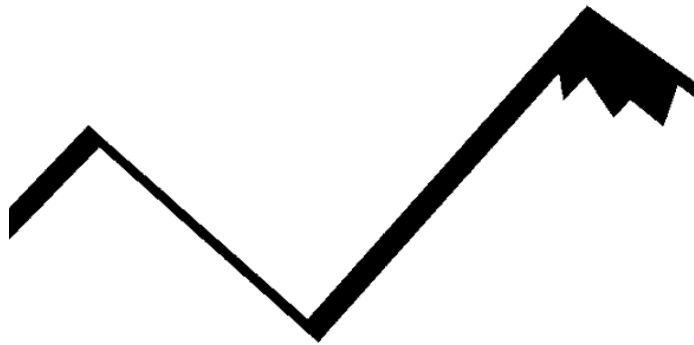
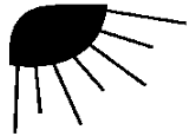


Exceptional Event Documentation

Corcoran, California
October 27, 2009



San Joaquin Valley
Unified Air Pollution Control District

March 16, 2011

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Executive Summary

The analysis in this report demonstrates that the exceedances of the PM10 National Ambient Air Quality Standard (NAAQS) recorded on October 27, 2009 were caused by unusually strong winds, and therefore qualify as an Exceptional Event under the Clean Air Act.

A strong, dry cold front associated with a low pressure system passed through the region on October 27, causing the high wind event. The cold front generated strong and gusty northwesterly winds across the San Joaquin Valley. The high winds entrained dust in the western and southern San Joaquin Valley and transported and deposited PM10 in the Corcoran area. The windstorm overwhelmed the San Joaquin Valley Air Pollution Control District's rigorous particulate matter emission controls and led to historically high PM10 concentrations in the Corcoran area. The exceedance of the NAAQS would not have occurred but for the wind event.

Table ES-1: 24-hour Average PM10 Concentrations, October 27, 2009
(Real-time Monitor)

Site	PM10 Concentration
Corcoran Real-time monitor	416 $\mu\text{g}/\text{m}^3$

This report meets all U.S. Environmental Protection Agency (EPA) documentation standards for Exceptional Events (see Section 1) and follows accepted EPA methodologies and guidance. Pursuant to federal regulations, with EPA concurrence, the October 27, 2009 PM10 measurements shown in Table ES-1 would be excluded from consideration regarding the NAAQS (40 Code of Federal Regulations (CFR) 50.14(b)).

Section 1: Meeting Federal Requirements for Exceptional Events

EPA's *Treatment of Data Influenced by Exceptional Events* rule (codified in 40 CFR 50) describes the requirements for exceptional events flagging and documentation. The District meets all of these procedural and documentation requirements.

1.1: Procedural Requirements

1. Public notification that event was occurring (40 CFR 50.14(c))

The District issued a press release on October 27, 2009 at 2:10 PM PDT highlighting elevated PM10 levels due to high winds (see Appendix C).

2. Place informational flag on data in the Air Quality System (AQS) (40 CFR 50.14(c)(2)(i))

The District submits real-time data into AQS. Once the data is in AQS, if the District's preliminary analysis supports influence from an exceptional event, the District submits a preliminary flag into AQS. The data is not official until it undergoes more thorough quality assurance and quality control, leading to certification by May 1 of the year following the calendar year in which the data was collected (40 CFR 58.15(a)(2)). The data flag is not official until the exceptional event documentation is approved by EPA. An AQS printout showing that the data has been flagged is in Appendix H.

3. Notify EPA of intent to flag through submission of initial event description by July 1 of calendar year following event (40 CFR 50.14(c)(2)(iii))

Shortly after the date of the event in question, the District notified EPA of the Exceptional Event via phone call. The District submitted a letter to the California Air Resources Board (CARB) on May 26, 2010 listing the days the District intended to analyze under the exceptional events policy (see Appendix A). The October 27, 2009 PM10 high wind event was included on this list. CARB then sent the District's list to EPA.

4. Document that the public comment process was followed for event documentation (40 CFR 50.14(c)(3)(v))

The District will conduct a 30-day public comment period on this document from March 16, 2011 through April 15, 2011. Public notice will be available in Valley newspapers and on the District website. Evidence of this notice will be submitted to EPA with the exceptional event documentation.

5. Submit demonstration supporting exceptional event flag (40 CFR 50.14(a)(1-2))

This document is intended to satisfy this requirement.

1.2: Documentation Requirements

6. **Provide evidence that the event satisfies “exceptional event” criteria set forth in 40 CFR 50.1(j) (40 CFR 50.14(c)(3)(iv)(A))**

See Sections 2 and 4 of this document.

According to 40 CFR 50.1(j), also Clean Air Act (CAA) Section 319, an exceptional event meets all of the following criteria:

- a. Affects air quality (See Section 4 of this document)
- b. Is not reasonably controllable or preventable (See Section 2 of this document)
- c. Is caused by either (1) human activity that is unlikely to recur at a particular location or (2) a natural event (See Section 4 of this document)
- d. Is determined by EPA to be in accordance with 40 CFR 50.14 to be an exceptional event (Pending EPA concurrence upon receipt of this document)

7. **There is a clear, causal relationship between the measurement under consideration and the event (40 CFR 50.14(c)(3)(iv)(B))**

See Section 4 of this document.

8. **Provide evidence that the event is associated with a measured concentration in excess of normal, historical fluctuations (40 CFR 50.14(c)(3)(iv)(C))**

See Section 3 of this document.

9. **Provide evidence that there would have been no exceedance or violation but for the event (the “but for” test) (40 CFR 50.14(c)(3)(iv)(D))**

See Section 5 of this document.

Section 2: Air Pollutant Controls in the San Joaquin Valley

This section satisfies the following federal requirement:

- An exceptional event is one that is not reasonably controllable or preventable
(40 CFR 50.14(c)(3)(iv)(A) and 40 CFR 50.1(j))

While high winds are not controllable, particulate matter emissions have been stringently controlled by the San Joaquin Valley Air Pollution Control District (District). The District's pollution controls are recognized as some of the toughest in the nation. Most notable among the District's PM controls:

- Regulation VIII (Fugitive PM10 Prohibitions), which requires actions to prevent, reduce, and mitigate anthropogenic fugitive dust emissions.
- Rule 4550 (Conservation Management Practices), which limits fugitive dust emissions from agricultural operations.
- Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters), which restricts wood burning when ambient PM10 concentrations reach or exceed 135 $\mu\text{g}/\text{m}^3$ or ambient PM2.5 concentrations reach or exceed 30 $\mu\text{g}/\text{m}^3$ between November 1 and February 28.
- Rule 4103 (Open Burning), which prohibits the burning of most agricultural waste materials and severely restricts the burning of the non-prohibited material, in conjunction with the District's Smoke Management Program.
- Rule 4106 (Prescribed Burning and Hazard Reduction Burning), which assures that the controlled burning of forest and rangeland residue in the District's foothills and mountains is conducted to prevent air quality problems.

Recognizing the effectiveness of the District's PM control measures, EPA approved the District's PM10 control strategy as Best Available Control Measures (BACM) in its May 26, 2004 approval of the *2003 PM10 Plan* (69 FR 30035). EPA reiterated this BACM approval in its November 12, 2008 approval of the District's *2007 PM10 Maintenance Plan*, noting that EPA had also approved many of the District's individual rules as BACM since the *2003 PM10 Plan* approval (73 FR 66766). In addition, PM and PM precursors continue to be further controlled in the Valley through the District's ongoing planning and regulatory efforts, including the *2007 Ozone Plan*, the *2008 PM2.5 Plan*, and the resulting control measures.

The District's BACM and other control measures have significantly reduced ambient PM10 concentrations and allowed the San Joaquin Valley Air Basin to attain the PM10 NAAQS. The District's BACM-level pollution controls are designed for the typical and wide range of climate conditions in the San Joaquin Valley. For a natural event to overwhelm these controls, the characteristics of the event - by definition - must be outside the norm. Because the District's controls are considered Best Available Control Measures and because the controls were in place at the time, the dust entrained on October 27, 2009 was clearly not reasonably controllable or preventable.

Human activities that generated PM10 emissions were approximately constant before, during and after the October 27, 2009 wind event, indicating that the sudden increase in PM10 concentrations was not driven by human activity. Based on a survey of the available information, there is no evidence of unusual anthropogenic emissions on October 27, 2009. Pursuant to District Rule 4103 and the District's Smoke Management Program, 0.0000 tons of PM10 emissions from the burning of agricultural material were authorized anywhere in the District on October 27, 2009 in anticipation of the high wind event and high PM10 concentrations.

Typical October farming operations in Kings County and the western part of Fresno County include land preparation and planting for winter crops, harvesting of summer crops, and end-of-year land cultivation to increase rain water infiltration into the soil to prevent soil erosion and refill the subsoil aquifer. The San Joaquin Valley Air Pollution Control District has several effective fugitive dust control measures in place. District Rule 8061 (Paved and Unpaved Roads) and Rule 8081 (Agricultural Sources) establishes fugitive dust control requirements to stabilize non-field surfaces of paved and unpaved roads, vehicle and equipment parking and traffic areas, vehicle carryout/trackout, and bulk material piles. District Rule 4550 (Conservation Management Practices) for agricultural operations implement multiple fugitive dust control measures for land preparation / cultivation, harvest activities, unpaved roads and equipment yards, and other cultural practices.

The above practices are applied as an industry standard and they sufficiently control dust under the San Joaquin Valley's typical range of weather patterns. Exceptions to fugitive dust control may occur when unusual weather conditions overwhelm properly applied and timed dust control practices.

Additionally, a summary of the District's compliance inspections, photographs, and video images on October 27, 2009 is shown in Appendix E.

Section 3: PM10 concentrations on October 27, 2009 were in excess of normal, historical fluctuations

This section satisfies the following federal requirement:

- Provide evidence that the event is associated with a measured concentration in excess of normal, historical fluctuations
(40 CFR 50.14(c)(3)(iv)(C))

PM10 concentrations on October 27, 2009 were exceptionally high at the Corcoran site, as summarized in Table 3-1. All real-time PM10 measurements presented in this document were collected under local conditions. The measured PM10 concentration on October 27 at Corcoran was greater than the 99th Percentile.

Table 3-1: Historical Ranking of October 27, 2009 PM10 Concentrations at the Corcoran Site

Date	Site	Concentration (ug/m ³)	Historical Ranking	Year Data Record Began
10/27/2009	Corcoran-Patterson Ave.	416	1 st	1996

Historically, 24-hour PM10 monitor concentrations are elevated in the month of October. However, due to the strong control measures in place in the San Joaquin Valley Air Basin, the frequency of PM10 exceedances in October and the maximum PM10 concentrations for October have decreased over the past several years (see Table 3-2 and Figure 1). It is noted that a subsequent windblown dust event occurred in the southern San Joaquin Valley on April 11, 2010. This event will be the subject of a forthcoming Exceptional Event document.

With the exception of the EPA-approved October 26, 2006 high wind event and the wind-blown dust events in October 2008 and 2009, peak PM10 levels during October have remained below the NAAQS since 2002. It is clear that the PM10 levels on October 27, 2009 were outside of historical maximums at the Corcoran site.

Table 3-2: Maximum PM10 Concentrations in the Month of October by year since 1987

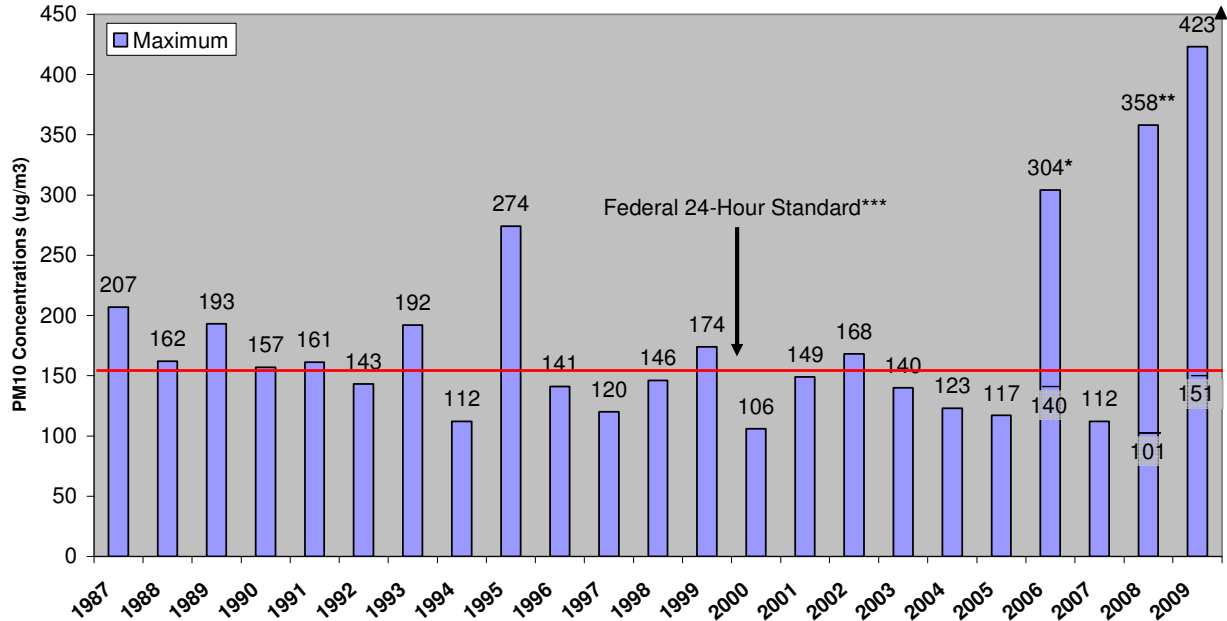
Date	Max PM10 Value ($\mu\text{g}/\text{m}^3$)	Location
10/6/1987	207	Corcoran – Van Dorsten
10/24/1988	162	Five Points
10/19/1989	193	Corcoran – Van Dorsten
10/26/1990	157	Visalia-Church
10/15/1991	161	Corcoran-Van Dorsten
10/13/1992	143	Corcoran-Van Dorsten
10/28/1993	192	Hanford
10/23/1994	112	Hanford
10/4/1995	274	Corcoran-Van Dorsten
10/18/1996	141	Corcoran
10/25/1997	120	Corcoran
10/20/1998	146	Hanford
10/21/1999	174	Corcoran
10/9/2000	106	Corcoran
10/16/2001	149	Hanford
10/29/2002	168	Corcoran
10/18/2003	140	Hanford
10/12/2004	123	Hanford
10/13/2005	117	Hanford
10/25/2006	304*	Corcoran
10/30/2007	112	Corcoran
10/30/2008	358**	Bakersfield-Golden State Hwy
10/13/2009	423**	Bakersfield-Golden State Hwy

* EPA concurred with the District's request to flag October 26, 2006 as having been caused by an exceptional event of high winds.

** Pending EPA approval of the District's request to flag October 30, 2008 as an Exceptional Event due to high winds.

Note: The October 27, 2009 PM10 measurement of $416 \mu\text{g}/\text{m}^3$ was the second highest measurement that occurred in October 2009.

Figure 1: October Historical Maximum 24-Hour PM10 Concentration Since 1987



- * EPA concurred with the District’s request to flag October 25, 2006 as an Exceptional event due to high winds.
- ** Pending EPA approval of the District’s request to flag October 30, 2008 as an Exceptional Event due to high winds.
- ***Federal 24-Hour National Ambient Air Quality Standard (NAAQS) for PM10 is defined as a 24-hour average of 155 µg/m³.
- ▲ Pending EPA approval of the District’s request to flag October 13, 2009 as an Exceptional Event due to high winds.

Note: In 2006, 2008, and 2009, the figure above has multiple exceptional event data points depicted within the bar chart. The “true maximum” PM10 non-exceptional event data points are shown for those years: 140 µg/m³ (2006), 101 µg/m³ (2008), and 151 µg/m³ (2009).

Pursuant to methodologies used by EPA in previous approvals of Exceptional Events, the District developed box-whisker plots to further analyze October PM10 data through 2009 for active sites in the San Joaquin Valley to determine if the concentrations on October 27, 2009 were in excess of normal historical fluctuations, including background (see Figure 2). The start date of monitoring at each site is summarized in Table 3-3.

The District used these box-whisker plots to identify outliers. An outlier is defined as a point that falls above the upper quartile (top of the box). A quartile is one of the four divisions of observations which have been grouped into four equal-sized sets, based on their statistical rank. The following equation identifies where the outlier resides:

Outlier > QU + 1.5*IQR

Where, QU is the 75th Percentile value, and IQR is the difference between the 75th and 25th Percentile values.

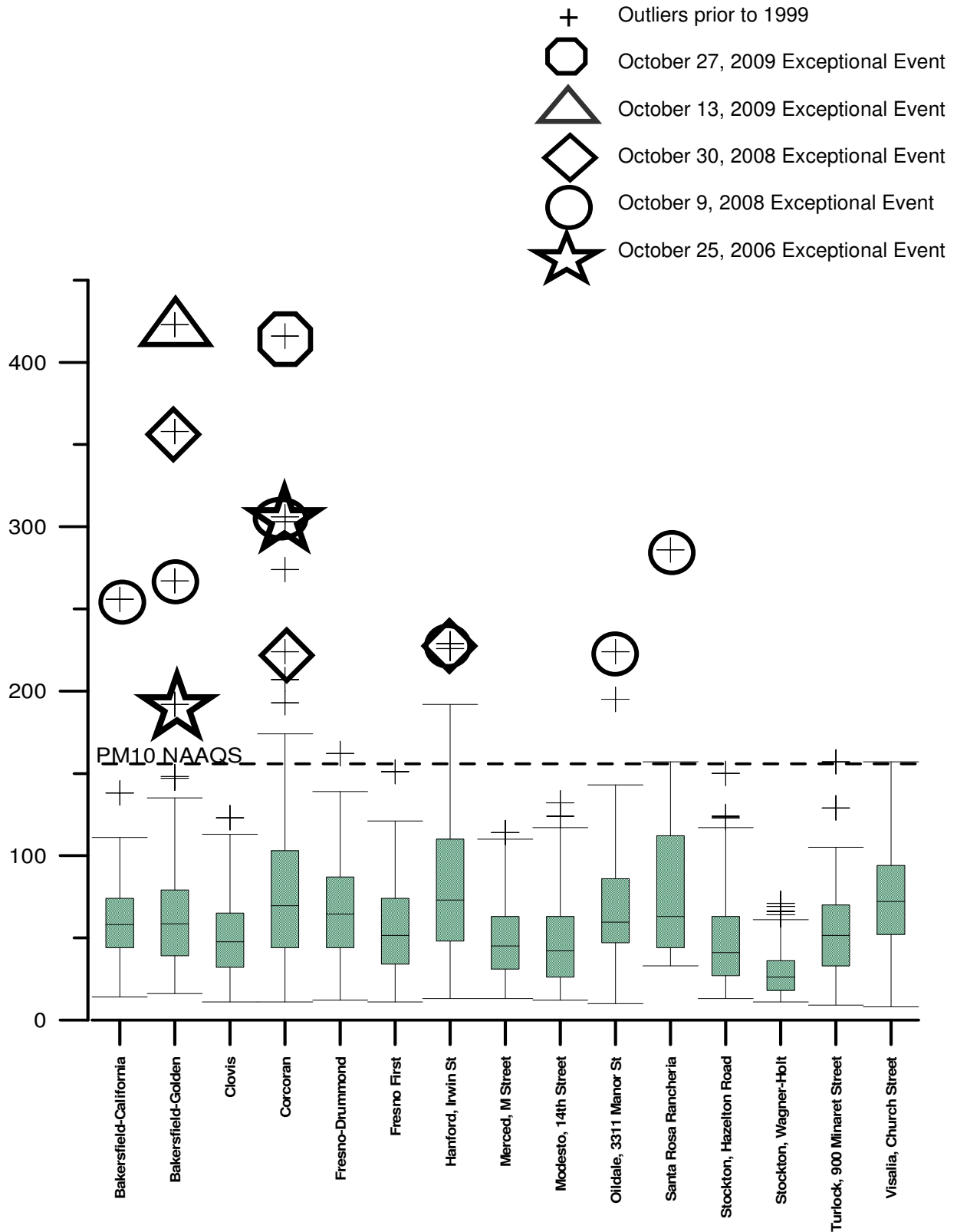
For Corcoran, the PM10 concentrations measured on October 27 was an outlier (see Figure 2). Thus, the October 27, 2009 exceedance was clearly in excess of normal historical fluctuations.

Table 3-3: PM10 Monitor Site Location and First Available October Data Point

PM 10 Monitor Site Location	First Available October Data Point
Bakersfield - CA	10/5/1994
Bakersfield – Golden State Hwy	10/5/1994
Clovis	10/3/1991
Corcoran*	10/6/1987
Fresno - Drummond	10/1/1989
Fresno - 1st	10/2/1990
Hanford	10/11/1993
Merced M St.	10/3/1999
Modesto - 14th St.	10/2/1998
Oildale	10/8/1987
Santa Rosa Rancheria	10/2/2006
Stockton - Hazelton	10/6/1987
Stockton - Wagner-Holt	10/18/1996
Turlock Minaret St.	10/5/1994
Visalia Church St.	10/6/1987

* Corcoran - Van Dorsten through 1997, then Corcoran - Patterson Avenue thereafter. Collocated October 1995 through 1997.

Figure 2: Box-Whisker Plot of PM₁₀ (µg/m³) data by site for the month of October



*NAAQS (National Ambient Air Quality Standard)

Section 4: PM10 concentrations were caused by a natural high wind event

This section satisfies the following federal requirements:

- The event was caused by a natural event
(40 CFR 50.14(c)(3)(iv)(A) and 40 CFR 50.1(j),
- The event affected air quality
(40 CFR 50.14(c)(3)(iv)(A) and 40 CFR 50.1(j),
- There is a clear, causal relationship between the measurement under consideration and the event
(40 CFR 50.14(c)(3)(iv)(B))

On October 27, 2009, a high wind event caused entrainment and transport of geologic particulate matter (PM) across the western San Joaquin Valley to the Corcoran/Hanford area. Reports of blowing dust occurred at the Lemoore Naval Air Station and at Hanford as a result of the wind storm. The western portions of the Valley were affected by this event, particularly the Corcoran area (see Figure 3).

Wind speeds in excess of 17 miles per hour have been documented to entrain typical San Joaquin Valley soil material into the atmosphere. Once entrained, PM can be transported by winds much slower than the entrainment wind speed. While it is easy to visualize how airborne dust is transported downwind, it is useful here to explain how soil material can become entrained, and how it stays suspended.

In order for soil materials to be entrained into the atmosphere, winds must be strong enough for surface particles to overcome friction and become dislodged. As particles are pushed and rolled along the ground, they can become airborne. Turbulent winds, swirling and moving vertically away from the surface, surround and lift the airborne particle much as a kite is lifted into the air when it is raised slightly off the ground.

Turbulence created by surface obstructions, strong wind shear, and surface heating mixes the entrained dust higher into the atmosphere. Vertical movement associated with turbulent mixing works against gravitational settling of particles, allowing dust to stay suspended in the atmosphere at speeds lower than the entrainment velocity. The higher the dust is mixed into the atmosphere, the longer it remains suspended.

Similar to a kite moving higher into the atmosphere, the further a particle moves away from the surface, the easier it is to keep it suspended. The combination of reduced surface obstructions, turbulent mixing, and exposure to higher winds aloft, allows soil material to be suspended as dust at wind speeds lower than those required for entrainment.

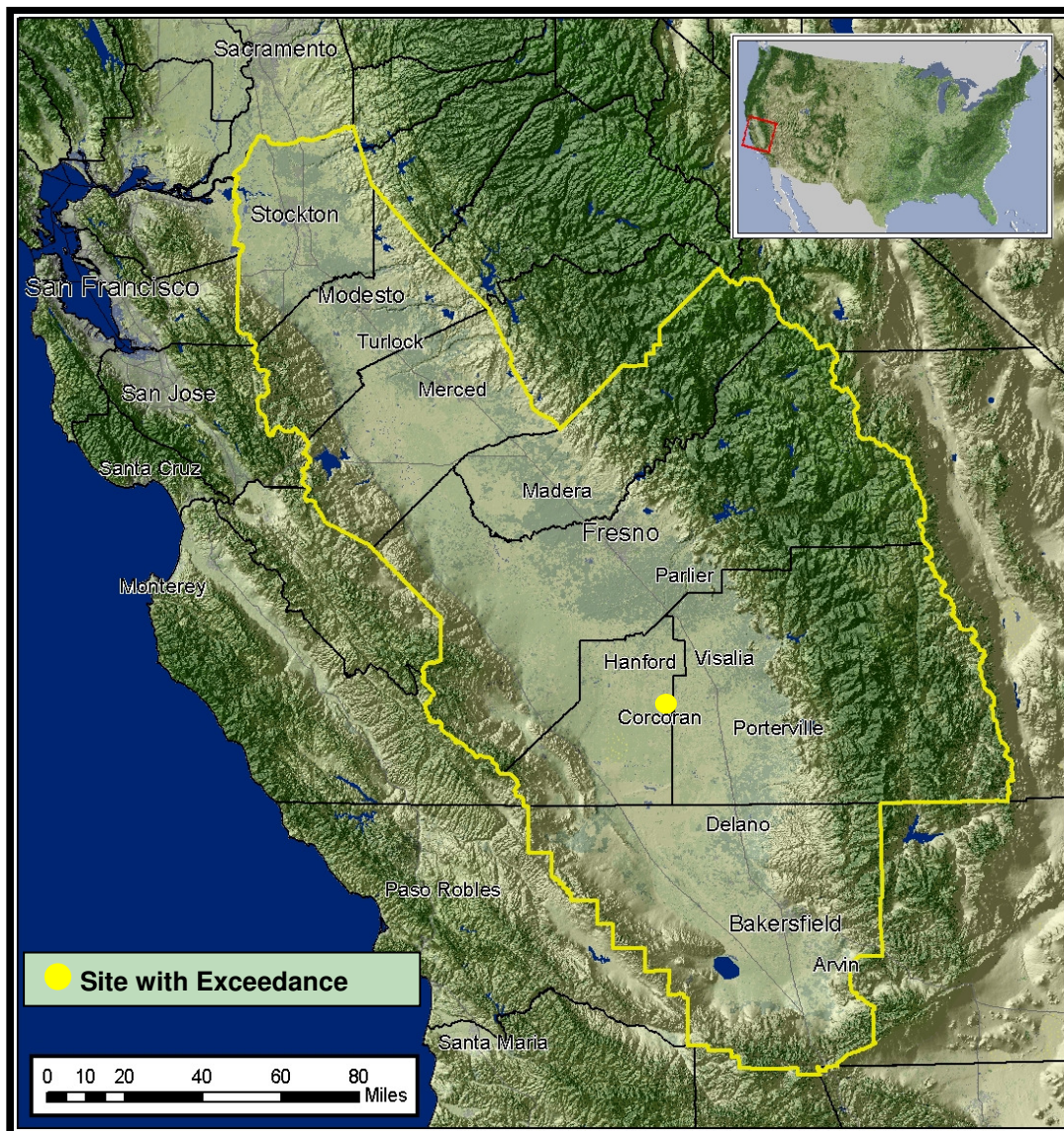
4.1: A natural event of high winds occurred on October 27, 2009

There are many sources of documentation that may be used, if available, to document and establish an exceptional event, as described in the District's *Natural Events Action Plan* (NEAP):

- 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
- Media accounts of the event
- Filter analysis

As shown in Figure 3, the San Joaquin Valley is a distinct inter-mountain valley in Central California, oriented southeast to northwest, with the slightly higher end of the valley closer to Los Angeles and the low end at the Sacramento-San Joaquin River Delta near San Francisco. The Valley is bounded by the Sierra Nevada range to the east, the Temblor and Coastal ranges to the west and the Tehachapi and San Emigdio ranges to the south. The floor of the San Joaquin Valley is approximately 200 miles long and 80 miles wide on average. In October of each year, the wind direction is generally from the northwest, following the orientation of the valley and Sierra Nevada Mountains.

Figure 3: Map showing San Joaquin Valley and the site with the exceedance



In 2009, the central and southern San Joaquin Valley had experienced minimal rainfall during the spring and fall, and a dry summer with seasonal precipitation totals running below normal. A strong, dry cold front passed through the region on October 27, causing the high wind event. There was a significant drop in temperature over just a two day period, from October 26 to October 27 (shown in Table 4-1) which demonstrates the change in the weather pattern that occurred. The frontal passage ushered in strong winds that led to the October 27, 2009 exceedance.

Table 4-1: Drop in maximum temperature surrounding the event

	October 26	October 27	October 28	October 29
Fresno	82	66	66	65
Hanford	81	64	64	64
Bakersfield	83	67	61	64

According to T&B Systems analysis of the CRPAQS (California Regional Particulate Air Quality Study) study area:

“There is evidence that winds at speeds of approximately 8 m/s [meters per second; 8 m/s is approximately 17.9 miles per hour (mph)] or greater can contribute to coarse particulate concentrations. ... there are indications that higher gusts associated with lower wind speeds (e.g. 10 m/s [22.3 mph] gusts when average wind speeds are closer to 6 m/s [13.4 mph]) may provide explanations for higher coarse mass concentrations” (T&B Systems, 2004, p 4).

This report concluded that wind speeds of 8 m/s (17.9 mph) could be sufficient to entrain surface soil into the atmosphere. The District used this speed as an indicator of the potential for dust entrainment during high wind events.

On October 27, 2009, the Lemoore Naval Air Station, located 27 miles northwest of Corcoran, reported NW to NNW wind gusts of 31 mph or greater from 3:56 AM to 11:56 PM Pacific Standard Time (PST), with peak winds gusting to 46 mph at 2:56 PM PST. Winds between Lemoore and Corcoran were sufficient to entrain dust into the atmosphere.

To demonstrate that winds were sufficient to entrain dust into the atmosphere, the District used meteorological data collected at the California Irrigation Management Information System (CIMIS) station in Stratford. The Stratford CIMIS station is located 12 miles southeast of the Lemoore Naval Air Station and 16 miles northwest of Corcoran. The wind speed at Stratford is measured at 2 meters Above Ground Level (AGL). In order to calculate the wind speed at Stratford at 10 meters above ground level the District used the following relationship. Over a flat surface with no obstructions and a well-mixed atmosphere, wind speed typically varies logarithmically with height above ground. This relationship is modeled using the equation:

$$V_1 / V_2 = (Z_1 / Z_2)^p$$

where:

V = wind speed,

Z = height above ground,

p is approximately 0.143 for flat terrain and 0.4 for rough terrain,
subscripts 1 and 2 denote two different sampling heights AGL

A number of documents (including *Wind in California* (California Department of Water Resources Bulletin No. 185, January 1978) and *An Introduction to Boundary Layer Meteorology* (Roland Stull, 1997)) utilize this equation. While this equation is not representative of the vertical wind structure in all weather conditions, it is appropriate to use this equation for the strong wind conditions that occurred on October 27, 2009.

The Stratford CIMIS station (a flat terrain area) reported a peak hourly averaged wind speed of 29.1 mph at 2 meters AGL (see Table 4-4 and Appendix E). The hourly averaged wind speed at 10 meters AGL would be 36.6 mph, as shown below:

$$V_{10 \text{ meters}} = V_{2 \text{ meters}} \left(Z_{10 \text{ meters}} / Z_{2 \text{ meters}} \right)^{0.143}$$

$$V_{10 \text{ meters}} = (29.1 \text{ mph}) (10 \text{ meters} / 2 \text{ meters})^{0.143}$$

$$V_{10 \text{ meters}} = 36.6 \text{ mph}$$

This computed 36.6 mph wind speed at 10 meters AGL at Stratford is above the dust entrainment wind speed threshold.

On October 27, the strong and gusty winds observed northwest of Corcoran resulted in the entrainment and transport of blowing dust across the western portion of the Valley.

4.2: The high winds affected air quality

PM10 concentrations were at their highest for the week on October 27, as shown in Table 4-2. In Corcoran, PM10 concentrations were below the NAAQS between October 24 and October 26 due to marginal dispersion conditions. A strong cold front passage on October 27 generated high winds that created blowing dust on the west side of the San Joaquin Valley. These winds caused elevated PM10 levels at Corcoran throughout the day and into the evening on October 27. Shortly after midnight the winds subsided and PM10 concentrations decreased.

Table 4-2: 24-hour average PM10 concentrations, $\mu\text{g}/\text{m}^3$
 (All real-time PM10 concentrations are collected under local conditions)

Monitoring site	Oct. 24	Oct. 25	Oct. 26	Oct. 27	Oct. 28	Oct. 29	Oct. 30
Stockton –Wagner Holt							33
Stockton – Hazelton					11		
Tracy	12	9	14	16	14	15	21
Modesto – 14 th					13		
Turlock					19		
Merced – M Street					15		
Clovis – Villa					13		30
Fresno- First Street (Filter Based) ¹					14		
Fresno – Drummond					20		
Hanford					34		
Santa Rosa Rancheria							62
Corcoran	44	26	53	416	43	44	65
Corcoran (Filter Based) ¹		33					66
Visalia -Church					50		
Oildale					74		47
Bakersfield – Golden State ²	48	37	57				67
Bakersfield – Golden State (Filter Based) ¹					96		
Bakersfield – California					47		

¹ Primary analyzers take precedence over secondary analyzers when multiple data are available.
²The real-time PM10 monitor at Bakersfield – Golden experienced a breakdown on October 27, 2009 and repairs were complete late on October 29, 2009.

4.3: The high winds caused the exceedance

Section 4.1 showed that there was a natural event of high winds on October 27, 2009. Section 4.2 showed that high PM10 concentrations were affected at the time of the high wind event. The analysis below shows that the high winds caused the PM10 exceedance.

4.3.1: Wind and PM10 data, hour-by-hour

Strong, gusty winds occurred in the western San Joaquin Valley on October 27, 2009 and hourly PM10 concentrations in Corcoran became elevated in conjunction with the high winds (see Table 4-3 and Figures 4 and 5). Observations at Lemoore Naval Air Station on October 27 indicate 21 hours of sustained winds greater than 17.9 mph and 20 hours with gusts greater than 30 mph. The highest recorded gust was 46 mph at 2:56 PM PST. Blowing dust was observed at the Lemoore Naval Air Station from 8:00 AM PST until 9:00 AM PST and from 14:00 PM PST until 18:00 PM PST. Observations at Hanford on October 27 indicate 13 hours of sustained winds greater than 17.9 mph and 15 hours with gusts greater than 21 mph. The highest recorded gust was 38 mph at 10:20 AM PST. Haze was observed at Hanford from 9:00 AM PST until 12:00 PM PST and from 15:00 PM PST until 17:00 PM PST.

October 27 wind speeds in the northern and western San Joaquin Valley were sufficient to transport the dust plume across the west central San Joaquin Valley to Corcoran. Lemoore Naval Air Station observations showed reduced visibilities (blowing dust) at hour 8 and between hours 14 and 18. To track the progress of the dust plume, the District used Five Points and Stratford as points northwest of Lemoore Naval Air Station and Corcoran. Five points is located 11 miles northwest of Lemoore Naval Air Station. Stratford is located 16 miles northwest of Corcoran (see Table 4-4 and Appendix F).

This analysis shows that the October 27, 2009 high wind event resulted in entrainment of dust and reports of blowing dust in the Corcoran/Hanford area. The strong northwesterly winds transported and deposited PM10 across the western and southern parts of the San Joaquin Valley.

Table 4-3: Corcoran Hourly PM10 concentrations increased with wind speed

Hour (PST)	Observations from Hanford, National Weather Service				Observations from Lemoore, Naval Air Station				Corcoran Real-time PM10 ($\mu\text{g}/\text{m}^3$)
	Wind Speed (mph)	Wind Direction	Wind Gust (mph)	Weather Observation	Wind Speed (mph)	Wind Direction	Wind Gust (mph)	Weather Observation	
0	13	NNW		Clear	14	NNW		Clear	38
1	12	NNW		Clear	18	NNW		Clear	20
2	14	NNW		Clear	14	NNW		Clear	26
3	17	NNW		Clear	22	NNW		Clear	283
4	22	NW	32	Clear	24	NW	31	Clear	520
5	20	NW	24	Clear	32	NW	41	Clear	119
6	16	NW		Clear	25	NW	33	Partly Cloudy	202
7	24	NW	33	Clear	30	NW	38	Partly Cloudy	168
8	25	NW	32	Clear	36	NW	43	Blowing Dust	395
9	24	NW	33	Haze	35	NW	45	Partly Cloudy	490
10	22	NW	33	Haze	30	NW	44	Partly Cloudy	753
11	22	NW	29	Haze	31	NNW	38	Partly Cloudy	789
12	23	NW	26	Haze	26	NW	38	Partly Cloudy	780
13	20	NNW	26	Clear	33	NW	39	Partly Cloudy	616
14	13	N	26	Clear	30	NNW	38	Blowing Dust	503
15	18	NW	26	Haze	38	NW	46	Blowing Dust	888
16	13	NW		Haze	30	NW	43	Blowing Dust	957
17	23	NW	32	Haze	30	NW	38	Blowing Dust	957
18	20	NW	31	Clear	32	NW	39	Blowing Dust	703
19	15	NW	22	Clear	31	NW	43	Partly Cloudy	336
20	12	NNW	24	Clear	33	NW	43	Partly Cloudy	168
21	16	NW		Clear	29	NW	38	Partly Cloudy	139
22	15	NNW		Clear	28	NW	36	Clear	102
23	20	NW		Clear	28	NW	35	Clear	541
								24 hour Avg.	416

Figure 4: Hourly Wind Speeds at Lemoore NAS and PM10 Concentrations at Corcoran.

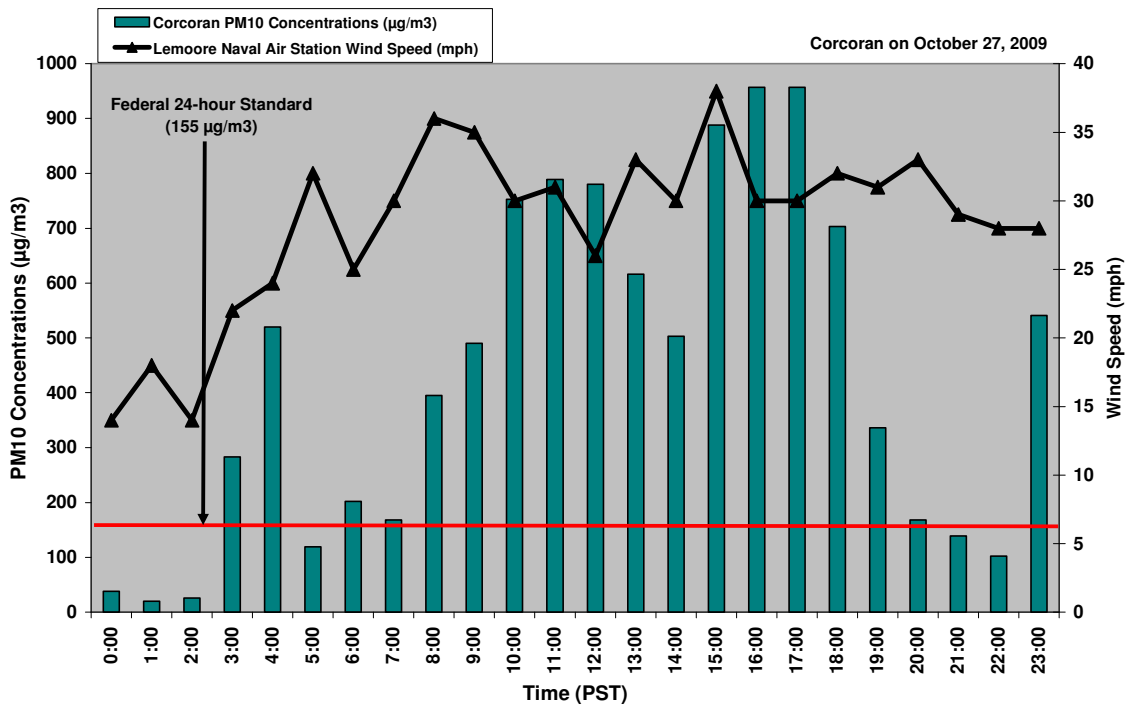


Figure 5: Hourly Wind Speeds at Hanford and PM10 Concentrations at Corcoran.

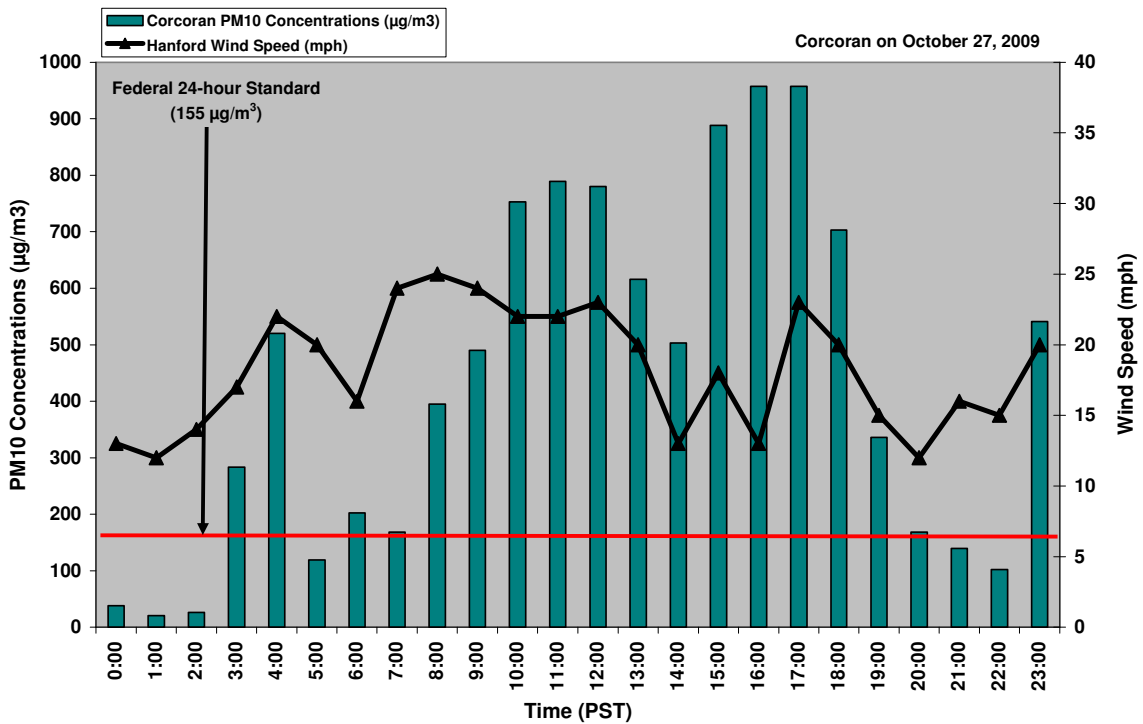


Table 4-4: Winds transported particulates to Corcoran on October 27, 2009

Hour	11 miles to the northwest of Lemoore NAS		27 miles to the northwest of Corcoran		16 miles to the northwest of Corcoran		Receptor Area	
	Five Points Hourly Average Wind Speed (mph) and Wind Direction at 2 meters AGL		Lemoore, Naval Air Station Wind Speed (mph) and Wind Direction at 10 meters AGL		Lemoore, Naval Air Station Weather Observation	Stratford Wind Speed (mph) and Wind Direction at 2 meters AGL	Corcoran PM10 ($\mu\text{g}/\text{m}^3$)	
0	9.7	NNW	14	NNW	Clear	5.8	NNW	38
1	9.8	NNW	18	NNW	Clear	9.2	NNW	20
2	8.2	N	14	NNW	Clear	9.3	NNW	26
3	14.8	NNW	22	NNW	Clear	14.1	NNW	283
4	16.2	NW	24	NW	Clear	18.3	NNW	520
5	19.6	NW	32	NW	Clear	20.4	NW	119
6	16.1	WNW	25	NW	Partly Cloudy	19.5	NW	202
7	20.7	WNW	30	NW	Partly Cloudy	14.6	NW	168
8	16.5	WNW	36	NW	Blowing Dust	20.1	NW	395
9	22.1	NW	35	NW	Partly Cloudy	23.2	NW	490
10	25.5	NW	30	NW	Partly Cloudy	28.7	NNW	753
11	25.3	NW	31	NNW	Partly Cloudy	29.1	NNW	789
12	25.5	NW	26	NW	Partly Cloudy	26.8	NW	780
13	26.4	NNW	33	NW	Partly Cloudy	22	NNW	616
14	25.8	NW	30	NNW	Blowing Dust	25.6	NNW	503
15	27.4	NW	38	NW	Blowing Dust	23.1	NNW	888
16	27.9	NW	30	NW	Blowing Dust	23.2	NNW	957
17	24.5	NW	30	NW	Blowing Dust	21.9	NNW	957
18	24.3	NW	32	NW	Blowing Dust	18	NNW	703
19	21.1	NW	31	NW	Partly Cloudy	17.9	NNW	336
20	26.2	NW	33	NW	Partly Cloudy	19.1	NNW	168
21	25.6	NW	29	NW	Partly Cloudy	22.1	NW	139
22	24.1	NW	28	NW	Clear	20.4	NW	102
23	23	NW	28	NW	Clear	19.2	NNW	541
						24 hour Avg.		416

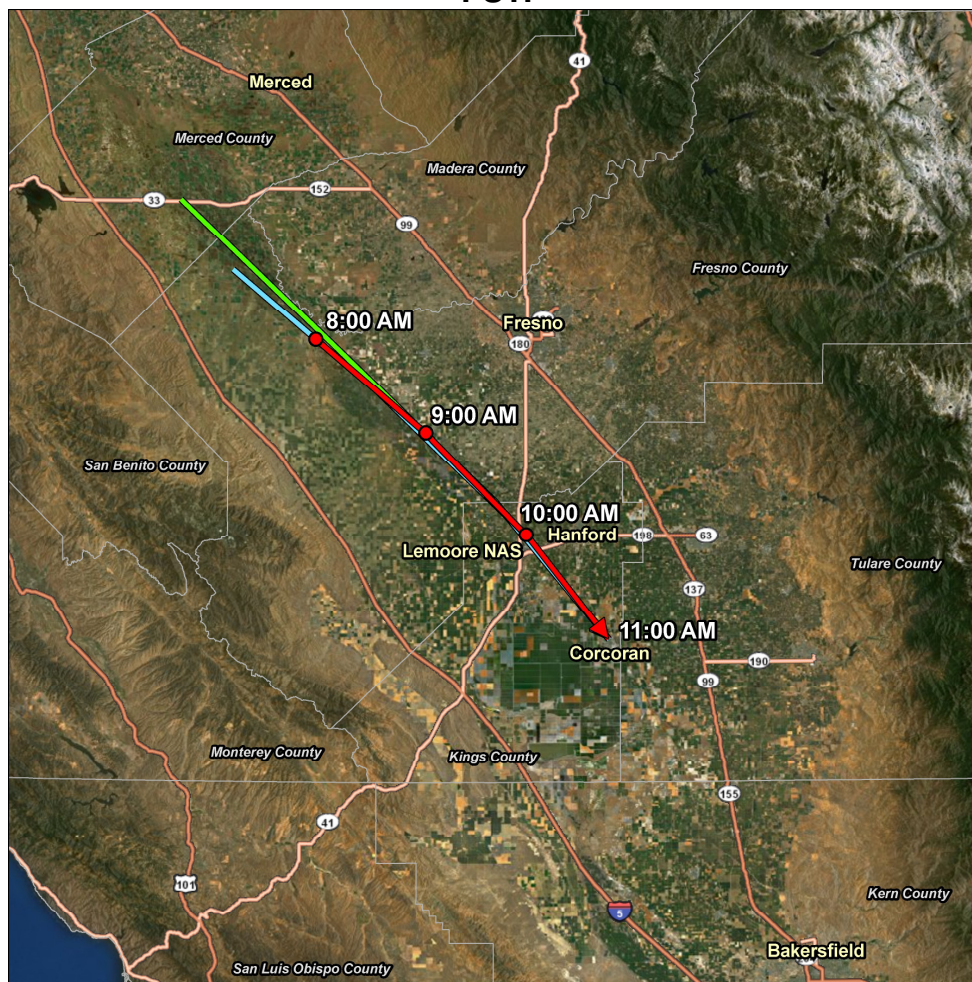
Hour 0 is Midnight to 1 AM, Pacific Standard Time. Stratford and Five Points wind data is from the California Irrigation Management Information System (CIMIS) monitors. CIMIS wind speed is an hourly average sampled at 2 meters above ground level (AGL). Wind speed measured at 2 meters would typically be lower than wind speed measured at 10 meters at the same location. Weather data at Lemoore NAS was obtained through the <http://www.met.utah.edu/mesowest/> website.

4.3.2: Source - Receptor Analysis: Backward Trajectory

The District ran the National Oceanic and Atmospheric Administration (NOAA) Hybrid Single-Particle Lagrangian Integrated Trajectory (HYSPLIT) model for the natural event to identify air parcel source regions that contributed to peak particulate concentrations in Corcoran. HYSPLIT was developed through a joint effort between the NOAA and Australia's Bureau of Meteorology. HYSPLIT can compute air parcel trajectories and dispersion based on meteorological observation data files from the National Weather Service's National Centers for Environmental Prediction (NCEP). The model and full documentation are available at www.arl.noaa.gov/ready/hysplit4.html.

The modeling and observations show that the blowing dust originated northwest of Corcoran. The model trajectory analysis takes the air parcel southeastward over Kings County, leading to the blowing dust observations at Lemoore Naval Air Station and Hanford, and the elevated PM10 reported at the Corcoran particulate monitor. Winds were from the northwest and north northwest during the blowing dust event, so the dust plume influenced the Corcoran monitor as shown in Figures 6 through 10.

Figure 6: Backward trajectory on October 27, 2009 showing location of air mass arriving in Corcoran at the 10, 100, and 250 meter height levels around 11:00 AM PST.



The District used the HYSPLIT model to simulate the flow field for air parcels that arrived in Corcoran between 2:00 AM & 5:00 AM PST and between 2:00 PM & 5:00 PM PST on October 27 to identify the areas that contributed to peak particulate concentrations at Corcoran.

The area northwest of Corcoran was the main source region for air arriving in Corcoran during high PM10 measurements recorded between 2:00 AM & 5:00 AM PST and between 2:00 PM & 5:00 PM PST (see Figures 7 and 8; dots on the images indicate air parcel movement, not particulate concentration):

Figure 7: Location of air mass at 2:00 AM PST arriving in Corcoran between 2:00 AM and 5:00 AM PST
(NOAA Air Resources Laboratory Plot)

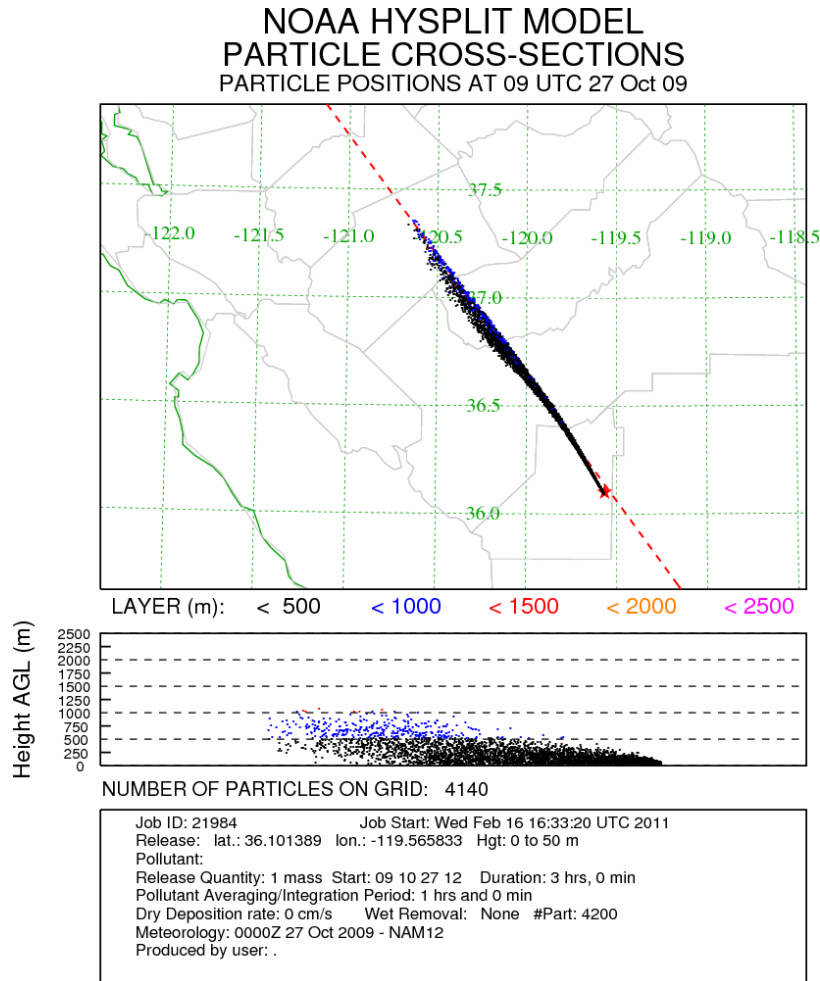
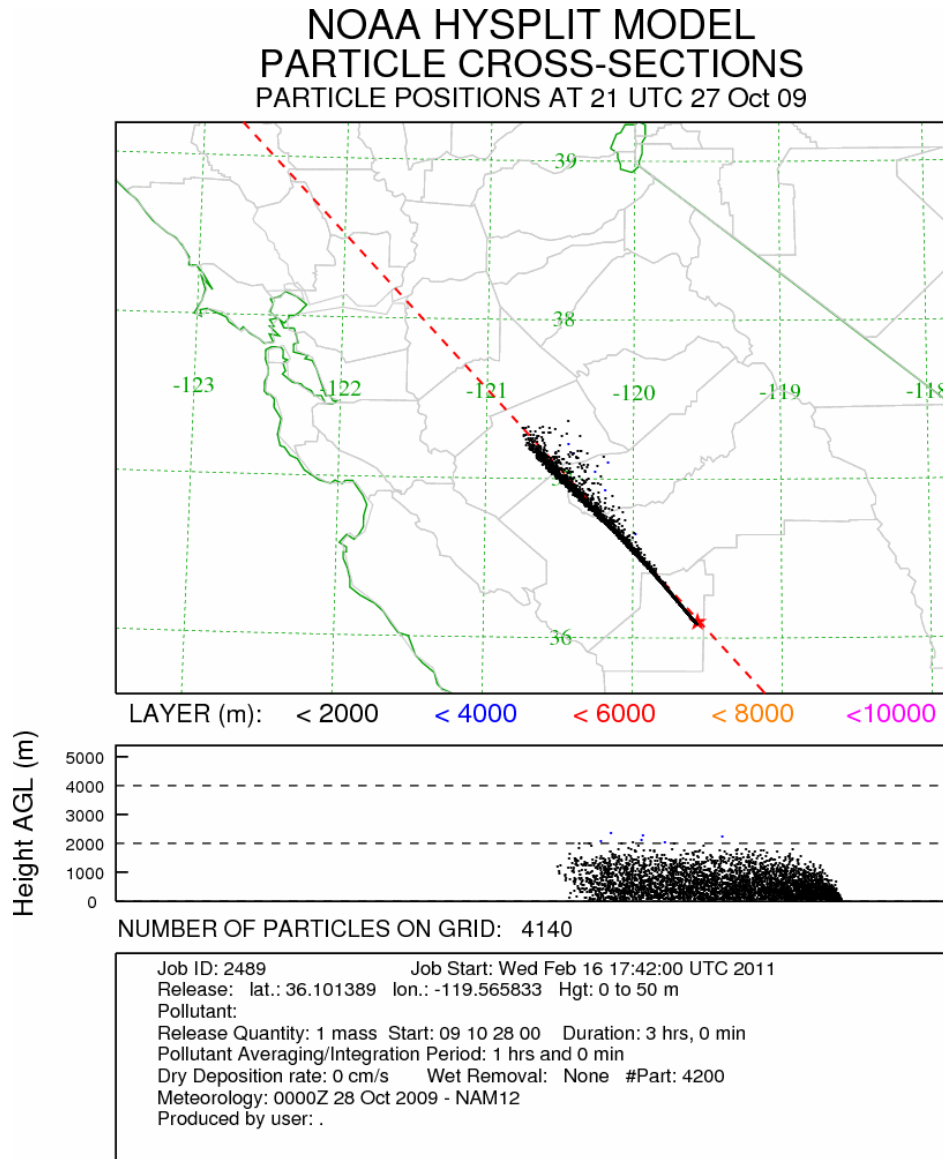


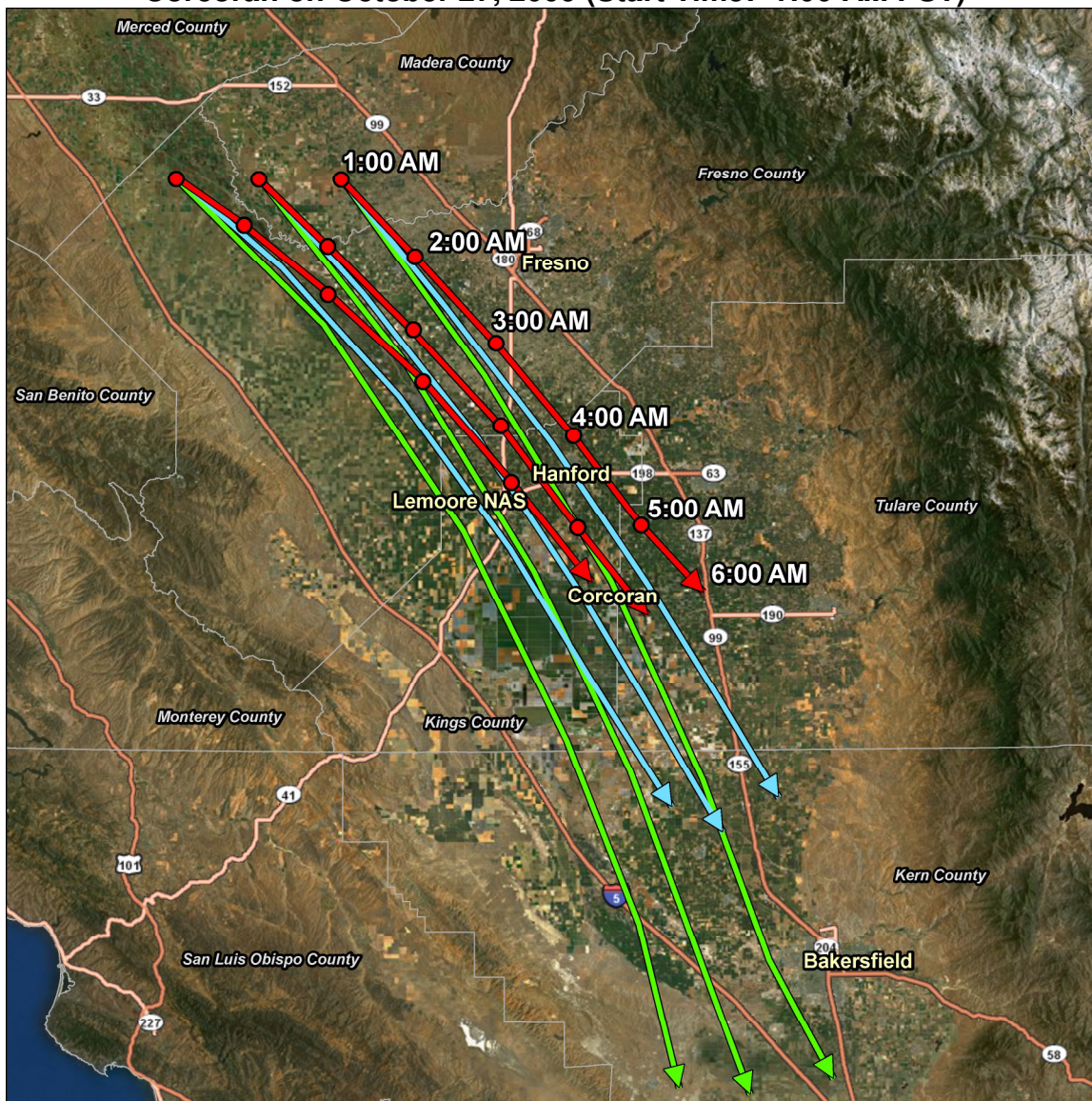
Figure 8: Location of air mass at 2:00 PM PST arriving in Corcoran between 2:00 PM and 5:00 PM PST
(NOAA Air Resources Laboratory Plot)



4.3.3: Source – Receptor Analysis: Forward Trajectory

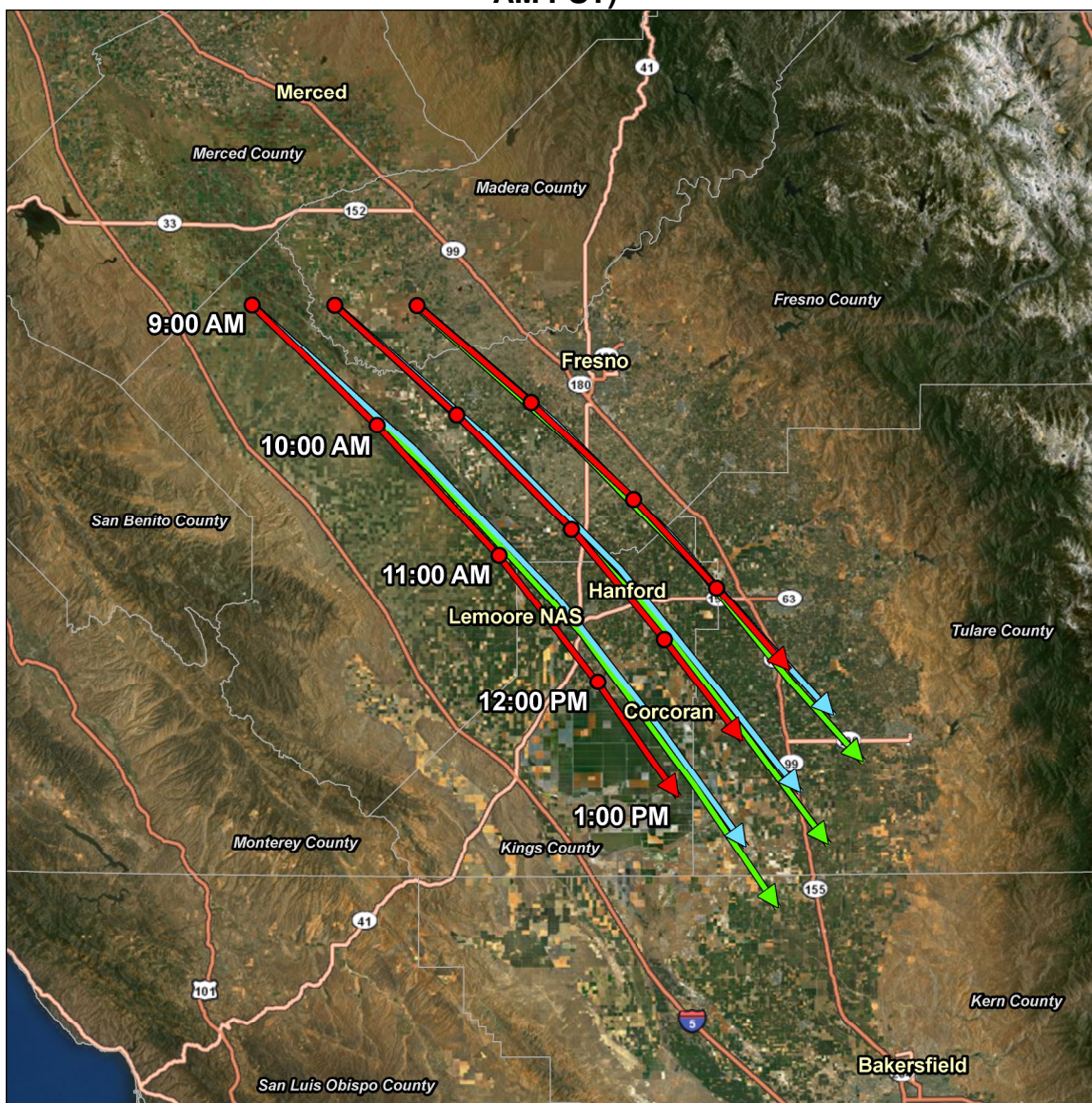
The District also analyzes this exceptional event using forward trajectory analysis. EPA used this methodology to prove another high wind exceptional event (73 FR 14687-14713). For the October 27 event, these forward trajectories show that high winds carried dust from the source area through the receptor (impacted) location Corcoran.

Figure 9: Forward Trajectories at 10, 100 and 250 meters starting northwest of Corcoran on October 27, 2009 (Start Time: 1:00 AM PST)



Forward trajectories starting northwest of Corcoran at 1:00 AM PST on October 27, Runtime is 5 hours. Trajectory heights are at 10 meters in red, 100 meters in blue, and 250 meters in green. These trajectories show the likelihood of windblown dust entrained from northwest of Lemoore/Hanford area reaching Corcoran within 5 hours (6:00 AM PST) at the 10, 100 and 250 meter height levels.

Figure 10: Forward Trajectories at 10, 100, and 250 meters starting from western Madera and northwestern Fresno Counties on October 27, 2009 (Start Time: 9:00 AM PST)



Forward trajectories starting at 9:00 AM PST on October 27, 2009 from northwestern Fresno and western Madera Counties. Runtime is 4 hours. Trajectory heights are at 10 meters in red, 100 meters in blue, and 250 meters in green. These trajectories show the likelihood of windblown dust entrained from northwest of Lemoore/Hanford area reaching Corcoran within 4 hours (12:00 PM PST) at the 10, 100 and 250 meter height levels.

4.3.4: October 27, 2009 Exceptional Event Media and Compliance Coverage

Television and newspaper coverage and District Compliance inspector reports confirmed the presence of high winds and blowing dust on October 27, 2009 through photographs, video documentation, and eyewitness accounts of the impacted areas (see Appendices D and E). These reports verified that high winds caused blowing dust on October 27, 2009.

Section 5: Conclusion

This section satisfies the following federal requirement:

- The exceedance would not have occurred but for the event
(40 CFR 50.14(c)(3)(iv)(D))

District analysis shows that:

- PM is heavily controlled in the San Joaquin Valley, and these controls have decreased average PM10 levels in the Valley (Section 2)
- In spite of these controls, PM10 concentrations on October 27, 2009 were amongst the highest concentrations recorded over the past several years (Section 3)
- A natural event of high winds caused increases in PM, and PM concentrations decreased the following day, after the event was over (Section 4)

Thus, the District concludes that the exceedance would not have occurred but for the event. The uncontrollable high winds overwhelmed the BACM for PM that have been put in place in the Valley. As wind speeds decreased the next day, PM10 concentrations also decreased. As such, it is appropriate to identify the October 27, 2009 exceedance as an Exceptional Event.

In light of this conclusion, and with the demonstration (Section 1 and referenced sections) that the District has met all applicable requirements, the District requests EPA concurrence to flag the October 27, 2009 PM10 data for the Corcoran site as having been caused by exceptional events.

Section 6: References

- Stull, Roland. *An Introduction to Boundary Layer Meteorology*. 1997
- California Department of Water Resources document, *Wind in California*, (Bulletin No. 185, January 1978)
- California Irrigation Management Information System (CIMIS) <http://www.cimis.water.ca.gov/cimis/data.jsp>
- Department of Earth and Atmospheric Sciences, University at Albany, State University of New York, <http://www.atmos.albany.edu/weather/difax.html> : Surface weather maps
- Desert Research Institute (DRI), Western Regional Climate Center, <http://www.wrcc.dri.edu> , *Western Climate Summaries*
- Environmental Protection Agency (EPA). *Guideline on the Identification and Use of Air Quality Data Affected by Exceptional Events*. July 1986.
- Environmental Protection Agency (EPA). *Treatment of Data Influenced by Exceptional Events; Final Rule*. March 2007.
- Environmental Protection Agency (EPA). *Memorandum: Areas Affected by PM10 Natural Events*. May 1996.
- KSEE Channel 24 (NBC), Fresno: Television news coverage
- KMPH Channel 26 (FOX), Fresno: Television news coverage
- KMPH.com (FOX)
- KFSN Channel 30 (ABC), Fresno: Television news coverage
- KGPE Channel 47 (CBS), Fresno: Television news coverage
- Mesowest historical meteorological data, *Mesowest*, <http://www.met.utah.edu/mesowest>
- National Oceanic and Atmospheric Administration (NOAA): ESRL/Physical Sciences Division, Profiler Data
- National Oceanic and Atmospheric Administration (NOAA): Air Resources Laboratory HYSPLIT – Hybrid Single Particle Lagrangian Integrated Trajectory Model, <http://ready.arl.noaa.gov/HYSPLIT.php>
- National Oceanic and Atmospheric Administration (NOAA): Weather data, <http://www.weather.gov>
- Naval Postgraduate School, Department of Meteorology, Profiler Data, <http://www.weather.nps.navy.mil/profiler/coastprof.html>
- T&B Systems, *Task 3.3 How Well Do Measurements Characterize Critical Meteorological Features, Subtask 3 Measurement of Gustiness*, August 24, 2004, <http://www.arb.ca.gov/airways/crpaqs/DA/Final/TB33st3.pdf>

**APPENDICES
&
SUPPORTING DOCUMENTS**

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APPENDIX A: Notification to ARB in regards to 2009 Exceptional Event Days



May 26, 2010

Theresa Najita
Air Pollution Specialist
California Air Resources Board
1001 "I" Street
PO Box 2815
Sacramento, CA 95812

Dear Mrs. Najita,

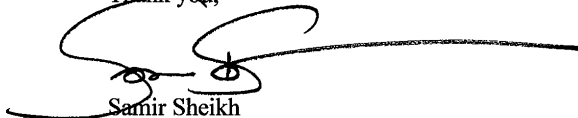
Please include the following information in your list to EPA in regards to exceedances of the National Ambient Air Quality Standards (NAAQS) that are attributed to an exceptional event that occurred in the San Joaquin Valley Air Basin during 2009.

Date(s)	Pollutant(s)	Site(s)	Cause
10/13/09	PM2.5	Bakersfield-Planz, Bakersfield Golden, Bakersfield California; including any collocated monitors	High winds
10/13/09	PM10	Bakersfield Golden	High winds
10/27/09	PM10	Bakersfield Golden and Corcoran; including any collocated monitors	High winds
10/27/09	PM2.5	Corcoran	High winds

The District also respectfully requests ARB to flag the October 13, 2009 high wind event that occurred at the Bakersfield California PM2.5 monitoring site; including any collocated monitors.

If you have any questions about this request, please contact Stephen Shaw, Supervising Air Quality Specialist via phone at 559-230-5824 or via email at stephen.shaw@valleyair.org.

Thank you,



Samir Sheikh
Director, Strategies and Incentives

Cc: Karen Magliano, ARB
Sylvia Zulawnick, ARB
Seyed Sadredin, SJVAPCD
Rick McVaigh, SJVAPCD

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com

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APPENDIX B: SJV Air Monitoring Network Map

San Joaquin Co:

- 1 Tracy: G,M,P,F
- 2 Hazelton: G,M,P,F,T
- 3 Wagner/Holt: P

Stanislaus Co:

- 4 Turlock: G,M,P,F
- 5 Modesto: G,M,P,F

Merced Co:

- 6 M Street: P,F
- 7 Coffee St: G,M

Madera Co:

- 8 Madera: G,M

Fresno Co:

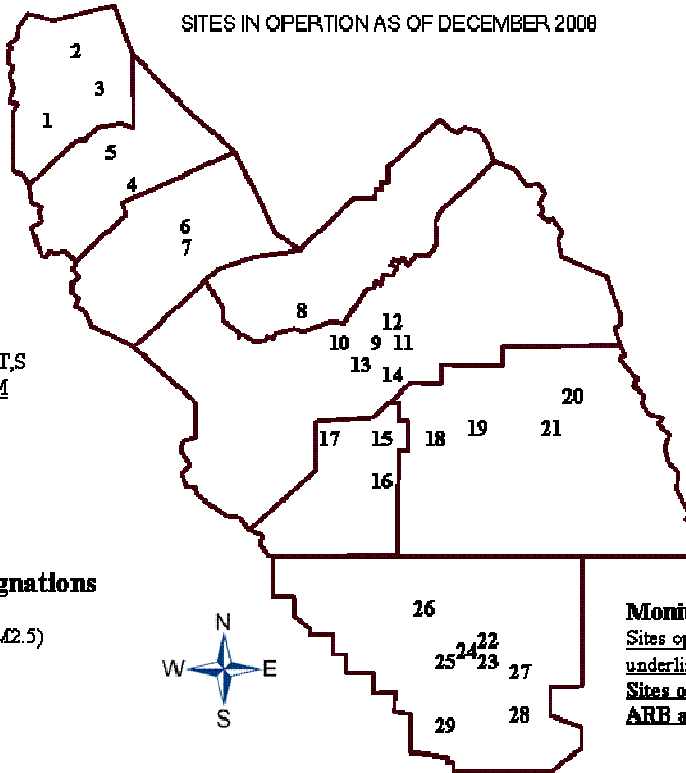
- 9 First Street: G,M,P,F,T,S
- 10 Sierra Sky Park: G,M
- 11 Fresno-Pacific: F
- 12 Clovis: G,M,P,F
- 13 Drummond: G,P, M
- 14 Parlier: G,M

Monitoring Designations

- A:** Acid Deposition
- F:** Fine Particulate (PM2.5)
- G:** Gaseous
- M:** Meteorological
- P:** Particulate (PM10)
- S:** Super Site
- T:** Toxics



SITES IN OPERATION AS OF DECEMBER 2008



Kings Co:

- 15 Hanford: G,P
- 16 Corcoran: G, M,P,F

Other:

- Tachi Yokut Tribe**
- 17 Santa Rosa Rancheria: G,M,P

Tulare Co:

- 18 Visalia Airport: M
- 19 Church Street: G,M,P,F

Other:

- National Park Service**
- 20 Kaweah: G,M
- 21 Ash Mountain: A,G, M, F

Kern Co:

- 22 Oildale: G,M,P
- 23 Planz Road: F
- 24 Golden State: G,M,P,F
- 25 California Avenue: A,G,M,P,F,T,S
- 26 **Shafter: G, M**
- 27 Edison: G, M
- 28 Arvin: G,M
- 29 Maricopa: G,M

Monitoring Operation:

- Sites operated by the District are underlined.
- Sites operated jointly by the District and ARB are in **bold and underlined**

June, 2009

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APPENDIX C: Public Notification of the Exceptional Event

C1: Framework for Exceptional Event Determination

The District's NEAP requires the District to forecast a high wind episode if criteria five and most or all of criteria one through four 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 October 27, 2009 all of the NEAP criteria were met:

Criteria 1. During the 7 consecutive days prior to the October 27, 2009 event Hanford received no measurable precipitation. Hanford received 0.01 inches of precipitation 8 days prior to the event on October 19, 2009. Stratford received 0.01 inches of precipitation 10 days prior to the event on October 17, 2009. Because precipitation in the Central San Joaquin Valley was minimal before the dust event, soils were dry enough to become entrained into the atmosphere during the high winds.

Criteria 2. The National Weather Service in Hanford issued a Wind Advisory and a Blowing Dust Advisory for the San Joaquin Valley.

Criteria 3. The afternoon surface weather maps showed a strong pressure gradient between Oakland and Las Vegas of +13 millibars (mb) over central California. This strong pressure gradient caused peak wind gusts at Hanford of 38 MPH at 9:20 AM PST and at Lemoore of 46 MPH at 2:56 PM PST.

Criteria 4. A strong 100 to 150 MPH Jet-stream at 300 mb was positioned over California through the day transferring stronger winds toward the surface. 300 mb is located approximately 30,000 feet above ground level.

Criteria 5. The PM10 NAAQS was exceeded Corcoran. The District forecast a NAAQS exceedance for Kings County, on October 27, 2009. A press release was issued on October 27, 2009 describing the high winds and blowing dust. The press release included the following, "Winds in the eight-county air basin – San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and the Valley portion of Kern counties -- may produce areas of localized blowing dust and unhealthy concentrations of particulate matter 10 microns and smaller in size (PM10) throughout the Valley."

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 data showed that the period preceding the blowing dust event was not wet enough in the Corcoran area to limit blowing dust. 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.

Precipitation

During the 7 consecutive days prior to the October 27, 2009 event Hanford received no measurable precipitation. Hanford received 0.01 inches of precipitation 8 days prior to the event on October 19, 2009. Stratford received 0.01 inches of precipitation 10 days prior to the event on October 17, 2009. Because precipitation in the Central San Joaquin Valley was minimal before the dust event, soils were dry enough to become entrained into the atmosphere during the high winds.

Figure B.1 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 desert areas of Owens Valley, Mojave Desert and Antelope Valley. Since the west side of Kern County has the lowest annual precipitation in the San Joaquin Valley, the undisturbed soils, on the average, are drier than other parts of the valley.

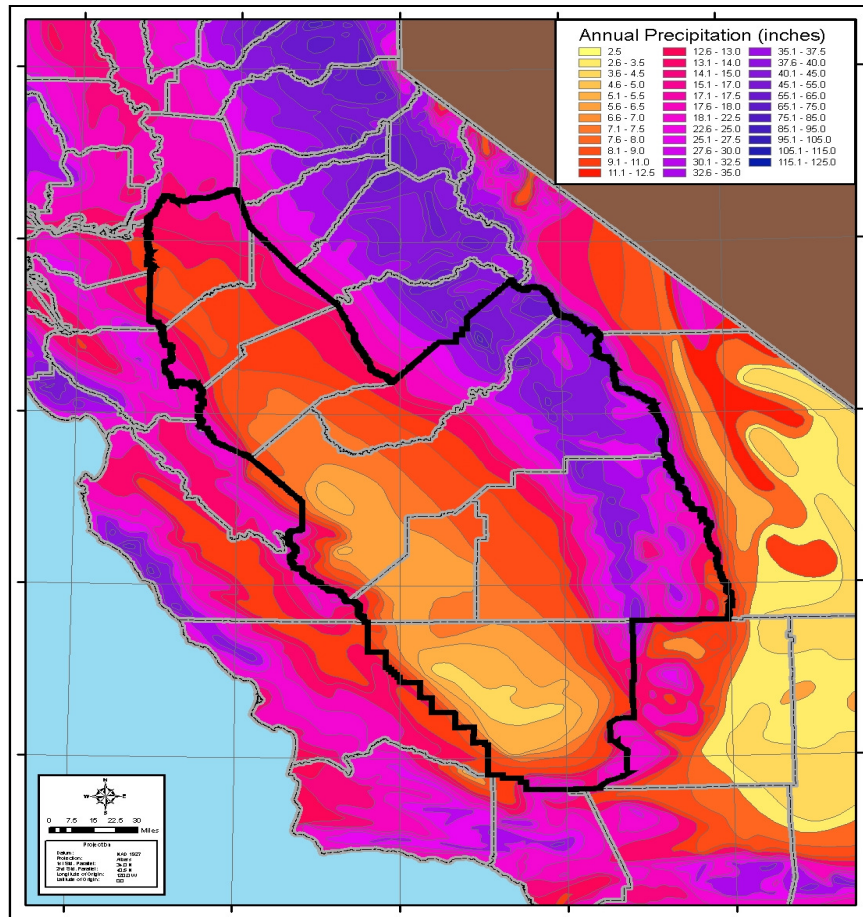


Figure C.1 Central California Annual Average Precipitation in Inches. The San Joaquin Valley Air Basin is outlined in black.

Criteria 2 – Wind Advisory issued by the National Weather Service

The National Weather Service in Hanford, CA issued a Wind Advisory and a Blowing Dust Advisory at 3:59 AM PDT on October 27, 2009 to notify the public of gusty winds

over the east central portion of the San Joaquin Valley and blowing dust over the west central and southern portions of the San Joaquin Valley (see Figures B.1 and B.2).

Figure C.1 Wind Advisory issued by the National Weather Service in Hanford, CA on October 27, 2009.

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE SAN JOAQUIN VALLEY - HANFORD CA
359 AM PDT TUE OCT 27 2009

CAZ090-271900-
/O.EXT.KHNX.WI.Y.0024.091027T1100Z-091028T0600Z/
EAST CENTRAL SAN JOAQUIN VALLEY-
359 AM PDT TUE OCT 27 2009

...WIND ADVISORY NOW IN EFFECT UNTIL 11 PM PDT THIS EVENING...

THE WIND ADVISORY FOR THE EAST CENTRAL SAN JOAQUIN VALLEY IS NOW IN EFFECT UNTIL 11 PM PDT THIS EVENING.

NORTHWEST WINDS IN THE 25 TO 35 MPH RANGE ARE EXPECTED TO CONTINUE INTO THE EVENING HOURS. GUSTS TO 45 MPH ARE LIKELY. DUE TO RECENT RAINS...BLOWING DUST WILL NOT LIKELY PRESENT A PROBLEM IN THIS AREA.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

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.

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WEATHER.GOV/HANFORD

Figure C.2 Blowing Dust Advisory issued by the National Weather Service in Hanford, CA on October 27, 2009

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE SAN JOAQUIN VALLEY - HANFORD CA
359 AM PDT TUE OCT 27 2009

CAZ089-091-092-271900-
/O.EXT.KHNX.DU.Y.0002.091027T1100Z-091028T0600Z/
WEST CENTRAL SAN JOAQUIN VALLEY-SOUTHWESTERN SAN JOAQUIN VALLEY-
SOUTHEASTERN SAN JOAQUIN VALLEY-
359 AM PDT TUE OCT 27 2009

...BLOWING DUST ADVISORY NOW IN EFFECT UNTIL 11 PM PDT THIS EVENING...

THE BLOWING DUST ADVISORY FOR THE WEST CENTRAL AND SOUTHERN SAN JOAQUIN VALLEY IS NOW IN EFFECT UNTIL 11 PM PDT THIS EVENING.

STRONG AND GUSTY NORTHWEST WINDS IN THE 25 TO 35 MPH RANGE WITH

GUSTS TO AROUND 45 MPH ARE EXPECTED TO CONTINUE THROUGH THE DAY AND INTO THE EVENING HOURS. LOCALIZED AREAS OF BLOWING DUST WITH VISIBILITY REDUCED TO NEAR ZERO ARE LIKELY. SOME OF THE MAIN HIGHWAYS AFFECTED BY THE BLOWING DUST WILL BE INTERSTATE 5 FROM FRESNO COUNTY SOUTH TO THE GRAPEVINE... HIGHWAY 99 IN KERN COUNTY AND HIGHWAYS 33...41...46...58... 166 AND 198.

TRAVELERS IN THESE AREAS SHOULD PAY VERY CLOSE ATTENTION TO TRAFFIC AHEAD AS VISIBILITY WILL QUICKLY BE REDUCED AS BLOWING DUST IS ENCOUNTERED.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A BLOWING DUST ADVISORY MEANS THAT BLOWING DUST WILL RESTRICT VISIBILITIES. TRAVELERS ARE URGED TO USE CAUTION.

&&

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WEATHER.GOV/HANFORD

Criteria 3 and 4 - Strong winds

As shown in Table 4-3, strong gusty winds occurred in Lemoore and Hanford during the October 27, 2009 high wind event. Observations at Lemoore Naval Air Station on October 27 indicate 21 hours of sustained winds greater than 17.9 mph and 20 hours with gusts greater than 30 mph. The highest recorded gust was 46 mph. Observations at Hanford on October 27 indicate 13 hours of sustained winds greater than 17.9 mph and 15 hours with gusts greater than 21 mph. The highest recorded gust was 38 mph.

The high wind event resulted in entrainment of dust and reports of blowing dust across the western San Joaquin Valley. Television news coverage and Compliance Inspector visual reports from October 27, 2009 documented the high winds with video footage, photographs, and eyewitness reports.

Wind profiles documenting strong winds aloft over the San Joaquin Valley on October 27, 2009 are provided in the Appendix.

Surface weather maps for the event are provided in the Appendix. Closely packed isobars, which are indicators of strong surface winds, are evident on these maps.

Criteria 5 – PM10 level is forecast to be above the NAAQS

The District issued a press release on October 27 at 2:20PM PDT highlighting elevated PM10 levels due to high winds (see Figure B.4). The agricultural burn allocation was set to 0 tons of PM10 on October 27, 2009 in anticipation of high PM10 concentrations.

C.4 DISTRICT PRESS RELEASE ON OCTOBER 27, 2009 FOR BLOWING DUST.

News release

For immediate release

10-27-09

For: Local News, Health and Weather sections

Northern District Media Contact-Modesto

Anthony Presto (209) 557-6400

Central District Media Contact - Fresno

Janelle Schneider (559) 230-6000

South District Media Contact - Bakersfield

Brenda Turner (661) 392-5500

Spanish language Media Contact

Claudia Encinas (559) 230-5851

Blowing dust prompts health warning

Strong, gusty winds causing increases in particulate matter throughout the San Joaquin Valley have prompted local air-pollution officials to issue a health cautionary statement through Tuesday evening.

Winds in the eight-county air basin – San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and the Valley portion of Kern counties -- may produce areas of localized blowing dust and unhealthy concentrations of particulate matter 10 microns and smaller in size (PM10) throughout the Valley.

"Take precautions to protect your health if you are in an area of blowing dust," said Scott Nester, Planning Director for the Air District.

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

Residents in affected areas are advised to use caution through midnight Tuesday. 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.

For more information about the Valley Air District, call a regional office: in Fresno, 559-230-6000; in Bakersfield, 661-392-5500; and in Modesto, 209-557-6400.

C.5 Air Quality Alert Messages

CAC029-031-107-280545-

AIR QUALITY ALERT MESSAGE
SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT
RELAYED BY NATIONAL WEATHER SERVICE SAN JOAQUIN VALLEY CA
1034 AM PDT TUE OCT 27 2009

THE SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT HAS ISSUED AN AIR QUALITY ALERT FOR KINGS, TULARE, AND THE VALLEY PORTION OF KERN COUNTIES FROM 1000AM TUESDAY MORNING UNTIL MIDNIGHT PDT TONIGHT DUE TO BLOWING DUST CAUSED BY WINDY CONDITIONS.

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. CHILDREN AND ELDERLY PEOPLE ARE ALSO MORE SUSCEPTIBLE TO CONSEQUENCES OF HIGH PARTICULATE LEVELS.

\$\$

CAC019-029-031-039-047-107-280845-

AIR QUALITY ALERT MESSAGE
SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT
RELAYED BY NATIONAL WEATHER SERVICE SAN JOAQUIN VALLEY CA
141 PM PDT TUE OCT 27 2009

THE SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT HAS ISSUED AN AIR QUALITY ALERT FOR MERCED, MADERA, FRESNO, KINGS, TULARE, AND THE VALLEY PORTION OF KERN COUNTIES FROM 130PM TUESDAY AFTERNOON UNTIL UNTIL MIDNIGHT PDT TONIGHT DUE TO BLOWING DUST CAUSED BY WINDY CONDITIONS.

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. CHILDREN AND ELDERLY PEOPLE ARE ALSO MORE SUSCEPTIBLE TO CONSEQUENCES OF HIGH PARTICULATE LEVELS.

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APPENDIX D: Media Coverage

D1. Newspaper Articles and Television News Coverage from October 27, 2009

Air district issues health warning

Last Update: 10/27/2009 9:51 pm

Source: 17KGET.com (NBC)

High winds associated with an approaching storm could create unhealthy levels of blowing dust, the Valley Air District warned Tuesday morning.

Here, in its entirety, is that warning:

Strong, gusty winds causing increases in particulate matter in the southern part of the Valley have prompted local air-pollution officials to issue a health cautionary statement through Tuesday evening.

Winds in Kings, Tulare and the Valley portion of Kern counties may produce areas of blowing dust and unhealthy concentrations of particulate matter 10 microns and smaller in size (PM10).

"Take precautions to protect your health if you are in an area of blowing dust," said Scott Nester, Planning Director for the Air District.

Exposure to particle pollution can cause serious health problems, aggravate lung disease, trigger asthma attacks and acute bronchitis, and increase risk of respiratory infections.

For people with heart disease, short-term exposure to particle pollution has been linked to heart attacks and arrhythmia, according to the U.S. Environmental Protection Agency.

Residents in affected areas are advised to use caution through midnight Tuesday.

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.

Wind Advisory Issued For San Joaquin Valley

Posted: Oct 27, 2009 10:01 AM PDT

Source: KMPH News

Valley residents may need to hold onto their hats Tuesday; the National Weather Service has issued a wind advisory for the East Central San Joaquin Valley.

The advisory cautions wind speeds of up to 20-30 mph, with gusts of up to 50 mph. The advisory has been issued from 11 a.m. to midnight.

A dust advisory has also been issued for the East Central San Joaquin Valley. Dust speeds could hit 20-30 mph with gusts of up to 50 mph.

The wind and dust contributed to downed power lines, traffic hazards and delays Tuesday morning. A traffic advisory was issued east of Firebaugh after a crash which involved a big rig. CHP officers warn of low visibility in rural areas like western Madera County due to the dust and winds.

Officers offer these tips to drivers stuck in low visibility areas:

- Reduce speed
- Increase their following distance
- Turn on headlights

Tuesday's winds also caused headaches for farmers, threatening almond trees, which are prone to knock over.

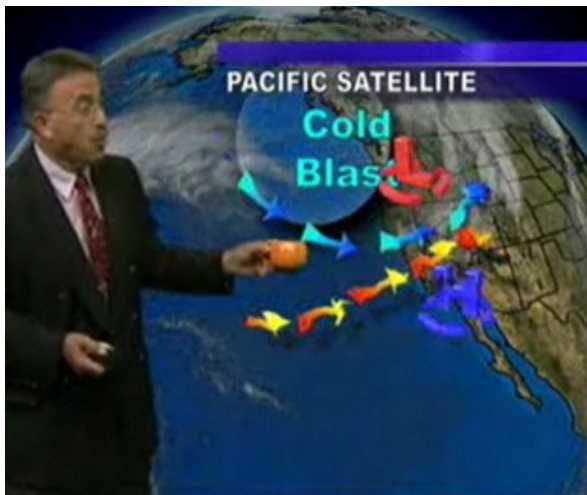
The gusty winds ultimately prompted Valley Air officials to issue a health warning for Kings, Tulare, San Joaquin, Stanislaus, Merced, Madera, and Fresno counties. "Take precautions to protect your health if you are in an area of blowing dust," said Scott Nester, Planning Director for the Air District.

The winds have caused an increase in particulate matter, which can cause serious health problems, especially for those with pre-existing conditions like respiratory and heart problems.

Air officials say people with heart or lung diseases along with older adults and children should avoid prolonged exposure, strenuous activities or heavy exertion.

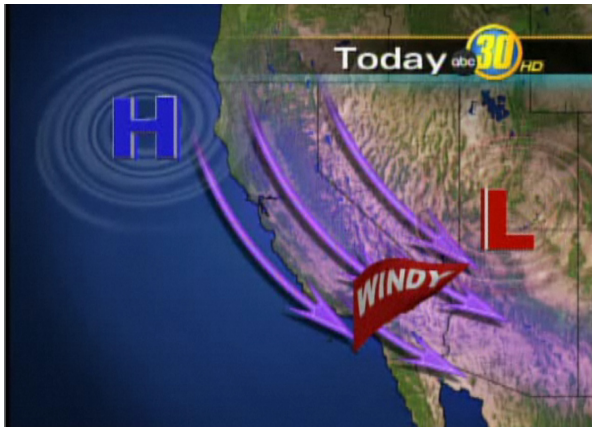
Stay with KMPH and KMPH.com as we continue to follow this story.

TV Coverage from KMPH-26 (FOX) – Fresno



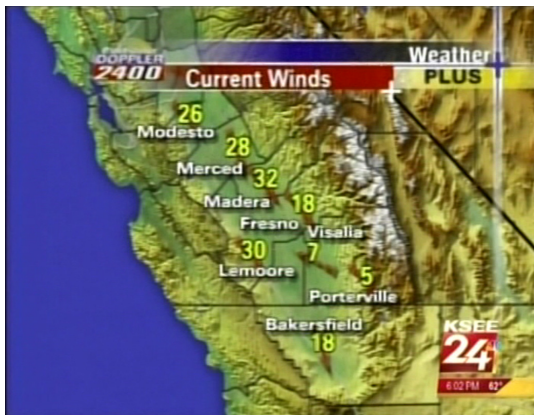


TV Coverage from KFSN-30 (ABC) -- Fresno

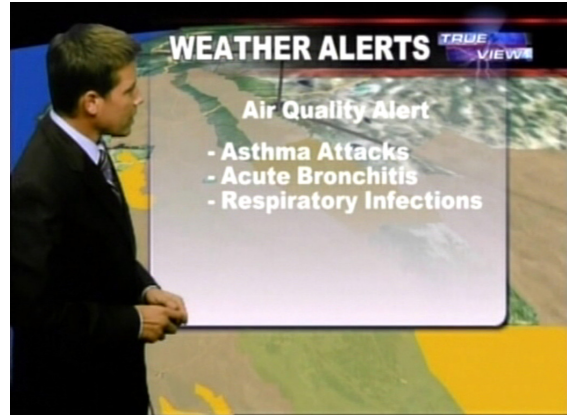




TV Coverage from KSEE-24 (NBC) -- Fresno



TV Coverage from KGPE-47 (CBS) – Fresno



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APPENDIX E: District Compliance Department Coverage

E1. District Compliance Photographs and Video Images from October 27, 2009

West side of Fresno County



Hanford Area



E2. Routine Inspections from October 27, 2009

For October 27, 2009 there were a total of 70 inspections.

ActivityDate	Activity	ProjectType	FacRegion
27-Oct-09	Complaint Investigations	Unpermitted Equipment	C
27-Oct-09	Complaint Investigations	Regulation VIII	C
27-Oct-09	District Testing	Minor Sources	C
27-Oct-09	Ongoing/Other Insp	Asbestos	C
27-Oct-09	Ongoing/Other Insp	Asbestos	C
27-Oct-09	Ongoing/Other Insp	ARB-issued Portable Equipment Registration	C
27-Oct-09	Ongoing/Other Insp	Outdoor Burning: Ag, Prescribed, Barrels	C
27-Oct-09	Complaint Investigations	Regulation VIII	C
27-Oct-09	Ongoing/Other Insp	Outdoor Burning: Ag, Prescribed, Barrels	C
27-Oct-09	Follow Up	Outdoor Burning: Ag, Prescribed, Barrels	C
27-Oct-09	Follow Up	Gasoline Dispensing Facilities	C
27-Oct-09	Follow Up	Gasoline Dispensing Facilities	C
27-Oct-09	Follow Up	Minor Sources	C
27-Oct-09	Ongoing/Other Insp	Grant Program	C
27-Oct-09	Follow Up	Minor Sources	C
27-Oct-09	Ongoing/Other Insp	Gasoline Dispensing Facilities	C
27-Oct-09	Ongoing/Other Insp	Grant Program	C
27-Oct-09	Complaint Investigations	Outdoor Burning: Ag, Prescribed, Barrels	N
27-Oct-09	Follow Up	Regulation VIII	N
27-Oct-09	Follow Up	Outdoor Burning: Ag, Prescribed, Barrels	N
27-Oct-09	Follow Up	Unpermitted Equipment	N
27-Oct-09	Follow Up	Minor Sources	N
27-Oct-09	Complaint Investigations	Regulation VIII	N
27-Oct-09	Complaint Investigations	Unpermitted Equipment	N
27-Oct-09	Ongoing/Other Insp	Gasoline Dispensing Facilities	N
27-Oct-09	Ongoing/Other Insp	Gasoline Dispensing Facilities	N
27-Oct-09	Ongoing/Other Insp	Gasoline Dispensing Facilities	N
27-Oct-09	Ongoing/Other Insp	Gasoline Dispensing Facilities	N
27-Oct-09	Breakdown/Title V Deviations investigations	Title V Sources	N
27-Oct-09	Ongoing/Other Insp	Gasoline Dispensing Facilities	N
27-Oct-09	Ongoing/Other Insp	Gasoline Dispensing Facilities	N
27-Oct-09	Follow Up	Gasoline Dispensing Facilities	N
27-Oct-09	Follow Up	Gasoline Dispensing Facilities	N
27-Oct-09	Ongoing/Other Insp	Gasoline Dispensing Facilities	N
27-Oct-09	Ongoing/Other Insp	Gasoline Dispensing Facilities	N
27-Oct-09	Ongoing/Other Insp	Grant Program	N
27-Oct-09	Follow Up	Grant Program	N
27-Oct-09	District Testing	Minor Sources	N
27-Oct-09	Ongoing/Other Insp	Minor Sources	N
27-Oct-09	Follow Up	District-issued Portable Equipment Registration	P
27-Oct-09	Follow Up	Unpermitted Equipment	S
27-Oct-09	Ongoing/Other Insp	Asbestos	S

27-Oct-09	Ongoing/Other Insp	Asbestos	S
27-Oct-09	Ongoing/Other Insp	Asbestos	S
27-Oct-09	Ongoing/Other Insp	Asbestos	S
27-Oct-09	Ongoing/Other Insp	ARB-issued Portable Equipment Registration	S
27-Oct-09	Follow Up	Automotive Coating Operations	S
27-Oct-09	Ongoing/Other Insp	Asbestos	S
27-Oct-09	District Testing	Unpermitted Equipment	S
27-Oct-09	Ongoing/Other Insp	Outdoor Burning: Ag, Prescribed, Barrels	S
27-Oct-09	Ongoing/Other Insp	Outdoor Burning: Ag, Prescribed, Barrels	S
27-Oct-09	Ongoing/Other Insp	Outdoor Burning: Ag, Prescribed, Barrels	S
27-Oct-09	Ongoing/Other Insp	Outdoor Burning: Ag, Prescribed, Barrels	S
27-Oct-09	Ongoing/Other Insp	Asbestos	S
27-Oct-09	Follow Up	Outdoor Burning: Ag, Prescribed, Barrels	S
27-Oct-09	District Testing	Administration	S
27-Oct-09	Breakdown/Title V Deviations investigations	Title V Sources	S
27-Oct-09	Breakdown/Title V Deviations investigations	Title V Sources	S
27-Oct-09	Ongoing/Other Insp	Gasoline Dispensing Facilities	S
27-Oct-09	Ongoing/Other Insp	Gasoline Dispensing Facilities	S
27-Oct-09	Ongoing/Other Insp	Gasoline Dispensing Facilities	S
27-Oct-09	Ongoing/Other Insp	Title V Sources	S
27-Oct-09	Group Inspections	Title V Sources	S
27-Oct-09	Breakdown/Title V Deviations investigations	Title V Sources	S
27-Oct-09	Follow Up	Gasoline Dispensing Facilities	S
27-Oct-09	Follow Up	Gasoline Dispensing Facilities	S
27-Oct-09	Follow Up	Gasoline Dispensing Facilities	S
27-Oct-09	Ongoing/Other Insp	Gasoline Dispensing Facilities	S
27-Oct-09	Ongoing/Other Insp	Minor Sources	S
27-Oct-09	Follow Up	Gasoline Dispensing Facilities	S

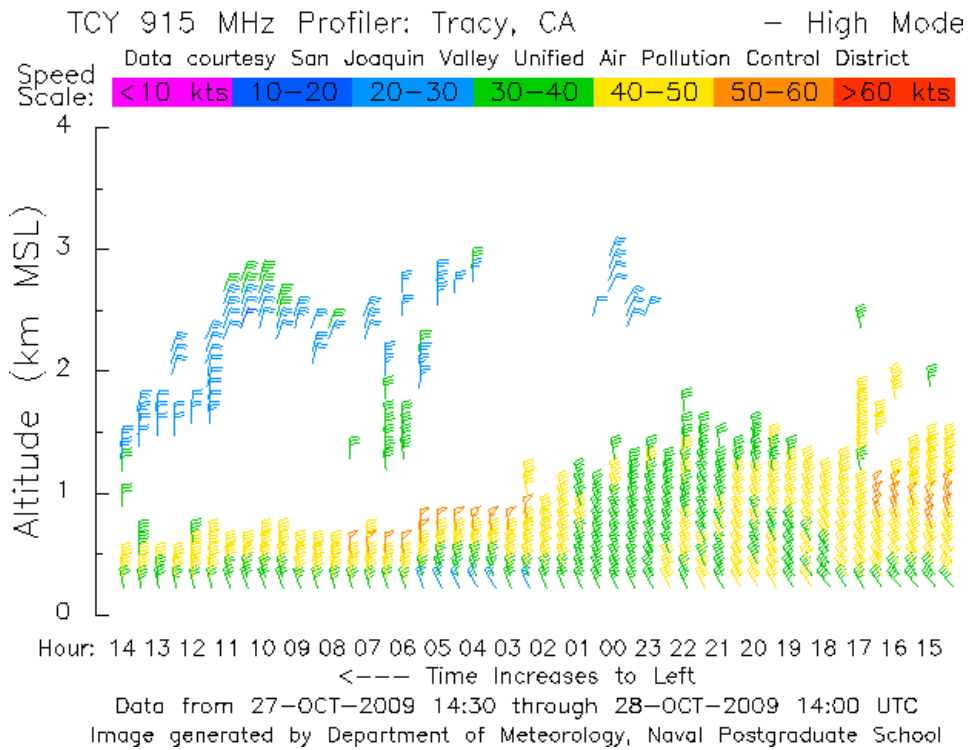
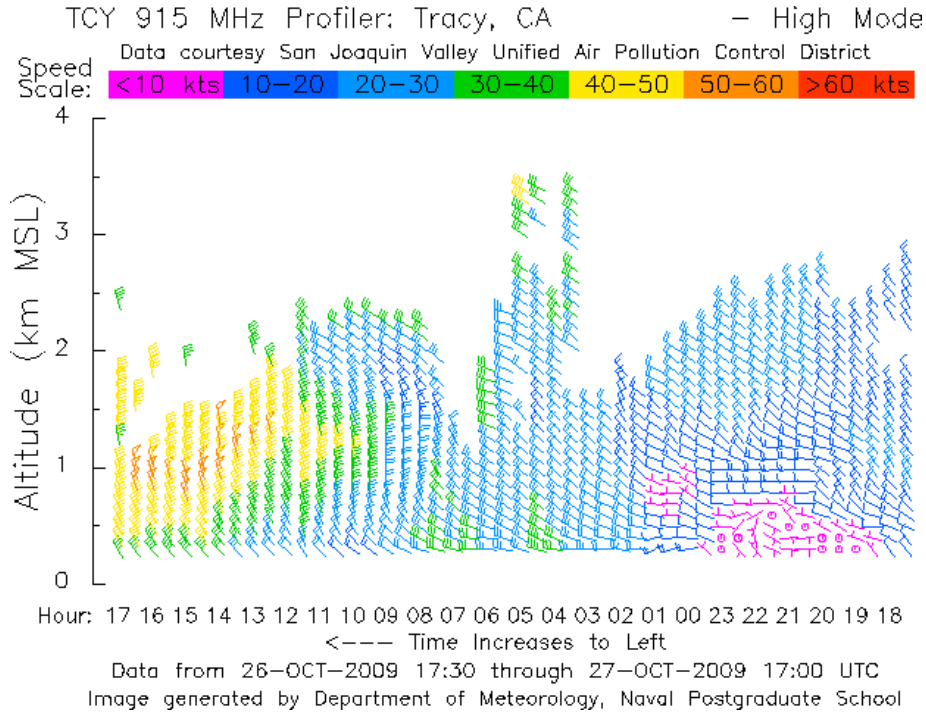
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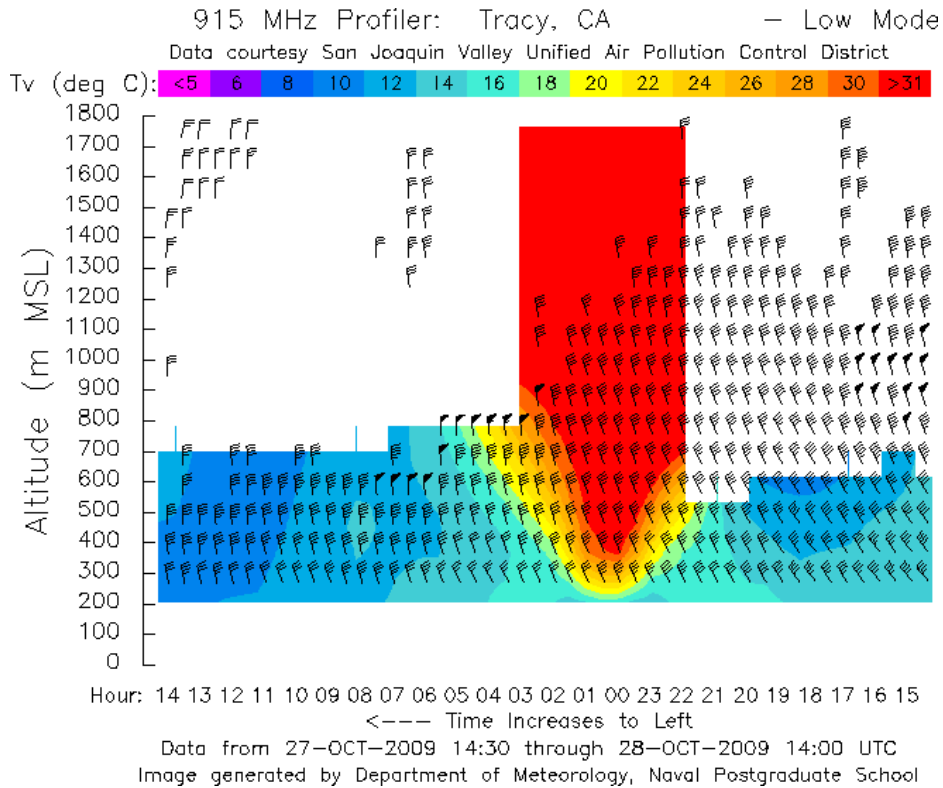
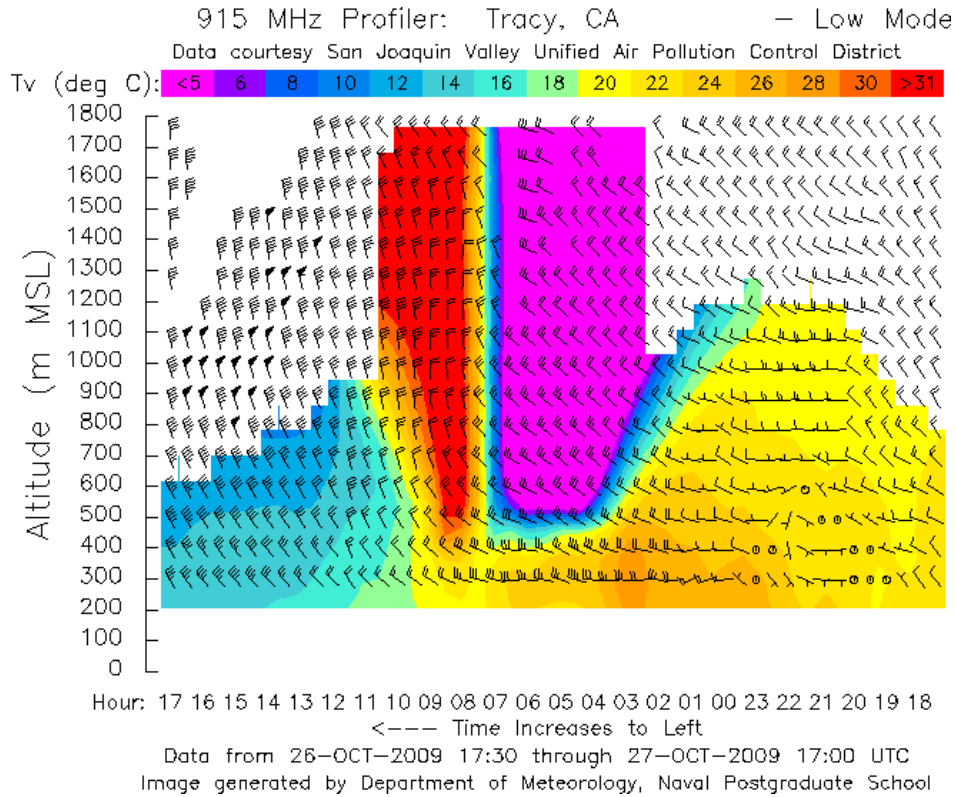
APPENDIX F: Weather Analysis

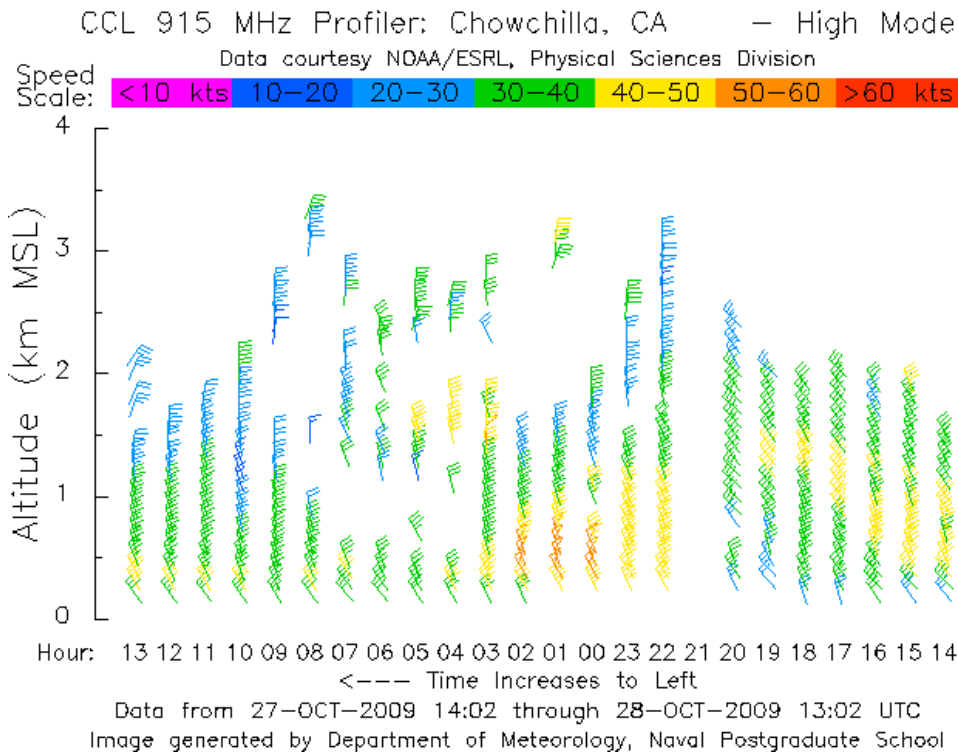
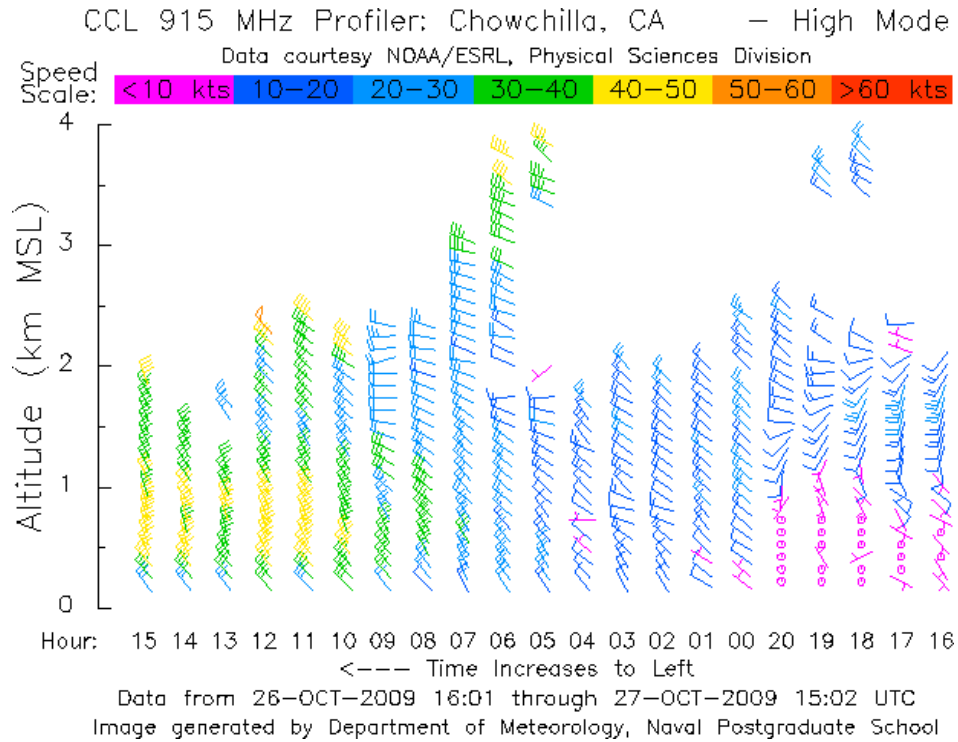
F1. Wind Profiles

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 seven hours ahead of Pacific Daylight Time (PDT). For example, 12 UTC or 12 Z is 4 AM PST or 5 AM PDT. The lower air profilers were located in Tracy, Chowchilla, and Lost Hills.

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.

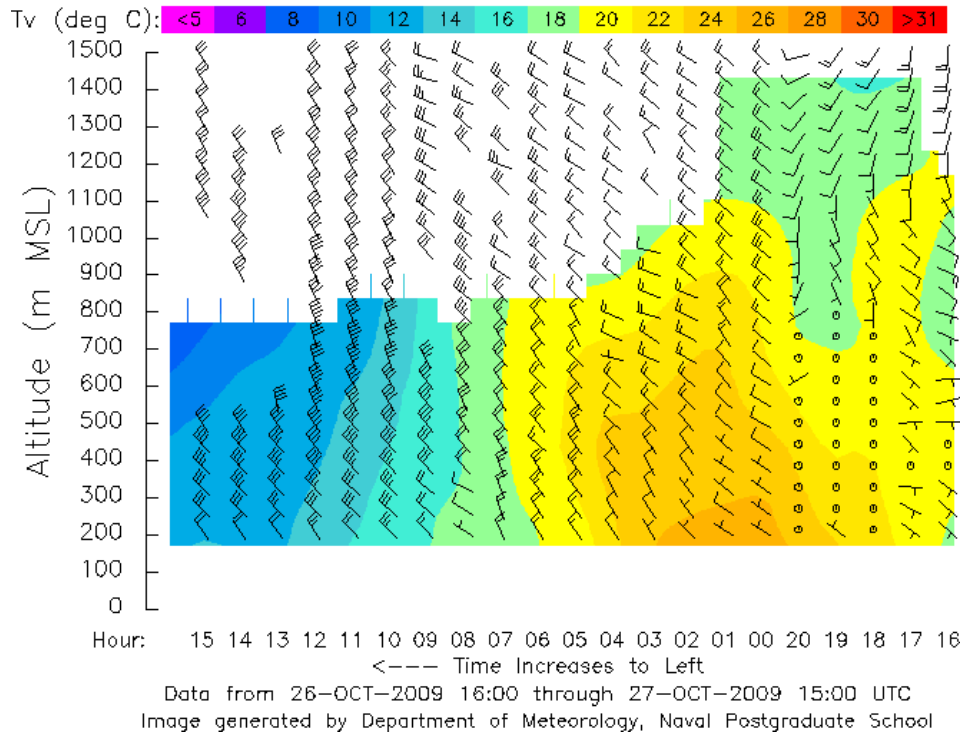






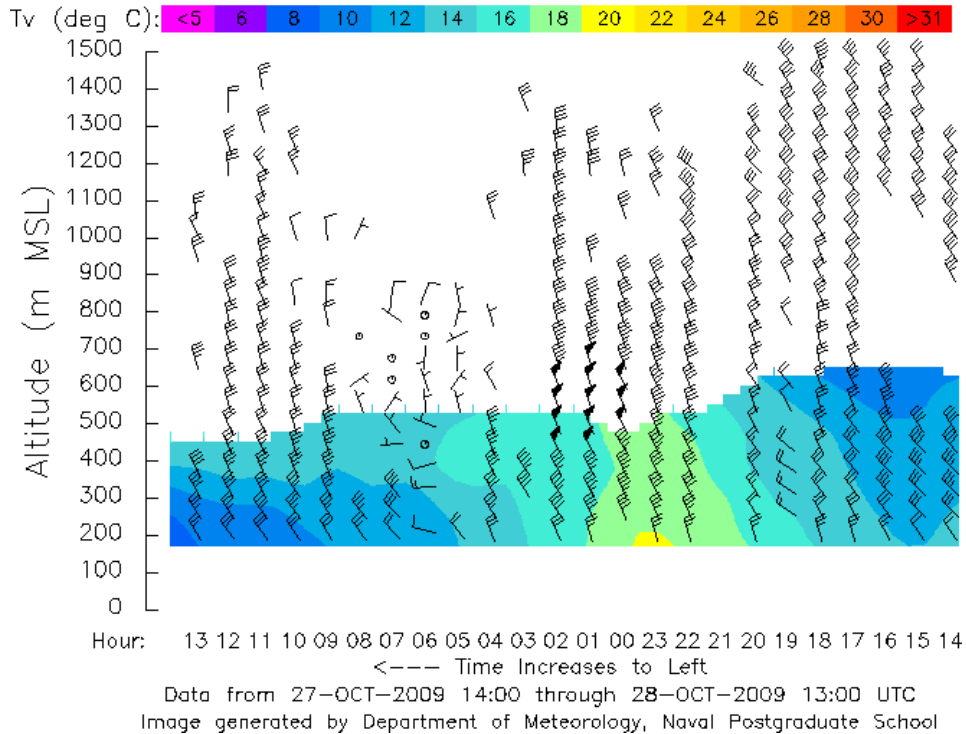
CCL 915 MHz Profiler: Chowchilla, CA - Low Mode

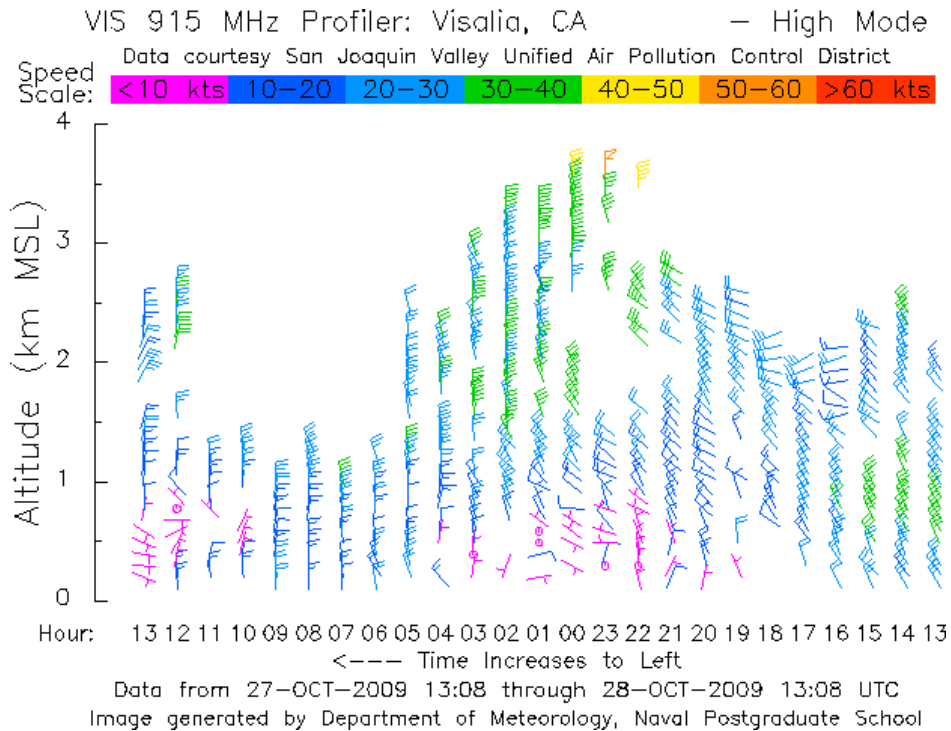
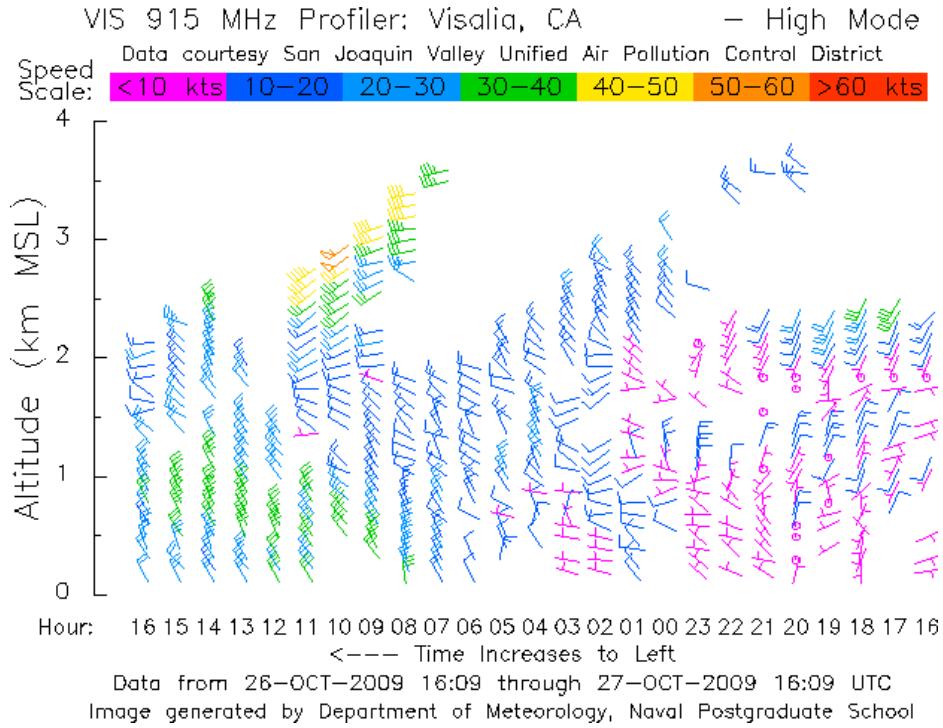
Data courtesy NOAA/ESRL, Physical Sciences Division

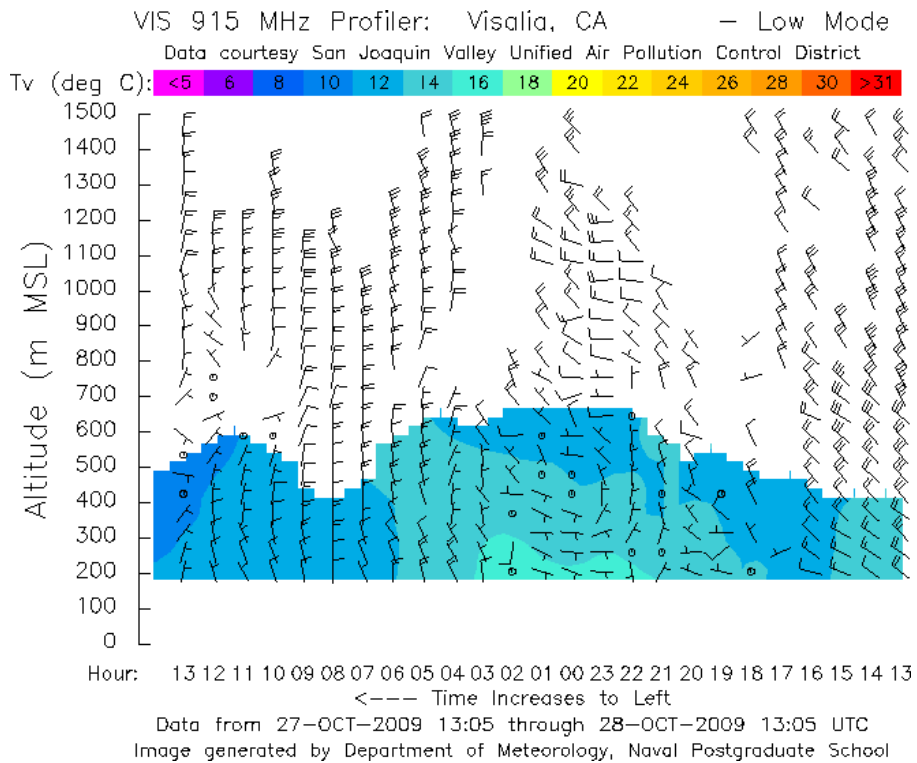
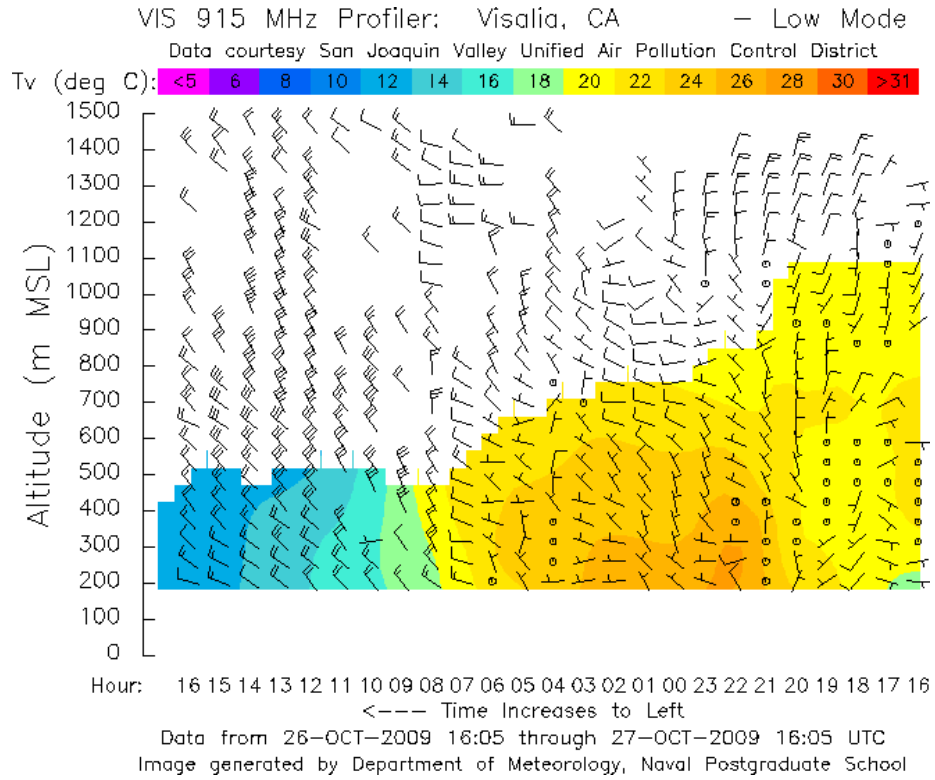


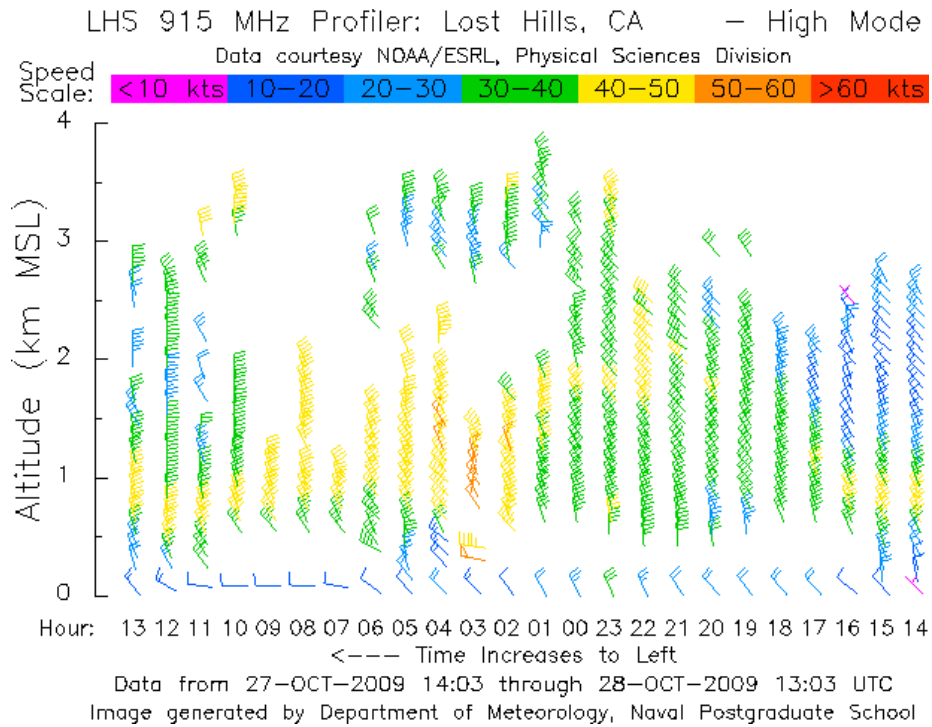
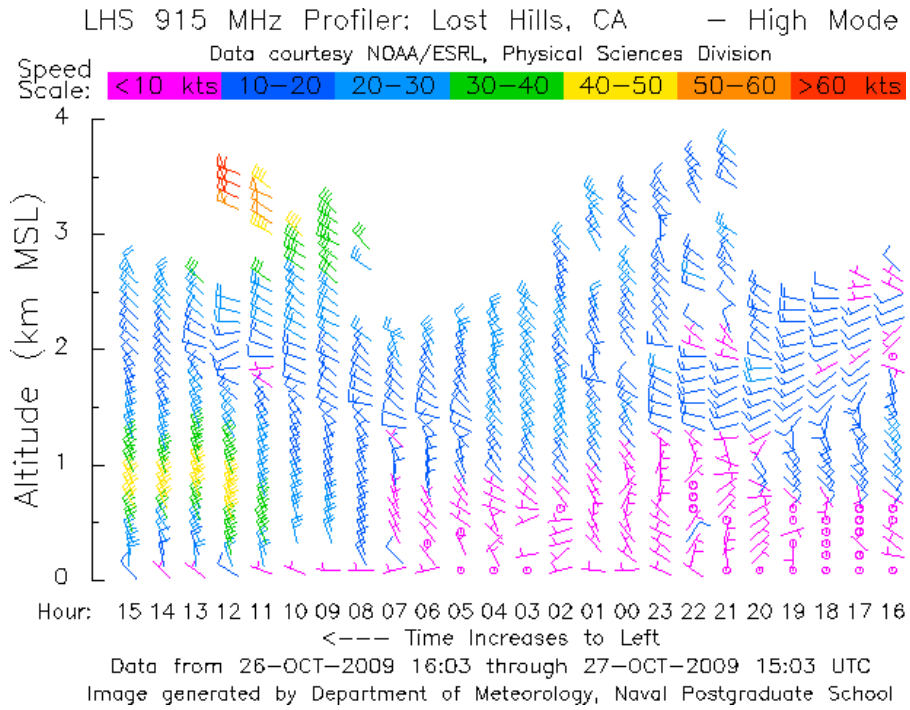
CCL 915 MHz Profiler: Chowchilla, CA - Low Mode

Data courtesy NOAA/ESRL, Physical Sciences Division



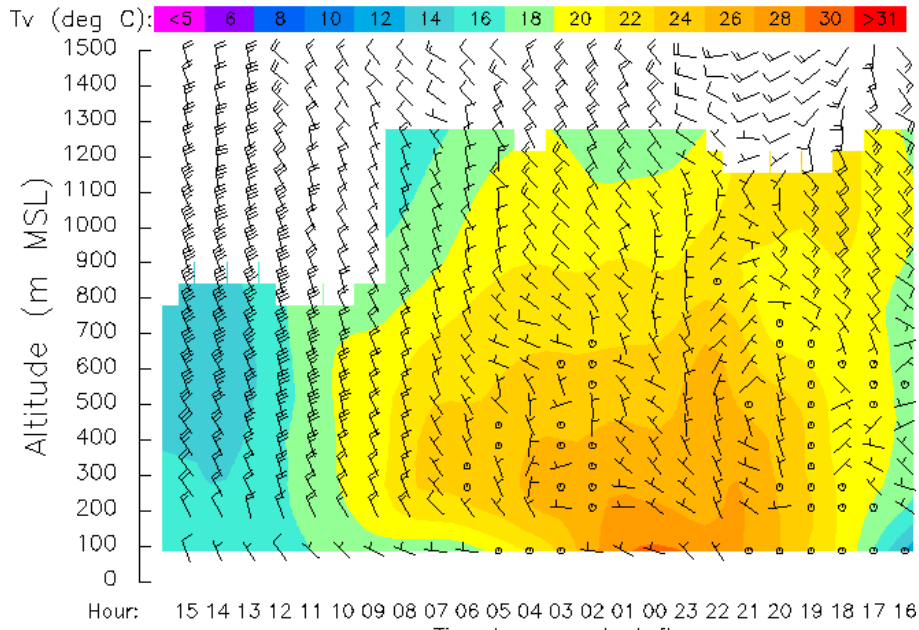






LHS 915 MHz Profiler: Lost Hills, CA - Low Mode

Data courtesy NOAA/ESRL, Physical Sciences Division



Hour: 15 14 13 12 11 10 09 08 07 06 05 04 03 02 01 00 23 22 21 20 19 18 17 16

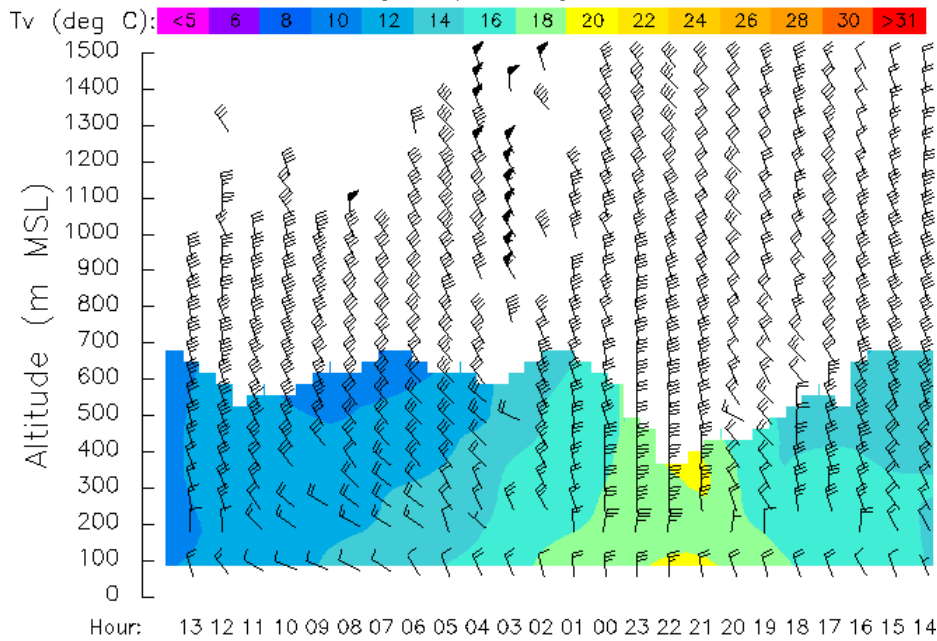
<--- Time Increases to Left

Data from 26-OCT-2009 16:00 through 27-OCT-2009 15:00 UTC

Image generated by Department of Meteorology, Naval Postgraduate School

LHS 915 MHz Profiler: Lost Hills, CA - Low Mode

Data courtesy NOAA/ESRL, Physical Sciences Division



Hour: 13 12 11 10 09 08 07 06 05 04 03 02 01 00 23 22 21 20 19 18 17 16 15 14

<--- Time Increases to Left

Data from 27-OCT-2009 14:00 through 28-OCT-2009 13:00 UTC

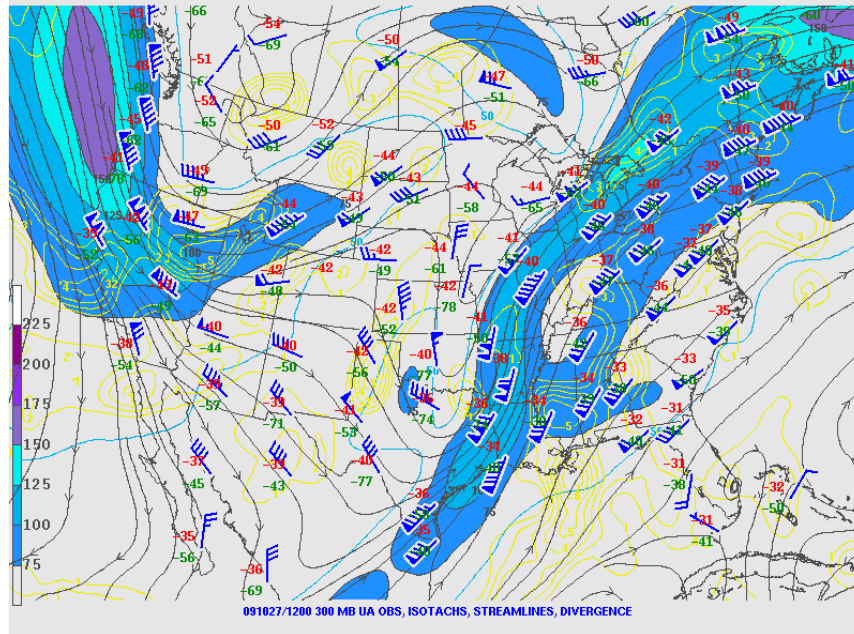
Image generated by Department of Meteorology, Naval Postgraduate School

F2. Weather Charts

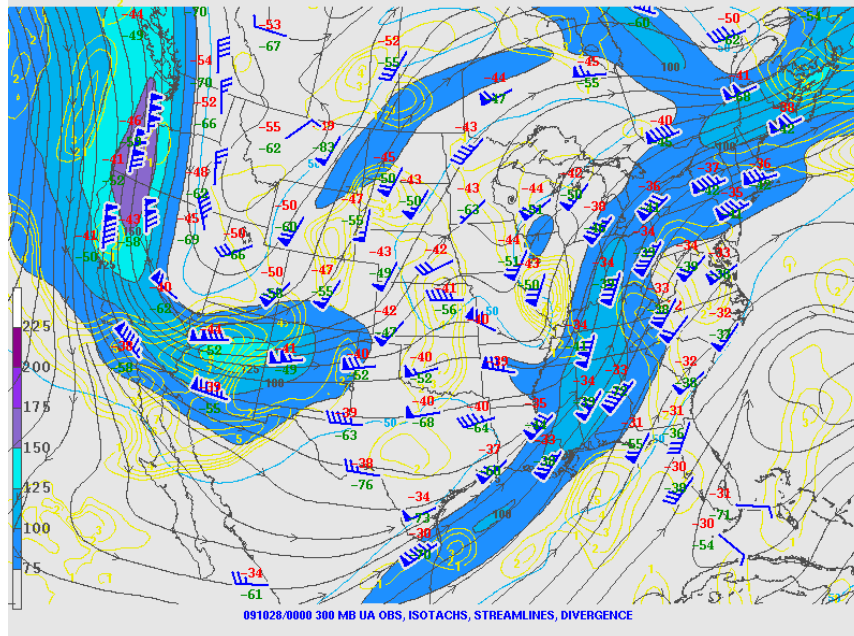
Upper-air analysis (approximately 30,000 feet above ground level) on October 27, 2009

The upper air analysis showed a strong 100 to 150 MPH Jet-stream positioned over California through the day transferring stronger winds toward the surface.

4:00 am PST



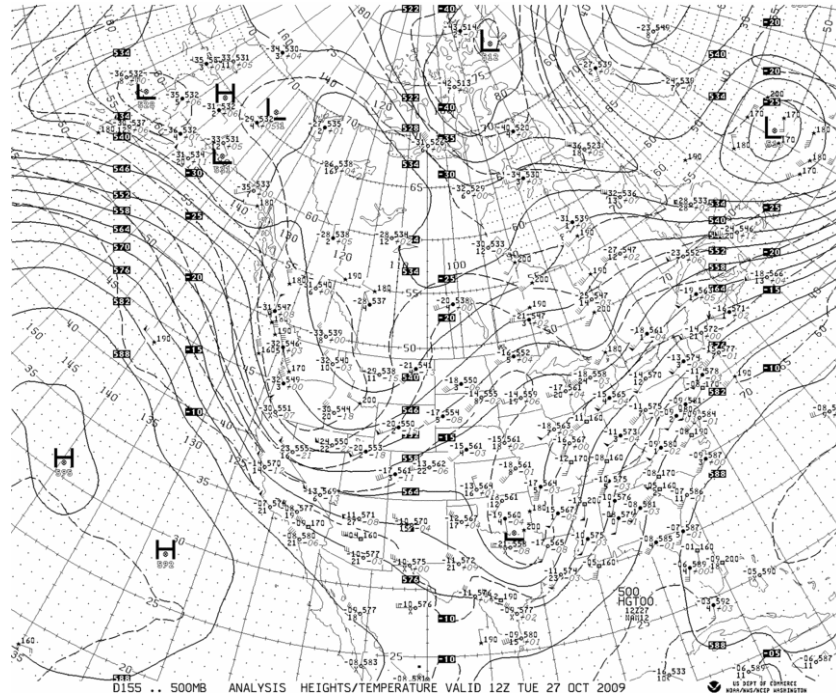
4:00 pm PST



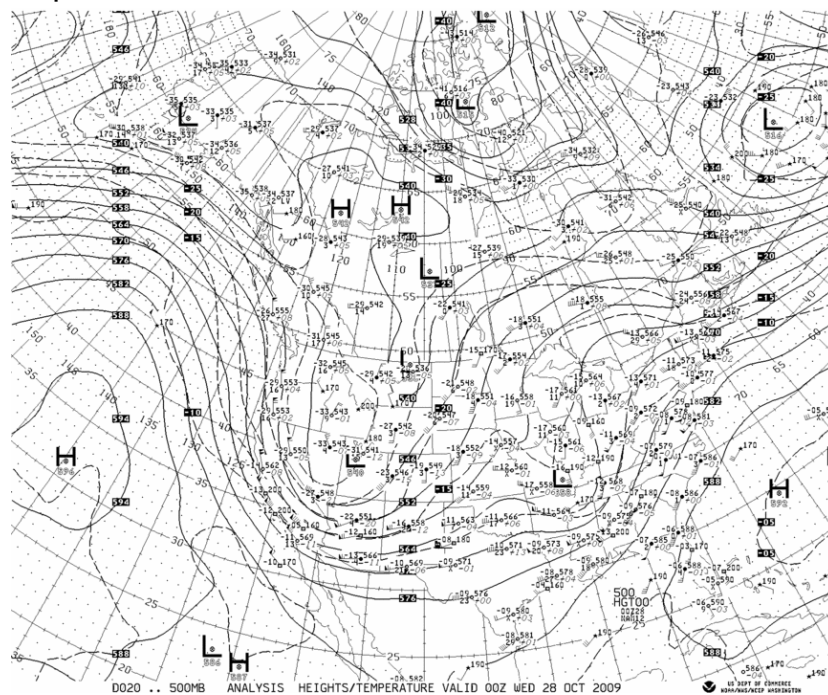
Upper-air analysis (approximately 18,000 feet above ground level) on October 27, 2009

The upper air analysis showed an unseasonably strong trough over western U.S. Strong winds were evident on the trough axis over California.

4:00 am PST



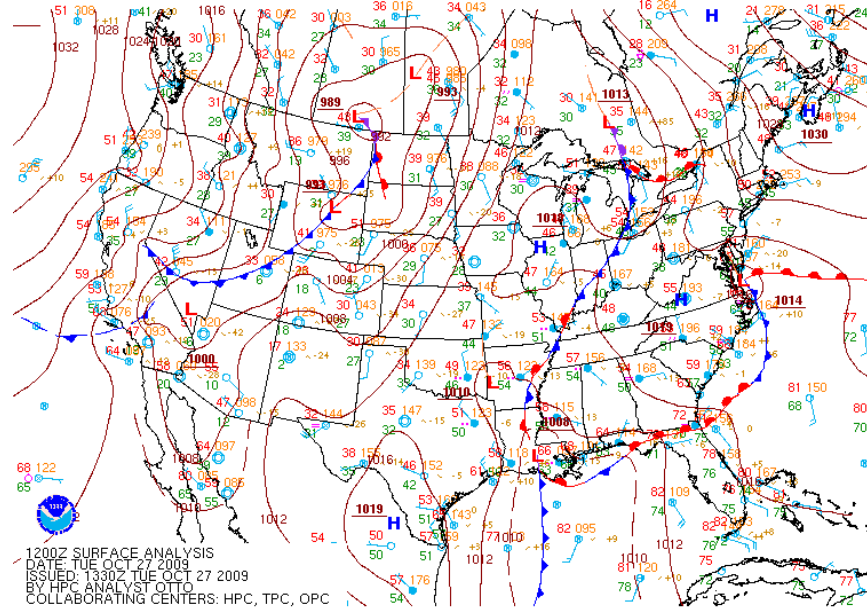
4:00 pm PST



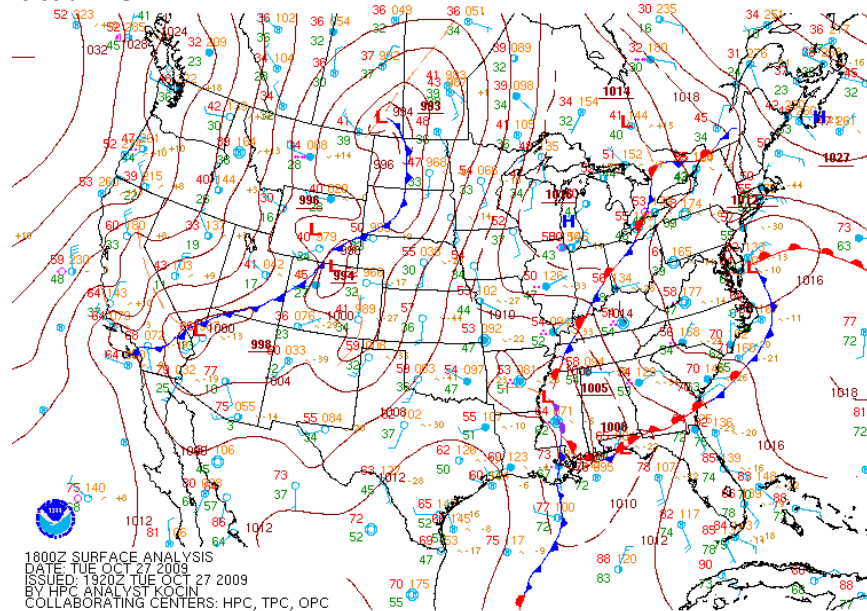
Surface Analysis on October 27, 2009

The surface analysis charts from October 27, 2009 showed packed isobars, which indicated strong winds over the San Joaquin Valley.

4:00 am PST

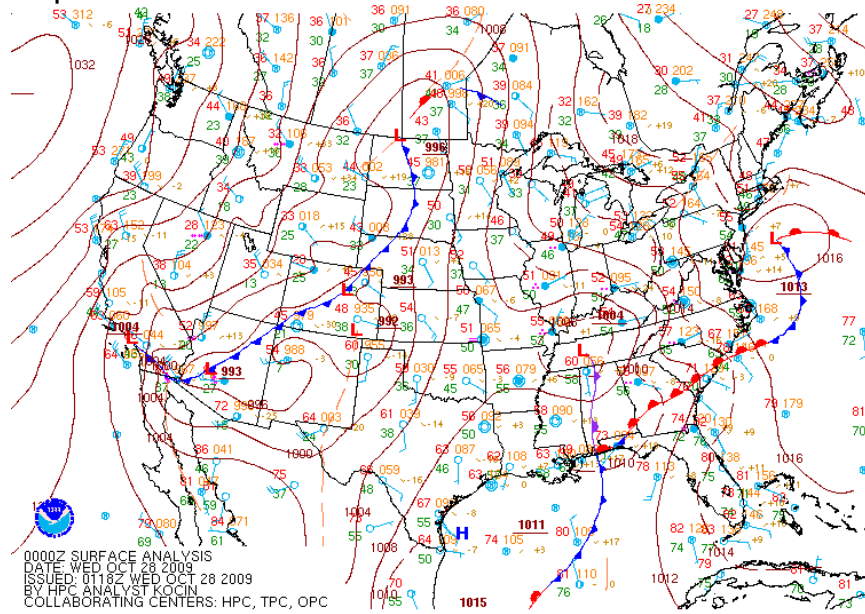


10:00 am PST

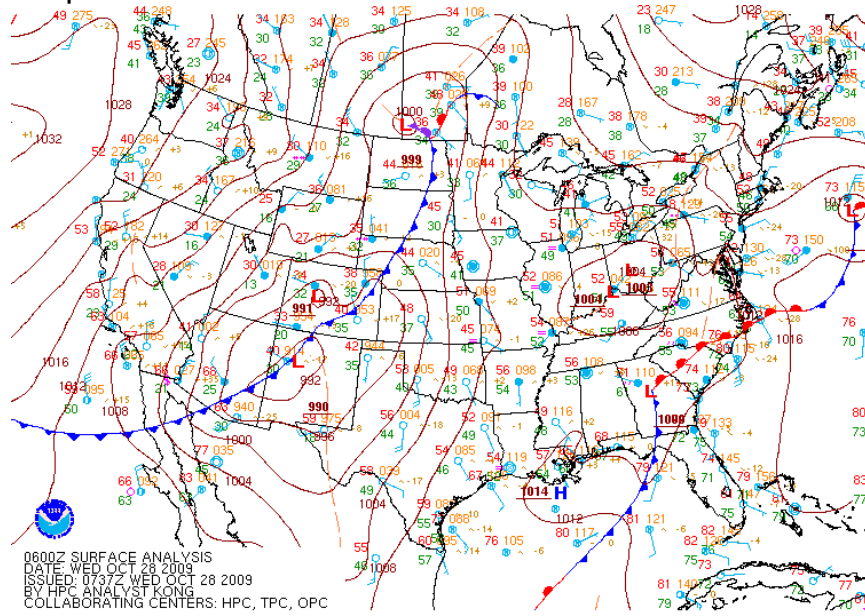


Surface Analysis on October 27, 2009

4:00 pm PST



10:00 pm PST



F3. Surface Observations

Weather Conditions for: Bakersfield, Meadows Field Airport, CA (KBFL)

Elev: 509 ft; Latitude: 35.43361; Longitude: -119.05667

Current time: Wed, 28 Oct 8:41 am (PDT)

Most Recent Observation: Wed, 28 Oct 7:54 am (PDT)

Time (PDT)	Temp. (f)	Dew Point (f)	Relative Humidity (%)	Wind Direction	Wind Speed (mph)	Visibility (miles)	WX	Clouds	Sea Level Pressure (mb)	Altimeter Setting (inches)	Station Pressure (inches)
28 Oct 7:54 am	43	30	60	ESE	3	10.00		CLR	1013.2	29.92	29.382
28 Oct 6:54 am	42	30	62	CALM		10.00		CLR	1012.6	29.91	29.373
28 Oct 5:54 am	43	31	62	CALM		10.00		CLR	1012.1	29.89	29.353
28 Oct 4:54 am	45	31	58	SE	3	10.00		CLR	1011.6	29.88	29.343
28 Oct 3:54 am	45	27	49	CALM		10.00		CLR	1011.5	29.88	29.343
28 Oct 2:54 am	44	28	53	NNW	3	10.00		CLR	1011.7	29.88	29.343
28 Oct 1:54 am	49	28	44	WNW	6	10.00		CLR	1011.3	29.87	29.333
28 Oct 12:54 am	48	29	47	NW	3	10.00		CLR	1011.3	29.87	29.333
27 Oct 11:54 pm	50	28	43	W	5	9.00		CLR	1011.3	29.87	29.333
27 Oct 10:54 pm	53	29	39	CALM		10.00		CLR	1011.5	29.88	29.343
27 Oct 9:54 pm	54	29	38	WSW	3	9.00		CLR	1011.3	29.87	29.333
27 Oct 8:54 pm	56	30	37	NW	7	10.00		CLR	1011.1	29.87	29.333
27 Oct 7:54 pm	57	34	42	WSW	5	10.00		CLR	1011.6	29.88	29.343
27 Oct 6:54 pm	58	33	39	NW	5	10.00		CLR	1010.8	29.86	29.323
27 Oct 5:54 pm	60	31	33	N	12	10.00		CLR	1010.3	29.85	29.313
27 Oct 4:54 pm	62	30	30	NNW	18	8.00		CLR	1010.6	29.85	29.313
27 Oct 3:54 pm	62	31	31	N	15	G23 5.00	HZ	CLR	1010.9	29.86	29.323
27 Oct 2:54 pm	62	30	30	NNW	15	G25 3.00	HZ	CLR	1010.8	29.86	29.323
27 Oct 1:54 pm	62	30	30	NW	14	4.00	HZ	CLR	1011.4	29.88	29.343
27 Oct 12:54 pm	63	31	30	WNW	14	G22 6.00	HZ	CLR	1012.4	29.91	29.373
27 Oct 11:54 am	62	32	32	NW	17	8.00		CLR	1013.5	29.94	29.402
27 Oct 10:54 am	61	33	35	NW	18	10.00		CLR	1014.3	29.97	29.432
27 Oct 9:54 am	60	34	37	NW	21	G24		CLR	1014.5	29.97	29.432
27 Oct 8:54 am	58	37	46	NNW	16	10.00		CLR	1014.2	29.96	29.422
27 Oct 7:54 am	56	45	67	WNW	8	10.00		SCT037	1013.7	29.95	29.412
27 Oct 6:54 am	57	47	69	NNW	14	10.00		SCT060	1013.1	29.93	29.392
27 Oct 5:54 am	55	49	80	NW	13	10.00		CLR	1012.3	29.91	29.373
27 Oct 4:54 am	59	50	72	NW	12	10.00		CLR	1011.2	29.88	29.343
27 Oct 3:54 am	61	49	65	NNW	10	8.00		CLR	1011.0	29.87	29.333
27 Oct 2:54 am	59	48	67	N	6	7.00		CLR	1011.5	29.89	29.353
27 Oct 1:54 am	63	47	56	CALM		10.00		CLR	1011.5	29.89	29.353
27 Oct 12:54 am	67	48	51	E	6	9.00		CLR	1011.7	29.89	29.353
26 Oct 11:54 pm	66	48	52	E	5	9.00		CLR	1012.7	29.92	29.382

Source: University of Utah MesoWest

Weather Conditions for:
Visalia, Visalia Municipal Airport, CA (KVIS)
 Elev: 295 ft; Latitude: 36.31667; Longitude: -119.4

Current time: Wed, 28 Oct 8:59 am (PDT)
 Most Recent Observation: Wed, 28 Oct 8:55 am (PDT)

Time (PDT)	Temp. (f)	Dew (f)	Relative Point Humidity (%)	Wind Direction	Wind Speed (mph)	Visibility (miles)	WX	Clouds	Altimeter Setting (inches)	Station Pressure (inches)
28 Oct 8:55 am	45	32	61	E	3	10.00	CLR		29.93	29.621
28 Oct 8:35 am	45	32	61	ESE	3	10.00	CLR		29.92	29.611
28 Oct 8:15 am	39	34	81	CALM		10.00	CLR		29.91	29.601
28 Oct 7:55 am	37	30	75	CALM		10.00	CLR		29.90	29.591
28 Oct 7:35 am	37	28	70	SE	3	10.00	CLR		29.89	29.581
28 Oct 7:15 am	37	30	75	CALM		10.00	CLR		29.88	29.572
28 Oct 6:55 am	37	30	75	CALM		10.00	CLR		29.88	29.572
28 Oct 6:35 am	37	30	75	SE	3	10.00	CLR		29.88	29.572
28 Oct 6:15 am	39	30	70	CALM		10.00	CLR		29.87	29.562
28 Oct 5:55 am	37	30	75	CALM		10.00	CLR		29.87	29.562
28 Oct 5:35 am	37	30	75	E	3	10.00	CLR		29.86	29.552
28 Oct 5:15 am	39	30	70	CALM		10.00	CLR		29.86	29.552
28 Oct 4:55 am	41	28	61	CALM		10.00	CLR		29.86	29.552
28 Oct 4:35 am	43	28	56	CALM		10.00	CLR		29.85	29.542
28 Oct 4:15 am	43	30	61	NW	5	10.00	CLR		29.85	29.542
28 Oct 3:55 am	45	28	53	N	5	10.00	CLR		29.84	29.532
28 Oct 3:35 am	45	28	53	NNW	6	10.00	CLR		29.86	29.552
28 Oct 3:15 am	45	30	57	NW	7	10.00	CLR		29.86	29.552
28 Oct 2:55 am	45	30	57	N	5	10.00	CLR		29.86	29.552
28 Oct 2:35 am	45	34	66	NNW	7	10.00	CLR		29.85	29.542
28 Oct 2:15 am	45	34	66	NNW	5	10.00	CLR		29.85	29.542
28 Oct 1:55 am	45	36	70	N	5	10.00	CLR		29.84	29.532
28 Oct 1:35 am	45	36	70	NNW	9	10.00	CLR		29.84	29.532
28 Oct 1:15 am	46	32	57	N	6	10.00	CLR		29.85	29.542
28 Oct 12:55 am	46	30	53	NW	8	10.00	CLR		29.84	29.532
28 Oct 12:35 am	46	30	53	N	7	10.00	CLR		29.84	29.532
28 Oct 12:15 am	46	30	53	NW	8	10.00	CLR		29.84	29.532
27 Oct 11:55 pm	48	34	57	NW	7	10.00	CLR		29.84	29.532
27 Oct 11:35 pm	50	34	54	N	6	10.00	CLR		29.84	29.532
27 Oct 11:15 pm	48	36	62	NNE	7	10.00	CLR		29.84	29.532
27 Oct 10:55 pm	48	36	62	N	7	10.00	CLR		29.84	29.532
27 Oct 10:35 pm	48	37	66	NNE	5	10.00	CLR		29.84	29.532
27 Oct 10:15 pm	48	37	66	N	7	10.00	CLR		29.84	29.532
27 Oct 9:55 pm	48	36	62	N	7	10.00	CLR		29.84	29.532
27 Oct 9:35 pm	52	36	54	N	6	10.00	CLR		29.84	29.532
27 Oct 9:15 pm	54	36	50	N	8	10.00	CLR		29.85	29.542
27 Oct 8:55 pm	55	34	44	NW	7	10.00	CLR		29.83	29.522
27 Oct 8:35 pm	57	32	38	NW	8	10.00	CLR		29.83	29.522
27 Oct 8:15 pm	55	34	44	NNW	7	10.00	CLR		29.83	29.522
27 Oct 7:55 pm	55	36	47	CALM		10.00	CLR		29.84	29.532
27 Oct 7:35 pm	55	36	47	SE	10	10.00	CLR		29.83	29.522
27 Oct 7:15 pm	54	37	54	SE	3	10.00	CLR		29.83	29.522
27 Oct 6:55 pm	54	37	54	ESE	3	10.00	CLR		29.83	29.522
27 Oct 6:35 pm	54	37	54	SE	3	10.00	CLR		29.83	29.522

27 Oct 6:15 pm	57	37	47	SE	5	10.00	CLR	29.82	29.512
27 Oct 5:55 pm	57	36	44	SE	7	10.00	CLR	29.82	29.512
27 Oct 5:35 pm	61	36	39	SE	7	10.00	CLR	29.82	29.512
27 Oct 5:15 pm	61	36	39	ESE	7	10.00	CLR	29.82	29.512
27 Oct 4:55 pm	61	36	39	E	6	10.00	CLR	29.84	29.532
27 Oct 4:35 pm	61	36	39	SE	7	10.00	CLR	29.84	29.532
27 Oct 4:15 pm	61	36	39	E	6	10.00	CLR	29.84	29.532
27 Oct 3:55 pm	61	34	36	ENE	5	10.00	CLR	29.85	29.542
27 Oct 3:35 pm	61	34	36	N	6	10.00	CLR	29.85	29.542
27 Oct 3:15 pm	61	34	36	N	10	10.00	CLR	29.86	29.552
27 Oct 2:55 pm	61	34	36	N	7G17	10.00	CLR	29.86	29.552
27 Oct 2:35 pm	61	34	36	NNE	9	10.00	FEW008 SCT060	29.86	29.552
27 Oct 2:15 pm	63	34	34	N	9	10.00	BKN060	29.86	29.552
27 Oct 1:55 pm	63	34	34	NNW	13	10.00	OVC060	29.87	29.562
27 Oct 1:35 pm	63	34	34	NW	13G18	10.00	SCT060	29.88	29.572
27 Oct 1:15 pm	61	34	36	NNW	14	10.00	CLR	29.89	29.581
27 Oct 12:55 pm	63	34	34	NW	15	10.00	CLR	29.90	29.591
27 Oct 12:35 pm	63	34	34	NW	13	10.00	FEW050	29.91	29.601
27 Oct 12:15 pm	61	34	36	NNW	15G20	10.00	SCT050	29.92	29.611
27 Oct 11:55 am	61	34	36	NNW	10G17	10.00	CLR	29.92	29.611
27 Oct 11:35 am	61	34	36	NW	14	10.00	CLR	29.93	29.621
27 Oct 11:15 am	61	34	36	NW	12G16	10.00	CLR	29.94	29.631
27 Oct 10:55 am	59	36	41	NW	18	10.00	CLR	29.94	29.631
27 Oct 10:35 am	59	36	41	NNW	18G23	10.00	CLR	29.94	29.631
27 Oct 10:15 am	57	36	44	NNW	20G25	10.00	CLR	29.95	29.641
27 Oct 9:55 am	57	36	44	NNW	14G18	10.00	CLR	29.94	29.631
27 Oct 9:35 am	55	36	47	NW	12	10.00	CLR	29.94	29.631
27 Oct 9:15 am	55	36	47	NW	13G20	10.00	CLR	29.94	29.631
27 Oct 8:55 am	55	36	47	NW	13	10.00	CLR	29.93	29.621
27 Oct 8:35 am	54	36	50	WNW	10	10.00	CLR	29.92	29.611
27 Oct 8:15 am	54	37	54	WNW	9	10.00	CLR	29.92	29.611
27 Oct 7:55 am	54	39	58	WNW	7	10.00	CLR	29.92	29.611
27 Oct 7:35 am	55	39	54	WNW	9	10.00	CLR	29.91	29.601
27 Oct 7:15 am	55	39	54	NW	15	10.00	CLR	29.90	29.591
27 Oct 6:55 am	55	39	54	NW	17	10.00	CLR	29.90	29.591
27 Oct 6:35 am	55	39	54	NNW	13	10.00	CLR	29.90	29.591
27 Oct 6:15 am	57	43	59	NW	15G21	10.00	CLR	29.90	29.591
27 Oct 5:55 am	57	45	63	NW	14	10.00	CLR	29.91	29.601
27 Oct 5:35 am	57	46	67	NW	14	10.00	CLR	29.89	29.581
27 Oct 5:15 am	57	48	72	NW	18	10.00	CLR	29.90	29.591
27 Oct 4:55 am	59	50	72	NW	16	10.00	CLR	29.89	29.581
27 Oct 4:35 am	61	50	68	NW	18	10.00	CLR	29.87	29.562
27 Oct 4:15 am	59	50	72	NW	14	10.00	CLR	29.87	29.562
27 Oct 3:55 am	59	50	72	NNW	10	10.00	CLR	29.88	29.572
27 Oct 3:35 am	57	50	77	NNW	10	10.00	CLR	29.89	29.581
27 Oct 3:15 am	57	48	72	NW	8	10.00	CLR	29.89	29.581
27 Oct 2:55 am	57	48	72	NW	9	10.00	CLR	29.89	29.581
27 Oct 2:35 am	57	48	72	NW	9	10.00	CLR	29.90	29.591
27 Oct 2:15 am	57	48	72	NNW	9	10.00	CLR	29.90	29.591
27 Oct 1:55 am	59	50	72	NNW	10	10.00	CLR	29.90	29.591
27 Oct 1:35 am	59	50	72	NNW	9	9.00	CLR	29.89	29.581
27 Oct 1:15 am	59	52	77	NW	9	7.00	CLR	29.90	29.591
27 Oct 12:55 am	59	52	77	NW	5	7.00	CLR	29.89	29.581
27 Oct 12:35 am	59	52	77	NW	3	7.00	CLR	29.90	29.591

27 Oct 12:15 am	57	50	77	CALM	8.00	CLR	29.90	29.591
26 Oct 11:55 pm	57	52	82	CALM	7.00	CLR	29.90	29.591

Source: University of Utah MesoWest

Weather Conditions for: Lemoore, Naval Air Station, CA (KNLC)

Elev: 233 ft; Latitude: 36.30361; Longitude: -119.93806

Current time: Wed, 28 Oct 8:57 am (PDT)

Most Recent Observation: Wed, 28 Oct 7:56 am (PDT)

Time (PDT)	Temp (f)	Dew (f)	Relative Humidity (%)	Wind Direction	Wind Speed (mph)	Visibility (miles)	WX	Clouds	Sea Level Pressure (mb)	Altimeter Setting (inches)	Station Pressure (inches)
28 Oct 7:56 am	46	27	47	NW	29G35	10.00		FEW200	1012.9	29.91	29.668
28 Oct 6:56 am	45	27	49	NW	26	10.00		FEW200	1012.8	29.91	29.668
28 Oct 5:56 am	46	27	47	NW	24	10.00		CLR	1012.7	29.90	29.658
28 Oct 4:56 am	46	27	47	NW	21	10.00		CLR	1012.2	29.89	29.648
28 Oct 3:56 am	48	27	44	NW	24	10.00		CLR	1012.0	29.88	29.638
28 Oct 2:56 am	49	27	42	NW	21	10.00		CLR	1012.4	29.90	29.658
28 Oct 1:56 am	50	27	41	NW	23	10.00		CLR	1012.1	29.89	29.648
28 Oct 12:56 am	52	26	36	NW	29G37	10.00		CLR	1011.6	29.87	29.628
27 Oct 11:56 pm	52	26	36	NW	28G35	10.00		CLR	1011.4	29.87	29.628
27 Oct 10:56 pm	53	26	35	NW	28G36	10.00		CLR	1011.6	29.87	29.628
27 Oct 9:56 pm	54	26	34	NW	29G38	8.00		FEW200	1011.5	29.87	29.628
27 Oct 8:56 pm	56	27	33	NW	33G43	8.00		FEW200	1011.2	29.86	29.618
27 Oct 7:56 pm	58	27	30	NW	31G43	7.00		SCT200	1011.1	29.86	29.618
27 Oct 6:56 pm	59	26	28	NW	32G39	6.00	BLDU	SCT200	1010.6	29.85	29.608
27 Oct 5:56 pm	61	27	27	NW	30G38	6.00	BLDU	FEW120 SCT200	1010.2	29.83	29.588
27 Oct 4:56 pm	63	27	25	NW	30G43	6.00	BLDU	SCT120 BKN200	1010.6	29.84	29.598
27 Oct 3:56 pm	65	28	25	NW	38G46	6.00	BLDU	FEW080 SCT120 OVC200	1011.0	29.86	29.618
27 Oct 2:56 pm	64	27	24	NNW	30G38	6.00	BLDU	SCT120 OVC200	1011.4	29.87	29.628
27 Oct 1:56 pm	64	27	24	NW	33G39	9.00		SCT120 OVC200	1011.3	29.87	29.628
27 Oct 12:56 pm	63	27	25	NW	26G38	10.00		SCT120 OVC200	1012.9	29.91	29.668
27 Oct 12:40 pm	63	27	25	NNW	35G45	4.00	BLDU	FEW001 SCT120 OVC200		29.92	29.678
27 Oct 11:56 am	65	26	23	NNW	31G38	7.00		FEW070 BKN200	1013.1	29.92	29.678
27 Oct 10:56 am	62	27	26	NW	30G44	8.00		FEW070 OVC200	1014.2	29.95	29.708
27 Oct 9:56 am	59	28	31	NW	35G45	10.00		BKN200	1014.7	29.97	29.727
27 Oct 8:56 am	58	30	34	NW	36G43	5.00	BLDU	OVC200	1013.7	29.94	29.698
27 Oct 7:56 am	57	31	37	NW	30G38	10.00		FEW070 OVC200	1013.8	29.94	29.698
27 Oct 6:56 am	56	36	47	NW	25G33	10.00		SCT200	1013.4	29.93	29.688
27 Oct 5:56 am	59	36	42	NW	32G41	9.00		CLR	1013.3	29.93	29.688
27 Oct 4:56 am	61	47	60	NW	24G31	10.00		CLR	1012.9	29.92	29.678
27 Oct 3:56 am	62	49	62	NNW	22	10.00		CLR	1012.7	29.91	29.668
27 Oct 2:56 am	61	48	62	NNW	14	10.00		CLR	1012.7	29.91	29.668
27 Oct 1:56 am	63	47	56	NNW	18	10.00		CLR	1012.9	29.92	29.678
27 Oct 12:56 am	62	44	52	NNW	14	10.00		CLR	1013.1	29.92	29.678
26 Oct 11:56 pm	61	42	50	NNW	13	8.00		FEW150 BKN180	1013.4	29.93	29.688

Source: University of Utah MesoWest

Weather Conditions for:
Hanford, Hanford Municipal Airport, CA (KHJO)
 Elev: 243 ft; Latitude: 36.31861; Longitude: -119.62889

Current time: Wed, 28 Oct 8:58 am (PDT)
 Most Recent Observation: Wed, 28 Oct 8:53 am (PDT)

Time (PDT)	Temp. (f)	Dew Point (f)	Relative Humidity (%)	Wind Direction	Wind Speed (mph)	Visibility (miles)	WX	Clouds	Sea Level Pressure (mb)	Altimeter Setting (inches)	Station Pressure (inches)
28 Oct 8:53 am	47	30	52	NNE	6	10.00		CLR	1014.5	29.96	29.707
28 Oct 7:53 am	46	26	45	N	16G21	10.00		CLR	1013.3	29.92	29.667
28 Oct 6:53 am	43	27	53	NNW	9	10.00		CLR	1012.8	29.90	29.647
28 Oct 5:53 am	46	27	47	NNW	8G16	10.00		CLR	1012.2	29.89	29.637
28 Oct 4:53 am	47	27	45	NNW	7	10.00		CLR	1011.7	29.87	29.617
28 Oct 3:53 am	47	28	48	NW	10	10.00		CLR	1011.4	29.86	29.607
28 Oct 2:53 am	48	28	46	NW	13G20	10.00		CLR	1011.7	29.87	29.617
28 Oct 1:53 am	49	28	44	NW	16G26	10.00		CLR	1011.2	29.86	29.607
28 Oct 12:53 am	50	28	42	NW	21	10.00		CLR	1011.3	29.86	29.607
27 Oct 11:53 pm	51	28	41	NW	20	10.00		CLR	1011.4	29.86	29.607
27 Oct 10:53 pm	52	29	41	NNW	15	10.00		CLR	1011.5	29.87	29.617
27 Oct 9:53 pm	54	29	38	NW	16	10.00		CLR	1011.4	29.86	29.607
27 Oct 8:53 pm	56	29	35	NNW	12G24	10.00		CLR	1011.4	29.86	29.607
27 Oct 7:53 pm	58	29	33	NW	15G22	9.00		CLR	1010.9	29.85	29.597
27 Oct 6:53 pm	60	29	30	NW	20G31	7.00		CLR	1010.7	29.84	29.588
27 Oct 5:53 pm	62	29	28	NW	23G32	4.00	HZ	CLR	1010.4	29.83	29.578
27 Oct 4:53 pm	63	30	29	NW	13	3.00	HZ	CLR	1010.7	29.85	29.597
27 Oct 3:53 pm	63	30	29	NW	18G26	6.00	HZ	CLR	1011.2	29.86	29.607
27 Oct 2:53 pm	62	30	30	N	13G26	7.00		CLR	1011.3	29.86	29.607
27 Oct 1:53 pm	62	31	31	NNW	20G26	7.00		CLR	1012.0	29.88	29.627
27 Oct 12:53 pm	62	31	31	NW	23G26	5.00	HZ	CLR	1012.8	29.91	29.657
27 Oct 11:53 am	61	31	32	NW	22G29	3.00	HZ	FEW009	1013.5	29.93	29.677
27 Oct 11:41 am	61	32	34	NW	23G29	2.50	HZ	SCT009		29.93	29.677
27 Oct 11:31 am	61	32	34	NW	23G31	2.00	HZ	BKN009		29.93	29.677
27 Oct 11:16 am	61	30	31	NW	24G35	2.50	HZ	SCT009		29.94	29.687
27 Oct 10:53 am	60	32	35	NW	22G33	4.00	HZ	FEW018	1014.0	29.94	29.687
27 Oct 10:43 am	59	32	36	NW	25G36	3.00	HZ	FEW018		29.95	29.697
27 Oct 10:20 am	57	34	41	NW	29G38	2.50	HZ	CLR		29.95	29.697
27 Oct 9:53 am	57	33	40	NW	24G33	4.00	HZ	CLR	1014.3	29.95	29.697
27 Oct 8:53 am	56	34	43	NW	25G32	8.00		CLR	1014.0	29.94	29.687
27 Oct 7:53 am	55	36	48	NW	24G33	8.00			1013.2	29.91	29.657
27 Oct 6:53 am	56	39	53	NW	16	8.00		CLR	1013.2	29.92	29.667
27 Oct 5:53 am	58	44	60	NW	20G24	10.00		CLR	1013.6	29.93	29.677
27 Oct 4:53 am	59	48	67	NW	22G32	10.00		CLR	1012.6	29.90	29.647
27 Oct 3:53 am	61	52	72	NNW	17	10.00		CLR	1012.5	29.90	29.647
27 Oct 2:53 am	62	51	67	NNW	14	10.00		CLR	1012.7	29.90	29.647
27 Oct 1:53 am	62	49	62	NNW	12	10.00		CLR	1013.1	29.92	29.667
27 Oct 12:53 am	62	50	65	NNW	13	10.00		CLR	1013.1	29.92	29.667
26 Oct 11:53 pm	63	55	75	NW	9	6.00	HZ	CLR	1013.4	29.93	29.677

Source: University of Utah MesoWest

Weather Conditions for:
Fresno, Fresno Air Terminal, CA (KFAT)
 Elev: 331 ft; Latitude: 36.78000; Longitude: -119.71944

Current time: Wed, 28 Oct 8:56 am (PDT)
 Most Recent Observation: Wed, 28 Oct 8:53 am (PDT)

Time (PDT)	Temp. (f)	Dew (f)	Relative Humidity (%)	Wind Direction	Wind Speed (mph)	Visibility (miles)	WX	Clouds	Sea Level Pressure (mb)	Altimeter Setting (inches)	Station Pressure (inches)
28 Oct 8:53 am	50	22	33	NW	6	10.00	FEW060		1014.0	29.95	29.602
28 Oct 7:53 am	47	22	37	NW	17	10.00	FEW060	SCT200	1012.8	29.91	29.563
28 Oct 6:53 am	46	23	40	NW	15	10.00	FEW180		1012.0	29.89	29.543
28 Oct 5:53 am	46	24	42	NW	14	10.00	CLR		1012.0	29.89	29.543
28 Oct 4:53 am	47	24	40	NW	14	10.00	CLR		1011.3	29.87	29.523
28 Oct 3:53 am	48	25	40	NW	13	10.00	CLR		1011.6	29.88	29.533
28 Oct 2:53 am	48	27	44	NW	12	10.00	CLR		1011.6	29.88	29.533
28 Oct 1:53 am	49	27	42	NW	13	10.00	CLR		1011.4	29.87	29.523
28 Oct 12:53 am	50	27	41	NW	15	10.00	CLR		1011.3	29.87	29.523
27 Oct 11:53 pm	54	26	34	NW	18	10.00	CLR		1011.2	29.87	29.523
27 Oct 10:53 pm	55	26	32	NW	18	10.00	CLR		1011.1	29.86	29.513
27 Oct 9:53 pm	56	27	33	NNW	10	10.00	CLR		1011.0	29.86	29.513
27 Oct 8:53 pm	57	27	31	NNW	17G25	10.00	FEW150		1011.2	29.87	29.523
27 Oct 7:53 pm	59	26	28	NW	22G30	10.00	CLR		1010.5	29.85	29.503
27 Oct 6:53 pm	60	32	35	N	14G33	9.00	FEW200		1010.5	29.85	29.503
27 Oct 5:53 pm	63	27	25	NW	16G24	10.00	FEW080	SCT150 BKN200	1009.7	29.82	29.474
27 Oct 4:53 pm	65	27	24	NW	18G29	10.00	FEW050	SCT080 SCT150 BKN200	1009.6	29.82	29.474
27 Oct 3:53 pm	64	29	27	WNW	18G29	10.00	FEW050	SCT080 SCT150 BKN200	1010.0	29.83	29.483
27 Oct 2:53 pm	66	30	26	WNW	24G29	8.00	FEW050	SCT200	1010.2	29.84	29.493
27 Oct 1:53 pm	63	31	30	NW	14G24	10.00	FEW050	SCT150	1011.3	29.87	29.523
27 Oct 12:53 pm	60	33	36	WNW	18G23	10.00	BKN050	BKN150	1012.4	29.90	29.553
27 Oct 11:53 am	60	33	36	WNW	16	10.00	FEW050	BKN150	1013.0	29.92	29.573
27 Oct 10:53 am	59	32	36	NW	17G30	9.00	FEW050	SCT150 BKN180	1013.3	29.93	29.583

27 Oct 9:53 am	57	33	40	NW	20G31	8.00	FEW040 SCT150 BKN180	1013.5	29.94	29.592
27 Oct 8:53 am	55	34	45	WNW	17G25	10.00	FEW035 BKN150 OVC180	1013.3	29.93	29.583
27 Oct 7:53 am	54	32	43	WNW	20	10.00	FEW035 BKN150 OVC180	1012.7	29.91	29.563
27 Oct 6:53 am	55	33	43	NW	17G25	10.00	SCT150 BKN180	1012.5	29.91	29.563
27 Oct 5:53 am	57	36	45	NW	14G24	10.00	FEW120 SCT180	1012.5	29.91	29.563
27 Oct 4:53 am	58	46	65	NW	21G28	10.00	SCT180	1012.3	29.90	29.553
27 Oct 3:53 am	60	53	78	WNW	23G29	10.00	OVC180	1012.0	29.90	29.553
27 Oct 2:53 am	62	52	70	WNW	21G26	10.00	OVC180	1012.1	29.90	29.553
27 Oct 1:53 am	62	51	67	NW	10	10.00	OVC180	1012.8	29.92	29.573
27 Oct 12:53 am	62	51	67	WNW	12	10.00	BKN180	1012.9	29.92	29.573
26 Oct 11:53 pm	62	55	78	WNW	5	8.00	BKN180	1013.2	29.93	29.583

Source: University of Utah MesoWest

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APPENDIX G: Climatology

G1. Climate Summaries

FRESNO WSO AP, CALIFORNIA (043257)

Period of Record Monthly Climate Summary

Period of Record : 7/ 1/1948 to 8/31/2009

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	54.5	61.5	67.0	74.5	83.6	91.7	98.3	96.3	90.5	79.7	65.3	54.6	76.5
Average Min. Temperature (F)	37.5	40.6	43.8	47.9	54.4	60.4	65.7	63.9	59.4	51.0	42.4	37.2	50.3
Average Total Precipitation (in.)	2.11	1.90	1.87	1.01	0.37	0.14	0.01	0.01	0.16	0.51	1.14	1.58	10.80
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%

Source: Western Regional Climate Center

HANFORD 1 S, CALIFORNIA (043747)

Period of Record Monthly Climate Summary

Period of Record : 7/ 1/1899 to 8/31/2009

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	54.7	61.9	67.6	75.0	83.7	91.4	97.9	96.1	90.4	80.0	66.3	55.4	76.7
Average Min. Temperature (F)	35.2	38.6	42.1	46.4	52.5	58.3	62.4	60.4	55.3	47.2	38.7	34.6	47.6
Average Total Precipitation (in.)	1.59	1.53	1.48	0.75	0.26	0.08	0.01	0.01	0.16	0.38	0.84	1.20	8.29
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%

Source: Western Regional Climate Center

CORCORAN IRRIG DIST, CALIFORNIA (042012)

Period of Record Monthly Climate Summary

Period of Record : 7/ 1/1948 to 8/31/2009

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	54.6	61.9	68.2	76.1	85.5	93.1	99.0	97.0	91.3	81.0	66.1	54.9	77.4
Average Min. Temperature (F)	36.5	39.7	42.7	46.5	52.9	58.7	63.4	61.9	57.4	49.2	40.6	35.8	48.8
Average Total Precipitation (in.)	1.48	1.34	1.13	0.66	0.23	0.05	0.01	0.01	0.16	0.32	0.73	0.98	7.09
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.: 99.5% Min. Temp.: 99.5% Precipitation: 98.9% Snowfall: 99.5% Snow Depth: 99.5%

Source: Western Regional Climate Center

BAKERSFIELD WSO ARPT, CALIFORNIA (040442)

Period of Record Monthly Climate Summary

Period of Record : 10/1/1937 to 8/31/2009

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	57.4	63.6	69.0	75.8	84.3	92.1	98.7	96.6	90.9	80.6	67.3	57.8	77.8
Average Min. Temperature (F)	38.5	42.1	45.5	49.8	56.7	63.3	69.2	67.6	62.9	53.9	44.2	38.5	52.7
Average Total Precipitation (in.)	1.05	1.17	1.12	0.66	0.21	0.07	0.01	0.04	0.11	0.30	0.60	0.78	6.12
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.: 99.6% Min. Temp.: 99.6% Precipitation: 99.7% Snowfall: 92.4% Snow Depth: 92.2%

Source: Western Regional Climate Center

G2. Preliminary Climatological Data for October 2009

Fresno, CA - October 2009

CXUS56 KHNX 011246

CF6FAT

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: FRESNO CA

MONTH: OCTOBER

YEAR: 2009

LATITUDE: 36 46 N

LONGITUDE: 119 43 W

TEMPERATURE IN F:					:PCPN:	SNOW:	WIND			:SUNSHINE:			SKY	:PK WND				
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	81	50	66	-4	0	1	0.00	0.0	0	1.8	10	290	M	M	0	8	14	310
2	85	52	69	-1	0	4	0.00	0.0	0	2.8	9	140	M	M	1	8	14	290
3	80	54	67	-3	0	2	0.00	0.0	0	7.1	23	300	M	M	4	8	28	300
4	68	47	58	-12	7	0	0.00	0.0	0	5.0	15	310	M	M	3		22	310
5	71	47	59	-10	6	0	0.00	0.0	0	4.5	12	300	M	M	1		18	290
6	76	46	61	-8	4	0	0.00	0.0	0	4.5	14	320	M	M	1		17	310
7	79	48	64	-4	1	0	0.00	0.0	0	2.8	12	310	M	M	1		20	310
8	80	50	65	-3	0	0	0.00	0.0	0	2.5	10	300	M	M	1		16	300
9	81	52	67	-1	0	2	0.00	0.0	0	2.7	10	300	M	M	1		13	290
10	81	52	67	0	0	2	0.00	0.0	0	2.8	9	290	M	M	0	8	13	350
11	81	51	66	-1	0	1	0.00	0.0	0	4.9	13	290	M	M	2	8	15	290
12	65	52	59	-8	6	0	0.00	0.0	0	7.0	14	130	M	M	8		20	280
13	65	57	61	-5	4	0	1.28	0.0	0	14.0	22	120	M	M	10	1	26	120
14	79	61	70	4	0	5	0.11	0.0	0	8.8	20	130	M	M	8	1	24	130
15	82	63	73	7	0	8	T	0.0	0	4.0	13	300	M	M	3		15	300
16	76	63	70	5	0	5	0.00	0.0	0	3.4	12	310	M	M	5	18	14	310
17	80	62	71	6	0	6	0.00	0.0	0	2.6	9	340	M	M	6	128	13	300
18	82	62	72	8	0	7	0.00	0.0	0	5.8	17	320	M	M	5	18	22	310
19	69	53	61	-3	4	0	T	0.0	0	7.2	16	330	M	M	4		21	10
20	63	52	58	-6	7	0	0.00	0.0	0	3.4	13	310	M	M	5	18	16	300
21	72	50	61	-2	4	0	0.00	0.0	0	1.9	9	290	M	M	4	18	13	290
22	73	52	63	0	2	0	0.00	0.0	0	1.7	12	300	M	M	2	8	22	360
23	79	54	67	5	0	2	0.00	0.0	0	1.9	8	300	M	M	4	18	9	320
24	78	56	67	5	0	2	0.00	0.0	0	3.9	12	300	M	M	4	18	14	310
25	78	55	67	5	0	2	0.00	0.0	0	2.7	13	140	M	M	2	18	16	150
26	82	55	69	8	0	4	0.00	0.0	0	2.6	13	300	M	M	5	18	17	290
27	66	50	58	-3	7	0	0.00	0.0	0	17.5	33	320	M	M	6	8	45	330
28	66	44	55	-5	10	0	0.00	0.0	0	9.8	22	300	M	M	2		26	320
29	65	40	53	-7	12	0	0.00	0.0	0	2.9	13	130	M	M	3		16	130
30	72	43	58	-1	7	0	0.00	0.0	0	1.7	7	300	M	M	1		14	250
31	75	43	59	0	6	0	0.00	0.0	0	1.2	8	290	M	M	1		10	310

```

=====
SM 2330 1616      87  53  1.39      0.0 145.4      M      103
=====
AV 75.2 52.1      4.7 FASTST  M      M      3      MAX(MPH)
MISC ----> # 33 320      # 45 330
=====

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NOTES:
LAST OF SEVERAL OCCURRENCES

COLUMN 17 PEAK WIND IN M.P.H.

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6) , PAGE 2

STATION: FRESNO CA
MONTH: OCTOBER
YEAR: 2009
LATITUDE: 36 46 N
LONGITUDE: 119 43 W

[TEMPERATURE DATA]	[PRECIPITATION DATA]	SYMBOLS USED IN COLUMN 16
AVERAGE MONTHLY: 63.6	TOTAL FOR MONTH: 1.39	1 = FOG OR MIST
DPTR FM NORMAL: -1.4	DPTR FM NORMAL: 0.74	2 = FOG REDUCING VISIBILITY
HIGHEST: 85 ON 2	GRTST 24HR 1.39 ON 13-14	TO 1/4 MILE OR LESS
LOWEST: 40 ON 29		3 = THUNDER
	SNOW, ICE PELLETS, HAIL	4 = ICE PELLETS
	TOTAL MONTH: 0.0 INCH	5 = HAIL
	GRTST 24HR 0.0	6 = FREEZING RAIN OR DRIZZLE
	GRTST DEPTH: 0	7 = DUSTSTORM OR SANDSTORM:
		VSBY 1/2 MILE OR LESS
		8 = SMOKE OR HAZE
[NO. OF DAYS WITH]	[WEATHER - DAYS WITH]	9 = BLOWING SNOW
MAX 32 OR BELOW: 0	0.01 INCH OR MORE: 2	X = TORNADO
MAX 90 OR ABOVE: 0	0.10 INCH OR MORE: 2	
MIN 32 OR BELOW: 0	0.50 INCH OR MORE: 1	
MIN 0 OR BELOW: 0	1.00 INCH OR MORE: 1	

[HDD (BASE 65)]	
TOTAL THIS MO. 87	CLEAR (SCALE 0-3) 17
DPTR FM NORMAL 14	PTCLDY (SCALE 4-7) 13
TOTAL FM JUL 1 89	CLOUDY (SCALE 8-10) 1
DPTR FM NORMAL 13	

[CDD (BASE 65)]		[PRESSURE DATA]
TOTAL THIS MO. 53		HIGHEST SLP 30.22 ON 30
DPTR FM NORMAL -36		LOWEST SLP 29.58 ON 3
TOTAL FM JAN 1 2380		
DPTR FM NORMAL 418		

[REMARKS]
#FINAL-10-09#

Hanford, CA - October 2009

CXUS56 KHNX 011246
CF6HJO

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: HANFORD CA AIRPORT
MONTH: OCTOBER
YEAR: 2009
LATITUDE: 36 19 N
LONGITUDE: 119 38 W

TEMPERATURE IN F:		:PCPN:		SNOW:		WIND		:SUNSHINE:		SKY		:PK WND						
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
										12Z		AVG MX		2MIN				
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	80	41	61	M	4	0	0.00	0.0	0	2.1	9	320	M	M	0	8	21	20
2	84	42	63	M	2	0	0.00	0.0	0	1.0	8	10	M	M	0	18	20	20
3	80	45	63	M	2	0	0.00	0.0	0	5.2	22	310	M	M	0	18	28	320
4	67	38	53	M	12	0	0.00	0.0	0	3.4	13	310	M	M	1		18	330
5	71	39	55	M	10	0	0.00	0.0	0	5.7	13	330	M	M	0		22	20
6	75	36	56	M	9	0	0.00	0.0	0	4.1	12	320	M	M	0	18	22	220
7	79	41	60	M	5	0	0.00	0.0	0	3.4	7	60	M	M	0	8	8	60
8	81	42	62	M	3	0	0.00	0.0	0	M	M	M	M	M	0	18	M	M
9	80	47	64	M	1	0	0.00	0.0	0	3.6	8	320	M	M	0		13	80
10	81	47	64	M	1	0	0.00	0.0	0	2.2	8	330	M	M	0	18	10	340
11	80	44	62	M	3	0	0.00	0.0	0	4.9	14	320	M	M	0	18	17	320
12	65	50	58	M	7	0	0.00	0.0	0	4.4	13	120	M	M	4	18	22	40
13	67	56	62	M	3	0	1.12	0.0	0	9.1	21	170	M	M	10	18	30	160
14	75	61	68	M	0	3	0.17	0.0	0	6.8	14	130	M	M	7	1	20	120
15	79	58	69	M	0	4	0.00	0.0	0	3.6	15	20	M	M	2	12	25	80
16	73	59	66	M	0	1	0.00	0.0	0	3.3	14	320	M	M	6	128	25	220
17	79	59	69	M	0	4	0.01	0.0	0	1.4	9	340	M	M	5	128	12	360
18	82	58	70	M	0	5	0.00	0.0	0	5.1	16	320	M	M	5	128	22	330
19	72	49	61	M	4	0	0.01	0.0	0	6.8	20	340	M	M	1		25	350
20	64	48	56	M	9	0	0.00	0.0	0	4.9	12	330	M	M	3	18	17	340
21	72	44	58	M	7	0	0.00	0.0	0	1.0	8	320	M	M	0	18	12	340
22	74	45	60	M	5	0	0.00	0.0	0	2.0	10	330	M	M	0	18	13	340
23	77	48	63	M	2	0	0.00	0.0	0	1.1	6	310	M	M	2	128	9	310
24	79	50	65	M	0	0	0.00	0.0	0	2.9	9	300	M	M	0	128	13	290
25	77	50	64	M	1	0	0.00	0.0	0	1.9	8	310	M	M	0	18	16	300
26	81	48	65	M	0	0	0.00	0.0	0	2.3	15	330	M	M	1	128	20	330
27	64	50	57	M	8	0	0.00	0.0	0	18.5	31	320	M	M	0	8	38	320
28	64	37	51	M	14	0	0.00	0.0	0	8.5	24	310	M	M	0		32	320
29	64	31	48	M	17	0	0.00	0.0	0	1.9	7	150	M	M	0	8	10	50
30	70	35	53	M	12	0	0.00	0.0	0	0.9	8	50	M	M	0	1	8	50
31	75	37	56	M	9	0	0.00	0.0	0	1.0	7	320	M	M	0	18	9	10
=====																		
SM	2311	1435			150	17	1.31		0.0	123.0			M		47			
=====																		
AV	74.5	46.3								4.1	FASTST		M	M	2	MAX (MPH)		
										MISC	---->	#	31	320		#	38	320
=====																		

NOTES:

LAST OF SEVERAL OCCURRENCES

COLUMN 17 PEAK WIND IN M.P.H.

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6) , PAGE 2

STATION: HANFORD CA AIRPORT

MONTH: OCTOBER

YEAR: 2009

LATITUDE: 36 19 N

LONGITUDE: 119 38 W

[TEMPERATURE DATA]

AVERAGE MONTHLY: 60.4
DPTR FM NORMAL: M
HIGHEST: 84 ON 2
LOWEST: 31 ON 29

[PRECIPITATION DATA]

TOTAL FOR MONTH: 1.31
DPTR FM NORMAL: M
GRTST 24HR 1.28 ON 13-14

SNOW, ICE PELLETS, HAIL
TOTAL MONTH: 0.0 INCH
GRTST 24HR 0.0
GRTST DEPTH: 0

SYMBOLS USED IN COLUMN 16

- 1 = FOG OR MIST
- 2 = FOG REDUCING VISIBILITY TO 1/4 MILE OR LESS
- 3 = THUNDER
- 4 = ICE PELLETS
- 5 = HAIL
- 6 = FREEZING RAIN OR DRIZZLE
- 7 = DUSTSTORM OR SANDSTORM: VSBY 1/2 MILE OR LESS
- 8 = SMOKE OR HAZE
- 9 = BLOWING SNOW
- X = TORNADO

[NO. OF DAYS WITH]

MAX 32 OR BELOW: 0
MAX 90 OR ABOVE: 0
MIN 32 OR BELOW: 1
MIN 0 OR BELOW: 0

[WEATHER - DAYS WITH]

0.01 INCH OR MORE: 4
0.10 INCH OR MORE: 2
0.50 INCH OR MORE: 1
1.00 INCH OR MORE: 1

[HDD (BASE 65)]

TOTAL THIS MO. 150
DPTR FM NORMAL M
TOTAL FM JUL 1 156
DPTR FM NORMAL M

CLEAR (SCALE 0-3) 25
PTCLDY (SCALE 4-7) 5
CLOUDY (SCALE 8-10) 1

[CDD (BASE 65)]

TOTAL THIS MO. 17
DPTR FM NORMAL M
TOTAL FM JAN 1 1801
DPTR FM NORMAL M

[PRESSURE DATA]

HIGHEST SLP 30.24 ON 30
LOWEST SLP 29.59 ON 3

[REMARKS]

#FINAL-10-09#

Bakersfield, CA - October 2009

CXUS56 KHNX 011246

CF6BFL

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: BAKERSFIELD CA

MONTH: OCTOBER

YEAR: 2009

LATITUDE: 35 25 N

LONGITUDE: 119 3 W

TEMPERATURE IN F:					:PCPN:			SNOW:			WIND			:SUNSHINE:			SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18		
								12Z			AVG MX 2MIN									
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR		
1	82	51	67	-6	0	2	0.00	0.0	0	4.5	15	320	M	M	0		18	320		
2	88	52	70	-2	0	5	0.00	0.0	0	4.7	15	310	M	M	0		18	320		
3	83	55	69	-3	0	4	0.00	0.0	0	6.3	17	340	M	M	0		20	320		
4	67	48	58	-14	7	0	0.00	0.0	0	4.9	16	310	M	M	0		21	300		
5	69	46	58	-13	7	0	0.00	0.0	0	3.3	13	320	M	M	0		16	330		
6	75	48	62	-9	3	0	0.00	0.0	0	4.2	14	350	M	M	0	8	18	310		
7	78	50	64	-7	1	0	0.00	0.0	0	4.7	14	320	M	M	0		17	320		
8	81	53	67	-3	0	2	0.00	0.0	0	4.8	12	320	M	M	0		17	300		
9	81	53	67	-3	0	2	0.00	0.0	0	3.6	9	300	M	M	0		13	300		
10	81	52	67	-3	0	2	0.00	0.0	0	2.9	13	300	M	M	0		17	310		
11	80	54	67	-2	0	2	0.00	0.0	0	3.6	12	320	M	M	0		18	310		
12	70	56	63	-6	2	0	0.00	0.0	0	4.5	13	350	M	M	2		15	320		
13	79	58	69	0	0	4	0.00	0.0	0	12.0	33	150	M	M	4	78	41	150		
14	74	64	69	1	0	4	0.08	0.0	0	5.8	14	10	M	M	7	18	16	10		
15	81	62	72	4	0	7	0.00	0.0	0	4.0	13	310	M	M	1	18	15	310		
16	76	62	69	2	0	4	0.00	0.0	0	2.5	8	300	M	M	4	18	12	290		
17	84	60	72	5	0	7	0.00	0.0	0	3.6	13	320	M	M	0	18	15	320		
18	86	63	75	8	0	10	0.00	0.0	0	6.1	15	330	M	M	0	18	18	320		
19	74	57	66	0	0	1	0.00	0.0	0	9.0	24	360	M	M	5		31	350		
20	69	54	62	-4	3	0	0.00	0.0	0	4.5	14	320	M	M	4	18	17	320		
21	72	49	61	-4	4	0	0.00	0.0	0	3.5	9	300	M	M	0		13	310		
22	76	50	63	-2	2	0	0.00	0.0	0	3.8	9	330	M	M	0		13	290		
23	78	54	66	1	0	1	0.00	0.0	0	3.5	13	300	M	M	0	8	16	320		
24	79	55	67	3	0	2	0.00	0.0	0	2.5	10	310	M	M	0	8	12	320		
25	79	58	69	5	0	4	0.00	0.0	0	3.2	9	300	M	M	0	8	14	270		
26	83	53	68	5	0	3	0.00	0.0	0	4.9	13	300	M	M	0		15	300		
27	67	48	58	-5	7	0	0.00	0.0	0	10.4	22	320	M	M	0	8	26	310		
28	61	41	51	-11	14	0	0.00	0.0	0	2.9	14	320	M	M	0		16	330		
29	64	41	53	-9	12	0	0.00	0.0	0	4.5	13	290	M	M	0		24	260		
30	71	42	57	-4	8	0	0.00	0.0	0	3.5	9	280	M	M	0		12	270		
31	73	44	59	-2	6	0	0.00	0.0	0	3.1	10	280	M	M	0		12	260		

SM 2361 1633 76 66 0.08 0.0 145.3 M 27

AV 76.2 52.7 4.7 FASTST M M 1 MAX (MPH)
MISC ----> # 33 150 # 41 150

NOTES:

LAST OF SEVERAL OCCURRENCES

COLUMN 17 PEAK WIND IN M.P.H.

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6) , PAGE 2

STATION: BAKERSFIELD CA
MONTH: OCTOBER
YEAR: 2009
LATITUDE: 35 25 N
LONGITUDE: 119 3 W

[TEMPERATURE DATA]	[PRECIPITATION DATA]	SYMBOLS USED IN COLUMN 16
AVERAGE MONTHLY: 64.4	TOTAL FOR MONTH: 0.08	1 = FOG OR MIST
DPTR FM NORMAL: -2.8	DPTR FM NORMAL: -0.22	2 = FOG REDUCING VISIBILITY TO 1/4 MILE OR LESS
HIGHEST: 88 ON 2	GRST 24HR 0.08 ON 14-14	3 = THUNDER
LOWEST: 41 ON 29,28		4 = ICE PELLETS
	SNOW, ICE PELLETS, HAIL	5 = HAIL
	TOTAL MONTH: 0.0 INCH	6 = FREEZING RAIN OR DRIZZLE
	GRST 24HR 0.0	7 = DUSTSTORM OR SANDSTORM: VSBY 1/2 MILE OR LESS
	GRST DEPTH: 0	8 = SMOKE OR HAZE
		9 = BLOWING SNOW
		X = TORNADO
[NO. OF DAYS WITH]	[WEATHER - DAYS WITH]	
MAX 32 OR BELOW: 0	0.01 INCH OR MORE: 1	
MAX 90 OR ABOVE: 0	0.10 INCH OR MORE: 0	
MIN 32 OR BELOW: 0	0.50 INCH OR MORE: 0	
MIN 0 OR BELOW: 0	1.00 INCH OR MORE: 0	
[HDD (BASE 65)]		
TOTAL THIS MO. 76	CLEAR (SCALE 0-3) 26	
DPTR FM NORMAL 21	PTCLDY (SCALE 4-7) 5	
TOTAL FM JUL 1 79	CLOUDY (SCALE 8-10) 0	
DPTR FM NORMAL 22		
[CDD (BASE 65)]		
TOTAL THIS MO. 66		
DPTR FM NORMAL -72	[PRESSURE DATA]	
TOTAL FM JAN 1 2625	HIGHEST SLP 30.20 ON 30	
DPTR FM NORMAL 341	LOWEST SLP 29.56 ON 3	
[REMARKS]		
#FINAL-10-09#		

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APPENDIX H: AQS Printout

User ID: GUJ

RAW DATA REPORT

Report Request ID: 840066

Report Code: AMP350

Feb. 23, 2011

GEOGRAPHIC SELECTIONS

Tribal	State	County	Site	Parameter	POC	City	AQCR	UAR	CBSA	CSA	EPA Region	Method	Duration	Begin Date	End Date
	06	077													
	06	099													
	06	019													
	06	029													
	06	031													
	06	047													
	06	107													

PROTOCOL SELECTIONS

Parameter Classification	Parameter	Method	Duration
CRITERIA	81102		

SELECTED OPTIONS

Option Type	Option Value
RAW DATA EVENTS	INCLUDE EVENTS
INCLUDE NULLS	YES
DAILY STATISTICS	MEAN
MERGE PDF FILES	YES
UNITS	STANDARD

SORT ORDER

Order	Column
1	STATE_CODE
2	COUNTY_CODE
3	SITE_ID
4	PARAMETER_CODE
5	POC

GLOBAL DATES

Start Date	End Date
2009 10 01	2009 10 31

APPLICABLE STANDARDS

Standard Description
PM10 24-hour 2006

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-019-0007 POC: 1
 COUNTY: (019) Fresno
 CITY: (27000) Fresno
 SITE ADDRESS: 4706 E. DRUMMOND ST., FRESNO
 SITE COMMENTS: ARB SITE NUMBER 1000244 NEW SITE 07/84.
 MONITOR COMMENTS: GMW HI-VOLUME SAMPLER W/ SIERRA ANDERSON 1200 SSI INLET

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (2840) FRESNO, CA
 LAND USE: COMMERCIAL
 LOCATION SETTING: SUBURBAN

CAS NUMBER:
 LATITUDE: 36.705556
 LONGITUDE: -119.741389
 UTM ZONE: 11
 UTM NORTHING: 4065510
 UTM EASTING: 255112
 ELEVATION-MSL: 89
 PROBE HEIGHT: 5

SUPPORT AGENCY: (0945) San Joaquin Valley Unified Air Pollution Control District
 MONITOR TYPE: SLAMS
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQAO: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										34		
5												
6												
7												
8												
9												
10										63		
11												
12												
13												
14												
15												
16										23		
17												
18												
19												
20												
21												
22										41		
23												
24												
25												
26												
27												
28										20 IJ		
29												
30												
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										63.		
MEAN:										36.2		
ANNUAL OBSERVATIONS:	5											
ANNUAL MEAN:	36.2											
ANNUAL MAX:	63.											

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-019-0008 POC: 1
 COUNTY: (019) Fresno
 CITY: (27000) Fresno

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (2840) FRESNO, CA
 LAND USE: RESIDENTIAL
 LOCATION SETTING: SUBURBAN

CAS NUMBER:
 LATITUDE: 36.781389
 LONGITUDE: -119.772222
 UTM ZONE: 11
 UTM NORTHING: 4074004
 UTM EASTING: 252601
 ELEVATION-MSL: 96
 PROBE HEIGHT: 13

SITE ADDRESS: 3425 N FIRST ST, FRESNO
 SITE COMMENTS: RELOCATED ABOUT 1-2/3 MI. NNW OF FRESNO-OLIVE AVENUE SITE. ARB SITE NAME (#) IS F
 MONITOR COMMENTS: GMW HI-VOLUME SAMPLER W/SIERRA ANDERSON MODEL 1200 SSI INLET.

SUPPORT AGENCY: (0145) California Air Resources Board

MONITOR TYPE: SLAMS

COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC

PQAO: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR

UNITS: Micrograms/cubic meter (25 C)

MIN DETECTABLE: 2

Day	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										23		
5												
6												
7												
8												
9												
10										54		
11												
12												
13												
14												
15												
16										19		
17												
18												
19												
20												
21												
22										28		
23												
24												
25												
26												
27												
28										14 IJ		
29												
30												
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										54.		
MEAN:										27.6		

ANNUAL OBSERVATIONS: 5 ANNUAL MEAN: 27.6 ANNUAL MAX: 54.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-019-5001 POC: 1
 COUNTY: (019) Fresno
 CITY: (14218) Clovis
 SITE ADDRESS: 908 N VILLA AVE, CLOVIS
 SITE COMMENTS: LOCATED IN CLOVIS MAINTENANCE YARD. ARB SITE NAME (#) IS CLOVIS-908 N VILLA AVE.
 MONITOR COMMENTS: GMW HI-VOLUME SAMPLER W/ SIERRA ANDERSON 1200 SSI INLET

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (2840) FRESNO, CA
 LAND USE: RESIDENTIAL
 LOCATION SETTING: URBAN AND CENTER CITY

CAS NUMBER:
 LATITUDE: 36.819167
 LONGITUDE: -119.716389
 UTM ZONE: 11
 UTM NORTHING: 4078053
 UTM EASTING: 257704
 ELEVATION-MSL: 86
 PROBE HEIGHT: 6

SUPPORT AGENCY: (0945) San Joaquin Valley Unified Air Pollution Control District
 MONITOR TYPE: SLAMS
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQA0: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										21		
5												
6												
7												
8												
9												
10										49		
11												
12												
13												
14												
15												
16										AN		
17												
18												
19												
20												
21												
22										22		
23												
24												
25												
26												
27												
28										13 IJ		
29												
30										30		
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										49.		
MEAN:										27.0		

ANNUAL OBSERVATIONS: 5 ANNUAL MEAN: 27.0 ANNUAL MAX: 49.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-029-0010 POC: 1
 COUNTY: (029) Kern
 CITY: (03526) Bakersfield
 SITE ADDRESS: 1128 GOLDEN STATE HIGHWAY, BAKERSFIELD
 SITE COMMENTS: INSTRUMENTS HOUSED IN OFFICE TYPE TRAILER
 MONITOR COMMENTS: GMW HI-VOLUME SAMPLER W/ SIERRA ANDERSON 1200 SSI INLET

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (0680) BAKERSFIELD, CA
 LAND USE: COMMERCIAL
 LOCATION SETTING: URBAN AND CENTER CITY

CAS NUMBER:
 LATITUDE: 35.385556
 LONGITUDE: -119.014722
 UTM ZONE: 11
 UTM NORTHING: 3917435
 UTM EASTING: 317002
 ELEVATION-MSL: 151
 PROBE HEIGHT:

SUPPORT AGENCY: (0944) San Joaquin County APCD
 MONITOR TYPE: SLAMS
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQAQ: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										55		
5												
6												
7												
8												
9												
10										101		
11												
12												
13												
14												
15												
16										69		
17												
18												
19												
20												
21												
22										78		
23												
24												
25												
26												
27												
28										96		
29												
30												
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										101.		
MEAN:										79.8		

ANNUAL OBSERVATIONS: 5 ANNUAL MEAN: 79.8 ANNUAL MAX: 101.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-029-0010 POC: 3
 COUNTY: (029) Kern
 CITY: (03526) Bakersfield
 SITE ADDRESS: 1128 GOLDEN STATE HIGHWAY, BAKERSFIELD
 SITE COMMENTS: INSTRUMENTS HOUSED IN OFFICE TYPE TRAILER
 MONITOR COMMENTS:

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (0680) BAKERSFIELD, CA
 LAND USE: COMMERCIAL
 LOCATION SETTING: URBAN AND CENTER CITY

CAS NUMBER:
 LATITUDE: 35.385556
 LONGITUDE: -119.014722
 UTM ZONE: 11
 UTM NORTHING: 3917435
 UTM EASTING: 317002
 ELEVATION-MSL: 151
 PROBE HEIGHT: 5

SUPPORT AGENCY: (0944) San Joaquin County APCD

MONITOR TYPE: SLAMS

COLLECTION AND ANALYSIS METHOD: (079) INSTRUMENTAL-R&P SA246B-INLET TEOM

PQAO: (0145) California Air Resources Board

REPORT FOR: OCTOBER 2009

DURATION: 1 HOUR

UNITS: Micrograms/cubic meter (25 C)

MIN DETECTABLE: -50

DAY	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	OBS	MEAN		
1	53	45	48	44	43	43	54	84	68	54	74	60	58	58	56	61	61	75	73	87	107	98	98	91	24	66.4		
2	68	87	57	48	48	65	83	92	66	73	61	61	43	34	43	50	65	52	59	69	87	97	105	108	24	67.5		
3	61	52	34	43	58	54	40	67	85	87	64	66	59	43	35	34	33	32	37	60	43	32	57	235	24	58.8		
4	172	108	104	73	68	73	23	21	20	18	17	23	15	23	25	25	22	24	29	35	52	48	47	51	24	46.5		
5	37	42	37	36	42	43	44	54	63	36	38	38	30	38	44	35	39	35	37	44	60	79	73	62	24	45.3		
6	48	45	45	41	37	44	77	67	68	57	57	47	57	60	53	43	41	50	62	73	85	98	95	83	24	59.7		
7	74	69	48	50	44	43	73	82	84	65	58	42	42	46	47	50	48	44	50	69	77	75	89	84	24	60.5		
8	81	61	41	33	45	32	77	106	101	56	38	50	65	78	40	39	36	34	49	77	63	57	71	73	24	58.5		
9	68	39	39	35	47	56	83	66	70	78	94	80	73	69	66	49	37	37	49	68	90	76	106	98	24	65.5		
10	72	60	57	58	50	52	53	72	67	75	74	67	55	61	76	65	57	48	62	79	100	89	100	92	24	68.4		
11	89	68	64	63	52	61	52	67	46	47	62	62	64	57	41	38	37	43	47	62	64	42	31	31	24	53.8		
12	28	38	28	33	30	34	36	47	80	110	61	48	40	34	BA	25	23	28	38	39	57	103	70	26	23	45.9		
13	33IJ	34IJ	45IJ	74IJ	51IJ	33IJ	46IJ	68IJ	138IJ	816IJ	915IJ	933IJ	921IJ	932IJ	943IJ	729IJ	631IJ	889IJ	574IJ	239IJ	91IJ	306IJ	316IJ	415IJ	24	423.8		
14	184	260	126	53	54	37	21	26	BA	BA	6	8	6	23	22	5	6	15	14	20	22	29	17	9	22	43.8		
15	9	17	15	14	22	21	23	37	29	34	25	18	17	12	14	14	12	19	22	28	21	16	21	29	24	20.4		
16	73	30	27	24	33	34	46	46	51	44	56	43	25	28	31	28	25	25	27	33	45	50	46	43	24	38.0		
17	44	41	33	29	31	28	41	49	46	40	38	36	32	36	36	36	39	40	45	44	41	46	53	51	24	39.8		
18	48	39	40	42	41	40	45	44	43	49	42	38	33	29	25	24	23	29	38	40	31	25	23	9	24	35.0		
19	11	11	12	11	15	15	18	23	23	27	39	31	16	34	24	22	25	62	90	28	10	8	8	11	24	23.9		
20	14	15	23	13	15	17	38	27	26	22	18	18	21	19	19	23	18	21	24	36	39	40	44	24	24	23.9		
21	27	20	17	19	31	35	60	47	46	32	47	32	24	38	30	29	35	57	53	50	55	61	53	54	24	39.7		
22	56	29	26	31	40	48	79	91	52	61	52	46	44	41	41	43	79	47	54	58	64	60	58	56	24	52.3		
23	63	50	45	46	43	49	84	81	52	61	49	48	41	60	53	49	43	42	58	63	59	81	70	58	24	56.2		
24	52	43	32	31	33	37	50	65	49	45	52	44	37	34	36	34	42	41	48	60	75	74	74	66	24	48.1		
25	55	51	42	46	46	40	42	48	33	22	15	14	16	18	18	18	20	25	55	60	62	45	44	53	24	37.0		
26	48	49	41	45	37	46	69	69	55	64	56	37	46	54	56	52	46	48	63	83	88	90	82	57	24	57.5		
27	51IJ	52IJ	50IJ	36IJ	27IJ	36IJ	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	6	42.0	
28	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	0	
29	AN	AN	AN	AN	AN	AN	AN	AN	AN	BA	BA	22	23	23	22	23	21	19	28	53	68	47	51	51	44	14	35.4	
30	49	64	48	34	48	43	74	149	69	60	49	41	44	44	49	44	43	71	160	107	78	87	96	75	24	67.8		
31	61	83	71	63	48	37	54	107	58	49	48	46	44	46	52	49	49	54	99	96	91	100	88	105	24	66.6		
NO.:	29	29	29	29	29	29	28	28	27	27	29	29	29	29	28	29	29	29	29	29	29	29	29	29	29			
MAX:	184.	260.	126.	74.	68.	73.	84.	149.	138.	816.	915.	933.	921.	932.	943.	729.	631.	889.	574.	239.	107.	306.	316.	415.				
AVG:	59.6	55.2	44.7	40.3	40.7	41.2	53.0	64.4	58.8	80.8	76.8	72.4	68.7	71.4	71.4	59.8	57.0	69.5	71.3	64.7	62.2	71.1	71.9	75.6				

MONTHLY OBSERVATIONS: 689 MONTHLY MEAN: 62.6 MONTHLY MAX: 943.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("**") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-029-0011 POC: 1
 COUNTY: (029) Kern
 CITY: (48452) Mojave
 SITE ADDRESS: 923 POOLE STREET, MOJAVE, CA 93501
 SITE COMMENTS: ARB SITE NAME (NUMBER) IS MOJAVE-923 POOLE ST (1500252). AT MOJAVE AIRPORT ANIMAL
 MONITOR COMMENTS: GMW HI-VOLUME SAMPLER W/ SIERRA ANDERSON 1200 SSI INLET

STATE: (06) California
 AQCR: (033) SOUTHEAST DESERT
 URBANIZED AREA: (0680) BAKERSFIELD, CA
 LAND USE: MOBILE
 LOCATION SETTING: RURAL

CAS NUMBER:
 LATITUDE: 35.050556
 LONGITUDE: -118.146389
 UTM ZONE: 11
 UTM NORTHING: 3879053
 UTM EASTING: 395450
 ELEVATION-MSL: 853
 PROBE HEIGHT:

SUPPORT AGENCY: (0145) California Air Resources Board

MONITOR TYPE: OTHER

COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC

PQAO: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR

UNITS: Micrograms/cubic meter (25 C)

MIN DETECTABLE: 2

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										45		
5												
6												
7												
8												
9												
10												
11										29		
12												
13												
14												
15												
16										8		
17												
18												
19												
20												
21												
22										14		
23												
24												
25												
26												
27												
28										68		
29												
30												
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										68.		
MEAN:										32.8		
ANNUAL OBSERVATIONS:	5											
ANNUAL MEAN:				32.8								
ANNUAL MAX:										68.		

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("**") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-029-0014 POC: 1
 COUNTY: (029) Kern
 CITY: (03526) Bakersfield
 SITE ADDRESS: 5558 CALIFORNIA AVE, BAKERSFIELD
 SITE COMMENTS:
 MONITOR COMMENTS: GMW HI-VOL W/ SA 1200 SSI INLET - CARB PRIMARY SAMPLER

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (0680) BAKERSFIELD, CA
 LAND USE: MOBILE
 LOCATION SETTING: URBAN AND CENTER CITY

CAS NUMBER:
 LATITUDE: 35.356111
 LONGITUDE: -119.040278
 UTM ZONE: 11
 UTM NORTHING: 3914247
 UTM EASTING: 314614
 ELEVATION-MSL: 0
 PROBE HEIGHT:

SUPPORT AGENCY: (0145) California Air Resources Board
 MONITOR TYPE: SLAMS
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQA0: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										37		
5												
6												
7												
8												
9												
10										62		
11												
12												
13												
14												
15												
16										40		
17												
18												
19												
20												
21												
22										42		
23												
24												
25												
26												
27												
28										47		
29												
30												
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										62.		
MEAN:										45.6		
ANNUAL OBSERVATIONS:	5											
ANNUAL MEAN:	45.6											
ANNUAL MAX:	62.											

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-029-0014 POC: 2
 COUNTY: (029) Kern
 CITY: (03526) Bakersfield
 SITE ADDRESS: 5558 CALIFORNIA AVE, BAKERSFIELD
 SITE COMMENTS:
 MONITOR COMMENTS: GMW HI-VOL W/ SA 1200 SSI INLET - CARB COLLOCATED SAMPLER

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (0680) BAKERSFIELD, CA
 LAND USE: MOBILE
 LOCATION SETTING: URBAN AND CENTER CITY

CAS NUMBER:
 LATITUDE: 35.356111
 LONGITUDE: -119.040278
 UTM ZONE: 11
 UTM NORTHING: 3914247
 UTM EASTING: 314614
 ELEVATION-MSL: 0
 PROBE HEIGHT:

SUPPORT AGENCY: (0145) California Air Resources Board
 MONITOR TYPE: OTHER
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQA0: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										38		
5												
6												
7												
8												
9												
10										61		
11												
12												
13												
14												
15												
16										42		
17												
18												
19												
20												
21												
22										42		
23												
24												
25												
26												
27												
28										47		
29												
30												
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										61.		
MEAN:										46.0		

ANNUAL OBSERVATIONS: 5 ANNUAL MEAN: 46.0 ANNUAL MAX: 61.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("**") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-029-0015 POC: 1
 COUNTY: (029) Kern
 CITY: (60704) Ridgecrest
 SITE ADDRESS: 100 WEST CALIFORNIA AVE, RIDGECREST, CA
 SITE COMMENTS: CARB SITE NUMBER 15-300.
 MONITOR COMMENTS: GMW HI-VOLUME SAMPLER W/ SIERRA ANDERSON 1200 SSI INLET

STATE: (06) California
 AQCR: (033) SOUTHEAST DESERT
 URBANIZED AREA: (0000) NOT IN AN URBAN AREA
 LAND USE: COMMERCIAL
 LOCATION SETTING: URBAN AND CENTER CITY

CAS NUMBER:
 LATITUDE: 35.623889
 LONGITUDE: -117.677222
 UTM ZONE: 11
 UTM NORTHING: 3942245
 UTM EASTING: 438673
 ELEVATION-MSL: 701
 PROBE HEIGHT: 3

SUPPORT AGENCY: (0575) Kern County APCD
 MONITOR TYPE: SLAMS
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQAO: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										45		
5												
6												
7												
8												
9												
10												
11										31		
12												
13												
14												
15												
16										21		
17												
18												
19												
20												
21												
22										AN		
23												
24												
25												
26												
27												
28										41 IJ		
29												
30												
31												
NO.:	0	0	0	0	0	0	0	0	0	4	0	0
MAX:										45.		
MEAN:										34.5		

ANNUAL OBSERVATIONS: 4 ANNUAL MEAN: 34.5 ANNUAL MAX: 45.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-029-0017 POC: 1
 COUNTY: (029) Kern
 CITY: (00000) Not in a city
 SITE ADDRESS: 3147 Highway 178, Canebrake
 SITE COMMENTS:
 MONITOR COMMENTS: PM10 SSI HI-VOL SAMPLER

STATE: (06) California
 AQCR: (033) SOUTHEAST DESERT
 URBANIZED AREA: (0000) NOT IN AN URBAN AREA
 LAND USE: DESERT
 LOCATION SETTING: RURAL

CAS NUMBER:
 LATITUDE: 35.7277796549
 LONGITUDE: -118.13931200
 UTM ZONE:
 UTM NORTHING:
 UTM EASTING:
 ELEVATION-MSL: 914.4
 PROBE HEIGHT:

SUPPORT AGENCY: (0145) California Air Resources Board
 MONITOR TYPE: NON-REGULATORY
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQA0: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										43		
5												
6												
7												
8												
9												
10										AN		
11												
12												
13												
14												
15												
16										5		
17												
18												
19												
20										4		
21												
22										11		
23												
24												
25												
26												
27												
28										42		
29												
30												
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										43.		
MEAN:										21.0		

ANNUAL OBSERVATIONS: 5 ANNUAL MEAN: 21.0 ANNUAL MAX: 43.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-029-0232 POC: 2
 COUNTY: (029) Kern
 CITY: (53448) Oildale
 SITE ADDRESS: 3311 MANOR ST., OILDALE
 SITE COMMENTS: ARB SITE NUMBER 1500243 NEW SITE 10/83.
 MONITOR COMMENTS: GMW HI-VOLUME SAMPLER W/ SIERRA ANDERSON 1200 SSI INLET

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (0680) BAKERSFIELD, CA
 LAND USE: INDUSTRIAL
 LOCATION SETTING: SUBURBAN

CAS NUMBER:
 LATITUDE: 35.438889
 LONGITUDE: -119.015833
 UTM ZONE: 11
 UTM NORTHING: 3923383
 UTM EASTING: 317022
 ELEVATION-MSL: 180
 PROBE HEIGHT:

SUPPORT AGENCY: (0145) California Air Resources Board
 MONITOR TYPE: SLAMS
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQAO: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										33		
5												
6												
7												
8												
9												
10										71		
11												
12												
13												
14												
15												
16										50		
17												
18												
19												
20												
21												
22										AJ		
23												
24												
25												
26												
27												
28										74		
29												
30										47		
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										74.		
MEAN:										55.0		

ANNUAL OBSERVATIONS: 5 ANNUAL MEAN: 55.0 ANNUAL MAX: 74.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-031-0004 POC: 1
 COUNTY: (031) Kings
 CITY: (16224) Corcoran
 SITE ADDRESS: 1520 PATTERSON AV., CORCORAN
 SITE COMMENTS: SITE IS PARALLEL MONITOR TO 06-031-0003 WHICH IS TO BE CLOSED MID 97
 MONITOR COMMENTS: PARALLEL SITE TO 06-031-0003. GMW HI-VOL SA 1200 SSI INLET

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (0000) NOT IN AN URBAN AREA
 LAND USE: RESIDENTIAL
 LOCATION SETTING: SUBURBAN

CAS NUMBER:
 LATITUDE: 36.101389
 LONGITUDE: -119.565833
 UTM ZONE: 11
 UTM NORTHING: 3998073
 UTM EASTING: 269015
 ELEVATION-MSL: 61
 PROBE HEIGHT: 6

SUPPORT AGENCY: (0945) San Joaquin Valley Unified Air Pollution Control District
 MONITOR TYPE: OTHER
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQAQ: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										46		
5												
6												
7												
8												
9												
10										76		
11												
12												
13												
14												
15												
16										23		
17												
18												
19												
20												
21												
22										58		
23												
24												
25												
26												
27												
28										AK		
29												
30										66		
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										76.		
MEAN:										53.8		

ANNUAL OBSERVATIONS: 5 ANNUAL MEAN: 53.8 ANNUAL MAX: 76.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-031-0004 POC: 3
 COUNTY: (031) Kings
 CITY: (16224) Corcoran
 SITE ADDRESS: 1520 PATTERSON AV., CORCORAN
 SITE COMMENTS: SITE IS PARALLEL MONITOR TO 06-031-0003 WHICH IS TO BE CLOSED MID 97
 MONITOR COMMENTS: GMW HI-VOL SSI SIERRA ANDERSON COLLOCATED

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (0000) NOT IN AN URBAN AREA
 LAND USE: RESIDENTIAL
 LOCATION SETTING: SUBURBAN

CAS NUMBER:
 LATITUDE: 36.101389
 LONGITUDE: -119.565833
 UTM ZONE: 11
 UTM NORTHING: 3998073
 UTM EASTING: 269015
 ELEVATION-MSL: 61
 PROBE HEIGHT:

SUPPORT AGENCY: (0945) San Joaquin Valley Unified Air Pollution Control District
 MONITOR TYPE: OTHER
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQA0: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										49		
5												
6												
7												
8												
9												
10										78		
11												
12												
13												
14												
15												
16										24		
17												
18												
19												
20												
21												
22										58		
23												
24												
25												
26												
27												
28										42		
29												
30										68		
31												
NO.:	0	0	0	0	0	0	0	0	0	6	0	0
MAX:										78.		
MEAN:										53.2		

ANNUAL OBSERVATIONS: 6 ANNUAL MEAN: 53.2 ANNUAL MAX: 78.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-031-0004 POC: 4
 COUNTY: (031) Kings
 CITY: (16224) Corcoran
 SITE ADDRESS: 1520 PATTERSON AV., CORCORAN
 SITE COMMENTS: SITE IS PARALLEL MONITOR TO 06-031-0003 WHICH IS TO BE CLOSED MID 97
 MONITOR COMMENTS: GMW HI-VOL SSI SIERRA ANDERSON ALTERNATE 6 DAY SAMPLING

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (0000) NOT IN AN URBAN AREA
 LAND USE: RESIDENTIAL
 LOCATION SETTING: SUBURBAN

CAS NUMBER:
 LATITUDE: 36.101389
 LONGITUDE: -119.565833
 UTM ZONE: 11
 UTM NORTHING: 3998073
 UTM EASTING: 269015
 ELEVATION-MSL: 61
 PROBE HEIGHT:

SUPPORT AGENCY: (0945) San Joaquin Valley Unified Air Pollution Control District
 MONITOR TYPE: OTHER
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQAO: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1										67		
2												
3												
4												
5												
6												
7										65		
8												
9												
10												
11												
12												
13										85 IJ		
14												
15												
16												
17												
18												
19										16		
20												
21												
22												
23												
24												
25										33		
26												
27												
28												
29												
30												
31										77		
NO.:	0	0	0	0	0	0	0	0	0	6	0	0
MAX:										85.		
MEAN:										57.2		

ANNUAL OBSERVATIONS: 6 ANNUAL MEAN: 57.2 ANNUAL MAX: 85.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-031-0004 POC: 7
 COUNTY: (031) Kings
 CITY: (16224) Corcoran
 SITE ADDRESS: 1520 PATTERSON AV., CORCORAN
 SITE COMMENTS: SITE IS PARALLEL MONITOR TO 06-031-0003 WHICH IS TO BE CLOSED MID 97
 MONITOR COMMENTS:

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (0000) NOT IN AN URBAN AREA
 LAND USE: RESIDENTIAL
 LOCATION SETTING: SUBURBAN

CAS NUMBER:
 LATITUDE: 36.101389
 LONGITUDE: -119.565833
 UTM ZONE: 11
 UTM NORTHING: 3998073
 UTM EASTING: 269015
 ELEVATION-MSL: 61
 PROBE HEIGHT: 5

SUPPORT AGENCY: (0945) San Joaquin Valley Unified Air Pollution Control District

MONITOR TYPE: SLAMS

COLLECTION AND ANALYSIS METHOD: (079) INSTRUMENTAL-R&P SA246B-INLET TEOM

PQAO: (0145) California Air Resources Board

REPORT FOR: OCTOBER 2009

DURATION: 1 HOUR

UNITS: Micrograms/cubic meter (25 C)

MIN DETECTABLE: -50

DAY	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	OBS	MEAN	
1	44	45	49	48	52	65	66	103	72	73	44	64	62	55	63	65	67	90	149	147	107	89	99	76	24	74.8	
2	67	73	82	88	85	85	123	99	68	65	57	49	57	63	59	66	53	77	121	106	78	89	105	108	24	80.1	
3	93	75	98	111	86	80	93	91	80	54	74	36	32	32	30	45	56	176	97	86	65	141	186	145	24	85.9	
4	124	125	92	31	23	42	59	40	36	32	30	27	21	29	29	27	23	34	59	58	83	63	32	38	24	48.2	
5	22	41	29	32	30	32	53	50	46	41	48	24	19	27	27	28	46	50	66	62	63	58	65	50	24	42.0	
6	67	76	81	77	86	89	113	156	152	145	90	54	56	52	74	62	78	81	106	82	81	124	68	60	24	87.9	
7	59	74	62	62	62	65	81	89	92	69	53	46	48	50	46	51	62	96	104	94	75	83	62	65	24	68.8	
8	82	64	73	56	48	49	112	140	87	130	120	57	42	53	41	45	35	66	95	130	131	138	122	80	24	83.2	
9	63	76	84	74	71	67	158	90	88	108	79	51	51	42	58	55	73	97	139	114	115	114	95	87	24	85.4	
10	82	77	70	58	63	69	77	98	85	80	90	51	31	32	41	46	50	87	88	93	109	87	123	76	24	73.5	
11	80	94	93	74	74	63	53	58	53	49	36	29	41	34	33	37	42	45	87	79	88	76	46	32	24	58.2	
12	44	35	31	24	23	22	39	27	BA	29	33	41	65	66	98	58	76	65	77	65	84	64	68	41	23	51.1	
13	39	36	45	76	54	33	77	75	36	25	27	138	355	343	376	139	169	79	56	59	43	50	44	32	24	100.3	
14	33	18	23	21	16	14	13	11	19	4	4	5	BA	BA	4	3	5	12	9	8	14	14	7	7	22	12.0	
15	9	9	15	10	15	25	39	15	12	14	14	10	9	8	12	12	14	21	32	44	52	37	17	15	24	19.2	
16	11	11	8	8	8	9	10	10	8	7	9	9	12	14	17	18	19	18	23	31	25	34	24	5	24	14.5	
17	8	AQ	5	6	8	7	7	12	23	20	21	38	29	24	18	16	22	30	40	45	38	37	31	28	23	22.3	
18	26	22	20	16	18	24	37	33	21	27	32	22	15	17	18	20	16	20	20	18	13	10	12	10	24	20.3	
19	11	12	13	12	11	15	20	22	15	17	12	12	16	14	16	47	57	15	10	8	11	11	11	13	24	16.7	
20	12	12	11	14	13	13	13	13	12	11	10	14	21	18	19	21	24	23	22	25	26	26	25	27	24	17.7	
21	22	23	21	22	26	26	28	60	66	73	44	18	18	30	21	24	29	37	36	41	51	39	41	55	24	35.5	
22	52	37	42	44	39	44	58	77	51	45	32	18	27	26	31	33	29	34	46	47	56	43	37	36	24	41.0	
23	44	37	30	31	42	50	81	147	77	68	29	20	23	24	29	28	39	59	68	57	71	71	60	58	24	51.8	
24	51	46	41	44	50	51	65	74	72	70	44	30	29	24	27	33	45	51	62	45	38	29	28	22	24	44.6	
25	17	26	24	19	22	21	17	21	22	21	22	22	25	21	22	22	34	36	35	41	40	28	28	30	40	26.4	
26	34	29	25	26	34	36	83	BA	BA	BA	82	46	46	38	38	41	45	73	84	79	70	65	70	70	21	53.0	
27	38IJ	20IJ	26IJ	283IJ	520IJ	119IJ	202IJ	168IJ	395IJ	490IJ	753IJ	789IJ	780IJ	616IJ	503IJ	888IJ	957IJ	957IJ	703IJ	336IJ	168IJ	139IJ	102IJ	54IJ	24	416.9	
28	37	26	21	21	22	19	39	31	45	63	61	50	48	56	59	56	73	72	85	42	29	32	32	29	24	43.7	
29	19	14	13	14	45	62	47	79	45	40	34	34	29	39	49	40	34	52	62	64	67	62	64	56	24	44.3	
30	57	44	47	40	48	56	93	92	91	66	40	35	23	29	30	48	57	76	91	95	108	128	92	88	24	65.6	
31	90	63	69	68	74	65	66	101	88	58	48	33	43	48	42	43	51	59	100	112	110	83	99	86	24	70.8	
NO.:	31	30	31	31	31	31	31	30	29	30	31	31	30	30	31	31	31	31	31	31	31	31	31	31	31		
MAX:	124.	125.	98.	283.	520.	119.	202.	168.	395.	490.	753.	789.	780.	616.	503.	888.	957.	957.	703.	336.	168.	141.	186.	145.			
AVG:	46.4	44.7	43.3	48.7	57.0	45.7	65.2	69.4	67.5	66.5	66.8	60.5	69.0	64.2	62.3	68.7	76.8	86.7	89.6	74.6	67.6	66.6	61.2	51.3			

MONTHLY OBSERVATIONS: 737 MONTHLY MEAN: 63.3 MONTHLY MAX: 957.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("**") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-031-0500 POC: 1
 COUNTY: (031) Kings
 CITY: (70122) Santa Rosa Rancheria
 SITE ADDRESS: 17225 Jersey Ave.
 SITE COMMENTS:
 MONITOR COMMENTS:

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (0000) NOT IN AN URBAN AREA
 LAND USE: AGRICULTURAL
 LOCATION SETTING: RURAL

CAS NUMBER:
 LATITUDE: 36.233318
 LONGITUDE: -119.765251
 UTM ZONE: 11
 UTM NORTHING: 4013172.63
 UTM EASTING: 251475.44
 ELEVATION-MSL: 68
 PROBE HEIGHT:

SUPPORT AGENCY: (542) Santa Rosa Indian Community of Santa Rosa Rancheria, CA
 MONITOR TYPE: TRIBAL MONITORS
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQA0: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										AJ		
5												
6												
7												
8												
9												
10										73		
11												
12												
13												
14												
15												
16										23		
17												
18												
19												
20												
21												
22										49		
23												
24												
25												
26												
27												
28										AF		
29												
30										62		
31												
NO.:	0	0	0	0	0	0	0	0	0	4	0	0
MAX:										73.		
MEAN:										51.8		

ANNUAL OBSERVATIONS: 4 ANNUAL MEAN: 51.8 ANNUAL MAX: 73.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-031-1004 POC: 1
 COUNTY: (031) Kings
 CITY: (31960) Hanford
 SITE ADDRESS: 807 SOUTH IRWIN ST., HANFORD
 SITE COMMENTS: RELOCATED HANFORD-CAMPUS SITE & ADDED NO2 MONITORING ARB #1600716
 MONITOR COMMENTS: GMW HI-VOLUME SAMPLER W/ SIERRA ANDERSON 1200 SSI INLET

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (0000) NOT IN AN URBAN AREA
 LAND USE: RESIDENTIAL
 LOCATION SETTING: SUBURBAN

CAS NUMBER:
 LATITUDE: 36.314444
 LONGITUDE: -119.643611
 UTM ZONE: 11
 UTM NORTHING: 4021869
 UTM EASTING: 262656
 ELEVATION-MSL: 99
 PROBE HEIGHT:

SUPPORT AGENCY: () Not Found

MONITOR TYPE: SLAMS

COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC

PQAO: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR

UNITS: Micrograms/cubic meter (25 C)

MIN DETECTABLE: 2

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										75		
5												
6												
7												
8												
9												
10										69		
11												
12												
13												
14												
15												
16										22		
17												
18												
19												
20												
21												
22										51		
23												
24												
25												
26												
27												
28										34		
29												
30												
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										75.		
MEAN:										50.2		
ANNUAL OBSERVATIONS:	5		ANNUAL MEAN:		50.2		ANNUAL MAX:		75.			

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("**") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-047-2510 POC: 1
 COUNTY: (047) Merced
 CITY: (46898) Merced
 SITE ADDRESS: 2334 'M' ST. MERCED, CA
 SITE COMMENTS:
 MONITOR COMMENTS: GMW HI-VOLUME SAMPLER W/ SIERRA ANDERSON 1200 SSI INLET

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (4940) MERCED, CA
 LAND USE: COMMERCIAL
 LOCATION SETTING: URBAN AND CENTER CITY

CAS NUMBER:
 LATITUDE: 37.309167
 LONGITUDE: -120.480556
 UTM ZONE: 10
 UTM NORTHING: 4131943
 UTM EASTING: 723284
 ELEVATION-MSL: 58
 PROBE HEIGHT: 2

SUPPORT AGENCY: (0945) San Joaquin Valley Unified Air Pollution Control District
 MONITOR TYPE: SLAMS
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQA0: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										16		
5												
6												
7												
8												
9												
10										64		
11												
12												
13												
14												
15												
16										AJ		
17												
18												
19												
20												
21												
22										27		
23												
24												
25												
26												
27												
28										15		
29												
30												
31												
NO.:	0	0	0	0	0	0	0	0	0	4	0	0
MAX:										64.		
MEAN:										30.5		

ANNUAL OBSERVATIONS: 4 ANNUAL MEAN: 30.5 ANNUAL MAX: 64.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("**") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-077-1002 POC: 2
 COUNTY: (077) San Joaquin
 CITY: (75000) Stockton
 SITE ADDRESS: HAZELTON-HD, STOCKTON
 SITE COMMENTS: ARB SITE NUMBER 3900252 STILL OPERATING
 MONITOR COMMENTS: GMW HI-VOLUME SAMPLER W/ SIERRA ANDERSON 1200 SSI INLET

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (8120) STOCKTON, CA
 LAND USE: RESIDENTIAL
 LOCATION SETTING: URBAN AND CENTER CITY

CAS NUMBER:
 LATITUDE: 37.950833
 LONGITUDE: -121.2675
 UTM ZONE: 10
 UTM NORTHING: 4201570
 UTM EASTING: 652220
 ELEVATION-MSL: 19
 PROBE HEIGHT: 5

SUPPORT AGENCY: (0145) California Air Resources Board
 MONITOR TYPE: SLAMS
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQAO: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										14		
5												
6												
7												
8												
9												
10										27		
11												
12												
13												
14												
15												
16										18		
17												
18												
19												
20												
21												
22										18		
23												
24												
25												
26												
27												
28										11		
29												
30												
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										27.		
MEAN:										17.6		

ANNUAL OBSERVATIONS: 5 ANNUAL MEAN: 17.6 ANNUAL MAX: 27.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("**") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-077-3005 POC: 3
 COUNTY: (077) San Joaquin
 CITY: (80238) Tracy
 SITE ADDRESS: 5749 S. TRACY BLVD., TRACY
 SITE COMMENTS:
 MONITOR COMMENTS:

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (0000) NOT IN AN URBAN AREA
 LAND USE: RESIDENTIAL
 LOCATION SETTING: SUBURBAN

CAS NUMBER:
 LATITUDE: 37.6825
 LONGITUDE: -121.44056
 UTM ZONE: 10
 UTM NORTHING: 4171527.87
 UTM EASTING: 637510.59
 ELEVATION-MSL: 30
 PROBE HEIGHT: 5

SUPPORT AGENCY: (0945) San Joaquin Valley Unified Air Pollution Control District
 MONITOR TYPE: SLAMS
 COLLECTION AND ANALYSIS METHOD: (079) INSTRUMENTAL-R&P SA246B-INLET TEOM
 PQAQ: (0145) California Air Resources Board

REPORT FOR: OCTOBER 2009

DURATION: 1 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: -50

DAY	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	OBS	MEAN	
1	25	39	44	34	56	95	65	49	34	35	32	33	25	20	43	45	49	49	46	67	37	37	33	35	24	42.8	
2	35	33	32	40	42	91	35	58	BA	BA	23	53	31	28	34	36	45	47	45	4	25	12	21	11	22	35.5	
3	50	53	30	18	15	21	11	14	10	12	15	15	26	27	40	65	74	40	51	38	63	55	20	13	24	32.3	
4	10	11	13	11	8	9	11	12	8	0	9	7	8	0	0	36	20	3	18	20	13	9	9	8	24	10.5	
5	13	14	18	25	2	15	14	6	12	38	78	116	92	71	50	21	31	42	41	33	25	23	22	34	24	34.8	
6	41	48	54	33	39	37	34	45	36	54	72	70	83	84	63	68	66	51	42	40	38	33	34	44	24	50.4	
7	36	34	33	41	50	48	45	60	81	92	55	36	32	27	25	14	22	19	17	10	11	11	15	25	24	35.0	
8	37	37	26	29	37	48	69	64	44	32	25	35	21	29	19	35	39	31	29	34	23	24	22	23	24	33.8	
9	31	24	25	23	17	11	15	46	26	34	36	35	39	31	14	40	50	83	45	31	37	39	27	36	24	33.1	
10	32	32	23	28	23	28	33	46	36	33	32	22	20	28	34	41	49	40	25	32	23	28	23	36	24	31.1	
11	31	29	26	25	29	22	26	26	28	24	19	20	19	25	23	24	20	18	27	31	23	15	29	23	24	24.3	
12	24	21	14	21	20	27	21	23	21	24	22	25	30	38	47	43	46	41	34	76	47	13	23	28	24	30.4	
13	33	25	47	47	36	13	12	10	11	9	5	3	7	9	11	11	7	5	3	2	3	6	4	4	24	13.5	
14	6	6	3	9	5	8	19	20	12	23	28	20	17	8	15	12	10	16	11	11	18	15	10	19	24	13.4	
15	19	17	8	16	16	19	27	17	24	19	26	18	18	19	22	22	12	13	9	4	6	0	0	3	24	14.8	
16	0	1	0	0	1	1	3	5	2	8	7	6	11	10	7	8	13	19	2	6	4	2	0	0	0	24	4.8
17	6	0	0	8	13	0	18	17	47	16	17	23	19	14	21	20	25	24	0	0	41	16	3	6	24	14.8	
18	8	17	4	0	1	15	0	0	1	7	6	0	19	13	10	0	24	8	13	3	7	5	4	1	24	6.9	
19	8	6	4	3	9	3	1	16	16	19	14	11	13	10	21	9	3	11	4	1	4	10	12	5	24	8.9	
20	6	4	0	2	0	1	4	2	2	5	8	12	1	5	10	2	12	17	16	9	14	0	1	7	24	5.8	
21	16	6	4	5	7	6	19	17	33	19	17	20	8	11	15	8	18	33	19	16	4	6	20	14	24	14.2	
22	11	5	14	10	6	5	6	20	19	19	16	14	9	13	15	15	17	20	13	10	0	10	7	5	24	11.6	
23	5	8	2	8	14	14	21	32	23	12	7	14	18	8	15	24	21	25	19	16	14	11	17	21	24	15.4	
24	8	9	17	16	13	14	16	18	24	19	24	12	11	15	11	18	22	12	3	7	6	7	4	0	24	12.8	
25	0	0	4	0	1	3	4	9	8	8	14	13	18	23	17	20	27	12	8	9	10	7	7	3	24	9.4	
26	3	6	12	8	5	16	7	16	30	17	17	24	23	27	20	19	0	36	3	21	13	8	0	11	24	14.3	
27	0	6	0	0	0	0	8	7	BA	BA	BA	BA	70	67	54	29	23	11	10	10	10	8	4	7	20	16.2	
28	2	3	4	5	4	10	8	12	23	29	27	24	34	27	22	23	20	14	12	12	6	6	5	3	24	14.0	
29	8	5	4	4	5	9	19	25	12	14	13	17	13	15	13	12	13	29	43	37	26	16	12	13	24	15.7	
30	13	14	14	24	31	24	22	36	34	31	29	26	29	24	24	21	22	24	23	18	11	12	9	10	24	21.9	
31	10	8	9	12	11	9	14	21	21	22	19	21	22	22	22	23	23	25	23	23	20	19	14	11	24	17.7	
NO.:	31	31	31	31	31	31	31	31	29	29	30	30	31	31	31	31	31	31	31	31	31	31	31	31	31		
MAX:	50.	53.	54.	47.	56.	95.	69.	64.	81.	92.	78.	116.	92.	84.	63.	68.	74.	83.	51.	76.	63.	55.	34.	44.			
AVG:	17.0	16.8	15.7	16.3	16.6	20.1	19.6	24.2	23.4	23.2	23.7	24.8	25.4	24.1	23.8	24.6	26.5	26.4	21.1	20.4	18.8	14.9	13.3	14.8			

MONTHLY OBSERVATIONS: 738 MONTHLY MEAN: 20.6 MONTHLY MAX: 116.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("**") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-077-3010 POC: 1
 COUNTY: (077) San Joaquin
 CITY: (75000) Stockton
 SITE ADDRESS: 8778 BRATTLE PLACE, STOCKTON-WAGNER HOLT
 SITE COMMENTS: NAMS (B) NEIGHBORHOOD SCALE MONITOR
 MONITOR COMMENTS: NAMS (B) SSI PM-10 MONITOR

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (8120) STOCKTON, CA
 LAND USE: RESIDENTIAL
 LOCATION SETTING: SUBURBAN

CAS NUMBER:
 LATITUDE: 38.029444
 LONGITUDE: -121.3525
 UTM ZONE: 10
 UTM NORTHING: 4210157
 UTM EASTING: 644597
 ELEVATION-MSL: 7
 PROBE HEIGHT: 6

SUPPORT AGENCY: (0945) San Joaquin Valley Unified Air Pollution Control District
 MONITOR TYPE: OTHER
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQAO: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										42		
5												
6												
7												
8												
9												
10										26		
11												
12												
13												
14												
15												
16										12		
17												
18												
19												
20												
21												
22										23		
23												
24												
25												
26												
27												
28										AF		
29												
30										33		
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										42.		
MEAN:										27.2		

ANNUAL OBSERVATIONS: 5 ANNUAL MEAN: 27.2 ANNUAL MAX: 42.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-099-0005 POC: 3
 COUNTY: (099) Stanislaus
 CITY: (48354) Modesto
 SITE ADDRESS: 814 14TH ST., MODESTO
 SITE COMMENTS: ARB SITE NUMBER 5000568. NEW SITE 7-15-81.
 MONITOR COMMENTS: GMW HI-VOLUME SAMPLER W/ SIERRA ANDERSON 1200 SSI INLET

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (5170) MODESTO, CA
 LAND USE: COMMERCIAL
 LOCATION SETTING: URBAN AND CENTER CITY

CAS NUMBER:
 LATITUDE: 37.641667
 LONGITUDE: -120.993611
 UTM ZONE: 10
 UTM NORTHING: 4167746
 UTM EASTING: 677022
 ELEVATION-MSL: 27
 PROBE HEIGHT:

SUPPORT AGENCY: (0145) California Air Resources Board
 MONITOR TYPE: SLAMS
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQAO: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										AN		
5												
6										60		
7												
8												
9												
10										40		
11												
12												
13												
14												
15												
16										18		
17												
18												
19												
20												
21												
22										24		
23												
24												
25												
26												
27												
28										13		
29												
30												
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										60.		
MEAN:										31.0		
ANNUAL OBSERVATIONS:	5		ANNUAL MEAN:		31.0		ANNUAL MAX:		60.			

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-099-0006 POC: 1
 COUNTY: (099) Stanislaus
 CITY: (80812) Turlock
 SITE ADDRESS: 900 S MINARET STREET, TURLOCK, CA
 SITE COMMENTS: REPLACES THE WESTLEY-I5 TRUCKSTOP AM STATION (5000572). STATION OPERATOR CHANGED
 MONITOR COMMENTS: GMW HI-VOLUME SAMPLER W/ SIERRA ANDERSON 1200 SSI INLET

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (5170) MODESTO, CA
 LAND USE: RESIDENTIAL
 LOCATION SETTING: SUBURBAN

CAS NUMBER:
 LATITUDE: 37.488333
 LONGITUDE: -120.835833
 UTM ZONE: 10
 UTM NORTHING: 4151042
 UTM EASTING: 691337
 ELEVATION-MSL: 56
 PROBE HEIGHT:

SUPPORT AGENCY: (0945) San Joaquin Valley Unified Air Pollution Control District
 MONITOR TYPE: OTHER
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 PQA0: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR
 UNITS: Micrograms/cubic meter (25 C)
 MIN DETECTABLE: 2

Day	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										22		
5												
6												
7												
8												
9												
10										61		
11												
12												
13												
14												
15												
16										16		
17												
18												
19												
20												
21												
22										27		
23												
24												
25												
26												
27												
28										19		
29												
30												
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										61.		
MEAN:										29.0		

ANNUAL OBSERVATIONS: 5 ANNUAL MEAN: 29.0 ANNUAL MAX: 61.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA REPORT

Feb. 23, 2011

(81102) PM10 Total 0-10um STP

SITE ID: 06-107-2002 POC: 2
 COUNTY: (107) Tulare
 CITY: (82954) Visalia

STATE: (06) California
 AQCR: (031) SAN JOAQUIN VALLEY
 URBANIZED AREA: (8779) VISALIA, CA
 LAND USE: COMMERCIAL
 LOCATION SETTING: URBAN AND CENTER CITY

CAS NUMBER:
 LATITUDE: 36.332222
 LONGITUDE: -119.290278
 UTM ZONE: 11
 UTM NORTHING: 4023031
 UTM EASTING: 294430
 ELEVATION-MSL: 97
 PROBE HEIGHT:

SITE ADDRESS: 310 N CHURCH ST, VISALIA
 SITE COMMENTS: ARB SITE NUMBER 5400568. NEW SITE 7/79. SPM SO2. NO2 DATA FROM THIS SITE BEFORE 1/
 MONITOR COMMENTS: GMW HI-VOL W/ SA 1200 SSI INLET - CARB PRIMARY SAMPLER

SUPPORT AGENCY: (0145) California Air Resources Board

MONITOR TYPE: SLAMS

COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC

PQAO: (0145) California Air Resources Board

REPORT FOR: 2009

DURATION: 24 HOUR

UNITS: Micrograms/cubic meter (25 C)

MIN DETECTABLE: 2

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1												
2												
3												
4										92		
5												
6												
7												
8												
9												
10										78		
11												
12												
13												
14												
15												
16										33		
17												
18												
19												
20												
21												
22										54		
23												
24												
25												
26												
27												
28										50		
29												
30												
31												
NO.:	0	0	0	0	0	0	0	0	0	5	0	0
MAX:										92.		
MEAN:										61.4		

ANNUAL OBSERVATIONS: 5 ANNUAL MEAN: 61.4 ANNUAL MAX: 92.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

QUALIFIER CODES:

Qualifier Code	Qualifier Description	Qualifier Type
AF	Scheduled but not Collected	NULL
AJ	Filter Damage	NULL
AK	Filter Leak	NULL
AN	Machine Malfunction	NULL
AQ	Collection Error	NULL
BA	Maintenance/Routine Repairs	NULL
IJ	High Winds	INFORM

Note: Qualifier codes with regional concurrence are shown in upper case,
and those without regional concurrence are shown in lower case.