions in September 2006. Soil and crop maps are provided for reference in Section 10.7 of the appendix.

Precipitation

There had been 122 consecutive days without measurable precipitation before the September 25, 2006 event. The last measurable precipitation was reported on May 22, 2006, as shown in Table 7. Precipitation was much below normal in the San Joaquin Valley for four months prior to the blowing dust event. Because the Southern San Joaquin Valley reported much below normal precipitation before the dust event, the soils were dry enough to become entrained into the atmosphere during the high winds.

Table 7. Days with precipitation recorded at Hanford, Bakersfield and Fresno for four months prior to September 22, 2006.

Date	Hanford	Bakersfield	Fresno
July 29, 2006	Trace	0	0
July 22, 2006	0	Trace	0
July 20, 2006	0	Trace	0
July 18, 2006	0	0	Trace
May 22, 2006	0.01	0.02	0.08
Four month total precipitation May 23 to Sep 22, 2006	Trace	Trace	Trace
Normal precipitation, June - September	0.23 inches	0.24 inches	0.34 inches

No precipitation was recorded at these stations during June, August and September 2006

Figure 11 is a map of annual precipitation for the San Joaquin Valley Air Basin. The map demonstrates that the west side of the Central and Southern San Joaquin Valley has the lowest annual precipitation of any area west of the Owens Valley, Mojave Desert and Antelope Valley. Since the west side of the valley has the lowest annual precipitation in the San Joaquin Valley, and the undisturbed soils, on the average, are drier than other parts of the valley. The 'west side of the valley'

is well known locally as a source location of blowing dust events. Section 10.8 of the appendix provides descriptions of historical dust storm events in the San Joaquin Valley.

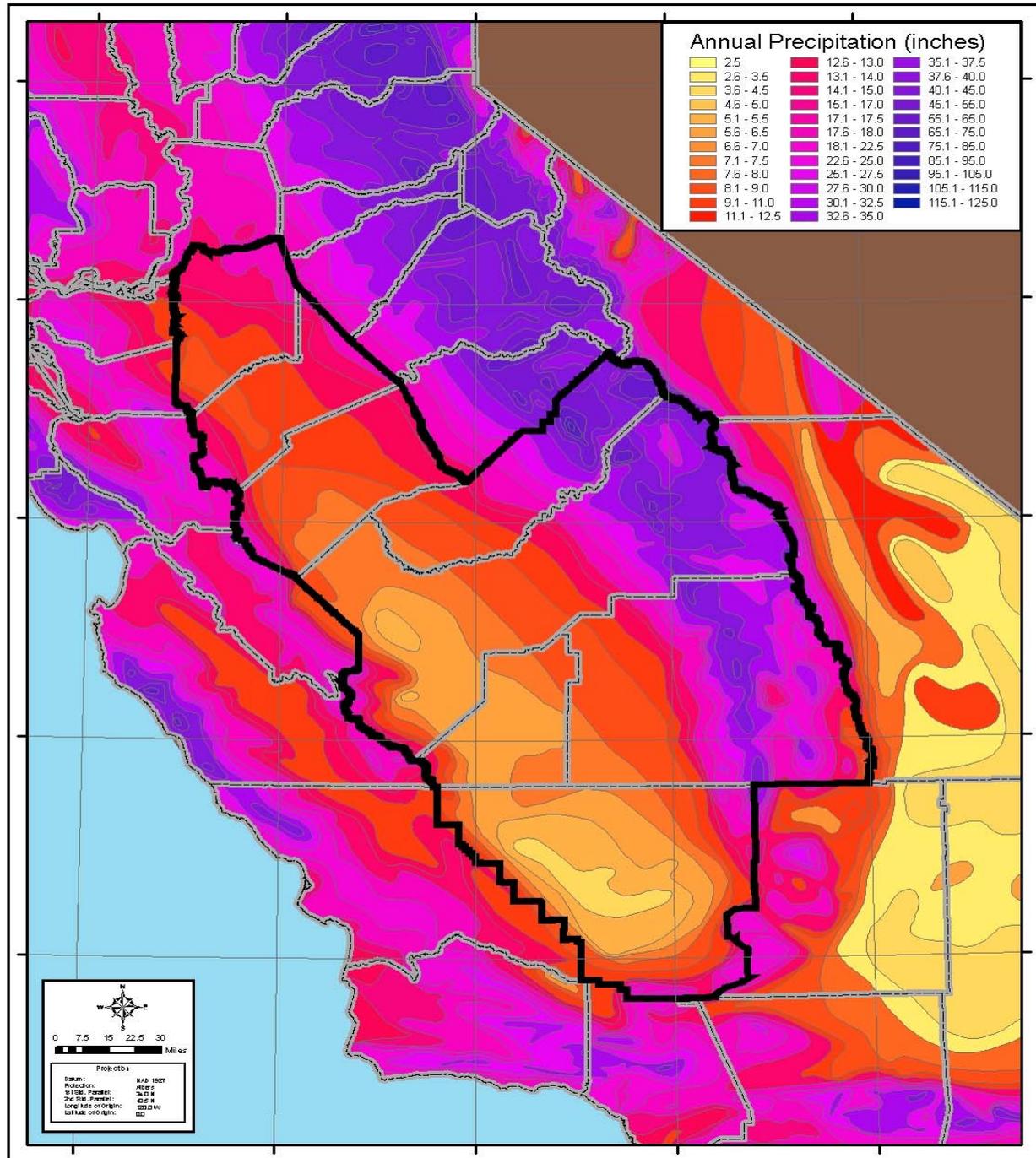


Figure 11. Central California annual average precipitation in inches. The San Joaquin Valley Air Basin is outlined in black.

Record summer heat

Record heat dried the soils. The spring and summer of 2006 was extremely hot. Table 8 indicates that mean temperatures in Fresno and Bakersfield were above normal in every month from May 2006 to September 2006. Table 9 indicates that June through September is the hottest time of year with maximum temperatures above 90 degrees F. In the last half of July, record heat was recorded, which resulted in a large number of heat related deaths in the San Joaquin Valley. The National Weather Service monitoring stations at Hanford, Bakersfield and Fresno reported 14 days in a row with temperatures over 100 degrees F. Fresno reported five days in a row of 112 F or greater during the heat wave at the end of July. These data indicate that the hottest and driest time of year preceded the September 22 wind event, and that it was excessively hot in the spring and summer 2006.

Table 8. Departure from average monthly temperature (degrees F).

Month	Fresno	Bakersfield
May 2006	+ 3.1	+ 2.2
June 2006	+ 4.6	+ 3.5
July 2006	+ 6.4	+ 4.8
August 2006	+ 0.2	+ 0.3
September 2006	+ 1.2	+ 0.3

Table 9. Average monthly maximum temperature (degrees F).

Month	Fresno	Bakersfield
May 2006	83	84
June 2006	92	92
July 2006	98	99
August 2006	96	97
September 2006	91	91

Criteria 2 - Wind advisories issued by the National Weather Service

Wind advisories and warnings were declared for the Northern San Joaquin Valley and Sacramento Valley by the National Weather Service offices in Hanford and Sacramento. Copies of these warnings and advisories are contained in the appendix.

On September 21, 2006, at 4:00 AM PDT the National Weather Service in Hanford issued a wind advisory for the West and East Central San Joaquin Valley, and Kern County Mountains in effect from 6 PM September 21 through 6 PM September 22. This advisory was cancelled at 8:38 AM on September 21. The National Weather Service office in Sacramento issued several watches and warnings for the northern San Joaquin Valley. A wind advisory was issued at 4:30 AM on September 21 for Southern, Central, and Northern Sacramento Valley for midnight to 4:00 PM on September 22. This wind advisory was again issued at 3:25 PM, and forecasted winds to gust to 50 mph. The advisory was issued once again at 4:30 AM on September 22. At 7:21 AM on the September 22, the

National Weather Service office in Sacramento issued a high wind warning for the Central and Southern Sacramento Valley until noon on September 22. The wind advisory continued in effect until 4 PM. The wind warning was cancelled at 11:55 AM, but a wind advisory remained in effect until 4 PM.

Red Flag warnings, describing high fire danger, low humidity and high wind speeds, were also in effect for the foothills and western slopes of the northern Sierra Nevada, and the remainder of interior northern California. The Red Flag Warning was issued at 6:50 AM on September 21 and was in effect from midnight on Friday, September 22 through 7 am through Sunday, September 24, at 7 AM. The National Weather Service predicted sustained winds of 20 to 30 mph with wind gusts to 50 mph. Several warnings were issued and the last update expired at 5 PM on the September 23.

Criteria 3 and 4 - Strong winds

As shown in Tables 10, 11, 12 and 13, strong gusty winds occurred in many parts of Central California during the September 22, 2006 event. In addition, the high winds persisted for many hours. The high wind event resulted in entrainment of dust followed by deposition of dust as the plume moved southeast through the Central Valley, from the Northern San Joaquin Valley to the Southern San Joaquin Valley.

Caution should be exercised when comparing wind statistics from different stations, because averaging period and sensor height can vary significantly between monitoring networks and monitoring stations. These differences can have a significant effect of the reported wind speed. Hourly averaged wind speeds can be significantly lower than gust statistics. For example, the peak hourly averaged wind speed in Maricopa was 17 mph and the peak minute averaged wind speed was 23 mph. During periods of gusty winds, minute averaged wind speed is typically significantly lower than an instantaneous peak gust.

Table 10. Peak wind speeds for September 22, 2006, recorded by National Weather Service stations.

Monitoring Station	Peak Gust (mph)	Peak Sustained Wind (mph)
Redding	44	25
Fairfield/Travis AFB	52	39
Sacramento/Mather	31	23
Stockton	28	21
Modesto	30	22
Merced	25	18
Madera	21	15
Fresno	25	16
Hanford	26	17
Lemoore	40	30
Visalia	Not Available	13
Bakersfield	17	14

ASOS/AWOS: Gust is peak 3 second average, Sustained is 10 minute average

Table 11. Peak wind data for September 22, 2006, from Remote Automatic Weather Stations (RAWS).

Monitoring Station	Peak Gust (mph)	Peak Sustained Wind Speed (mph)
San Luis NWR	29	20
Santa Rita	30	17
Los Banos	23	14
Kettleman Hills	32	20

RAWS: Gust is hourly peak, Sustained is a 10 minute average

Table 12. Maximum hourly averaged wind data for September 22, 2006.

Monitoring Station	Maximum Hour Averaged Wind Speed (mph) on September 22, 2006	Maximum Minute Averaged Wind Speed (mph) on September 22, 2006
Tracy	21	26
Stockton	10	Not Available
Modesto	8	Not Available
Turlock	13	18
Merced	9	14
Madera	13	17
Fresno - First St.	9	Not Available
Clovis	10	15
Parlier	10	13
Corcoran	11	15
Maricopa	17	23
Bakersfield - Golden State Highway	9	12

Hourly averaged wind speed is typically much lower than peak gust
 Minute averaged wind speed is not considered a peak gust
 Data source: District and CARB

Table 13. Hourly averaged wind data for September 22, 2006, from California Irrigation Management Information System (CIMIS) monitors in the Corcoran area.

Monitoring Station	Location	Maximum Hourly Averaged Wind Speed (mph)
Five Points	NW of Corcoran	21.7
Five Points South West	NW of Corcoran	17.2
Stratford	WNW of Corcoran	19.8
Kettleman	WSW of Corcoran	15.1
Alpaugh	SE of Corcoran, Between Corcoran and Bakersfield	15.2

Hourly averaged data is typically much lower than peak gust. Sensor height is 2m above ground level (AGL). Wind speed measured at 2 meters would typically be lower than wind speed measured at 10 meters at the same location.

Wind sensor heights can vary with network and station. Over a flat surface with no obstructions and a well-mixed atmosphere, wind speed typically varies logarithmically with height above ground, such that wind speed measured at 2 meters typically be would be lower than wind speed measured at 10 meters at the same location. A summary of wind monitoring station sampling parameters is provided in Table 14.

Monitoring Network	Sensor Height (m)	'Sustained Wind' Definition	'Gust' Definition
District and CARB	10	Hourly or Minute Average.	Gust Not Reported
National Weather Service AWOS/ASOS	9 to 10	10-Minute Average.	3 Second Average
RAWS	6	10-Minute Average	Hourly Peak
CIMIS	2	Hourly Average	Gust Not Reported

Table 14. Wind monitoring network sampling parameters.

Wind monitoring sites throughout the San Joaquin Valley (including Corcoran) recorded daily average wind speeds that were more than 3 standard deviations from normal. Long-term wind monitoring data from the Department of Water Resources measured on the southwest side of the San Joaquin Valley indicates that hourly averaged winds above 13 mph hour occur 3.7 % of the time in Taft and winds above 16 mph occur 1.6% of the time in Wasco and 3.3 % of the time in Coalinga. These statistics indicate that windy conditions are rare in the southwestern part of the San Joaquin Valley, but do occur at times. Department of Water Resources extreme annual wind statistics indicates that the mean annual peak gust for Lemoore is 42 mph. For this event, the peak gust was 40 mph.

7. SOURCE-RECEPTOR RELATIONSHIP

District staff examined the source-receptor relationship for this blowing dust event. Figure 12 is a backward trajectory analysis using archived meteorological data and the NOAA Hysplit Numerical

NOAA HYSPLIT MODEL
 Backward trajectories ending at 21 UTC 22 Sep 06
 EDAS Meteorological Data

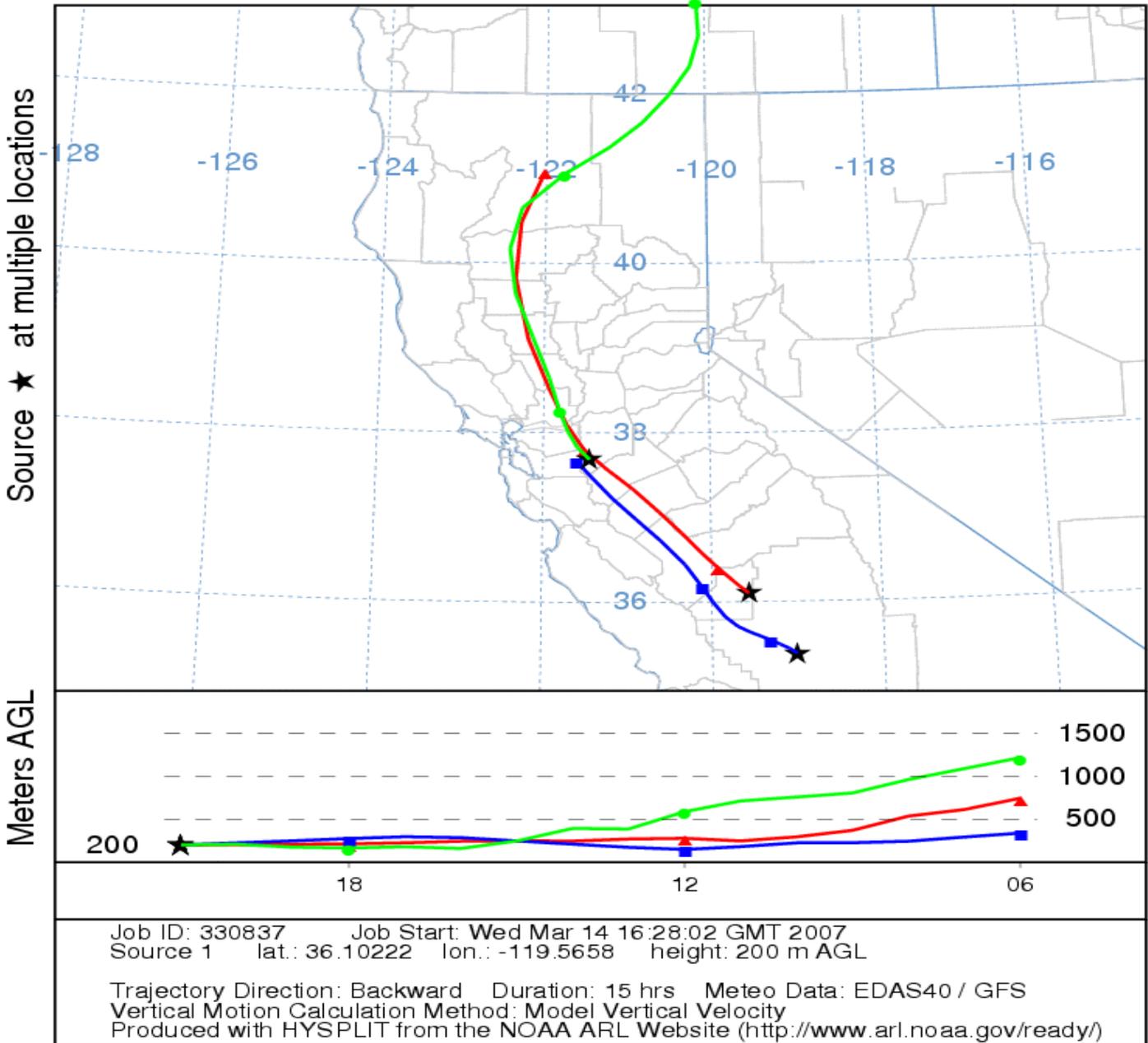


Figure 12. Backward trajectory for 2 PM PDT on September 22, 2006, showing air parcel trajectories to the Tracy, Corcoran and Bakersfield receptors.

Model (www.arl.noaa.gov), which produces an analysis of the air parcel trajectory during the middle of the natural event. The trajectories show that the air parcel that arrived in Corcoran and Bakersfield first traversed Northern California and the Northern San Joaquin Valley. Based on the backward trajectories, PM10 reported at these locations was transported to the Corcoran and Bakersfield monitors on September 22, indicating that there was both a regional and local component to the PM10 concentrations measured in the San Joaquin Valley.

Regional PM10 influenced communities in sequence starting with Northern California and progressing southeastward across the San Joaquin Valley. In the San Joaquin Valley, regional PM10 first influenced the Tracy monitor. Under the northwesterly wind, the regional plume then was transported to the Corcoran monitor where it commingled with locally produced PM10. The plume then traveled southeastward where it influenced the Bakersfield monitor several hours later. Dust generated locally commingled with regional PM10 and smoke from fires to create a plume of PM10 that is significant enough to be seen in MODIS image in Figure 5.

Hysplit parcel trajectories for 11 AM and 5 PM on September 22 are provided in the appendix.

8. EMISSIONS SOURCES AND ACTIVITY DATA

The District has best available control measures (BACM) in place as described in the 2006 *PM10 Plan*, the NEAP, and previous plans. Most notable among the District's dust controls are Regulation VIII (the fugitive dust rules, which were last amended in August 2004), and Conservation Management Practices (CMPs, District Rule 4550, adopted May 2004 and re-adopted August 2004), through which the District has documented CMPs on over three million acres of agricultural land in the San Joaquin Valley Air Basin. Inspectors were in the field on September 22 enforcing BACM (see list of patrol areas in the appendix).

Based on reports from District field staff and from industry and agricultural operations, the District estimates that the anthropogenic emissions were approximately constant before, during and after the event, indicating the significant increase in PM10 concentrations was caused primarily by the wind entrained dust and to a lesser degree smoke from wildland fires.

Based on data shown in Figure 13, the PM2.5 to PM10 ratios were 0.11 at Corcoran and 0.21 at Bakersfield on September 22, which is characteristic of a blowing dust event and indicates more coarse particulate was present. It also indicates that smoke contribution to the PM10 event was likely in the 10 to 20 percent range. A lower PM2.5 to PM10 ratio at Corcoran indicates a larger coarse fraction at Corcoran.

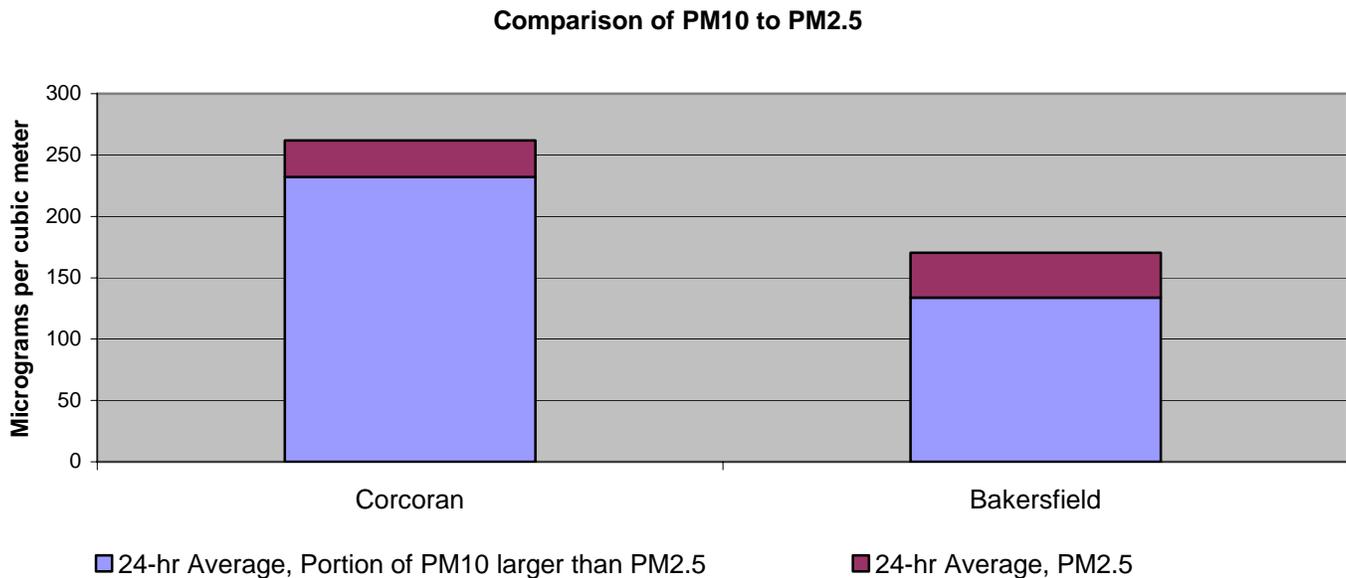


Figure 13. PM10 and PM2.5 concentrations at Corcoran and Bakersfield on September 22, 2006.

PM10 was emitted from BACM controlled sources on September 22. Some of the sources of particulate include plowing, almond harvesting, travel on unpaved roads, and other agricultural activities. The cotton harvest had not begun. The Conservation Management Practices program was

in place for agricultural operations on September 22. PM2.5 emissions for agricultural burn totaled 4.4 tons in the San Joaquin Valley on September 21, 2006 as part of the District's Smoke Management Allocation System (Rule 4103); however no burning was allowed in the District on September 22.

A review of District compliance records shows that twelve inspectors were deployed throughout the San Joaquin Valley Air Basin on September 22, 2006. District staff did not observe any unusual emissions other than the blowing dust event on September 22. A summary of inspections is provided in the appendix. A summary of the dust and smoke related complaints reported on September 22 in the Central and Southern San Joaquin Valley Air Basin is provided in Table 15.

Location	Time Reported	Nature Of Complaint
Lemoore	9:35 AM	Dust from construction site was blowing off-site towards an elementary school. A Notice of Violation was not issued because District staff did not observe fugitive dust at the time of the investigation.
Lemoore	10:24 AM	Plowing field - lots of dust and no water trucks. A Notice of Violation was not issued because there was no evidence of a violation of District rules.
Bakersfield	10:30 AM	Blowing dust due to construction. A Notice of Violation was not issued because the visible dust emissions were not above the District rule threshold.
Bakersfield	1:23 PM	Dust from construction site. Lots of trackout. Visible dust in the air. A Notice of Violation was issued.
Bakersfield	4:00 PM	Store is burning cardboard and other refuse in dumpster. A Notice of Violation was not issued because the inspector did not observe any visible smoke and could not confirm that a burn had taken place.

Table 15. Summary of dust-related complaints for September 22, 2006.

9. REFERENCES

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National Climatic Data Center, <http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms> ,
Record Events

10. APPENDIX - SUPPORTING DOCUMENTS

10.1 Press Releases and Newspaper Articles



San Joaquin Valley
Air Pollution
Control District

News Release

9-22-06

For Immediate Release

North District Media Contact - Modesto
Anthony Presto
(209) 557-6400

Central District Media Contact - Fresno
Kelly Hogan Morphy
(559) 230-6000

South District Media Contact - Bakersfield
Brenda Turner
(661) 326-6900

High winds prompt health warning Air District cautions that air pollution levels climbing Monday

Unusual weather and high winds throughout the San Joaquin Valley, have prompted local air-pollution officials to issue a health cautionary statement though Saturday evening.

High-winds aloft and at the surface are transporting dust and depositing it. "Winds have been very strong in the Sacramento and Northern San Joaquin Valley, and now the dust that was picked up there is depositing throughout the valley -- this creates unhealthy concentrations of particulate matter 10 microns and smaller, or PM10," said Evan Shipp, a meteorologist for the District.

Shipp noted that the District's air monitoring stations located in Corcoran have recorded 24 hour averages over the national ambient air quality standard. From Tracy to Bakersfield PM10 concentrations have been high. Tracy levels have also been near the health standard and Bakersfield levels have been moderate.

Exposure to particle pollution can cause serious health problems, aggravate lung disease, cause asthma attacks and acute bronchitis, and increase risk of respiratory infections. In people with heart disease, short-term exposure to particle pollution has been linked to heart attacks and arrhythmias, according to the U.S. Environmental Protection Agency.

Residents of the San Joaquin Valley are advised to use caution today and tomorrow. People with heart or lung diseases should follow their doctors' advice for dealing with episodes of unhealthy air quality. Additionally, older adults and children should avoid prolonged exposure, strenuous activities or heavy exertion. Everyone else should reduce prolonged exposure, strenuous activities or heavy exertion.

The air quality today will continue to be near unhealthful for sensitive groups levels and should become better as the particulate matter deposits. Over the weekend particulate levels will not be as widespread as they were today, but it is possible that PM10 will remain elevated as the dispersion of pollutants diminishes with the lower wind speeds.

On Feb. 16, 2006, the Valley Air District's Governing Board approved a "Natural Events Action Plan" (NEAP) that outlines a protocol to inform the public when unusual natural events occur. The purpose of the plan is to identify and minimize public exposure to these unusual events. The full text of the NEAP is available online at [http://www.valleyair.org/Workshops/postings/2-16-06-NEAP/Natural Events Action Plan.pdf](http://www.valleyair.org/Workshops/postings/2-16-06-NEAP/Natural%20Events%20Action%20Plan.pdf)

The Valley Air District covers eight counties including San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and the valley portion of Kern. For more information, visit <http://www.valleyair.org/> or call the nearest District office: Modesto (209) 557-6400, Fresno (559) 230-6000 and Bakersfield (661) 326-6900.

Brenda Turner

Public Information Representative

Southern Region

San Joaquin Valley Air Pollution Control District

Phone: (661)326-6981 Fax: (661)326-6985

E-mail: brenda.turner@valleyair.org

News Release

9-22-06

For Immediate Release

**TO:
Local News, Health and Weather sections**

Media Contact
Evan Shipp
(559) 230-5809

Yolo fire causing heavy smoke in north Valley **Wildfire smoke elevates particulate levels; officials urge caution**

A large wildfire in Yolo County near Zamora that started today is creating air-pollution problems in the northern portion of the San Joaquin Valley, and could create air-quality concerns in San Joaquin and, to a lesser extent, in Stanislaus and Merced counties.

Officials at the Valley Air District urge residents in San Joaquin, Stanislaus and Merced counties to use caution and common sense when conducting outdoor activities. Smoke is a source of particulate pollution, which can have serious negative health effects.

“If you can smell smoke, then it’s probably at a strong enough concentration to cause health effects,” said Evan Shipp, a District meteorologist.

The fire has diminished in the last few hours, but the smoke remains. It is expected that once the fire is out, smoke will disperse on strong north winds today.

Exposure to smoke and other particle pollution can cause serious health problems, aggravate lung disease, cause asthma attacks and acute bronchitis, and increase risk of respiratory infections. In people with heart disease, short-term exposure to particle pollution has been linked to heart attacks and arrhythmias, according to the U.S. Environmental Protection Agency.

Residents in affected areas are advised to use caution when smoke is present. People with heart or lung diseases should follow their doctors’ advice for dealing with episodes of unhealthy air quality when smoke is present. Additionally, older adults and children should avoid prolonged exposure, strenuous activities or heavy exertion. Everyone else should reduce prolonged exposure, strenuous activities or heavy exertion.

The Valley Air District covers eight counties including San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and the valley portion of Kern. For more information, visit www.valleyair.org <<http://www.valleyair.org>> or call the nearest District office: Modesto (209) 557-6400, Fresno (559) 230-6000 and Bakersfield (661) 326-6900.

Air district issues a health warning

The Fresno Bee

Sunday, September 24, 2006

The San Joaquin Valley Air Pollution Control District issued a health warning Saturday, saying that particulate levels are unhealthy for sensitive groups. According to the warning, which runs through the end of today, high winds on Friday and Saturday mixed with dust are creating high particulate levels. The district said that particulate exposure can cause serious health problems, aggravate lung disease, cause asthma attacks and acute bronchitis, and increase risk of respiratory infections. Residents are urged to use caution during the alert period. Those with heart or lung disease should follow their doctor's advice for dealing with periods of unhealthy air quality.

Wind blows smoke, fire danger into valley

From The Modesto Bee Newsroom

Modesto Bee, Friday, September 22, 2006

State air officials are urging residents to be careful today as a result of a large wildfire in Yolo County and high winds that have pushed smoke into the Northern San Joaquin Valley. The fire near Zamora that started early this morning and 20 mph winds from the north are creating problems in San Joaquin County and, to a lesser extent, Stanislaus and Merced counties, according to the San Joaquin Valley Air Pollution Control District. "If you can smell smoke, then it's probably at a strong enough concentration to cause health effects," said Evan Shipp, a District meteorologist. The fire has diminished in the last few hours, but the smoke remains. It is expected that once the fire is out, smoke will disperse on strong north winds today. High winds have whipped up grass fires in Yolo County, and a car crash near Sacramento International Airport sparked another blaze, according to The Sacramento Bee. There was also a report of a fire near Fairfield. Winds in Modesto have reached nearly 20 mph, according to the Modesto Irrigation District, and the smell of smoke has permeated the area as far south as Turlock. A wind advisory is in effect until 4 p.m. today, according to the National Weather Service. The dry conditions and low humidity have sparked concerns for wildfires throughout the region. And the California Highway Patrol issued a warning for big rigs and high-profile vehicles along area freeways. "There will be fire hazards throughout the valley through this afternoon," said George Cline, forecaster for the National Weather Service in Sacramento. Residents in areas affected by smoke are advised to use caution when smoke is present, according to the air district. People with heart or lung diseases should follow their doctors' advice for dealing with episodes of unhealthy air quality. Additionally, older adults and children should avoid prolonged exposure, strenuous activities or heavy exertion. Everyone else should reduce prolonged exposure, strenuous activities or heavy exertion.

Winds kick up dust, smoke in north Valley

By Jed Chernabaeff, Staff writer

Visalia Times-Delta, Saturday, Sept. 23, 2006

High winds kicked up dust and blew smoke from a northern California wildfire into the San Joaquin Valley on Friday, but the effects were less pronounced in Tulare County, officials said. The wildfire, which started Friday in Yolo County northwest of Sacramento, burned 12 to 15 square miles and created air pollution problems in the northern part of the San Joaquin Valley - mainly San Joaquin, Stanislaus and Merced counties. Evan Shipp, a meteorologist for the San Joaquin Valley Air Pollution Control District, said winds reached speeds of 45 miles per hour. While strong winds pushed smoke into several counties in the northern part of the San Joaquin Valley, it also picked up dust, causing the Valley air district to issue a health cautionary statement. Jamie Holt, a spokeswoman for the district, warned that the strong winds in and north of Tulare County could cause dust to hurt air quality. Exposure to particle pollution can cause serious health problems, aggravate lung disease, cause asthma attacks and acute bronchitis, and increase risk of respiratory infections. In people with heart disease, short-term exposure to particle pollution has been linked to heart attacks and arrhythmias, according to the U.S. Environmental Protection Agency. People with heart or lung diseases should follow their doctors' advice for dealing with episodes of unhealthy air quality.

Hanford Sentinel, Editorial, Sunday, Sept. 24, 2006:

From the editor's desk: Don't let smoke get up your nose

By Jackie Kaczmarek

As I headed out to lunch on Friday - my first official noontime outing in weeks - the smoky air hit my lungs with a punch.

Was Hanford on fire?

No, but other parts of California sure were - and we were feeling their pain in the form of foul air. So it was with some amusement that, upon my return from a tasty lunch at the Irwin Street Inn, that I picked up Friday's edition of the Sentinel and read the headline "Central Valley's air improves, but still lagging."

Regardless of the smoke, which was out of our control here in Kings County, it seems that the Central Valley has been doing a good job of cutting down on fine-particle pollution. And that's good news for all of us. San Joaquin Valley Air Pollution Control District officials already have curtailed agricultural burning, required dust control on roads and fields, and tightened restrictions on diesel engines.

But if that's the case, I wondered to myself recently as I drove out to Coalinga, how come my car is always covered in a thin layer of dust, and I see farmers plowing their fields, sending clouds of dust up into the air? Regardless of my sometimes-compulsive obsession with pollution and clean air, there was a photo on the front page of Friday's paper that suddenly caught my eye.

Rodney's coming to Hanford!

Yes, Rodney Carrington, the star of his own half-hour TV sitcom, was coming to the Fox Theatre! And Barbara Swarm, the Sentinel's very own features reporter, got to interview him over the phone! (I told her she was my new hero...) After that, the workday was pretty much over. I vowed to combat the bad air by designing a new line of fashionable painter's masks, and decided that my love affair with beets would have to come to an end.

After all, Rodney doesn't like people who love beets.

Blazes charring acre after acre in Northern California

Dana M. Nichols

Stockton Record, Saturday, Sep 23, 2006

VALLEY SPRINGS - Storm-force winds made big fires bigger and whipped new fires to fast starts across Northern California on Friday, befouling air in the Central Valley and giving Valley Springs residents an afternoon scare. A fire at a farm near Lathrop sent up a mighty smoke signal Friday afternoon, with smoke and the glow of flames visible from Interstate 5 into the evening, but there was no one to heed the call. The fire was in an area where residents had voted to opt out of fire protection, San Joaquin County sheriff's Deputy Les Garcia said, so the fire was left to burn itself out. In the Mother Lode, a fire that started next to Highway 12 about 2:45 p.m. Friday quickly sent flames marching east through dry grass toward Valley Springs' commercial district. Within minutes, two California Department of Forestry and Fire Protection air tankers and a helicopter were attacking the blaze. Emergency radio channels crackled with a warning that the Valley Springs Sport and Fitness Center and the Valley Springs Homer Center might have to be evacuated, although no official evacuation was called. A little line of orange fire retardant dropped by a tanker slowed the fire's advance, and then, a fire line cut through the grass by a bulldozer halted it. "These guys responded real fast," 29-year-old Valley Springs resident Bruce Snider said as he watched crews mop up hot spots that remained in the 35-acre charred area. "It hasn't even been a half-hour, max." Snider said that he saw what he believed was the start of the fire as he was driving home on Highway 12. He said he saw a tow truck with a pickup already hoisted and that the vehicles were burning. He said he saw people with a fire extinguisher make a futile effort to stop the fire when it was only about 20 feet wide. "Within 10 minutes, that thing was pretty good size," Snider said. Officials with the Tuolumne-Calaveras unit of the California Department of Forestry were still working on a fire late Friday and had not yet determined what caused it. But a state-level spokesman for the CDF said the agency had extra crews and equipment on call because of the grim weather situation. "On windy days like today, we don't want to take any chances," spokesman Daniel Berlant said. He said the National Weather Service issued a red flag warning because of low humidity and gusty north winds. In some places in Northern California, winds were 45 to 60 mph Friday. Fortunately for Valley Springs, winds had slacked off by late afternoon, gusting from the northwest at only about 10 mph by sunset. The humidity was a low 18 percent. Such fire dangers are familiar to Valley Springs residents. Two years and two weeks ago, the Pattison Complex fire destroyed 17 homes here. This time, the only damage was to grass and two utility lines transmitting telephone and cable television signals. The Lathrop fire continued to burn unchecked Friday evening, and flames appeared to engulf 20 campers and a half-dozen trailers reportedly belonging to farm workers. Earlier in the afternoon, several acres of farmland, a house, a large barn with heavy equipment and a shed were destroyed in the 1400 block of South Roberts Road, Garcia said. No damage estimate was available Friday. Sheriff's deputies responded to the area, but only to assure public safety. "What we do is make sure there's no danger to life," he said. Fires in Yolo County northwest of Sacramento burned 12 to 15 square miles, with the front line of one of the fires moving as fast as 30 mph, according to fire officials' estimates. Three homes were destroyed in an unincorporated area near Zamora. Fire also destroyed 15 barns, 10 other buildings and six cars, said Beth Gador, Yolo County's public information officer. High winds also complicated the battle against at least 10 other wildfires across the state. More than 100 firefighters, air tankers and inmate crews were battling to save 50 homes near Yountville, in Napa County. High winds also knocked down power lines and halted morning traffic along Interstate 80 near Sacramento. Some downtown Sacramento businesses were left in the dark, and the state Capitol closed early Friday as crews continued to clear city streets. The wind even forced some garbage dumps to close because of flying debris, officials said. The wind and the Yolo County fire made it unhealthy to go outside and breathe the air in San Joaquin County on Friday. San Joaquin Valley Air Pollution Control District officials urged residents to use caution and common sense when conducting outdoor activities. Smoke is a source of particulate pollution, which can have serious negative health effects. Exposure to smoke can aggravate lung disease, cause asthma attacks and acute bronchitis, and increase the risk of respiratory infections. People with heart or lung diseases, as well as older adults and children, should avoid prolonged exposure, strenuous activities or heavy exertion outdoors.

For more information, visit www.valleyair.org.

Whitney Canyon blaze quickly out High weekend winds could fuel Day Fire in forest

By Patricia Farrell Aidem, Staff Writer

LA Daily News, Friday, September 22, 2006

Newhall - Firefighters made quick work Thursday of a brush fire that broke out at the mouth of Whitney Canyon in Newhall, but the region was under a blanket of smoke all day from the much larger forest fire burning to the north. Flames charred about 10 acres at the trailhead into the scenic canyon, preserved as state parkland. The fire started about 10:15 a.m. just south of the dead end of San Fernando Road and was out in about an hour, Los Angeles County Fire Capt. Tom Robertson said. The fire appeared to have been ignited by a malfunction on an electric power pole. There were no injuries or damage, Robertson said. Meanwhile, the Day Fire in the Los Padres National Forest in eastern Ventura County continued for a 17th day. So far, it has burned more than 106,000 acres - some 167 square miles - and was about 35 percent contained, according to a report from the U.S. Forest Service. Smoke from that fire, which until Thursday had largely skirted the Santa Clarita Valley, covered the sky, prompting a smoke advisory because of heavy particulate matter in the air, said Sam Atwood, a spokesman for the South Coast Air Quality Management District. The warning continues through today, and urges those with chronic respiratory, heart or lung ailments to avoid going outdoors. Afternoon high school sports events were canceled, including a Saugus High track meet and freshman and junior varsity football home games, said Pat Willett of the William S. Hart Union High School District. A decision was pending on evening varsity football games. More than 2,000 firefighters are fighting the Day Fire, which has threatened the towns of Piru, Fillmore, Santa Paula and Ojai to the south and Lockwood Valley, near Frazier Park, to the northeast. The National Weather Service issued a warning for the region Thursday, and said conditions could worsen with high winds forecast. A high-wind watch will be in effect tonight through Saturday evening, with gusts up to 50 mph expected. High temperatures will hover around 90.

Weekend weather: A warm but possibly smoky weekend

Staff reports

Visalia Times-Delta, Friday, September 22, 2006

Sunshine and temperatures in the mid-80s are forecast for the weekend in Tulare County, but smoke from a fire in the Sacramento Valley could waft into the area. Accuweather, which provides the Times-Delta and Advance-Register weather forecasts, says it will be 86 and 85 Saturday and Sunday, with lows of 50 and 54. But the Valley Air District reports that smoke from a large wildfire near Zamora, along Interstate 5 in Yolo County, could create problems initially in San Joaquin, Stanislaus and Merced counties and maybe further south. Air experts say that if you can smell smoke, that means it's strong enough to have an impact on your health, particularly for children and older people. For more details, see the weekend editions of the Visalia Times-Delta or Tulare Advance-Register.

Smoke is lingering problem

Friday, SEPTEMBER 22, 2006

Kaweah Commonwealth

In scenes reminiscent of 2002 when Kaweah Country choked on smoke from the monstrous McNally Fire in the southern Sierra, another blazing inferno is currently causing similar breathing problems. The Day Fire, the biggest of a complex of fires now burning in Southern California, has consumed more than 131 square miles in the Los Padres National Forest and is making the local air unbearable.

After threatening several communities near the boundary of Los Angeles and Ventura counties, the Day Fire continues to burn in rugged and mostly inaccessible terrain. Just when firefighters appear to have the upper hand, those devilish Santa Ana winds kick up dozens of new flare-ups.

Last weekend, motorists traveling over the Grapevine via Interstate 5 reported seeing flame lengths more than 100 feet high. An army of nearly 2,000 firefighters, 24 helicopters, and 10 air tankers are battling the blaze.

As of Thursday morning, firefighters were hoping for 20 percent containment. Due to the fire's increasing size and prevailing southwesterly winds, the smoke is likely to continue to influence local air quality.

In the last two days, winds shifted slightly to the northwest bringing some relief to foothills locales.

"In general, if you can smell smoke, then it's probably at a strong enough concentration to cause health effects," said Shawn Ferreira, a meteorologist with the San Joaquin Valley Air Pollution Control District.

The fires could conceivably burn until rains arrive in October or November. If wind patterns remain predominantly southwesterly, long-term exposure to smoke could cause even more serious health problems.

A National Park Service engine crew from Grant Grove and several other local firefighters are currently on assignment in Southern California. Fire managers in Sequoia and Kings Canyon National Parks are hopeful that conditions will improve so that several planned prescribed fire projects may be ignited before the rainy season (see related story on page 6).

According to the Environmental Protection Agency, exposure to smoke and other particle pollution increases the incidence of respiratory infections and can cause health problems, including asthma attacks and acute bronchitis. For people with heart disease, short-term exposure to particle pollution has been linked to heart attacks and arrhythmias.

Residents in affected areas are advised to use caution when smoke is present. Older adults and children should avoid prolonged exposure, strenuous activities, or heavy exertion.

For more air quality information, call the Fresno district office, 230-6000.

Mountain fire still not contained

By Jason Kotowski and James Burger, staff writers
Bakersfield Californian, Wednesday, Sept. 20, 2006

The sky was relatively clear of smoke over Frazier Park Tuesday, but fire officials warned that the massive Day fire was only six miles from Lockwood Valley and they would continue to recommend that area residents evacuate. Helicopters and their crews got ready for takeoff Tuesday to attack the Day fire from the air again because it was surrounded by wilderness. The fire was still far enough away, however, that it was not an immediate threat to Frazier Park and Pine Mountain Club, both in Kern County. The fire was about 11 miles from Frazier Park and 13 miles from Pine Mountain Club, U.S. Forest Service Public Information Officer Larry Comerford said late Tuesday morning. It's now consumed 93,000 acres, according to authorities. Public information officers set up maps and handed out fire statistics at different areas in Frazier Park. Outside the Frazier Park Market, officer Tammy Shroyer answered residents' questions about the fire and the danger it posed to the town. Several residents said they had already packed up their most important belongings in case the fire creeps closer and they're forced to evacuate. Tim Cossairt, 46, said he always keeps a bag packed with special papers and items in case of a house fire. If the Day fire forces him to leave, he would have to stay in a shelter for a while. A positive for Cossairt and others Tuesday was the reprieve from the heavy smoke that blanketed the area the day before. He said Monday's smoke not only hurt his lungs, but played on his nerves. "With more smoke, there's more anxiety," Cossairt said. Even if the fire marches to her property, Laurie Vlach will stand her ground. Vlach lives in a stucco house with a tile roof on Boy Scout Camp Road, where firefighters are recommending evacuation. The area surrounding her house has been cleared of brush. If the fire comes, she's confident she'll be safe. "I'll close the windows and wait for it to blow over," Vlach said. The presence of dozens of firefighters along Lockwood Valley Road is reassuring. "The fire department's not going to let a house burn down," she said. Liz Evans, a teacher at El Tejon Middle School, said she checks the fire on the Web several times during the day because students have worried about their homes. Evans said she was a little more relaxed Tuesday because the smoke was gone. Humans aren't the only ones on edge from the fire. Chris Edrington, a trainer at Steve Martin's Working Wildlife, transported a couple dozen animals about eight miles from Boy Scout Camp Road to land he owns on Lockwood Valley Road. He said he hasn't determined where they'll move if the fire gets closer. In the meantime, motorists driving along Lockwood Valley Road may catch a glimpse of a fenced in camel or zebra. The three African lions are in cages and aren't visible from the road. Edrington said the animals could notice the difference in the air quality with the fire nearby. Most seemed to be dealing fine with the transition to Lockwood Valley Road. "They kind of enjoy being here," Edrington said. The animals appear mostly in feature films, television series and commercials. The fire, started by a person burning a small amount of materials in Los Padres National Forest, has resisted all methods firefighters have used to suppress it, Kern County Fire Chief Dennis Thompson said at a county supervisors' meeting Tuesday morning. North of the wilderness area, between the fire and Kern County, bulldozers are trying to dig a break. Thompson said the biggest concern is that the fire will reach Lockwood Valley with a strong wind behind it. "When the winds and the canyons align you can get extreme fire behavior," Thompson said. About 150 people have been evacuated from Lockwood Valley, and between 40 to 60 of the evacuees are seeking shelter in Kern County, he said. Firefighters have been battling the fire since Sept. 4, and more than 2,000 firefighting personnel are now in the area. The fire was 20 percent contained Tuesday night. A rise in humidity was expected to keep fire activity to a minimum overnight.

Winds push smoke away from Valley But winds might shift again by Sunday or Monday

By Jed Chernabaeff, Staff writer

Visalia Times-Delta, Wednesday, September 20, 2006

A thin layer of smoke from a Southern California wildfire should be gone by today because of a change in wind patterns, officials say.

Smoke, which began making its way north on Monday afternoon, forced San Joaquin Valley Air Pollution Control District officials to issue health warnings and urge people who work outside to be cautious. Residents with health problems are particularly at risk.

The fire, which was ignited by burning debris on Labor Day in the Los Padres National Forest, was just 15 percent contained late Tuesday and had burned more than 84,000 acres.

Little change in Valley

Kelly Hogan Morphy, spokeswoman for the Valley air district, said air quality monitoring systems have registered little change since the warnings because the smoke hasn't reached the Valley floor.

Still, she urges people to be cautious.

"It depends on what Mother Nature does," Morphy said. "If the weather patterns change, there could be a downward draft that brings [smoke] to ground level."

Meteorologists say the wind that carried the smoke over the San Joaquin Valley, threatening seven counties, has changed direction and now is sending it toward the desert and Nevada.

"[Today] we should be smoke-free," said Jeff Myers, a meteorologist with the National Weather Service in Hanford.

But the relief may only be temporary. Myers said the wind direction could change again by Sunday or Monday, bringing back the smoke.

Morphy said the fire could last until late October or early November, the traditional start of the rainy season in Southern California.

Dr. A.M. Aminian, medical director of the Allergy Institute in Fresno and Visalia, said smoke is particularly damaging to those with respiratory problems, but urges everyone to follow the air district's warnings.

Minimize exposure

"If the air pollution goes way up, people might have to cancel and minimize activities," Aminian said.

Exposure to smoke and other particulates can aggravate lung disease, cause asthma attacks and increase risk of respiratory infections.

Valley residents, particularly older adults and children, should avoid prolonged exposure, strenuous activities or heavy exertion, health officials say.

10.2 Summary of Inspections - September 22, 2006

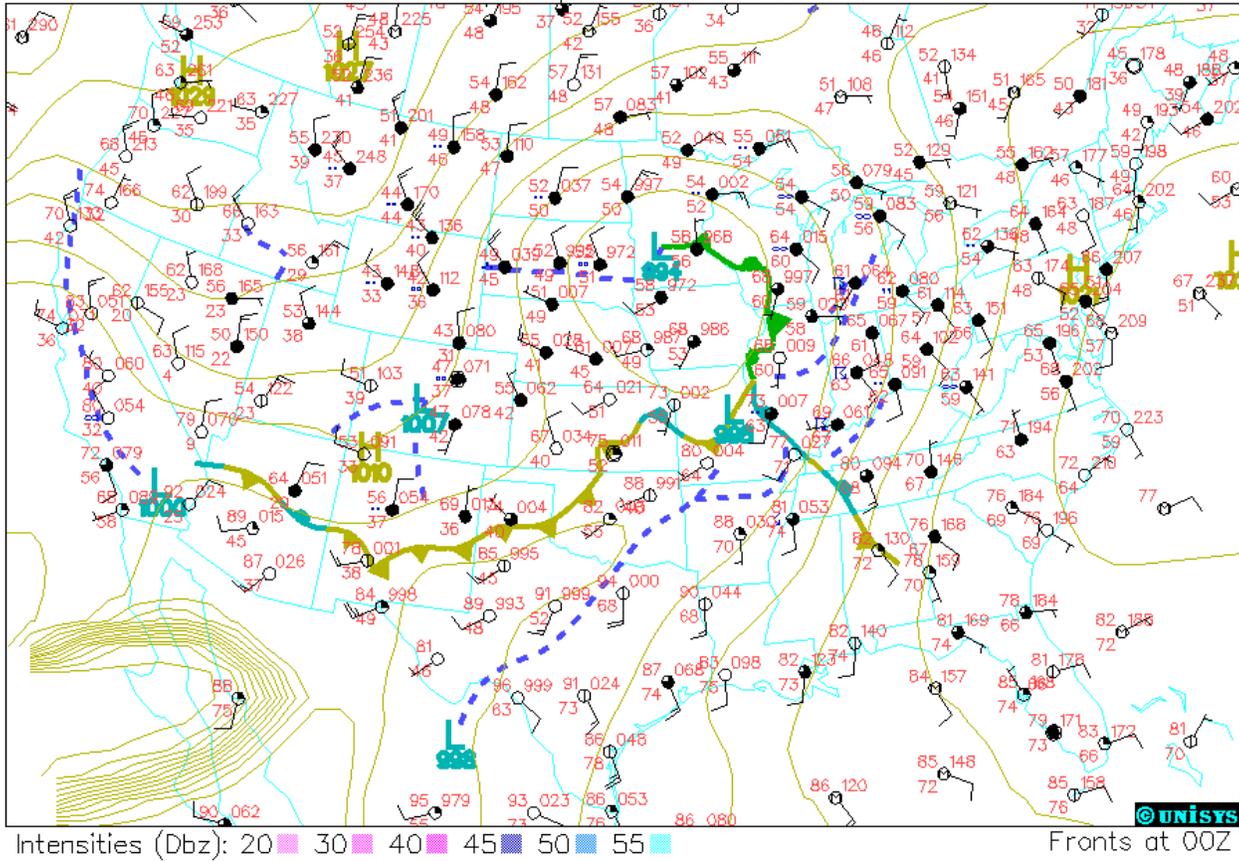
InspectorID	Date/Time	Activity	Units	Zip Code	City	County
842	9/22/2006 8:02	ATC/PTO Startup - Field	1	93720	Fresno	FRESNO
671	9/22/2006 8:32	ATC/PTO Startup - Field	1	93721	Fresno	FRESNO
482	9/22/2006 8:37	Follow-Up/Reinspections - Field	1	93722	Fresno	FRESNO
671	9/22/2006 8:51	Required Compliance Inspection - Field	12	93725	Fresno	FRESNO
671	9/22/2006 9:13	Follow-Up/Reinspections - Field	1	93726	Fresno	FRESNO
482	9/22/2006 9:20	Required Compliance Inspection - Field	1	93627	Helm	FRESNO
192	9/22/2006 9:35	Follow-Up/Reinspections - Field	1	93631	Kingsburg	FRESNO
833	9/22/2006 9:54	Legal Action - Field Activity	0	93309	Bakersfield	KERN
595	9/22/2006 10:01	Special Project - Field	0	93312	Bakersfield	KERN
482	9/22/2006 10:03	District Conducted Testing - Field	1	93312	Bakersfield	KERN
840	9/22/2006 10:20	Follow-Up/Reinspections - Field	6		Bakersfield	KERN
121	9/22/2006 10:22	Required Compliance Inspection - Field	1	93206	Buttonwillow	KERN
858	9/22/2006 10:30	Required Compliance Inspection - Field	2	93206	Buttonwillow	KERN
528	9/22/2006 10:31	District Conducted Testing - Field	15		Fellows	KERN
503	9/22/2006 10:32	Follow-Up/Reinspections - Field	1	93249	Lost Hills	KERN
671	9/22/2006 10:33	Required Compliance Inspection - Field	1	93249	Lost Hills	KERN
255	9/22/2006 10:47	Required Compliance Inspection - Field	1	93249	Lost Hills	KERN
733	9/22/2006 10:48	ATC/PTO Startup - Field	1	93249	Lost Hills	KERN
671	9/22/2006 10:49	Other Compliance Inspection - Field	13	93249	Lost Hills	KERN
176	9/22/2006 10:55	ATC/PTO Startup - Field	13	93249	Lost Hills	KERN
482	9/22/2006 11:02	ATC/PTO Startup - Field	1	93249	Lost Hills	KERN
859	9/22/2006 11:10	Required Compliance Inspection - Field	4	93250	McFarland	KERN
857	9/22/2006 11:12	Required Compliance Inspection - Field	6	93250	McFarland	KERN
843	9/22/2006 11:24	Other Compliance Inspection - Field	1	93251	McKittrick	KERN
733	9/22/2006 11:31	Source Test/Performance Test - Field	1	93251	McKittrick	KERN

InspectorID	Date/Time	Activity	Units	Zip Code	City	County
528	9/22/2006 11:33	Follow-Up/Reinspections - Field	1	93263	Shafter	KERN
100	9/22/2006 11:33	Required Compliance Inspection - Field	20		Taft	KERN
129	9/22/2006 11:36	Other Compliance Inspection - Field	0	93280	Wasco	KERN
741	9/22/2006 12:11	Required Compliance Inspection - Field	0			KERN
121	9/22/2006 12:26	Required Compliance Inspection - Field	10			KERN
595	9/22/2006 12:30	Required Compliance Inspection - Field				KERN
595	9/22/2006 12:33	Required Compliance Inspection - Field	50			KERN
791	9/22/2006 12:51	ATC/PTO Startup - Field	2			KERN
528	9/22/2006 13:23	Surveillance/Survey - Field	0		Hanford	KINGS
100	9/22/2006 13:23	Required Compliance Inspection - Field	1	95334	Livingston	MERCED
791	9/22/2006 13:46	Other Compliance Inspection - Field	0	95334	Livingston	MERCED
528	9/22/2006 14:09	Required Compliance Inspection - Field	1	95237	Lockeford	SAN JOAQUIN
858	9/22/2006 14:36	Required Compliance Inspection - Field	1	95240	Lodi	SAN JOAQUIN
733	9/22/2006 15:52	Other Compliance Inspection - Field	0	95337	Manteca	SAN JOAQUIN
176	9/22/2006 15:54	Legal Action - Field Activity	1	93205	Stockton	SAN JOAQUIN
733	9/22/2006 16:34	Other Compliance Inspection - Field	1	95201	Stockton	SAN JOAQUIN
833	9/22/2006 16:46	Legal Action - Field Activity	1	95205	Stockton	SAN JOAQUIN
595	9/22/2006 17:01	Other Compliance Inspection - Field	1	95206	Stockton	SAN JOAQUIN
671	9/22/2006 17:07	Legal Action - Field Activity	2	95206	Stockton	SAN JOAQUIN
109	9/22/2006 17:13	ATC/PTO Startup - Field	1		Stockton	SAN JOAQUIN
669	9/22/2006 17:14	Required Compliance Inspection - Field	1	95303	Ballico	STANISLAUS

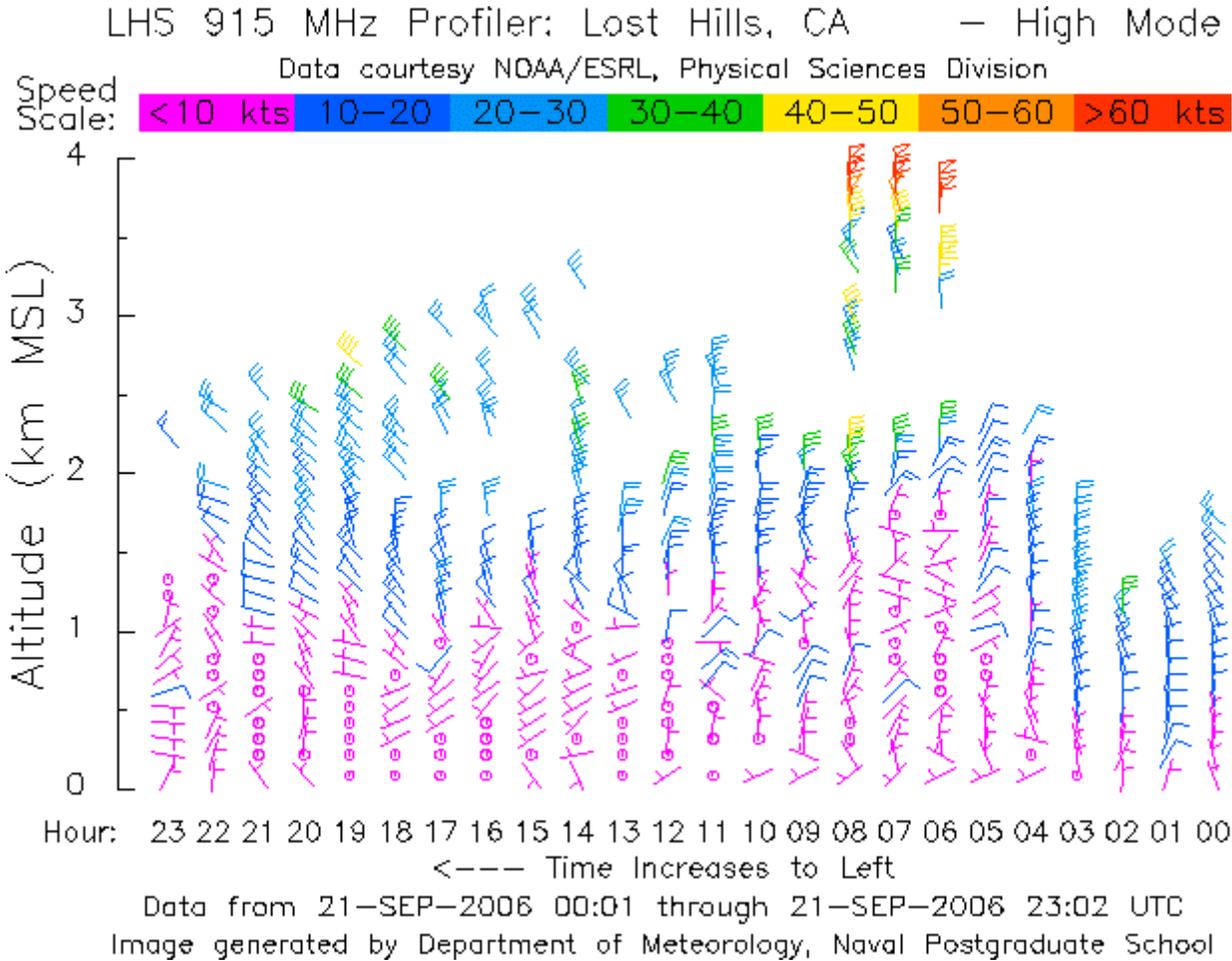
10.3 Meteorological Data for the September 22, 2006 Wind Event

Surface Data Plot for September 22, 2006 at 16:00 PST

Surface data plot for 00Z 23 SEP 06



Lost Hills Wind Profiler Data September 21, 2006 (UTC)



Time in UTC (Coordinated Universal Time, also abbreviated with "Z" or "GMT") is also called Greenwich Mean Time (Mean Solar Time at the Royal Observatory in Greenwich, England). Greenwich Mean Time is eight hours ahead of Pacific Standard Time (PST) and seven hours ahead of Pacific Daylight Time (PDT). For example, 12 UTC or 12 Z is 4 AM PST or 5 AM PDT.

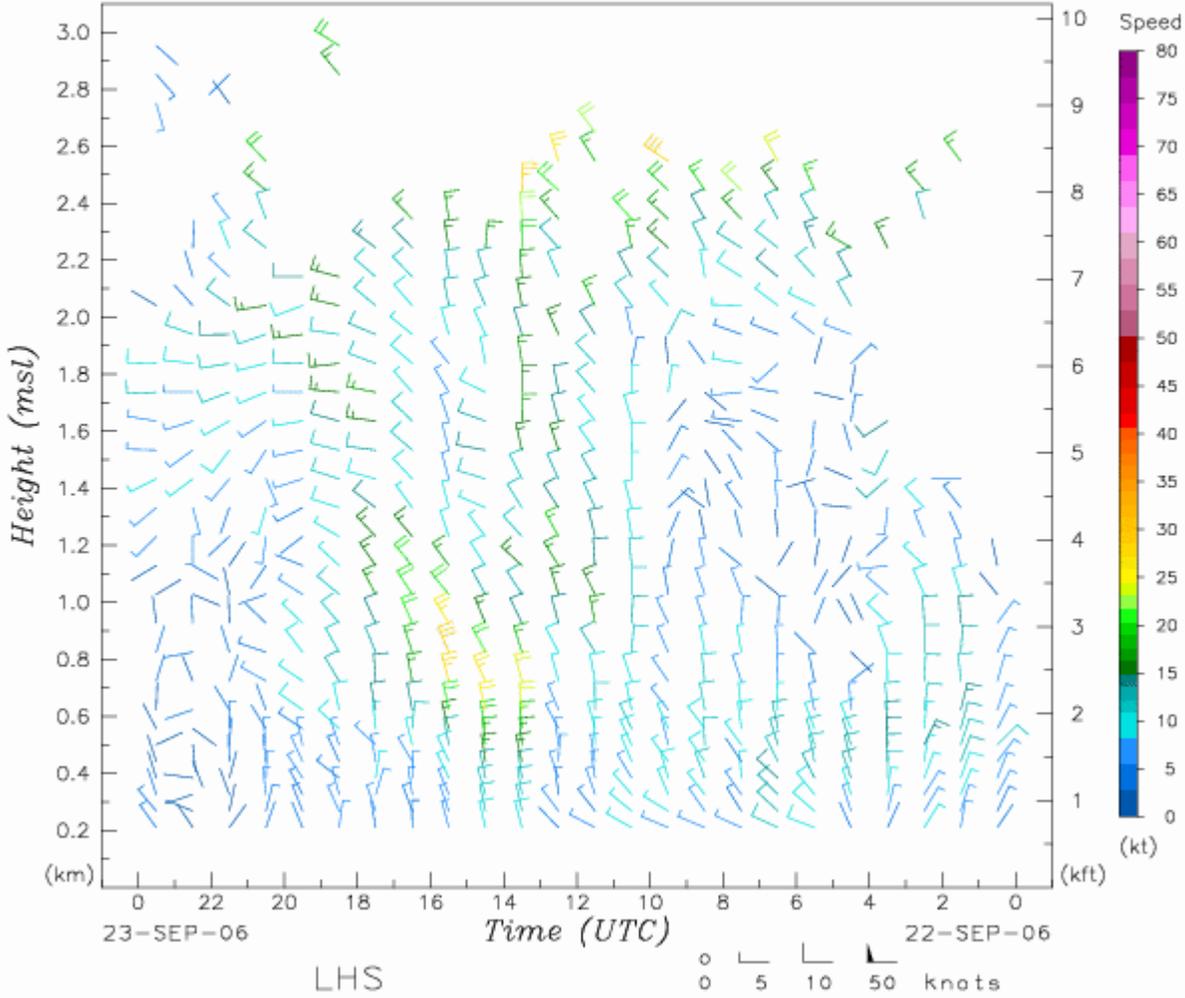
Wind barbs point in the direction "from" which the wind is blowing. A circle represents calm conditions. Flags (straight lines) attached at the end of the wind barbs indicate wind speed. Each short flag represents 5 knots, and each long flag represents 10 knots. A long flag and a short flag represent 15 knots, simply by adding the value of each flag together (10 knots + 5 knots = 15 knots). The color-coded speed scale is also provided on top of the plot. A triangular flag at the end of a wind barb represents a 50-knot wind. This wind barb is color-coded orange in the plot shown above.

Lost Hills Wind Profiler Data September 22 and 23, 2006



Environmental Technology Laboratory
Boundary Layer Wind Profiler Studies

Data provided by the NOAA Environmental Technology Laboratory

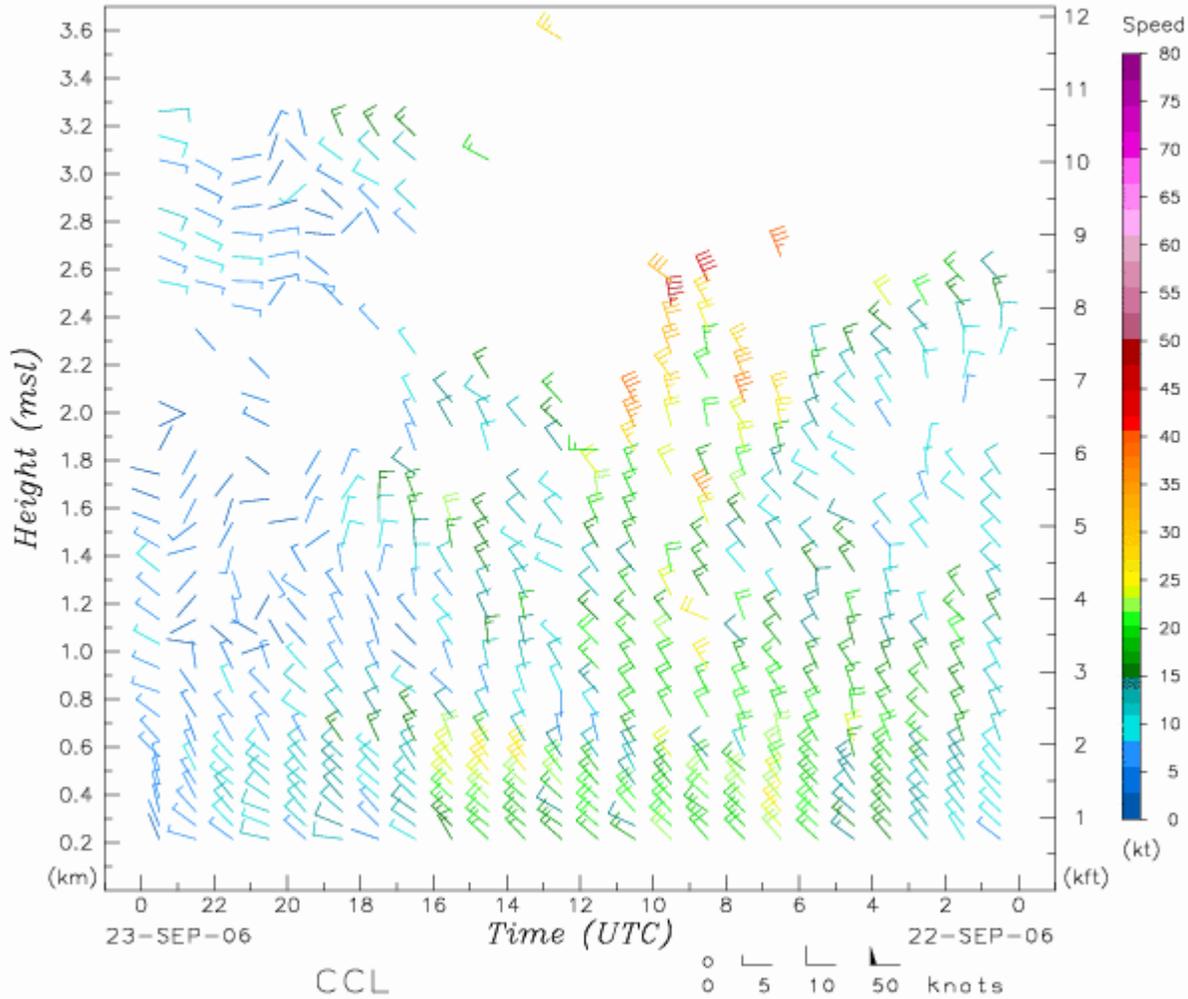


Chowchilla Wind Profiler Data September 22 and 23, 2006



Environmental Technology Laboratory Boundary Layer Wind Profiler Studies

Data provided by the NOAA Environmental Technology Laboratory

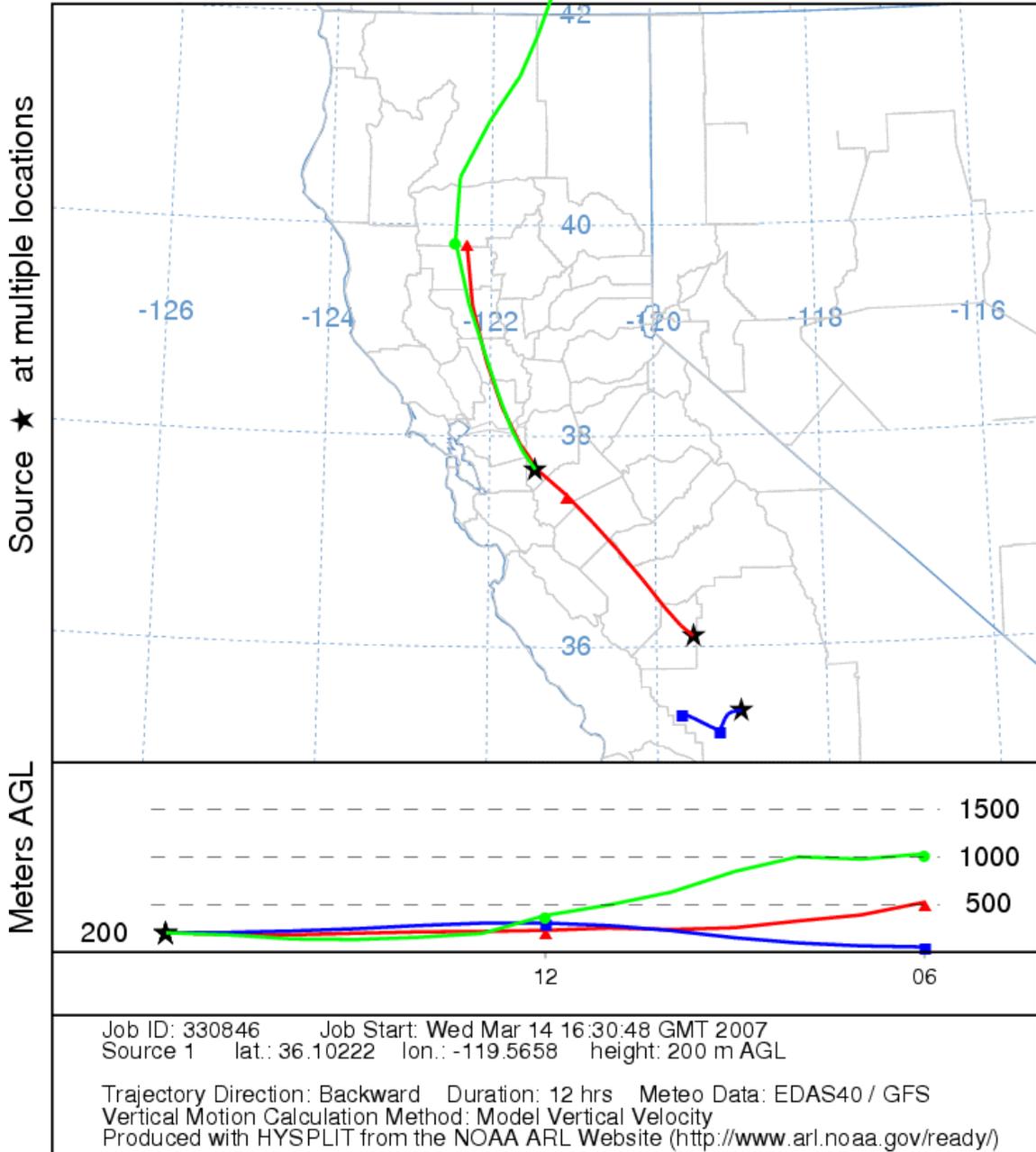


Weather Observations for Lemoore (Source: Mesowest)
September 22, 2006 - 5:00 through September 23, 2006 - 00:00 PDT

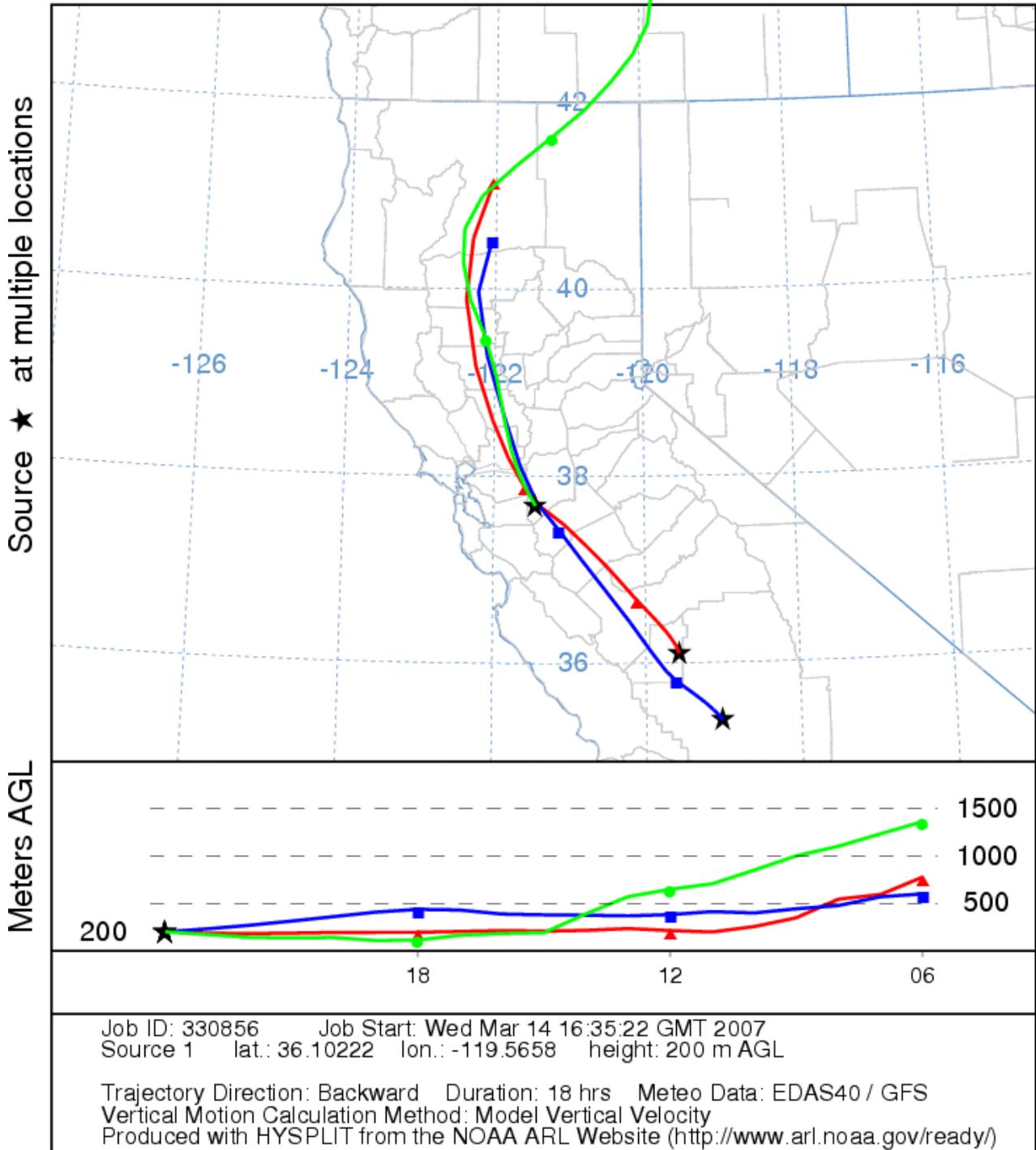
Time(PDT)	Temperature	Dew	Wet Bulb	Relative	Wind	Wind	Wind	Quality	Pressure	Sea level	Altimeter	1500 m	Weather	Visibility
	Point	Temperature	Humidity	Speed	Gust	Direction	check		pressure		Pressure		conditions	
	° F	° F	° F	%	mph	mph			in	in	in	in		miles
23:55	55.9	37.0	46.7	49	7	WSW	OK	29.55	29.80	29.80	24.87	clear	10.00	
22:55	57.9	37.0	47.6	46	0		OK	29.54	29.79	29.79	24.86	clear	10.00	
21:55	57.9	37.9	47.9	47	9	WNW	OK	29.53	29.78	29.78	24.85	clear	10.00	
20:55	61.0	37.9	49.3	42	7	WNW	OK	29.51	29.76	29.76	24.83	clear	10.00	
19:55	64.9	39.0	51.5	38	8	NW	OK	29.49	29.74	29.74	24.82	clear	10.00	
18:55	70.0	37.9	53.2	31	6	N	OK	29.48	29.72	29.73	24.81	clear	10.00	
17:55	78.1	36.0	55.8	22	9	NNW	OK	29.47	29.71	29.72	24.80	clear	10.00	
16:55	80.1	37.0	57.0	21	10	N	OK	29.47	29.71	29.72	24.80	mostly clear	10.00	
15:55	79.0	36.0	56.2	21	5	N	OK	29.47	29.71	29.72	24.80	mostly clear	10.00	
14:55	79.0	34.0	55.6	20	14	NNE	OK	29.48	29.72	29.73	24.81	smoke	5.00	
13:55	78.1	33.1	55.0	19	21	NNW	OK	29.49	29.73	29.74	24.82	smoke	3.00	
12:55	77.0	34.0	54.8	21	17	25 NNW	OK	29.50	29.75	29.75	24.83	smoke	4.00	
11:55	75.0	35.1	54.3	23	17	24 NNW	OK	29.51	29.75	29.76	24.83	smoke	5.00	
10:55	72.0	34.0	52.7	25	23	30 NW	OK	29.51	29.75	29.76	24.83	smoke	5.00	
10:15	69.8	33.8	51.8	26	24	NW	OK	29.50		29.75	24.83	smoke	2.00	
9:55	69.1	34.0	51.5	27	29	37 NNW	OK	29.49	29.73	29.74	24.82	smoke	1.50	
9:25	68.0	33.8	51.0	28	28	40 NNW	OK	29.48		29.73	24.81	smoke	1.50	
9:10	66.2	33.8	50.2	30	31	38 NNW	OK	29.49		29.74	24.82	smoke	2.00	
9:05	66.2	33.8	50.2	30	26	35 NNW	OK	29.49		29.74	24.82	smoke	1.75	
8:55	66.9	34.0	50.6	29	28	35 NNW	OK	29.49	29.73	29.74	24.82	smoke	2.50	
7:55	64.9	34.0	49.7	32	21	NW	OK	29.47	29.72	29.72	24.80	clear	10.00	
6:55	63.0	34.0	48.8	34	21	NW	OK	29.44	29.68	29.69	24.78	clear	10.00	
5:55	61.0	37.0	49.0	41	8	NNW	OK	29.43	29.67	29.68	24.77	clear	10.0	

10.4 Air Parcel Trajectories

NOAA HYSPLIT MODEL
 Backward trajectories ending at 18 UTC 22 Sep 06
 EDAS Meteorological Data



NOAA HYSPLIT MODEL
 Backward trajectories ending at 00 UTC 23 Sep 06
 EDAS Meteorological Data



10.5 National Weather Service Advisories

OCT. 25. 2006 3:37PM National Weather Service

NO. 0521 P. 1



Department of Commerce
NOAA/NWS
San Joaquin Valley Office
900 Foggy Bottom Road
Hanford, CA 93230
Phone: (559) 584-3752
Fax: (559) 584-1152

Fax

To: <u>Evan Shipp</u>	From: <u>Steve Mendenhall</u>
Fax: <u>230-6064</u>	Date:
Photos:	Pages: <u>3</u>
Ret:	CC:

10/25/2006 WED 15:34 [TX/RX NO 6544] 001

OCT. 25. 2006 3:37PM

National Weather Service

NO. 0921 P. 2

Oct 25, 06 16:17

Text 3: -5:NPWHNX

Page 1/2

WWS76 KHNK 211100
NPWHNX

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE HANFORD CA
400 AM PDT THU SEP 21 2006

...GUSTY WINDS TO DEVELOP OVER THE CENTRAL CALIFORNIA INTERIOR...

A DEEPENING LOW PRESSURE SYSTEM WILL DROP FROM WESTERN CANADA INTO THE NORTHERN ROCKIES TONIGHT. THIS SYSTEM WILL REMAIN OVER THE WESTERN UNITED STATES THROUGH SATURDAY...AND BRING GUSTY WINDS AT TIMES TO THE CENTRAL SAN JOAQUIN VALLEY AND KERN COUNTY MOUNTAINS AND DESERTS.

CAZ089-090-211900-
/O.NEW.KHNK.WI.Y.0016.060922T0100Z-060923T0100Z/
WEST CENTRAL SAN JOAQUIN VALLEY-EAST CENTRAL SAN JOAQUIN VALLEY-
400 AM PDT THU SEP 21 2006

...WIND ADVISORY IN EFFECT FROM 6 PM THIS EVENING TO 6 PM PDT FRIDAY...

THE NATIONAL WEATHER SERVICE IN HANFORD HAS ISSUED A WIND ADVISORY...WHICH IS IN EFFECT FROM 6 PM THIS EVENING TO 6 PM PDT FRIDAY FOR THE CENTRAL SAN JOAQUIN VALLEY.

NORTHWEST WINDS WILL INCREASE TONIGHT OVER THE CENTRAL SAN JOAQUIN VALLEY. GUSTS TO AROUND 35 MPH WILL OCCUR AT TIMES...AND CONTINUE INTO FRIDAY. THE WIND GUSTS MAY CAUSE AREAS OF REDUCED VISIBILITY DUE TO BLOWING DUST.

A WIND ADVISORY MEANS THAT SUSTAINED WIND SPEEDS OF AT LEAST 25 MPH OR GUSTS OF 35 MPH OR MORE ARE EXPECTED. WINDS THIS STRONG CAN MAKE DRIVING DIFFICULT...ESPECIALLY FOR HIGH PROFILE VEHICLES. USE EXTRA CAUTION.

##

CAZ096-098-099-211900-
/O.NEW.KHNK.WI.Y.0016.060922T0100Z-060924T0200Z/
KERN COUNTY MOUNTAINS-INDIAN WELLS VALLEY-
SOUTHEASTERN KERN COUNTY DESERT-
400 AM PDT THU SEP 21 2006

...WIND ADVISORY IN EFFECT FROM 6 PM THIS EVENING TO 7 PM PDT SATURDAY...

THE NATIONAL WEATHER SERVICE IN HANFORD HAS ISSUED A WIND ADVISORY...WHICH IS IN EFFECT FROM 6 PM THIS EVENING TO 7 PM PDT SATURDAY FOR THE KERN COUNTY MOUNTAINS AND DESERTS.

WEST WINDS 15 TO 25 MPH WILL DEVELOP OVER THE KERN COUNTY MOUNTAINS AND DESERTS TONIGHT...WITH GUSTS TO 50 MPH POSSIBLE THROUGH AND BELOW THE PASSES. THE WINDS WILL SUBSIDE A BIT FRIDAY EVENING AS THEY TURN FROM THE NORTHWEST TO THE EAST...BUT WILL INCREASE AGAIN BY SATURDAY MORNING. THE WINDS MAY CAUSE AREAS OF REDUCED VISIBILITY DUE TO BLOWING DUST OR SAND.

A WIND ADVISORY MEANS THAT SUSTAINED WIND SPEEDS OF AT LEAST 35 MPH OR GUSTS OF 45 MPH OR MORE ARE EXPECTED. WINDS THIS STRONG CAN MAKE DRIVING DIFFICULT...ESPECIALLY FOR HIGH PROFILE VEHICLES. USE EXTRA CAUTION.

##

STAY TUNED TO NOAA WEATHER RADIO...OR YOUR FAVORITE NEWS SOURCE...FOR FURTHER INFORMATION. OR VISIT OUR WEB SITE AT WWW.WEATHER.GOV/HANFORD /USE ALL LOWER CASE/.

Wednesday October 25, 2006

1/2

10/25/2006 WED 15:35 [TX/RX NO 8544] 002

OCT. 25. 2006 3:38PM

National Weather Service

NO. 0921 P. 3

Oct 25, 08 15:17 Text 3: --1:NPWHHX Page 1/1

WAUS76 KHNK 211538
NPMHXX

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE HANFORD CA
838 AM PDT THU SEP 21 2006

CAZ089-090-211645-
/O.CAN.KHNK.MI.Y.0016.060922T0100Z-060923T0100Z/
WEST CENTRAL SAN JOAQUIN VALLEY-EAST CENTRAL SAN JOAQUIN VALLEY-
838 AM PDT THU SEP 21 2006

...WIND ADVISORY IS CANCELLED...

THE NATIONAL WEATHER SERVICE IN HANFORD HAS CANCELED THE WIND
ADVISORY FOR THE CENTRAL SAN JOAQUIN VALLEY. THE LATEST WEATHER
DATA NO LONGER INDICATES THAT WIDESPREAD GUSTY WINDS WILL OCCUR TONIGHT
AND FRIDAY. THE WIND ADVISORY IS THEREFORE CANCELLED.

\$\$

CAZ095-098-099-211645-
/O.CAN.KHNK.MI.Y.0016.060922T0100Z-060924T0200Z/
KERN COUNTY MOUNTAINS-INDIAN WELLS VALLEY-
SOUTHEASTERN KERN COUNTY DESERT-
838 AM PDT THU SEP 21 2006

...WIND ADVISORY IS CANCELLED...

THE NATIONAL WEATHER SERVICE IN HANFORD HAS CANCELED THE WIND
ADVISORY FOR THE KERN COUNTY MOUNTAINS AND DESERT. THE LATEST
WEATHER DATA NO LONGER INDICATES THAT WIDESPREAD GUSTY WINDS WILL
OCCUR TONIGHT THROUGH SATURDAY MORNING. THE WIND ADVISORY IS
THEREFORE CANCELLED.

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DODLEY

Wednesday October 25, 2006

1/1

10/25/2006 WED 15:35 [TX/RX NO 8544] 003

Feb 09 07 10:01a

National Weather Service

p.1



NATIONAL WEATHER SERVICE
WFO SACRAMENTO

3310 El Camino Avenue, Suite 228
Sacramento, CA 95821-6373
FAX: (916) 979-3067
TELEPHONE: (916) 979-3041

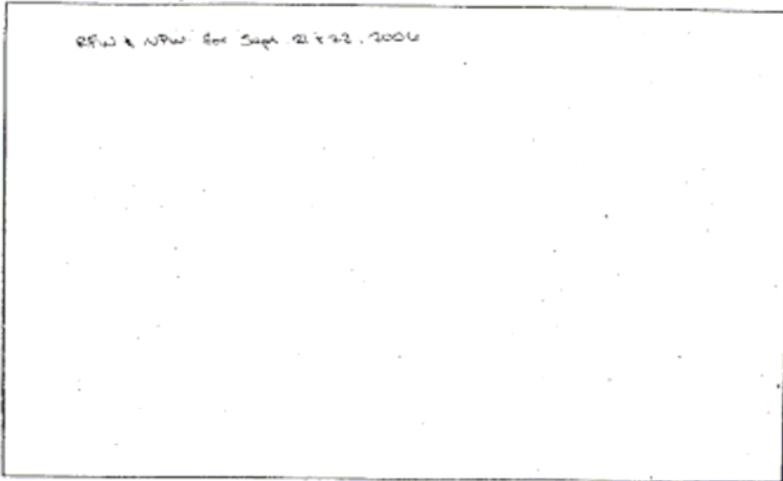
DATE: 09/22/06

TO: Evan Shiff

FAX #: 916-230-6064

PHONE #: 916-230-5309

FROM: ailing



RFW & NPW for Sept 21 & 22, 2006

Feb 09 07 10:02a National Weather Service

p.9

WWUS75 KSTO 211130
NWSIC

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE SACRAMENTO CA
430 AM PDT THU SEP 21 2006

...GUSTY NORTH WINDS WILL DEVELOP ACROSS THE INTERIOR OF NORTHERN CALIFORNIA TONIGHT AND CONTINUE INTO THE WEEKEND...

..ANOTHER DRY COLD FRONT TRAILING BEHIND A STRONG WEATHER SYSTEM DEVELOPING OVER THE ROCKIES WILL MOVE ACROSS NORTHERN CALIFORNIA TONIGHT. STRONG GUSTY NORTH WINDS WILL INCREASE TONIGHT AND CONTINUE INTO THE WEEKEND. THE WINDS ALONG WITH VERY DRY CONDITIONS WILL LEAD TO HIGH FIRE DANGER.

CA2015>018-063-064-220030-
/O.NEM.KSTO.WI.Y.0012.060922T07002-060922T2300Z/
NORTHERN SACRAMENTO VALLEY-CENTRAL SACRAMENTO VALLEY-
SOUTHERN SACRAMENTO VALLEY-CARQUINEE STRAIT AND DELTA-
MOUNTAINS SOUTHWESTERN SHASTA COUNTY TO NORTHERN LAKE COUNTY-
CLEAR LAKE/SOUTHERN LAKE COUNTY-
430 AM PDT THU SEP 21 2006

...WIND ADVISORY IN EFFECT FROM MIDNIGHT TONIGHT TO 4 PM PDT FRIDAY...

THE NATIONAL WEATHER SERVICE IN SACRAMENTO HAS ISSUED A WIND ADVISORY...WHICH IS IN EFFECT FROM MIDNIGHT TONIGHT TO 4 PM PDT FRIDAY FOR THE NORTHERN SACRAMENTO VALLEY...THE WEST SIDE OF THE CENTRAL AND SOUTHERN SACRAMENTO VALLEY...DELTA...INTERIOR COAST RANGE NORTH OF CLEAR LAKE...AND LAKE COUNTY.

STRONG NORTH WINDS WILL DEVELOP ACROSS THE REGION TONIGHT AND WILL CONTINUE INTO FRIDAY. THE FOCUS OF STRONGEST WINDS ARE EXPECTED TO OCCUR ACROSS THE WEST SIDE OF THE SACRAMENTO VALLEY...MAINLY WEST OF THE SACRAMENTO RIVER...AND WESTWARD INTO THE FOOTEILLS AND INTERIOR COAST RANGE FROM LAKE COUNTY NORTH.

THE STRONGEST NORTH WINDS WILL DEVELOP THIS EVENING AND CONTINUE INTO MIDDAY FRIDAY BEFORE DECREASING SOMEWHAT FRIDAY AFTERNOON. NORTH WINDS OF 20 TO 30 MPH WITH GUSTS OF 40 TO 55 MPH CAN BE EXPECTED...ESPECIALLY ALONG INTERSTATE 505 AND ALONG INTERSTATE 5 NORTH OF WOODLAND...AND ACROSS THE EXPOSED RIDGETOPS OF LAKE COUNTY AND THE INTERIOR COAST RANGE.

STRONG AND GUSTY WINDS CAN MAKE DRIVING DIFFICULT...ESPECIALLY FOR HIGH PROFILE VEHICLES. USE EXTRA CAUTION.

THE WINDS ALONG WITH DRY CONDITIONS WILL LEAD TO EXTREMELY HIGH FIRE DANGER THE NEXT SEVERAL DAYS. BE EXTREMELY CAREFUL WHEN USING ANY EQUIPMENT NEAR DRY VEGETATION!

88

02/09/2007 FRI 09:38 ITR/RI NO 6850] 009

Feb 09 07 10:02a National Weather Service

p.10

WWUS76 KSTO 212225
NPNSTO

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE SACRAMENTO CA
325 PM PDT THU SEP 21 2006

...GUSTY NORTH WINDS WILL DEVELOP ACROSS THE INTERIOR OF NORTHERN CALIFORNIA TONIGHT AND CONTINUE INTO THE WEEKEND...

...ANOTHER DRY COLD FRONT TRAILING BEHIND A STRONG WEATHER SYSTEM DEVELOPING OVER THE ROCKIES WILL MOVE ACROSS NORTHERN CALIFORNIA TONIGHT. STRONG GUSTY NORTH WINDS WILL INCREASE TONIGHT AND CONTINUE INTO THE WEEKEND. THE WINDS ALONG WITH VERY DRY CONDITIONS WILL LEAD TO HIGH FIRE DANGER.

CAZ019>018-063-064-221230-
/O.CON.KSTO.WI.Y.0012.060922T0700Z-060922T1300Z/
NORTHERN SACRAMENTO VALLEY-CENTRAL SACRAMENTO VALLEY-
SOUTHERN SACRAMENTO VALLEY-CANQUINES STRAIT AND DELTA-
MOUNTAINS SOUTHWESTERN SHASTA COUNTY TO NORTHERN LAKE COUNTY-
CLEAR LAKE/SOUTHERN LAKE COUNTY-
325 PM PDT THU SEP 21 2006

...WIND ADVISORY REMAINS IN EFFECT FROM MIDNIGHT TONIGHT TO 4 PM PDT FRIDAY FOR THE SACRAMENTO VALLEY AND DELTA AND THE INTERIOR COAST RANGE NORTH OF CLEAR LAKE AND LAKE COUNTY...

THE NATIONAL WEATHER SERVICE IN SACRAMENTO HAS ISSUED A WIND ADVISORY...WHICH IS IN EFFECT FROM MIDNIGHT TONIGHT TO 4 PM PDT FRIDAY FOR THE NORTHERN SACRAMENTO VALLEY...THE WEST SIDE OF THE CENTRAL AND SOUTHERN SACRAMENTO VALLEY...DELTA...INTERIOR COAST RANGE NORTH OF CLEAR LAKE...AND LAKE COUNTY.

STRONG NORTH WINDS WILL DEVELOP ACROSS THE REGION TONIGHT AND WILL CONTINUE INTO FRIDAY. THE FOCUS OF STRONGEST WINDS ARE EXPECTED TO OCCUR ACROSS THE WEST SIDE OF THE SACRAMENTO VALLEY... MAINLY WEST OF THE SACRAMENTO RIVER...AND WESTWARD INTO THE FOOTHILLS AND INTERIOR COAST RANGE FROM LAKE COUNTY NORTH.

THE STRONGEST NORTH WINDS WILL DEVELOP OVERNIGHT AND CONTINUE INTO MIDDAY FRIDAY BEFORE DECREASING SOMEWHAT FRIDAY AFTERNOON. NORTH WINDS OF 20 TO 30 MPH WITH GUSTS UP TO 50 MPH CAN BE EXPECTED...ESPECIALLY ALONG INTERSTATE 505 AND ALONG INTERSTATE 5 NORTH OF WOODLAND...AND ACROSS THE EXPOSED RIDGETOPS OF LAKE COUNTY AND THE INTERIOR COAST RANGE.

STRONG AND GUSTY WINDS CAN MAKE DRIVING DIFFICULT...ESPECIALLY FOR HIGH PROFILE VEHICLES. USE EXTRA CAUTION. RESIDENTS SHOULD SECURE OUTDOOR OBJECTS SUCH AS PATIO FURNITURE.

THE WINDS ALONG WITH DRY CONDITIONS WILL LEAD TO EXTREMELY HIGH FIRE DANGER THE NEXT SEVERAL DAYS. BE EXTREMELY CAREFUL WHEN USING ANY EQUIPMENT NEAR DRY VEGETATION!

88

02/09/2007 FRI 09:38 (TX/RX NO 8850) @ 010

Feb 09 07 10:03a National Weather Service

p.11

WWS76 KSTO 221130
NWS76

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE SACRAMENTO CA
430 AM PDT FRI SEP 22 2006

CAZ015>018-063-064-221930-
/O.CON.KSTO.WI.Y.0012.06000070C00Z-06092211300Z/
NORTHERN SACRAMENTO VALLEY-CENTRAL SACRAMENTO VALLEY-
SOUTHERN SACRAMENTO VALLEY-CARQUINEZ STRAIT AND DELTA-
MOUNTAINS SOUTHWESTERN SHASTA COUNTY TO NORTHERN LAKE COUNTY-
CLEAR LAKE/SOUTHERN LAKE COUNTY-
430 AM PDT FRI SEP 22 2006

...WIND ADVISORY REMAINS IN EFFECT UNTIL 4 PM PDT THIS
AFTERNOON...

A WIND ADVISORY REMAINS IN EFFECT UNTIL 4 PM PDT THIS AFTERNOON
FOR THE SACRAMENTO VALLEY...DELTA...LAKE COUNTY AND THE INTERIOR
COAST RANGE NORTH OF CLEAR LAKE.

THE STRONG GUSTY NORTH WINDS THAT DEVELOPED THURSDAY NIGHT WILL
CONTINUE TODAY. THE STRONGEST WINDS WILL OCCUR ACROSS THE WEST
SIDE OF THE SACRAMENTO VALLEY... MAINLY WEST OF THE SACRAMENTO
RIVER...AND WESTWARD INTO THE FOOTHILLS AND INTERIOR COAST RANGE
FROM LAKE COUNTY NORTH.

NORTH WINDS OF 20 TO 30 MPH WITH GUSTS TO 50 MPH OR HIGHER CAN BE
EXPECTED TODAY...ESPECIALLY ALONG INTERSTATE 505 AND ALONG
INTERSTATE 5 NORTH OF WOODLAND...AND ACROSS THE EXPOSED RIDGETOPS
OF LAKE COUNTY AND THE INTERIOR COAST RANGE. THE WINDS ARE
EXPECTED TO REACH THEIR PEAK AROUND MIDDAY AND THEN DECREASE
SLOWLY THIS AFTERNOON...BUT MANY LOCATIONS ON THE WEST SIDE OF THE
SACRAMENTO VALLEY AND IN LAKE COUNTY WILL CONTINUE TO SEE BREEZY
CONDITIONS INTO EARLY SATURDAY.

STRONG AND GUSTY WINDS CAN MAKE DRIVING DIFFICULT...ESPECIALLY
FOR HIGH PROFILE VEHICLES. USE EXTRA CAUTION. RESIDENTS SHOULD
SECURE OUTDOOR OBJECTS SUCH AS PATIO FURNITURE.

THE WINDS ALONG WITH DRY CONDITIONS WILL LEAD TO HIGH FIRE DANGER
THE NEXT SEVERAL DAYS. BE EXTREMELY CAREFUL WHEN USING ANY
EQUIPMENT NEAR DRY VEGETATION!

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02/09/2007 FRI 09:35 [TX/RX NO 6550] 011

Fed US G/ 10155a National Weather Service

p.12

WNUS76 KSTO 221421
NPNUS76

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE SACRAMENTO CA
721 AM PDT FRI SEP 22 2006

CAZC16>018-221900-
/O.NEW.KSTO.HW.W.0002.060922T1421Z-060922T1900Z/
/O.EXT.KSTO.WI.Y.0012.060922T1900Z-060922T2300Z/
CENTRAL SACRAMENTO VALLEY-SOUTHERN SACRAMENTO VALLEY-
CARQUINEZ STRAIT AND DELTA-
721 AM PDT FRI SEP 22 2006

...HIGH WIND WARNING IN EFFECT UNTIL NOON PDT TODAY...
...WIND ADVISORY NOW IN EFFECT FROM NOON TODAY TO 4 PM PDT THIS
AFTERNOON...

THE NATIONAL WEATHER SERVICE IN SACRAMENTO HAS ISSUED A HIGH WIND
WARNING MAINLY FOR AREAS ALONG AND WEST OF INTERSTATE 5 IN THE
CENTRAL AND SOUTHERN SACRAMENTO VALLEY AND DELTA AREA UNTIL NOON
PDT TODAY. THIS WOULD INCLUDE WILLIAMS...WILLOWS...WOODLAND...DAVIS...
VACAVILLE AND FAIRFIELD. THE WIND ADVISORY IS NOW IN EFFECT FROM
NOON TODAY TO 4 PM PDT THIS AFTERNOON.

SUSTAINED WINDS OF 40 MPH WITH GUSTS FROM 50 TO 60 MPH WILL OCCUR
AT TIMES MAINLY ALONG AND WEST OF INTERSTATE 5 THIS MORNING. WINDS
OF THIS MAGNITUDE CAN DOWN POWER LINES...TOPPLE SMALL TREES AND
CREATE HAZARDOUS DRIVING CONDITIONS...ESPECIALLY FOR HIGH PROFILE
VEHICLES.

THE NORTH WINDS ARE EXPECTED TO DECREASE SLIGHTLY TO 20 TO 30 MPH
WITH GUSTS TO 40 MPH OVER THE WEST SIDE THIS AFTERNOON.

THE WINDS ALONG WITH DRY CONDITIONS WILL LEAD TO HIGH FIRE DANGER
THE NEXT SEVERAL DAYS. BE EXTREMELY CAREFUL WHEN USING ANY
EQUIPMENT NEAR DRY VEGETATION!

A HIGH WIND WARNING MEANS A HAZARDOUS HIGH WIND EVENT IS EXPECTED
OR OCCURRING. HIGH WIND SPEEDS OR GUSTS MAY LEAD TO PROPERTY
DAMAGE.

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CAZC15-063-064-222230-
/O.DON.KSTO.WI.Y.0012.060900T0000Z-060922T2300Z/
NORTHERN SACRAMENTO VALLEY-
MOUNTAINS SOUTHWESTERN SEASTA COUNTY TO NORTHERN LAKE COUNTY-
CLEAR LAKE/SOUTHERN LAKE COUNTY-
721 AM PDT FRI SEP 22 2006

...WIND ADVISORY REMAINS IN EFFECT UNTIL 4 PM PDT THIS
AFTERNOON...

A WIND ADVISORY REMAINS IN EFFECT UNTIL 4 PM PDT THIS AFTERNOON.

THE STRONG GUSTY NORTH WINDS THAT DEVELOPED THURSDAY NIGHT WILL
CONTINUE TODAY. THE STRONGEST WINDS WILL OCCUR ACROSS THE WEST
SIDE OF THE SACRAMENTO VALLEY... MAINLY WEST OF THE SACRAMENTO
RIVER... AND WESTWARD INTO THE FOOTHILLS AND INTERIOR COAST RANGE
FROM LAKE COUNTY NORTH.

NORTH WINDS OF 20 TO 30 MPH WITH GUSTS TO 50 MPH OR HIGHER CAN BE
EXPECTED TODAY... ESPECIALLY ALONG INTERSTATE 505 AND ALONG
INTERSTATE 5 NORTH OF WOODLAND... AND ACROSS THE EXPOSED RIDGETOPS
OF LAKE COUNTY AND THE INTERIOR COAST RANGE. THE WINDS ARE
EXPECTED TO REACH THEIR PEAK AROUND MIDDAY AND THEN DECREASE
SLOWLY THIS AFTERNOON... BUT MANY LOCATIONS ON THE WEST SIDE OF
THE SACRAMENTO VALLEY AND IN LAKE COUNTY WILL CONTINUE TO SEE
BRIEZY CONDITIONS INTO EARLY SATURDAY.

02/09/2007 FRI 09:35 (TX/RX NO 6550) 012

Feb 09 07 10:03a National Weather Service

p.13

STRONG AND GUSTY WINDS CAN MAKE DRIVING DIFFICULT...ESPECIALLY FOR HIGH PROFILE VEHICLES. USE EXTRA CAUTION. RESIDENTS SHOULD SECURE OUTDOOR OBJECTS SUCH AS PATIO FURNITURE.

THE WINDS ALONG WITH DRY CONDITIONS WILL LEAD TO HIGH FIRE DANGER THE NEXT SEVERAL DAYS. BE EXTREMELY CAREFUL WHEN USING ANY EQUIPMENT NEAR DRY VEGETATION!

SS
JMM

02/09/2007 FRI 09:38 ITS/RI NO 65501 013

Feb 09 07 10:03a National Weather Service

p.14

WKUS76 KSTO 221855
NFWSTO

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE SACRAMENTO CA
1155 AM PDT FRI SEP 22 2006

CAZ016-018-222300-
/O.CAN.KSTO.HN.W.0002.000000TC0802-060922T1900Z/
/O.EXT.KSTO.MI.Y.0012.C60922T1855Z-060922T2300Z/
CENTRAL SACRAMENTO VALLEY-SOUTHERN SACRAMENTO VALLEY-
CAQUINTE STRAIT AND DELTA-
1155 AM PDT FRI SEP 22 2006

...HIGH WIND WARNING IS CANCELLED...
...WIND ADVISORY NOW IN EFFECT UNTIL 4 PM PDT THIS AFTERNOON...

THE NATIONAL WEATHER SERVICE IN SACRAMENTO HAS CANCELLED THE HIGH WIND WARNING. THE WIND ADVISORY IS NOW IN EFFECT UNTIL 4 PM PDT THIS AFTERNOON.

THE NORTH WINDS HAVE DECREASED SLIGHTLY ACROSS THE SACRAMENTO VALLEY IN AREAS WEST OF INTERSTATE 5. FOR THIS REASON THE HIGH WIND WARNING FOR THESE AREAS HAS BEEN CANCELLED. HOWEVER...GUSTY NORTH WINDS WILL CONTINUE THIS AFTERNOON. WIND SPEEDS ARE EXPECTED TO REMAIN BETWEEN 20 TO 30 MPH WITH GUSTS TO 40 MPH OVER THE WEST SIDE THIS AFTERNOON.

THE WINDS ALONG WITH DRY CONDITIONS WILL LEAD TO HIGH FIRE DANGER THE NEXT SEVERAL DAYS. BE EXTREMELY CAREFUL WHEN USING ANY EQUIPMENT NEAR DRY VEGETATION!

STRONG AND GUSTY WINDS CAN MAKE DRIVING DIFFICULT...ESPECIALLY FOR HIGH PROFILE VEHICLES. USE EXTRA CAUTION.

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CAZ015-053-084-222300-
/O.CON.KSTO.MI.Y.0012.000000T0000Z-060922T2300Z/
NORTHERN SACRAMENTO VALLEY-
MOUNTAINS SOUTHWESTERN SHASTA COUNTY TO NORTHERN LAKE COUNTY-
CLEAR LAKE/SOUTHERN LAKE COUNTY-
1155 AM PDT FRI SEP 22 2006

...WIND ADVISORY REMAINS IN EFFECT UNTIL 4 PM PDT THIS AFTERNOON...

A WIND ADVISORY REMAINS IN EFFECT UNTIL 4 PM PDT THIS AFTERNOON.

THE STRONG GUSTY NORTH WINDS THAT DEVELOPED THURSDAY NIGHT WILL CONTINUE TODAY. THE STRONGEST WINDS WILL OCCUR ACROSS THE WEST SIDE OF THE SACRAMENTO VALLEY... MAINLY WEST OF THE SACRAMENTO RIVER...AND WESTWARD INTO THE FOOTHILLS AND INTERIOR COAST RANGE FROM LAKE COUNTY NORTH.

NORTH WINDS OF 20 TO 30 MPH WITH GUSTS TO 50 MPH OR HIGHER CAN BE EXPECTED TODAY...ESPECIALLY ACROSS THE EXPOSED RIDGE TOPS OF LAKE COUNTY AND THE INTERIOR COAST RANGE. THE WINDS ARE EXPECTED TO SLOWLY DECREASE THIS AFTERNOON...BUT MANY LOCATIONS IN THE HILLS ALONG THE WEST SIDE OF THE SACRAMENTO VALLEY AS WELL AS IN LAKE COUNTY WILL CONTINUE TO SEE BREEZY CONDITIONS INTO EARLY SATURDAY.

STRONG AND GUSTY WINDS CAN MAKE DRIVING DIFFICULT...ESPECIALLY FOR HIGH PROFILE VEHICLES. USE EXTRA CAUTION. RESIDENTS SHOULD SECURE OUTDOOR OBJECTS SUCH AS PATIO FURNITURE.

THE WINDS ALONG WITH DRY CONDITIONS WILL LEAD TO HIGH FIRE DANGER THE NEXT SEVERAL DAYS. BE EXTREMELY CAREFUL WHEN USING ANY EQUIPMENT NEAR DRY VEGETATION!

02/09/2007 FRI 09:35 ITL/RX NO 65501 @014

Feb 09 07 1003a National Weather Service

p.15

NW576 KSTO 222258
NPNSTO

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE SACRAMENTO CA
358 PM PDT FRI SEP 22 2006

CAZ015>018-063-064-230000-
/O.EXP.XSTO.WI.Y.0012.00000010000Z-060922T12300Z/
NORTHERN SACRAMENTO VALLEY-CENTRAL SACRAMENTO VALLEY-
SOUTHERN SACRAMENTO VALLEY-CARQUINES STRAIT AND DELTA-
MOUNTAINS SOUTHWESTERN SHASTA COUNTY TO NORTHERN LAKE COUNTY-
CLEAR LAKE/SOUTHWESTERN LAKE COUNTY-
358 PM PDT FRI SEP 22 2006

...WIND ADVISORY WILL EXPIRE AT 4 PM PDT THIS AFTERNOON...

THE WIND ADVISORY WILL EXPIRE AT 4 PM PDT THIS AFTERNOON. THE
STRONG NORTHERLY PRESSURE GRADIENT ACROSS NORTHERN CALIFORNIA IS
BEGINNING TO WEAKEN...WITH WIND SPEEDS ACROSS THE REGION DECREASING
INTO THE 10 TO 25 MPH RANGE THIS AFTERNOON. THEREFORE...THE WIND
ADVISORY WILL EXPIRE AT 4 PM. HOWEVER...LOCALLY GUSTY WINDS WILL
CONTINUE TO BE POSSIBLE THROUGH THE EARLY EVENING HOURS. OVERNIGHT
TONIGHT...AN EASTERLY PRESSURE GRADIENT WILL DEVELOP...WITH
LOCALLY GUSTY WINDS POSSIBLE IN THE CANYONS AND VALLEYS ALONG THE
WEST SLOPES OF THE SIERRA AND SIERRA FOOTHILLS.

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02/09/2007 FRI 09:35 ITX/RX NO 65501 015

Feb 09 07 10:01a National Weather Service

p.2

WWS86 KSTO 211352
RFWSTO

RED FLAG WARNING
NATIONAL WEATHER SERVICE SACRAMENTO CA
650 AM PDT THU SEP 21 2006

...RED FLAG WARNING IN EFFECT LATE TONIGHT THROUGH SUNDAY MORNING IN THE FOOTHILLS AND WEST SLOPES OF THE NORTHERN SIERRA NEVADA FOR STRONG DOWNSLOPE EASTERLY WIND AND VERY LOW HUMIDITIES...

...RED FLAG WARNING IN EFFECT LATE TONIGHT THROUGH SATURDAY AFTERNOON FOR THE REMAINDER OF INTERIOR NORTHERN CALIFORNIA FOR STRONG NORTHERLY WIND AND VERY LOW HUMIDITIES...

LOW PRESSURE OVER CANADA WILL MOVE THROUGH THE PACIFIC NORTHWEST TODAY AND INTO THE GREAT BASIN TONIGHT. IN ITS WAKE...A VERY TIGHT PRESSURE GRADIENT DEVELOPS AS HIGH PRESSURE BUILDS INLAND. AS A RESULT...STRONG AND GUSTY NORTH TO EAST DOWNSLOPE WIND DEVELOPS TONIGHT AND CONTINUES INTO THE WEEKEND. WIND COMBINED WITH AN ALREADY DRY AIRMASS WILL CREATE CRITICAL FIRE WEATHER CONDITIONS ACROSS INTERIOR NORTHERN CALIFORNIA. THE WIND IS EXPECTED TO DECREASE OVER MOST AREAS BY SATURDAY EVENING...BUT REMAIN GUSTY IN THE FOOTHILLS AND WEST SLOPES OF THE NORTHERN SIERRA NEVADA SATURDAY NIGHT BEFORE DIMINISHING SUNDAY MORNING. WARM AND DRY CONDITIONS CONTINUE EARLY NEXT WEEK BUT WITH LIGHTER WIND.

CA2220-221-266-259-212230-
/O.UPG.KSTO.FW.A.0004.060922T0700Z-060924T0000Z/
/O.NWS.KSTO.FW.N.0004.060922T0700Z-060924T1400Z/
650 AM PDT THU SEP 21 2006

...RED FLAG WARNING IN EFFECT FROM MIDNIGHT TONIGHT TO 7 AM PDT SUNDAY...

THE NATIONAL WEATHER SERVICE IN SACRAMENTO HAS ISSUED A RED FLAG WARNING...WHICH IS IN EFFECT FROM MIDNIGHT TONIGHT TO 7 AM PDT SUNDAY. THE FIRE WEATHER WATCH IS NO LONGER IN EFFECT.

STRONG NORTHEAST TO EAST WIND DEVELOPS LATE TONIGHT AND CONTINUES FRIDAY INTO SATURDAY. WIND SPEEDS OF 20 TO 30 MPH WITH LOCAL GUSTS UP TO 55 MPH ARE LIKELY OVER RIDGES AND THROUGH EAST-WEST ORIENTED CANYONS. DAYTIME HUMIDITY MINIMUMS IN THE SINGLE DIGITS ARE LIKELY WITH OVERNIGHT RECOVERIES IN THE 20S TO 30S...LOCALLY LOWER. GUSTY WIND CONTINUES THROUGH SATURDAY NIGHT AND THEN DIMINISHES SUNDAY MORNING.

PLEASE ADVISE THE APPROPRIATE OFFICIALS OR FIRE CREWS IN THE FIELD OF THIS RED FLAG WARNING.

SS

CA2213-219-263-264-279-212230-
/O.UPG.KSTO.FW.A.0004.060922T0700Z-060924T0000Z/
/O.NWS.KSTO.FW.N.0004.060922T0700Z-060924T0000Z/
650 AM PDT THU SEP 21 2006

...RED FLAG WARNING IN EFFECT FROM MIDNIGHT TONIGHT TO 5 PM PDT SATURDAY...

THE NATIONAL WEATHER SERVICE IN SACRAMENTO HAS ISSUED A RED FLAG WARNING...WHICH IS IN EFFECT FROM MIDNIGHT TONIGHT TO 5 PM PDT SATURDAY. THE FIRE WEATHER WATCH IS NO LONGER IN EFFECT.

STRONG NORTH TO NORTHEAST WIND DEVELOPS LATE TONIGHT AND CONTINUES FRIDAY INTO SATURDAY. WIND SPEEDS OF 15 TO 30 MPH WITH GUSTS TO 45 MPH OR HIGHER ARE LIKELY...ESPECIALLY OVER COASTAL MOUNTAINS AND WEST PORTIONS OF THE SACRAMENTO VALLEY. DAYTIME HUMIDITY MINIMUMS

02/09/2007 FRI 09:38 [TX/RX NO 8850] 002

Fed US 07 10/01a National Weather Service

p.3

IN THE SINGLE DIGITS ARE LIKELY FRIDAY AND SATURDAY. HUMIDITY RECOVERY TONIGHT IS LIKELY TO BE UNDER 30 PERCENT IN MANY AREAS AND POSSIBLY DOWN TO 20 PERCENT OR LOWER ON FRIDAY NIGHT. WIND IS EXPECTED TO DECREASE OVER MOST AREAS BY SATURDAY EVENING.

PLEASE ADVISE THE APPROPRIATE OFFICIALS OR FIRE CREWS IN THE FIELD OF THIS RED FLAG WARNING.

88

02/09/2007 FRI 09:35 (TX/RX NO 8850) 003

NWUS86 KSTO 212300
RFBWSTO

RED FLAG WARNING
NATIONAL WEATHER SERVICE SACRAMENTO CA
400 PM PDT THU SEP 21 2006

...RED FLAG WARNING IN EFFECT LATE TONIGHT THROUGH SUNDAY MORNING
IN THE FOOTHILLS AND WEST SLOPES OF THE NORTHERN SIERRA NEVADA
FOR STRONG DOWNSLOPE EASTERLY WIND AND VERY LOW HUMIDITIES...

...RED FLAG WARNING IN EFFECT LATE TONIGHT THROUGH SATURDAY
AFTERNOON FOR THE REMAINDER OF INTERIOR NORTHERN CALIFORNIA FOR
STRONG NORTHERLY WIND AND VERY LOW HUMIDITIES...

.LOW PRESSURE SYSTEM OVER THE PACIFIC NORTHWEST WILL DROP INTO THE
GREAT BASIN TONIGHT. IN ITS WAKE...A VERY TIGHT PRESSURE GRADIENT
WILL DEVELOP AS HIGH PRESSURE AT THE SURFACE AND ALOFT BUILDS
INLAND. STRONG NORTH TO EAST DOWNSLOPE WIND WILL DEVELOP LATE
TONIGHT AND CONTINUE INTO THE WEEKEND. THE WIND COMBINED WITH AN
ALREADY DRY AIRMASS WILL SIGNIFICANTLY INCREASE THE FIRE DANGER.
WINDS SHOULD DECREASE OVER MOST OF INTERIOR NORTHERN CALIFORNIA
SATURDAY AFTERNOON...BUT CONTINUE GUSTY IN THE FOOTHILLS AND WEST
SLOPES OF THE NORTHERN SIERRA NEVADA SATURDAY NIGHT BEFORE
DIMINISHING SUNDAY MORNING. WARM AND DRY CONDITIONS WILL CONTINUE
ON MONDAY WITH LIGHTER WIND.

CAE220-221-266-269-222315-
/O.CON.KSTO.FW.W.0004.060922T0700Z-060924T1400Z/
400 PM PDT THU SEP 21 2006

...RED FLAG WARNING REMAINS IN EFFECT FROM MIDNIGHT TONIGHT TO
7 AM PDT SUNDAY...

A RED FLAG WARNING REMAINS IN EFFECT FROM MIDNIGHT TONIGHT TO
7 AM PDT SUNDAY FOR THE WEST SLOPES OF THE SIERRA NEVADA AND
SOUTHERN CASCADES.

STRONG NORTHEAST TO EAST WINDS ARE EXPECTED TO DEVELOP LATE
TONIGHT AND CONTINUE FRIDAY INTO SATURDAY. WIND SPEEDS OF 20 TO
30 MPH WITH LOCAL GUSTS 30 TO 50 MPH ARE LIKELY OVER RIDGES AND
THROUGH EAST TO WEST ORIENTED CANYONS. THE DRY EAST WINDS WILL
RESULT IN DAYTIME HUMIDITY MINIMUMS IN THE SINGLE DIGITS...AND
VERY POOR OVERNIGHT RECOVERIES IN THE 20 TO 30 PERCENT RANGE
THROUGH SUNDAY MORNING. GUSTY WIND WILL CONTINUE THROUGH SATURDAY
NIGHT AND THEN DIMINISH SUNDAY MORNING.

PLEASE ADVISE THE APPROPRIATE OFFICIALS OR FIRE CREWS IN THE
FIELD OF THIS RED FLAG WARNING.

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CAE213>219-263-264-279-222315-
/O.CON.KSTO.FW.W.0004.060922T0700Z-060924T0000Z/
400 PM PDT THU SEP 21 2006

...RED FLAG WARNING REMAINS IN EFFECT FROM MIDNIGHT TONIGHT TO
5 PM PDT SATURDAY...

A RED FLAG WARNING REMAINS IN EFFECT FROM MIDNIGHT TONIGHT TO
5 PM PDT SATURDAY FOR THE COASTAL RANGE...SHASTA COUNTY MOUNTAINS
AND INTERIOR VALLEY AND DELTA.

STRONG NORTH TO NORTHEAST WIND WILL DEVELOP LATE TONIGHT AND
CONTINUE FRIDAY AND SATURDAY. WIND SPEEDS OF 15 TO 30 MPH WITH
GUSTS 35 TO 45 MPH...OR HIGHER...ARE EXPECTED ESPECIALLY OVER THE
COASTAL MOUNTAINS AND WEST PORTIONS OF THE SACRAMENTO VALLEY.
DAYTIME HUMIDITY MINIMUMS IN THE SINGLE DIGITS ARE LIKELY FRIDAY
AND SATURDAY. POOR HUMIDITY RECOVERY IS EXPECTED TONIGHT AND
FRIDAY NIGHT. OVERNIGHT RECOVERIES MAY BE UNDER 30 PERCENT IN SOME

02/09/2007 FRI 09:38 (TX/RX NO 68501) 004

Feb 09 07 10:01a National Weather Service

p.5

AREAS TONIGHT...AND MAY BE DOWN TO AS LOW AS 20 PERCENT IN SOME
AREAS FRIDAY NIGHT. WIND IS EXPECTED TO DECREASE OVER MOST AREAS
BY SATURDAY EVENING.

PLEASE ADVISE THE APPROPRIATE OFFICIALS OR FIRE CREWS IN THE
FIELD OF THIS RED FLAG WARNING.

\$\$
JMM

02/09/2007 FRI 09:38 [TX/RX NO 68501] 005

Feb 09 07 1002a National Weather Service

p.6

WWS66 KSTO 221305
RWS60

RED FLAG WARNING
NATIONAL WEATHER SERVICE SACRAMENTO CA
603 AM PDT FRI SEP 22 2006

...RED FLAG WARNING IN EFFECT THROUGH SUNDAY MORNING IN THE
FOOTHILLS AND WEST SLOPES OF THE NORTHERN SIERRA NEVADA FOR STRONG
DOWNSLOPE EASTERLY WIND AND VERY LOW HUMIDITIES...

...RED FLAG WARNING IN EFFECT THROUGH SATURDAY AFTERNOON FOR THE
REMAINDER OF INTERIOR NORTHERN CALIFORNIA FOR STRONG NORTHERLY
WIND AND VERY LOW HUMIDITIES...

A TIGHT PRESSURE GRADIENT HAS DEVELOPED OVER NORTHERN CALIFORNIA
RESULTING IN STRONG MOIST TO EAST DRYING WIND. GUSTY WIND WILL
CONTINUE TODAY INTO SATURDAY WITH LOW DAYTIME HUMIDITIES AND
WIDESPREAD POOR OVERNIGHT HUMIDITY RECOVERIES. THE PRESSURE
GRADIENT WEAKENS SATURDAY AFTERNOON BUT GUSTY WIND IS LIKELY TO
CONTINUE OVERNIGHT SATURDAY INTO SUNDAY MORNING AND POSSIBLY AGAIN
SUNDAY NIGHT IN PORTIONS OF THE FOOTHILLS AND WEST SLOPES OF THE
NORTHERN SIERRA NEVADA. WARM AND DRY CONDITIONS CONTINUE INTO
EARLY NEXT WEEK WITH LIGHTER WIND.

CA2220-221-266-269-222300-
/O.CON.KSTO.FW.W.0004.000000T00002-060924T1400Z/
605 AM PDT FRI SEP 22 2006

...RED FLAG WARNING REMAINS IN EFFECT UNTIL 7 AM PDT SUNDAY...

A RED FLAG WARNING REMAINS IN EFFECT UNTIL 7 AM PDT SUNDAY.

STRONG NORTHEAST TO EAST WIND CONTINUES TODAY INTO THE WEEKEND.
WIND SPEEDS OF 15 TO 30 MPH WITH LOCAL GUSTS OF 40 TO 50 MPH CAN
BE EXPECTED OVER RIDGES AND THROUGH EAST TO WEST ORIENTED
CANYONS. THE DRYING WIND WILL RESULT IN AREAS OF DAYTIME HUMIDITY
MINIMUMS IN THE SINGLE DIGITS WITH POOR OVERNIGHT RECOVERIES IN
THE 20 TO 30 PERCENT RANGE...LOCALLY LOWER...THROUGH SUNDAY
MORNING. GUSTY WIND WILL CONTINUE SATURDAY NIGHT AND THEN DIMINISH
SUNDAY MORNING. WEATHER MODELS ARE STARTING TO INDICATE THAT THE
WIND MAY BECOME GUSTY AGAIN SUNDAY NIGHT WARRANTING AN EXTENSION
OF THIS RED FLAG WARNING.

PLEASE ADVISE THE APPROPRIATE OFFICIALS OR FIRE CREWS IN THE
FIELD OF THIS RED FLAG WARNING.

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CA2213-219-263-264-279-222300-
/O.CON.KSTO.FW.W.0004.000000T00002-060924T0000Z/
605 AM PDT FRI SEP 22 2006

...RED FLAG WARNING REMAINS IN EFFECT UNTIL 5 PM PDT SATURDAY...

A RED FLAG WARNING REMAINS IN EFFECT UNTIL 5 PM PDT SATURDAY.

STRONG NORTHERLY WIND WILL CONTINUE TODAY...WITH SOME DECREASE IN
WIND AT THE LOWER ELEVATIONS BY THIS EVENING. WIND SPEEDS OF 20 TO
30 MPH WITH GUSTS UP TO 45 MPH...OR HIGHER...CAN BE EXPECTED
ESPECIALLY OVER THE COASTAL MOUNTAINS AND WESTERN PORTIONS OF THE
SACRAMENTO VALLEY. DAYTIME HUMIDITY MINIMUMS INTO THE SINGLE
DIGITS ARE LIKELY TODAY. AREAS OF POOR HUMIDITY RECOVERY IN THE 25
TO 35 PERCENT RANGE ARE POSSIBLE TONIGHT. LOCALLY BREEZY CONDITIONS
WILL CONTINUE SATURDAY THEN DECREASE BY THE AFTERNOON AS THE
PRESSURE GRADIENT SIGNIFICANTLY WEAKENS.

PLEASE ADVISE THE APPROPRIATE OFFICIALS OR FIRE CREWS IN THE
FIELD OF THIS RED FLAG WARNING.

02/09/2007 FRI 09:35 (TX/RX NO 65501) 000

Feb 09/10 02a National Weather Service

p.5

WNUS66 KSTO 221305
RMS20

RED FLAG WARNING
NATIONAL WEATHER SERVICE SACRAMENTO CA
605 AM PDT FRI SEP 22 2006

...RED FLAG WARNING IN EFFECT THROUGH SUNDAY MORNING IN THE
FOOTHILLS AND WEST SLOPES OF THE NORTHERN SIERRA NEVADA FOR STRONG
DOWNSLOPE BASTERLY WIND AND VERY LOW HUMIDITIES...

...RED FLAG WARNING IN EFFECT THROUGH SATURDAY AFTERNOON FOR THE
REMAINDER OF INTERIOR NORTHERN CALIFORNIA FOR STRONG NORTHERLY
WIND AND VERY LOW HUMIDITIES...

A TIGHT PRESSURE GRADIENT HAS DEVELOPED OVER NORTHERN CALIFORNIA
RESULTING IN STRONG NORTH TO EAST DRYING WIND. GUSTY WIND WILL
CONTINUE TODAY INTO SATURDAY WITH LOW DAYTIME HUMIDITIES AND
WIDESPREAD POOR OVERNIGHT HUMIDITY RECOVERIES. THE PRESSURE
GRADIENT WEAKENS SATURDAY AFTERNOON BUT GUSTY WIND IS LIKELY TO
CONTINUE OVERNIGHT SATURDAY INTO SUNDAY MORNING AND POSSIBLY AGAIN
SUNDAY NIGHT IN PORTIONS OF THE FOOTHILLS AND WEST SLOPES OF THE
NORTHERN SIERRA NEVADA. WARM AND DRY CONDITIONS CONTINUE INTO
EARLY NEXT WEEK WITH LIGHTER WIND.

CA2220-221-266-269-222300-
/O.CON.KSTO.FM.W.0004.000000T0000Z-060924T1400Z/
605 AM PDT FRI SEP 22 2006

...RED FLAG WARNING REMAINS IN EFFECT UNTIL 7 AM PDT SUNDAY...

A RED FLAG WARNING REMAINS IN EFFECT UNTIL 7 AM PDT SUNDAY.

STRONG NORTHEAST TO EAST WIND CONTINUES TODAY INTO THE WEEKEND.
WIND SPEEDS OF 15 TO 30 MPH WITH LOCAL GUSTS OF 40 TO 50 MPH CAN
BE EXPECTED OVER RIDGES AND THROUGH EAST TO WEST ORIENTED
CANYONS. THE DRYING WIND WILL RESULT IN AREAS OF DAYTIME HUMIDITY
MINIMUMS IN THE SINGLE DIGITS WITH POOR OVERNIGHT RECOVERIES IN
THE 20 TO 30 PERCENT RANGE...LOCALLY LOWER...THROUGH SUNDAY
MORNING. GUSTY WIND WILL CONTINUE SATURDAY NIGHT AND THEN DIMINISH
SUNDAY MORNING. WEATHER MODELS ARE STARTING TO INDICATE THAT THE
WIND MAY BECOME GUSTY AGAIN SUNDAY NIGHT WARRANTING AN EXTENSION
OF THIS RED FLAG WARNING.

PLEASE ADVISE THE APPROPRIATE OFFICIALS OR FIRE CREWS IN THE
FIELD OF THIS RED FLAG WARNING.

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CA2213>219-263-264-279-222300-
/O.CON.XSTO.FM.W.0004.000000T0000Z-060924T0000Z/
605 AM PDT FRI SEP 22 2006

...RED FLAG WARNING REMAINS IN EFFECT UNTIL 5 PM PDT SATURDAY...

A RED FLAG WARNING REMAINS IN EFFECT UNTIL 5 PM PDT SATURDAY.

STRONG NORTHERLY WIND WILL CONTINUE TODAY...WITH SOME DECREASE IN
WIND AT THE LOWER ELEVATIONS BY THIS EVENING. WIND SPEEDS OF 20 TO
30 MPH WITH GUSTS UP TO 45 MPH...OR HIGHER...CAN BE EXPECTED
ESPECIALLY OVER THE COASTAL MOUNTAINS AND WESTERN PORTIONS OF THE
SACRAMENTO VALLEY. DAYTIME HUMIDITY MINIMUMS INTO THE SINGLE
DIGITS ARE LIKELY TODAY. AREAS OF POOR HUMIDITY RECOVERY IN THE 25
TO 35 PERCENT RANGE ARE POSSIBLE TONIGHT. LOCALLY BREEZY CONDITIONS
WILL CONTINUE SATURDAY THEN DECREASE BY THE AFTERNOON AS THE
PRESSURE GRADIENT SIGNIFICANTLY WEAKENS.

PLEASE ADVISE THE APPROPRIATE OFFICIALS OR FIRE CREWS IN THE
FIELD OF THIS RED FLAG WARNING.

02/09/2007 FRI 09:35 ITX/RI NO 65501 006

WMUS86 KSTO 222315
RPNSTO

RED FLAG WARNING
NATIONAL WEATHER SERVICE SACRAMENTO CA
415 PM PDT FRI SEP 22 2006

...RED FLAG WARNING IN EFFECT THROUGH SUNDAY MORNING IN THE
FOOTHILLS AND WEST SLOPES OF THE NORTHERN SIERRA NEVADA FOR
STRONG DOWNSLOPE EASTERLY WIND AND VERY LOW HUMIDITIES...

...RED FLAG WARNING IN EFFECT THROUGH SATURDAY AFTERNOON FOR THE
REMAINDER OF INTERIOR NORTHERN CALIFORNIA FOR STRONG NORTHERLY
WIND AND VERY LOW HUMIDITIES...

TIGHT PRESSURE GRADIENT OVER NORTHERN CALIFORNIA RESULTED IN
STRONG NORTHEAST DRYING WIND. THE STRONG WINDS WILL DECREASE IN
THE VALLEY ALLOWING FOR SOME HUMIDITY RECOVERY TONIGHT.
HOWEVER...LOCALLY VERY WINDY CONDITIONS WILL CONTINUE OVER HIGHER
ELEVATIONS RESULTING IN POOR OVERNIGHT HUMIDITY RECOVERIES. GUSTY
WINDS AND LOW HUMIDITIES WILL CONTINUE OVER THE HIGHER TERRAIN
INTO SATURDAY. THE PRESSURE GRADIENT WILL WEAKEN SIGNIFICANTLY BY
SATURDAY AFTERNOON... AND WINDS WILL DECREASE. HOWEVER...LOCALLY
BREEZY CONDITIONS ARE LIKELY TO CONTINUE OVERNIGHT SATURDAY AND
POSSIBLY AGAIN SUNDAY NIGHT OVER PORTIONS OF THE FOOTHILLS AND
WEST SLOPES OF THE NORTHERN SIERRA NEVADA.

CAZ220-221-266-269-240000-
/O.CON.KSTO.FM.W.0004.060000T0000Z-060924T1400Z/
415 PM PDT FRI SEP 22 2006

...RED FLAG WARNING REMAINS IN EFFECT UNTIL 7 AM PDT SUNDAY...

A RED FLAG WARNING REMAINS IN EFFECT UNTIL 7 AM PDT SUNDAY FOR THE
WEST SLOPE OF THE NORTHERN SIERRA NEVADA AND SOUTHERN CASCADES.

STRONG NORTHEAST TO EAST WIND IS EXPECTED TO CONTINUE INTO THE
WEEKEND. WIND SPEEDS OF 15 TO 30 MPH WITH LOCAL GUSTS OF 40 TO 50
MPH CAN BE EXPECTED OVER RIDGES AND THROUGH EAST TO WEST ORIENTED
CANYONS. THE DRYING WIND WILL RESULT IN AREAS OF DAYTIME HUMIDITY
MINIMUMS IN THE SINGLE DIGITS WITH POOR OVERNIGHT RECOVERIES IN
THE 20 TO 30 PERCENT RANGE...LOCALLY LOWER...THROUGH SUNDAY
MORNING. GUSTY WIND WILL CONTINUE SATURDAY NIGHT AND THEN DIMINISH
SUNDAY MORNING. WEATHER MODELS ARE STARTING TO INDICATE THAT THE
WIND MAY BECOME GUSTY AGAIN SUNDAY NIGHT WARRANTING AN EXTENSION
OF THIS RED FLAG WARNING.

PLEASE ADVISE THE APPROPRIATE OFFICIALS OR FIRE CREWS IN THE
FIELD OF THIS RED FLAG WARNING.

88

CAZ213-219-263-264-279-240000-
/O.CON.KSTO.FM.W.0004.000000T0000Z-060924T0000Z/
415 PM PDT FRI SEP 22 2006

...RED FLAG WARNING REMAINS IN EFFECT UNTIL 5 PM PDT SATURDAY...

A RED FLAG WARNING REMAINS IN EFFECT UNTIL 5 PM PDT SATURDAY FOR
THE SHASTA MOUNTAINS...THE COASTAL MOUNTAINS...THE INTERIOR VALLEY
AND DELTA.

STRONG NORTHERLY WIND WILL DECREASE IN THE VALLEY THIS
EVENING...BUT WILL LIKELY CONTINUE OVER THE HIGHER TERRAIN. WIND
SPEEDS OF 20 TO 30 MPH WITH GUSTS UP TO 45 MPH...OR HIGHER...CAN
BE EXPECTED ESPECIALLY OVER THE COASTAL MOUNTAINS TONIGHT. AREAS
OF POOR HUMIDITY RECOVERY IN THE 25 TO 35 PERCENT RANGE ARE LIKELY
TONIGHT OVER THE HIGHER TERRAIN. HOWEVER... SOME HUMIDITY RECOVERY
IS EXPECTED IN THE INTERIOR VALLEY AND DELTA AS WINDS DECREASE
OVERNIGHT.

02/08/2007 FRI 09:38 (TX/RX NO 8856) 007

Feb 09 07 10:02a National Weather Service

p8

DAYTIME HUMIDITY MINIMUMS AROUND 10 PERCENT ARE POSSIBLE AGAIN ON SATURDAY. HOWEVER...LOCALLY WINDY CONDITIONS WILL DECREASE BY SATURDAY AFTERNOON AS THE PRESSURE GRADIENT SIGNIFICANTLY WEAKENS.

PLEASE ADVISE THE APPROPRIATE OFFICIALS OR FIRE CREWS IN THE FIELD OF THIS RED FLAG WARNING.

98
JMK

02/09/2007 FRI 09:38 (TX/RX NO 6850) 008

10.6 Climate Summaries

BAKERSFIELD WSO AIRPORT, CALIFORNIA (040442)

Period of Record Monthly Climate Summary

Period of Record: 10/1/1937 to 12/31/2005

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	57.4	63.6	68.8	75.8	84.2	92.1	98.6	96.6	90.9	80.7	67.3	57.9	77.8
Average Min. Temperature (F)	38.5	42.1	45.4	49.7	56.5	63.1	69.0	67.5	62.9	54.0	44.0	38.5	52.6
Average Total Precipitation (in.)	1.08	1.17	1.16	0.66	0.22	0.08	0.01	0.04	0.11	0.30	0.61	0.80	6.23
Average Total SnowFall (in.)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record:

Max. Temp.: 99.6% Min. Temp.: 99.6% Precipitation: 99.7% Snowfall: 92.4% Snow Depth: 92.2%

Western Regional Climate Center, wrcc@dri.edu

FRESNO WSO AIRPORT, CALIFORNIA (043257)

Period of Record Monthly Climate Summary

Period of Record: 7/ 1/1948 to 12/31/2005

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	54.4	61.5	66.9	74.6	83.4	91.6	98.1	96.2	90.5	79.8	65.2	54.6	76.4
Average Min. Temperature (F)	37.6	40.6	43.7	47.8	54.1	60.2	65.4	63.7	59.3	50.9	42.2	37.2	50.2
Average Total Precipitation (in.)	2.13	1.88	1.94	1.00	0.37	0.15	0.01	0.01	0.17	0.53	1.17	1.58	10.94
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record:

Max. Temp.: 100% Min. Temp.: 100% Precipitation: 100% Snowfall: 91.2% Snow Depth: 91.3%

Western Regional Climate Center, wrcc@dri.edu

HANFORD 1 S, CALIFORNIA (043747)

Period of Record Monthly Climate Summary

Period of Record: 12/1/1927 to 12/31/2005

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	54.4	61.5	67.6	75.3	83.7	91.0	97.4	95.7	90.1	80.4	66.2	55.2	76.6
Average Min. Temperature (F)	35.7	38.8	42.4	46.6	52.7	58.3	62.6	60.6	55.8	47.8	38.8	35.0	47.9
Average Total Precipitation (in.)	1.58	1.53	1.46	0.72	0.24	0.08	0.01	0.01	0.13	0.37	0.82	1.28	8.22
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

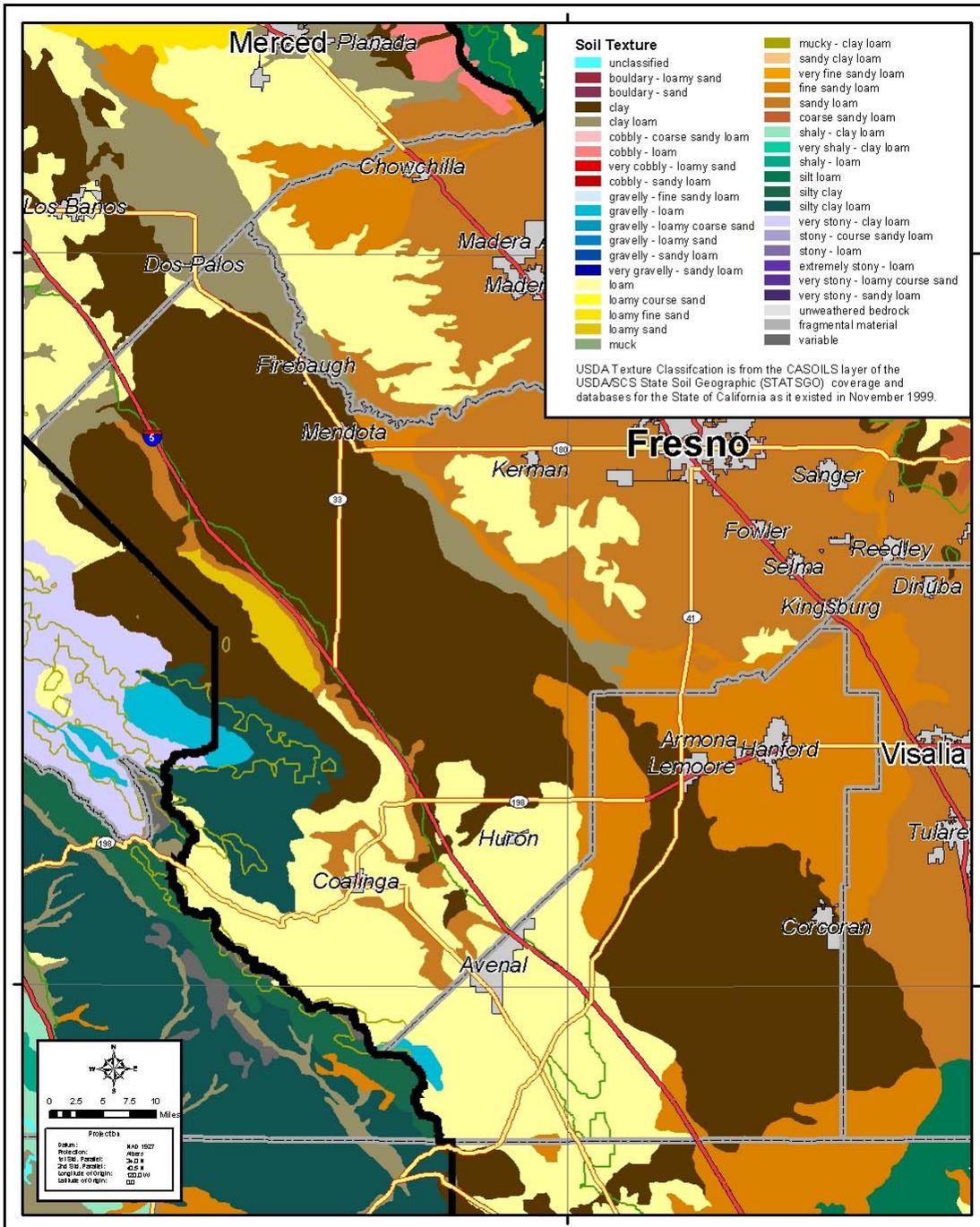
Percent of possible observations for period of record

Max. Temp.: 98.4% Min. Temp.: 98.1% Precipitation: 98.8% Snowfall: 98.2% Snow Depth: 98.2%

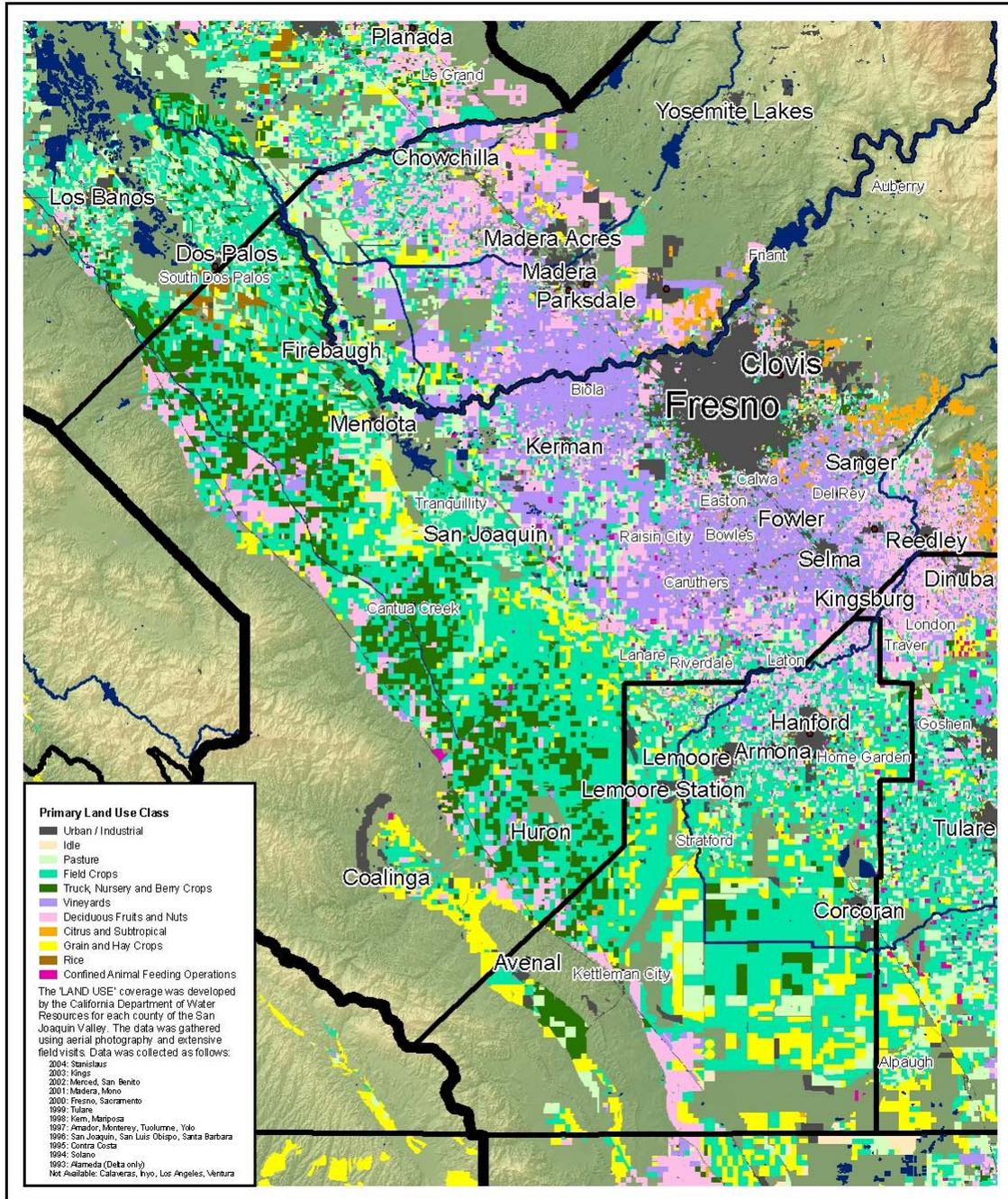
Western Regional Climate Center, wrcc@dri.edu

10.7 Soil and Crop Maps

Soil Map of area northwest of Corcoran



Crop Map of area northwest of Corcoran



10.8 Historical Dust Storm Events

Dust Storm Event Record Details (From the National Climatic Data Center Archives):

Event: Dust Storm	State: California Map of Counties
Begin Date: 09 Oct 2000, 05:30:00 PM PST	Forecast
Begin Location: Not Known	Zones SW S.J. VALLEY
End Date: 09 Oct 2000, 08:00:00 PM PST	affected:
End Location: Not Known	
Magnitude: 0	
Fatalities: 0	
Injuries: 0	
Property Damage: \$ 0.0	
Crop Damage: \$ 0.0	

Description:

Gusty wind just ahead of frontal passage through the Central San Joaquin Valley raised dust in many areas of the west side...including Kings County where visibility dropped to only 200 feet in a few locations. Some areas of blowing dust were also reported in Fresno County but visibilities were not reported as low.

Event: **Dust Storm**
Begin Date: **12 Apr 2001, 12:00:00 PM PST**
Begin Location: **Not Known**
End Date: **13 Apr 2001, 06:00:00 PM PST**
End Location: **Not Known**
Magnitude: **0**
Fatalities: **0**
Injuries: **0**
Property Damage: **\$ 0.0**
Crop Damage: **\$ 0.0**

State: **California**
[Map of Counties](#)
Forecast Zones affected: **E CENTRAL S.J. VALLEY**

Description:

A dust storm that started in Mongolia and picked up industrial pollution from China spread haze across the west quarter of the United States, including the Interior Central California CWFA. Despite cloudless skies, the high level haze provided an unusual appearance to the sky.

Event: **Dust Storm**
Begin Date: **19 May 2002, 06:00:00 PM PST**
Begin Location: **Not Known**
End Date: **19 May 2002, 10:00:00 PM PST**
End Location: **Not Known**
Magnitude: **0**
Fatalities: **0**
Injuries: **0**
Property Damage: **\$ 0.0**
Crop Damage: **\$ 0.0**

State: **California**
[Map of Counties](#)
Forecast Zones affected: **Se S.j. Valley, Sw S.j. Valley**

Description:

In the late afternoon and early evening hours of the 19th, gusty wind raised dust on the Southern San Joaquin Valley floor to the extent that visibilities were reduced to 200 feet on South Valley roads with many area visibilities at or below 1/2 mile. Meadows Field at Bakersfield reported wind to 31 MPH with vertical visibility limited to just 900 feet due to the blowing dust. While the wind was from the northwest in the vicinity of Bakersfield, other locations in the Central Valley reported wind from the southeast. The blowing dust was limited primarily to the Kern County portion of the San Joaquin Valley floor.

Event: **Dust Storm**
Begin Date: **07 Feb 2003, 03:55:00 AM PST**
Begin Location: **Not Known**
End Date: **07 Feb 2003, 08:00:00 AM PST**
End Location: **Not Known**
Magnitude: **0**
Fatalities: **0**
Injuries: **0**
Property Damage: **\$ 0.0**
Crop Damage: **\$ 0.0**

State: **California**
[Map of Counties](#)
Forecast
Zones affected: **SE S.J. VALLEY**

Description:

Winds generally in the 40-50 MPH range but with some gusts measured to 60 MPH led to a trailer being towed overturning at the base of the Tehachapi Mountains as well as a gravel truck being overturned southeast of Bakersfield early on the morning of the 7th. Areas of near-zero visibility on Highway 223 south-southeast of Bakersfield were also reported due to blowing dust during the same time period. Power outages occurred in Maricopa, Arvin, and Bakersfield as the result of the strong wind on the South Valley floor.

Event: **Dust Storm**
Begin Date: **20 Sep 2005, 04:15:00 PM PST**
Begin Location: **Not Known**
End Date: **20 Sep 2005, 06:00:00 PM PST**
End Location: **Not Known**
Magnitude: **0**
Fatalities: **0**
Injuries: **0**
Property **\$ 0.0**
Damage:
Crop Damage: **\$ 0.0**

State: **California**
[Map of Counties](#)
Forecast Zones affected: **Sw S.j. Valley, W Central S.j. Valley**

Description:

Outflow from afternoon thunderstorms raised numerous areas of blowing dust on the west side of the San Joaquin Valley. Visibility dropped to only 100 feet in the Fresno County community of San Joaquin while several areas from Hanford west to the the Avenal-Coalinga area of Kings-Fresno County experienced lowered visibility in dust and/or heavy rain. Navy Lemoore reported a west-southwest wind gust to 38 knots. Cotton crop damage was reported on the Fresno-Kings County line from thunderstorm southerly high wind along with smaller hail and very heavy rain.

10.9 Calibration Data

QA Audit

Parameter	Station Percent Difference	Station Percent Difference From Design	Leak Check Value (LPM)	Leak Check Pass/Fail	Percent Difference Pass/Fail	Design Difference Pass/Fail
FM10	0.0	0.7			Pass	Pass

RECEIVED

FEB 12 2007

PLANNING
S/W/000

CALIFORNIA AIR RESOURCES BOARD

HI-VOL CERTIFICATION REPORT

TO : PHIL B POWERS
AIR MONITORING - CENTRAL
FROM: BRIAN SPREADBOROUGH
Program Evaluation & Standards

LOG NUMBER : 2006 030
CALIBRATION DATE: 03/03/2006
REPORT DATE : 03/06/2006

IDENTIFICATION

Instrument : GMW HIVOL ORIFICE, VARIABLE
Property No. : 9498
Serial No. : F61
Previous Log No. : 2005 022
Bar Code No. : 20002854
Elevation : 25.00'
Instr. Prop. Of : AIR MONITORING - CENTRAL
Site Name : MLD Standards Lab
Site Number : 34-299
Location : 1309 T-Street
Sacramento, CA 95814

CALIBRATION STANDARDS	ID NUMBER
ROOTS METER - 5M175CEX	11361

CALIBRATION RESULTS

Component	Qa	Qstd
Instrument Range	64	N/A
Display Of Delta P (Inches of Water)	8	8
Linear Equation X = Guest Inst., Y = True Flow:Slope	36.87	14.46
Previous Calibration Date	02/09/2005	02/09/2005
Change From Previous Calibration	-0.65	-0.64

Note: Ta = Ambient Temperature(K), Pa = Ambient Pressure (mmHg)

Certification Equations:

Certification Expire: 03/03/2007

Actual Airflow (Qa) = $37.0 * [\Delta P * Ta / Pa]^{1/2} - 0.458$

Standard Airflow (Qstd) = $14.5 * [\Delta P * Pa / Ta]^{1/2} - 0.458$

Comments:

Calibrated By BSJ

Checked By MR

**CALIFORNIA AIR RESOURCES BOARD
MONTHLY QUALITY MAINTENANCE CHECK SHEET
VOLUMETRIC CONTROL PM10 SAMPLERS**

Location: Oildale-Manor Month/Year: Aug 2006
 Station Number: 15-243 Technician: Robles
 Property Number: 7547 Agency: CARB

Sample Date:	3	9	15	22	27	30
Filter Number:	Q4081842	Q4081843	Q4081836	Q4084445	Q4084446	Q4084447
Initial Filter Pressure Drop:	19.9	19.4	20.0	19.3	-	18.4
Final Filter Pressure Drop:	20.5	20.6	20.0	20.3	-	20.0
Avg. 24 hr Ambient Temp.:	27.8/1000	28.5	20.7	29.4	28.8	28.5
Avg. 24 hr Ambient Pres.:	750	750	750	750	750	750
Initial Time Meter Reading:	2327.01	2351.07	2375.11	2399.21	2423.23	2447.24
Final Time Meter Reading:	2351.09	2375.11	2399.21	2423.23	2447.24	2471.27

OPERATOR INSTRUCTIONS:

- Each Run: Check and record the pre and post filter drop readings, inspect faceplate gasket, verify flow recorder operation, record initial and final elapsed time meter readings.
- 30 Day Interval: Fixed Orifice Check Date performed 8/16/06

$TA = ^\circ C + 273$
 $PA = \text{mm Hg}$

$Flow = Slope \sqrt{\Delta P * \frac{TA}{PA}} + Intercept$

# <u>20005450</u>	<u>Slope</u>	<u>Intercept</u>	Cert. Date	Cert. Expires
Orifice Certification:	<u>37.0</u>	<u>-0.458</u>	<u>3/3/06</u>	<u>3/3/07</u>

Flow Verification Readings:	Orifice ΔP Indicated Flow	Orifice True Flow	Sampler Mag Indicated Flow	Percent diff. From 40 cfm
	<u>2.95</u>	<u>39.9</u>	<u>19.9</u>	<u>0.3%</u>

- Interval as required: Clean Sampler and greased shim. Date last cleaned:
- 800 Interval: Replace sampler motor brushes and inspect armature, motor shaft, motor gaskets, motor wiring and flow meter. Date Performed: 4/25/06 Motor Reading: 1870.31
- Semi-Annual: Calibrate sampler. Date last calibrated: 12/19/05

Date	Comments or Maintenance Performed:

Reviewed by: _____ Date: _____

**CALIFORNIA AIR RESOURCES BOARD
MONTHLY QUALITY MAINTENANCE CHECK SHEET
VOLUMETRIC CONTROL PM10 SAMPLERS**

Location: Oildale-Manor
 Station Number: 15-243
 Property Number: 7547

Month/Year: Sept. 2006
 Technician: R.J. Robles
 Agency: CARB

Sample Date:	2	8	14	20	22	26
Filter Number:	Q4084448	Q4084449	Q4084450	Q4084451	Q4084452	Q4084453
Initial Filter Pressure Drop:	20.0	19.8	18.0	17.9	19.9	19.0
Final Filter Pressure Drop:	20.1	18.3	18.8	-	19.9	19.0
Avg. 24 hr Ambient Temp.:	30.1	28.0	27.5	22.0	22.6	20.0
Avg. 24 hr Ambient Pres.:	750	750	750	750	750	750
Initial Time Meter Reading:	2471.27	2495.30	2519.32	2543.34	2567.37	2519.42
Final Time Meter Reading:	2495.30	2519.32	2543.34	2567.37	2519.42	2615.69

OPERATOR INSTRUCTIONS:

- Each Run: Check and record the pre and post filter drop readings, inspect faceplate gasket, verify flow recorder operation, record initial and final elapsed time meter readings.
- 30 Day Interval: Fixed Orifice Check Date performed 9-27-06

Orifice Certification:	Slope	Intercept	Cert. Date	Cert. Expires
<u>*20005450</u>	<u>37.0</u>	<u>0563</u>	<u>9/15/06</u>	<u>9/15/07</u>

Flow Verification Readings:	Orifice Indicated Flow	Orifice True Flow	Sampler Mag Indicated Flow	Percent diff. From 40 cfm
	<u>2.95</u>	<u>40.6</u>	<u>19.9</u>	<u>1.6%</u>

- Interval as required: Clean Sampler and greased shim. Date last cleaned: 9/28/06
- 800 Interval: Replace sampler motor brushes and inspect armature, motor shaft, motor gaskets, motor wiring and flow meter. Date Performed: 9/21/06 Motor Reading: 2567.37
- Semi-Annual: Calibrate sampler. Date last calibrated: 9/25/06

Date	Comments or Maintenance Performed:

Reviewed by: _____ Date: _____

**CALIFORNIA AIR RESOURCES BOARD
CALIBRATION REPORT**

**TO: Gary Zimmerman Mgr.
Air Monitoring - Central
Air Resources Board**

**NUMBER: AMC-RIR-121905-1
CALIBRATION DATE: 12-19-05
REPORT DATE: 12-19-05**

**FROM: Ralph I. Robles
Air Quality Instrument Tech.**

IDENTIFICATION

Instrument: Primary PM10 SSI	Site Name: Oildale - Manor
Model Number: Sierra Andersen 1200 VFC	Site Number: 15-243
Property Number: 20004244 (7547)	Site Location: 3315 Manor St.
VFC Serial Number: P1887	
Previous Calibration Log No.: AMC-RIR-111303-1	Instrument Property of: ARB
Elevation: 660'	Barometric Pressure: 755.0 mm Hg

CALIBRATION STANDARDS

Standard	ID Number	Certification Date	Certified Value or Factor
General Metals Variable Orifice	20002854	02-09-05	$36.9 * \sqrt{Pg * (Ta/Pa)} - 0.347$
MLDTEQM9407 (p/t) Standard	20020825	04-05-05	$[0.9926 * Ta (ind)] - 0.2354$ $[1.0125 * Pa (ind)] - 4.179$

CALIBRATION RESULTS

Component	PM10			
Volumetric Flow Rate Qt. (BGI) CFM	39.38			
Sampler Flow Rate Qv	40.59			
Percent Diff. from True (Qt vs Qv)	2.8 %			
Change from Prev. Cal. (2/16/96)%	3.7 %			
0 to 40 in. Magnehelic Ind. Press.	20.8			
Magnehelic Percent Accuracy	2.4 %			
Dickson Chart Reading	37.0			

Comments:

Calibrated By Ralph I. Robles
MLD-25 (5/95)

Checked By [Signature]

CALIFORNIA AIR RESOURCES BOARD
VOLUMETRIC FLOW CONTROL PM10 CALIBRATION DATA SHEET

DATE: 12/19/05

CALIBRATION: AS - IS FINAL

Site Name: Oildale - Manor	Site Elevation: 660'
Site Number: 15-243	Ambient Temperature °C (Ta) 20.24
Log Number: AMC-RIR-121905-1	Ambient Pres. mm Hg: (Pa) 755.0

ORIFICE CALIBRATION STANDARD

SAMPLER BEING CALIBRATED

Orifice Std. Make/Model: GMW Variable Orifice	Make and Model: Sierra Anderson 1200 VFC
Property Number: 20002854	VFC Serial Number: P1887
Date Certified: 02/09/05	Property Number: 20004244 (7547)
Cert. Eq.: True Flow = (36.9) * √Pg(Ta/Pa) - 0.347	Last Cal. Date: 06/10/05 Flow: 41.0
	Sampler Magnehelic Zero: 0
P/T Std. Property Number: 20020825	Initial Clean Filter Absolute Pressure mm Hg: (apf) : 715.2
P/T Date Certified: 04/05/05	Dickson Chart Reading: 36.0

SINGLE POINT CALIBRATION VERIFICATION

Variable Orifice True Vol. Flow (Qt)		Sampler Volumetric Flow				Percent Diff From True (Qt vs Qv)
BGI Magnehelic Pg "H2O	QT CFM	P/T Std. Abs Pres. Mm Hg	Magnehelic Pf "H2O	PO/PA	Qv CFM	
3.0	39.48	715.2	20.8	.95	40.59	2.8 %

$$\text{Percent Diff. From True} = \left| \frac{Qv - Qt}{Qt} \right| \times 100 = 2.8 \%$$

$$\% \text{ Difference from Previous Calibration} = \left| \frac{Qt - Qt \text{ Prev.}}{Qt \text{ Prev.}} \right| \times 100 = 3.7 \%$$

$$\text{Magnehelic Percent} = \left| \frac{(Pf_m \times 1.867) - (Pa - Pf_{pt})}{(Pa - Pf_{pt})} \right| \times 100 = 2.4 \%$$

Pressure in "H2O can be converted mm Hg by multiplying by 1,867.

$$Qv \text{ } ^\circ\text{F} = [(45.379 \times (Po/Pa)) - 2.243] + (Tf - 77) \times 0.33 \text{ or}$$

$$Qv \text{ } ^\circ\text{C} = [(45.379 \times (Po/Pa)) - 2.243] + (Tc - 25) \times 0.059$$

$$Qt = C \times \sqrt{Pg \text{ BGI} \times (Ta/Pa)} \pm \text{Intercept}$$

Comments: _____

MLD-38a (1/3/95) Calibrated By: Ralph J. Roberts Checked By: [Signature]

**CALIFORNIA AIR RESOURCES BOARD
CALIBRATION REPORT**

**TO: Gary Zimmerman Mgr.
Air Monitoring - Central
Air Resources Board**

**NUMBER: AMC-RIR-101206-1
CALIBRATION DATE: 10-12-06
REPORT DATE: 10-12-06**

**FROM: Ralph I. Robles
Air Quality Instrument Tech.**

IDENTIFICATION

Instrument: Primary PM10 SSI	Site Name: Olindale - Manor
Model Number: Sierra Andersen 1200 VFC	Site Number: 15-243
Property Number: 20004244 (7547)	Site Location: 3315 Manor St.
VFC Serial Number: P1887	
Previous Calibration Log No.: AMC-RIR-101905-1	Instrument Property of: ARB
Elevation: 660'	Barometric Pressure: 749.99 mm Hg

CALIBRATION STANDARDS

Standard	ID Number	Certification Date	Certified Value or Factor
General Metals Variable Orifice	20005450	09/15/06	$37.0 * \sqrt{P_g} * (Ta/Pa) - 0.563$
MLDTEQM9407 (p/t) Standard	20005256	08-31-06	$[0.9994 * Ta (ind)] - 0.3138$ $[1.002 * Pa (Ind)] - 1.6075$

CALIBRATION RESULTS

Component	PM10			
Volumetric Flow Rate Qt. (BGI) CFM	40.1			
Sampler Flow Rate Qv	40.11			
Percent Diff. from True (Qt vs Qv)	0.02%			
Change from Prev. Cal. (12/19/05)%	1.23 %			
0 to 40 in. Magnehelic Ind. Press.	18.5			
Magnehelic Percent Accuracy	3.3 %			
Dickson Chart Reading	38.0			

Comments:

MLD-25 (5/95)

Calibrated By

Ralph I. Robles

Checked By

R.I.R.

CALIFORNIA AIR RESOURCES BOARD

VOLUMETRIC FLOW CONTROL PM10 CALIBRATION DATA SHEET

DATE: 10/12/06

CALIBRATION: AS - IS

FINAL

Site Name: Oildale - Manor	Site Elevation: 660'
Site Number: 15-243	Ambient Temperature °C (Ta) 15.17
Log Number: AMC-RIR-101206-1	Ambient Pres. mm Hg: (Pa) 749.99

ORIFICE CALIBRATION STANDARD

SAMPLER BEING CALIBRATED

Orifice Std. Make/Model: HIVOL Variable Orifice	Make and Model: Sierra Anderson 1200 VFC
Property Number: 20005450	VFC Serial Number: P1887
Date Certified: 09/15/06	Property Number: 20004244 (7547)
Cert. Eq.: True Flow = (37.0) * √Pg(Ta/Pa) + 0.563	Last Cal. Date: 12/19/05 Flow: 40.6
	Sampler Magnehelic Zero: 0
P/T Std. Property Number: 20005256	Initial Clean Filter Absolute Pressure mm Hg: (apf) : 713.9
P/T Date Certified: 08/31/06	Dickson Chart Reading: 38.0

SINGLE POINT CALIBRATION VERIFICATION

Variable Orifice
True Vol. Flow (Qt)

Sampler Volumetric Flow

BGI Magnehelic Pg "H ₂ O	QT CFM
2.97	40.1

P/T Std. Abs Pres. Mm Hg	Magnehelic Pf "H ₂ O	PO/PA	Qv CFM
713.9	18.5	.95	40.11

Percent Diff. From True (Qt vs Qv)
0.02 %

$$\text{Percent Diff. From True} = \left| \frac{Q_v - Q_t}{Q_t} \right| \times 100 = \underline{\underline{0.02}} \%$$

$$\% \text{ Difference from Previous Calibration} = \left| \frac{Q_t - Q_t \text{ Prev.}}{Q_t \text{ Prev.}} \right| \times 100 = \underline{\underline{1.23}} \%$$

$$\text{Magnehelic Percent} = \left| \frac{(P_{fm} \times 1.867) - (P_a - P_{fpt})}{(P_a - P_{fpt})} \right| \times 100 = \underline{\underline{3.3}} \%$$

Pressure in "H₂O can be converted mm Hg by multiplying by 1,867.

$$Q_v \text{ } ^\circ\text{F} = [(45.379 \times (P_o/P_a)) - 2.243] + (T_f - 77) \times 0.33 \text{ or}$$

$$Q_v \text{ } ^\circ\text{C} = [(45.379 \times (P_o/P_a)) - 2.243] + (T_c - 25) \times 0.059$$

$$Q_t = C \times \sqrt{P_g \text{ BGI} \times (T_a/P_a)} \pm \text{Intercept}$$

Comments: _____

MLD-38a (1/3/95)

Calibrated By:

Ralph J. Rables

Checked By:

Quil

CALIFORNIA AIR RESOURCES BOARD
Volumetric PM10 24-Hour Sample Report/Sample Tracking

SAMPLE NO. (FILTER PAPER NO.)
04074510

Station Name: Corcoran - Patterson #1
 Station Address: 1520 Patterson
 Project Name (If Applicable): SJUAPCD
 Station Operator/Agency: Ant Salm Phone No: 559 230 5866

COUNTY: 16 SITE: 08719 AGENCY: E
 INSTRUMENT NO.: 04120

SAMPLING CONDITIONS <input checked="" type="checkbox"/>	LOCAL CONDITION CODES (ENTER APPROPRIATE CODE IN THE BOX AT LEFT)		
	* - NO UNUSUAL CONDITIONS A - HIGH WINDS E - FOREST FIRE F - STRUCTURAL FIRE	J - CONSTRUCTION NEARBY K - FARMING NEARBY L - HIGHWAY CONSTRUCTION N - SANDING/SALTING STREETS	P - ROOFING OPERATIONS Q - PRESCRIBED BURN X - RAIN Y - SNOW Z - OTHER (Explain in Field Comments)

SAMPLE COLLECTION DATA							DATE OF LAST CALIBRATION		
	DATE			TIME		ELAPSED TIME METER (MIN.)	FILTER PAPER WEIGHT (GRAMS)		
	YEAR	MONTH	DAY	HOURS	MIN.		YEAR	MONTH	DAY
FINISH	06	09	22	24	00	1440			
START	06	09	22		0	0	4.50	43	
INDICATED FLOW RATE						NET: 1440	AVERAGE STD FLOW (SCFM) 39.9		
							AVERAGE IND. FLOW RATE 39.9		

Pd(I) 21.0 in. Pd(F) 21.9 in. Ta 20.6 °C Pa 750 mmHg
 Type of Sample: Regular Collocate Make up
 D: 4.5045

TO BE COMPLETED BY SAMPLER OPERATORS:

- Inspection of sampler and filter indicates that sample collected is in compliance with quality control standards for sampling. Filter and Dickson recorder chart enclosed.
 Sample does not meet quality control standards for sampling and should be invalidated. Dickson recorder chart and filter enclosed.
 Make up sample scheduled for _____

- Reasons:
- | | | |
|---|---|---|
| <input type="checkbox"/> Filter Contaminated or Damaged | <input type="checkbox"/> High/Low Flowrate | <input type="checkbox"/> Erratic Flowrate |
| <input type="checkbox"/> Power Outage | <input type="checkbox"/> Dickson Chart Recorder Problem | <input type="checkbox"/> Timer Problem |
| <input type="checkbox"/> Other _____ | | |

Field Comments: Make up Br 9/17

Sample Tracking

Action	Transfer Method (Check One)		Name & Initials	Date/Time
	Carrier	Person		
Released by Field	<input checked="" type="checkbox"/>		AA Salm	9-28 0800
Received by Lab				

====FOR LABORATORY USE ONLY====

LIMS Sample ID: _____

Sample Conditions upon Received: _____

	PRE-ANA.	POST-ANA.
Initials	RA	
Date	9/18/05	

Lab Comments: _____

Volumetric Flow Calculator

Corcoran-Patterson #2

Run Date 9/22/2006

Filter# _____

Press. Drop Initial Pd(I) = 21.0

BPR Avg. (Pa) = 750 mmHg

Press. Drop Final Pd(F) = 21.8

Temp Avg. (Ta) = 20.6 °C

Press. Final (Pf) = 39.98

Temp. (in Kelvins) = 293.9 Kelvin

Po/Pa = 0.947

Calibration Date 6/13/2006

Interpolation:

Temp (below ave. temp) = 18.0

ASI/GMW for above = 1.122

Temp (above ave. temp) = 22.0

ASI/GMW for above = 1.132

Inter. Factor = 0.0035

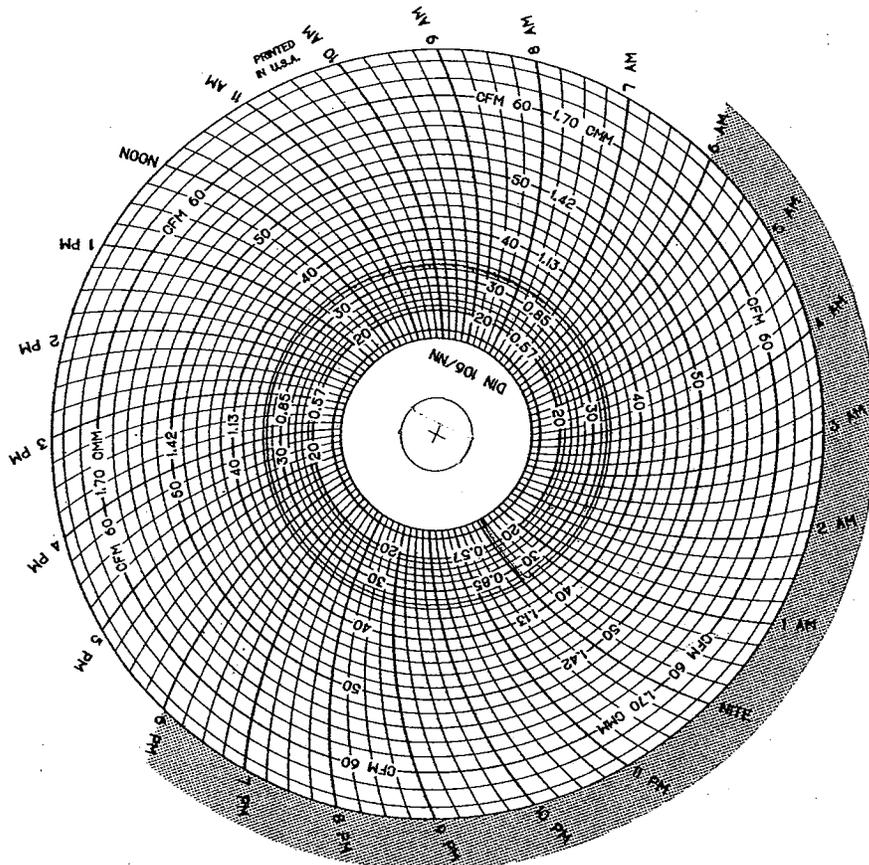
Interpolated:

Look up table value (ASI/GMW) = 1.1285 cubic meters/min

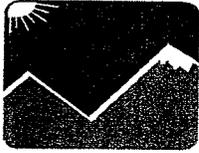
Average Std Flow (SCFM) = 39.9

Average Ind. Flow Rate = 39.9

Remarks: Makeup for 9/14



SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT
VOLUMETRIC FLOW CONTROL
PM10 CALIBRATION DATA SHEET



Date 6/13/2006

Calibration: AS-IS X Final _____

Site Name: Corcoran-Patterson # 1
Site Number: 16-719
Log Number: NA

Site Elevation: 296
Ambient Temp C: (Ta) 24.0
Ambient press: mmHg: (Pa) 757

Calibration Standards

Orifice Std. Make/Model: F&J Model CD-550-1
Property Number: 11749
Date Certified: 4/3/2006
P Std. Property Number: Honeywell AKW50AZ 012179
P Date Certified: 12/12/2005

Sampler Being Calibrated

Make and Model: Sierra -Anderson
VFC Serial Number: P04964
Property Number: 1885
Last Cal. Date: 1/19/2006
Flow During Last Cal Date: 39.25
Sampler Magnehelic Zero: 0.0
Dickson Chart reading: 32.5

Single-Point Calibration Verification

True Volumetric Flow (Qt)

F&J AVG.SCFM 39.36
Qt CFM 40.17
delta Cal ser. 186
Qt= K1 Sqrt (ΔP Pa/Tk) + K2
Tk= Ta+273

Sampler Volumetric Flow (Qv)

Pf Std Abs Pres mmHg 716
Magnehelic Pf "H2O" 22
Po/Pa 0.9457
Qv CFM 40.05

% Diff from True $\frac{Qv - Qt}{Qt} \times 100 = \underline{-0.30\%}$ %

Po/Pa = $1 - \frac{Pf \text{ "H2O" }}{Pa * 0.5353}$

% Diff from previous cal $\frac{Qt - Qt \text{ Prev}}{Qt \text{ Prev}} \times 100 = \underline{2.34\%}$ %

Magnehelic % Accuracy $\frac{[(Pf \text{ "H2O" } \times 1.867) - (Pa - Pf \text{ std})]}{(Pa - Pf \text{ std})} \times 100 = \underline{0.24\%}$ %

* Pfstd = PmmHg measured at stagnation tap by pressure standard (clean filter in calibrated orifice) while sampler is running
**QvCFM = m3m (chart look up value)(35.3146667215)

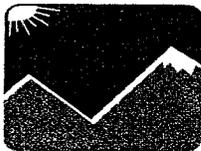
Comments: The unit was working well prior to motor replacement.

Calibrated by: Richard Nelson Approved by: Warren LeLeaux

RMN

WLL 7/11/06

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT
VOLUMETRIC FLOW CONTROL
PM10 CALIBRATION DATA SHEET



Date 9/28/2006

Calibration: AS-IS _____ Final X

Site Name: Corcoran-Patterson # 1
Site Number: 16-719
Log Number: NA

Site Elevation: 296
Ambient Temp C: (Ta) 27.0
Ambient press. mmHg: (Pa) 754

Calibration Standards

Orifice Std. Make/Model: F&J Model CD-550-1
Property Number 11749
Date Certified 4/3/2006
P Std. Property Number: Honeywell AKW50AZ 012179
P Date Certified: 12/12/2005

Sampler Being Calibrated

Make and Model: Sierra -Anderson
VFC Serial Number: P04964
Property Number: 1885
Last Cal. Date: 6/13/2006
Flow During Last Cal Date: 40.36
Sampler Magnehelic Zero: 0.0
Dickson Chart reading: 34.0

Single-Point Calibration Verification

True Volumetric Flow (Qt)

F&J AVG.SCFM 39.127
Qt CFM 40.229

$Qt = K1 \sqrt{(\Delta P Pa/Tk)} + K2$
 $Tk = Ta + 273$

% Diff from True $\frac{Qv - Qt}{Qt} \times 100 = \underline{-0.03\%}$ %

% Diff from previous cal $\frac{Qt - Qt\ Prev}{Qt\ Prev} \times 100 = \underline{-0.32\%}$ %

Magnehelic % Accuracy $\frac{[(P_{fm} \text{ "H}_2\text{O"} \times 1.867) - (Pa - P_{fstd})]}{(Pa - P_{fstd})} \times 100 = \underline{2.97\%}$ %

Sampler Volumetric Flow (Qv)

Pf Std Abs Pres mmHg 715
Magnehelic Pf "H₂O" 21.5
Po/Pa 0.94680
Qv CFM 40.216

$Po/Pa = 1 - \frac{Pf \text{ "H}_2\text{O"}}{Pa \times 0.5353}$

* Pfsd = PmmHg measured at stagnation tap by pressure standard (clean filter in calibrated orifice) while sampler is running.

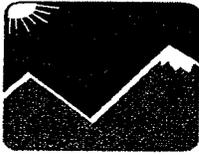
**QvCFM = m3m (chart look up value)(35.3146667215)

Comments: Motor brushes failed. Rebuilt motor installed is working satisfactorily, but a bit loud.

Calibrated by: Richard Nelson Approved by: Warren LeLeaux

RL 10/02/06

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT
VOLUMETRIC FLOW CONTROL
PM10 CALIBRATION DATA SHEET



Date 6/6/2006

Calibration: AS-IS _____ Final X

Site Name: Bakersfield-Goldenstate
Site Number: 06-029-0010
Log Number: NA

Site Elevation: 497
Ambient Temp C: (Ta) 32.0
Ambient press. mmHg: (Pa) 743

Calibration Standards

Orifice Std. Make/Model: F&J Model CD-550-1
Property Number 11749
Date Certified 4/3/2006
P Std. Property Number: Delta Cal ser. 000445
P Date Certified: 10/19/2005

Sampler Being Calibrated

Make and Model: Sierra -Anderson
VFC Serial Number: P4875
Property Number: 4121
Last Cal. Date: 3/14/2006
Flow During Last Cal Date: 38.93
Sampler Magnehelic Zero: 0
Dickson Chart reading: 30.0

Single-Point Calibration Verification

True Volumetric Flow (Qt)

F&J AVG. SCFM 36.69
F&J Avg. ACT. CFM 38.87

$Qt = K1 \sqrt{\Delta P Pa / Tk} + K2$
 $Tk = Ta + 273$

% Diff from True $\frac{Qv - Qt}{Qt} \times 100 = \underline{3.65} \%$

Sampler Volumetric Flow (Qv)

Pf Std Abs Pres mmHg 704
Magnehelic Pf "H2O" 23.5
Po/Pa 0.9409
Qv CFM 40.29

$Po/Pa = 1 - \frac{Pf \text{ "H2O" }}{Pa * 0.5353}$

% Diff from previous cal $\frac{Qt - Qt \text{ Prev}}{Qt \text{ Prev}} \times 100 = \underline{-0.15} \%$

Magnehelic % Accuracy $\frac{[(Pf_m \text{ "H2O" } \times 1.867) - (Pa - Pf_{std})]}{(Pa - Pf_{std})} \times 100 = \underline{7.6} \%$

* Pfsd = PmmHg measured at stagnation tap by pressure standard (clean filter in calibrated orifice) while sampler is running
**QvCFM = m3m (chart look up value)(35.3146667215)

Comments: A reconditioned motor was installed and is operating normal.

Calibrated by : Richard Nelson Approved by: Warren LeLeaux
RMN 7/11/06