State of Arizona Exceptional Event Documentation for September 4, 2014, and September 6, 2014, for the Maricopa County PM_{10} Nonattainment Area

Produced by:

Arizona Department of Environmental Quality
Maricopa County Air Quality Department
Maricopa Association of Governments

FINAL Report
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I. EXCEPTIONAL EVENT RULE (EER) REQUIREMENTS

In addition to the technical requirements that are contained within the EER, procedural requirements must also be met in order for EPA to concur with the flagged air quality monitoring data. This section of the report lays out the requirements of the EER and associated guidance, and discusses how the Arizona Department of Environmental Quality (ADEQ) addressed those requirements.

Procedural Requirements

This section presents a review of the procedural requirements of the EER as required by 40 CFR 50.14 (Treatment of Air Quality Monitoring Data Influenced by Exceptional Events) and explains how ADEQ fulfills them. The Federal EER requirements include public notification that an event was occurring, the placement of informational flags on data in EPA's Air Quality System (AQS), the notification of EPA of the intent to flag through submission of initial event description, the documentation that the public comment process was followed, and the submittal of a demonstration supporting the exceptional events flag. ADEQ has addressed all of these procedural and documentation requirements.

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

ADEQ issued Dust Control Action Forecasts and Ensemble Forecasts for the Greater Phoenix area advising citizens of the potential for high wind / dust events on September 4, 2014, and September 6, 2014. More information on ADEQ's forecasting program can be found in Section IV. The forecast products that were issued for September 4, 2014 and September 6, 2014 are included in Appendix A.

Place informational flag on data in AQS (40 CFR 50.14(c)(2)(ii))

ADEQ and other operating agencies in Arizona submit data into EPA's AQS. Data from both filter-based and continuous monitors operated in Arizona are submitted to AQS.

When ADEQ and/or another agency operating monitors in Arizona suspects that data may be influenced by an exceptional event, ADEQ and/or the other operating agency expedites analysis of the filters collected from the potentially-affected filter-based air monitoring instruments, quality assures the results and submits the data into AQS. ADEQ and/or other operating agencies also submit data from continuous monitors into AQS after quality assurance is complete.

If ADEQ and/or the operating agency have determined a potential exists that the monitor reading has been influenced by an exceptional event, a preliminary flag is submitted for the measurement in the AQS. The data are not official until they undergo more thorough quality assurance and quality control, leading to certification by May 1st of the year following the calendar year in which the data were collected (40 CFR 58.15(a)(2)). The presence of the flag can be confirmed in AQS.

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))

ADEQ submitted a notice of intent (NOI) to EPA Region 9 Air Division Director, Deborah Jordan, on December 11, 2014 notifying EPA of ADEQ's intent to flag data in AQS and submit documentation to EPA by January 8, 2015 for the September 4, 2014, and September 6, 2014, exceptional events. This

assessment report serves as the demonstration supporting the flagging of these data. The following Maricopa County PM_{10} nonattainment area monitors have been flagged as exceeding the 24-hour PM_{10} standard as a result of the high wind exceptional events:

On September 4, 2014: **Higley** (04-013-4006)

On September 6, 2014: **South Phoenix** (04-013-4003)

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

ADEQ posted this assessment report on the ADEQ webpage and placed a hardcopy of the report in the ADEQ Records Management Center for public review. ADEQ opened a 30-day public comment period on November 24, 2014. A copy of the public notice certification, along with any comments received, will be submitted to EPA, consistent with the requirements of 40 CFR 50.14(c)(3)(v). See Appendix C for a copy of the affidavit of public notice.

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

At the close of the comment period, and after ADEQ has had the opportunity to consider any comments submitted on this document, ADEQ will submit this document, the comments received, and ADEQ's responses to those comments to EPA Region IX headquarters in San Francisco, California. The deadline for the submittal of this demonstration package is September 30, 2017.

Documentation Requirements

Section 50.14(c)(3)(iv) in 40 CFR part 50 states that in order to justify excluding air quality monitoring data, evidence must be provided for the following elements:

a. The event satisfies the criteria set forth in 40 CFR 50.1(j) that:
   (1) the event affected air quality,
   (2) the event was not reasonably controllable or preventable, and
   (3) the event was caused by human activity unlikely to recur in a particular location or was a natural event;
b. There is a clear causal relationship between the measurement under consideration and the event;
c. The event is associated with a measured concentration in excess of normal historical fluctuations; and
d. There would have been no exceedance or violation but for the event.

Section II of this assessment introduces the conceptual model of the thunderstorm outflow wind events that transpired on September 4, 2014, and September 6, 2014, providing a background narrative of the exceptional events and an overall explanation that 'the event affected air quality'. Further evidence that 'the event affected air quality' is provided in Section V.

Section IV of this assessment details the existing area control measures and demonstrates that despite the presence and enforcement of these controls, the events on September 4, 2014, and September 6, 2014, were not reasonably controllable or preventable.

Section V of this assessment establishes a clear causal connection between the natural events on September 4, 2014, and September 6, 2014, and the exceedances of the 24-hour PM_{10} standard. The evidence in this section (and the previous section on historical fluctuations) also confirms that the events in question both affected air quality and were the result of a natural event.

Section III of this assessment provides data summaries and time series graphs which help illustrate that the events on September 4, 2014, and September 6, 2014, produced PM_{10} concentrations in excess of normal historical fluctuations.

Section VI of this assessment builds upon the demonstration showing a clear causal connection between the natural events and the exceedances and concludes there would have been no exceedances on September 4, 2014, and September 6, 2014, but for the presence of the natural events.

II. CONCEPTUAL MODEL

Geographic Setting and Climate

Geographic Setting

The Maricopa County PM_{10} nonattainment area is located in the Salt River Valley in south-central Arizona. It lies at a mean elevation of 1,090 feet above mean sea level (MSL) in the northeastern part of the Sonoran Desert. Other than the mountains in and around the area, the topography of the area is generally flat. The area is surrounded by the McDowell Mountains (~4,200 ft MSL) to the northeast, the foothills of the Bradshaw (~7,900 ft MSL) and Mazatzal (~7,900 ft MSL) ranges to the north, the White Tank Mountains (~4,500 ft MSL) to the west, the Sierra Estrella (~4,450 ft MSL) to the southwest, and the Superstition Mountains (~5,000 ft MSL) far to the east. Within the area are the Phoenix Mountains (~2,600 ft MSL) and South Mountain (~2,600 ft MSL). Current development is pushing north, west, and south into Pinal County. The PM_{10} nonattainment area contains a fairly dense network of PM_{10} monitors throughout the area, with a much less dense network of monitors located throughout the rest of the state. Figure 2–1 shows the general geographic setting of the nonattainment area, as well as the locations of PM_{10} monitors in the nonattainment area and throughout the state. It should be noted that some of the monitors shown in Figure 2-1 are filter-based monitors; therefore, monitoring data from all locations may only be available for select days (i.e. 1-in-6 run days).

Figure 2–2 depicts the drainage systems or watersheds for the State of Arizona. Many of the rivers that form Arizona's drainage system are dry for most of the year and, consequently, are sources of silt and fine soils that become suspended and add to regional PM_{10} loadings during high wind events. Much of this alluvial matter and fine soil is deposited in the low lying areas of central and southern Arizona, with larger depositional areas focused in and around the confluences of dry river channels.

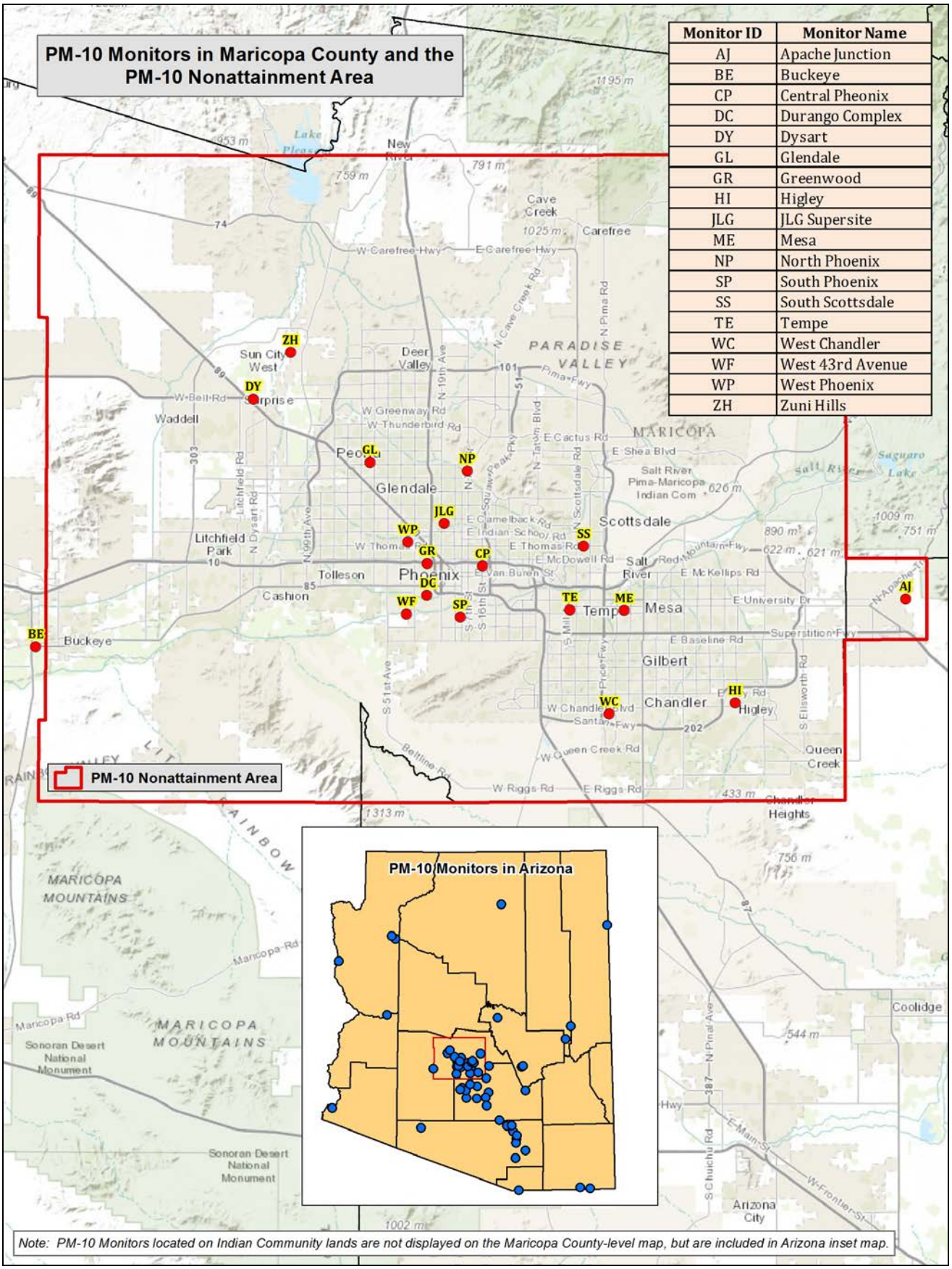

Figure 2-1. Maricopa County PM_{10} nonattainment area geographic setting and PM_{10} monitor locations.

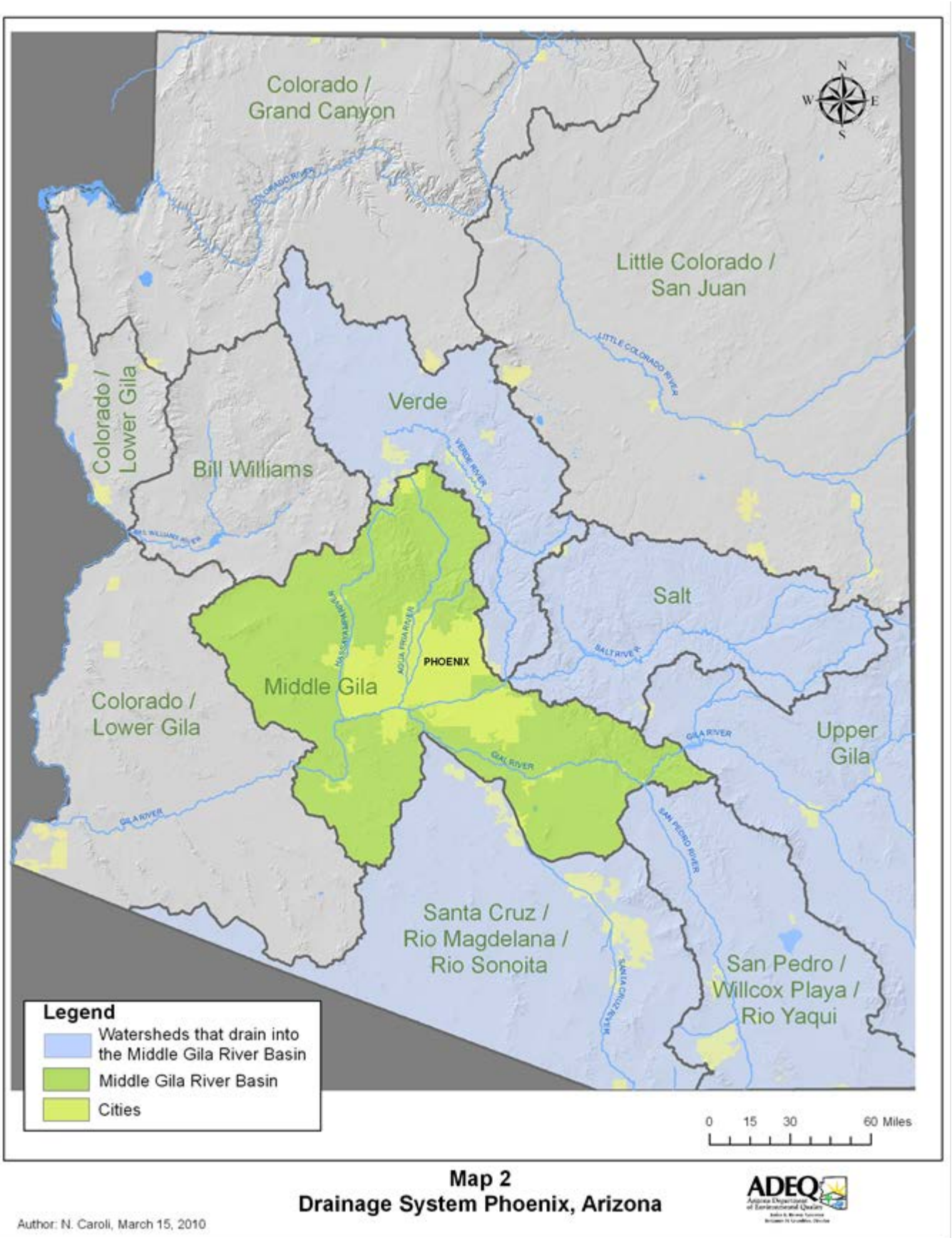

Figure 2-2. Drainage basins of the state of Arizona.

Climate

The Maricopa County PM_{10} nonattainment area has an arid climate, with very hot summers and temperate winters. The average summer high temperature is among the hottest of any populated area in the United States. The temperature reaches or exceeds 100ºF an average of 110 days during the year and highs top 110ºF an average of 18 days during the year. The area receives an average of 7.66 inches of rain per year.

Precipitation is sparse during the first part of the summer, but the influx of monsoonal moisture, which generally begins in early July and lasts until mid-September, raises humidity levels and can cause heavy localized precipitation and flooding. Although thunderstorms are possible at any time of the year, they are most common during the monsoon season from July to mid-September as humid air is advected from the Gulf of California, Gulf of Mexico, and large thunderstorm complexes from the Sierra Madre Occidental Mountains in Mexico. This influx in moisture, combined with intense solar heating, often creates a very unstable environment that is ripe for thunderstorm development. These thunderstorms can bring strong winds and blowing dust, large hail, and heavy rain. Dust storms associated with these thunderstorms typically occur in the early part of the monsoon season (July) before soaking rains help keep soil particles bound to one another. However, depending on the amount of precipitation received during the monsoon season, extremely hot temperatures act to dry out the surface quickly, and dust storms can occur at any time. During the December through March period, winter storms moving inland from the Pacific Ocean can bring strong winds, blowing dust and significant rains throughout Arizona. This December – March time period, and July – August time period are typically the wettest parts of the year. Meanwhile, a distinct dry season occurs during the period of April through June for the nonattainment area and the rest of Arizona. While these weather patterns describe the general climatology for the nonattainment area over a long period of time, the area and the entire state of Arizona are also prone to a high degree of variability in these weather patterns from year to year.

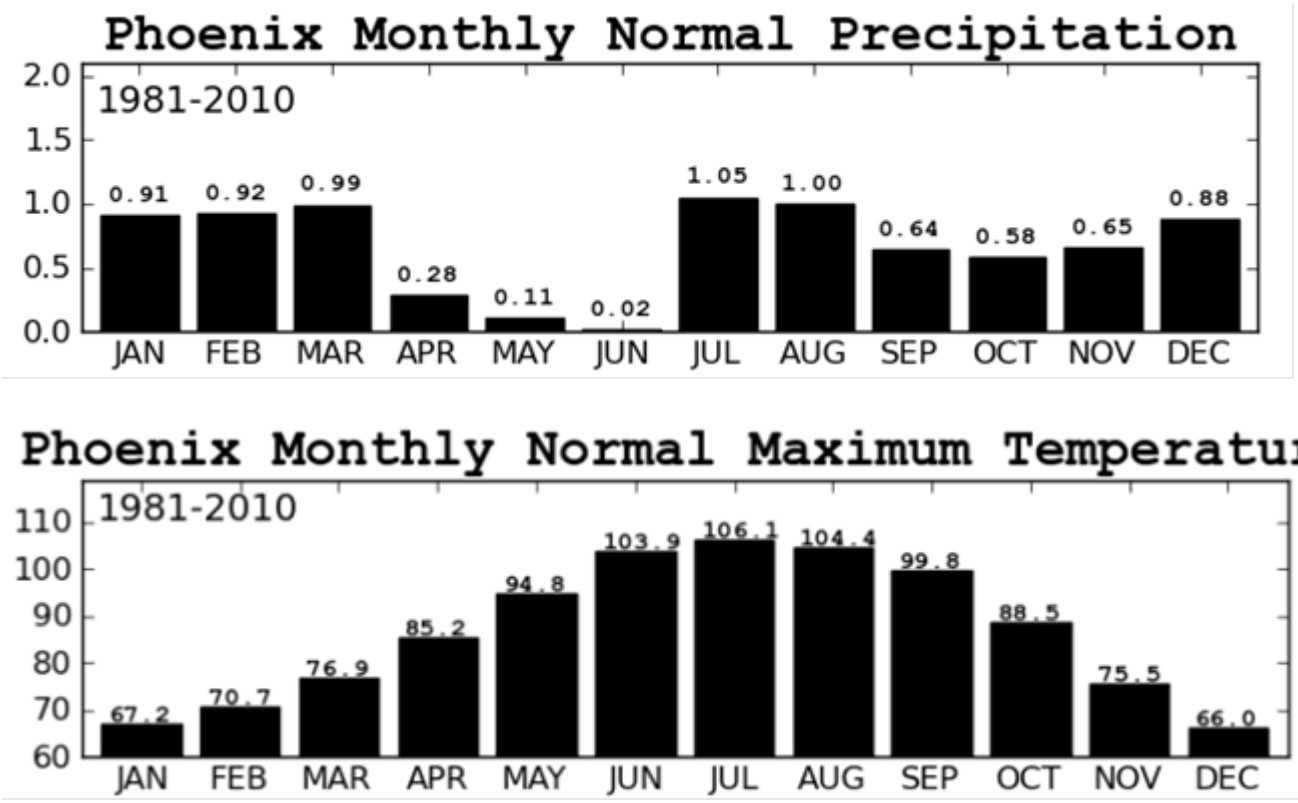

Figure 2-3 Phoenix monthly precipitation (top) and maximum temperature (bottom) climatology (source: National Weather Service).

Monsoon Season Thunderstorm Outflow Dust Storm Event Summary

The North American Monsoon is a shift in wind patterns in the summer which occurs as Mexico and the Southwest U.S. warm under intense solar heating. As this happens, low level moisture is transported primarily from the Gulf of California and eastern Pacific Ocean into the southwestern U.S. Mid and upper level moisture is also transported into the region, mainly from the Gulf of Mexico by easterly winds aloft. This combination causes a distinct rainy season over large portions of western North America, which develops rather quickly and sometimes dramatically. There are usually distinct "burst" periods of heavy rain during the monsoon, and "break" periods with little or no rain. Even during active monsoon periods, some areas can go without receiving any significant precipitation while other nearby areas experience heavy rains and flooding.

In addition to bringing precipitation, active thunderstorms can produce downbursts, or sometimes more concentrated and severe microbursts, which are rapidly descending bursts of air spreading away from the thunderstorm clouds. These downward bursts of air hit the ground and then disperse away from the storms as areas of outflow. These outflow boundaries from the thunderstorms can generate large walls of dust, sometimes called haboobs, and transport that dust for long distances from the initiating thunderstorms (see Figure 2–4).

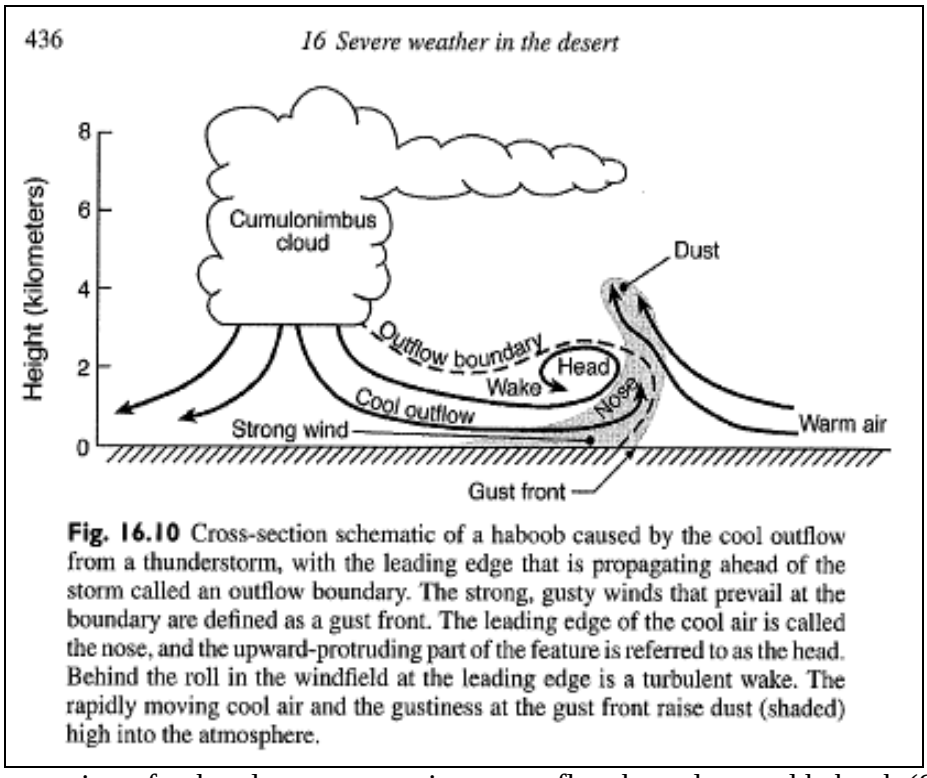

Fig. 16.10 Cross-section schematic of a haboob caused by the cool outflow from a thunderstorm, with the leading edge that is propagating ahead of the storm called an outflow boundary. The strong, gusty winds that prevail at the boundary are defined as a gust front. The leading edge of the cool air is called the nose, and the upward-protruding part of the feature is referred to as the head. Behind the roll in the windfield at the leading edge is a turbulent wake. The rapidly moving cool air and the gustiness at the gust front raise dust (shaded) high into the atmosphere.

Figure 2-4. Cross-section of a thunderstorm creating an outflow boundary and haboob (Source: Desert Meteorology. Thomas T. Warner. 2004.)

During the period of September 4-6, 2014, increasing moisture from the south (Hurricane Norbert) combined with the seasonal monsoon to produce atmospheric conditions ripe for the production of active thunderstorms and associated outflows. The unstable atmosphere generated multiple thunderstorms of varying intensity across the deserts of Maricopa, Pinal and Pima counties. The thunderstorms were capable of generating both isolated and widespread precipitation, high winds, and blowing dust.

On the evening of September 4, 2014, a strong thunderstorm originated in the central Pinal County desert. At 7:03 pm, the National Weather Service (NWS) Phoenix Office issued a dust storm warning for the cities of Apache Junction, Casa Grande and Florence in response to the thunderstorm outflow-generated dust storm moving north-northeast across Pinal County. A subsequent blowing dust advisory for the cities of Phoenix and Mesa was issued at 7:19 pm. The dust storm produced sustained winds as high as 30 mph and gusts as high as 43 mph, with visibilities as low as 0.5 miles. Five-minute average PM_{10} concentrations above 5,000 $\mu g/m^3$ were recorded at three monitors in Pinal County with the passing of the dust storm. As the dust storm moved north-northeast towards the Maricopa County PM_{10} nonattainment area, separate thunderstorm activity and associated high winds within the nonattainment area kept the approaching dust storm confined to the far southeast portion of the nonattainment area. Within the nonattainment area, the southeastern-most Higley monitor recorded the highest PM_{10} concentrations from the dust storm, ultimately resulting in a 24-hour average PM_{10} concentration (155 $\mu g/m^3$) that just exceeded the PM_{10} standard by 1 $\mu g/m^3$. Three monitors in the thunderstorm outflow source region of Pinal County also exceeded the PM_{10} standard as a result of the dust storm.

In the evening hours of September 6, 2014, a large thunderstorm was detected by the NWS near Florence in Pinal County. At 5:27 pm, the NWS issued a dust storm warning for north and north central Pinal County. The thunderstorm outflow-generated dust storm contained sustained winds as high as 32 mph and gusts as high as 40 mph, with visibilities as low as 0.8 miles. As the dust storm moved northwest towards and across the nonattainment area, the NWS issued a dust storm warning at 6:17 pm for the greater Phoenix area and Sky Harbor International Airport with predicted wind gusts as high as 50 mph and visibilities as low as one mile. The dust storm was ultimately pushed out of the nonattainment area by a separate outflow from the northeast that blew the dust west of the nonattainment area. Before the dust storm exited the nonattainment area, four nonattainment area monitors recorded five-minute average PM_{10} concentrations above 5,000 $\mu g/m^3$, along with four other monitors recording five-minute average PM_{10} concentrations above 2,500 $\mu g/m^3$. While only the centrally-located South Phoenix monitor recorded an exceedance of the 24-hour PM_{10} standard (159 $\mu g/m^3$, 5 $\mu g/m^3$ over the standard), three other centrally-located nonattainment area monitors nearly exceeded the standard with 24-hour average PM_{10} concentrations between 125-144 $\mu g/m^3$ as a result of the passing dust storm.

A contributing factor that led to these dust storms was the on-going drought across the region. As shown in Figure 2–5, the U.S. Drought Monitor as of September 2, 2014, categorized the drought level of the source area of the thunderstorm outflows as either D2 (Severe) or D3 (Extreme). This level of drought helps to show how the natural desert areas within Pinal and Maricopa counties are vulnerable to dust storms generated by thunderstorm outflow winds.

A more detailed explanation and time series visualization of the thunderstorm outflow dust storm events are available in Section V, describing the clear causal connection between the approaching outflows and the exceeding PM_{10} concentrations recorded in the nonattainment area. As a summary of the events, Figure 2–6 displays an hourly graph of the PM_{10} concentrations throughout Maricopa County and the nonattainment area for the period of September 4-6, 2014. Tables 2–1 and 2–2 contain PM_{10} concentration data from all recorded monitors throughout the state of Arizona on September 4 and 6, 2014.

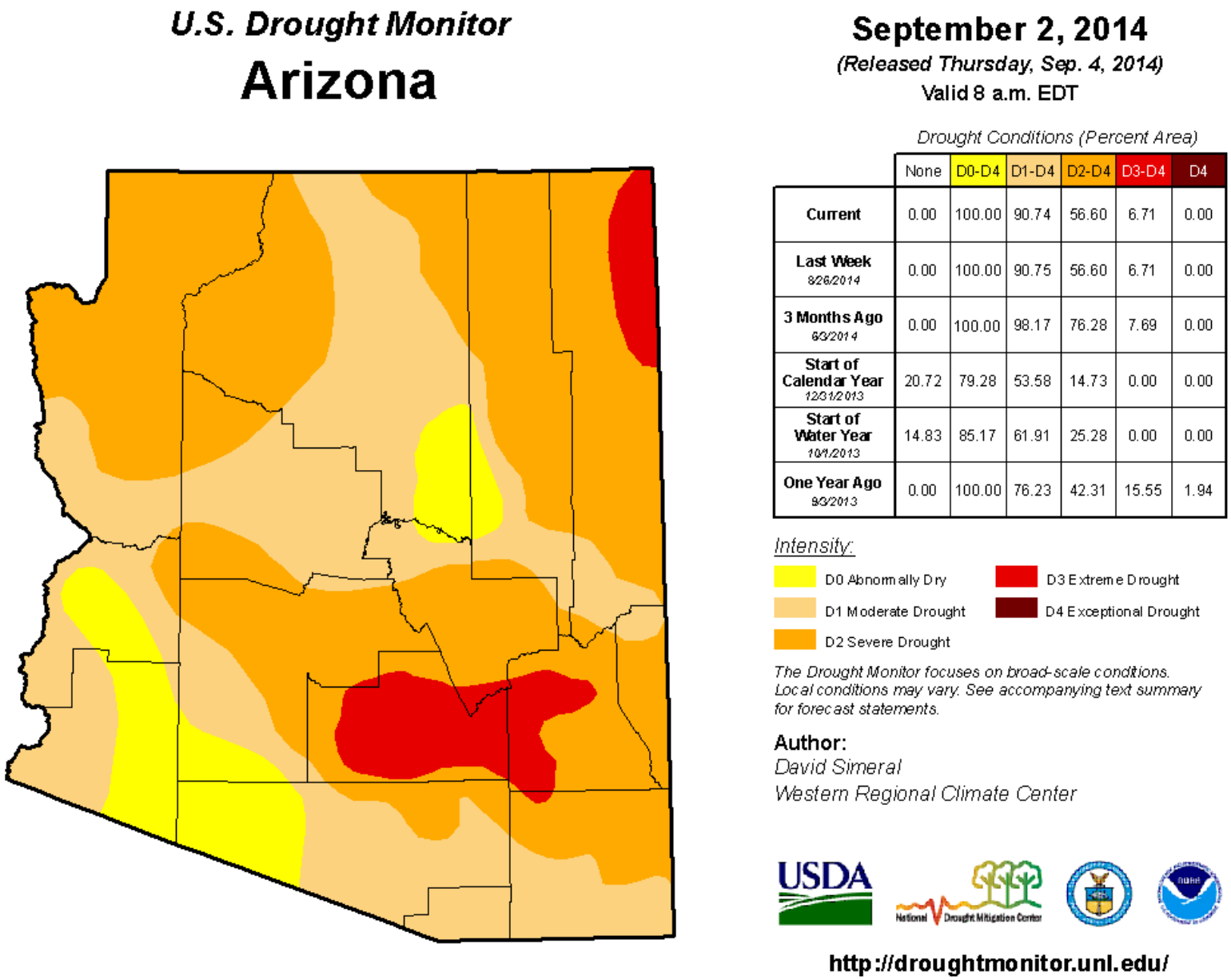

Figure 2-5. U.S. Drought Monitor analysis of Arizona issued for September 2, 2014.

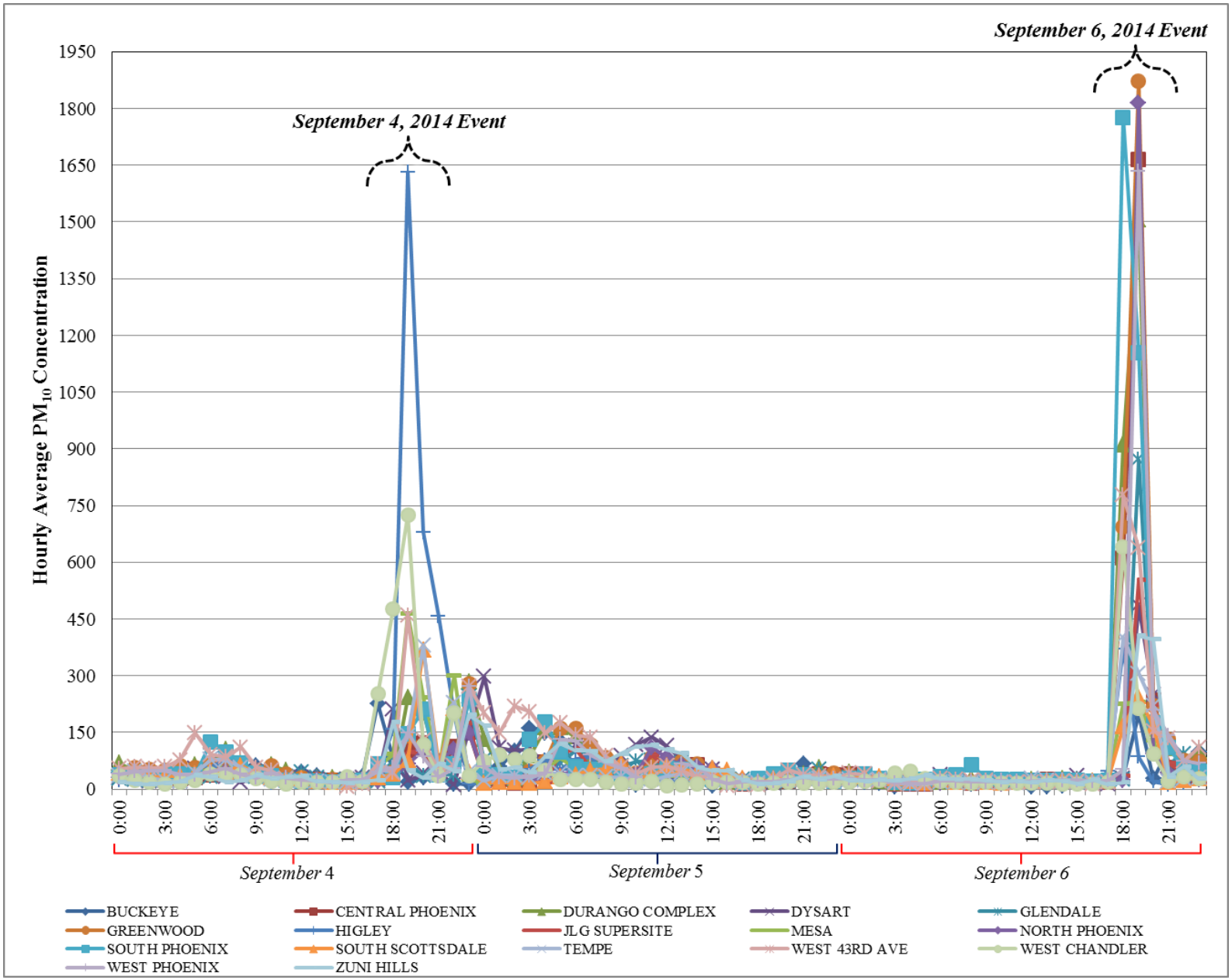

Figure 2-6. Timeline of PM_{10} concentrations at monitors in Maricopa County and the PM_{10} nonattainment area on September 4-6, 2014.

Table 2-1. Arizona PM_{10} Measurements on September 4, 2014.

Monitor	Monitor Type	Operator	AQS Monitor ID	24-hr Avg PM_{10} ($\mu g/m^3$)	1-hr Max PM_{10} ($\mu g/m^3$)	Max Time	AQS Qualifier Flag
Cochise County							
Douglas Red Cross	TEOM	ADEQ	04-003-1005-81102-3	23	67	0800	
Paul Spur Chemical Lime	TEOM	ADEQ	04-003-0011-81102-3	10	35	1600	
Gila County							
Hayden Old Jail	TEOM	ADEQ	04-007-1001-81102-3	87	1,187	2000	
Miami Golf Course	TEOM	ADEQ	04-007-8000-81102-3	26	63	0700	
Payson Well Site	TEOM	ADEQ	04-007-0008-81102-1	11	47	2300	
La Paz County							
Alamo Lake	TEOM	ADEQ	04-012-8000-81102-1	13	69	2100	
Maricopa County							
Buckeye	TEOM	MCAQD	04-013-4011-81102-1	48	227	1700	
Central Phoenix	TEOM	MCAQD	04-013-3002-81102-4	47	151	2300	
Durango Complex	TEOM	MCAQD	04-013-9812-81102-1	76	284	2300	
Dysart	TEOM	MCAQD	04-013-4010-81102-1	41	210	1800	
Glendale	TEOM	MCAQD	04-013-2001-81102-1	43	245	2300	
Greenwood	TEOM	MCAQD	04-013-3010-81102-1	64	278	2300	
Higley	**TEOM**	**MCAQD**	**04-013-4006-81102-1**	**155**	**1,631**	**1900**	**RJ**
JLG Supersite	BAM	ADEQ	04-013-9997-81102-3	43	175	2300	
Mesa	TEOM	MCAQD	04-013-1003-81102-1	78	464	1900	
North Phoenix	BAM	MCAQD	04-013-1004-81102-1	46	149	2300	
South Phoenix	TEOM	MCAQD	04-013-4003-81102-1	63	237	2300	
South Scottsdale	TEOM	MCAQD	04-013-3003-81102-1	58	368	2000	
Tempe	TEOM	MCAQD	04-013-4005-81102-1	63	379	2000	
West Chandler	TEOM	MCAQD	04-013-4004-81102-1	94	725	1900	
West Forty Third	TEOM	MCAQD	04-013-4009-81102-1	94	459	1900	
West Phoenix	TEOM	MCAQD	04-013-0019-81102-1	54	272	2300	
Zuni Hills	TEOM	MCAQD	04-013-4016-81102-1	41	195	2300	
Mohave County							
Bullhead City	TEOM	ADEQ	04-015-1003-81102-3	25	65	0900	
Pima County							
Ajo	TEOM	ADEQ	04-019-0001-81102-3	59	160	1300	
Geronimo	BAM	PCDEQ	04-019-1113-81102-1	31	427	1900	
Green Valley	TEOM	PCDEQ	04-019-1030-81102-1	14	32	1600	
Rillito	TEOM	ADEQ	04-019-0020-81102-3	71	512	1700	
Pinal County							
Casa Grande Downtown	TEOM	PCAQCD	04-021-0001-81102-3	288	2,702	1800	
Combs School	TEOM	PCAQCD	04-021-3009-81102-3	178	2,030	1900	
Cowtown	TEOM	PCAQCD	04-021-3013-81102-3	96	806	1900	
Maricopa	TEOM	PCAQCD	04-021-3010-81102-3	46	171	1900	
Pinal Air Park	TEOM	PCAQCD	04-021-3007-81102-3	89	785	1700	
Pinal County Housing	TEOM	PCAQCD	04-021-3011-81102-3	226	1,783	1900	
Stanfield	TEOM	PCAQCD	04-021-3008-81102-3	145	1,907	1800	
Santa Cruz County							
Nogales Post Office	BAM	ADEQ	04-023-0004-81102-3	17	50	0700	
Yuma County							
Yuma Supersite	TEOM	ADEQ	04-027-8011-81102-3	44	160	2000	

SOURCE: ADEQ's, MCAQD's and PCAQCD's AirVision Databases and PCDEQ website.

TEOM: Tapered Element Oscillating Microbalance monitor
BAM: Beta Attenuation Monitor
MCAQD: Maricopa County Air Quality Department
ADEQ: Arizona Department of Environmental Quality
PCDEQ: Pima County Department of Environmental Quality
PCAQCD: Pinal County Air Quality Control District
RJ: qualifier flag for high winds

Table 2-2. Arizona PM_{10} Measurements on September 6, 2014.

Monitor	Monitor Type	Operator	AQS Monitor ID	24-hr Avg PM_{10} ($\mu g/m^3$)	1-hr Max PM_{10} ($\mu g/m^3$)	Max Time	AQS Qualifier Flag
Cochise County							
Douglas Red Cross	TEOM	ADEQ	04-003-1005-81102-3	13	24	0000	
Paul Spur Chemical Lime	TEOM	ADEQ	04-003-0011-81102-3	10	23	1200	
Gila County							
Hayden Old Jail	TEOM	ADEQ	04-007-1001-81102-3	27	64	1400	
Miami Golf Course	TEOM	ADEQ	04-007-8000-81102-3	15	28	0100	
Payson Well Site	TEOM	ADEQ	04-007-0008-81102-1	8	25	0100	
La Paz County							
Alamo Lake	TEOM	ADEQ	04-012-8000-81102-1	14	49	2300	
Maricopa County							
Buckeye	TEOM	MCAQD	04-013-4011-81102-1	34	197	1900	
Central Phoenix	TEOM	MCAQD	04-013-3002-81102-4	125	1,663	1900	
Durango Complex	TEOM	MCAQD	04-013-9812-81102-1	138	1,506	1900	
Dysart	TEOM	MCAQD	04-013-4010-81102-1	55	485	1900	
Glendale	TEOM	MCAQD	04-013-2001-81102-1	69	870	1900	
Greenwood	TEOM	MCAQD	04-013-3010-81102-1	144	1,872	1900	
Higley	TEOM	MCAQD	04-013-4006-81102-1	41	371	1800	
JLG Supersite	BAM	ADEQ	04-013-9997-81102-3	53	553	1900	
Mesa	TEOM	MCAQD	04-013-1003-81102-1	44	231	1900	
North Phoenix	BAM	MCAQD	04-013-1004-81102-1	99	1,813	1900	
South Phoenix	**TEOM**	**MCAQD**	**04-013-4003-81102-1**	**159**	**1,776**	**1800**	**RJ**
South Scottsdale	TEOM	MCAQD	04-013-3003-81102-1	43	244	1900	
Tempe	TEOM	MCAQD	04-013-4005-81102-1	56	401	1800	
West Chandler	TEOM	MCAQD	04-013-4004-81102-1	58	639	1800	
West Forty Third	TEOM	MCAQD	04-013-4009-81102-1	95	776	1800	
West Phoenix	TEOM	MCAQD	04-013-0019-81102-1	106	1,634	1900	
Zuni Hills	TEOM	MCAQD	04-013-4016-81102-1	56	406	1900	
Mohave County							
Bullhead City	TEOM	ADEQ	04-015-1003-81102-3	24	43	1000	
Pima County							
Ajo	TEOM	ADEQ	04-019-0001-81102-3	20	65	0700	
Geronimo	BAM	PCDEQ	04-019-1113-81102-1	12	21	1500	
Green Valley	TEOM	PCDEQ	04-019-1030-81102-1	10	16	0000	
Rillito	TEOM	ADEQ	04-019-0020-81102-3	35	190	1500	
Pinal County							
Casa Grande Downtown	TEOM	PCAQCD	04-021-0001-81102-3	176	2,831	1700	
Combs School	TEOM	PCAQCD	04-021-3009-81102-3	71	509	0400	
Cowtown	TEOM	PCAQCD	04-021-3013-81102-3	154	2,331	1800	
Maricopa	TEOM	PCAQCD	04-021-3010-81102-3	27	90	2000	
Pinal Air Park	TEOM	PCAQCD	04-021-3007-81102-3	33	203	1600	
Pinal County Housing	TEOM	PCAQCD	04-021-3011-81102-3	137	2,528	1700	
Stanfield	TEOM	PCAQCD	04-021-3008-81102-3	141	2,526	1800	
Santa Cruz County							
Nogales Post Office	BAM	ADEQ	04-023-0004-81102-3	9	17	0800	
Yuma County							
Yuma Supersite	TEOM	ADEQ	04-027-8011-81102-3	17	31	1700	

SOURCE: ADEQ's, MCAQD's and PCAQCD's AirVision Databases and PCDEQ website.

TEOM: Tapered Element Oscillating Microbalance monitor
BAM: Beta Attenuation Monitor
MCAQD: Maricopa County Air Quality Department
ADEQ: Arizona Department of Environmental Quality
PCDEQ: Pima County Department of Environmental Quality
PCAQCD: Pinal County Air Quality Control District
RJ: qualifier flag for high winds

III. HISTORICAL FLUCTUATIONS

PM_{10} concentrations measured at Maricopa County nonattainment area monitors on September 4-6, 2014, were unusual and in excess of normal historical fluctuations. Figure 3–1 displays a time series plot of the 24-hour average PM_{10} concentrations for the period of January 1, 2009, through September 15, 2014, for the Higley monitor. The figure indicates that the 24-hour average PM_{10} concentration seen at the Higley monitor on September 4, 2014, was in excess of normal historical fluctuations. Figure 3–2 displays a time series plot of the 24-hour average PM_{10} concentrations for the period of January 1, 2009, through September 15, 2014, for the South Phoenix monitor. The figure indicates that the 24-hour average PM_{10} concentration seen at the South Phoenix monitor on September 6, 2014, was in excess of normal historical fluctuations.

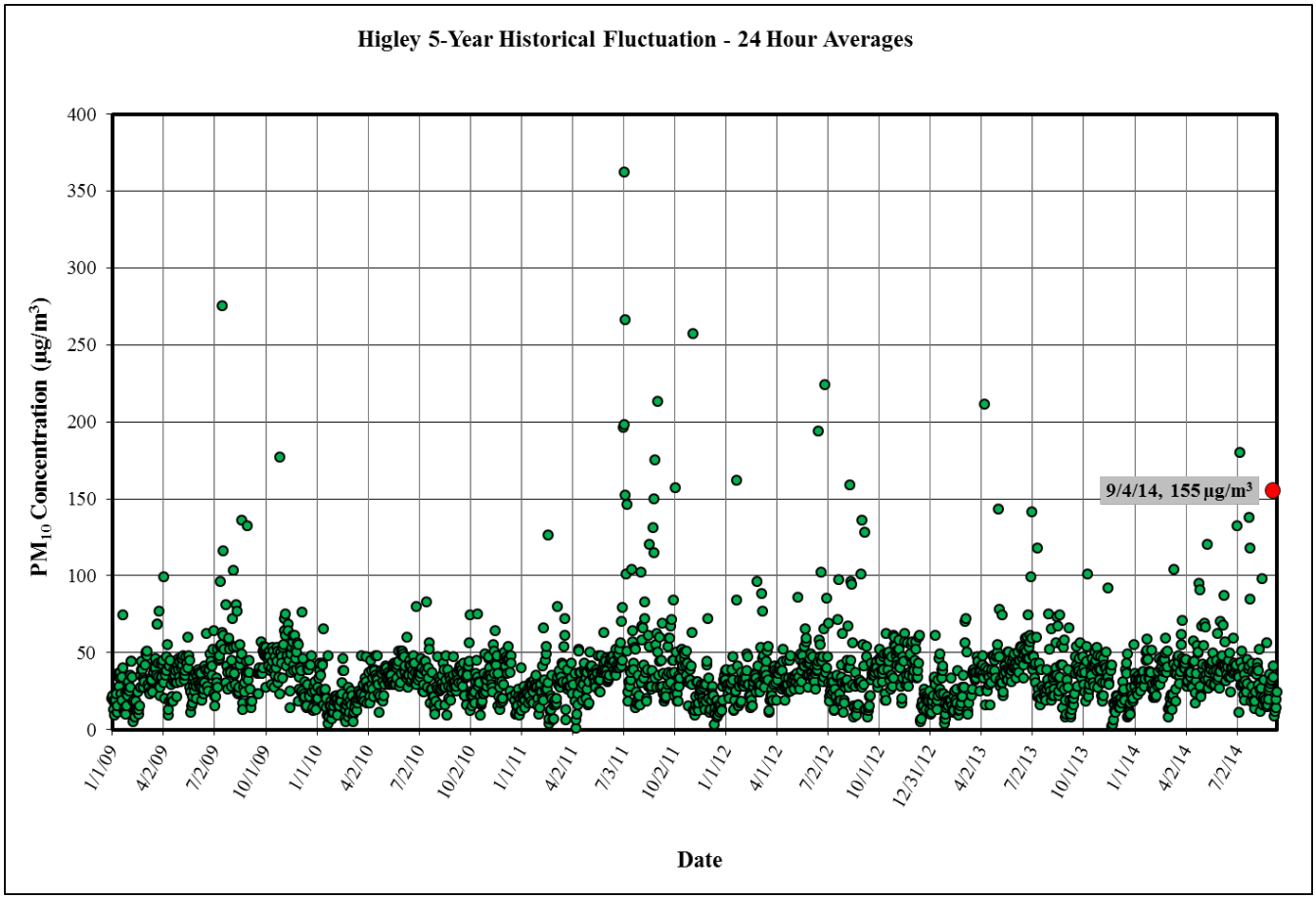

Figure 3-1. Plot of 24-hour average PM_{10} concentrations (January 1, 2009 – September 15, 2014) at the Higley monitor.

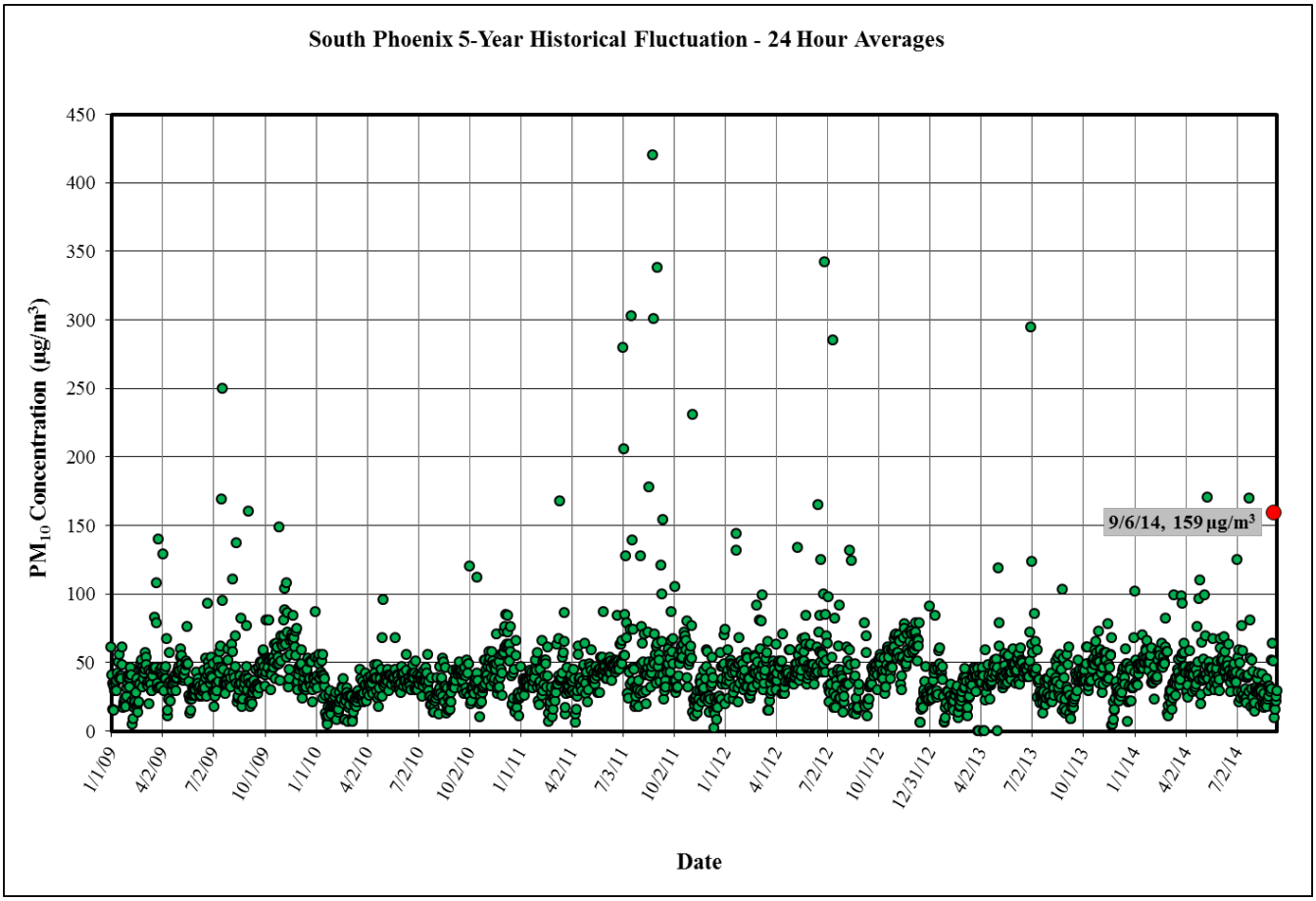

Figure 3-2. Plot of 24-hour average PM_{10} concentrations (January 1, 2009 – September 15, 2014) at the South Phoenix monitor.

IV. NOT REASONABLY CONTROLLABLE OR PREVENTABLE

Section 50.1(j) of Title 40 CFR Part 50 requires that an event must be "not reasonably controllable or preventable" in order to be defined as an exceptional event. This requirement is met by demonstrating that despite reasonable control measures in place within Maricopa County and the PM_{10} nonattainment area, high wind conditions overwhelmed all reasonably available controls. The events occurring on September 4, 2014, and September 6, 2014, were directly related to turbulent winds generated by thunderstorm outflows, producing dust storms with high wind gusts, high sustained wind speeds, and very low visibilities (September 4, 2014, recorded wind gusts of 43 mph, sustained wind speeds of 30 mph, and visibilities as low as 0.5 miles; September 6, 2014, recorded wind gusts of 40 mph, sustained wind speeds of 32 mph, and visibilities as low as 0.8 miles). These gusty outflow winds overwhelmed all reasonably available controls, and were also responsible for the transport of PM into the Maricopa County PM_{10} nonattainment area from areas outside of the nonattainment area.

As shown in Section V, the source region for the thunderstorm outflows and associated transported dust on September 4, 2014, came from the desert areas of Pinal County. On September 6, 2014, the source region for the thunderstorm outflows and associated transported dust were the desert areas of Pinal and Maricopa counties. While it is likely that PM_{10} was generated within the nonattainment area as gusts from these thunderstorm outflows passed through the area, the transport of dust from the source regions outside the nonattainment area contributed heavily to the elevated and exceeding concentrations of PM_{10} within the nonattainment area. Strict controls on local sources of fugitive dust were in place and enforced during the events on September 4, 2014, and September 6, 2014, but were not capable of controlling the dust and PM_{10} generated and transported by the gusty and turbulent thunderstorm outflow winds on these dates.

The following sections describe the BACM- and MSM-level PM_{10} control measures in place on September 4, 2014, and September 6, 2014, and the robustness of the programs designed to enforce these measures. Inspections of local sources performed before, during, and after September 4, 2014, and September 6, 2014, confirmed that no unusual anthropogenic PM_{10}-producing activities contributed to the exceedances on September 4, 2014, or September 6, 2014.

Regulatory Measures and Control Programs

The Arizona Department of Environmental Quality (ADEQ) and the Maricopa County Air Quality Department (MCAQD) are responsible for implementing regulatory measures to control emissions from mobile sources, agricultural sources, stationary sources, fugitive dust sources, and open burning within Maricopa County. Three major programs provide or contribute to air pollution control measures for the Greater Phoenix area. These programs include:

1.) ADEQ's Agricultural Best Management Program (AgBMP)
2.) Maricopa County's Inspection and Compliance Program
3.) ADEQ's Air Quality Forecasting Program

Specifically, ADEQ is responsible for compliance assistance and enforcement of Agricultural Best Management Practices developed by the Governor's Agricultural Best Management Practices Committee, while MCAQD is responsible for compliance assurance for all other significant sources of PM_{10} emissions. In addition to routine inspections and inspections driven by complaints, inspections are often

increased when 1.) ADEQ forecasters issue a High Risk for the Maricopa County Dust Control Forecast, 2.) ADEQ forecasters issue a High Pollution Advisory, or 3.) near real-time monitoring data indicate unique activity via high PM concentrations. The forecasting program and inspection / compliance programs work together so that resources can be best utilized during days that are of greatest risk for elevated PM emissions.

On July 25, 2002, EPA took initial action to finalize approval of the Best Available Control Measure (BACM) and the Most Stringent Measure (MSM) demonstrations in the Serious Area PM_{10} plan for the Maricopa County portion of the PM_{10} nonattainment area (67 FR 48718). These BACM and MSM demonstrations were again approved by EPA on July 14, 2006 (71 FR 43979). The Agricultural Best Management Practices General Permit rule and related definitions have been approved into the Arizona Administrative Code as R18-2-610 and R18-2-611 pursuant to Arizona Revised Statutes § 49-457[1] . Maricopa County regulations of PM_{10} emissions are listed in Table 4-1.

Table 4-1. Rules and Ordinances Regulating Particulate Matter Emissions in Maricopa County.

Rule/Ordinance Number & Title	Description
Rule 300: Visible Emissions	Establishes standards for visible emissions and opacity.
Rule 310: Fugitive Dust from Dust-Generating Operations	Establishes limits for the emissions of particulate matter into the ambient air from any property, operations, or activity that may serve as a fugitive dust source.
Rule 310.01: Fugitive Dust from Non-Traditional Sources of Fugitive Dust	Establishes limits for the emissions of particulate matter into the ambient air from open areas, vacant lots, unpaved parking lots, and unpaved roadways which are not regulated by Rule 310 and which are not required to have either a permit or a dust control plan.
Rule 311: Particulate Matter from Process Industries	Establishes emission rates based on process weight applicable to any affected operations not subject to Rule 316.
Rule 312: Abrasive Blasting	Establishes limits for particulate emissions from abrasive blasting operations.
Rule 314: Open Outdoor Fires and Indoor Fireplaces at Commercial and Institutional Establishments	Establishes limits for the emissions of air contaminants produced from open burning.
Rule 316: Nonmetallic Mineral Processing	Establishes limits for the emissions of particulate matter into the ambient air from any nonmetallic mining operation or rock product processing plant.
Rule 317: Hospital/Medical/ Infectious Waste Incinerators	Establishes limits for the emissions of air pollutants from medical waste incinerators.
Rule 322: Power Plant Operations	Establishes limits for the emissions of nitrogen oxides, sulfur oxides, carbon monoxide and particulate matter from existing power plants and cogeneration plants.
Rule 323: Fuel Burning Equipment from Industrial/Commercial/ Institutional (ICI) Sources	Establishes limits for the emissions of nitrogen oxides, sulfur oxides, carbon monoxide and particulate matter from ICI sources.

[1] Updates to the AgBMP program in December, 2011, clarified BMPs for crop and added BMPs for animal operations. Effective 12/29/2011, R18-2-611 was renumbered to R18-2-610.01 **Agricultural PM_{10} General Permit for Crop Operations** and R18-2-611.01, **Animal Operations PM_{10} General Permit** was added. Definitions for Crop Operations were revised at R18-2-610 and new definitions for Animal Operations were added at R18-2-611.

Rule/Ordinance Number & Title	Description
Rule 324: Stationary Internal Combustion (IC) Engines	Establishes limits for the emissions of carbon monoxide, nitrogen oxides, sulfur oxides, volatile organic compounds, and particulate matter from stationary internal combustion engines, including stationary IC engines used in cogeneration.
Rule 325: Brick and Structural Clay Products (BSCP) Manufacturing	Establishes limits for particulate matter emissions from the use of tunnel kilns for curing in the brick and structural clay product (BSCP) manufacturing processes.
Ordinance P-25: Leaf Blower Restriction	Establishes restrictions for leaf blowers in incorporated and unincorporated sections of Area A in Maricopa County.
Ordinance P-26: Residential Woodburning Restriction	Establishes restrictions for residential woodburning.
Ordinance P-27: Vehicle Parking and Use on Unstabilized Vacant Lots	Establishes restrictions for vehicle parking and use on unstabilized vacant lots in unincorporated sections of Area A in Maricopa County.
Ordinance P-28: Off-Road Vehicle Use in Unincorporated Areas of Maricopa County	Establishes restrictions for operating vehicles on unpaved property in unincorporated areas of Maricopa County.
Arizona Administrative Code R18-2-611 & 610: Agricultural PM_{10} General permit	Establishes a requirement for commercial farmers to implement best management practices and maintain a record demonstrating compliance

In addition to the rules and regulations listed in the above table, other PM_{10} reducing control measures (e.g., paving of unpaved roads, PM_{10} certified street sweepers, controlling unpaved parking lots, etc.) have been committed to, and implemented by, local jurisdictions throughout the PM_{10} nonattainment area, and incorporated into the Arizona SIP through PM_{10} plans such as the Revised MAG 1999 Serious Area Particulate Plan for PM_{10} for the Maricopa County Nonattainment Area. The Pinal County Air Quality Control District (PCAQCD) also implements regulatory control measures on emissions from existing and new non-point sources within Pinal County (see Table 4-2). Additionally, the PCAQCD implements specific nonattainment rules for that part of the PM_{10} nonattainment area that resides in Pinal County (see Table 4-3).

Table 4-2. Pinal County Rules Regulating Existing and New Non-point Sources in Pinal County.

Article Number & Title	Description
Article 2: Fugitive Dust	Provides a mechanism to reasonably regulate operations which periodically may cause fugitive dust emissions into the atmosphere
Article 3: Construction Sites – Fugitive Dust	Improves the control of excessive fugitive dust emissions that have been traditionally associated with construction, earthwork, and land development, and thereby minimize nuisance impacts

Table 4-3. Pinal County Rules Regulating Fugitive Dust in Pinal County Portion of MC PM_{10} NAA.

Article Number & Title	Description
Article 4: Nonattainment Area Rules; Dustproofing for Commercial Parking, Drives and Yards	Establishes rules to avoid violations of the prevailing PM_{10} standard and additionally minimize nuisance impacts by improving control of excessive fugitive dust emissions from unpaved parking lots

Article Number & Title	Description
Article 5: Nonattainment Area Rules; Stabilization for Residential Parking and Drives	Establishes rules for stabilizing residential properties
Article 6: Restrictions on Vehicle Parking and Use on Vacant Lots	Establishes rules for unpaved or unstabilized vacant lots
Article 7: Construction Sites in Nonattainment Areas – Fugitive Dust	Establishes rules to avoid violations of the prevailing PM_{10} standard and additionally minimize nuisance impacts by improving control of excessive fugitive dust emissions from activities associated with construction, earthwork, or land development.
Article 8: Nonattainment Area Rules, Requirement for Stabilization of Disturbed Areas at Vacant Lots	Establishes rules for stabilizing disturbed areas at vacant lots

PM_{10} Rule Effectiveness

MCAQD analyzed the effectiveness of its fugitive dust rules (Rules 310, 310.01 and 316) in terms of source compliance rates. The rule effectiveness study was designed to assess how many sources regulated by MCAQD during the subject time period received no PM_{10} emissions-related violations. As a basis for comparison, the percentage of sources that did not receive a PM_{10} emissions-related violation during calendar year 2007 was 76% for sources subject to Rule 310, 85% for sources subject to Rule 310.01, and 40% for sources subject to Rule 316. In early 2008, Rules 310, 310.01, and 316 were strengthened and new ordinances (covering additional source categories such as leaf blowers, vacant lots, and off-road vehicles) were adopted. These enhancements resulted from MCAQD's obligations under such agreements as the 2005 Revised PM_{10} State Implementation Plan for the Salt River Area and the Maricopa Association of Governments (MAG) 2007 Five Percent Plan for PM_{10} for the Maricopa County Nonattainment Area. Three major areas that contributed to increased compliance were an increase in departmental staffing (especially inspectors), a robust training program, and regulatory changes that broadened and strengthened control measures under Rules 310, 310.01, and 316.

Rule effectiveness rates were re-assessed for FY 2009 (July 2008–June 2009), a period that allowed time for the new and revised regulations to take effect. The results showed significant increases in compliance compared with the earlier period: to 90% (from 76%) for Rule 310 sources, to 95% (from 85%) for Rule 310.01 sources, and to 65% (from 40%) for Rule 316 sources. These improvements continued into calendar year 2010 with rule effectiveness rates of 94% for Rule 310 sources, 96% for Rule 310.01, and 73% for Rule 316 sources.

Additional rule effectiveness increases were observed for Rule 310.01 and Rule 316 in calendar year 2012. The increase in rule effectiveness for Rule 310.01 was attributed to ADEQ's Dust Action General Permit, which was a new dust measure contained in the 2012 Five Percent Plan for PM_{10} for the Maricopa County Nonattainment Area. The rule effectiveness for Rule 310.01 was 98%, an increase of 2% in 2012. The rule effectiveness for Rule 316 had a considerable increase to 83%, which is an increase of 10% compared to 2010.

The timeline below illustrates the improvements in rule effectiveness over the last several years, and also points out significant revisions to previous rules, as well as newly adopted rules, ordinances and

measures. Since the first study of 2007, the rule effectiveness has increased for Rule 310, Rule 310.01, and Rule 316 by 17%, 13%, and 43%, respectively.

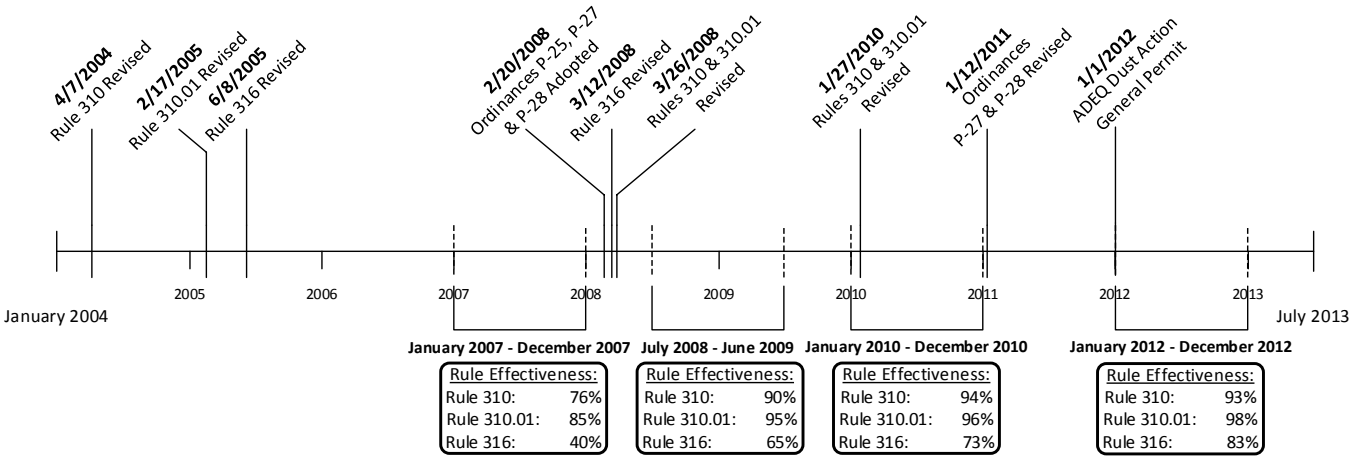

Figure 4-1. Timeline of Maricopa County fugitive dust rules and ordinances.

Compliance and Enforcement Activities

MCAQD is prepared to proactively respond to high wind events and protect human health and well-being. MCAQD's approach consists of two primary components: routine proactive inspections, as well as surveillance inspections, conducted both during and after significant events. MCAQD routinely inspects dust control-permitted sites and increases the frequency of inspections for permits covering areas of ten acres or more. Non-metallic surface mining sources under Rule 316 are also regularly inspected multiple times every year. Maricopa County also responds to the majority of air quality complaints within 24 hours.

Maricopa County monitors the ADEQ Five-Day Dust Control Forecast to identify the potential for elevated PM_{10} pollution levels due to high winds or stagnant conditions. When a High Pollution Advisory (HPA) is issued for Maricopa County, MCAQD conducts additional increased surveillance before, during, and after the forecast event(s). MCAQD also conducts event surveillance and post-event activities after an exceptional event that had not been forecast (i.e., those instances in which an HPA had not been issued).

Pre-event surveillance consists of surveying high-risk areas for any dust-generating activities, educating sources of the impending HPA event, and issuing violations for failure to comply with local, state, or federal regulations. During the event, MCAQD inspectors survey high-risk areas to confirm that control measures are in place, document any violations, and contact other regulatory agencies if necessary. Post-event activities include continued surveys of high-risk areas, re-inspecting sources within two business days of receiving a violation, and an internal MCAQD debriefing of event activities.

Currently, a total of 16 MCAQD air monitoring sites were upgraded with new equipment to allow the monitoring sites to automatically report monitored readings at 5-minute intervals. Previously, hourly readings were only available. The real-time data reporting system includes a mechanism to alert MCAQD inspectors when PM_{10} concentrations are elevated. The system allows MCAQD inspectors to review concentrations at the monitor and to consult the National Weather Service website to check for weather

event activity. This capability allows the MCAQD responder to identify regional events and monitor specific issues. If necessary, the MCAQD responders can inform nearby stakeholders and local governments of the elevated PM_{10} concentrations.

On Sunday, August 31, 2014, the ADEQ began to issue forecasts for storms that would impact central Arizona beginning on Thursday, September 4, 2014. These forecasts mentioned that remnants of hurricane/tropical storm Norbert would bring moisture to the state and increase the chance of storms and blowing dust. These forecasts continued through September 5, 2014.

An evaluation of all inspection reports, air quality complaints, compliance reports, and other documentation indicate no evidence of unusual anthropogenic-based PM_{10} emissions. During the time period of September 1 through September 9, 2014, MCAQD inspectors conducted a total of 273 inspections of permitted facilities, of which 225 were at fugitive dust sources. Additionally, MCAQD conducted 96 inspections on vacant lots and unpaved parking lots during this period.

During this 9-day period, a total of 24 violations were issued county-wide for PM_{10} and non-PM_{10}-related violations, but only one of these was issued to a PM_{10} fugitive dust source within a 4-mile radius of an exceeding monitor:

- MCAQD issued a violation to a fugitive dust source on September 9, 2014, for failure to renew their dust permit within 14 days of expiration. A renewal permit was issued on September 12, 2014. The source was located 2.5 miles from the exceeding South Phoenix monitor. This violation would not have contributed to the exceedance on September 6, 2014, as the violation was an administrative, paper-work violation.

Also during this 9-day period, one 60-day letter and two violations for vehicle use were issued for non-compliant vacant lots and/or unpaved parking lots; none of these vacant lots were located within a 4-mile radius of an exceeding monitor.

MCAQD was prepared for any complaints received due to the high wind event. During the 9-day period from September 1 through September 9, 2014, MCAQD received 25 complaints, of which 14 were windblown dust or PM_{10} related. None of these complaints were located within 4 miles of an exceeding monitor.

During the period of September 1, 2014 through September 9, 2014, only one complaint of dust caused by agricultural activity was received by ADEQ. The complaint involved the tilling of a dry field in Glendale, Arizona, near Camelback Road and Freeway Loop 101 on September 2, 2014. This field is located many miles northwest and downwind of the exceeding monitors and would not have contributed to the exceedances of the PM_{10} standard at the Higley monitor on September 4, 2014, or the South Phoenix monitor on September 6, 2014.

Conclusions

The thunderstorm outflow events on September 4, 2014, and September 6, 2014, produced strong gusts and turbulent wakes that transported and generated dust and PM_{10} into the Maricopa County PM_{10} nonattainment area. The source regions of the outflow winds that caused the exceedances were the desert areas of Pinal and Maricopa counties. The Maricopa County area is designated as a serious nonattainment area for PM_{10} and is required to have BACM for all significant sources of PM_{10}. BACM-approved control measures on significant anthropogenic sources were in place and enforced during the events, and

pro-active tracking and response to the events by regulatory agencies and local governments confirmed the uncontrollable nature of the dust emissions; therefore, these pre-existing/prior-approved, required controls are adequate for meeting the requirements of an exceptional event and should be considered "reasonable" for these purposes.

Despite the deployment of comprehensive control measures and sophisticated response programs, high wind conditions associated with thunderstorms and thunderstorm outflow winds brought high concentrations of PM_{10} emissions into, and also overwhelmed controls within, the nonattainment area. Strong thunderstorm outflows with recorded gusts of 40-43 mph, and sustained winds of 30-32 mph, were more than enough to overwhelm all available efforts to limit PM_{10} concentrations from the events on September 4, 2014, and September 6, 2014. The fact that these were natural events involving strong thunderstorm outflow winds that transported and generated PM_{10} emissions into the nonattainment area from source regions outside and within the nonattainment area provides strong evidence that the events and exceedances of September 4, 2014, and September 6, 2014, were not reasonably controllable or preventable.

V. CLEAR CAUSAL RELATIONSHIP

Introduction

Demonstrations of the clear causal connection between windblown dust generated and transported by thunderstorm outflow winds and the exceedances at the Higley monitor on September 4, 2014, and the South Phoenix monitor on September 6, 2014, are provided in this section.

Around 6:30 pm on September 4, 2014, a strong thunderstorm outflow-generated dust storm developed in the deserts of Pinal County and began transporting dust northward towards the Maricopa County PM_{10} nonattainment area. Strong winds heading north-northeast from the outflow crossed into the far southeast portion of the nonattainment area, with gusts as high 43 mph and sustained winds as high as 30 mph, depositing and generating five-minute average PM_{10} concentrations over 5,000 $\mu g/m^3$ along the way. Additional and separate thunderstorm activity in the central and western portions of the nonattainment area kept the outflow-generated dust storm from reaching all but the southeastern portion of the nonattainment area. As a result, only the southeastern-most monitor (Higley) exceeded the 24-hour PM_{10} standard from the PM_{10} transported and generated by the thunderstorm outflow winds.

At approximately 5:00 pm on September 6, 2014, a large thunderstorm outflow originating near Florence in Pinal County began generating and transporting dust northwest towards the nonattainment area. The outflow-generated dust storm crossed the nonattainment area under recorded gusts as high as 40 mph and sustained winds as high as 32 mph, before being pushed west of the nonattainment area by a second thunderstorm outflow from the northeast. As a result of the thunderstorm outflow-generated dust storm, four nonattainment area monitors recorded five-minute average PM_{10} concentrations above 5,000 $\mu g/m^3$, along with four other monitors recording five-minute average PM_{10} concentrations above 2,500 $\mu g/m^3$, ultimately resulting in an exceedance of the 24-hour PM_{10} standard at the centrally-located South Phoenix monitor.

A detailed description of the meteorology that caused the natural windblown dust exceedance events at the nonattainment area monitors on September 4, 2014, and September 6, 2014, is described below in a series of time-stamped maps. Time series videos of visibility photos on the days of the high wind dust events provide additional evidence of the dust storms' impact on the exceeding monitors. The weight of evidence presented in this section provides the clear causal connection between the windblown dust generated and transported by thunderstorm outflow winds and the exceedances at the Maricopa County nonattainment area monitors on September 4, 2014, and September 6, 2014.

Time Series Maps and Visibility Photos.

Figures 5–1 through 5–19 provide a time series GIS-based visualization of the meteorology and PM_{10} concentrations associated with the thunderstorm outflows on September 4, 2014, and September 6, 2014. The data displayed in the following maps were gathered from five data sources. All available meteorological and air quality data were used in order to present the most complete story of the events. Table 5–1 displays the types of data used from each agency in creating the maps.

Table 5-1. Data Sets Used in the Creation of Time Series GIS Maps.

Agency	Data Sets
Arizona Department of Environmental Quality (ADEQ)	Hourly PM_{10} Concentrations, Wind Speed, Wind Direction and Wind Gusts
Arizona Meteorological Network (AZMET)	Hourly Wind Speed, Wind Direction and Wind Gusts
Maricopa County Air Quality Department (MCAQD)	5-Minute PM_{10} Concentrations, Wind Speed, Wind Direction, and Wind Gusts (hourly data used when 5-minute was unavailable)
Pinal County Air Quality Control District (PCAQCD)	5-Minute PM_{10} Concentrations, Wind Speed, Wind Direction, and Wind Gusts (hourly data used when 5-minute was unavailable)
National Weather Service (NWS)	Point in Time Wind Speed, Wind Direction, Wind Gusts, Visibility and Base Velocity Radar

Map Description

A description of each time series map is provided to highlight important data in each map and explain the progression of the meteorology and PM_{10} concentrations through time. Taken as a whole, the maps and associated explanatory text describe the clear causal connection between the windblown dust generated and transported by the thunderstorm outflow winds and the PM_{10} exceedances at the Maricopa County nonattainment area monitors.

<u>September 4, 6:30 PM – 7:00 PM</u>

An evening with very active thunderstorm cells developed over Maricopa and Pinal counties. A significant thunderstorm-outflow generated dust storm is present in the deserts of Pinal County, as recorded at two Pinal County PM_{10} monitors. PM_{10} concentrations at the Pinal County monitors experience a rapid change from concentrations below 50 $\mu g/m^3$ at the beginning of the period, to concentrations above 5,000 $\mu g/m^3$ at the end of the half-hour period, indicative of a fast moving dust storm. Velocity radar indicates very strong outflow winds (dark green pixels) headed towards the PM_{10} nonattainment area in the vicinity of the affected Pinal County monitors, even though a distinct outflow is not visible on the radar profile. Thunderstorm activity within the PM_{10} nonattainment area is very active as well, with separate thunderstorm cells and associated precipitation recorded at the Buckeye Municipal and Luke Air Force Base Airports. This unstable and active atmosphere over Maricopa and Pinal counties is one of the primary reasons why the dust storm originating in Pinal County will be confined to the southeast portion of the nonattainment area later in the evening, and also helps to explain why distinct delineated thunderstorm outflow signatures are not easily visible on the base velocity radar.

<u>September 4, 7:00 PM – 7:30 PM</u>

The dust storm originating in Pinal County grows as it heads north-northeast towards the PM_{10} nonattainment area. Four Pinal County monitors record PM_{10} concentrations above 2,500 $\mu g/m^3$ with recorded wind gusts as high as 43 mph and sustained winds as high as 30 mph. A visibility of only 0.5 miles is reported at the Casa Grande Municipal Airport. The edge of this dust storm reaches the Chandler Municipal Airport towards the end of this period, as represented by a visibility of 1.0 miles recorded at the Airport. In response to the approaching dust storm, a blowing dust advisory for the cities of Phoenix and Mesa was issued at 7:19 pm by the NWS. A separate and somewhat chaotic thunderstorm cell over the central portion of the nonattainment area produces strong wind gusts of 42 mph and scattered precipitation with winds generally pushing to the east. PM_{10} concentrations at the centrally-located nonattainment area monitors do begin to rise in response to the gusty conditions; however, the scattered

precipitation and lack of dust-producing sources in the area keep PM_{10} concentrations below exceedance levels. Precipitation from thunderstorm activity in the western portion of the nonattainment area continues, keeping PM_{10} concentrations low despite gusty conditions.

September 4, 7:30 PM – 8:00 PM

The heart of the dust storm originating in Pinal County reaches the southeastern portion of the nonattainment area. Wind vectors indicate the sustained winds from the dust storm moving northeast out of the nonattainment area, forcing the bulk of the PM_{10} from the dust storm over the southeastern-most Higley monitor. Gusts as high as 40 and 36 mph are recorded at the West Chandler and Higley monitors. Instrument error at the Chandler Municipal and Phoenix-Mesa Gateway Airports during this period kept the highest wind gusts and sustained winds from being recorded during this period, along with visibility measurements. Five-minute average PM_{10} concentrations reach as high as 5,511 $\mu g/m^3$, ultimately leading to an exceedance of the PM_{10} standard at the Higley monitor. Chaotic thunderstorm activity and precipitation over the central portion of the nonattainment area continues, with gusty winds from the centrally-located thunderstorms fighting against the approaching outflow winds from the Pinal County dust storm.

September 4, 8:00 PM – 8:30 PM

The Pinal County dust storm outflow continues to primarily exit the nonattainment area to the northeast. PM_{10} from the dust storm continues to be concentrated at the Higley monitor and the nearby Combs School monitor, just southeast of the nonattainment area in Pinal County. Visibility at the Phoenix-Mesa Gateway Airport is still reduced to 4.0 miles. While the heart of the dust storm is located over the southeastern portion of the nonattainment area, winds from the outflow have also reached into the central portion of the nonattainment area, overtaking the prior erratic thunderstorm activity in the area and pushing any suspended PM_{10} to the north-northwest.

September 4, 8:30 PM – 9:00 PM

The bulk of the Pinal County dust storm has largely exited the nonattainment area, allowing PM_{10} concentrations to fall in the southeast portion of the nonattainment area. However, strong and gusty winds remain throughout Maricopa and Pinal counties, keeping PM_{10} concentrations elevated above pre-thunderstorm activity levels. A new outflow-generated dust storm is recorded in Pinal County during this period and is indicative of strong and gusty thunderstorm winds approaching the nonattainment area again from the southeast.

September 4, 9:00 PM – 9:30 PM

Unstable atmospheric conditions continue with multiple wind direction shifts occurring throughout different portions of the nonattainment area. Suspended dust in the southeast portion of the nonattainment area is still present, as reflected in elevated PM_{10} concentrations at the Higley and Combs School monitors.

September 4, 9:30 PM – 10:00 PM

Strong thunderstorm outflow winds headed northwest across the nonattainment area battle against separate outflow winds from the west and the north over the central portion of the nonattainment area. The suspended PM_{10} over the Higley monitor will finally begin to be pushed northwest towards the

central portion of the nonattainment area at the end of this period. Visibility has returned to 20.0 miles at the Phoenix-Mesa Gateway airport, located just a few miles east of the Higley monitor.

September 4, 10:00 PM – 10:30 PM

PM_{10} concentrations over the Higley monitor continue to be lowered as the suspended dust is pushed northwest. This is reflected in the temporary rise in PM_{10} concentrations seen at the Mesa monitor, located directly downwind of the Higley monitor.

September 4, 10:30 PM – 11: 00 PM

Higley PM_{10} concentrations have returned to pre-thunderstorm levels and will remain so for the remainder of the day as prevailing easterly winds push suspended dust out of the nonattainment area. Visibility is temporarily lowered to 8.0 miles at the Sky Harbor International Airport as the remaining suspended dust exits to the northwest. PM_{10} monitors located in the central and western portions of the nonattainment area will see temporarily elevated PM_{10} concentrations as the suspended dust leaves the nonattainment area over the next couple hours. The elevated concentrations will largely range between 200-400 $\mu g/m^3$ and will not be high enough to cause an exceedance of the PM_{10} standard on September 4, 2014, at these monitors.

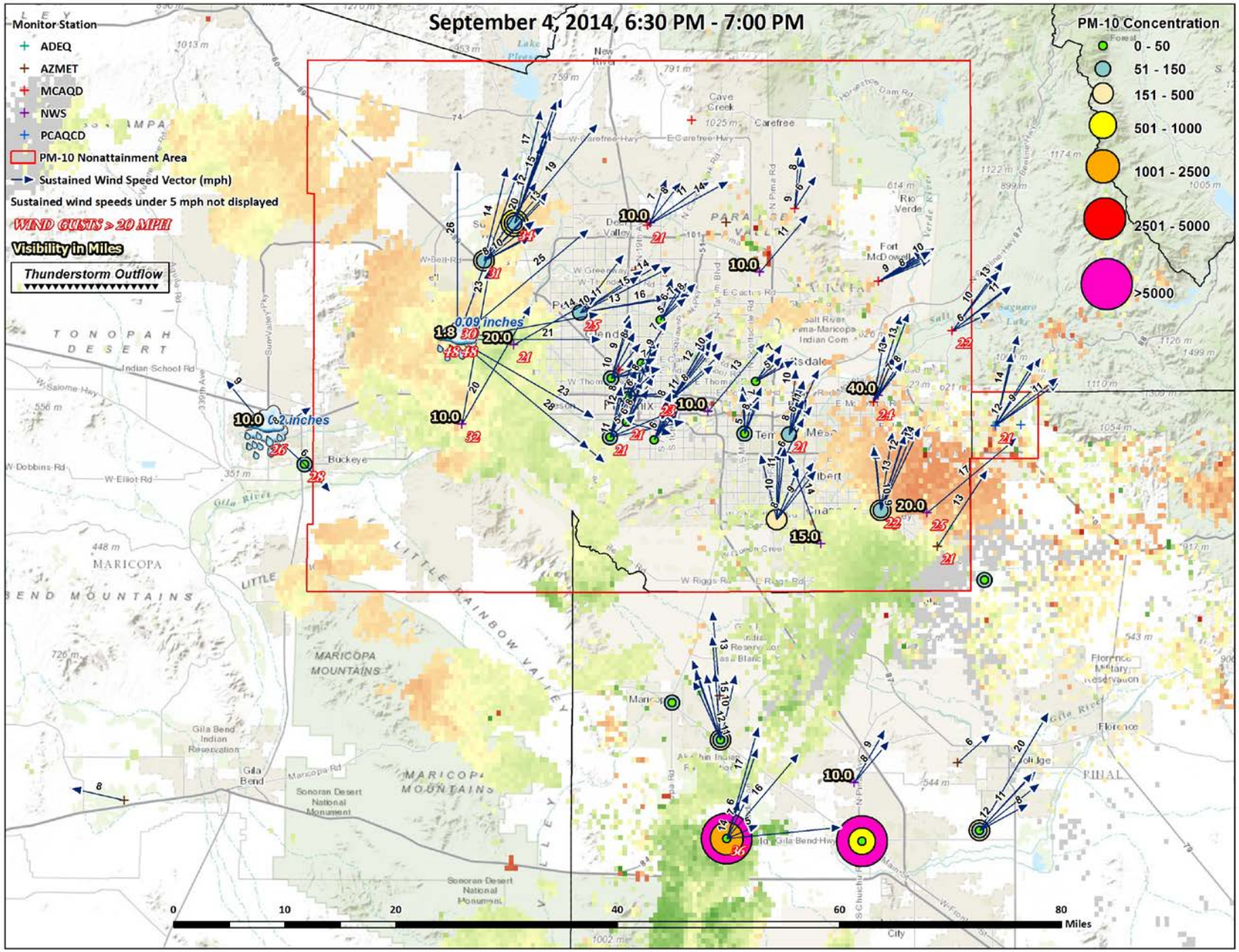

Figure 5-1. September 4, 2014, 6:30 PM – 7:00 PM.

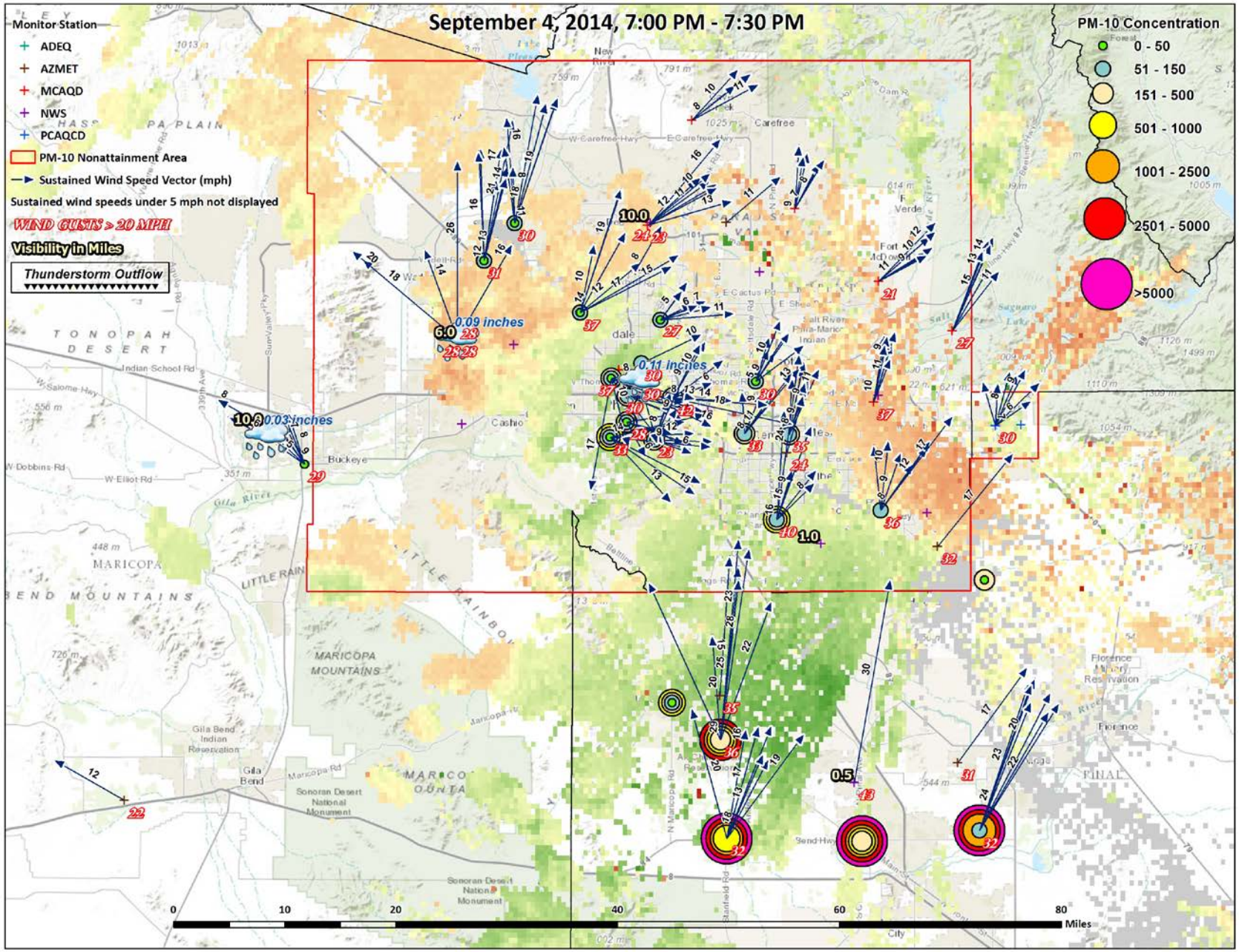

Figure 5-2. September 4, 2014, 7:00 PM – 7:30 PM.

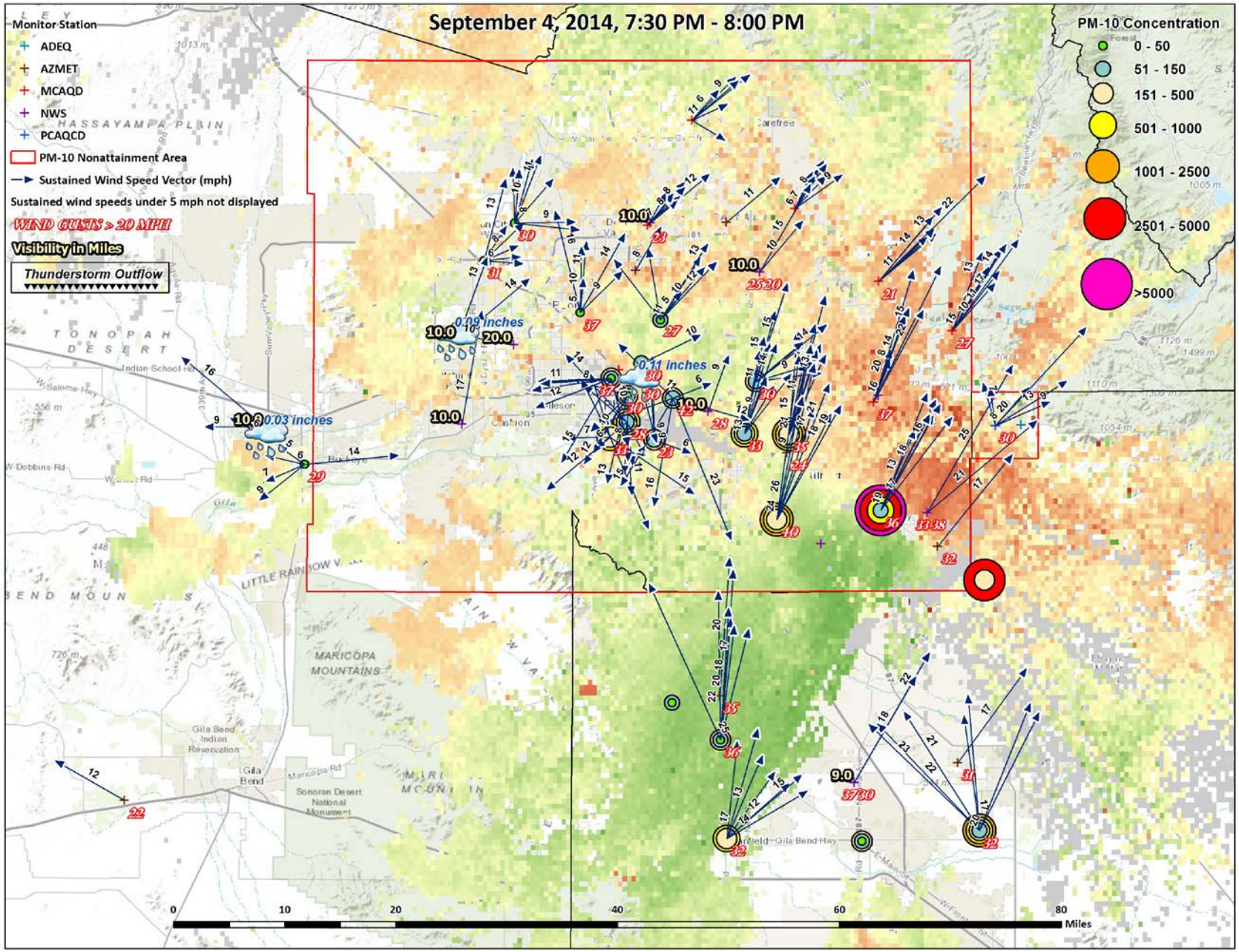

Figure 5-3. September 4, 2014, 7:30 PM – 8:00 PM.

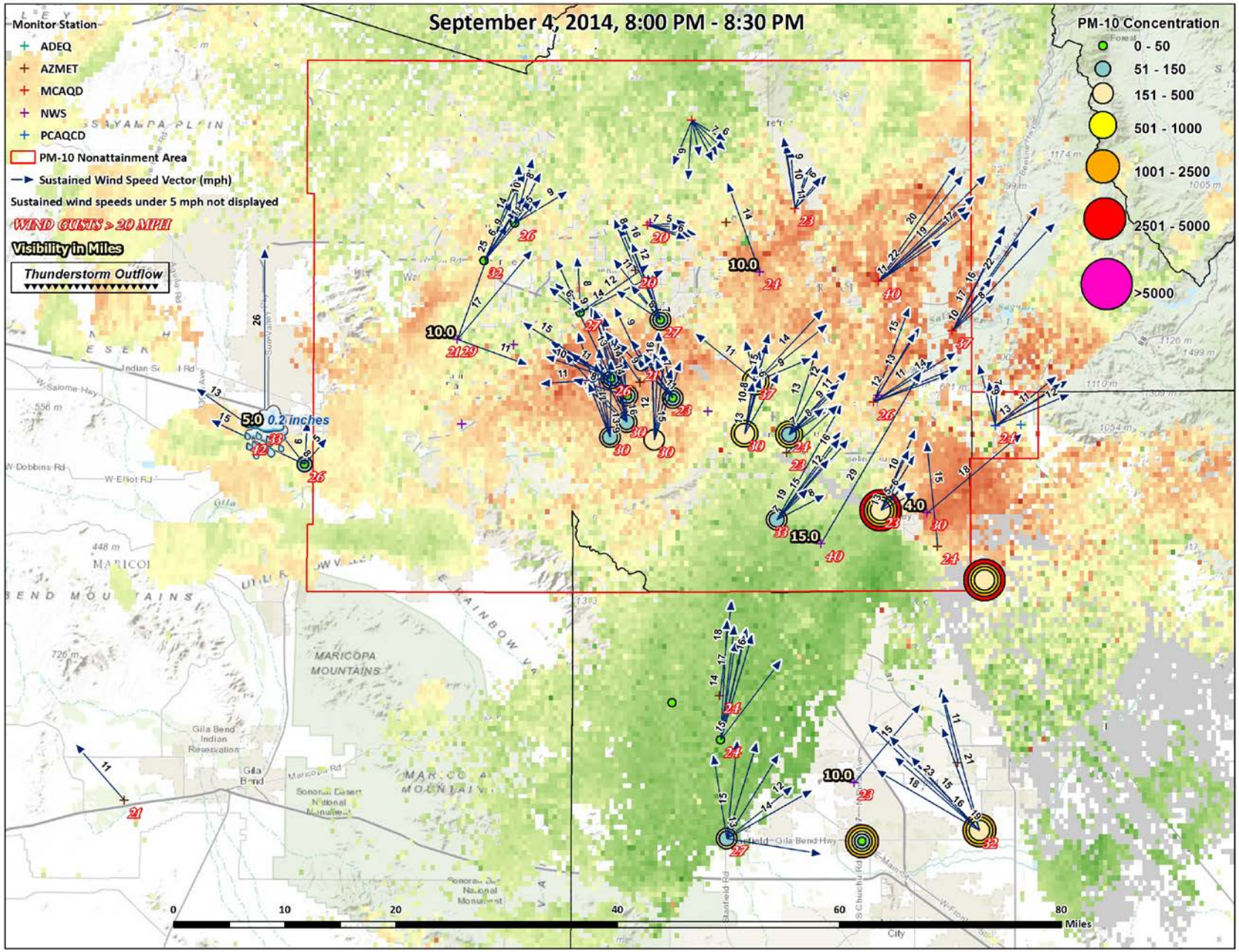

Figure 5-4. September 4, 2014, 8:00 PM – 8:30 PM.

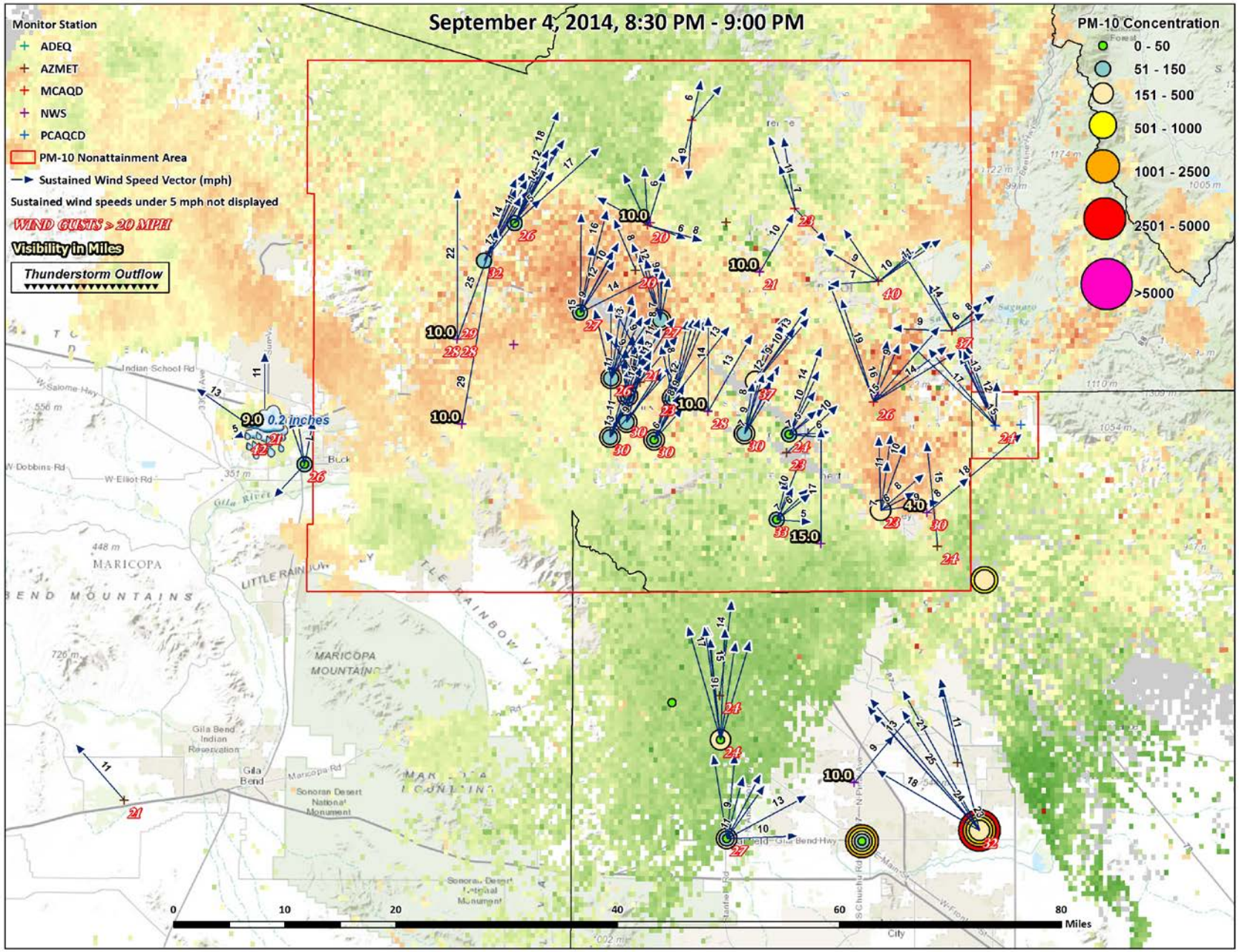

Figure 5-5. September 4, 2014, 8:30 PM – 9:00 PM.

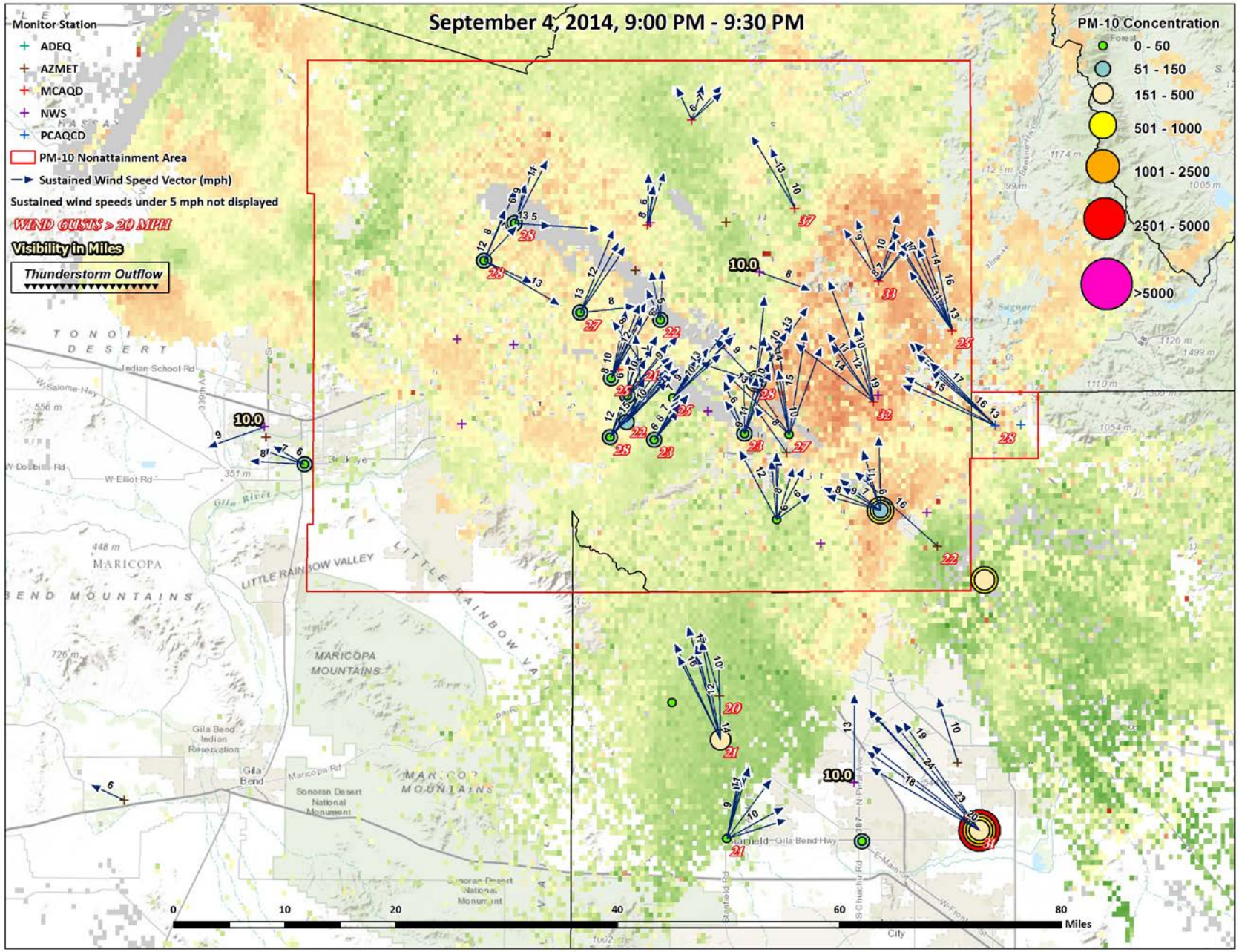

Figure 5-6. September 4, 2014, 9:00 PM – 9:30 PM.

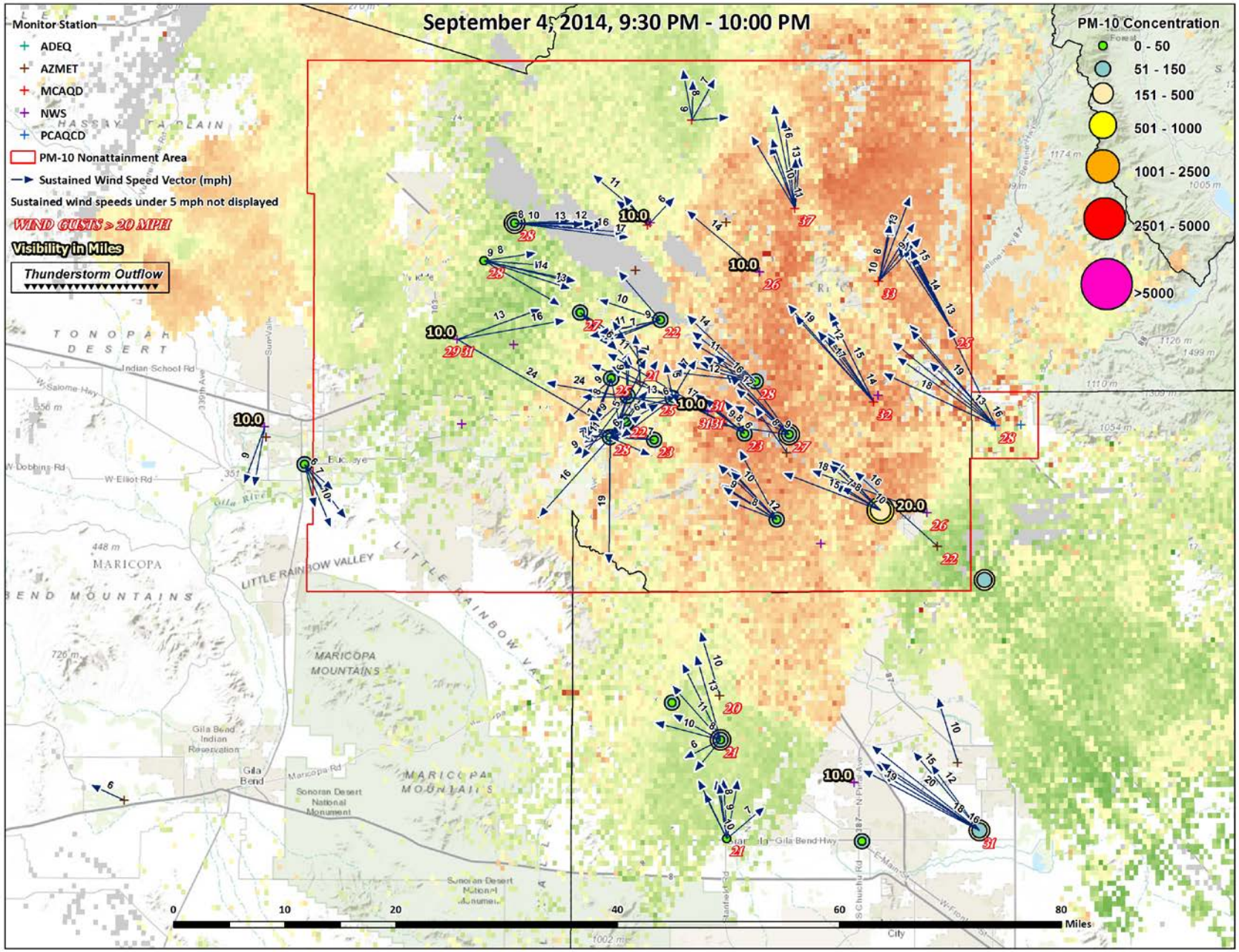

Figure 5-7. September 4, 2014, 9:30 PM – 10:00 PM.

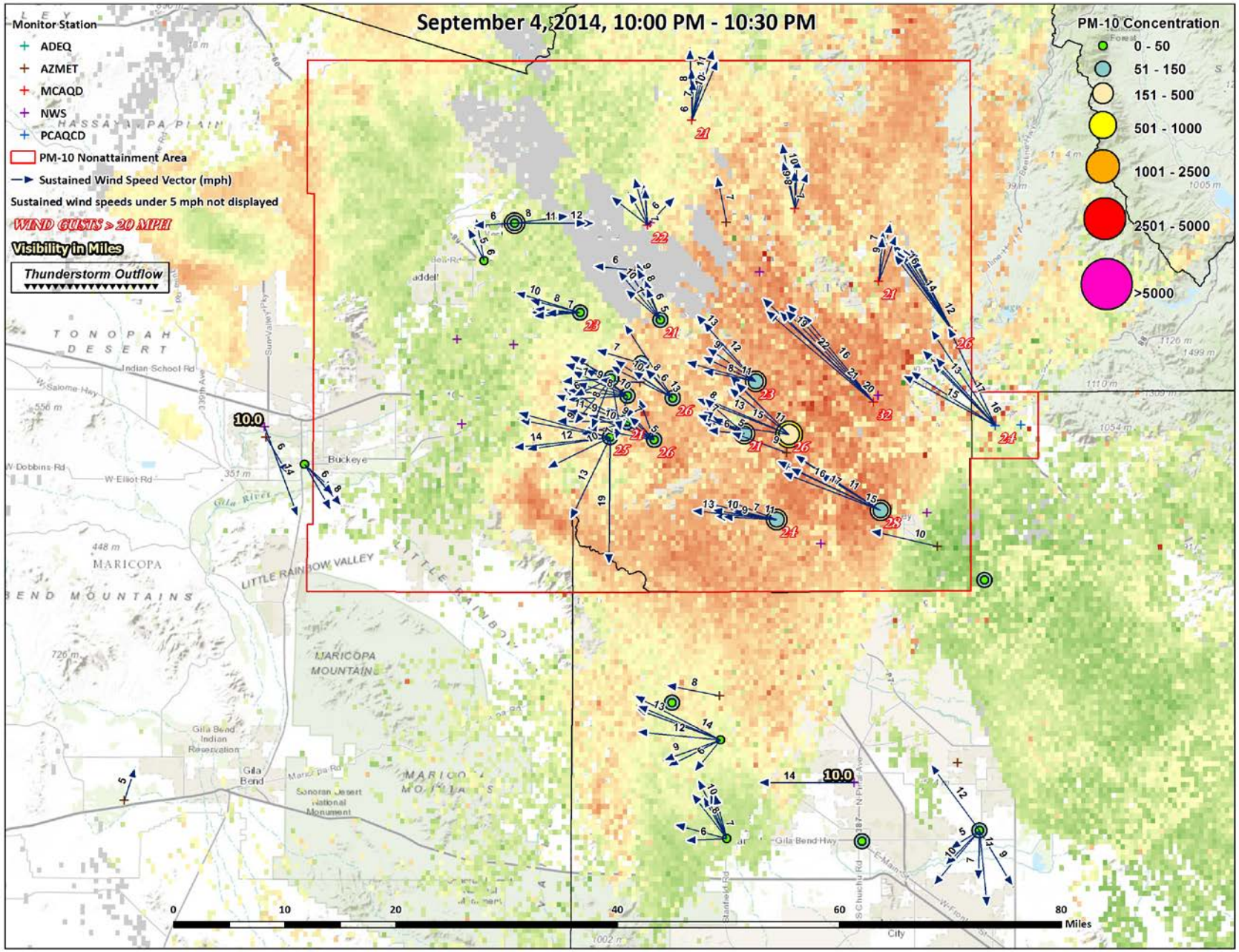

Figure 5-8. September 4, 2014, 10:00 PM – 10:30 PM.

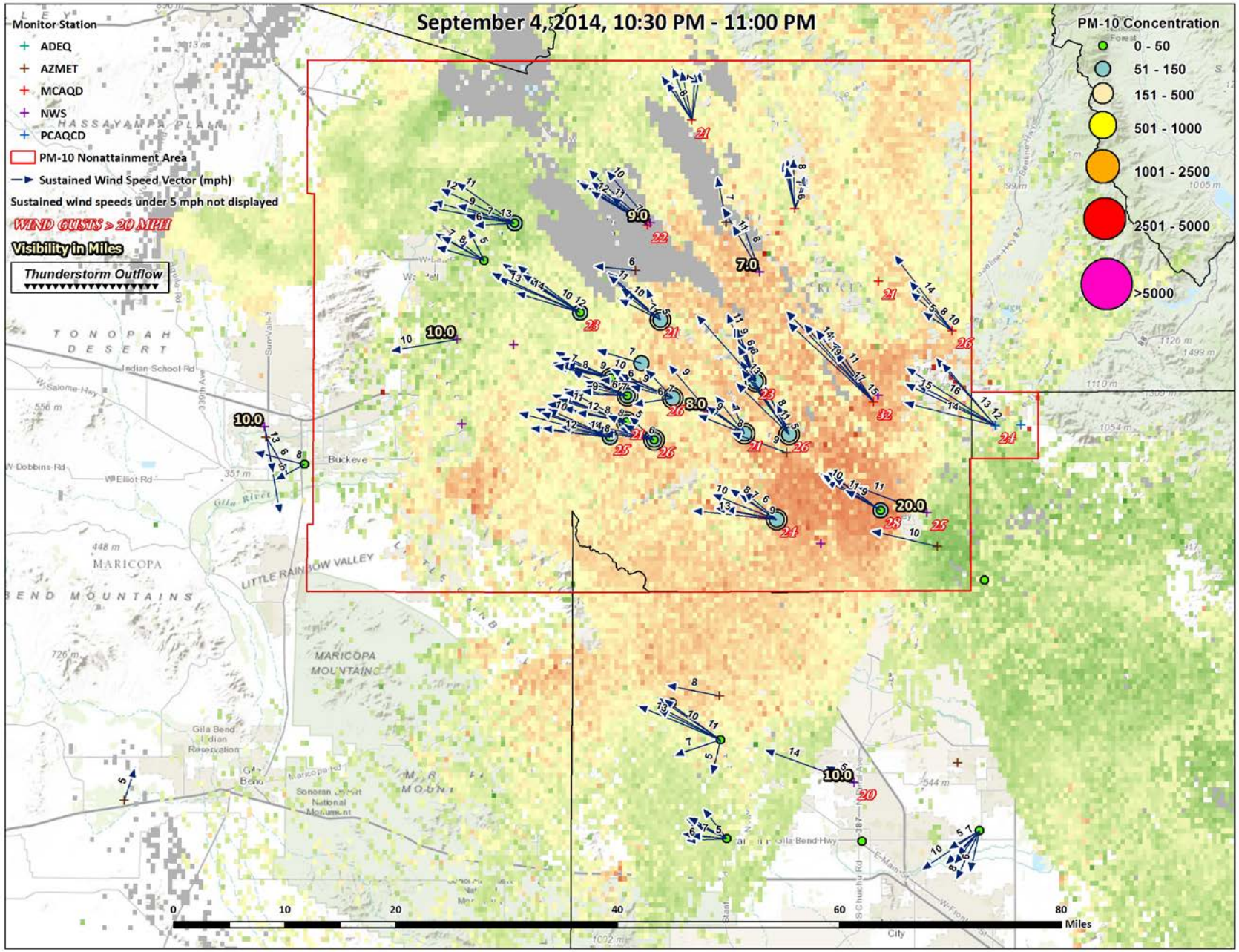

Figure 5-9. September 4, 2014, 10:30 PM – 11:00 PM.

September 6, 5:00 PM – 5:30 PM

A strong thunderstorm outflow in northern Pinal County is clear on base velocity radar. The outflow-generated dust storm has already passed over the Pinal County Housing Complex monitor producing PM_{10} concentrations in excess of 5,000 $\mu g/m^3$. The dust storm is headed northwest towards the PM_{10} nonattainment area, where all nonattainment monitors currently record PM_{10} concentrations of 50 $\mu g/m^3$ or less.

September 6, 5:30 PM – 6:00 PM

The dust storm originating in Pinal County has crossed into the southeast portion of the nonattainment area, raising PM_{10} concentrations to over 1,000 $\mu g/m^3$ at the Higley monitor. However, the bulk of the PM_{10} from the dust storm remains in Pinal County, producing visibilities as low as 0.8 miles at the Casa Grande Municipal Airport under gusts of 37 mph and sustained winds of 23 mph.

September 6, 6:00 PM – 6:30 PM

The dust storm gains strength as it moves west and north across the nonattainment area under gusts as high as 40 mph and sustained winds as high as 32 mph. Visibility has been reduced to 1.0 miles at the Chandler Municipal Airport with the nearby West Chandler monitor recording PM_{10} concentrations as high as 2,037 $\mu g/m^3$. At 6:17 pm, the NWS issued a dust storm warning for the greater Phoenix area, including the Phoenix Sky Harbor International Airport, under reports of gusty winds up to 50 mph.

September 6, 6:30 PM – 7:00 PM

The outflow winds associated with the thunderstorm-generated dust storm turn northward and impact the centrally-located nonattainment area monitors. Under gusts of 36 mph and sustained winds of 26 mph, PM_{10} concentrations at three monitors soar above 5,000 $\mu g/m^3$, with three other monitors recording concentrations above 2,500 $\mu g/m^3$. In the heart of the dust storm, concentrations at the exceeding South Phoenix monitor reach as high as 8,338 $\mu g/m^3$. Visibility is reduced to 1.3 miles at the nearby Phoenix Sky Harbor International Airport. A new outflow from the northeast portion of the nonattainment area is visible on velocity radar. This outflow will intersect with the dust storm outflow during the next few hours and help to cause the suspended dust from the dust storm to be pushed west out of the nonattainment area.

September 6, 7:00 PM – 7:30 PM

The dust storm continues north and west across a wide portion of the nonattainment area, simultaneously reducing visibility to 2.0, 4.0 and 5.0 miles respectively at the Phoenix Goodyear Municipal, Luke Air Force Base, and Phoenix Sky Harbor International Airports, under gusts of 39 mph and sustained winds of 23 mph. The separate outflow from the northeast continues to progress westward across the nonattainment area and has begun to merge with the northern edge of the dust storm.

September 6, 7:30 PM – 8:00 PM

The northeast outflow increases in strength and also brings some precipitation to the northern portions of the nonattainment area as the outflow associated with the dust storm exits the nonattainment area to the north. The northeast outflow both pushes the suspended dust from the initial dust storm west of the

nonattainment area while also creating some new elevated dust emissions under gusts as high as 39 mph and sustained winds as high as 28 mph.

September 6, 8:00 PM – 8:30 PM

As the outflow continues to the western portion of the nonattainment area, PM_{10} concentrations in the southeast portion of the nonattainment have almost returned to pre-thunderstorm levels. Some central and western nonattainment area monitors still record significant PM_{10} concentrations in the range of 500-1,000 $\mu g/m^3$.

September 6, 8:30 PM – 9:00 PM

PM_{10} concentrations continue to decline across the nonattainment area as the outflow largely has exited the nonattainment area. Scattered gusty conditions exist throughout the nonattainment area, keeping PM_{10} concentration above pre-storm levels at most central and western nonattainment area monitors.

September 6, 9:00 PM – 9:30 PM

Concentrations are almost back to pre-storm levels, except at the central area nonattainment monitors which experienced the highest PM_{10} concentrations from the passing dust storm. Gusts are below 20 mph throughout the nonattainment area, with sustained winds topping out at 15 mph.

September 6, 9:30 PM – 10:00 PM

PM_{10} concentrations are at pre-storm levels, with all nonattainment area monitors recording concentrations below 150 $\mu g/m^3$. Concentrations will remain low for the remainder of September 6, 2014.

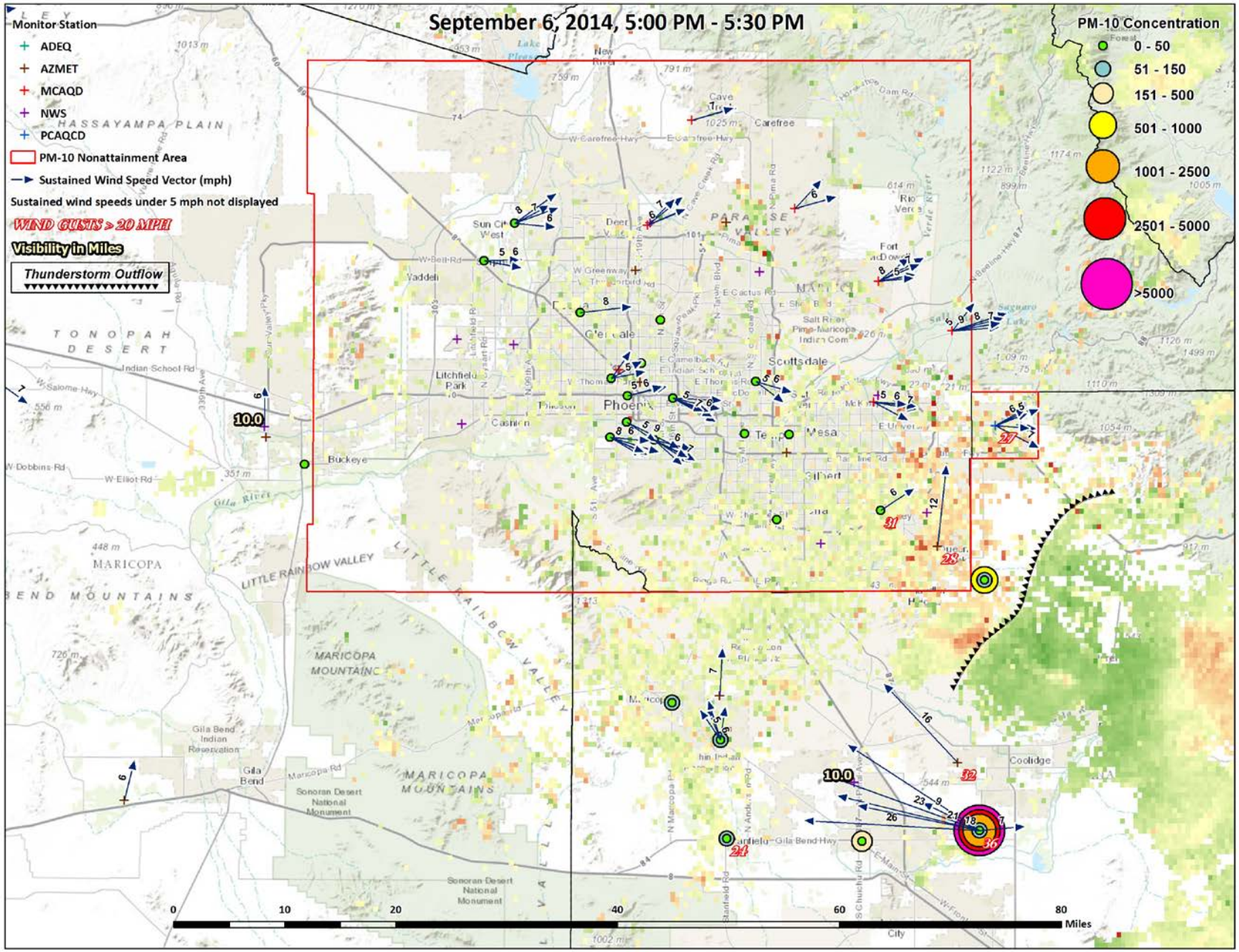

Figure 5-10. September 6, 2014, 5:00 PM – 5:30 PM.

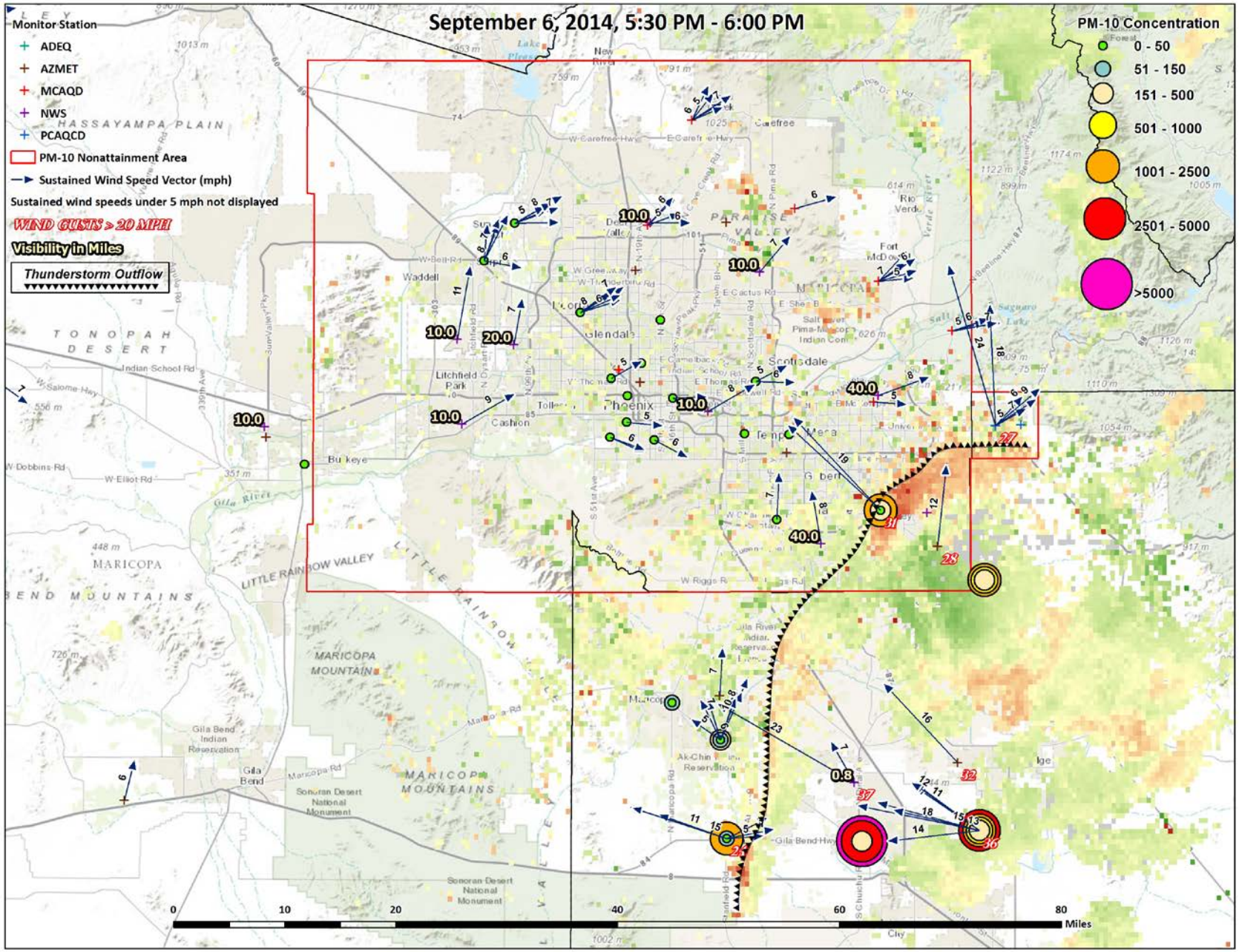

Figure 5-11. September 6, 2014, 5:30 PM – 6:00 PM.

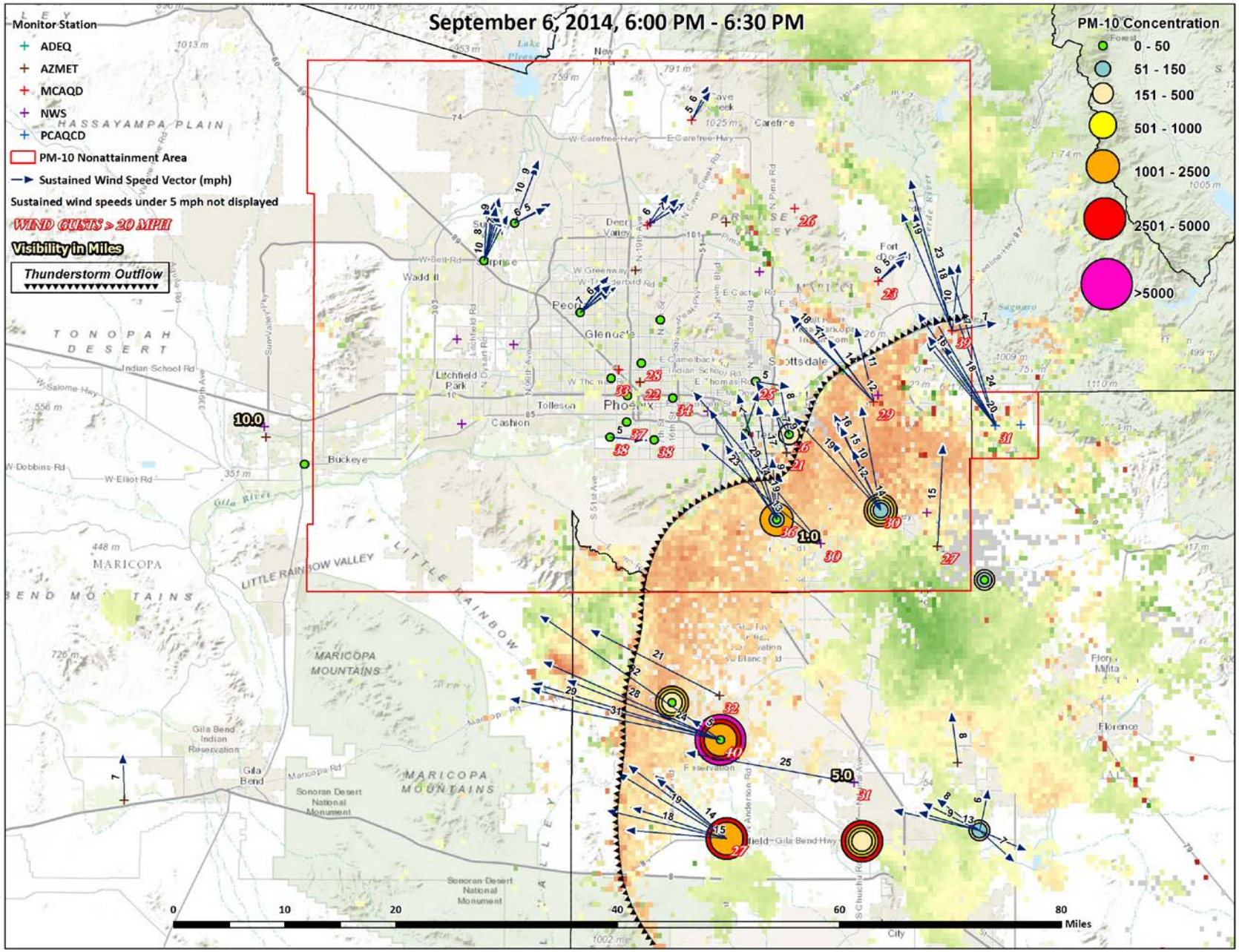

Figure 5-12. September 6, 2014, 6:00 PM – 6:30 PM.

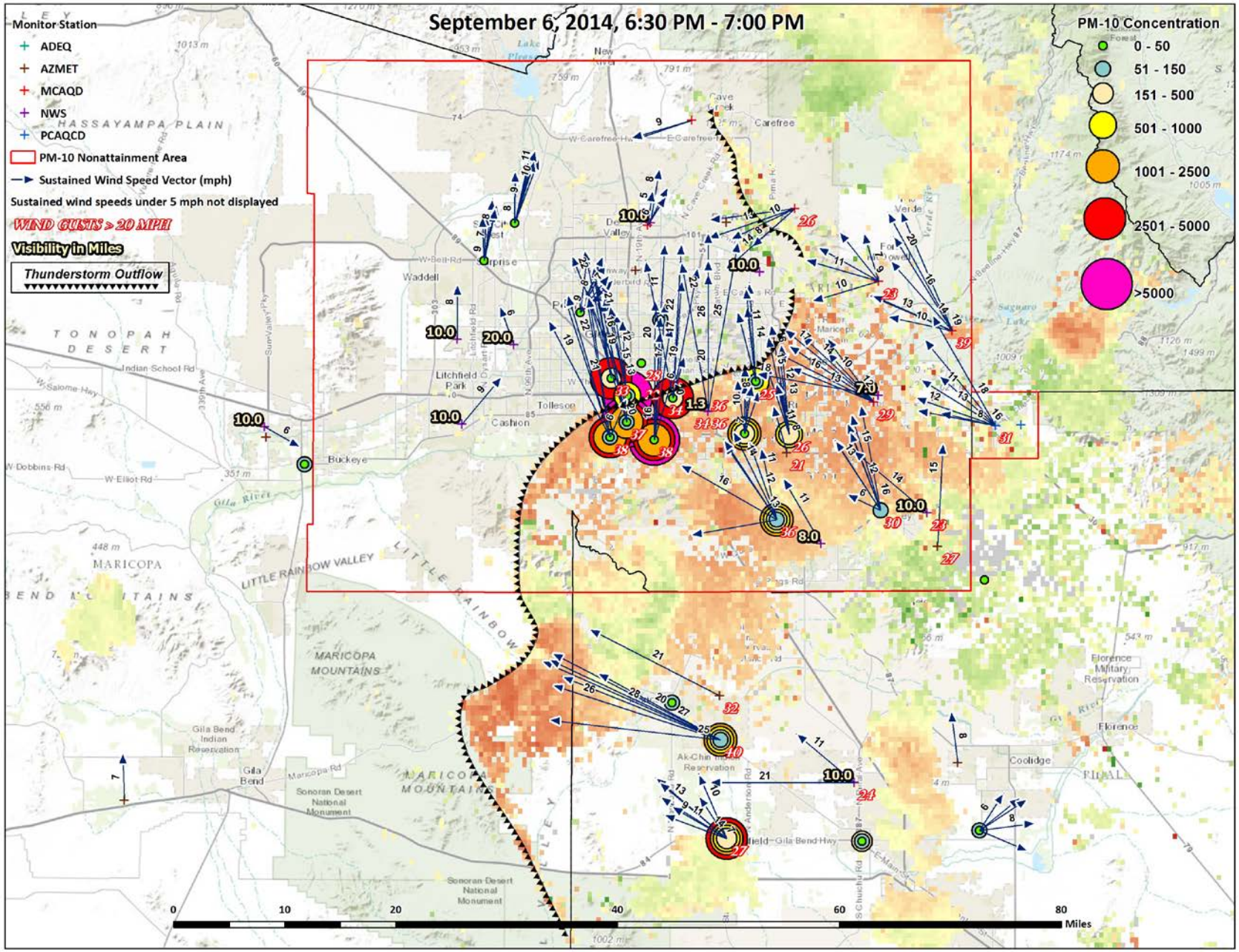

Figure 5-13. September 6, 2014, 6:30 PM – 7:00 PM.

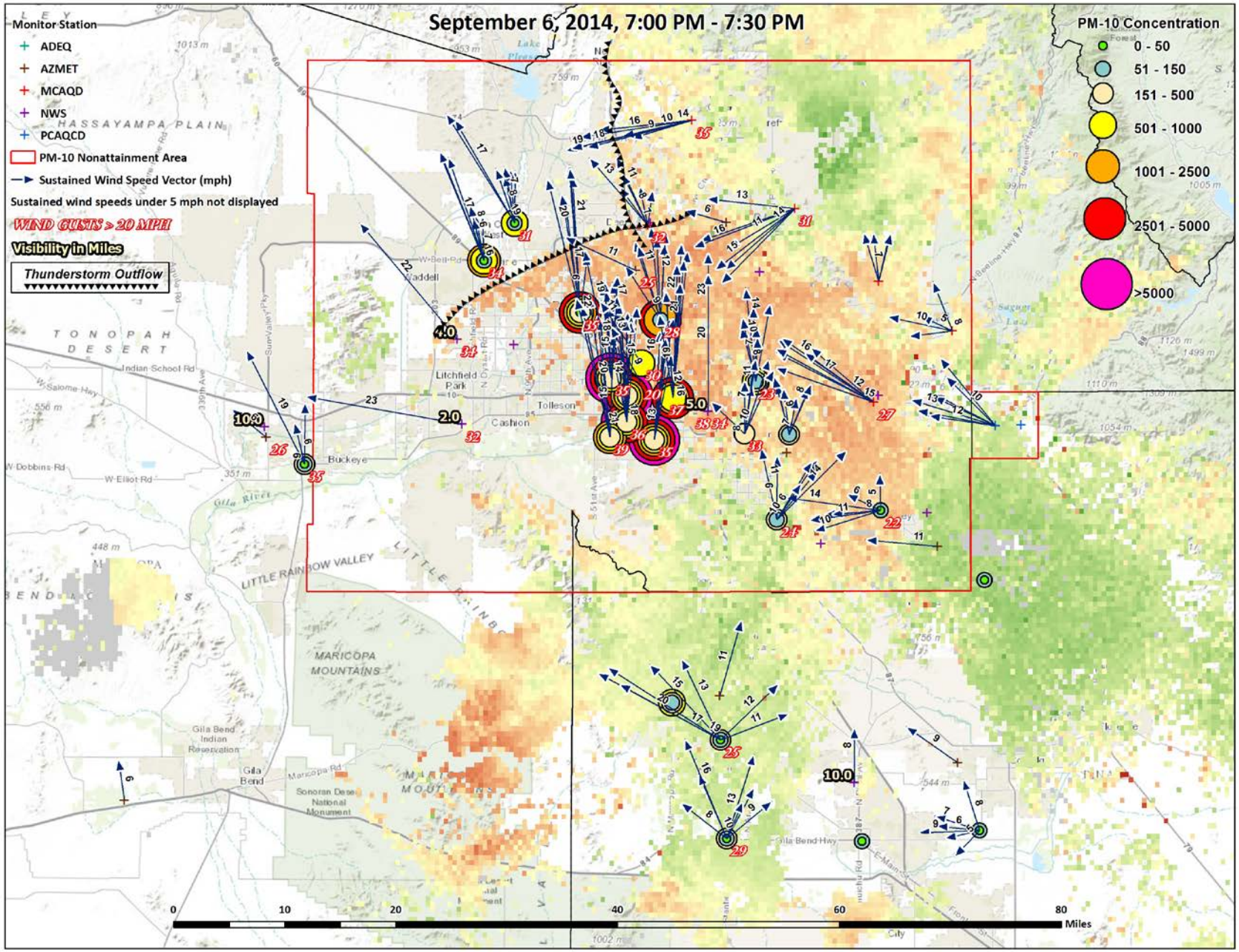

Figure 5-14. September 6, 2014, 7:00 PM – 7:30 PM.

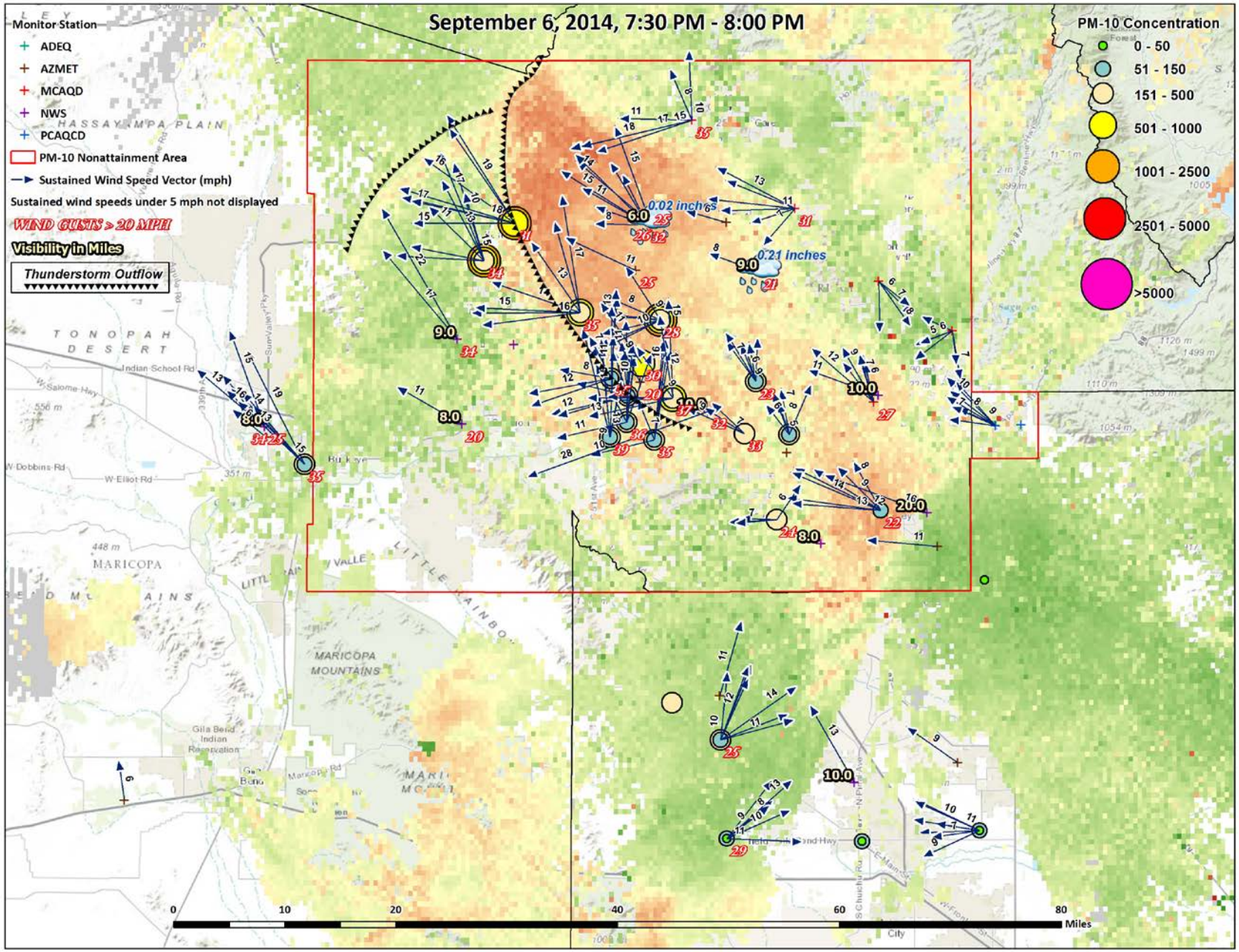

Figure 5-15. September 6, 2014, 7:30 PM – 8:00 PM.

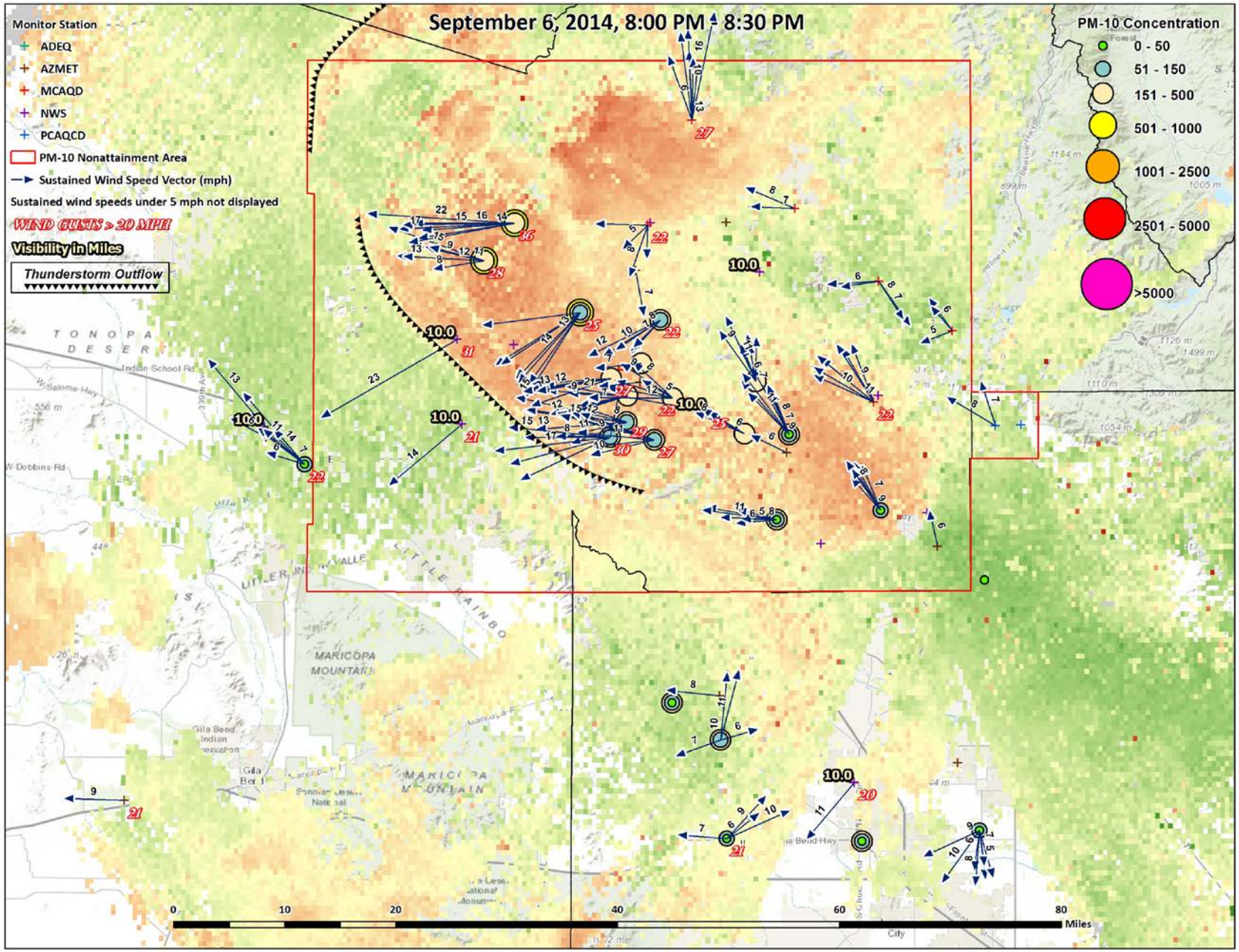

Figure 5-16. September 6, 2014, 8:00 PM – 8:30 PM.

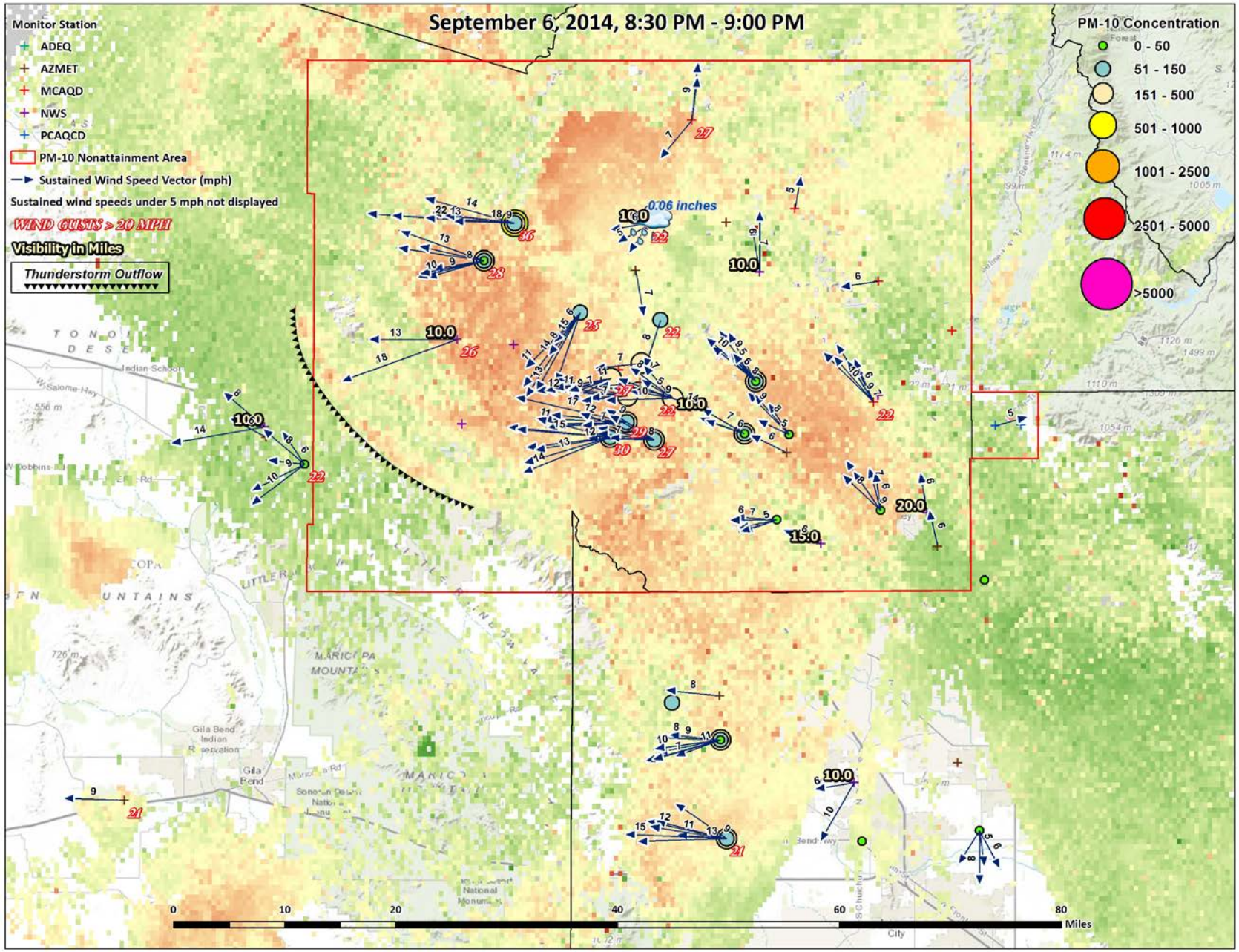

Figure 5-17. September 6, 2014, 8:30 PM – 9:00 PM.

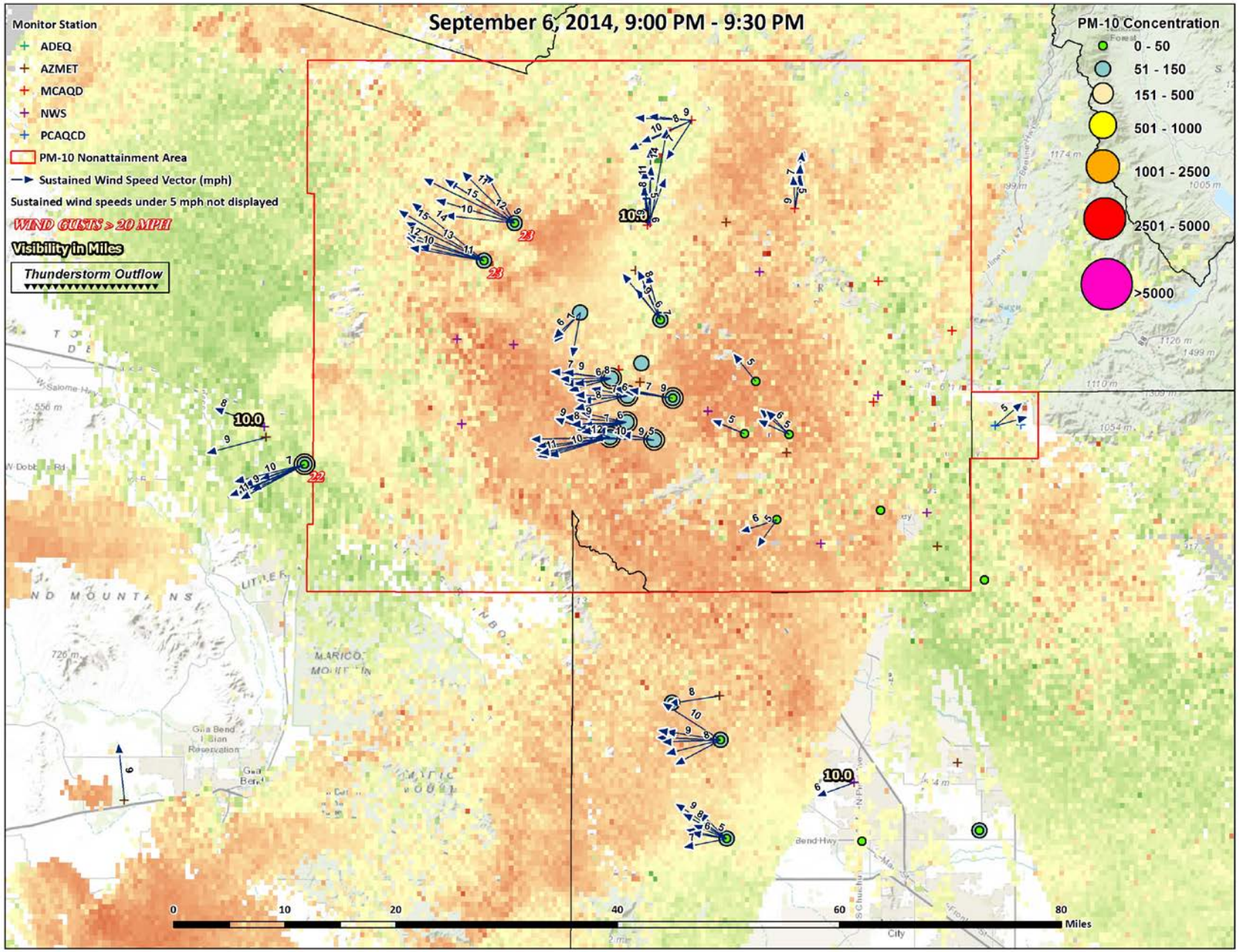

Figure 5-18. September 6, 2014, 9:00 PM – 9:30 PM.

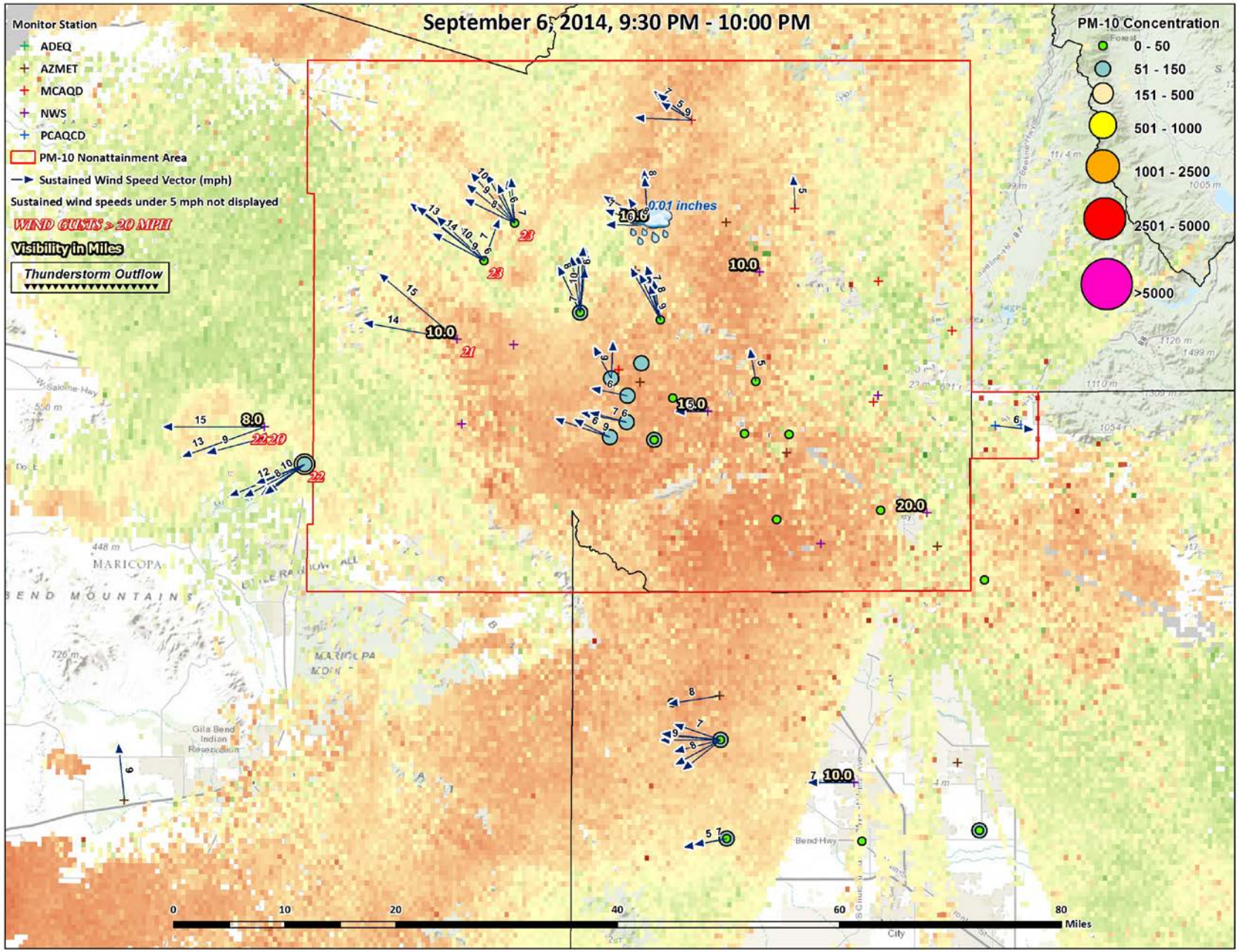

Figure 5-19. September 6, 2014, 9:30 PM – 10:00 PM.

Visibility Photos

Time series videos of visibility photos taken on the days of the events are provided below in the following links. The visibility photos taken in the area of the exceeding monitors show the approach of the thunderstorm outflow-generated dust storms and the associated dramatic decrease in visibility.

For September 4, 2014*: http://www.phoenixvis.net/tlapse_camera.aspx?site=SUPM1

For September 6, 2014: http://www.phoenixvis.net/tlapse_camera.aspx?site=SOMT1

**Note: The dust storm on September 4, 2014, arrived in the nonattainment area primarily after daylight hours; however, visibility photo videos still show the arrival of significant dust around the 7 pm hour in the southeastern portion of the nonattainment area.*

Conclusion

The information presented within this section has adequately demonstrated a clear causal relationship between the emissions generated by uncontrollable natural events and the exceedances measured at the Maricopa County PM_{10} nonattainment area monitors on September 4, 2014, and September 6, 2014. The maps provided in this section contain an illustration of the events as they unfolded. The series of maps for the events show a spatial and temporal representation of the thunderstorm outflow winds and associated windblown dust as they move throughout Maricopa and Pinal counties. These maps show a clear causal connection between the windblown dust generated and transported by the thunderstorm outflow winds and the exceedances at the monitors. Visibility photos help show the approach of the thunderstorm outflow and the reduced visibilities associated with the dust storm generated by the outflow. It is clear from these data that thunderstorm outflow winds generated and transported uncontrollable windblown PM_{10} emissions to the Maricopa County nonattainment area monitors, demonstrating a clear causal connection between the events and the exceedances.

VI. "BUT FOR" ANALYSIS

Section 50.14(c)(3)(iv)(D) in 40 CFR part 50 requires that an exceptional event demonstration must satisfy that "[t]here would have been no exceedance or violation but for the event." The prior sections of this submittal have provided detailed information that the exceedances on September 4, 2014, and September 6, 2014, were not reasonably controllable or preventable and that there is a clear causal relationship between the windblown dust generated and transported by thunderstorm outflow winds and the exceedances at the Maricopa County PM_{10} nonattainment area monitors. The weight of evidence in these sections demonstrates that but for the existence of windblown dust emissions generated and transported by thunderstorm outflow winds, there would have been no exceedance of the 24-hour PM_{10} standard.

As detailed in Section IV, all reasonable control measures were in place and actively enforced before, during, and after the exceedances on September 4, 2014, and September 6, 2014. Inspection and compliance data of local fugitive dust sources during this time period revealed that PM_{10} from anthropogenic activities was well controlled and constant. Real-time surveillance of PM_{10} monitoring stations during the event established a clear link between rapidly rising PM_{10} concentrations and the arrival of the thunderstorm outflow winds. As an example, Figure 6–1 shows that PM_{10} concentrations in the hours before the event at the exceeding Higley monitor were at normal levels on September 4, 2014, indicating no significant anthropogenic activities. PM_{10} concentrations in the hours after the event show a return to low levels once transported dust from the thunderstorm outflow passed the monitoring station. Figure 6–2 displays the same data for the exceeding South Phoenix monitor on September 6, 2014.

As shown in Section V, detailed, time series maps establish a clear causal relationship between the arrival of windblown dust generated by thunderstorm outflow winds and elevated PM_{10} concentrations at the monitors. The body of evidence presented in this submittal confirms that the exceedances on September 4, 2014, and September 6, 2014, were natural events and that there would have been no exceedances but for the presence of the uncontrollable windblown dust from the thunderstorm outflow winds.

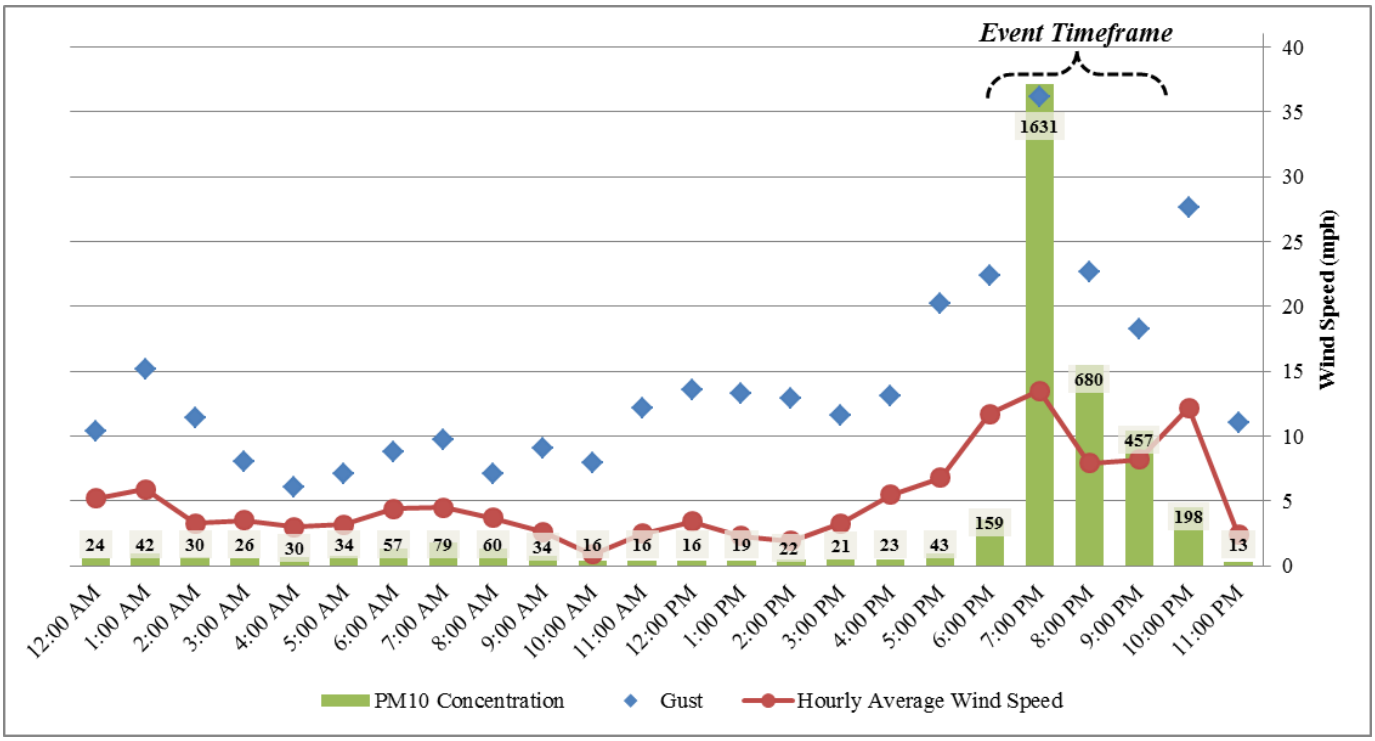

Figure 6-1. Hourly PM_{10} concentration, wind gust, and average wind speed as recorded at the exceeding Higley monitor on September 4, 2014.

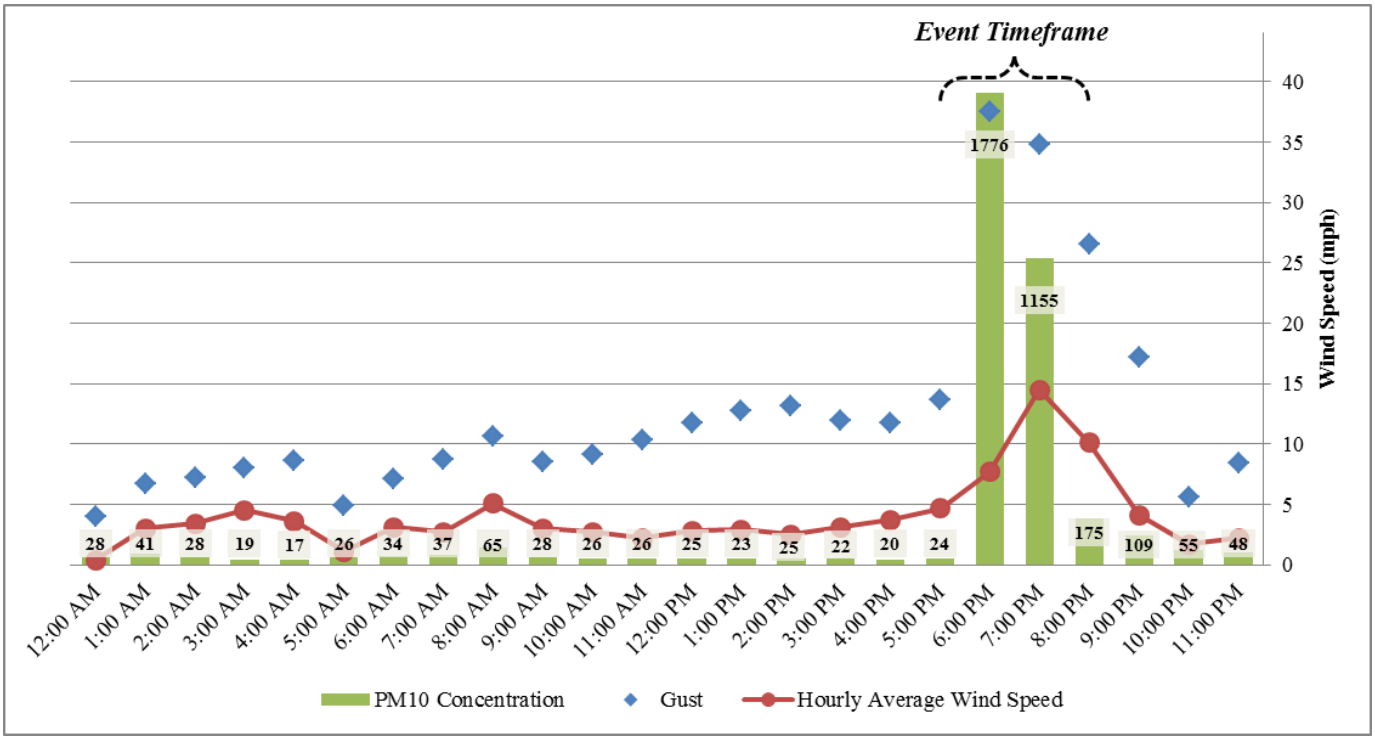

Figure 6-2. Hourly PM_{10} concentration, wind gust, and average wind speed as recorded at the South Phoenix monitor on September 6, 2014.

VII. CONCLUSIONS

The exceedances that occurred on September 4, 2014, and September 6, 2014, satisfy the criteria of 40 CFR 50.1(j) and meet the definition of an exceptional event. These criteria are:

- The event affects air quality.
- The event is not reasonably controllable or preventable.
- The event is unlikely to reoccur at a particular location or [is] a natural event.

A. Affects Air Quality

As stated in the preamble to the Exceptional Events Rule, the events in question are considered to have affected air quality if it can be shown that there is a clear causal relationship between the monitored exceedances and the events, and that the events are associated with measured concentrations in excess of normal historical fluctuations. Given the information presented in Sections II, III, IV and V, it is reasonable to conclude that the events in question affected air quality.

B. Not Reasonably Controllable or Preventable

Section 50.1(j) of Title 40 CFR Part 50 requires that an event must be "not reasonably controllable or preventable" in order to be defined as an exceptional event. This requirement is met by demonstrating that despite reasonable control measures in place within Maricopa County and the PM_{10} nonattainment area, high wind conditions overwhelmed all reasonably available controls. Despite the deployment of comprehensive control measures and sophisticated response programs, high wind conditions associated with thunderstorms and thunderstorm outflows generated and transported high concentrations of PM_{10} emissions into the PM_{10} nonattainment area. The events discussed in this document that caused the exceedances in this request (see Sections II and V) were caused by thunderstorm driven outflow winds that generated and transported dust into the Maricopa County PM_{10} nonattainment area from areas inside and outside of the nonattainment area. The fact that these were natural events involving strong thunderstorm outflow winds that generated and transported PM_{10} emissions into and within the nonattainment area, provides strong evidence that the events and exceedances of September 4, 2014, and September 6, 2014, recorded at the Maricopa County nonattainment area monitors, were not reasonably controllable or preventable.

C. Natural Event

As discussed above, the events shown to cause these exceedances were emissions of PM_{10} generated by high winds caused by thunderstorm activity and related outflow boundaries on September 4, 2014, and September 6, 2014. The events therefore qualify as natural events.

In summary, the exceedances of the federal 24-hour PM_{10} standard on September 4, 2014, and September 6, 2014, would not have occurred but for the monsoonal thunderstorm driven high winds and windblown dust generated and transported from areas inside and outside the nonattainment area, based on the following weight of evidence:

- Historical Fluctuation data in Section III showing five years of 24-hour average data for the Maricopa County nonattainment area monitors demonstrates that the values on September 4, 2014, and September 6, 2014, were atypical and in excess of normal historical fluctuations.

- The exceedances of the PM_{10} standard recorded on September 4, 2014, and September 6, 2014, are tied to thunderstorm activity and thunderstorm generated outflow winds, as can be seen in radar imagery analyses in Section V.

- Figures in Section V show that the timing of thunderstorm generated outflow boundary passage and increases in wind speeds at monitoring locations and National Weather Service stations during the events are consistent with the timing of elevated PM_{10} concentrations recorded at the monitoring locations in the Maricopa County nonattainment area.

- Wind directions, thunderstorm generated outflow boundary propagation, and concentration patterns showing elevated levels of PM_{10} in Pinal County prior to levels increasing in Maricopa County, all depicted in Section V, help to show that dust originating in Pinal County was transported into the nonattainment area.

- Section IV discusses rules that are in place in the nonattainment area, as well as inspections that were conducted in the area to verify compliance with those rules, in order to show that the events were not reasonably controllable or preventable.

APPENDIX A

ADEQ FORECAST PRODUCTS FOR MARICOPA COUNTY

MARICOPA COUNTY DUST CONTROL FORECAST

ISSUED Wednesday, September 3, 2014

Five-day weather outlook:

NOTE: DURING ACTIVE SUMMER MONSOON PERIODS STRONG OUTFLOW WINDS FROM EVEN DISTANT THUNDERSTORMS CAN GENERATE PERIODS OF DENSE BLOWING DUST

The high-pressure system that tends to drive the flow of moisture in the monsoon is now centered over western Texas and is expected to remain in that general location through Monday. As a result, atmospheric moisture will be slowly, but steadily, increasing throughout this forecast period. It now looks like the first push of moisture won't take place until tonight. Scattered early morning showers in Maricopa County will be possible as this occurs. Strong outflows with these are not expected.

The timing of this activity could make the rest of Thursday a "down" day in terms of additional storms and this is why Thursday's risk for exceeding the PM-10 health standard is now set at Low. The risk level remains Moderate for both Friday and Saturday because of increasing instability and storm coverage.

The dust threat quickly lowers by Sunday. The long-range GFS weather model has consistently been advertising a period of heavy rainfall for the lower deserts from Sunday through Tuesday connected to Tropical Storm Norbert. Total amounts between model runs have varied between two and five inches! Needless to say, a lot is depending on the eventual track of this system.

Check back tomorrow for an upadated outlook! -J.Malloy

R I S K F A C T O R S

	WINDS		STAGNATION		UNHEALTHY PM-10 RISK LEVEL
Day 1: Thu. 9/4/2014	Mainly light and variable winds, gusty near showers and thunderstorms.	+	No stagnation due to possible precipitation.	=	***LOW***
Day 2: Fri. 9/5/2014	Light winds becoming west-northwesterly 5 to 10 mph for the afternoon, gusty near showers and thunderstorms.	+	No stagnation due to possible precipitation.	=	***MODERATE***
Day 3: Sat. 9/6/2014	Light winds becoming southwesterly 5 to 10 mph for the afternoon, gusty near showers and thunderstorms.	+	No stagnation due to possible precipitation.	=	***MODERATE***
EXTENDED OUTLOOK					
Day 4: Sun. 9/7/2014	Light winds becoming south-southwesterly 5 to 10 mph for the afternoon, gusty near showers and thunderstorms.	+	No stagnation due to possible precipitation.	=	***LOW***
Day 5: Mon. 9/8/2014	Light winds becoming southwesterly 5 to 15 mph for the afternoon, gusty near showers and thunderstorms.	+	No stagnation due to possible precipitation.	=	***LOW***

The Maricopa County Dust Control Action Forecast is issued to assist in the planning of work activities to help reduce dust pollution. A recorded message of this forecast can be accessed at 602-771-2368. To review the complete air quality forecast for the Phoenix metropolitan area, as well as the health impacts and reduction methods for different air pollutants, call 602-771-2367 for recorded forecast information or click on ADEQ's Air Quality Forecast at http://www.azdeq.gov/environ/air/ozone/ensemble.pdf.

JRP 04/28/2011

MARICOPA COUNTY DUST CONTROL FORECAST

ISSUED Thursday, September 4, 2014

Five-day weather outlook:

NOTE: DURING ACTIVE SUMMER MONSOON PERIODS STRONG OUTFLOW WINDS FROM EVEN DISTANT THUNDERSTORMS CAN GENERATE PERIODS OF DENSE BLOWING DUST

Skies are clearing rapidly this morning after a few thundershowers developed last night, primarily over western Maricopa County. There is now enough moisture and instability in the region to support additional storms later today, even over the lower deserts. Where thunderstorms develop strong and gusty outflow winds could cause localized blowing dust. Local weather models are indicating such storms could form west of the Phoenix Metro and/or western Pinal County this evening. The atmosphere becomes more unstable Friday and Saturday following a moisture surge from the Gulf of California, hence the Moderate risk for those days.

Then there is the much anticipated heavy rain event later in the weekend. This is due to the unusual track of now Hurricane Norbert. The system is projected to ride up the Baja coastline and possibly swing eastward and stall near the southern California border providing ample moisture. The GFS model still wants to put a least 2" over south-central Arizona. Below average temperatures and plenty of cloud cover would go along with this wet scenario. There is a Low risk for exceeding the PM-10 health standard Sunday through Tuesday.

Check back tomorrow for an updated outlook! -J.Malloy

R I S K F A C T O R S

	WINDS		STAGNATION		UNHEALTHY PM-10 RISK LEVEL
Day 1: Fri. 9/5/2014	Mainly light and variable surface winds expected, gusty winds over 30 mph possible near outflows.	+	No stagnation due to possible precipitation.	=	***MODERATE***
Day 2: Sat. 9/6/2014	Light winds early becoming southwesterly 5 to 15 mph for the afternoon, gusty winds over 30 mph possible near outflows.	+	No stagnation due to possible precipitation.	=	***MODERATE***
Day 3: Sun. 9/7/2014	Light winds early becoming south-southwesterly 5 to 15 mph for the afternoon.	+	No stagnation due to possible precipitation.	=	***LOW***
EXTENDED OUTLOOK					
Day 4: Mon. 9/8/2014	Southerly winds 5 to 10 mph becoming light late.	+	No stagnation due to possible precipitation.	=	***LOW***
Day 5: Tue. 9/9/2014	Mainly light and variable surface winds expected.	+	No stagnation due to possible precipitation.	=	***LOW***

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JRP 04/28/2011

MARICOPA COUNTY DUST CONTROL FORECAST

ISSUED Friday, September 5, 2014

Five-day weather outlook:

NOTE: DURING ACTIVE SUMMER MONSOON PERIODS STRONG OUTFLOW WINDS FROM EVEN DISTANT THUNDERSTORMS CAN GENERATE PERIODS OF DENSE BLOWING DUST

The monsoon season is not over yet! Storms yesterday began to form late in the afternoon and increased in coverage across much of Maricopa and Pinal Counties into the evening. A few spots received brief heavy rain, but the main impact was the strong and gusty winds, over 40 mph at times, caused by thunderstorm downdrafts. Based on PM-10 readings throughout the Phoenix Metro, dust impacts tended to be localized versus widespread. However, the very high concentrations observed over the southeastern portion of the Valley, show that desert soils have not been completely stabilized.

Today, the atmosphere is not as ripe for an encore performance, but a few storms could still develop bringing gusty winds and localized blowing dust. More available energy for thunderstorms returns tomorrow. A Moderate risk for exceeding the PM-10 health standard on Saturday still seems appropriate given the lack of widespread rain yesterday.

For Sunday and Monday, moisture associated with Hurricane Norbert will bring a cloudy, cooler, and wetter period. Recent model runs have scaled back total rain amounts to between 0.5" and 1.5". Such rain can still greatly lower regional dust concerns. Flooding during this time may also become an issue. Precip chances fall Tuesday and Wednesday. Dust wise, there is a Low risk in place starting Sunday.

Check back Sunday for an updated outlook. Have a great weekend! -J.Malloy

R I S K F A C T O R S

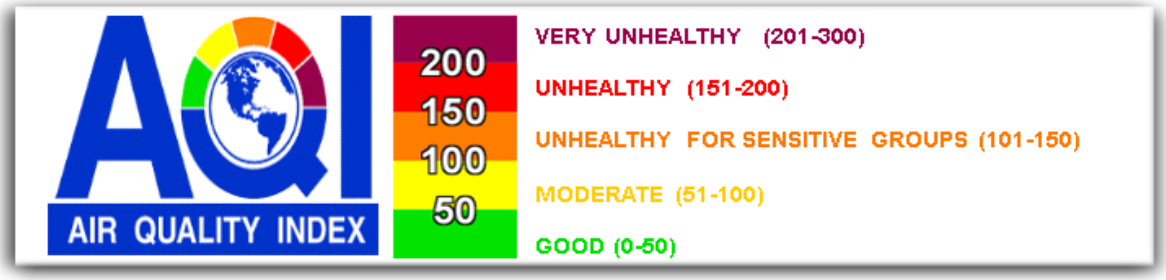
	WINDS		STAGNATION		UNHEALTHY PM-10 RISK LEVEL
Day 1: Sat. 9/6/2014	Light winds early becoming southerly 5 to 15 mph for the afternoon, gusts over 30 mph near outflows possible.	+	No stagnation due to possible precipitation.	=	***MODERATE***
Day 2: Sun. 9/7/2014	Easterly winds around 5 mph becoming southwesterly 5 to 10 mph.	+	No stagnation due to possible precipitation.	=	***LOW***
Day 3: Mon. 9/8/2014	Light winds early becoming southwesterly 5 to 10 mph.	+	No stagnation due to possible precipitation.	=	***LOW***
EXTENDED OUTLOOK					
Day 4: Tue. 9/9/2014	Light winds early becoming southwesterly 5 to 10 mph for the afternoon.	+	No stagnation due to possible precipitation.	=	***LOW***

Day 5: Wed. 9/10/2014	Mainly light surface winds expected.	+	No stagnation due to possible precipitation.	=	***LOW***

The Maricopa County Dust Control Action Forecast is issued to assist in the planning of work activities to help reduce dust pollution. A recorded message of this forecast can be accessed at 602-771-2368. To review the complete air quality forecast for the Phoenix metropolitan area, as well as the health impacts and reduction methods for different air pollutants, call 602-771-2367 for recorded forecast information or click on ADEQ's Air Quality Forecast at http://www.azdeq.gov/environ/air/ozone/ensemble.pdf.

JRP 04/28/2011

ADEQ Arizona Department of Environmental Quality



AIR QUALITY FORECAST FOR Thursday, September 4, 2014

This report is updated by 1:00 p.m. Sunday thru Friday and is validfor areas within and bordering Maricopa County in Arizona

FORECAST DATE **NOTICES** (*SEE BELOW FOR DETAILS) **AIR POLLUTANT**	YESTERDAY Tue 09/02/2014 Highest AQI Reading/Site (*Preliminary data only*)	TODAY Wed 09/03/2014	TOMORROW Thu 09/04/2014	EXTENDED Fri 09/05/2014 **Dust Possible**
O3*	**49** **Pinnacle Peak**	**65** ***Moderate***	**51** ***Moderate***	**48** ***Good***
CO*	**7** **Multiple Sites**	**5** ***Good***	**6** ***Good***	**6** ***Good***
PM-10*	**47** **West Chandler**	**55** ***Moderate***	**48** ***Good***	**75** ***Moderate***
PM-2.5*	**30** **West Phoenix**	**41** ***Good***	**37** ***Good***	**53** ***Moderate***

* O3 = Ozone CO = Carbon Monoxide PM-10 = Particles 10 microns & smaller PM-2.5 = Particles smaller than 2.5 microns

*"Ozone Health Watch" means that the highest concentration of OZONE may approach the federal health standard.
"PM-10 or PM-2.5 Health Watch" means that the highest concentration of PM-10 or PM-2.5 may approach the federal health standard.
"High Pollution Advisory" means that the highest concentration of OZONE, PM-10, or PM-2.5 may exceed the federal health standard.
"DUST" means that short periods of high PM-10 concentrations caused by outflow from thunderstorms are possible.

Health Statements	
Wednesday, 09/03/2014	Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.
Thursday, 09/04/2014	Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.

SYNOPSIS AND DISCUSSION

Today now does not appear to be as active in terms of storm coverage over southern Arizona. Moisture is still expected to increase through Friday, but will likely hold off for our area until tonight. Scattered early morning showers tomorrow are possible following this initial moisture surge. Morning debris cloud cover and potential rainfall could greatly limit additional storms later in the day. Generally, confidence for strong outflow winds and blowing dust through Thursday is much lower compared to yesterday. A much more significant moisture surge caused by Tropical Storm Norbert is expected to arrive Friday morning. Better afternoon storm coverage and blowing dust threat would exist Friday and Saturday.

Ozone levels are trending steady in the upper Good to lower Moderate range. This should continue the rest of the week under the current weather pattern.

Check back tomorrow for more. Until then, have a good day! -J.Malloy

MONITORING SITE MAPS	
INTERACTIVE MAPS	http://alert.fcd.maricopa.gov/alert/Google/v3/air.html http://www.airnow.gov/

POLLUTION MONITOR READINGS FOR Tuesday, September 2, 2014

O3 (OZONE)

SITE NAME	MAX 8-HR VALUE (PPB)	MAX AQI	AQI COLOR CODE
Alamo Lake	41	35	
Apache Junction	38	32	
Blue Point	53	45	
Buckeye	45	38	
Casa Grande	37	31	
Cave Creek	55	47	
Central Phoenix	43	36	
Dysart	52	44	
Falcon Field	48	41	
Fountain Hills	49	42	
Glendale	49	42	
Humboldt Mountain	58	49	
Phoenix Supersite	53	45	
Mesa	48	41	
North Phoenix	55	47	
Pinal Air Park	41	35	
Pinnacle Peak	58	49	
Queen Valley	42	35	
Rio Verde	51	43	
South Phoenix	43	36	
South Scottsdale	46	39	
Tempe	43	36	
Tonto Nat'l Mon.	46	39	
West Chandler	42	35	
West Phoenix	52	44	
Yuma	32	27	

CO (CARBON MONOXIDE)

SITE NAME	MAX 8-HR VALUE (PPM)	MAX AQI	AQI COLOR CODE
Central Phoenix	0.6	7	
Greenwood	0.6	7	
Phoenix Supersite	0.6	7	
West Phoenix	0.6	7	

PM-10 (PARTICLES)

SITE NAME	MAX 24-HR VALUE (µg/m3)	MAX AQI	AQI COLOR CODE
Buckeye	47.1	44	
Central Phoenix	27.0	25	
Combs School (Pinal County)	56.7	52	
Durango	39.4	36	
Dysart	23.4	22	
Glendale	27.0	25	
Greenwood	37.0	34	
Higley	30.2	28	
Maricopa (Pinal County)	43.8	41	
Phoenix Supersite	24.0	22	
Mesa	27.4	25	
North Phoenix	23.4	22	
South Phoenix	30.4	28	
South Scottsdale	26.4	24	
Tempe	21.9	20	
West Chandler	51.2	47	
West Forty Third	44.7	41	
West Phoenix	29.5	27	
Zuni Hills	18.4	17	

PM-2.5 (PARTICLES)

SITE NAME	MAX 24-HR VALUE (µg/m3)	MAX AQI	AQI COLOR CODE
Durango	6.5	27	
Glendale	5.4	23	
Phoenix Supersite	3.0	13	
Mesa	6.3	26	
North Phoenix	5.5	23	
South Phoenix	4.2	18	
Tempe	6.6	28	
West Phoenix	7.2	30	

DESCRIPTION OF LOCAL AIR POLLUTANTS IN DETAIL

O3 (OZONE):

Description –

This is a secondary pollutant that is formed by the reaction of other primary pollutants (precursors) such as VOCs (volatile organic compounds) and NOx (Nitrogen Oxides) in the presence of heat and sunlight.

Sources – VOCs are emitted from motor vehicles, chemical plants, refineries, factories, and other industrial sources. NOx is emitted from motor vehicles, power plants, and other sources of combustion.
Potential health impacts – Exposure to ozone can make people more susceptible to respiratory infection, result in lung inflammation, and aggravate pre-existing respiratory diseases such as asthma. Other effects include decrease in lung function, chest pain, and cough.
Unit of measurement – Parts per billion (ppb).
Averaging interval – Highest eight-hour period within a 24-hour period (midnight to midnight)
Reduction tips – Curtail daytime driving, refuel cars and use gasoline-powered equipment as late in the day as possible.

CO (CARBON MONOXIDE):

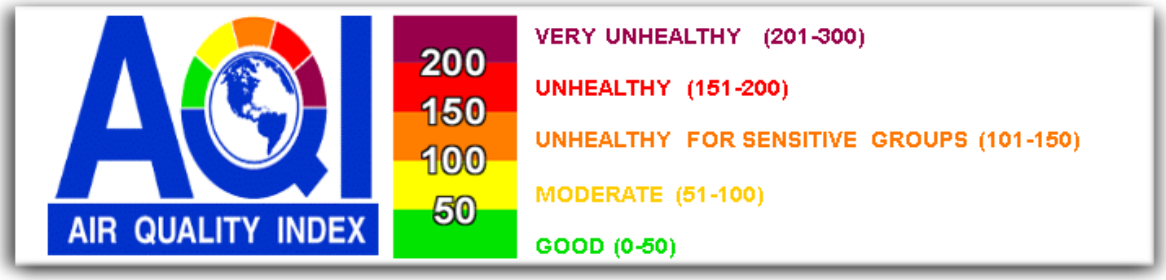
Description – A colorless, odorless, poisonous gas formed when carbon in fuels is not burned completely.
Sources – In cities, as much as 95 percent of all CO emissions emanate from automobile exhaust. Other sources include industrial processes, non-transportation fuel combustion, and natural sources such as wildfires. Peak concentrations occur in colder winter months.
Potential health impacts – Reduces oxygen delivery to the body's organs and tissues. The health threat is most serious for those who suffer from cardiovascular disease.
Unit of measurement – Parts per million (ppm).
Averaging interval – Highest eight-hour period within a 24-hour period (midnight to midnight)
Reduction tips – Keep motor vehicle tuned properly and minimize nighttime driving.

PM-10 & PM-2.5 (PARTICLES):

Description – The term "particulate matter" (PM) includes both solid particles and liquid droplets found in air. Many manmade and natural sources emit PM directly or emit other pollutants that react in the atmosphere to form PM. Particles less than 10 micrometers in diameter tend to pose the greatest health concern because they can be inhaled into and accumulate in the respiratory system. Particles less than 2.5 micrometers in diameter are referred to as "fine" particles and are responsible for many visibility degradations such as the "Valley Brown Cloud" (see http://www.phoenixvis.net/). Particles with diameters between 2.5 and 10 micrometers are referred to as "coarse".
Sources – Fine = All types of combustion (motor vehicles, power plants, wood burning, etc.) and some industrial processes. Coarse = crushing or grinding operations and dust from paved or unpaved roads.
Potential health impacts – PM can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases, such as asthma and chronic bronchitis.
Units of measurement – Micrograms per cubic meter (ug/m3)
Averaging interval – 24 hours (midnight to midnight).
Reduction tips – Stabilize loose soils, slow down on dirt roads, carpool, and use public transit.

{**Updated 12/19/2011**}

ADEQ Arizona Department of Environmental Quality



AIR QUALITY FORECAST FOR Friday, September 5, 2014

This report is updated by 1:00 p.m. Sunday thru Friday and is validfor areas within and bordering Maricopa County in Arizona

FORECAST DATE NOTICES (*SEE BELOW FOR DETAILS) AIR POLLUTANT	YESTERDAY Wed 09/03/2014 Highest AQI Reading/Site (*Preliminary data only*)	TODAY Thu 09/04/2014 Localized Blowing Dust Possible	TOMORROW Fri 09/05/2014 Dust Possible	EXTENDED Sat 09/06/2014 Dust Possible
O3*	**54** **Humboldt Mountain**	**51** ***Moderate***	**48** ***Good***	**50** ***Good***
CO*	**7** **Central Phoenix and Greenwood**	**6** ***Good***	**6** ***Good***	**5** ***Good***
PM-10*	**48** **South Phoenix**	**48** ***Good***	**75** ***Moderate***	**75** ***Moderate***
PM-2.5*	**34** **West Phoenix**	**37** ***Good***	**53** ***Moderate***	**51** ***Moderate***

* O3 = Ozone CO = Carbon Monoxide PM-10 = Particles 10 microns & smaller PM-2.5 = Particles smaller than 2.5 microns

*"Ozone Health Watch" means that the highest concentration of OZONE may approach the federal health standard.
"PM-10 or PM-2.5 Health Watch" means that the highest concentration of PM-10 or PM-2.5 may approach the federal health standard.
"High Pollution Advisory" means that the highest concentration of OZONE, PM-10, or PM-2.5 may exceed the federal health standard.
"DUST" means that short periods of high PM-10 concentrations caused by outflow from thunderstorms are possible.

Health Statements	
Thursday, 09/04/2014	Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.
Friday, 09/05/2014	Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.

SYNOPSIS AND DISCUSSION

Isolated showers and thunderstorms developed over western Maricopa County last night and have now pushed northward into Yavapai County. Brief heavy rain and gusty winds likely accompanied the strongest cells. Other virga style showers (i.e., rain evaporating before reaching the ground) were also noted this morning exiting out of the East Valley.

This indicates that a more unstable atmosphere has finally arrived. Will it be enough to get more storms going later today? Both local weather models (WRF-GFS and WRF-NAM) say yes; however, the details differ. The WRF-GFS shows strongest thunderstorms over north-central Maricopa County by early evening, while the WRF-NAM points to western Pinal County as the prime spot with a slightly later start. The latter scenario would pose a greater dust and PM-10 threat. The GFS version has better captured this morning's environment, so confidence is higher with that solution. Regardless, if storms do fire then gusty winds and localized blowing dust may occur and this holds true through Saturday as moisture and instability continues to climb on a daily basis.

Turning the attention to ozone…variable cloud cover the next few days during the daytime will affect ozone levels. Even without cloud cover concentrations are still expected to peak from the upper Good to lower Moderate range, with highest values shifting towards the southeastern Valley by tomorrow.

Check back tomorrow for the latest. Until then, have a good day! -J.Malloy

MONITORING SITE MAPS	
INTERACTIVE MAPS	http://alert.fcd.maricopa.gov/alert/Google/v3/air.html http://www.airnow.gov/

POLLUTION MONITOR READINGS FOR Wednesday, September 3, 2014

O3 (OZONE)

SITE NAME	MAX 8-HR VALUE (PPB)	MAX AQI	AQI COLOR CODE
Alamo Lake	36	31	
Apache Junction	39	33	
Blue Point	52	44	
Buckeye	44	37	
Casa Grande	39	33	
Cave Creek	59	50	
Central Phoenix	50	42	
Dysart	52	44	
Falcon Field	48	41	
Fountain Hills	53	45	
Glendale	55	47	
Humboldt Mountain	61	54	
Phoenix Supersite	55	47	
Mesa	51	43	
North Phoenix	59	50	
Pinal Air Park	40	34	
Pinnacle Peak	60	51	
Queen Valley	41	35	

Rio Verde	40	34	
South Phoenix	51	43	
South Scottsdale	52	44	
Tempe	46	39	
Tonto Nat'l Mon.	44	37	
West Chandler	42	35	
West Phoenix	53	45	
Yuma	35	30	

CO (CARBON MONOXIDE)

SITE NAME	MAX 8-HR VALUE (PPM)	MAX AQI	AQI COLOR CODE
Central Phoenix	0.6	7	
Greenwood	0.6	7	
Phoenix Supersite	0.5	6	
West Phoenix	0.5	6	

PM-10 (PARTICLES)

SITE NAME	MAX 24-HR VALUE (µg/m3)	MAX AQI	AQI COLOR CODE
Buckeye	40.9	38	
Central Phoenix	27.1	25	
Combs School (Pinal County)	42.2	39	
Durango	40.0	37	
Dysart	24.2	22	
Glendale	28.7	27	
Greenwood	41.8	39	
Higley	30.7	28	
Maricopa (Pinal County)	53.9	50	
Phoenix Supersite	24.7	23	
Mesa	29.8	28	
North Phoenix	23.9	22	
South Phoenix	52.0	48	
South Scottsdale	31.9	30	
Tempe	28.6	26	
West Chandler	27.0	25	
West Forty Third	48.7	45	
West Phoenix	35.5	33	
Zuni Hills	18.7	17	

PM-2.5 (PARTICLES)

SITE NAME	MAX 24-HR VALUE (µg/m3)	MAX AQI	AQI COLOR CODE
Durango	7.1	30	
Glendale	5.5	23	
Phoenix Supersite	4.7	20	
Mesa	7.2	30	
North Phoenix	5.7	24	
South Phoenix	7.8	33	
Tempe	7.9	33	
West Phoenix	8.2	34	

DESCRIPTION OF LOCAL AIR POLLUTANTS IN DETAIL

O3 (OZONE):

Description –
This is a secondary pollutant that is formed by the reaction of other primary pollutants (precursors) such as VOCs (volatile organic compounds) and NOx (Nitrogen Oxides) in the presence of heat and sunlight.
Sources – VOCs are emitted from motor vehicles, chemical plants, refineries, factories, and other industrial sources. NOx is emitted from motor vehicles, power plants, and other sources of combustion.
Potential health impacts – Exposure to ozone can make people more susceptible to respiratory infection, result in lung inflammation, and aggravate pre-existing respiratory diseases such as asthma. Other effects include decrease in lung function, chest pain, and cough.
Unit of measurement – Parts per billion (ppb).
Averaging interval – Highest eight-hour period within a 24-hour period (midnight to midnight)
Reduction tips – Curtail daytime driving, refuel cars and use gasoline-powered equipment as late in the day as possible.

CO (CARBON MONOXIDE):

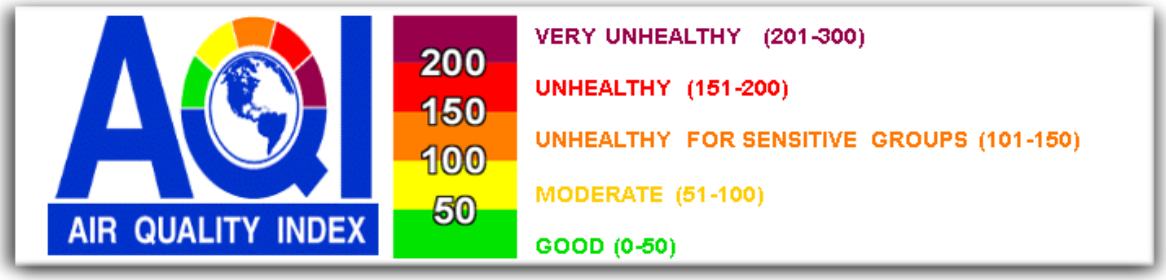
Description – A colorless, odorless, poisonous gas formed when carbon in fuels is not burned completely.
Sources – In cities, as much as 95 percent of all CO emissions emanate from automobile exhaust. Other sources include industrial processes, non-transportation fuel combustion, and natural sources such as wildfires. Peak concentrations occur in colder winter months.
Potential health impacts – Reduces oxygen delivery to the body's organs and tissues. The health threat is most serious for those who suffer from cardiovascular disease.
Unit of measurement – Parts per million (ppm).
Averaging interval – Highest eight-hour period within a 24-hour period (midnight to midnight)
Reduction tips – Keep motor vehicle tuned properly and minimize nighttime driving.

PM-10 & PM-2.5 (PARTICLES):

Description – The term "particulate matter" (PM) includes both solid particles and liquid droplets found in air. Many manmade and natural sources emit PM directly or emit other pollutants that react in the atmosphere to form PM. Particles less than 10 micrometers in diameter tend to pose the greatest health concern because they can be inhaled into and accumulate in the respiratory system. Particles less than 2.5 micrometers in diameter are referred to as "fine" particles and are responsible for many visibility degradations such as the "Valley Brown Cloud" (see http://www.phoenixvis.net/). Particles with diameters between 2.5 and 10 micrometers are referred to as "coarse".
Sources – Fine = All types of combustion (motor vehicles, power plants, wood burning, etc.) and some industrial processes. Coarse = crushing or grinding operations and dust from paved or unpaved roads.
Potential health impacts – PM can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases, such as asthma and chronic bronchitis.
Units of measurement – Micrograms per cubic meter (ug/m3)
Averaging interval – 24 hours (midnight to midnight).
Reduction tips – Stabilize loose soils, slow down on dirt roads, carpool, and use public transit.

{**Updated 12/19/2011**}

ADEQ Arizona Department of Environmental Quality



AIR QUALITY FORECAST FOR Saturday, September 6, 2014

This report is updated by 1:00 p.m. Sunday thru Friday and is validfor areas within and bordering Maricopa County in Arizona

FORECAST DATE **NOTICES** (*SEE BELOW FOR DETAILS) **AIR POLLUTANT**	YESTERDAY Thu 09/04/2014 **Localized Blowing Dust** Highest AQI Reading/Site (*Preliminary data only*)	TODAY Fri 09/05/2014 **AM Haze** **Blowing Dust Possible**	TOMORROW Sat 09/06/2014 **Blowing Dust Possible**	EXTENDED Sun 09/07/2014
O3*	**64** **North Phoenix**	**48** ***Good***	**54** ***Moderate***	**46** ***Good***
CO*	**7** **Greenwood**	**6** ***Good***	**6** ***Good***	**5** ***Good***
PM-10*	**101** **Higley**	**75** ***Moderate***	**75** ***Moderate***	**45** ***Good***
PM-2.5*	**39** **Mesa**	**53** ***Moderate***	**51** ***Moderate***	**30** ***Good***

* O3 = Ozone CO = Carbon Monoxide PM-10 = Particles 10 microns & smaller PM-2.5 = Particles smaller than 2.5 microns

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"High Pollution Advisory" means that the highest concentration of OZONE, PM-10, or PM-2.5 may exceed the federal health standard.
"DUST" means that short periods of high PM-10 concentrations caused by outflow from thunderstorms are possible.

Health Statements	
Friday, 09/05/2014	**Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.**
Saturday, 09/06/2014	**Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.**

SYNOPSIS AND DISCUSSION

Severe storms developed yesterday afternoon in the deserts! Areas of dust were lifted as multiple outflows crossed the Valley, however like the rain, the degree of dust impacts were more localized than widespread. For instance, the 24-hr average PM-10 readings for the network ranged from 41.9 µg/m^3 (Dysart monitor) to just over 150 µg/m^3 (Higley monitor)! In the aftermath, a haze has settled over the Phoenix Metro. We will have to deal with this until breezier winds and better lift towards afternoon disperses the particulates.

Today could actually be less active. The amount of energy to fuel storms (measured by what is called CAPE) is being shown by models to decrease during the afternoon period. This timing coincides with the greatest heating of the day, which helps explains why the models keep activity to a minimum. The threat for a pop-up storm and gusty winds still exists, though. An uptick in thunderstorm coverage should occur Saturday.

By Sunday, all eyes turn to Hurricane Norbert and the moisture that goes with the tropical system. A prolonged period of heavier rain could occur late in the weekend. The bulk of the rainfall is being advertised Sunday night through Monday morning. Total amounts up to 1.5” or greater are possible. This kind of rain would quell the dust threat and could lead to flooding issues. Both ozone and PM-10 return to the Good AQI at that time.

Check back on Sunday for a look ahead at next week's weather and air quality. Until then, have a great weekend! -J.Malloy

MONITORING SITE MAPS	
INTERACTIVE MAPS	http://alert.fcd.maricopa.gov/alert/Google/v3/air.html http://www.airnow.gov/

POLLUTION MONITOR READINGS FOR Thursday, September 4, 2014

O3 (OZONE)

SITE NAME	MAX 8-HR VALUE (PPB)	MAX AQI	AQI COLOR CODE
Alamo Lake	42	35	
Apache Junction	39	33	
Blue Point	53	45	
Buckeye	45	38	
Casa Grande	41	35	
Cave Creek	51	43	
Central Phoenix	54	46	
Dysart	55	47	
Falcon Field	53	45	
Fountain Hills	48	41	
Glendale	58	49	
Humboldt Mountain	44	37	
Phoenix Supersite	61	54	
Mesa	51	43	
North Phoenix	64	64	
Pinal Air Park	44	37	
Pinnacle Peak	52	44	
Queen Valley	46	39	

Rio Verde	36	31	
South Phoenix	48	41	
South Scottsdale	53	45	
Tempe	47	40	
Tonto Nat'l Mon.	43	36	
West Chandler	44	37	
West Phoenix	55	47	
Yuma	33	28	

CO (CARBON MONOXIDE)

SITE NAME	MAX 8-HR VALUE (PPM)	MAX AQI	AQI COLOR CODE
Central Phoenix	0.4	5	
Greenwood	0.6	7	
Phoenix Supersite	0.4	5	
West Phoenix	0.4	5	

PM-10 (PARTICLES)

SITE NAME	MAX 24-HR VALUE (µg/m3)	MAX AQI	AQI COLOR CODE
Buckeye	48.2	45	
Central Phoenix	47.7	44	
Combs School (Pinal County)	178.8	113	
Durango	76.9	62	
Dysart	41.9	39	
Glendale	43.9	41	
Greenwood	64.4	56	
Higley	155.4	101	
Maricopa (Pinal County)	44.6	41	
Phoenix Supersite	43.0	40	
Mesa	78.5	62	
North Phoenix	46.2	43	
South Phoenix	64.0	56	
South Scottsdale	59.0	53	
Tempe	64.0	56	
West Chandler	94.3	70	
West Forty Third	94.1	70	
West Phoenix	54.9	51	
Zuni Hills	41.7	39	

PM-2.5 (PARTICLES)

SITE NAME	MAX 24-HR VALUE (µg/m3)	MAX AQI	AQI COLOR CODE
Durango	7.4	31	
Glendale	6.5	27	
Phoenix Supersite	5.9	25	
Mesa	9.3	39	
North Phoenix	7.2	30	
South Phoenix	6.4	27	
Tempe	7.1	30	
West Phoenix	7.4	31	

DESCRIPTION OF LOCAL AIR POLLUTANTS IN DETAIL

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Unit of measurement – Parts per billion (ppb).
Averaging interval – Highest eight-hour period within a 24-hour period (midnight to midnight)
Reduction tips – Curtail daytime driving, refuel cars and use gasoline-powered equipment as late in the day as possible.

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Potential health impacts – Reduces oxygen delivery to the body's organs and tissues. The health threat is most serious for those who suffer from cardiovascular disease.
Unit of measurement – Parts per million (ppm).
Averaging interval – Highest eight-hour period within a 24-hour period (midnight to midnight)
Reduction tips – Keep motor vehicle tuned properly and minimize nighttime driving.

PM-10 & PM-2.5 (PARTICLES):

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Units of measurement – Micrograms per cubic meter (ug/m3)
Averaging interval – 24 hours (midnight to midnight).
Reduction tips – Stabilize loose soils, slow down on dirt roads, carpool, and use public transit.

{**Updated 12/19/2011**}

APPENDIX B

NATIONAL WEATHER SERVICE METEOROLOGICAL OBSERVATIONS AND STORM REPORTS

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA
(may be updated)
HOURLY OBSERVATIONS TABLE
PHOENIX SKY HARBOR INTL AIRPORT (23183)
PHOENIX, AZ
(09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1107 ft. above sea level
Latitude: 33.427
Longitude: -112.003
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
04	0051	11	FEW180 SCT220	10.00		94	34.4	67	19.6	51	10.6	23	0	000		28.47			29.57	AA		29.64
04	0151	11	FEW180 SCT220	10.00		93	33.9	68	19.9	53	11.7	26	8	090		28.47			29.57	AA		29.64
04	0251	11	SCT160 BKN200	10.00		92	33.3	68	20.0	54	12.2	28	7	110		28.48			29.57	AA		29.65
04	0351	11	SCT160 BKN200	10.00		92	33.3	68	20.0	54	12.2	28	7	140		28.48			29.58	AA		29.65
04	0451	11	SCT160 BKN200	10.00		90	32.2	68	20.2	56	13.3	32	9	080		28.48			29.57	AA		29.65
04	0551	11	SCT180 BKN200	10.00		90	32.2	68	19.9	55	12.8	31	9	090		28.49			29.59	AA		29.66
04	0651	11	FEW150 SCT180 BKN200	10.00		90	32.2	68	20.2	56	13.3	32	5	090		28.52			29.62	AA		29.69
04	0751	11	FEW120 SCT170 SCT220	10.00		89	31.7	68	19.7	55	12.8	32	5	120		28.54			29.65	AA		29.71
04	0851	11	FEW120 FEW170 SCT220	10.00		93	33.9	70	20.9	57	13.9	30	7	130		28.56			29.66	AA		29.73
04	0951	11	FEW100 BKN130 BKN170	10.00		97	36.1	70	21.3	56	13.3	25	8	150		28.57			29.67	AA		29.74
04	1051	11	FEW100 BKN130 BKN170	10.00		99	37.2	70	21.1	54	12.2	22	3	VR		28.58			29.68	AA		29.75
04	1151	11	FEW100 SCT130 SCT170	10.00		101	38.3	71	21.4	54	12.2	21	0	000		28.56			29.66	AA		29.73
04	1251	11	FEW100 FEW130	10.00		103	39.4	72	22.0	55	12.8	20	10	210		28.53			29.63	AA		29.70
04	1351	11	FEW110 FEW150 SCT250	10.00		102	38.9	71	21.6	54	12.2	20	5	250		28.51			29.61	AA		29.68
04	1451	11	FEW100 SCT150 SCT250	10.00		106	41.1	72	22.2	54	12.2	18	7	210	17	28.48			29.57	AA		29.65
04	1551	11	FEW100 SCT150 SCT250	10.00		107	41.7	72	22.3	54	12.2	17	8	130		28.46			29.55	AA		29.63
04	1651	11	FEW100 SCT150 SCT250	10.00		104	40.0	71	21.9	54	12.2	19	5	060		28.44			29.54	AA		29.61
04	1749	11	OVC100	10.00		100	38.0	68	19.9	48	9.0	17	16	210	28	28.46			M	SP		29.63
04	1751	11	BKN100 BKN150 BKN250	10.00		100	37.8	69	20.3	50	10.0	19	15	210	28	28.46			29.56	AA		29.63
04	1851	11	FEW035 FEW060 BKN140	10.00		99	37.2	67	19.5	47	8.3	17	13	220		28.48			29.59	AA	T	29.65
04	1938	11	SCT100CB BKN140 CLR190	10.00		96	35.6	70	21.1	56	13.3	26	6	VR	28	28.54			M	SP		29.71
04	1951	11	SCT100CB BKN140 CLR190	10.00		96	35.6	70	21.2	56	13.3	26	9	200		28.56			29.66	AA		29.73
04	2031	11	SCT100 BKN150 BKN190	10.00		88	31.1	71	21.8	63	17.2	43	14	180	28	28.59			M	SP		29.76
04	2051	11	SCT100 BKN150 BKN190	10.00		89	31.7	71	21.7	62	16.7	41	13	210		28.58			29.69	AA		29.75
04	2149	11	FEW100 SCT150 BKN190	10.00		88	31.0	69	20.7	59	15.0	38	17	120	31	28.63			M	SP		29.80
04	2151	11	FEW100 SCT150 BKN190	10.00		88	31.1	70	21.0	60	15.6	39	18	100	31	28.63			29.74	AA		29.80
04	2158	11	FEW100 SCT150 BKN190	10.00		86	30.0	70	21.2	62	16.7	45	24	100	31	28.64			M	SP		29.81
04	2251	11	FEW027 SCT090 SCT130	8.00		84	28.9	70	21.2	63	17.2	49	9	140		28.69			29.80	AA		29.86
04	2351	11	FEW090 FEW130 SCT190	10.00		83	28.3	70	21.3	64	17.8	53	9	140		28.66			29.78	AA		29.84

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final) HOURLY OBSERVATIONS TABLE SCOTTSDALE AIRPORT (03192) SCOTTSDALE, AZ (09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1473 ft. above sea level
Latitude: 33.622
Longitude: -111.910
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp (F)	Dry Bulb Temp (C)	Wet Bulb Temp (F)	Wet Bulb Temp (C)	Dew Point Temp (F)	Dew Point Temp (C)	Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
04	0053	12	CLR	10.00		92	33.3	66	18.7	49	9.4	23	5	VR		28.10			29.59	AA		29.69
04	0153	12	CLR	10.00		90	32.2	66	18.8	51	10.6	26	3	110		28.10			29.60	AA		29.69
04	0253	12	CLR	10.00		89	31.7	66	18.9	52	11.1	28	0	000		28.10			29.60	AA		29.69
04	0353	12	FEW110	10.00		88	31.1	67	19.2	54	12.2	31	3	120		28.11			29.60	AA		29.70
04	0453	12	CLR	10.00		87	30.6	66	19.1	54	12.2	32	0	000		28.10			29.60	AA		29.69
04	0553	12	CLR	10.00		88	31.1	67	19.5	55	12.8	33	0	000		28.12			29.62	AA		29.71
04	0653	12	CLR	10.00		87	30.6	67	19.3	55	12.8	34	0	000		28.15			29.65	AA		29.74
04	0753	12	CLR	10.00		88	31.1	68	20.1	57	13.9	35	0	000		28.17			29.67	AA		29.76
04	0853	12	CLR	10.00		91	32.8	68	20.0	55	12.8	30	3	VR		28.19			29.68	AA		29.78
04	0953	12	CLR	10.00		94	34.4	69	20.3	54	12.2	26	7	100		28.20			29.70	AA		29.79
04	1053	12	CLR	10.00		96	35.6	69	20.4	53	11.7	23	7	150		28.20			29.70	AA		29.79
04	1153	12	CLR	10.00		99	37.2	70	21.1	54	12.2	22	8	180		28.18			29.68	AA		29.77
04	1253	12	CLR	10.00		100	37.8	71	21.5	55	12.8	22	9	190		28.17			29.66	AA		29.76
04	1353	12	CLR	10.00		100	37.8	71	21.7	56	13.3	23	6	200		28.14			29.64	AA		29.73
04	1453	12	CLR	10.00		100	37.8	71	21.7	56	13.3	23	3	VR		28.11			29.61	AA		29.70
04	1553	12	CLR	10.00		102	38.9	71	21.8	55	12.8	21	6	050		28.09			29.59	AA		29.68
04	1653	12	CLR	10.00		101	38.3	71	21.4	54	12.2	21	3	180		28.08			29.57	AA		29.67
04	1753	12	BKN110	10.00		101	38.3	70	21.1	53	11.7	20	3	350		28.09			29.58	AA		29.68
04	1853	12	SCT110	10.00		97	36.1	69	20.5	53	11.7	23	11	220	17	28.11			29.60	AA		29.70
04	1945	12	SCT110	10.00	VCTS	93	34.0	69	20.4	55	13.0	28	15	210	25	28.15			M	SP		29.74
04	1953	12	FEW070 BKN110	10.00	VCTS -RA	94	34.4	69	20.8	56	13.3	28	10	220	20	28.15			29.65	AA	T	29.74
04	2023	12	FEW065 SCT090 BKN110	10.00	VCTS	90	32.0	70	20.9	59	15.0	35	14	160	24	28.16			M	SP		29.75
04	2053	12	CLR	10.00	VCTS	88	31.1	69	20.3	58	14.4	36	10	210	21	28.19			29.69	AA	T	29.78
04	2110	12	CLR	10.00		88	31.0	69	20.6	59	15.0	38	8	290		28.22			M	SP		29.81
04	2153	12	CLR	10.00		84	28.9	69	20.5	61	16.1	46	14	130	26	28.27			29.77	AA		29.86
04	2232	12	BKN026	7.00		82	28.0	70	20.8	63	17.0	53	11	150	16	28.29			M	SP		29.89
04	2239	12	FEW026	10.00		82	28.0	70	21.1	64	18.0	55	8	160		28.30			M	SP		29.90
04	2253	12	FEW026	10.00		82	27.8	70	21.1	64	17.8	55	8	150	18	28.30			29.81	AA		29.90
04	2353	12	CLR	10.00		82	27.8	70	20.8	63	17.2	53	5	150		28.27			29.79	AA		29.87

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final) HOURLY OBSERVATIONS TABLE LUKE AFB AIRPORT (23111) GLENDALE, AZ (09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1085 ft. above sea level
Latitude: 33.55
Longitude: -112.366
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
04	0056	0	FEW039 SCT140 BKN160	10.00	-RA	90	32.0	68	19.9	55	13.0	31	14	310		28.48			M	AA		29.63
04	0058	0	FEW039 SCT140 BKN160	10.00	-RA	90	32.0	68	19.9	55	13.0	31	13	310	21	28.48			29.58	AA		29.63
04	0107	0	FEW140	10.00		90	32.0	68	19.9	55	13.0	31	2	300	21	28.49			M	AA		29.64
04	0158	0	BKN160	10.00		90	32.0	67	19.4	53	11.7	28	5	050		28.49			29.59	AA		29.64
04	0258	0	SCT150 BKN180	10.00	VCTS	90	32.2	66	18.9	51	10.7	26	7	020		28.50			29.60	AA		29.65
04	0358	0	SCT120	10.00		89	31.4	67	19.2	53	11.4	29	6	270		28.51			29.61	AA		29.66
04	0458	0	CLR	10.00		85	29.4	66	18.8	54	12.4	35	6	340		28.50			29.60	AA		29.65
04	0558	0	BKN150	10.00		86	29.9	68	20.0	58	14.7	39	9	340		28.53			29.63	AA		29.68
04	0658	0	FEW150 SCT170	10.00		84	28.8	70	21.2	63	17.0	49	7	320		28.55			29.65	AA		29.70
04	0758	0	FEW150 SCT200	10.00		89	31.6	70	21.1	60	15.7	38	10	010		28.56			29.63	AA		29.71
04	0858	0	FEW130 SCT180	10.00		93	33.9	69	20.4	55	12.9	28	10	010		28.58			29.65	AA		29.73
04	0958	0	FEW150 SCT200	10.00		96	35.6	70	20.9	55	12.5	25	5	070		28.59			29.67	AA		29.74
04	1058	0	FEW120 SCT180	10.00		99	37.1	71	21.9	57	13.7	25	3	050		28.59			29.66	AA		29.74
04	1158	0	FEW150 SCT200	10.00		99	37.2	72	22.1	58	14.4	26	8	130		28.58			29.65	AA		29.73
04	1258	0	FEW150 SCT200	10.00		101	38.1	72	22.2	57	13.9	23	3	VR		28.56			29.66	AA		29.71
04	1358	0	CLR	10.00		102	38.8	72	22.3	57	13.7	23	2	VR		28.53			29.63	AA		29.68
04	1458	0	SCT150 SCT200	10.00		103	39.5	72	22.2	56	13.1	21	7	290		28.50			29.60	AA		29.65
04	1558	0	SCT100 SCT200	10.00		103	39.5	72	22.2	56	13.3	21	5	320		28.48			29.58	AA		29.63
04	1658	0	BKN100 BKN200	10.00		103	39.4	73	22.5	57	13.7	22	5	140		28.47			29.57	AA		29.62
04	1708	0	BKN100 BKN200	10.00		102	39.0	71	21.8	55	13.0	21	2	050		28.47			M	AA		29.62
04	1728	0	BKN100 BKN200	10.00		102	39.0	71	21.8	55	13.0	21	6	230		28.47			M	AA		29.62
04	1738	0	BKN090 BKN200	10.00		102	39.0	71	21.8	55	13.0	21	9	200		28.48			M	AA		29.63
04	1748	0	BKN080 BKN200	10.00		100	38.0	73	22.5	59	15.0	26	14	190	21	28.47			M	AA		29.62
04	1758	0	BKN090 BKN190	10.00		99	37.0	73	22.6	60	15.4	28	24	190	30	28.47			29.57	AA		29.62
04	1808	0	BKN080CB BKN180	10.00	VCTS	95	35.0	72	22.3	61	16.0	32	22	200	29	28.48			M	AA	0.24	29.63
04	1818	0	BKN080CB BKN180	10.00	TS	93	34.0	71	21.5	59	15.0	32	17	190		28.49			M	AA	0.24	29.64
04	1828	0	BKN100 BKN180	10.00	TS	93	34.0	72	22.0	61	16.0	34	14	230		28.51			M	AA	0.24	29.66
04	1836	0	BKN080CB BKN200	10.00	TS	91	33.0	72	22.3	63	17.0	39	23	300	25	28.52			M	AA	0.24	29.67
04	1840	0	BKN110	7.00	-TSRA	91	33.0	73	22.6	64	18.0	41	28	310	38	28.51			M	AA	0.24	29.66
04	1841	0	FEW004 BKN110	5.00	-TSRA	91	33.0	74	23.2	66	19.0	44	25	310	38	28.51			M	AA	0.24	29.66
04	1845	0	SCT020 OVC110	2.00	+TSRA	88	31.0	74	23.4	68	20.0	52	21	270	38	28.54			M	AA	0.24	29.69
04	1847	0	FEW002 SCT019 OVC110	1.25	+TSRA	86	30.0	74	23.1	68	20.0	55	21	260	38	28.53			M	AA	0.24	29.68
04	1852	0	FEW002 BKN037 OVC110	1.50	TSRA	86	30.0	74	23.1	68	20.0	55	25	230	30	28.54			M	AA	0.24	29.69
04	1858	0	FEW002 BKN042 OVC110	1.75	+TSRA	84	29.0	73	22.8	68	20.0	59	26	200	48	28.55			29.66	AA	0.24	29.70
04	1900	0	FEW002 BKN038 OVC110	1.75	TSRA	82	28.0	71	21.8	66	19.0	58	26	180	48	28.55			M	AA	0.09	29.70
04	1910	0	FEW002 BKN028 BKN070	6.00	-TSRA	82	28.0	71	21.8	66	19.0	58	18	130	33	28.54			M	AA	0.09	29.69
04	1920	0	FEW002 BKN031 BKN040	10.00	-TSRA	84	29.0	71	21.5	64	18.0	51	20	130	28	28.52			M	AA	0.09	29.67
04	1922	0	FEW002 BKN026	10.00	-TSRA	86	30.0	71	21.5	63	17.0	46	14	160	28	28.53			M	AA	0.09	29.68
04	1926	0	SCT019 BKN050 BKN100CB	10.00	-TSRA	86	30.0	71	21.5	63	17.0	46	16	210	28	28.54			M	AA	0.09	29.69
04	1932	0	FEW019 BKN080CB BKN160	10.00	VCTS	86	30.0	72	22.4	66	19.0	51	13	200		28.54			M	AA	0.09	29.69
04	1958	0	SCT130	10.00		86	30.0	76	24.1	71	21.5	61	14	230		28.56			29.67	AA	0.09	29.71
04	2009	0	FEW110 BKN130	10.00	TS	84	29.0	73	22.8	68	20.0	59	11	290		28.59			M	AA	T	29.74
04	2023	0	BKN090CB BKN120	10.00	TS	86	30.0	74	23.1	68	20.0	55	17	220	21	28.61			M	AA	T	29.76
04	2028	0	FEW090 BKN120	10.00	-TSRA	86	30.0	74	23.1	68	20.0	55	25	200	29	28.61			M	AA	T	29.76
04	2038	0	FEW031 SCT055 SCT070	10.00		82	28.0	74	23.2	70	21.0	67	25	200	29	28.60			M	AA	T	29.75
04	2057	0	FEW015	10.00		82	28.0	73	22.5	68	20.0	63	22	180	28	28.59			M	AA	T	29.74
04	2058	0	FEW015	10.00		82	28.0	73	22.5	68	20.0	63	22	180	28	28.59			29.70	AA	T	29.74
04	2144	0	SCT140	10.00		82	28.0	73	22.5	68	20.0	63	24	300	29	28.65			M	AA	T	29.80
04	2153	0	BKN140	10.00		82	28.0	71	21.8	66	19.0	58	16	260	31	28.65			M	AA	T	29.80
04	2158	0	SCT140	10.00		83	28.5	72	22.0	66	18.7	57	13	250		28.65			29.75	AA	T	29.80
04	2258	0	FEW180	10.00		83	28.1	72	22.3	67	19.6	59	10	080		28.68			29.78	AA		29.83
04	2358	0	FEW240	10.00		82	28.0	70	21.2	64	17.9	55	11	120		28.67			29.78	AA		29.82

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final) HOURLY OBSERVATIONS TABLE PHOENIX GOODYEAR AIRPORT (03186) GOODYEAR, AZ (09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 968 ft. above sea level
Latitude: 33.416
Longitude: -112.383
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
04	0547	0	FEW080 SCT120 BKN200	10.00		88	31.0	66	18.8	52	11.0	29	8	010		28.66			M	AA		29.69
04	0647	0	FEW080 SCT120 BKN200	10.00		84	29.0	68	20.0	59	15.0	43	18	360		28.67			M	AA		29.70
04	0747	0	FEW080 SCT120 BKN200	10.00		90	32.0	71	21.6	61	16.0	38	9	010		28.69			M	AA		29.72
04	0847	0	FEW080 SCT120 BKN200	10.00		91	33.0	69	20.6	57	14.0	32	9	040		28.71			M	AA		29.74
04	0947	0	FEW080 SCT120 BKN200	10.00		97	36.0	70	21.1	55	13.0	24	7	050		28.73			M	AA		29.76
04	1047	0	FEW080 SCT120 BKN200	10.00		97	36.0	71	21.6	57	14.0	26	7	100		28.73			M	AA		29.76
04	1147	0	FEW080 SCT120 BKN200	10.00		100	38.0	72	22.0	57	14.0	24	6	090		28.71			M	AA		29.74
04	1347	0	SCT100	10.00		102	39.0	72	22.3	57	14.0	23	6	VR		28.66			M	AA		29.69
04	1447	0	SCT100 SCT200	10.00		102	39.0	71	21.8	55	13.0	21	10	010		28.64			M	AA		29.67
04	1547	0	SCT100 BKN200	10.00		104	40.0	72	22.1	55	13.0	20	9	300		28.63			M	AA		29.65
04	1647	0	SCT090 BKN200	10.00		102	39.0	71	21.8	55	13.0	21	8	300		28.61			M	AA		29.63
04	1747	0	SCT080CB BKN150 BKN200	10.00		91	33.0	71	21.7	61	16.0	37	17	200	25	28.63			M	AA		29.65
04	1835	0	BKN080CB BKN150 BKN200	10.00	-TSRA	95	35.0	69	20.7	55	13.0	26	20	210		28.64			M	AA		29.67
04	1847	0	BKN080CB BKN150 BKN200	10.00	-TSRA	95	35.0	69	20.7	55	13.0	26	23	190	32	28.65			M	AA		29.68
04	1947	0	BKN150 BKN200 CLR200s	10.00		88	31.0	72	22.1	64	18.0	45	17	190		28.69			M	AA		29.72
04	2047	0	BKN080CB BKN150 OVC200	10.00	RA	81	27.0	73	23.0	70	21.0	69	29	190		28.76			M	AA		29.79

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final)
HOURLY OBSERVATIONS TABLE
GLENDALE MUNICIPAL AIRPORT (53126)
GLENDALE, AZ
(09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1066 ft. above sea level
Latitude: 33.527
Longitude: -112.295
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
04	0547	0	SCT150 BKN200	20.00		88	31.0	66	18.8	52	11.0	29	7	310		28.57			M	AA		29.70
04	0647	0	SCT150 BKN200	20.00		88	31.0	67	19.6	55	13.0	33	8	320		28.58			M	AA		29.71
04	0747	0	SCT150 BKN200	20.00		90	32.0	70	21.0	59	15.0	35	8	330		28.60			M	AA		29.73
04	0847	0	SCT150 BKN200	20.00		93	34.0	68	20.2	54	12.0	27	6	340		28.62			M	AA		29.75
04	0947	0	SCT120 BKN200	20.00		97	36.0	70	20.8	54	12.0	24	3	050		28.63			M	AA		29.76
04	1047	0	SCT120 BKN200	20.00		99	37.0	71	21.4	55	13.0	23	6	050		28.63			M	AA		29.76
04	1147	0	SCT100 BKN200	20.00		99	37.0	71	21.4	55	13.0	23	6	050		28.62			M	AA		29.75
04	1247	0	SCT100 BKN200	20.00		102	39.0	71	21.8	55	13.0	21	6	080		28.59			M	AA		29.72
04	1347	0	SCT100 SCT200	20.00		102	39.0	71	21.8	55	13.0	21		M		28.57			M	AA		29.70
04	1447	0	SCT100 SCT200	20.00		102	39.0	M	M	M	M	M	6	330		28.54			M	AA		29.67
04	1547	0	SCT100 SCT200	20.00		104	40.0	71	21.9	54	12.0	19	3	070		28.52			M	AA		29.65
04	1647	0	SCT100 BKN200	20.00		106	41.0	72	22.2	54	12.0	18	5	300		28.51			M	AA		29.64
04	1747	0	SCT080 BKN100 BKN200	20.00		102	39.0	71	21.8	55	13.0	21	5	VR		28.51			M	AA		29.64
04	1847	0	SCT080 BKN100 BKN200	20.00s	TS	102	39.0	71	21.8	55	13.0	21	14	240	21	28.51			M	AA		29.64
04	1955	0	SCT080 BKN100CB CLR200s	20.00		93	34.0	69	20.4	55	13.0	28	10	100		28.51			M	AA		29.64

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final)
HOURLY OBSERVATIONS TABLE
WILLIAMS GATEWAY AIRPORT (23104)
PHOENIX, AZ
(09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1382 ft. above sea level
Latitude: 33.3
Longitude: -111.666
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
04	0015	0	CLR	10.00		90	32.0	66	18.6	50	10.0	25	10	150		28.25			M	AA		29.70
04	0035	0	CLR	10.00		88	31.0	65	18.3	50	10.0	27	9	120		28.25			M	AA		29.70
04	0055	0	CLR	10.00		88	31.0	64	17.8	48	9.0	25	13	120		28.25			M	AA		29.71
04	0115	0	CLR	10.00		86	30.0	63	17.4	48	9.0	27	10	140		28.25			M	AA		29.71
04	0135	0	CLR	10.00		86	30.0	64	17.9	50	10.0	29	10	120		28.25			M	AA		29.70
04	0155	0	CLR	10.00		86	30.0	64	17.9	50	10.0	29	8	130		28.25			M	AA		29.70
04	0215	0	CLR	10.00		86	30.0	64	17.9	50	10.0	29	0	000		28.25			M	AA		29.70
04	0235	0	CLR	10.00		86	30.0	64	17.9	50	10.0	29	9	090		28.25			M	AA		29.70
04	0255	0	CLR	10.00		86	30.0	64	17.9	50	10.0	29	5	100		28.25			M	AA		29.70
04	0315	0	CLR	10.00		86	30.0	64	17.9	50	10.0	29	0	000		28.25			M	AA		29.70
04	0335	0	CLR	10.00		84	29.0	64	17.5	50	10.0	31	6	100		28.25			M	AA		29.70
04	0355	0	CLR	10.00		82	28.0	63	17.2	50	10.0	33	0	000		28.25			M	AA		29.71
04	0415	0	CLR	10.00		82	28.0	63	17.2	50	10.0	33	0	000		28.25			M	AA		29.70
04	0435	0	CLR	10.00		82	28.0	63	17.2	50	10.0	33	5	110		28.25			M	AA		29.70
04	0450	0	BKN120 BKN200	20.00		84	29.0	65	18.0	52	11.0	33	0	000		28.25			M	AA		29.70
04	0550	0	BKN120 BKN200	20.00		84	29.0	65	18.0	52	11.0	33	8	100		28.25			M	AA		29.71
04	0647	0	BKN120 BKN200	20.00		84	29.0	65	18.0	52	11.0	33	7	110		28.28			M	AA		29.74
04	0747	0	SCT080 BKN120	45.00		84	29.0	65	18.6	54	12.0	36	7	120		28.30			M	AA		29.76
04	0847	0	SCT080 BKN120	45.00		91	33.0	68	19.8	54	12.0	29	6	150		28.31			M	AA		29.77
04	0947	0	SCT080 BKN200	45.00		93	34.0	67	19.6	52	11.0	25	8	100		28.33			M	AA		29.79
04	1047	0	SCT080 BKN200	45.00		99	37.0	70	21.1	54	12.0	22	7	190		28.34			M	AA		29.80
04	1147	0	SCT100	45.00		99	37.0	69	20.6	52	11.0	21	3	170		28.31			M	AA		29.77
04	1253	0	FEW120	45.00		100	38.0	69	20.8	52	11.0	20	0	000		28.29			M	AA		29.75
04	1347	0	FEW120 SCT150	45.00		100	38.0	69	20.8	52	11.0	20	7	230		28.27			M	AA		29.73
04	1447	0	SCT100	45.00		100	38.0	69	20.8	52	11.0	20	9	290		28.25			M	AA		29.70
04	1547	0	SCT100 BKN150	35.00		100	38.0	69	20.8	52	11.0	20	9	250		28.22			M	AA		29.68
04	1647	0	SCT100 BKN150	35.00		99	37.0	69	20.6	52	11.0	21	6	270		28.22			M	AA		29.67
04	1747	0	BKN100 BKN200	35.00		99	37.0	69	20.6	52	11.0	21	7	210		28.22			M	AA		29.68
04	1800	0	BKN100 BKN200	10.00	BLDU	99	37.0	71	21.8	57	14.0	25	47	210	54	28.25			M	AA		29.70
04	1847	0	SCT100 BKN150	20.00		93	34.0	68	20.1	54	12.0	27	17	230	25	28.25			M	AA		29.71
04	1937	0	CLR100 CLR200	M		37	3.0s	M	M	M	M	M	25	210	33	28.32			M	AA		29.78
04	1950	0	CLR100 CLR200	M		37	3.0	M	M	M	M	M	21	230	38	28.34			M	AA		29.80
04	2030	0	SCT100 BKN200	4.00	HZ	84	29.0s	68	20.0	59	15.0	43	18	230	30	28.34			M	AA		29.80
04	2050	0	SCT100 BKN150	20.00		84	29.0	67	19.4	57	14.0	40	8	230		28.37			M	AA		29.83
04	2147	0	SCT100 BKN150	20.00		81	27.0	68	20.0	61	16.0	51	18	110	26	28.42			M	AA		29.88
04	2247	0	SCT100 BKN150	20.00		81	27.0	69	20.6	63	17.0	54	11	110	25	28.42			M	AA		29.88
04	2347	0	SCT100 BKN150	20.00		81	27.0	68	20.0	61	16.0	51	6	120		28.42			M	AA		29.88

Dynamically generated Fri Sep 12 16:51:27 EDT 2014 via http://cdo.ncdc.noaa.gov/qclcd/QCLCD

On 9/25/2014, I spoke with the NWS Phoenix office in regards to the high wind speed and gust recorded at 1800 hours. The NWS Phoenix office believes those values to likely be instrument errors and not actual recorded wind speeds and gusts. Matt Poppen - Maricopa Association of Governments.

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final) HOURLY OBSERVATIONS TABLE FALCON FIELD AIRPORT (03185) MESA, AZ (09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1380 ft. above sea level
Latitude: 33.466
Longitude: -111.733
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
04	0555	0	BKN070 BKN150	30.00		88	31.0	67	19.3	54	12.0	31	7	010		28.22			M	AA		29.69
04	0750	0	SCT080 BKN120	40.00		90	32.0	67	19.6	54	12.0	29	9	100		28.26			M	AA		29.73
04	0853	0	SCT080 BKN120	40.00		91	33.0	68	19.8	54	12.0	29	9	130		28.29			M	AA		29.76
04	0951	0	SCT080 BKN120	40.00		93	34.0	68	20.1	54	12.0	27	8	180		28.30			M	AA		29.77
04	1250	0	SCT100	40.00		102	39.0	71	21.8	55	13.0	21	5	VR		28.26			M	AA		29.73
04	1452	0	SCT100 BKN180	40.00		102	39.0	71	21.8	55	13.0	21	11	190		28.21			M	AA		29.68
04	1554	0	SCT100 BKN180	40.00		104	40.0	71	21.8	54	12.0	19	6	240		28.18			M	AA		29.65
04	1847	0	BKN180	40.00		97	36.0	68	19.8	50	10.0	20	13	200		28.21			M	AA		29.68

Dynamically generated Fri Sep 12 16:49:19 EDT 2014 via http://cdo.ncdc.noaa.gov/qclcd/QCLCD

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final) HOURLY OBSERVATIONS TABLE PHOENIX DEER VALLEY ARPT (03184) PHOENIX, AZ (09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1455 ft. above sea level
Latitude: 33.688
Longitude: -112.081
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
04	0053	12	CLR	10.00		89	31.7	64	17.5	46	7.8	23	7	360		28.12			29.58	AA		29.67
04	0153	12	CLR	10.00		85	29.4	63	17.0	47	8.3	27	5	110		28.12			29.58	AA		29.67
04	0253	12	CLR	10.00		89	31.7	66	18.7	51	10.6	27	8	130		28.12			29.58	AA		29.67
04	0353	12	CLR	10.00		87	30.6	66	18.6	52	11.1	30	7	080		28.13			29.59	AA		29.68
04	0453	12	CLR	10.00		86	30.0	66	18.6	53	11.7	32	8	090		28.12			29.59	AA		29.67
04	0553	12	CLR	10.00		85	29.4	66	18.7	54	12.2	35	3	340		28.15			29.61	AA		29.70
04	0653	12	CLR	10.00		86	30.0	66	18.6	53	11.7	32	6	030		28.17			29.63	AA		29.72
04	0753	12	CLR	10.00		86	30.0	64	17.9	50	10.0	29	3	040		28.18			29.65	AA		29.74
04	0853	12	CLR	10.00		93	33.9	68	19.9	53	11.7	26	5	040		28.20			29.67	AA		29.75
04	0953	12	CLR	10.00		93	33.9	68	19.9	53	11.7	26	6	100		28.21			29.68	AA		29.77
04	1053	12	SCT110	10.00		96	35.6	69	20.4	53	11.7	23	7	140		28.21			29.68	AA		29.77
04	1153	12	CLR	10.00		97	36.1	69	20.8	54	12.2	24	6	VR		28.20			29.67	AA		29.76
04	1253	12	FEW110	10.00		100	37.8	70	21.2	54	12.2	21	9	210		28.18			29.65	AA		29.74
04	1353	12	FEW110	10.00		99	37.2	70	21.1	54	12.2	22	0	000		28.16			29.63	AA		29.71
04	1453	12	CLR	10.00		100	37.8	69	20.5	51	10.6	19	7	210		28.14			29.59	AA		29.69
04	1553	12	CLR	10.00		102	38.9	69	20.6	50	10.0	17	5	290		28.11			29.57	AA		29.66
04	1653	12	CLR	10.00		102	38.9	70	20.8	51	10.6	18	11	280		28.10			29.56	AA		29.65
04	1753	12	CLR	10.00		100	37.8	69	20.3	50	10.0	19	0	000		28.11			29.57	AA		29.66
04	1853	12	CLR	10.00		99	37.2	68	20.1	50	10.0	19	7	200		28.13			29.59	AA		29.68
04	1929	12	BKN100	10.00	TS	91	33.0	69	20.6	57	14.0	32	16	220	24	28.16			M	SP		29.71
04	1953	12	FEW090	10.00	TS	91	32.8	69	20.3	56	13.3	31	8	220		28.17			29.64	AA	T	29.72
04	2053	12	SCT100	10.00	TS	91	32.8	68	20.0	55	12.8	30	5	VR		28.23			29.70	AA		29.79
04	2153	12	CLR	10.00		87	30.6	69	20.7	60	15.6	40	11	130		28.28			29.76	AA		29.84
04	2253	12	SCT027	9.00		83	28.3	69	20.4	61	16.1	48	10	140		28.30			29.78	AA		29.86
04	2353	12	CLR	10.00		81	27.2	69	20.6	63	17.2	54	15	130	20	28.28			29.75	AA		29.84

Dynamically generated Fri Sep 12 16:50:27 EDT 2014 via http://cdo.ncdc.noaa.gov/qclcd/QCLCD

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final)
HOURLY OBSERVATIONS TABLE
CHANDLER MUNICIPAL AIRPORT (53128)
CHANDLER, AZ
(09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1243 ft. above sea level
Latitude: 33.268
Longitude: -111.812
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
04	0547	0	SCT120 BKN200	15.00		79	26.0	65	18.5	57	14.0	47	6	080		28.37			M	AA		29.68
04	0647	0	SCT120 BKN200	40.00		84	29.0	68	20.0	59	15.0	43	3	110		28.39			M	AA		29.70
04	0747	0	SCT120 BKN200	40.00		86	30.0	69	20.3	59	15.0	40	5	120		28.43			M	AA		29.74
04	0847	0	SCT120 BKN200	40.00		93	34.0	69	20.4	55	13.0	28	6	VR		28.43			M	AA		29.75
04	0950	0	SCT120 BKN200	40.00		95	35.0	69	20.7	55	13.0	26	9	200		28.46			M	AA		29.77
04	1047	0	SCT100 BKN200	40.00		99	37.0	70	21.1	54	12.0	22	7	150		28.46			M	AA		29.77
04	1147	0	FEW100 SCT200	40.00		99	37.0	70	21.1	54	12.0	22	6	140		28.43			M	AA		29.75
04	1247	0	SCT080 SCT120	40.00		100	38.0	70	21.3	54	12.0	21	6	270		28.42			M	AA		29.73
04	1347	0	SCT120	40.00		102	39.0	71	21.8	55	13.0	21	13	230		28.39			M	AA		29.70
04	1447	0	SCT120 BKN200	40.00		100	38.0	71	21.5	55	13.0	22	8	170		28.36			M	AA		29.67
04	1547	0	SCT100 BKN200	40.00		102	39.0	71	21.8	55	13.0	21	8	170		28.34			M	AA		29.65
04	1647	0	SCT100 BKN200	40.00		100	38.0	72	22.0	57	14.0	24	8	160		28.33			M	AA		29.64
04	1747	0	SCT100 BKN200	20.00		97	36.0	71	21.5	57	14.0	26	17	210		28.35			M	AA		29.66
04	1847	0	BKN120 BKN200	15.00		91	33.0	71	21.7	61	16.0	37	14	160		28.37			M	AA		29.68
04	1928	0	OVC004	1.00	BLDU	90	32.0	M	M	63	17.0	M	56	210	78	M			M	AA		M
04	1947	0	M	M		M	M	M	M	M	M	M	67	210	90	M			M	AA		M
04	2010	0	SCT030 BKN050	15.00		79	26.0s	70	21.3	66	19.0	65	29s	210	40	28.44			M	AA		29.76
04	2047	0	BKN070	15.00		82	28.0	70	21.1	64	18.0	55	17	180		28.47			M	AA		29.79

Dynamically generated Fri Sep 12 16:44:10 EDT 2014 via http://cdo.ncdc.noaa.gov/qclcd/QCLCD

On 9/25/2014, I spoke with the NWS Phoenix office in regards to the high wind speeds and gusts recorded at 1928 and 1947 hours. The NWS Phoenix office believes those values to likely be instrument errors and not actual recorded wind speeds and gusts. Matt Poppen - Maricopa Association of Governments.

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL DATA Climatological (final) HOURLY OBSERVATIONS TABLE CASA GRANDE MUNICIPAL ARPT (03,914) CASA GRANDE, AZ (09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1462 ft. above sea level
Latitude: 32.95
Longitude: -111.766
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
04	0015	0	CLR	10.00		91	33.0	68	19.8	54	12.0	29	7	190		28.17				AA		29.71
04	0035	0	CLR	10.00		91	33.0	68	19.8	54	12.0	29	0	000		28.17				AA		29.71
04	0055	0	CLR	10.00		90	32.0	67	19.6	54	12.0	29	0	000		28.17				AA		29.71
04	0115	0	CLR	10.00		90	32.0	67	19.6	54	12.0	29	0	000		28.17				AA		29.71
04	0135	0	CLR	10.00		90	32.0	67	19.6	54	12.0	29	6	110		28.16				AA		29.70
04	0155	0	CLR	10.00		90	32.0	67	19.6	54	12.0	29	0	000		28.16				AA		29.70
04	0215	0	CLR	10.00		88	31.0	67	19.3	54	12.0	31	0	000		28.15				AA		29.69
04	0235	0	CLR	10.00		90	32.0	67	19.6	54	12.0	29	0	000		28.16				AA		29.70
04	0255	0	CLR	10.00		88	31.0	66	18.7	52	11.0	29	0	000		28.16				AA		29.70
04	0315	0	CLR	10.00		86	30.0	65	18.4	52	11.0	31	0	000		28.16				AA		29.70
04	0335	0	CLR	10.00		84	29.0	65	18.0	52	11.0	33	0	000		28.16				AA		29.70
04	0355	0	CLR	10.00		82	28.0	64	17.7	52	11.0	35	0	000		28.16				AA		29.70
04	0415	0	CLR	10.00		84	29.0	65	18.0	52	11.0	33	0	000		28.16				AA		29.70
04	0435	0	CLR	10.00		84	29.0	65	18.0	52	11.0	33	0	000		28.16				AA		29.70
04	0455	0	CLR	10.00		84	29.0	65	18.0	52	11.0	33	0	000		28.16				AA		29.70
04	0515	0	CLR	10.00		84	29.0	65	18.5	54	12.0	36	0	000		28.16				AA		29.70
04	0535	0	CLR	10.00		84	29.0	65	18.5	54	12.0	36	0	000		28.17				AA		29.71
04	0555	0	CLR	10.00		84	29.0	65	18.5	54	12.0	36	0	000		28.17				AA		29.71
04	0615	0	CLR	10.00		84	29.0	65	18.5	54	12.0	36	0	000		28.18				AA		29.72
04	0635	0	CLR	10.00		84	29.0	65	18.5	54	12.0	36	0	000		28.19				AA		29.73
04	0655	0	CLR	10.00		84	29.0	65	18.5	54	12.0	36	7	110		28.20				AA		29.74
04	0715	0	CLR	10.00		84	29.0	65	18.6	54	12.0	36	7	110		28.21				AA		29.75
04	0735	0	CLR	10.00		84	29.0	65	18.6	54	12.0	36	0	000		28.22				AA		29.76
04	0755	0	CLR	10.00		84	29.0	65	18.6	54	12.0	36	0	000		28.23				AA		29.77
04	0815	0	CLR	10.00		84	29.0	65	18.6	54	12.0	36	0	000		28.23				AA		29.77
04	0835	0	CLR	10.00		86	30.0	66	18.9	54	12.0	33	0	000		28.24				AA		29.78
04	0855	0	CLR	10.00		88	31.0	67	19.3	54	12.0	31	0	000		28.24				AA		29.78
04	0915	0	CLR	10.00		91	33.0	68	20.0	55	13.0	30	3	150		28.25				AA		29.79
04	0935	0	CLR	10.00		93	34.0	69	20.4	55	13.0	28	6	160		28.25				AA		29.79
04	0955	0	CLR	10.00		95	35.0	69	20.4	54	12.0	25	9	170		28.25				AA		29.79
04	1015	0	CLR	10.00		97	36.0	69	20.8	54	12.0	24	11	170		28.25				AA		29.80
04	1035	0	CLR	10.00		97	36.0	69	20.8	54	12.0	24	9	190		28.25				AA		29.80
04	1055	0	CLR	10.00		99	37.0	70	21.1	54	12.0	22	10	150	17	28.25				AA		29.79
04	1115	0	CLR	10.00		99	37.0	70	21.1	54	12.0	22	11	170	16	28.24				AA		29.78
04	1135	0	CLR	10.00		99	37.0	70	21.1	54	12.0	22	0	000		28.24				AA		29.78
04	1155	0	CLR	10.00		99	37.0	70	21.1	54	12.0	22	0	000		28.23				AA		29.77
04	1215	0	CLR	10.00		99	37.0	70	21.3	55	13.0	23	7	200	16	28.22				AA		29.76
04	1235	0	CLR	10.00		100	38.0	71	21.5	55	13.0	22	3	210		28.22				AA		29.76
04	1255	0	CLR	10.00		100	38.0	71	21.5	55	13.0	22	13	210		28.21				AA		29.75
04	1315	0	CLR	10.00		100	38.0	71	21.5	55	13.0	22	0	000		28.21				AA		29.75
04	1335	0	CLR	10.00		100	38.0	71	21.5	55	13.0	22	3	250		28.19				AA		29.73
04	1355	0	CLR	10.00		100	38.0	71	21.5	55	13.0	22	0	000		28.18				AA		29.72
04	1415	0	CLR	10.00		102	39.0	72	22.3	57	14.0	23	7	250		28.17				AA		29.71
04	1435	0	CLR	10.00		102	39.0	72	22.3	57	14.0	23	9	210		28.16				AA		29.70
04	1455	0	CLR	10.00		100	38.0	71	21.5	55	13.0	22	0	000		28.15				AA		29.69
04	1515	0	CLR	10.00		102	39.0	72	22.3	57	14.0	23	10	290		28.15				AA		29.69
04	1535	0	CLR	10.00		100	38.0	72	22.0	57	14.0	24	0	000		28.14				AA		29.68
04	1555	0	CLR	10.00		100	38.0	72	22.0	57	14.0	24	17	290	21	28.14				AA		29.68
04	1615	0	CLR	10.00	VCTS	99	37.0	71	21.8	57	14.0	25	8	300		28.13				AA		29.67
04	1635	0	CLR	10.00	VCTS	99	37.0	70	21.3	55	13.0	23	6	300		28.14				AA		29.68
04	1655	0	CLR	9.00	VCTS	97	36.0	71	21.5	57	14.0	26	24	170	36	28.15				AA		29.69
04	1715	0	CLR	10.00	VCTS	91	33.0	71	21.7	61	16.0	37	17	180	23	28.17				AA		29.71
04	1735	0	CLR	10.00		91	33.0	69	20.6	57	14.0	32	11	170		28.18				AA		29.72
04	1755	0	CLR	10.00		91	33.0	70	21.1	59	15.0	34	8	230		28.19				AA		29.73
04	1815	0	CLR	10.00		91	33.0	70	21.1	59	15.0	34	14	230		28.19				AA		29.73
04	1835	0	CLR	10.00		90	32.0	71	21.5	61	16.0	38	8	220		28.19				AA		29.73
04	1855	0	CLR	10.00		90	32.0	70	21.0	59	15.0	35	9	210		28.22				AA		29.76
04	1915	0	OVC003	0.50		81	27.0	70	21.0	64	18.0	56	30	190	43	28.21				AA		29.75
04	1935	0	SCT003	3.00		81	27.0	69	20.6	63	17.0	54	22	210	37	28.23				AA		29.77
04	1955	0	CLR	9.00		82	28.0	68	20.2	61	16.0	49	18	210	30	28.22				AA		29.76
04	2015	0	CLR	10.00		82	28.0	68	20.2	61	16.0	49	15	220	23	28.25				AA		29.79
04	2035	0	CLR	10.00		81	27.0	68	20.0	61	16.0	51	9	220		28.27				AA		29.81
04	2055	0	CLR	10.00		82	28.0	66	19.0	57	14.0	43	13	220		28.27				AA		29.81
04	2115	0	CLR	10.00		79	26.0	67	19.7	61	16.0	54	13	180	18	28.27				AA		29.82
04	2135	0	CLR	10.00		79	26.0	67	19.7	61	16.0	54	0	000		28.29				AA		29.84
04	2155	0	CLR	10.00		79	26.0	67	19.7	61	16.0	54	0	000		28.31				AA		29.86
04	2215	0	CLR	10.00		79	26.0	69	20.3	63	17.0	58	14	090		28.32				AA		29.87
04	2235	0	CLR	10.00		79	26.0	69	20.3	63	17.0	58	14	110	20	28.32				AA		29.87
04	2255	0	CLR	10.00		77	25.0	69	20.3	64	18.0	64	5	120		28.33				AA		29.88
04	2315	0	CLR	10.00		79	26.0	69	20.3	63	17.0	58	5	080		28.33				AA		29.88

04	2335	0	CLR	10.00		81	27.0	68	20.0	61	16.0	51	0	000		28.33			I	AA		29.88
04	2355	0	CLR	10.00		79	26.0	67	19.7	61	16.0	54	0	000		28.33			I	AA		29.88

Dynamically generated Fri Sep 12 16:40:17 EDT 2014 via http://cdo.ncdc.noaa.gov/qclcd/QCLCD

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final) HOURLY OBSERVATIONS TABLE BUCKEYE MUNICIPAL AIRPORT (00226) BUCKEYE, AZ (09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1021 ft. above sea level
Latitude: 33.417
Longitude: -112.683
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
04	0015	0	CLR044 FEW075 CLR075 BKN120 CLR120	10.00		88	31.0	67	19.6	55	13.0	33	0	000		28.57			M	AA		29.65
04	0035	0	CLR044 OVC120 CLR120	10.00		88	31.0	67	19.6	55	13.0	33	3	010		28.57			M	AA		29.65
04	0055	0	CLR050 FEW070 CLR070 OVC120 CLR120	10.00		88	31.0	67	19.6	55	13.0	33	6	360		28.57			M	AA		29.65
04	0115	0	CLR120	10.00		88	31.0	68	20.1	57	14.0	35	0	000		28.57			M	AA		29.65
04	0135	0	CLR120	10.00		88	31.0	68	20.1	57	14.0	35	0	000		28.57			M	AA		29.65
04	0155	0	CLR120	10.00		86	30.0	68	19.8	57	14.0	37	0	000		28.57			M	AA		29.65
04	0215	0	CLR120	10.00		86	30.0	69	20.3	59	15.0	40	0	000		28.57			M	AA		29.65
04	0235	0	CLR120	10.00		86	30.0	68	19.8	57	14.0	37	0	000		28.57			M	AA		29.65
04	0255	0	CLR120	10.00		88	31.0	68	20.1	57	14.0	35	3	040		28.57			M	AA		29.65
04	0315	0	CLR120	10.00		86	30.0	69	20.3	59	15.0	40	6	070		28.57			M	AA		29.65
04	0335	0	CLR090 OVC120 CLR120	10.00		86	30.0	69	20.3	59	15.0	40	0	000		28.58			M	AA		29.66
04	0355	0	CLR090 OVC120 CLR120	10.00		86	30.0	69	20.3	59	15.0	40	5	080		28.58			M	AA		29.66
04	0415	0	CLR120	10.00		86	30.0	69	20.3	59	15.0	40	3	050		28.57			M	AA		29.65
04	0435	0	CLR120	10.00		84	29.0	68	20.0	59	15.0	43	3	030		28.57			M	AA		29.65
04	0455	0	CLR100 OVC120 CLR120	10.00		84	29.0	68	20.0	59	15.0	43	6	360		28.57			M	AA		29.65
04	0515	0	CLR120	10.00		84	29.0	67	19.4	57	14.0	40	8	350		28.58			M	AA		29.66
04	0535	0	CLR120	10.00		84	29.0	67	19.4	57	14.0	40	9	350		28.59			M	AA		29.67
04	0555	0	CLR120	10.00		84	29.0	67	19.4	57	14.0	40	9	350		28.60			M	AA		29.68
04	0615	0	CLR120	10.00		84	29.0	68	20.0	59	15.0	43	8	010		28.61			M	AA		29.69
04	0635	0	CLR120	10.00		84	29.0	68	20.0	59	15.0	43	7	360		28.61			M	AA		29.69
04	0655	0	CLR	10.00		84	29.0	68	20.0	59	15.0	43	8	330		28.62			M	AA		29.70
04	0715	0	CLR	10.00		84	29.0	69	20.6	61	16.0	46	10	340		28.62			M	AA		29.70
04	0735	0	CLR	10.00		84	29.0	69	20.6	61	16.0	46	9	350		28.63			M	AA		29.71
04	0755	0	CLR	10.00		86	30.0	70	20.9	61	16.0	43	9	340		28.63			M	AA		29.71
04	0815	0	CLR	10.00		90	32.0	71	21.6	61	16.0	38	7	020		28.64			M	AA		29.72
04	0835	0	CLR	10.00		90	32.0	71	21.6	61	16.0	38	0	000		28.65			M	AA		29.73
04	0855	0	CLR	10.00		90	32.0	71	21.6	61	16.0	38	5	170		28.66			M	AA		29.74
04	0915	0	CLR	7.00		91	33.0	72	22.3	63	17.0	39	6	170		28.67			M	AA		29.75
04	0935	0	CLR	7.00		91	33.0	71	21.7	61	16.0	37	5	200		28.67			M	AA		29.75
04	0955	0	CLR	7.00		91	33.0	71	21.7	61	16.0	37	3	170		28.67			M	AA		29.75
04	1015	0	CLR	5.00		93	34.0	71	21.5	59	15.0	32	6	210		28.67			M	AA		29.75
04	1035	0	CLR	10.00		99	37.0	70	21.1	54	12.0	22	8	120		28.67			M	AA		29.75
04	1055	0	CLR	10.00		99	37.0	70	21.1	54	12.0	22	3	080		28.67			M	AA		29.75
04	1115	0	CLR	8.00		99	37.0	71	21.4	55	13.0	23	5	120		28.66			M	AA		29.74
04	1135	0	CLR	8.00		97	36.0	70	21.1	55	13.0	24	7	110		28.66			M	AA		29.74
04	1155	0	CLR	9.00		99	37.0	71	21.4	55	13.0	23	6	090		28.65			M	AA		29.73
04	1215	0	CLR	9.00		100	38.0	71	21.5	55	13.0	22	6	120		28.65			M	AA		29.73
04	1235	0	CLR	9.00		99	37.0	71	21.4	55	13.0	23	7	110		28.64			M	AA		29.72
04	1255	0	CLR	9.00		100	38.0	71	21.5	55	13.0	22	5	100		28.63			M	AA		29.71
04	1315	0	CLR	8.00		100	38.0	71	21.5	55	13.0	22	3	150		28.63			M	AA		29.71
04	1335	0	CLR	8.00		100	38.0	71	21.5	55	13.0	22	8	070		28.62			M	AA		29.70
04	1355	0	CLR	8.00		100	38.0	71	21.5	55	13.0	22	5	070		28.61			M	AA		29.69
04	1415	0	CLR	9.00		100	38.0	71	21.5	55	13.0	22	5	100		28.60			M	AA		29.68
04	1435	0	CLR	9.00		102	39.0	71	21.8	55	13.0	21	5	090		28.59			M	AA		29.67
04	1455	0	CLR	9.00		102	39.0	71	21.8	55	13.0	21	3	130		28.58			M	AA		29.66
04	1515	0	CLR	10.00		102	39.0	71	21.8	55	13.0	21	5	110		28.57			M	AA		29.65
04	1535	0	CLR	10.00		102	39.0	71	21.8	55	13.0	21	3	070		28.56			M	AA		29.64
04	1555	0	CLR	10.00		102	39.0	71	21.8	55	13.0	21	0	000		28.56			M	AA		29.64
04	1615	0	CLR	10.00		102	39.0	71	21.8	55	13.0	21	6	080		28.55			M	AA		29.63
04	1635	0	CLR	10.00		102	39.0	71	21.8	55	13.0	21	3	090		28.55			M	AA		29.63
04	1655	0	CLR	10.00		100	38.0	71	21.5	55	13.0	22	6	070		28.54			M	AA		29.62
04	1715	0	CLR	10.00		100	38.0	71	21.5	55	13.0	22	6	090		28.55			M	AA	0.01	29.63
04	1735	0	CLR042 FEW060 CLR060	7.00		93	34.0	71	21.5	59	15.0	32	18	150		28.57			M	AA	0.01	29.65
04	1755	0	M	2.00		79	26.0	74	23.4	72	22.0	79	30	200	44	28.61			M	AA	0.01	29.69
04	1815	0	FEW004 BKN032 OVC095	2.50		75	24.0	70	21.3	68	20.0	79	9	290	29	28.63			M	AA	0.27	29.71
04	1835	0	FEW029 SCT041 SCT090	10.00		79	26.0	69	20.6	64	18.0	60	3	250		28.60			M	AA	0.27	29.68
04	1855	0	SCT100	10.00		82	28.0	74	23.2	70	21.0	67	9	140		28.60			M	AA	0.27	29.68
04	1915	0	FEW100	10.00		82	28.0	75	23.9	72	22.0	72	8	120		28.62			M	AA		29.70
04	1935	0	SCT100 BKN120	10.00		81	27.0	77	24.8	75	24.0	82	9	090		28.64			M	AA		29.72
04	1955	0	BKN090 OVC120	10.00		82	28.0	74	23.2	70	21.0	67	16	130		28.66			M	AA		29.74
04	2015	0	FEW003 BKN090 OVC120	5.00		81	27.0	70	21.0	64	18.0	56	26	180	33	28.69			M	AA	0.11	29.77
04	2035	0	FEW005 SCT041 BKN055	8.00		77	25.0	71	21.6	68	20.0	74	11	180	21	28.69			M	AA	0.11	29.77
04	2055	0	SCT047 BKN070 OVC120	9.00		77	25.0	71	21.6	68	20.0	74	5	070		28.70			M	AA	0.11	29.78
04	2115	0	FEW070 FEW100	10.00		77	25.0	74	23.0	72	22.0	85	9	070		28.71			M	AA		29.80
04	2135	0	BKN120	10.00		81	27.0	72	22.3	68	20.0	65	9	020		28.74			M	AA		29.82
04	2155	0	FEW060 OVC120	10.00		81	27.0	73	23.0	70	21.0	69	9	010		28.74			M	AA		29.82
04	2215	0	OVC120	10.00		79	26.0	70	21.3	66	19.0	65	14	340		28.74			M	AA		29.82
04	2235	0	SCT120	10.00		81	27.0	69	20.7	63	17.0	54	13	350	17	28.73			M	AA		29.81
04	2255	0	SCT040 SCT055	10.00		81	27.0	69	20.7	63	17.0	54	7	350		28.73			M	AA		29.81
04	2315	0	FEW041 BKN048 BKN050	10.00		79	26.0	70	21.3	66	19.0	65	10	110		28.74			M	AA		29.83
04	2335	0	BKN060 OVC080	10.00		77	25.0	71	21.6	68	20.0	74	6	120		28.74			M	AA		29.83
04	2355	0	SCT060 BKN080	10.00		77	25.0	71	21.6	68	20.0	74	6	150		28.74			M	AA		29.83

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA
(may be updated)
HOURLY OBSERVATIONS TABLE
PHOENIX SKY HARBOR INTL AIRPORT (23183)
PHOENIX, AZ
(09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1107 ft. above sea level
Latitude: 33.427
Longitude: -112.003
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
06	0051	11	CLR	10.00		90	32.2	70	21.0	59	15.0	35	7	080		28.69			29.80	AA		29.87
06	0151	11	CLR	10.00		91	32.8	73	22.9	65	18.3	42	9	290		28.69			29.81	AA		29.87
06	0251	11	CLR	10.00		89	31.7	73	22.9	66	18.9	47	11	290		28.69			29.80	AA		29.87
06	0351	11	CLR	10.00		88	31.1	73	22.8	66	18.9	48	11	280		28.69			29.81	AA		29.87
06	0451	11	CLR	10.00		87	30.6	73	22.6	66	18.9	50	11	280		28.70			29.82	AA		29.88
06	0551	11	SCT150	10.00		86	30.0	73	22.5	66	18.9	51	8	310		28.71			29.83	AA		29.89
06	0651	11	FEW150 SCT200	10.00		86	30.0	73	22.5	66	18.9	51	7	290		28.73			29.85	AA		29.91
06	0751	11	FEW150 SCT180	10.00		87	30.6	73	22.6	66	18.9	50	7	290		28.75			29.86	AA		29.93
06	0851	11	FEW120 SCT150	10.00		89	31.7	73	22.6	65	18.3	45	8	300		28.75			29.87	AA		29.93
06	0951	11	FEW120 SCT150	10.00		91	32.8	74	23.2	66	18.9	44	0	000		28.76			29.88	AA		29.94
06	1051	11	FEW120 SCT150	10.00		94	34.4	74	23.1	64	17.8	37	5	VR		28.74			29.86	AA		29.92
06	1151	11	SCT120 SCT200	10.00		96	35.6	74	23.4	64	17.8	35	7	260		28.72			29.83	AA		29.90
06	1251	11	SCT120 SCT200	10.00		99	37.2	73	23.0	61	16.1	29	10	310		28.70			29.81	AA		29.88
06	1351	11	SCT120 SCT200	10.00		100	37.8	74	23.1	61	16.1	28	8	250		28.66			29.78	AA		29.84
06	1451	11	FEW110 SCT250	10.00		102	38.9	73	22.6	58	14.4	23	6	VR		28.64			29.75	AA		29.81
06	1551	11	FEW110 SCT250	10.00		102	38.9	73	22.6	58	14.4	23	7	260		28.62			29.73	AA		29.79
06	1651	11	FEW110 SCT250	10.00		102	38.9	72	22.3	57	13.9	23	9	300		28.61			29.71	AA		29.78
06	1751	11	SCT140 SCT200 BKN250	10.00		102	38.9	73	22.6	58	14.4	23	8	240		28.61			29.72	AA		29.78
06	1845	11	SCT020 SCT140 BKN200	1.75		97	36.0	73	22.6	61	16.0	30	26	180	36	28.63			M	SP		29.80
06	1847	11	SCT020 BKN110CB CLR200s	1.25		95	35.0	72	22.3	61	16.0	32	22	170	36	28.64			M	SP		29.81
06	1851	11	SCT020 BKN110CB CLR200s	1.25		94	34.4	73	22.5	62	16.7	35	20	180	36	28.64			29.75	AA		29.81
06	1854	11	BKN017 BKN110CB CLR200s	1.50		94	34.4	73	22.5	62	16.7	35	22	180	34	28.65			M	SP		29.82
06	1858	11	BKN014 BKN110CB CLR200s	2.00		93	33.9	72	22.3	62	16.7	36	25	190	36	28.65			M	SP		29.82
06	1907	11	BKN014 BKN110CB CLR200s	4.00		89	31.7	72	22.3	64	17.8	44	23	180	38	28.65			M	SP		29.82
06	1920	11	BKN011 BKN110 BKN200	5.00		88	31.1	72	22.1	64	17.8	45	20	180	34	28.66			M	SP		29.83
06	1951	11	FEW010 BKN110 BKN200	10.00		89	31.7	72	22.0	63	17.2	42	28	070	32	28.69			29.81	AA		29.87
06	2005	11	FEW010 BKN110 BKN200	10.00		89	31.7	72	22.0	63	17.2	42	21	100	25	28.70			M	SP		29.88
06	2051	11	BKN100 BKN120 BKN150	10.00		88	31.1	72	22.2	64	17.8	45	14	110		28.73			29.84	AA		29.91
06	2151	11	BKN100 BKN120 BKN150	10.00		88	31.1	71	21.5	62	16.7	42	5	090		28.70			29.82	AA		29.88
06	2251	11	BKN100 BKN120 BKN150	10.00		88	31.1	71	21.5	62	16.7	42	6	090		28.69			29.80	AA		29.86
06	2351	11	FEW100 SCT120 BKN150	10.00		87	30.6	71	21.7	63	17.2	45	11	150		28.70			29.82	AA		29.88

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final) HOURLY OBSERVATIONS TABLE SCOTTSDALE AIRPORT (03192) SCOTTSDALE, AZ (09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1473 ft. above sea level
Latitude: 33.622
Longitude: -111.910
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
06	0053	12	CLR	10.00		89	31.7	70	21.1	60	15.6	38	0	000		28.31			29.82	AA		29.91
06	0153	12	CLR	10.00		86	30.0	70	20.9	61	16.1	43	0	000		28.32			29.83	AA		29.92
06	0253	12	CLR	10.00		86	30.0	71	21.8	64	17.8	48	3	260		28.31			29.83	AA		29.91
06	0353	12	CLR	10.00		85	29.4	72	21.9	65	18.3	51	0	000		28.32			29.83	AA		29.92
06	0453	12	CLR	10.00		84	28.9	72	22.1	66	18.9	55	0	000		28.33			29.84	AA		29.93
06	0553	12	CLR	10.00		83	28.3	72	21.9	66	18.9	57	0	000		28.33			29.85	AA		29.93
06	0653	12	CLR	10.00		83	28.3	72	22.3	67	19.4	59	0	000		28.35			29.86	AA		29.95
06	0753	12	CLR	10.00		85	29.4	70	21.3	63	17.2	48	3	190		28.37			29.88	AA		29.97
06	0853	12	CLR	10.00		87	30.6	72	22.0	64	17.8	46	0	000		28.37			29.89	AA		29.97
06	0953	12	CLR	10.00		90	32.2	72	22.4	64	17.8	42	0	000		28.38			29.90	AA		29.98
06	1053	12	CLR	10.00		93	33.9	73	22.6	63	17.2	37	0	000		28.36			29.87	AA		29.96
06	1153	12	CLR	10.00		95	35.0	72	22.3	61	16.1	32	5	250		28.34			29.85	AA		29.94
06	1253	12	CLR	10.00		97	36.1	72	22.1	59	15.0	28	5	130		28.32			29.83	AA		29.92
06	1353	12	CLR	10.00		100	37.8	73	22.8	60	15.6	27	7	VR		28.29			29.80	AA		29.89
06	1453	12	CLR	10.00		100	37.8	73	22.8	60	15.6	27	5	VR		28.26			29.76	AA		29.85
06	1553	12	CLR	10.00		101	38.3	73	22.6	59	15.0	25	5	230		28.25			29.75	AA		29.84
06	1653	12	CLR	10.00		101	38.3	72	22.4	58	14.4	24	7	200		28.23			29.73	AA		29.82
06	1753	12	CLR	10.00		100	37.8	72	22.0	57	13.9	24	7	220		28.24			29.74	AA		29.83
06	1853	12	SCT120	10.00		99	37.2	71	21.8	57	13.9	25	3	180		28.25			29.75	AA		29.84
06	1936	12	BKN042 OVC085	2.50	+TSRA	82	28.0s	74	23.1	70	21.0	67	8	110	21	28.33			M	SP		29.93
06	1945	12	FEW042 BKN090 BKN110	5.00	TSRA	82	28.0	74	23.1	70	21.0	67	3	130		28.33			M	SP		29.93
06	1953	12	FEW042 BKN120	9.00	VCTS -RA	83	28.3	75	23.6	71	21.7	67	0	000		28.33			29.85	AA	0.21	29.93
06	2007	12	FEW075 SCT120	10.00		82	28.0	77	25.0	75	24.0	79	3	360		28.34			M	SP		29.94
06	2040	12	BKN095 BKN110	10.00	TS	84	29.0	74	23.5	70	21.0	63	3	330		28.34			M	SP		29.94
06	2051	12	SCT095	10.00		82	28.0	75	23.8	72	22.0	72	9	180		28.34			M	SP		29.94
06	2053	12	SCT095	10.00	-RA	83	28.3	76	24.4	73	22.8	72	7	170		28.34			29.87	AA	T	29.94
06	2153	12	CLR	10.00		84	28.9	71	21.8	65	18.3	53	3	120		28.32			29.84	AA	T	29.92
06	2253	12	CLR	10.00		84	28.9	72	22.4	67	19.4	57	6	050		28.32			29.83	AA		29.92
06	2353	12	CLR	10.00		84	28.9	72	22.1	66	18.9	55	3	170		28.32			29.84	AA		29.92

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final) HOURLY OBSERVATIONS TABLE LUKE AFB AIRPORT (23111) GLENDALE, AZ (09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1085 ft. above sea level
Latitude: 33.55
Longitude: -112.366
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
06	0058	0	CLR	10.00		87	30.3	73	22.6	66	18.7	50	2	220		28.71			29.83	AA		29.87
06	0158	0	CLR	10.00		86	30.0	74	23.1	68	20.2	55	10	200		28.71			29.83	AA		29.87
06	0258	0	CLR	10.00		85	29.6	74	23.3	69	20.7	59	10	220		28.71			29.83	AA		29.87
06	0358	0	CLR	10.00		82	28.0	72	22.1	67	19.5	61	3	260		28.72			29.83	AA		29.88
06	0458	0	CLR	10.00		83	28.4	73	22.6	68	20.0	61	3	270		28.74			29.85	AA		29.89
06	0558	0	CLR	10.00		82	27.8	73	22.8	69	20.5	65	0	000		28.74			29.85	AA		29.89
06	0658	0	CLR	10.00		82	27.8	73	22.5	68	19.8	63	2	010		28.75			29.87	AA		29.91
06	0758	0	CLR	10.00		85	29.2	73	22.6	67	19.5	55	2	160		28.77			29.89	AA		29.93
06	0858	0	CLR	10.00		87	30.8	74	23.3	68	20.0	53	7	200		28.78			29.90	AA		29.94
06	0958	0	CLR	10.00		91	32.6	75	23.9	68	20.2	47	2	140		28.78			29.90	AA		29.94
06	1058	0	CLR	10.00		93	33.7	75	23.9	67	19.5	43	3	250		28.77			29.88	AA		29.93
06	1158	0	CLR	10.00		95	35.1	76	24.5	68	19.8	41	3	150		28.75			29.86	AA		29.91
06	1258	0	CLR	10.00		97	36.3	75	23.8	65	18.3	35	6	250		28.72			29.83	AA		29.88
06	1358	0	CLR	10.00		100	37.7	74	23.4	62	16.9	29	7	230		28.70			29.80	AA		29.85
06	1458	0	CLR	10.00		101	38.3	74	23.5	62	16.6	28	2	VR		28.67			29.77	AA		29.82
06	1558	0	CLR	10.00		101	38.4	75	23.8	63	17.4	29	8	250		28.65			29.75	AA		29.80
06	1658	0	CLR	10.00		102	39.0	74	23.1	60	15.7	25	7	220		28.63			29.73	AA		29.78
06	1758	0	CLR	10.00		101	38.2	73	23.0	60	15.3	26	11	190		28.63			29.73	AA		29.78
06	1858	0	SCT150	10.00		99	37.1	74	23.2	62	16.6	30	8	180		28.64			29.75	AA		29.79
06	1928	0	SCT005 SCT095 BKN150	4.00	HZ	91	33.0	74	23.2	66	19.0	44	22	140	34	28.67			M	AA		29.82
06	1938	0	FEW005 SCT150	9.00		90	32.0	74	23.1	66	19.0	45	22	150	34	28.67			M	AA		29.82
06	1958	0	CLR	10.00		90	32.2	73	22.5	64	17.8	42	17	140		28.68			29.79	AA		29.83
06	2028	0	BKN090	10.00		91	33.0	73	22.6	64	18.0	41	23	060	31	28.72			M	AA		29.88
06	2038	0	SCT090	10.00		90	32.0	75	23.7	68	20.0	48	18	070	26	28.72			M	AA		29.88
06	2058	0	SCT100	10.00		88	31.1	74	23.1	67	19.3	50	13	090		28.74			29.85	AA		29.89
06	2148	0	BKN090 BKN170	10.00		88	31.0	72	22.2	64	18.0	45	14	100		28.72			M	AA		29.88
06	2158	0	SCT090 BKN110	10.00	VCTS	90	32.0	72	22.2	63	17.0	41	15	130	21	28.71			29.83	AA		29.87
06	2208	0	SCT100 BKN120	10.00	VCTS	88	31.0	73	22.8	66	19.0	48	15	130	21	28.71			M	AA	T	29.86
06	2210	0	SCT100 SCT120	10.00	-RA	88	31.0	73	22.8	66	19.0	48	15	130		28.71			M	AA	T	29.86
06	2221	0	FEW110	10.00		86	30.0	74	23.1	68	20.0	55	14	170		28.70			M	AA	T	29.85
06	2258	0	FEW180	10.00		86	29.9	73	22.8	67	19.3	53	9	020		28.71			29.83	AA	T	29.87
06	2358	0	CLR	10.00		84	28.8	74	23.1	69	20.4	61	6	040		28.72			29.84	AA		29.88

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final)
HOURLY OBSERVATIONS TABLE
PHOENIX GOODYEAR AIRPORT (03186)
GOODYEAR, AZ
(09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 968 ft. above sea level
Latitude: 33.416
Longitude: -112.383
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
06	0547	0	FEW150	10.00		82	28.0	73	22.5	68	20.0	63	7	240		28.89			M	AA		29.92
06	0647	0	SCT150	10.00		82	28.0	73	22.5	68	20.0	63	8	250		28.90			M	AA		29.93
06	0747	0	SCT150	10.00		84	29.0	74	23.5	70	21.0	63	8	230		28.92			M	AA		29.95
06	0847	0	FEW150	10.00		88	31.0	74	23.4	68	20.0	52	9	240		28.92			M	AA		29.95
06	0947	0	FEW150	10.00		90	32.0	76	24.4	70	21.0	52	8	230		28.93			M	AA		29.96
06	1047	0	SCT150	10.00		93	34.0	74	23.6	66	19.0	41	6	230		28.92			M	AA		29.95
06	1255	0	SCT150	10.00		97	36.0	74	23.2	63	17.0	33	5	VR		28.86			M	AA		29.89
06	1347	0	FEW080 SCT200	10.00		86	30.0	71	21.5	63	17.0	46	7	VR		28.84			M	AA		29.87
06	1447	0	FEW085 SCT200	10.00		100	38.0	74	23.1	61	16.0	28	7	VR		28.81			M	AA		29.84
06	1547	0	FEW080 SCT200 SCT250	10.00		100	38.0	73	22.6	59	15.0	26	6	VR		28.79			M	AA		29.82
06	1647	0	FEW080 FEW200 SCT250	10.00		100	38.0	73	22.6	59	15.0	26	11	250		28.77			M	AA		29.80
06	1747	0	FEW090 SCT200	10.00		100	38.0	72	22.1	57	14.0	24	9	240		28.76			M	AA		29.79
06	1847	0	FEW090 SCT200	10.00		99	37.0	72	22.4	59	15.0	27	9	220		28.77			M	AA		29.80
06	1915	0	BKN090 BKN200	2.00	BLDU	90	32.0	74	23.1	66	19.0	45	23	100	32	28.80			M	AA		29.83
06	1947	0	BKN090 BKN200	8.00		86	30.0	73	22.5	66	19.0	51	11	120	20	28.81			M	AA		29.84
06	2024	0	BKN100 BKN200	10.00		91	33.0	73	22.6	64	18.0	41	14	050	21	28.87			M	AA		29.90

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final)
HOURLY OBSERVATIONS TABLE
GLENDALE MUNICIPAL AIRPORT (53126)
GLENDALE, AZ
(09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1066 ft. above sea level
Latitude: 33.527
Longitude: -112.295
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
06	0647	0	FEW120	20.00		84	29.0	72	22.1	66	19.0	55	7	190		28.79			M	AA		29.93
06	0750	0	FEW150 FEW200	M		84	29.0	72	22.1	66	19.0	55		M		28.80			M	AA		29.94
06	0848	0	FEW150 FEW200	M		88	31.0	74	23.4	68	20.0	52		M		28.81			M	AA		29.95
06	0947	0	FEW150 SCT200	M		90	32.0	75	23.7	68	20.0	48		M		28.82			M	AA		29.96
06	1047	0	FEW120 SCT200	M		93	34.0	74	23.5	66	19.0	41		M		28.81			M	AA		29.95
06	1147	0	FEW120 SCT200	20.00		95	35.0	74	23.2	64	18.0	36	6	160		28.79			M	AA		29.93
06	1248	0	FEW120 SCT200	20.00		99	37.0	75	23.8	64	18.0	32	3	120		28.77			M	AA		29.91
06	1347	0	FEW120 SCT200	20.00		100	38.0	75	23.7	63	17.0	30	7	220		28.74			M	AA		29.87
06	1447	0	FEW120 SCT200	20.00		100	38.0	74	23.1	61	16.0	28	5	240		28.71			M	AA		29.84
06	1550	0	FEW120 SCT200	20.00		102	39.0	73	22.9	59	15.0	24	6	180		28.68			M	AA		29.81
06	1647	0	FEW070 FEW120 SCT200	20.00		102	39.0	74	23.4	61	16.0	26	9	210		28.67			M	AA		29.80
06	1747	0	FEW070 FEW120 SCT200	20.00		102	39.0	72	22.3	57	14.0	23	7	190		28.66			M	AA		29.79
06	1847	0	FEW070 FEW120 SCT200	20.00		100	38.0	73	22.6	59	15.0	26	6	160		28.67			M	AA		29.80

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final)

HOURLY OBSERVATIONS TABLE
WILLIAMS GATEWAY AIRPORT (23104)
PHOENIX, AZ
(09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1382 ft. above sea level
Latitude: 33.3
Longitude: -111.666
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
06	0015	0	CLR	10.00		82	28.0	65	18.5	55	13.0	40	3	200		28.46			M	AA		29.92
06	0035	0	CLR	10.00		82	28.0	65	18.5	55	13.0	40	0	000		28.45			M	AA		29.91
06	0055	0	CLR	10.00		86	30.0	67	19.2	55	13.0	35	0	000		28.46			M	AA		29.92
06	0115	0	CLR	10.00		82	28.0	65	18.5	55	13.0	40	0	000		28.46			M	AA		29.92
06	0135	0	CLR	10.00		82	28.0	65	18.5	55	13.0	40	0	000		28.45			M	AA		29.91
06	0155	0	CLR	10.00		82	28.0	65	18.5	55	13.0	40	0	000		28.45			M	AA		29.91
06	0215	0	CLR	10.00		82	28.0	66	19.0	57	14.0	43	0	000		28.45			M	AA		29.91
06	0235	0	CLR	10.00		81	27.0	66	18.9	57	14.0	44	0	000		28.46			M	AA		29.92
06	0255	0	CLR	10.00		82	28.0	67	19.6	59	15.0	46	5	280		28.46			M	AA		29.92
06	0315	0	CLR	10.00		82	28.0	65	18.5	55	13.0	40	0	000		28.46			M	AA		29.92
06	0335	0	CLR	10.00		82	28.0	67	19.6	59	15.0	46	3	310		28.46			M	AA		29.92
06	0355	0	CLR	10.00		82	28.0	67	19.6	59	15.0	46	3	350		28.46			M	AA		29.92
06	0415	0	CLR	10.00		81	27.0	67	19.4	59	15.0	47	5	360		28.46			M	AA		29.92
06	0435	0	CLR	10.00		82	28.0	67	19.6	59	15.0	46	6	360		28.46			M	AA		29.93
06	0547	0	SCT120	20.00		84	29.0	70	21.2	63	17.0	49	5	320		28.46			M	AA		29.93
06	0649	0	SCT120	35.00		84	29.0	70	21.2	63	17.0	49	0	000		28.49			M	AA		29.96
06	0747	0	FEW150	35.00		84	29.0	69	20.6	61	16.0	46	7	310		28.50			M	AA		29.97
06	0847	0	SCT150	35.00		88	31.0	69	20.7	59	15.0	38	0	000		28.50			M	AA		29.97
06	0947	0	SCT150	35.00		91	33.0	71	21.7	61	16.0	37	0	000		28.51			M	AA		29.98
06	1047	0	SCT150	35.00		93	34.0	70	20.9	57	14.0	30	6	290		28.50			M	AA		29.97
06	1147	0	SCT150	35.00		95	35.0	69	20.7	55	13.0	26	6	VR		28.48			M	AA		29.95
06	1254	0	FEW250	45.00		99	37.0	72	22.4	59	15.0	27	8	290		28.46			M	AA		29.92
06	1347	0	FEW250	45.00		99	37.0	71	21.9	57	14.0	25	7	330		28.43			M	AA		29.89
06	1447	0	SCT250	45.00		99	37.0	71	21.8	57	14.0	25	6	280		28.40			M	AA		29.86
06	1547	0	SCT250	45.00		99	37.0	71	21.8	57	14.0	25	8	250		28.39			M	AA		29.85
06	1647	0	SCT250	45.00		99	37.0	71	21.3	55	13.0	23	9	300		28.37			M	AA		29.83
06	1847	0	BKN070	10.00	DU	88	31.0	68	20.1	57	14.0	35	14	130	23	28.40			M	AA		29.86
06	1947	0	BKN070	20.00		84	29.0	71	21.5	64	18.0	51	16	110		28.46			M	AA		29.93
06	2047	0	BKN070	20.00		84	29.0	71	21.5	64	18.0	51	6	170		28.48			M	AA		29.95
06	2147	0	BKN070	20.00		84	29.0	70	21.2	63	17.0	49	3	180		28.46			M	AA		29.92
06	2250	0	BKN070	20.00		84	29.0	71	21.5	64	18.0	51	8	100		28.46			M	AA		29.93
06	2350	0	BKN070	20.00		84	29.0	72	22.1	66	19.0	55	3	150		28.46			M	AA		29.93

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final) HOURLY OBSERVATIONS TABLE FALCON FIELD AIRPORT (03185) MESA, AZ (09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1380 ft. above sea level
Latitude: 33.466
Longitude: -111.733
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
06	0651	0	SCT120	40.00		82	28.0	68	20.2	61	16.0	49	11	350		28.45			M	AA		29.93
06	0747	0	SCT110	40.00		84	29.0	69	20.6	61	16.0	46	6	350		28.47			M	AA		29.95
06	0900	0	FEW150	40.00		86	30.0	69	20.3	59	15.0	40	6	060		28.48			M	AA		29.96
06	1049	0	SCT220	40.00		91	33.0	70	21.1	59	15.0	34	6	VR		28.47			M	AA		29.95
06	1148	0	SCT200	40.00		95	35.0	72	22.3	61	16.0	32	9	270		28.44			M	AA		29.92
06	1229	0	SCT150	40.00		99	37.0	74	23.5	63	17.0	31	11	250		28.43			M	AA		29.91
06	1259	0	SCT150	40.00		99	37.0	73	22.9	61	16.0	29	7	210		28.41			M	AA		29.89
06	1347	0	SCT150	40.00		100	38.0	75	23.6	63	17.0	30	7	240		28.41			M	AA		29.89
06	1455	0	SCT150	40.00		100	38.0	74	23.1	61	16.0	28	8	240		28.37			M	AA		29.84
06	1550	0	BKN150	40.00		102	39.0	73	22.8	59	15.0	24	7	220		28.35			M	AA		29.82
06	1647	0	FEW180 SCT200 BKN250	40.00		102	39.0	73	22.8	59	15.0	24	9	250		28.34			M	AA		29.81
06	1747	0	SCT120 BKN180 BKN250	40.00		100	38.0	72	22.0	57	14.0	24	8	250		28.34			M	AA		29.81
06	1847	0	SCT120 BKN200 BKN250	7.00	TS BLDU	90	32.0	72	22.1	63	17.0	41	18	100		28.37			M	AA		29.84
06	1947	0	SCT080 BKN180 BKN250	10.00	TS	88	31.0	70	21.2	61	16.0	40	11	110		28.41			M	AA		29.89

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final)
HOURLY OBSERVATIONS TABLE
PHOENIX DEER VALLEY ARPT (03184)
PHOENIX, AZ
(09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1455 ft. above sea level
Latitude: 33.688
Longitude: -112.081
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
06	0053	12	CLR	10.00		85	29.4	69	20.4	60	15.6	43	0	000		28.33			29.81	AA		29.89
06	0153	12	CLR	10.00		84	28.9	68	20.0	59	15.0	43	0	000		28.34			29.81	AA		29.90
06	0253	12	CLR	10.00		83	28.3	68	20.1	60	15.6	46	0	000		28.34			29.81	AA		29.90
06	0353	12	CLR	10.00		82	27.8	68	19.9	60	15.6	47	0	000		28.34			29.82	AA		29.90
06	0453	12	CLR	10.00		81	27.2	67	19.4	59	15.0	47	0	000		28.35			29.83	AA		29.91
06	0553	12	CLR	10.00		81	27.2	67	19.4	59	15.0	47	0	000		28.36			29.83	AA		29.92
06	0653	12	CLR	10.00		80	26.7	67	19.2	59	15.0	49	0	000		28.37			29.85	AA		29.93
06	0753	12	CLR	10.00		83	28.3	68	20.1	60	15.6	46	3	150		28.38			29.87	AA		29.95
06	0853	12	CLR	10.00		86	30.0	70	21.2	62	16.7	45	0	000		28.40			29.88	AA		29.96
06	0953	12	CLR	10.00		89	31.7	72	22.3	64	17.8	44	6	200		28.40			29.88	AA		29.96
06	1053	12	CLR	10.00		92	33.3	72	22.1	62	16.7	37	0	000		28.38			29.86	AA		29.95
06	1153	12	CLR	10.00		94	34.4	73	22.5	62	16.7	35	0	000		28.37			29.84	AA		29.93
06	1253	12	CLR	10.00		96	35.6	72	22.2	60	15.6	30	0	000		28.34			29.82	AA		29.90
06	1353	12	CLR	10.00		99	37.2	73	22.6	60	15.6	28	9	220		28.31			29.79	AA		29.87
06	1453	12	CLR	10.00		100	37.8	72	22.2	58	14.4	25	5	330		28.28			29.75	AA		29.84
06	1553	12	CLR	10.00		100	37.8	72	22.0	57	13.9	24	8	300		28.26			29.74	AA		29.82
06	1653	12	CLR	10.00		101	38.3	71	21.9	56	13.3	22	11	270		28.24			29.72	AA		29.80
06	1753	12	CLR	10.00		99	37.2	72	22.3	59	15.0	27	6	270		28.24			29.72	AA		29.80
06	1853	12	CLR	10.00		98	36.7	72	22.2	59	15.0	27	8	190		28.25			29.73	AA		29.81
06	1939	12	OVC085	3.00	TS HZ	91	33.0	71	21.7	61	16.0	37	15	160	25	28.32			M	SP		29.88
06	1953	12	FEW045 BKN080 OVC110	6.00	-TSRA	81	27.2	73	23.0	70	21.1	69	14	130	26	28.36			29.85s	AA	0.02	29.92
06	2053	12	FEW080 BKN095 OVC120	10.00	-TSRA	81	27.2	70	21.3	65	18.3	58	6	080		28.36			29.85	AA	0.06	29.92
06	2105	12	FEW060 BKN100 BKN120	10.00	-RA	81	27.0	73	23.0	70	21.0	69	5	170		28.34			M	SP		29.90
06	2112	12	SCT070 BKN100 BKN120	10.00	VCTS	82	28.0	71	21.8	66	19.0	58	11	180		28.33			M	SP		29.89
06	2127	12	FEW055 SCT070 BKN100	10.00	-RA	81	27.0	72	22.3	68	20.0	65	14	190		28.34			M	SP		29.90
06	2153	12	FEW090	10.00	-RA	82	27.8	72	22.4	68	20.0	63	8	120		28.33			29.81	AA	0.01	29.89
06	2253	12	CLR	10.00		81	27.2	72	22.3	68	20.0	65	7	040		28.34			29.82	AA	T	29.90
06	2353	12	CLR	10.00		81	27.2	73	22.6	69	20.6	67	0	000		28.34			29.82	AA		29.90

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final) HOURLY OBSERVATIONS TABLE CHANDLER MUNICIPAL AIRPORT (53128) CHANDLER, AZ (09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1243 ft. above sea level
Latitude: 33.268
Longitude: -111.812
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
06	0647	0	SCT150	35.00		84	29.0	72	22.1	66	19.0	55	7	340		28.61			M	AA		29.93
06	0747	0	SCT150	35.00		86	30.0	73	22.5	66	19.0	51	0	000		28.62			M	AA		29.94
06	0847	0	SCT150	35.00		88	31.0	73	22.8	66	19.0	48	6	VR		28.63			M	AA		29.95
06	0947	0	SCT150	35.00		91	33.0	74	23.2	66	19.0	44	7	340		28.64			M	AA		29.96
06	1047	0	SCT150	40.00		93	34.0	73	22.9	64	18.0	38	7	360		28.62			M	AA		29.94
06	1147	0	FEW120 SCT150	40.00		95	35.0	74	23.2	64	18.0	36	8	240		28.60			M	AA		29.92
06	1247	0	SCT120 SCT200	40.00		97	36.0	74	23.2	63	17.0	33	8	180		28.58			M	AA		29.90
06	1347	0	SCT100 BKN200	40.00		99	37.0	73	22.9	61	16.0	29	8	240		28.54			M	AA		29.86
06	1447	0	SCT100 BKN200	40.00		100	38.0	74	23.1	61	16.0	28	9	230		28.51			M	AA		29.83
06	1547	0	SCT100 BKN200	40.00		100	38.0	74	23.1	61	16.0	28	10	190		28.50			M	AA		29.82
06	1647	0	SCT100 BKN200	40.00		100	38.0	73	22.5	59	15.0	26	7	270		28.48			M	AA		29.80
06	1747	0	BKN100 BKN200	40.00		100	38.0	74	23.1	61	16.0	28	8	170		28.49			M	AA		29.81
06	1805	0	BKN100 BKN200	1.00	DS	95	35.0	73	22.9	63	17.0	35	29	140		28.50			M	AA		29.82
06	1815	0	BKN100 BKN200	5.00	BLDU	93	34.0	73	22.6	63	17.0	37	23	130	30	28.50			M	AA		29.82
06	1850	0	BKN120 BKN200	8.00	TS	90	32.0	72	22.1	63	17.0	41	11	150		28.52			M	AA		29.84
06	1947	0	BKN070 BKN100	8.00		88	31.0	71	21.8	63	17.0	43	9	VR		28.59			M	AA		29.91
06	2047	0	SCT080 BKN100	15.00		84	29.0	71	21.5	64	18.0	51	6	110		28.61			M	AA		29.93

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final) HOURLY OBSERVATIONS TABLE CASA GRANDE MUNICIPAL ARPT (03914) CASA GRANDE, AZ (09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1462 ft. above sea level
Latitude: 32.95
Longitude: -111.766
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
06	0015	0	CLR	10.00		84	29.0	66	18.6	54	12.0	36	0	000		28.36			M	AA		29.91
06	0035	0	CLR	10.00		84	29.0	66	18.8	55	13.0	37	0	000		28.37			M	AA		29.92
06	0055	0	CLR	10.00		84	29.0	66	18.8	55	13.0	37	0	000		28.36			M	AA		29.91
06	0115	0	CLR	10.00		84	29.0	67	19.4	57	14.0	40	0	000		28.36			M	AA		29.91
06	0135	0	CLR	10.00		84	29.0	70	21.2	63	17.0	49	0	000		28.37			M	AA		29.92
06	0155	0	CLR	10.00		84	29.0	70	21.2	63	17.0	49	6	270		28.36			M	AA		29.91
06	0215	0	CLR	10.00		82	28.0	70	20.8	63	17.0	53	3	280		28.36			M	AA		29.91
06	0235	0	CLR	10.00		84	29.0	71	21.5	64	18.0	51	8	280		28.36			M	AA		29.91
06	0255	0	CLR	10.00		84	29.0	71	21.5	64	18.0	51	6	270		28.36			M	AA		29.91
06	0315	0	CLR	10.00		82	28.0	70	21.1	64	18.0	55	6	240		28.36			M	AA		29.91
06	0335	0	CLR	10.00		81	27.0	68	20.0	61	16.0	51	0	000		28.37			M	AA		29.92
06	0355	0	CLR	10.00		79	26.0	67	19.7	61	16.0	54	0	000		28.37			M	AA		29.92
06	0415	0	CLR	10.00		79	26.0	67	19.7	61	16.0	54	0	000		28.37			M	AA		29.92
06	0435	0	CLR	10.00		79	26.0	67	19.7	61	16.0	54	0	000		28.37			M	AA		29.92
06	0455	0	CLR	10.00		79	26.0	67	19.7	61	16.0	54	0	000		28.38			M	AA		29.93
06	0515	0	CLR	10.00		79	26.0	69	20.6	64	18.0	60	0	000		28.38			M	AA		29.93
06	0535	0	CLR	10.00		79	26.0	69	20.6	64	18.0	60	0	000		28.39			M	AA		29.94
06	0555	0	CLR	10.00		79	26.0	69	20.6	64	18.0	60	0	000		28.39			M	AA		29.94
06	0615	0	CLR	10.00		79	26.0	69	20.6	64	18.0	60	0	000		28.39			M	AA		29.94
06	0635	0	CLR	10.00		79	26.0	69	20.6	64	18.0	60	0	000		28.40			M	AA		29.95
06	0655	0	CLR	10.00		79	26.0	69	20.6	64	18.0	60	0	000		28.41			M	AA		29.96
06	0715	0	CLR	10.00		81	27.0	71	21.6	66	19.0	60	0	000		28.40			M	AA		29.95
06	0735	0	CLR	10.00		82	28.0	71	21.8	66	19.0	58	0	000		28.41			M	AA		29.96
06	0755	0	CLR	10.00		84	29.0	72	22.1	66	19.0	55	0	000		28.42			M	AA		29.97
06	0815	0	CLR	10.00		84	29.0	72	22.1	66	19.0	55	3	240		28.42			M	AA		29.97
06	0835	0	CLR	10.00		84	29.0	72	22.1	66	19.0	55	0	000		28.42			M	AA		29.97
06	0855	0	CLR	10.00		86	30.0	71	21.8	64	18.0	48	0	000		28.43			M	AA		29.98
06	0915	0	CLR	10.00		88	31.0	72	22.1	64	18.0	45	0	000		28.43			M	AA		29.98
06	0935	0	CLR	10.00		88	31.0	73	22.8	66	19.0	48	0	000		28.43			M	AA		29.98
06	0955	0	CLR	10.00		90	32.0	72	22.4	64	18.0	42	0	000		28.43			M	AA		29.98
06	1015	0	CLR	10.00		91	33.0	74	23.2	66	19.0	44	0	000		28.43			M	AA		29.98
06	1035	0	CLR	10.00		91	33.0	73	22.6	64	18.0	41	0	000		28.42			M	AA		29.97
06	1055	0	CLR	10.00		91	33.0	73	22.6	64	18.0	41	0	000		28.42			M	AA		29.97
06	1115	0	CLR	10.00		93	34.0	73	22.9	64	18.0	38	0	000		28.41			M	AA		29.96
06	1135	0	CLR	10.00		93	34.0	73	22.9	64	18.0	38	0	000		28.40			M	AA		29.95
06	1155	0	CLR	10.00		95	35.0	74	23.2	64	18.0	36	7	240		28.39			M	AA		29.94
06	1215	0	CLR	10.00		97	36.0	74	23.5	64	18.0	34	8	300		28.39			M	AA		29.94
06	1235	0	CLR	10.00		97	36.0	74	23.5	64	18.0	34	8	270		28.38			M	AA		29.93
06	1255	0	CLR	10.00		97	36.0	74	23.5	64	18.0	34	3	250		28.37			M	AA		29.92
06	1315	0	CLR	10.00		97	36.0	74	23.2	63	17.0	33	0	000		28.36			M	AA		29.91
06	1335	0	CLR	10.00		99	37.0	74	23.5	63	17.0	31	9	270	18	28.35			M	AA		29.90
06	1355	0	CLR	10.00		99	37.0	74	23.5	63	17.0	31	9	250		28.34			M	AA		29.89
06	1415	0	CLR	10.00		99	37.0	74	23.5	63	17.0	31	7	250		28.33			M	AA		29.88
06	1435	0	CLR	10.00		99	37.0	73	22.9	61	16.0	29	0	000		28.32			M	AA		29.87
06	1455	0	CLR	10.00		99	37.0	74	23.5	63	17.0	31	8	210		28.31			M	AA		29.86
06	1515	0	CLR	10.00		99	37.0	73	22.9	61	16.0	29	7	220		28.31			M	AA		29.86
06	1535	0	CLR	10.00		100	38.0	74	23.0	61	16.0	28	0	000		28.30			M	AA		29.85
06	1555	0	CLR	10.00		99	37.0	73	22.9	61	16.0	29	7	250		28.30			M	AA		29.85
06	1615	0	CLR	10.00		99	37.0	73	22.9	61	16.0	29	9	250		28.29			M	AA		29.84
06	1635	0	CLR	10.00		99	37.0	73	22.9	61	16.0	29	3	240		28.29			M	AA		29.84
06	1655	0	CLR	10.00		99	37.0	73	22.9	61	16.0	29	6	230		28.29			M	AA		29.84
06	1715	0	CLR	10.00		99	37.0	73	22.9	61	16.0	29	0	000		28.29			M	AA		29.84
06	1735	0	CLR	10.00		97	36.0	73	22.6	61	16.0	30	7	150		28.30			M	AA		29.85
06	1755	0	BKN007	0.75		88	31.0	71	21.8	63	17.0	43	23	120	37	28.35			M	AA		29.90
06	1815	0	FEW006 FEW090 SCT110	5.00		84	29.0	70	21.2	63	17.0	49	25	100	31	28.37			M	AA		29.92
06	1835	0	SCT120	10.00	VCTS	84	29.0	69	20.5	61	16.0	46	21	090		28.36			M	AA		29.91
06	1855	0	BKN110	10.00		82	28.0	70	20.8	63	17.0	53	11	130	24	28.34			M	AA		29.89
06	1915	0	SCT110	10.00		82	28.0	68	20.2	61	16.0	49	8	180		28.32			M	AA		29.87
06	1935	0	CLR	10.00		84	29.0	69	20.5	61	16.0	46	13	150	17	28.34			M	AA		29.89
06	1955	0	FEW120	10.00		84	29.0	69	20.5	61	16.0	46	0	000		28.36			M	AA		29.91
06	2015	0	BKN100	10.00		84	29.0	70	21.2	63	17.0	49	11	040	20	28.40			M	AA		29.95
06	2035	0	FEW060 SCT070 OVC100	10.00	VCTS	81	27.0	70	21.0	64	18.0	56	10	030		28.39			M	AA		29.94
06	2055	0	FEW060 SCT070 BKN090	10.00		79	26.0	69	20.6	64	18.0	60	6	080		28.39			M	AA		29.94
06	2115	0	CLR	10.00		79	26.0	70	21.3	66	19.0	65	6	070		28.38			M	AA		29.93
06	2135	0	CLR	10.00		81	27.0	70	21.0	64	18.0	56	7	090		28.37			M	AA		29.92
06	2155	0	CLR	10.00		79	26.0	70	21.3	66	19.0	65	0	000		28.37			M	AA		29.92
06	2215	0	CLR	10.00		81	27.0	70	21.0	64	18.0	56	0	000		28.37			M	AA		29.92
06	2235	0	CLR	10.00		79	26.0	73	22.6	70	21.0	74	0	000		28.37			M	AA		29.92
06	2255	0	CLR	10.00		81	27.0	71	21.6	66	19.0	60	0	000		28.37			M	AA		29.92
06	2315	0	CLR	10.00		81	27.0	71	21.6	66	19.0	60	6	050		28.37			M	AA		29.92
06	2335	0	CLR	10.00		81	27.0	71	21.6	66	19.0	60	0	000		28.37			M	AA		29.92
06	2355	0	CLR	10.00		81	27.0	71	21.6	66	19.0	60	7	080		28.37			M	AA		29.92

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final) HOURLY OBSERVATIONS TABLE BUCKEYE MUNICIPAL AIRPORT (00226) BUCKEYE, AZ (09/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 1021 ft. above sea level
Latitude: 33.417
Longitude: -112.683
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
06	0015	0	CLR	10.00		84	29.0	74	23.5	70	21.0	63	0	000		28.79			M	AA		29.88
06	0035	0	CLR	10.00		82	28.0	75	23.9	72	22.0	72	0	000		28.79			M	AA		29.88
06	0055	0	CLR	10.00		84	29.0	73	22.8	68	20.0	59	0	000		28.79			M	AA		29.88
06	0115	0	CLR	10.00		82	28.0	76	24.2	73	23.0	74	0	000		28.80			M	AA		29.89
06	0135	0	CLR	10.00		82	28.0	75	23.9	72	22.0	72	0	000		28.80			M	AA		29.89
06	0155	0	CLR	10.00		82	28.0	75	23.9	72	22.0	72	0	000		28.80			M	AA		29.89
06	0215	0	CLR	10.00		82	28.0	74	23.2	70	21.0	67	3	200		28.81			M	AA		29.90
06	0235	0	CLR	10.00		82	28.0	74	23.2	70	21.0	67	6	220		28.80			M	AA		29.89
06	0255	0	CLR	10.00		81	27.0	72	22.3	68	20.0	65	3	260		28.80			M	AA		29.89
06	0315	0	CLR	10.00		81	27.0	73	23.0	70	21.0	69	0	000		28.80			M	AA		29.89
06	0335	0	CLR	10.00		81	27.0	75	23.7	72	22.0	74	5	310		28.80			M	AA		29.89
06	0355	0	FEW035	10.00		81	27.0	73	23.0	70	21.0	69	3	320		28.80			M	AA		29.89
06	0415	0	CLR	10.00		81	27.0	72	22.3	68	20.0	65	0	000		28.81			M	AA		29.90
06	0435	0	CLR	10.00		81	27.0	73	23.0	70	21.0	69	0	000		28.81			M	AA		29.90
06	0455	0	CLR	10.00		81	27.0	72	22.3	68	20.0	65	0	000		28.81			M	AA		29.90
06	0515	0	CLR	10.00		81	27.0	72	22.3	68	20.0	65	0	000		28.81			M	AA		29.90
06	0535	0	CLR	10.00		79	26.0	72	22.0	68	20.0	69	0	000		28.82			M	AA		29.91
06	0555	0	CLR	10.00		77	25.0	72	22.3	70	21.0	79	3	320		28.82			M	AA		29.91
06	0615	0	CLR	10.00		79	26.0	72	22.0	68	20.0	69	0	000		28.83			M	AA		29.92
06	0635	0	CLR	10.00		77	25.0	74	23.0	72	22.0	85	0	000		28.83			M	AA		29.92
06	0655	0	CLR	10.00		81	27.0	72	22.3	68	20.0	65	0	000		28.84			M	AA		29.93
06	0715	0	CLR	10.00		82	28.0	74	23.2	70	21.0	67	0	000		28.84			M	AA		29.93
06	0735	0	CLR	10.00		82	28.0	74	23.2	70	21.0	67	0	000		28.85			M	AA		29.94
06	0755	0	CLR	10.00		82	28.0	74	23.2	70	21.0	67	0	000		28.86			M	AA		29.95
06	0815	0	CLR	10.00		84	29.0	74	23.5	70	21.0	63	5	220		28.86			M	AA		29.95
06	0835	0	CLR	10.00		84	29.0	74	23.5	70	21.0	63	0	000		28.86			M	AA		29.95
06	0855	0	CLR	10.00		84	29.0	74	23.5	70	21.0	63	0	000		28.86			M	AA		29.95
06	0915	0	CLR	10.00		86	30.0	74	23.1	68	20.0	55	0	000		28.87			M	AA		29.96
06	0935	0	CLR	10.00		86	30.0	75	23.8	70	21.0	59	5	210		28.87			M	AA		29.96
06	0955	0	CLR	10.00		88	31.0	75	24.1	70	21.0	55	3	210		28.86			M	AA		29.95
06	1015	0	CLR	10.00		90	32.0	76	24.4	70	21.0	52	5	170		28.86			M	AA		29.95
06	1035	0	CLR	10.00		90	32.0	76	24.4	70	21.0	52	5	170		28.86			M	AA		29.95
06	1055	0	CLR	10.00		91	33.0	75	23.9	68	20.0	47	3	200		28.85			M	AA		29.94
06	1115	0	CLR	10.00		93	34.0	74	23.5	66	19.0	41	6	150		28.84			M	AA		29.93
06	1135	0	CLR	10.00		93	34.0	74	23.5	66	19.0	41	5	180		28.84			M	AA		29.93
06	1155	0	CLR	10.00		93	34.0	74	23.5	66	19.0	41	0	000		28.83			M	AA		29.92
06	1215	0	CLR	10.00		93	34.0	74	23.5	66	19.0	41	5	180		28.82			M	AA		29.91
06	1235	0	CLR	10.00		95	35.0	74	23.2	64	18.0	36	0	000		28.82			M	AA		29.91
06	1255	0	CLR	10.00		95	35.0	74	23.2	64	18.0	36	3	140		28.81			M	AA		29.90
06	1315	0	CLR	10.00		97	36.0	74	23.5	64	18.0	34	5	170		28.79			M	AA		29.88
06	1335	0	CLR	10.00		97	36.0	74	23.2	63	17.0	33	5	230		28.78			M	AA		29.87
06	1355	0	CLR	10.00		99	37.0	74	23.5	63	17.0	31	6	180		28.77			M	AA		29.86
06	1415	0	CLR	10.00		99	37.0	73	23.0	61	16.0	29	5	180		28.77			M	AA		29.85
06	1435	0	CLR	8.00		99	37.0	73	23.0	61	16.0	29	0	000		28.75			M	AA		29.84
06	1455	0	CLR	10.00		99	37.0	73	23.0	61	16.0	29	5	180		28.74			M	AA		29.83
06	1515	0	CLR	10.00		99	37.0	74	23.5	63	17.0	31	5	190		28.74			M	AA		29.82
06	1535	0	CLR	10.00		99	37.0	74	23.5	63	17.0	31	5	160		28.74			M	AA		29.82
06	1555	0	CLR	2.50		100	38.0	75	23.7	63	17.0	30	3	170		28.73			M	AA		29.81
06	1615	0	CLR	9.00		99	37.0	74	23.5	63	17.0	31	6	180		28.73			M	AA		29.81
06	1635	0	CLR	10.00		100	38.0	75	23.7	63	17.0	30	6	180		28.71			M	AA		29.80
06	1655	0	CLR	10.00		100	38.0	75	23.9	64	18.0	31	7	180		28.71			M	AA		29.79
06	1715	0	CLR	10.00		100	38.0	75	23.7	63	17.0	30	6	180		28.70			M	AA		29.78
06	1735	0	CLR	10.00		99	37.0	75	23.8	64	18.0	32	3	180		28.71			M	AA		29.79
06	1755	0	CLR	10.00		99	37.0	74	23.5	63	17.0	31	3	170		28.71			M	AA		29.79
06	1815	0	CLR	10.00		99	37.0	75	23.8	64	18.0	32	3	150		28.71			M	AA		29.79
06	1835	0	CLR	10.00		95	35.0	75	23.8	66	19.0	39	3	270		28.71			M	AA		29.79
06	1855	0	CLR	10.00		93	34.0	73	22.9	64	18.0	38	6	300		28.71			M	AA		29.80
06	1915	0	CLR	10.00		91	33.0	74	23.2	66	19.0	44	3	270		28.73			M	AA		29.81
06	1935	0	CLR	10.00		91	33.0	75	23.9	68	20.0	47	15	160	34	28.74			M	AA		29.83
06	1955	0	SCT002 SCT095	8.00		84	29.0	72	22.1	66	19.0	55	13	130	25	28.77			M	AA		29.85
06	2015	0	FEW018 FEW028 SCT095	10.00		86	30.0	71	21.8	64	18.0	48	13	140		28.77			M	AA		29.86
06	2035	0	FEW019 BKN120	10.00		84	29.0	72	22.1	66	19.0	55	8	130		28.79			M	AA		29.88
06	2055	0	SCT100 OVC120	10.00		84	29.0	72	22.1	66	19.0	55	14	080	18	28.80			M	AA		29.89
06	2115	0	FEW033 FEW042 OVC090	10.00		86	30.0	71	21.5	63	17.0	46	8	110		28.80			M	AA		29.89
06	2135	0	SCT049 BKN090 OVC120	8.00		86	30.0	73	22.5	66	19.0	51	15	090	22	28.81			M	AA		29.90
06	2155	0	FEW043 SCT075 BKN090	8.00		84	29.0	72	22.1	66	19.0	55	13	070	20	28.80			M	AA		29.89
06	2215	0	FEW049 FEW100 OVC120	8.00		86	30.0	73	22.5	66	19.0	51	15	090	18	28.79			M	AA		29.88
06	2235	0	FEW041 OVC120	8.00		86	30.0	71	21.8	64	18.0	48	10	100	17	28.78			M	AA		29.87
06	2255	0	BKN041 BKN047 BKN120	8.00		82	28.0	71	21.8	66	19.0	58	8	120		28.78			M	AA		29.87
06	2315	0	FEW042 SCT050 BKN120	9.00		82	28.0	71	21.8	66	19.0	58	8	100		28.77			M	AA		29.86
06	2335	0	FEW048 SCT120	10.00		84	29.0	72	22.1	66	19.0	55	8	100		28.78			M	AA		29.87
06	2355	0	SCT050	10.00		82	28.0	71	21.8	66	19.0	58	10	100		28.79			M	AA		29.88

Dynamically generated Fri Sep 12 16:37:14 EDT 2014 via http://cdo.ncdc.noaa.gov/qclcd/QCLCD

WWUS85 KPSR 042306
SPSPSR
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
406 PM MST THU SEP 4 2014
AZZ028-042345-
PINAL AZ-
406 PM MST THU SEP 4 2014
...SIGNIFICANT WEATHER ADVISORY...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
  CENTRAL PINAL COUNTY IN SOUTHEAST ARIZONA
UNTIL 445 PM MST
AT 403 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A
STRONG THUNDERSTORM NEAR ARIZONA CITY...MOVING NORTHEAST AT 10 MPH.
WIND GUSTS UP TO 40 MPH ARE EXPECTED WITH THIS STORM.
LOCATIONS IMPACTED INCLUDE...
   ARIZOLA...
   CASA GRANDE...
   TOLTEC...
SOME UNSECURED OBJECTS COULD BE BLOWN AROUND. SEEK SHELTER INDOORS
UNTIL THE STORM PASSES.
BLOWING DUST IS POSSIBLE. IF YOU ENCOUNTER BLOWING DUST WHILE
DRIVING...PULL OVER AS FAR OFF THE ROADWAY AS POSSIBLE AND PARK.
TURN OFF YOUR HEADLIGHTS AND KEEP YOUR FOOT OFF THE BRAKE.
LAT...LON 3276 11175 3276 11177 3279 11178 3279 11182
      3280 11184 3305 11161 3290 11144 3283 11153
      3280 11156 3275 11161 3273 11166 3273 11174
TIME...MOT...LOC 2306Z 226DEG 9KT 3280 11169
$$
WOODALL

WWUS85 KPSR 042317
SPSPSR
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
417 PM MST THU SEP 4 2014
AZZ027-050000-
MARICOPA AZ-
417 PM MST THU SEP 4 2014
...SIGNIFICANT WEATHER ADVISORY...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
  SOUTH CENTRAL MARICOPA COUNTY IN SOUTH CENTRAL ARIZONA
UNTIL 500 PM MST
AT 414 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A
CLUSTER OF STRONG THUNDERSTORMS FROM NEAR MOBILE...TO SONORAN
NATIONAL MONUMENT...TO SOUTH OF GILA BEND. MOVEMENT WAS NORTHEAST AT
15 MPH.
WIND GUSTS UP TO 40 MPH ARE EXPECTED WITH THIS STORM...ALONG WITH
HEAVY RAIN.
LOCATIONS IMPACTED INCLUDE...
   ESTRELLA...
   INTERSTATE 8 AND HIGHWAY 238 EAST OF GILA BEND.
SOME UNSECURED OBJECTS COULD BE BLOWN AROUND. SEEK SHELTER INDOORS
UNTIL THE STORM PASSES.
BLOWING DUST IS POSSIBLE. IF YOU ENCOUNTER BLOWING DUST WHILE
DRIVING...PULL OVER AS FAR OFF THE ROADWAY AS POSSIBLE AND PARK.
TURN OFF YOUR HEADLIGHTS AND KEEP YOUR FOOT OFF THE BRAKE.
HEAVY RAINFALL MAY CAUSE TEMPORARY PONDING ON SOME ROADS AND MINOR
FLOODING OF POOR DRAINAGE AREAS. IN HEAVY RAINFALL...SLOW DOWN TO

REDUCE THE RISK OF HYDROPLANING...AND LEAVE A SAFE DISTANCE BETWEEN
YOURSELF AND OTHER VEHICLES.
LAT...LON 3313 11257 3313 11221 3252 11223 3263 11281
TIME...MOT...LOC 2316Z 218DEG 18KT 3299 11247
$$
WOODALL

WWUS75 KPSR 042326
NPWPSR
URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE PHOENIX AZ
426 PM MST THU SEP 4 2014
AZZ027-028-050100-
/O.NEW.KPSR.DU.Y.0035.140904T2326Z-140905T0100Z/
SOUTHWEST MARICOPA COUNTY-
NORTHWEST AND NORTH CENTRAL PINAL COUNTY-
INCLUDING THE CITIES OF...GILA BEND...APACHE JUNCTION...
CASA GRANDE...FLORENCE
426 PM MST THU SEP 4 2014
...BLOWING DUST ADVISORY IN EFFECT UNTIL 6 PM MST THIS EVENING...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A BLOWING DUST
ADVISORY...WHICH IS IN EFFECT UNTIL 6 PM MST THIS EVENING.
* AFFECTED AREA...NORTHWEST AND NORTH CENTRAL PINAL COUNTY...AND
  SOUTHWEST MARICOPA COUNTY...INCLUDING THE INTERSTATE 10 AND
  INTERSTATE 8 CORRIDORS NEAR GILA BEND AND CASA GRANDE.
* TIMING...UNTIL 6 PM.
* WINDS...30 TO 40 MPH.
* VISIBILITY...DOWN TO ONE HALF MILE.
* IMPACTS...VISIBILITIES WILL DROP SUDDENLY RESULTING IN
  HAZARDOUS TRAVEL CONDITIONS.
PRECAUTIONARY/PREPAREDNESS ACTIONS...
BE READY FOR A SUDDEN DROP IN VISIBILITY. IF YOU ENCOUNTER
BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT
APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR
VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR
FOOT OFF THE BRAKE PEDAL.
REMEMBER...PULL ASIDE...STAY ALIVE.
&&
$$
VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

WWUS55 KPSR 050002
SVSPSR
SEVERE WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
502 PM MST THU SEP 4 2014
AZC013-050045-
/O.CON.KPSR.SV.W.0062.000000T0000Z-140905T0045Z/
MARICOPA AZ-
502 PM MST THU SEP 4 2014
...A SEVERE THUNDERSTORM WARNING REMAINS IN EFFECT UNTIL 545 PM MST
FOR SOUTHWESTERN MARICOPA COUNTY...
AT 459 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS CONTINUED TO
DETECT A SEVERE THUNDERSTORM CAPABLE OF PRODUCING DIME SIZE HAIL...
AND DAMAGING WINDS IN EXCESS OF 60 MPH. THIS STORM WAS LOCATED NEAR
GILA BEND AUXILIARY FIELD...OR 8 MILES SOUTHWEST OF GILA BEND...
MOVING NORTHEAST AT 15 MPH.
OTHER LOCATIONS IN THE WARNING INCLUDE BUT ARE NOT LIMITED TO COTTON
CENTER...BOSQUE...HIGHWAY 85 SOUTH OF GILA BEND...AND INTERSTATE 8
NEAR GILA BEND.
PRECAUTIONARY/PREPAREDNESS ACTIONS...

IF YOU ARE IN THE WARNING AREA...GO INSIDE A STURDY BUILDING.
REMEMBER...A SEVERE THUNDERSTORM WILL PRODUCE DAMAGING WINDS AND
DEADLY LIGHTNING
REPORT SEVERE WEATHER TO THE NEAREST LAW ENFORCEMENT AGENCY. THEY
WILL RELAY YOUR REPORT TO THE NATIONAL WEATHER SERVICE FORECAST
OFFICE.
HEAVY RAINS MAY FLOOD LOW LYING AREAS SUCH AS DITCHES AND
UNDERPASSES. AVOID THESE AREAS AND DO NOT CROSS FLOODED ROADS AS THEY
MAY BE WASHED OUT. WATER LEVELS OF SMALL STREAMS AND RIVERS MAY ALSO
RISE.
&&
LAT...LON 3293 11291 3311 11268 3289 11249 3278 11265
      3270 11281
TIME...MOT...LOC 0001Z 238DEG 12KT 3288 11278
$$
WOODALL

WWUS55 KPSR 050016
SVSPSR
SEVERE WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
516 PM MST THU SEP 4 2014
AZC013-050025-
/O.CAN.KPSR.SV.W.0062.000000T0000Z-140905T0045Z/
MARICOPA AZ-
516 PM MST THU SEP 4 2014
...THE SEVERE THUNDERSTORM WARNING FOR SOUTHWESTERN MARICOPA COUNTY
IS CANCELLED...
THE STORMS WHICH PROMPTED THE WARNING HAVE WEAKENED AND ARE NO
LONGER SEVERE.
HEAVY RAIN AND GUSTY WINDS WILL STILL BE POSSIBLE IN SOUTHWESTERN
MARICOPA COUNTY.
REPORT SEVERE WEATHER TO THE NEAREST LAW ENFORCEMENT AGENCY. THEY
WILL RELAY YOUR REPORT TO THE NATIONAL WEATHER SERVICE FORECAST
OFFICE.
LAT...LON 3293 11291 3311 11268 3289 11249 3278 11265
      3270 11281
TIME...MOT...LOC 0015Z 238DEG 12KT 3290 11273
$$
WOODALL

WWUS85 KPSR 050037
SPSPSR
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
537 PM MST THU SEP 4 2014
AZZ022-023-027-050115-
MARICOPA AZ-
537 PM MST THU SEP 4 2014
...SIGNIFICANT WEATHER ADVISORY...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
  WEST CENTRAL MARICOPA COUNTY IN SOUTH CENTRAL ARIZONA
UNTIL 615 PM MST
AT 535 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A
STRONG THUNDERSTORM 7 MILES NORTH OF GILLESPIE DAM...MOVING NORTH AT
15 MPH.
WIND GUSTS UP TO 40 MPH ARE EXPECTED WITH THIS STORM.
LOCATIONS IMPACTED INCLUDE...
   PALO VERDE NUCLEAR GENERATION STATION...
   PALO VERDE AND WINTERSBURG...

BUCKEYE...
SOME UNSECURED OBJECTS COULD BE BLOWN AROUND. SEEK SHELTER INDOORS UNTIL THE STORM PASSES.
BLOWING DUST IS POSSIBLE. IF YOU ENCOUNTER BLOWING DUST WHILE DRIVING...PULL OVER AS FAR OFF THE ROADWAY AS POSSIBLE AND PARK. TURN OFF YOUR HEADLIGHTS AND KEEP YOUR FOOT OFF THE BRAKE.
HEAVY RAINFALL MAY CAUSE TEMPORARY PONDING ON SOME ROADS AND MINOR FLOODING OF POOR DRAINAGE AREAS. IN HEAVY RAINFALL...SLOW DOWN TO REDUCE THE RISK OF HYDROPLANING...AND LEAVE A SAFE DISTANCE BETWEEN YOURSELF AND OTHER VEHICLES.
LAT...LON 3360 11282 3355 11245 3322 11271 3330 11291
TIME...MOT...LOC 0037Z 201DEG 11KT 3333 11277
$$
WOODALL

WWUS75 KPSR 050057
NPWPSR
URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE PHOENIX AZ
557 PM MST THU SEP 4 2014
AZZ027-050200-
/O.CAN.KPSR.DU.Y.0035.000000T0000Z-140905T0100Z/
SOUTHWEST MARICOPA COUNTY-
INCLUDING THE CITY OF...GILA BEND
557 PM MST THU SEP 4 2014
...BLOWING DUST ADVISORY IS CANCELLED...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS CANCELLED THE BLOWING DUST ADVISORY.
$$
AZZ028-050200-
/O.EXT.KPSR.DU.Y.0035.000000T0000Z-140905T0200Z/
NORTHWEST AND NORTH CENTRAL PINAL COUNTY-
INCLUDING THE CITIES OF...APACHE JUNCTION...CASA GRANDE...
FLORENCE
557 PM MST THU SEP 4 2014
...BLOWING DUST ADVISORY NOW IN EFFECT UNTIL 7 PM MST THIS EVENING...
THE BLOWING DUST ADVISORY IS NOW IN EFFECT UNTIL 7 PM MST THIS EVENING.
* AFFECTED AREA...NORTHWEST AND NORTH CENTRAL PINAL COUNTY...AND SOUTHWEST MARICOPA COUNTY...INCLUDING THE INTERSTATE 10 AND INTERSTATE 8 CORRIDORS NEAR CASA GRANDE.
* TIMING...UNTIL 7 PM.
* WINDS...30 TO 40 MPH.
* VISIBILITY...DOWN TO ONE HALF MILE.
* IMPACTS...VISIBILITIES WILL DROP SUDDENLY RESULTING IN HAZARDOUS TRAVEL CONDITIONS.
PRECAUTIONARY/PREPAREDNESS ACTIONS...
BE READY FOR A SUDDEN DROP IN VISIBILITY. IF YOU ENCOUNTER BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR FOOT OFF THE BRAKE PEDAL.
REMEMBER...PULL ASIDE...STAY ALIVE.
&&
$$
VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

WWUS85 KPSR 050106
SPSPSR
SPECIAL WEATHER STATEMENT

NATIONAL WEATHER SERVICE PHOENIX AZ
606 PM MST THU SEP 4 2014
AZZ022-023-050145-
MARICOPA AZ-
606 PM MST THU SEP 4 2014
...SIGNIFICANT WEATHER ADVISORY...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
  WEST CENTRAL MARICOPA COUNTY IN SOUTH CENTRAL ARIZONA
UNTIL 645 PM MST
AT 602 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A
STRONG THUNDERSTORM 8 MILES EAST OF WINTERSBURG...MOVING NORTH AT 5
MPH.
HAIL UP TO ONE-HALF INCH IN DIAMETER AND WIND GUSTS UP TO 50 MPH ARE
EXPECTED WITH THIS STORM...ALONG WITH HEAVY RAIN.
LOCATIONS IMPACTED INCLUDE...
  BUCKEYE...
  INTERSTATE 10 BETWEEN BUCKEYE AND TONOPAH...
SOME UNSECURED OBJECTS WILL BE BLOWN AROUND...TREE LIMBS COULD BE
SNAPPED OFF...AND ISOLATED POWER OUTAGES WILL BE POSSIBLE. SEEK
SHELTER INDOORS UNTIL THE STORM PASSES.
HEAVY RAINFALL MAY CAUSE TEMPORARY PONDING ON SOME ROADS AND MINOR
FLOODING OF POOR DRAINAGE AREAS. IN HEAVY RAINFALL...SLOW DOWN TO
REDUCE THE RISK OF HYDROPLANING...AND LEAVE A SAFE DISTANCE BETWEEN
YOURSELF AND OTHER VEHICLES.
LAT...LON 3362 11286 3360 11257 3336 11265 3338 11286
TIME...MOT...LOC 0105Z 188DEG 6KT 3344 11274
$$
WOODALL

WWUS85 KPSR 050134
SPSPSR
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
634 PM MST THU SEP 4 2014
AZZ022-023-050215-
MARICOPA AZ-
634 PM MST THU SEP 4 2014
...SIGNIFICANT WEATHER ADVISORY...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
  WEST CENTRAL MARICOPA COUNTY IN SOUTH CENTRAL ARIZONA
UNTIL 715 PM MST
AT 630 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A
STRONG THUNDERSTORM 13 MILES SOUTHWEST OF MORRISTOWN...MOVING
NORTHEAST AT 10 MPH.
HAIL UP TO ONE-HALF INCH IN DIAMETER AND WIND GUSTS UP TO 50 MPH ARE
EXPECTED WITH THIS STORM.
LOCATIONS IMPACTED INCLUDE...
   MORRISTOWN AND CIRCLE CITY...
   HIGHWAY 60 BETWEEN WICKENBURG AND WITTMANN...
SOME UNSECURED OBJECTS COULD BE BLOWN AROUND. SEEK SHELTER INDOORS
UNTIL THE STORM PASSES.
HEAVY RAINFALL MAY CAUSE TEMPORARY PONDING ON SOME ROADS AND MINOR
FLOODING OF POOR DRAINAGE AREAS. IN HEAVY RAINFALL...SLOW DOWN TO
REDUCE THE RISK OF HYDROPLANING...AND LEAVE A SAFE DISTANCE BETWEEN
YOURSELF AND OTHER VEHICLES.
LAT...LON 3396 11270 3378 11250 3361 11277 3374 11290
TIME...MOT...LOC 0133Z 222DEG 10KT 3373 11277
$$
WOODALL

NWUS55 KPSR 050201
LSRPSR
PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PHOENIX AZ
701 PM MST THU SEP 04 2014

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0657 PM	DUST STORM	3 NNW CASA GRANDE	32.94N 111.75W
09/04/2014		PINAL AZ	TRAINED SPOTTER
	VSBY LESS THAN 1 8 MILE 30 MPH WIND		

&&
EVENT NUMBER PSR1400252
$$
KINCAID

WWUS75 KPSR 050203
NPWPSR
URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE PHOENIX AZ
703 PM MST THU SEP 4 2014
AZZ028-050400-
/O.EXP.KPSR.DU.Y.0035.000000T0000Z-140905T0200Z/
/O.NEW.KPSR.DS.W.0010.140905T0203Z-140905T0400Z/
NORTHWEST AND NORTH CENTRAL PINAL COUNTY-
INCLUDING THE CITIES OF...APACHE JUNCTION...CASA GRANDE...
FLORENCE
703 PM MST THU SEP 4 2014
...DUST STORM WARNING IN EFFECT UNTIL 9 PM MST THIS EVENING...
...BLOWING DUST ADVISORY HAS EXPIRED...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A DUST STORM
WARNING...WHICH IS IN EFFECT UNTIL 9 PM MST THIS EVENING. THE
BLOWING DUST ADVISORY IS NO LONGER IN EFFECT.
* AFFECTED AREA...NORTHWEST AND NORTH CENTRAL PINAL COUNTY...INCLUDING
  THE INTERSTATE 10 AND INTERSTATE 8 CORRIDORS NEAR CASA GRANDE.
* TIMING...UNTIL 9 PM.
* WINDS...30 TO 40 MPH.
* VISIBILITY...DOWN TO ONE QUARTER OF A MILE.
* IMPACTS...VISIBILITIES WILL DROP SUDDENLY RESULTING IN
  HAZARDOUS TRAVEL CONDITIONS.
PRECAUTIONARY/PREPAREDNESS ACTIONS...
BE READY FOR A SUDDEN DROP IN VISIBILITY TO NEAR ZERO. IF YOU
ENCOUNTER BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT
APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR
VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR
FOOT OFF THE BRAKE PEDAL.
REMEMBER...PULL ASIDE...STAY ALIVE.
&&
$$
VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

WWUS85 KPSR 050205
SPSPSR
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
705 PM MST THU SEP 4 2014
AZZ023-050245-
MARICOPA AZ-
705 PM MST THU SEP 4 2014
...SIGNIFICANT WEATHER ADVISORY...

THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
  CENTRAL MARICOPA COUNTY IN SOUTH CENTRAL ARIZONA
UNTIL 745 PM MST
AT 703 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A
STRONG THUNDERSTORM NEAR LITCHFIELD PARK...MOVING EAST AT 15 MPH.
WIND GUSTS UP TO 50 MPH ARE EXPECTED WITH THIS STORM. STRONG GUSTY
WINDS WILL SPREAD ACROSS THE WEST VALLEY THROUGH 745 PM.
LOCATIONS IMPACTED INCLUDE...
   EL MIRAGE...
   YOUNGTOWN...
   CAMELBACK RANCH AND SUN CITY...
   GLENDALE SPORTS COMPLEX AND TOLLESON...
   DOWNTOWN GLENDALE AND DOWNTOWN PEORIA...
   ARROWHEAD MALL...
   GLENDALE...
SOME UNSECURED OBJECTS WILL BE BLOWN AROUND...TREE LIMBS COULD BE
SNAPPED OFF...AND ISOLATED POWER OUTAGES WILL BE POSSIBLE. SEEK
SHELTER INDOORS UNTIL THE STORM PASSES.
LAT...LON 3367 11213 3338 11212 3341 11247 3364 11246
TIME...MOT...LOC 0204Z 272DEG 10KT 3352 11235
$$
WOODALL

WWUS75 KPSR 050219
NPWPSR
URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE PHOENIX AZ
719 PM MST THU SEP 4 2014
AZZ028-050400-
/O.CON.KPSR.DS.W.0010.000000T0000Z-140905T0400Z/
NORTHWEST AND NORTH CENTRAL PINAL COUNTY-
INCLUDING THE CITIES OF...APACHE JUNCTION...CASA GRANDE...
FLORENCE
719 PM MST THU SEP 4 2014
...DUST STORM WARNING REMAINS IN EFFECT UNTIL 9 PM MST THIS
EVENING...
A DUST STORM WARNING REMAINS IN EFFECT UNTIL 9 PM MST THIS
EVENING.
* AFFECTED AREA...NORTHWEST AND NORTH CENTRAL PINAL COUNTY...
  INCLUDING THE INTERSTATE 10 AND INTERSTATE 8 CORRIDORS NEAR
  CASA GRANDE.
* TIMING...UNTIL 9 PM.
* WINDS...30 TO 40 MPH.
* VISIBILITY...LESS THAN ONE QUARTER OF A MILE.
* IMPACTS...VISIBILITIES WILL DROP SUDDENLY RESULTING IN
  HAZARDOUS TRAVEL CONDITIONS.
PRECAUTIONARY/PREPAREDNESS ACTIONS...
BE READY FOR A SUDDEN DROP IN VISIBILITY TO NEAR ZERO. IF YOU
ENCOUNTER BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT
APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR
VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR
FOOT OFF THE BRAKE PEDAL.
REMEMBER...PULL ASIDE...STAY ALIVE.
&&
$$
AZZ023-050400-
/O.NEW.KPSR.DU.Y.0036.140905T0219Z-140905T0400Z/
GREATER PHOENIX AREA-
INCLUDING THE CITIES OF...MESA...PHOENIX
719 PM MST THU SEP 4 2014
...BLOWING DUST ADVISORY IN EFFECT UNTIL 9 PM MST THIS EVENING...

THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A BLOWING DUST ADVISORY...WHICH IS IN EFFECT UNTIL 9 PM MST THIS EVENING.
* AFFECTED AREA...PHOENIX METROPOLITAN AREA...MAINLY INCLUDING THE SOUTHEAST VALLEY CITIES OF CHANDLER MESA...AND GILBERT.
* TIMING...UNTIL 9 PM.
* WINDS...30 TO 40 MPH.
* VISIBILITY...DOWN TO ONE HALF MILE.
* IMPACTS...VISIBILITIES WILL DROP SUDDENLY RESULTING IN HAZARDOUS TRAVEL CONDITIONS.
PRECAUTIONARY/PREPAREDNESS ACTIONS...
BE READY FOR A SUDDEN DROP IN VISIBILITY. IF YOU ENCOUNTER BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR FOOT OFF THE BRAKE PEDAL.
REMEMBER...PULL ASIDE...STAY ALIVE.
&&
$$
VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

WWUS85 KPSR 050237
SPSPSR
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
737 PM MST THU SEP 4 2014
AZZ022-023-027-050315-
MARICOPA AZ-
737 PM MST THU SEP 4 2014
...SIGNIFICANT WEATHER ADVISORY...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A SIGNIFICANT WEATHER ADVISORY FOR...
  WEST CENTRAL MARICOPA COUNTY IN SOUTH CENTRAL ARIZONA
UNTIL 815 PM MST
AT 733 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A STRONG THUNDERSTORM 6 MILES NORTH OF GILLESPIE DAM...MOVING EAST AT 15 MPH. ANOTHER STRONG STORM WAS 9 MILES WEST OF GILLESPIE DAM.
WIND GUSTS UP TO 40 MPH ARE EXPECTED WITH THIS STORM...ALONG WITH HEAVY RAIN.
LOCATIONS IMPACTED INCLUDE...
   PALO VERDE...
   BUCKEYE...
SOME UNSECURED OBJECTS COULD BE BLOWN AROUND. SEEK SHELTER INDOORS UNTIL THE STORM PASSES.
BLOWING DUST IS POSSIBLE. IF YOU ENCOUNTER BLOWING DUST WHILE DRIVING...PULL OVER AS FAR OFF THE ROADWAY AS POSSIBLE AND PARK. TURN OFF YOUR HEADLIGHTS AND KEEP YOUR FOOT OFF THE BRAKE.
LAT...LON 3341 11252 3314 11252 3318 11296 3340 11287
TIME...MOT...LOC 0236Z 273DEG 12KT 3331 11273
$$
WOODALL

FXUS65 KPSR 050356
AFDPSR
AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
856 PM MST THU SEP 4 2014
.SYNOPSIS...
INCREASING SOUTHERLY FLOW ALOFT WILL CONTINUE TO GRADUALLY INCREASE MOISTURE LEVELS OVER THE DESERT SOUTHWEST THROUGH FRIDAY...WITH ISOLATED TO SCATTERED SHOWERS AND THUNDERSTORMS OVER THE REGION. A FURTHER INCREASE IN MOISTURE IS EXPECTED THIS WEEKEND AS MOISTURE

FROM THE REMAINS OF HURRICANE NORBERT SURGES INLAND INTO THE REGION...WITH HEAVY RAIN AND LOCALIZED FLOODING POSSIBLE. A SLOW DRYING TREND IS THEN EXPECTED TO BEGIN NEXT WEEK AS HIGH PRESSURE SLOWLY REBUILDS OVER THE REGION.
&&
.DISCUSSION...
WHAT TURNED OUT TO BE A SLOW START EARLY THIS AFTERNOON WITH MOST STORM ACTIVITY TO THE SOUTH OF OUR AREA ACTUALLY ENDED UP BEING QUITE ACTIVE AFTER A SERIES OF OUTFLOWS REPEATEDLY SPAWNED SHOWERS AND THUNDERSTORMS ALONG THE LEADING EDGES. THOUGH STORM COVERAGE WAS QUITE EXTENSIVE...THE ATMOSPHERE STILL REMAINS SOMEWHAT ON THE DRY SIDE...SO RAINFALL AMOUNTS WERE FAIRLY LIMITED. A FEW LOCATIONS SOUTH OF GILA BEND AND WEST OF PHOENIX LIKELY SAW CLOSE TO AN INCH OF RAINFALL...BUT THE VAST MAJORITY OF THE AREA SAW ONLY A TRACE TO A TENTH OF AN INCH. THE 00Z RAOBS FOR BOTH PHOENIX AND TUCSON SHOWED NO INCREASE INCREASE IN PRECIPITABLE WATER VALUES...BUT FAIRLY STEEP MID-LEVEL LAPSE RATES WERE OBSERVED. A SUBTLE SHORTWAVE TROUGH WAS OBSERVED IN THE WIND FIELD THIS AFTERNOON AND EVENING MOVING ACROSS SOUTHWEST ARIZONA INTO SOUTH-CENTRAL ARIZONA. THIS SHORTWAVE LIKELY AIDED IN STORM DEVELOPMENT ALONG WITH THE NUMEROUS OUTFLOWS CREATING LOW LEVEL CONVERGENT AREAS.
STORM ACTIVITY CONTINUES AS OF 9 PM FROM NORTHERN MARICOPA COUNTY EASTWARD THROUGH GILA AND PINAL COUNTIES. EXPECTING THIS ACTIVITY TO GRADUALLY WIND DOWN BY MIDNIGHT WITH SOME SHOWERS LIKELY LINGERING ACROSS SOUTHEAST AND EAST-CENTRAL ARIZONA DURING THE OVERNIGHT HOURS. MADE SOME ADJUSTMENTS TO POPS DURING THE OVERNIGHT ADDING IN SLIGHT CHANCES THROUGH THE PHOENIX AREA AND INCREASING POPS SLIGHTLY TO AROUND 20 PERCENT TO THE EAST OF PHOENIX. ALSO MADE TWEAKS TO THE SKY GRIDS GIVEN THE CURRENT EXTENSIVE CLOUDINESS EXPECTING PARTLY TO MOSTLY CLOUDY SKIES TO LAST THROUGH MUCH OF THE OVERNIGHT ACROSS SOUTH-CENTRAL ARIZONA.
&&
.PREVIOUS DISCUSSION...
TONIGHT AND FRIDAY...
MODELS CONTINUE TO BE CONSISTENT ON THE FORECAST THROUGH FRIDAY...WITH A SLOW INCREASE IN THE PWAT VALUES OVER AZ TONIGHT INTO EARLY FRIDAY...MOST LIKELY INTO THE 1.50-1.60 INCH RANGE. THIS MODEST MOISTURE...COMBINED WITH A WEAK SHORTWAVE THAT IS NOW SEEN IN THE LATEST WV SATELLITE IMAGERY MOVING INTO EXTREME SOUTHERN AZ...IS NOW TRIGGERING ISOLATED TO SCATTERED THUNDERSTORMS OVER PIMA COUNTY. THE LATEST HRRR HI-RES MODEL RUN IS NOW SHOWING MOST OF THESE STORMS REMAINING TO THE SOUTH OF OUR CWA...BUT WITH A FEW OF THE STORMS MOVING INTO OR DEVELOPING OVER SOUTH-CENTRAL AZ. THE MAIN THREAT FROM THESE STORMS WILL BE GUSTY WINDS AND BLOWING DUST...WITH ONLY A SLIGHT CHANCE FOR MEASURABLE RAIN AT ANY ONE SPOT.
FRIDAY STILL LOOKS LIKE A BIT OF A DOWN DAY...WITH THE LATEST GFS PRETTY MUCH MATCHING EARLIER RUNS...WITH WEAK HIGH PRESSURE RIDGING REBUILDING INTO THE REGION FROM THE WEST AND PWATS FALLING A BIT...INTO THE 1.40-1.50 INCH RANGE...WHICH SHOULD KEEP TS ACTIVITY LIMITED TO SOUTH-CENTRAL AZ...MOSTLY OVER THE HIGHER TERRAIN NORTH AND EAST OF PHOENIX.
SATURDAY THROUGH MONDAY...
THIS PERIOD LOOKS MORE-AND-MORE LIKELY THAT IT WILL BE A QUITE ACTIVE...AS MOISTURE FROM HURRICANE NORBERT BEGINS TO IMPACT THE REGION. THE LATEST (21Z) NHC FORECAST CONTINUES TO TRACK THIS STORM TO THE WEST OF THE BAJA CALIFORNIA PENINSULA OVER THE NEXT 3-5 DAYS...WITH AN UPPER TROF THAT WILL BE MOVING SOUTHWARD ALONG THE NORTHERN AND CENTRAL CA COAST SHEARING MID AND HIGH-LEVEL MOISTURE NORTHWESTWARD INTO OUR REGION FROM THIS STORM. LATEST MODEL RUNS ALSO ARE SHOWING A BROAD AREA OF LOW-LEVEL SOUTHEASTERLY FLOW PUSHING VERY MOIST AIR NORTHWARD ACROSS THE GULF OF CALIFORNIA INTO AZ AND SE CA...WITH SFC DEWPOINTS EXCEEDING 70F AT ANY LOWER DESERT LOCATIONS BY SUNDAY MORNING AND PWATS RISING WELL ABOVE 2

INCHES...WHICH IS AT NEAR-RECORD VALUES FOR EARLY SEPT.
GIVEN THESE VERY HIGH AVAILABLE MOISTURE LEVELS...WIDESPREAD
SHOWER/THUNDERSTORM ACTIVITY NOW APPEARS TO BE VERY LIKELY FROM LATE
SAT INTO MONDAY...WITH HEAVY RAIN AND LOCALIZED FLOODING BEING THE
MAIN THREATS FROM STORM-TOTAL RAINFALL AMOUNTS OF 1-2 INCHES...OR
EVEN MORE AT MANY LOWER DESERT LOCATIONS. THE RAIN AND CLOUDS ARE
ALSO EXPECTED TO COOL TEMPS SUBSTANTIALLY DURING THIS PERIOD...WITH
HIGHS REMAINING IN THE 90S...AND EVEN A FEW 80S ACROSS THE LOWER
DESERTS EACH DAY.
TUESDAY THROUGH THURSDAY...
A SLOW DRYING TREND IS EXPECTED THROUGH THIS PERIOD AS INCREASING
WESTERLY FLOW AND BUILDING HIGH PRESSURE OVER THE REGION HELPS TO
SWEEP ANY REMAINING MOISTURE FROM NORBERT WELL OFF TO OUR
EAST...WITH THE THREAT OF THUNDERSTORM ACTIVITY LIKELY ENDING OVER
OUR CWA BY WEDNESDAY OR THURSDAY...WITH DAYTIME HIGHS REBOUNDING TO
NEAR...OR SLIGHTLY ABOVE NORMAL VALUES.
&&
.AVIATION...
SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...
ISOLATED TO SCATTERED SHOWERS AND A FEW THUNDERSTORMS REMAIN ACROSS
THE METRO AREA AND SHOULD LAST THROUGH AROUND 06Z...THOUGH
DIMINISHING UNTIL THEN. ADDITIONAL OUTFLOWS AND SUDDEN WIND SHIFTS
WILL BE POSSIBLE ALSO UNTIL AROUND 06Z. WINDS WILL GRADUALLY MIGRATE
AROUND TO A EAST SOUTHEASTERLY DIRECTION BY AROUND 09Z. BROKEN CIGS
AROUND 10K WILL LAST THROUGH MUCH OF THE OVERNIGHT...GRADUALLY
SCATTERING OUT AFTER 12Z. STORM CHANCES WILL RETURN FOR FRIDAY
AFTERNOON AND EVENING WITH GUSTY OUTFLOW WINDS AGAIN LIKELY AND ONLY
MARGINAL CHANCES FOR ANY RAINFALL IMPACTING AREA TERMINALS.
SOUTHWEST ARIZONA AND SOUTHEAST CALIFORNIA INCLUDING KIPL AND KBLH...
MOSTLY CLEAR SKIES SHOULD PREVAIL THROUGH FRIDAY MORNING...THOUGH
SOME INCREASE IN A SCT LOWER DECK...AS WELL AS HIGH DECK MAY BE
POSSIBLE. WIND DIRECTION FORECASTS ARE OF LOWER CONFIDENCE AS
OUTFLOW WINDS AND SOUTHERLY SURGES OF MOISTURE MAY BRING STRONGER
GUSTS EVEN DURING OVERNIGHT HOURS. IN GENERAL...A SOUTHERLY OR
SOUTHEASTERLY COMPONENT WILL BE FAVORED.
AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.
&&
.FIRE WEATHER...
SUNDAY THROUGH THURSDAY...
MOISTURE WILL ALREADY HAVE ENVELOPED SOUTHWEST ARIZONA AND SOUTHEAST
CALIFORNIA BY SUNDAY...WITH THE POTENTIAL FOR HEAVY RAINFALL OVER
MUCH OF THE REGION. STORM CHANCES WILL CONTINUE THROUGH TUESDAY
BEFORE TRENDING DOWNWARD THROUGH MIDWEEK. HUMIDITIES WILL REMAIN
VERY ELEVATED DURING THE ENTIRE PERIOD...ONLY FALLING INTO A 30-40
PERCENT RANGE IN THE AFTERNOON WITH MOSTLY COOLER THAN AVERAGE
TEMPERATURES. WINDS MAY BE GUSTY IN AND AROUND THUNDERSTORMS...AND
STAY VARIABLE FOR PROLONGED PERIODS OTHERWISE.
&&
.PSR WATCHES/WARNINGS/ADVISORIES...
AZ...NONE.
CA...NONE.
&&
$$
VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX
DISCUSSION...KUHLMAN
PREVIOUS DISCUSSION...PERCHA
AVIATION...KUHLMAN
FIRE WEATHER...MO

WWUS85 KPSR 050414
SPSPSR
SPECIAL WEATHER STATEMENT

NATIONAL WEATHER SERVICE PHOENIX AZ
914 PM MST THU SEP 4 2014
AZZ022-023-050500-
MARICOPA AZ-
914 PM MST THU SEP 4 2014
...SIGNIFICANT WEATHER ADVISORY...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
  WEST CENTRAL MARICOPA COUNTY IN SOUTH CENTRAL ARIZONA
UNTIL 1000 PM MST
AT 912 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A
STRONG THUNDERSTORM 8 MILES NORTHEAST OF TONOPAH...MOVING EAST AT 15
MPH.
WIND GUSTS UP TO 45 MPH ARE EXPECTED WITH THIS STORM...ALONG WITH
HEAVY RAIN.
LOCATIONS IMPACTED INCLUDE...
  RURAL WESTERN MARICOPA COUNTY...
SOME UNSECURED OBJECTS COULD BE BLOWN AROUND. SEEK SHELTER INDOORS
UNTIL THE STORM PASSES.
HEAVY RAINFALL MAY CAUSE TEMPORARY PONDING ON SOME ROADS AND MINOR
FLOODING OF POOR DRAINAGE AREAS. IN HEAVY RAINFALL...SLOW DOWN TO
REDUCE THE RISK OF HYDROPLANING...AND LEAVE A SAFE DISTANCE BETWEEN
YOURSELF AND OTHER VEHICLES.
LAT...LON 3379 11268 3355 11259 3352 11292 3364 11296
TIME...MOT...LOC 0414Z 248DEG 13KT 3361 11287
$$
WOODALL

FXUS65 KPSR 062205
AFDPSR
AREA FORECAST DISCUSSION...UPDATED
NATIONAL WEATHER SERVICE PHOENIX AZ
305 PM MST SAT SEP 6 2014
.SYNOPSIS...
MOISTURE WILL CONTINUE TO INCREASE ACROSS THE AREA THIS WEEKEND.
SHOWERS AND THUNDERSTORMS ARE EXPECTED AT TIMES EACH DAY THROUGH
EARLY NEXT WEEK...WITH SOME LOCATIONS POSSIBLY SEEING BRIEF PERIODS
OF HEAVY RAIN. A GRADUAL DRYING TREND IS EXPECTED TO BEGIN NEXT WEEK
AS HIGH PRESSURE SLOWLY REBUILDS OVER THE REGION.
&&
.DISCUSSION...
AS OF 130PM MST...PER LOCAL HI-RES FORECAST MODELS...SOME CONVECTIVE
ACTIVITY HAS BEGUN ABOUT 2 HOURS EARLIER THAN FORECAST. SOME
ISOLATED STORMS IN THE WESTERN ZONES OF ARIZONA AND SOUTHEAST
CALIFORNIA HAVE POPPED UP. NOT SURPRISING AS THIS AREA HAS BEEN
UNDER NEARLY CLEAR SKIES ALL DAY SO THE HEATING AND INSTABILITY HAS
REMAINED IN THESE AREAS. OTHER LOCATIONS THAT HAVE FIRED UP ARE OUT
EAST IN THE WHITE MOUNTAINS AND SOUTH SOUTH AND WEST OF TUCSON. FOR
THE REMAINDER OF TONIGHT...EXPECT ACTIVITY TO CONTINUE INCREASING
OVER THE SOUTHERN PART OF THE STATE WHICH WILL IN TURN GIVE OFF SOME
OUTFLOW AND REDEVELOPMENT ACROSS SOUTHERN MARICOPA COUNTY AND
NORTHWEST PINAL AND SHOULD CREATE AREAS OF BLOWING DUST.
EMBEDDED INVERTED TROUGH MOVING THROUGH SOUTHERN ARIZONA TODAY WILL
BE THE LIFT NEEDED FOR CONVECTIVE ACTIVITY TO TRIGGER. KEEPING A
SOUTHERLY-SOUTHEASTERLY FLOW WITH THE SUBSTANTIAL AMOUNT OF MOISTURE
IN PLACE.../TAPPING INTO BLENDED TPW SATELLITE 1.8 - 2.0 INCHES OF
PWAT/...THE INGREDIENTS ARE AVAILABLE AND READY FOR HEAVY RAIN
PRODUCERS. AS HURRICANE NORBERT CONTINUES A MOSTLY NORTHWARD
TRAJECTORY AND AN INVERTED TROUGH SCOOTS NORTH-NORTHEAST...A VERY
DIFLUENT COLUMN FROM NORTHERN MEXICO THROUGH CENTRAL ARIZONA WILL
REMAIN IN PLACE THROUGH SUNDAY. AS THE FLOW TURNS MORE SOUTHEASTERLY
SUNDAY...WITH INCREASED MOISTURE YET AGAIN...THE BEST WINDOW OF

HEAVY RAINFALL LOOKS TO BE SUNDAY AFTERNOON THROUGH MONDAY MID DAY.
OF COURSE...EACH DAY/S ACTIVITY HIGHLY DEPENDS ON THE PREVIOUS
DAY.../TOO CLOUDED OVER OR THE BOUNDARY LAYER BEING TOO OVER
WORKED/...AND THIS REMAINS THE TRICKY PART OF THE FORECAST. RAINFALL
AMOUNTS AND TIMING CONTINUE TO BE FOCUSED AND FINE TUNED FOR THIS
FORECAST. REGARDLESS OF THE QPF AMOUNTS CERTAIN AREAS RECEIVE...MOST
ALL LOCATIONS ACROSS ARIZONA SHOULD RECEIVE RAIN DURING THIS EVENT.
AFTER MONDAY...OPERATIONAL AND ENSEMBLE FORECAST MODELS HAVE THE
REMNANT LOW FORMERLY KNOWN AS NORBERT ABSORBING INTO A WAVE WHICH
GETS SWEPT IN THE LONGWAVE TROUGH THROUGH THE PACIFIC NORTHWEST.
DIFFERENCES ARISE IN THE TIMING AND SPEED OF THAT TROUGH MOVING
THROUGH ARIZONA INTO THE FOUR CORNERS AND ON TO NEW MEXICO. THE
AIRMASS ACROSS THE SOUTHWEST WILL SLOWLY RECOVER...WITH HEIGHT
CHANGES EVER SO SLIGHT. TEMPERATURES WILL BE SLOW TO CLIMB BACK TO
SEASONAL NORMALS IF THEY EVEN REACH THAT /103F FOR PHOENIX...104F
FOR YUMA/ BY NEXT SATURDAY.
&&
.AVIATION...
SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...
QUITE A BIT OF CLOUD COVER ACROSS SE AZ WHICH MAY INHIBIT CONVECTION
UNTIL LATER THIS EVENING. NONETHELESS IT STILL LOOKS LIKE STORMS
WILL FIRE AND MOVE INTO THE METRO THIS EVENING. THE POTENTIAL FOR
BLOWING DUST IS STILL THERE AND I WILL RETAIN THE TEMPO GROUPS FOR
BLDU THROUGH THE EVENING. THERE SHOULD BE SOME SHOWERS IN THE AREA
AS WELL ALTHOUGH I'M NOT CONFIDENT ENOUGH TO INCLUDE PREVAILING RAIN
SHOWERS OR THUNDERSTORMS AT ANY POINT DURING THE TAF PERIOD. MID
CLOUDS SHOULD LINGER THROUGH THE NIGHT INTO LATE SUNDAY MORNING AT
ALL PHOENIX SITES.
SOUTHEAST CALIFORNIA AND SOUTHWEST ARIZONA INCLUDING KIPL AND KBLH...
THUNDERSTORMS SHOULD DEVELOP AND APPROACH THE SE CA TAF SITES LATE
IN THE PERIOD...BUT THERE SHOULD BE A THREAT OF BLOWING DUST
BEFOREHAND. VCSH LOOKS INCREASINGLY LIKELY AFTER 12Z AS DEEPER
MOISTURE MOVES INTO THE AREA.
AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.
&&
.FIRE WEATHER...
TUESDAY THROUGH SATURDAY.
A GRADUAL DRYING TREND WILL COMMENCE TUESDAY AS MOISTURE FROM
HURRICANE NORBERT EXITS THE AREA. HOWEVER...THERE WILL REMAIN AT
LEAST A SLIGHT CHANCE OF AFTERNOON SHOWERS AND THUNDERSTORMS THROUGH
THE END OF THE WEEK. LOW LEVEL MOISTURE WILL BE SLOW TO ERODE
HOWEVER AND GOOD/EXCELLENT RECOVERIES ARE EXPECTED ALL WEEK. AS FOR
WINDS...NO MAJOR WIND EVENTS EXPECTED NEXT WEEK OUTSIDE OF LOCALLY
DRIVEN THUNDERSTORM WINDS.
&&
.PSR WATCHES/WARNINGS/ADVISORIES...
AZ...NONE.
CA...NONE.
&&
$$
VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX
DISCUSSION...DEWEY
AVIATION...LEINS
FIRE WEATHER...LEINS

WWUS75 KPSR 062332
NPWPSR
URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE PHOENIX AZ
432 PM MST SAT SEP 6 2014
AZZ028-070100-
/O.NEW.KPSR.DU.Y.0037.140906T2332Z-140907T0100Z/

NORTHWEST AND NORTH CENTRAL PINAL COUNTY-
INCLUDING THE CITIES OF...APACHE JUNCTION...CASA GRANDE...
FLORENCE
432 PM MST SAT SEP 6 2014
...BLOWING DUST ADVISORY IN EFFECT UNTIL 6 PM MST THIS EVENING...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A BLOWING DUST
ADVISORY...WHICH IS IN EFFECT UNTIL 6 PM MST THIS EVENING.
* AFFECTED AREA...CENTRAL AND NORTHWESTERN PINAL COUNTY...INCLUDING
  FLORENCE...COOLIDGE...CASA GRANDE...AND THE INTERSTATE 10 AND
  INTERSTATE 8 CORRIDORS.
* TIMING...THROUGH 600 PM MST THIS EVENING.
* WINDS...GUSTS OF 30 TO 40 MPH AHEAD OF THUNDERSTORM OUTFLOWS.
* VISIBILITY...AS LOW AS ONE HALF MILE.
* IMPACTS...GUSTY WINDS AS THUNDERSTORM OUTFLOWS MOVE FROM EAST TO
  WEST ACROSS PINAL COUNTY. VISIBILITIES WILL DROP SUDDENLY...
  RESULTING IN HAZARDOUS TRAVEL CONDITIONS.
PRECAUTIONARY/PREPAREDNESS ACTIONS...
BE READY FOR A SUDDEN DROP IN VISIBILITY. IF YOU ENCOUNTER
BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT
APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR
VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR
FOOT OFF THE BRAKE PEDAL.
REMEMBER...PULL ASIDE...STAY ALIVE.
&&
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VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX
WOODALL

WWUS85 KPSR 070005
SPSPSR
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
505 PM MST SAT SEP 6 2014
AZZ024-028-070045-
PINAL AZ-
505 PM MST SAT SEP 6 2014
...SIGNIFICANT WEATHER ADVISORY...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
  CENTRAL PINAL COUNTY IN SOUTHEAST ARIZONA
UNTIL 545 PM MST
AT 500 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A
STRONG THUNDERSTORM 9 MILES SOUTHEAST OF FLORENCE JUNCTION...MOVING
WEST AT 5 MPH.
WIND GUSTS UP TO 40 MPH ARE EXPECTED WITH THIS STORM.
LOCATIONS IMPACTED INCLUDE...
   FLORENCE...
   HIGHWAY 79 BETWEEN FLORENCE AND FLORENCE JUNCTION.
SOME UNSECURED OBJECTS COULD BE BLOWN AROUND. SEEK SHELTER INDOORS
UNTIL THE STORM PASSES.
GUSTY WINDS FROM THIS STORM WILL INCREASE THE THREAT OF BLOWING
DUST. IF YOU ENCOUNTER BLOWING DUST WHILE DRIVING...PULL OVER AS FAR
OFF THE ROADWAY AS POSSIBLE AND PARK. TURN OFF YOUR HEADLIGHTS AND
KEEP YOUR FOOT OFF THE BRAKE.
AFTER THE WINDS AND DUST PASS...HEAVY RAIN WILL MOVE IN.
LAT...LON 3312 11112 3306 11121 3298 11142 3324 11146
      3327 11117
TIME...MOT...LOC 0004Z 086DEG 5KT 3315 11124
$$
WOODALL

NWUS55 KPSR 070018

LSRPSR
PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PHOENIX AZ
518 PM MST SAT SEP 06 2014

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0514 PM	DUST STORM	1 WSW COOLIDGE	32.97N 111.55W
09/06/2014		PINAL AZ	TRAINED SPOTTER
	VSBY 1 4 MILE		

&&
EVENT NUMBER PSR1400254
$$
KINCAID

WWUS75 KPSR 070027
NPWPSR
URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE PHOENIX AZ
527 PM MST SAT SEP 6 2014
AZZ028-070300-
/O.UPG.KPSR.DU.Y.0037.000000T0000Z-140907T0100Z/
/O.NEW.KPSR.DS.W.0011.140907T0027Z-140907T0300Z/
NORTHWEST AND NORTH CENTRAL PINAL COUNTY-
INCLUDING THE CITIES OF...APACHE JUNCTION...CASA GRANDE...
FLORENCE
527 PM MST SAT SEP 6 2014
...DUST STORM WARNING IN EFFECT UNTIL 8 PM MST THIS EVENING...
...THIS REPLACES THE BLOWING DUST ADVISORY THAT WAS EARLIER
ISSUED...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A DUST STORM
WARNING...WHICH IS IN EFFECT UNTIL 8 PM MST THIS EVENING. THE
BLOWING DUST ADVISORY IS NO LONGER IN EFFECT.
* AFFECTED AREA...CENTRAL AND NORTHWESTERN PINAL COUNTY...
  INCLUDING FLORENCE...COOLIDGE...CASA GRANDE...AND THE
  INTERSTATE 10 AND INTERSTATE 8 CORRIDORS.
* TIMING...THROUGH 8 PM MST THIS EVENING.
* WINDS...GUSTS OF 30 TO 40 MPH AHEAD OF THUNDERSTORM OUTFLOWS.
* VISIBILITY...AS LOW AS ONE HALF MILE.
* IMPACTS...GUSTY WINDS AS THUNDERSTORM OUTFLOWS MOVE FROM EAST
  TO WEST ACROSS PINAL COUNTY. VISIBILITIES WILL DROP SUDDENLY...
   RESULTING IN HAZARDOUS TRAVEL CONDITIONS.
PRECAUTIONARY/PREPAREDNESS ACTIONS...
BE READY FOR A SUDDEN DROP IN VISIBILITY TO NEAR ZERO. IF YOU
ENCOUNTER BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT
APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR
VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR
FOOT OFF THE BRAKE PEDAL.
REMEMBER...PULL ASIDE...STAY ALIVE.
&&
$$
AZZ023-070300-
/O.NEW.KPSR.DS.W.0011.140907T0027Z-140907T0300Z/
GREATER PHOENIX AREA-
INCLUDING THE CITIES OF...MESA...PHOENIX
527 PM MST SAT SEP 6 2014
...DUST STORM WARNING IN EFFECT UNTIL 8 PM MST THIS EVENING...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A DUST STORM
WARNING...WHICH IS IN EFFECT UNTIL 8 PM MST THIS EVENING.
* AFFECTED AREA...PHOENIX METROPOLITAN AREA...MAINLY AFFECTING THE
  SOUTHEAST VALLEY CITIES OF CHANDLER...MESA...AND GILBERT.
* TIMING....UNTIL 8 PM.
* WINDS...30 TO 40 MPH.

* VISIBILITY...LOCALLY DOWN TO ONE QUARTER MILE...OR LESS.
* IMPACTS...VISIBILITIES WILL DROP SUDDENLY RESULTING IN HAZARDOUS
  TRAVEL CONDITIONS.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

BE READY FOR A SUDDEN DROP IN VISIBILITY TO NEAR ZERO. IF YOU ENCOUNTER BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR FOOT OFF THE BRAKE PEDAL.

REMEMBER...PULL ASIDE...STAY ALIVE.

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VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

NWUS55 KPSR 070034
LSRPSR
PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PHOENIX AZ
534 PM MST SAT SEP 06 2014

..TIME...	...EVENT...	...CITY LOCATION...		...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION	..ST..	...SOURCE....
	..REMARKS..			
0515 PM	DUST STORM	8 NW CASA GRANDE		32.97N 111.83W
09/06/2014		PINAL	AZ	TRAINED SPOTTER
	VSBY LESS THAN 1 8 MILE			

&&

EVENT NUMBER PSR1400255

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KINCAID

WWUS85 KPSR 070035
SPSPSR
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
535 PM MST SAT SEP 6 2014
AZZ028-070100-
PINAL AZ-
535 PM MST SAT SEP 6 2014

...SIGNIFICANT WEATHER ADVISORY...

THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A SIGNIFICANT WEATHER ADVISORY FOR...
  CENTRAL PINAL COUNTY IN SOUTHEAST ARIZONA
UNTIL 600 PM MST
AT 533 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A STRONG THUNDERSTORM NEAR TOLTEC...MOVING WEST AT 5 MPH.
WIND GUSTS UP TO 50 MPH ARE EXPECTED WITH THIS STORM.
LOCATIONS IMPACTED INCLUDE...
   TOLTEC...
   ARIZOLA...
   CASA GRANDE...
SOME UNSECURED OBJECTS WILL BE BLOWN AROUND...TREE LIMBS COULD BE SNAPPED OFF...AND ISOLATED POWER OUTAGES WILL BE POSSIBLE. SEEK SHELTER INDOORS UNTIL THE STORM PASSES.
BLOWING DUST IS POSSIBLE. IF YOU ENCOUNTER BLOWING DUST WHILE DRIVING...PULL OVER AS FAR OFF THE ROADWAY AS POSSIBLE AND PARK. TURN OFF YOUR HEADLIGHTS AND KEEP YOUR FOOT OFF THE BRAKE.
FOLLOWING THE WIND AND DUST...VERY HEAVY RAINFALL MAY CAUSE TEMPORARY PONDING ON SOME ROADS AND MINOR FLOODING OF POOR DRAINAGE AREAS. IN HEAVY RAINFALL...SLOW DOWN TO REDUCE THE RISK OF HYDROPLANING...AND LEAVE A SAFE DISTANCE BETWEEN YOURSELF AND OTHER VEHICLES.

LAT...LON 3298 11175 3294 11145 3281 11155 3277 11161
3277 11176
TIME...MOT...LOC 0035Z 096DEG 3KT 3284 11159
$$
WOODALL

WWUS55 KPSR 070039
SVSPSR
SEVERE WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
539 PM MST SAT SEP 6 2014
AZC013-021-070100-
/O.CON.KPSR.SV.W.0063.000000T0000Z-140907T0100Z/
PINAL AZ-MARICOPA AZ-
539 PM MST SAT SEP 6 2014
...A SEVERE THUNDERSTORM WARNING REMAINS IN EFFECT UNTIL 600 PM MST
FOR EAST CENTRAL MARICOPA AND CENTRAL PINAL COUNTIES...
AT 536 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS CONTINUED TO
DETECT A SEVERE THUNDERSTORM CAPABLE OF PRODUCING DAMAGING WINDS IN
EXCESS OF 60 MPH. IN ADDITION...DENSE BLOWING DUST MAY ACCOMPANY
THIS SEVERE STORM. THIS STORM WAS LOCATED NEAR SAN TAN VALLEY...OR
12 MILES NORTH OF COOLIDGE...MOVING NORTHWEST AT 5 MPH.
OTHER LOCATIONS IN THE WARNING INCLUDE BUT ARE NOT LIMITED TO
ENCANTERA...SAN TAN MOUNTAIN PARK...CHANDLER HEIGHTS...SACATON AND
QUEEN CREEK
PRECAUTIONARY/PREPAREDNESS ACTIONS...
IF YOU ARE IN THE WARNING AREA...GO INSIDE A STURDY BUILDING.
REMEMBER...A SEVERE THUNDERSTORM WILL PRODUCE DAMAGING WINDS AND
DEADLY LIGHTNING
REPORT SEVERE WEATHER TO THE NEAREST LAW ENFORCEMENT AGENCY. THEY
WILL RELAY YOUR REPORT TO THE NATIONAL WEATHER SERVICE FORECAST
OFFICE.
HEAVY RAINS MAY FLOOD LOW LYING AREAS SUCH AS DITCHES AND
UNDERPASSES. AVOID THESE AREAS AND DO NOT CROSS FLOODED ROADS AS THEY
MAY BE WASHED OUT. WATER LEVELS OF SMALL STREAMS AND RIVERS MAY ALSO
RISE.
&&
LAT...LON 3308 11176 3330 11167 3322 11146 3305 11152
TIME...MOT...LOC 0040Z 128DEG 3KT 3316 11158
$$
WOODALL

NWUS55 KPSR 070043
LSRPSR
PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PHOENIX AZ
543 PM MST SAT SEP 06 2014

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0535 PM	HEAVY RAIN	2 ESE SAN TAN MOUNTAIN	33.14N 111.62W
09/06/2014	M0.79 INCH	PINAL AZ	TRAINED SPOTTER
	MEASURED RAINFALL IN 15 MINUTES. VSBY LESS THAN 0.12 MI. IN DUST AND RAIN.		

&&
EVENT NUMBER PSR1400256
$$
PSR

WWUS55 KPSR 070059

SVSPSR
SEVERE WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
559 PM MST SAT SEP 6 2014
AZC013-021-070109-
/O.EXP.KPSR.SV.W.0063.000000T0000Z-140907T0100Z/
PINAL AZ-MARICOPA AZ-
559 PM MST SAT SEP 6 2014
...THE SEVERE THUNDERSTORM WARNING FOR EAST CENTRAL MARICOPA AND
CENTRAL PINAL COUNTIES WILL EXPIRE AT 600 PM MST...
THE STORM THAT PROMPTED THE WARNING HAS WEAKENED. HOWEVER...HEAVY
RAIN...GUSTY WIND...AND LIGHTNING ARE ALL STILL POSSIBLE.
REPORT SEVERE WEATHER TO THE NEAREST LAW ENFORCEMENT AGENCY. THEY
WILL RELAY YOUR REPORT TO THE NATIONAL WEATHER SERVICE FORECAST
OFFICE.
LAT...LON 3308 11176 3330 11167 3322 11146 3305 11152
TIME...MOT...LOC 0059Z 128DEG 3KT 3317 11159
$$
WOODALL

NWUS55 KPSR 070108
LSRPSR
PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PHOENIX AZ
608 PM MST SAT SEP 06 2014

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0540 PM	HEAVY RAIN	2 ESE SAN TAN MOUNTAIN	33.14N 111.62W
09/06/2014	M2.10 INCH	PINAL AZ	TRAINED SPOTTER
	2.10 INCHES IN 45 MINUTES AND STILL RAINING HEAVILY		

&&
EVENT NUMBER PSR1400257
$$
KINCAID

NWUS55 KPSR 070113
LSRPSR
PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PHOENIX AZ
613 PM MST SAT SEP 06 2014

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0530 PM	TSTM WND GST	2 ESE SAN TAN MOUNTAIN	33.14N 111.62W
09/06/2014	M60 MPH	PINAL AZ	TRAINED SPOTTER
	MEADURED 60 MPH WIND GUST ON DAVIS WEATHER STATION. TIME APPROXIMATE. SOME MINOR ROFF DAMAGE.		

&&
EVENT NUMBER PSR1400258
$$
KINCAID

WWUS85 KPSR 070116
SPSPSR
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
616 PM MST SAT SEP 6 2014
AZZ023-027-028-070200-
PINAL AZ-MARICOPA AZ-

616 PM MST SAT SEP 6 2014
...SIGNIFICANT WEATHER ADVISORY...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
  SOUTH CENTRAL MARICOPA COUNTY IN SOUTH CENTRAL ARIZONA
  EXTREME WEST CENTRAL PINAL COUNTY IN SOUTHEAST ARIZONA
UNTIL 700 PM MST
AT 614 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A
STRONG THUNDERSTORM 5 MILES NORTHEAST OF MOBILE...MOVING WEST AT 5
MPH.
WIND GUSTS UP TO 50 MPH ARE EXPECTED WITH THIS STORM.
LOCATIONS IMPACTED INCLUDE...
  MOBILE...
  HIGHWAY 238 EAST OF GILA BEND...
SOME UNSECURED OBJECTS WILL BE BLOWN AROUND...TREE LIMBS COULD BE
SNAPPED OFF...AND ISOLATED POWER OUTAGES WILL BE POSSIBLE. SEEK
SHELTER INDOORS UNTIL THE STORM PASSES.
LOCALLY DENSE BLOWING DUST IS POSSIBLE. IF YOU ENCOUNTER BLOWING DUST
WHILE DRIVING...PULL OVER AS FAR OFF THE ROADWAY AS POSSIBLE AND
PARK. TURN OFF YOUR HEADLIGHTS AND KEEP YOUR FOOT OFF THE BRAKE.
VERY HEAVY RAINFALL MAY CAUSE TEMPORARY PONDING ON SOME ROADS AND
MINOR FLOODING OF POOR DRAINAGE AREAS. IN HEAVY RAINFALL...SLOW DOWN
TO REDUCE THE RISK OF HYDROPLANING...AND LEAVE A SAFE DISTANCE
BETWEEN YOURSELF AND OTHER VEHICLES.
LAT...LON 3301 11240 3324 11239 3324 11209 3306 11207
TIME...MOT...LOC 0115Z 084DEG 6KT 3314 11219
$$
WOODALL

WWUS85 KPSR 070117
AWWPHX
AZZ023-070330-
AIRPORT WEATHER WARNING FOR SKY HARBOR AIRPORT
NATIONAL WEATHER SERVICE PHOENIX AZ
617 PM MST SAT SEP 6 2014
...AIRPORT WEATHER WARNING FOR SKY HARBOR AIRPORT IN EFFECT UNTIL
815 PM MST...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED AN AIRPORT WEATHER
WARNING FOR SKY HARBOR AIRPORT FOR BLOWING DUST.
A DUST STORM WARNING HAS BEEN ISSUED FOR THE GREATER PHOENIX
AREA...INCLUDING SKY HARBOR INTERNATIONAL AIRPORT. STRONG GUSTY WINDS
UP TO 50 MPH HAVE CREATED AREAS OF DENSE BLOWING DUST THAT HAVE THE
POTENTIAL TO RAPIDLY LOWER VISIBILITY TO LESS THAN 1 MILE. THE DUST
WILL AFFECT THE AIRPORT THROUGH AT LEAST 815 PM.
$$

NWUS55 KPSR 070121
LSRPSR
PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PHOENIX AZ
621 PM MST SAT SEP 06 2014
..TIME...   ...EVENT...   ...CITY LOCATION...   ...LAT.LON...
..DATE...   ....MAG....   ..COUNTY LOCATION..ST.. ...SOURCE....
            ..REMARKS..
0530 PM   TSTM WND DMG   2 NW SEVILLE   33.25N 111.73W
09/06/2014   MARICOPA   AZ   TRAINED SPOTTER
            ROOF SEVTION BLOWN OFF TRAILER IN RV PARK. TIME OF
            EVENT APPROXIMATE.
&&
EVENT NUMBER PSR1400259
$$

KINCAID

WWUS55 KPSR 070122
SVSPSR
SEVERE WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
622 PM MST SAT SEP 6 2014
AZC013-021-070145-
/O.CON.KPSR.SV.W.0064.000000T0000Z-140907T0145Z/
PINAL AZ-MARICOPA AZ-
622 PM MST SAT SEP 6 2014
...A SEVERE THUNDERSTORM WARNING REMAINS IN EFFECT UNTIL 645 PM MST FOR EXTREME EAST CENTRAL MARICOPA AND EXTREME NORTH CENTRAL PINAL COUNTIES...
AT 620 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS CONTINUED TO DETECT A SEVERE THUNDERSTORM CAPABLE OF PRODUCING DAMAGING WINDS IN EXCESS OF 60 MPH. THIS STORM WAS LOCATED 3 MILES EAST OF APACHE JUNCTION...MOVING WEST AT 5 MPH.
OTHER LOCATIONS IN THE WARNING INCLUDE BUT ARE NOT LIMITED TO GOLD CANYON VILLAGE...PROSPECTOR PARK AND APACHE JUNCTION
PRECAUTIONARY/PREPAREDNESS ACTIONS...
IF YOU ARE IN THE WARNING AREA...GO INSIDE A STURDY BUILDING. REMEMBER...A SEVERE THUNDERSTORM WILL PRODUCE DAMAGING WINDS AND DEADLY LIGHTNING
REPORT SEVERE WEATHER TO THE NEAREST LAW ENFORCEMENT AGENCY. THEY WILL RELAY YOUR REPORT TO THE NATIONAL WEATHER SERVICE FORECAST OFFICE.
HEAVY RAINS MAY FLOOD LOW LYING AREAS SUCH AS DITCHES AND UNDERPASSES. AVOID THESE AREAS AND DO NOT CROSS FLOODED ROADS AS THEY MAY BE WASHED OUT. WATER LEVELS OF SMALL STREAMS AND RIVERS MAY ALSO RISE.
&&
LAT...LON 3331 11159 3352 11160 3352 11136 3334 11133
TIME...MOT...LOC 0121Z 082DEG 4KT 3342 11147
$$
WOODALL

WWUS75 KPSR 070130
NPWPSR
URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE PHOENIX AZ
630 PM MST SAT SEP 6 2014
AZZ027-070300-
/O.EXA.KPSR.DS.W.0011.000000T0000Z-140907T0300Z/
SOUTHWEST MARICOPA COUNTY-
INCLUDING THE CITY OF...GILA BEND
630 PM MST SAT SEP 6 2014
...DUST STORM WARNING IN EFFECT UNTIL 8 PM MST THIS EVENING...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A DUST STORM WARNING...WHICH IS IN EFFECT UNTIL 8 PM MST THIS EVENING.
* AFFECTED AREA...PHOENIX METROPOLITAN AREA...MAINLY AFFECTING THE SOUTHEAST VALLEY CITIES OF CHANDLER...MESA...AND GILBERT.
* TIMING....UNTIL 8 PM.
* WINDS...30 TO 40 MPH.
* VISIBILITY...LOCALLY DOWN TO ONE QUARTER MILE...OR LESS.
* IMPACTS...VISIBILITIES WILL DROP SUDDENLY RESULTING IN HAZARDOUS TRAVEL CONDITIONS.
PRECAUTIONARY/PREPAREDNESS ACTIONS...
BE READY FOR A SUDDEN DROP IN VISIBILITY TO NEAR ZERO. IF YOU ENCOUNTER BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR

VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR
FOOT OFF THE BRAKE PEDAL.
REMEMBER...PULL ASIDE...STAY ALIVE.
&&
$$
AZZ023-028-070300-
/O.CON.KPSR.DS.W.0011.000000T0000Z-140907T0300Z/
GREATER PHOENIX AREA-NORTHWEST AND NORTH CENTRAL PINAL COUNTY-
INCLUDING THE CITIES OF...MESA...PHOENIX...APACHE JUNCTION...
CASA GRANDE...FLORENCE
630 PM MST SAT SEP 6 2014
...DUST STORM WARNING REMAINS IN EFFECT UNTIL 8 PM MST THIS
EVENING...
A DUST STORM WARNING REMAINS IN EFFECT UNTIL 8 PM MST THIS
EVENING.
* AFFECTED AREA...PHOENIX METROPOLITAN AREA...MAINLY AFFECTING
  THE SOUTHEAST VALLEY CITIES OF CHANDLER...MESA...AND GILBERT.
* TIMING....UNTIL 8 PM.
* WINDS...30 TO 40 MPH.
* VISIBILITY...LOCALLY DOWN TO ONE QUARTER MILE...OR LESS.
* IMPACTS...VISIBILITIES WILL DROP SUDDENLY RESULTING IN
  HAZARDOUS TRAVEL CONDITIONS.
PRECAUTIONARY/PREPAREDNESS ACTIONS...
BE READY FOR A SUDDEN DROP IN VISIBILITY TO NEAR ZERO. IF YOU
ENCOUNTER BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT
APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR
VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR
FOOT OFF THE BRAKE PEDAL.
REMEMBER...PULL ASIDE...STAY ALIVE.
&&
$$
VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX
WOODALL

WWUS85 KPSR 070137
SPSPSR
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
637 PM MST SAT SEP 6 2014
AZZ023-070215-
MARICOPA AZ-
637 PM MST SAT SEP 6 2014
...SIGNIFICANT WEATHER ADVISORY...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
  CENTRAL MARICOPA COUNTY IN SOUTH CENTRAL ARIZONA
UNTIL 715 PM MST
AT 633 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A
STRONG THUNDERSTORM FROM CHANDLER TO SOUTH TEMPE...MOVING WEST AT
5 MPH.
WIND GUSTS UP TO 40 MPH ARE EXPECTED WITH THIS STORM...ALONG WITH
HEAVY RAIN.
LOCATIONS IMPACTED INCLUDE...
   TEMPE MARKETPLACE...
   TEMPE...
   AHWATUKEE... ARIZONA MILLS MALL AND ARIZONA STATE UNIVERSITY...
BLOWING DUST WILL CONTINUE. IF YOU ENCOUNTER BLOWING DUST WHILE
DRIVING...PULL OVER AS FAR OFF THE ROADWAY AS POSSIBLE AND PARK.
TURN OFF YOUR HEADLIGHTS AND KEEP YOUR FOOT OFF THE BRAKE.
FOLLOWING THE DUST...HEAVY RAINFALL MAY CAUSE TEMPORARY PONDING ON
SOME ROADS AND MINOR FLOODING OF POOR DRAINAGE AREAS. IN HEAVY
RAINFALL...SLOW DOWN TO REDUCE THE RISK OF HYDROPLANING...AND LEAVE

A SAFE DISTANCE BETWEEN YOURSELF AND OTHER VEHICLES.
LAT...LON 3325 11211 3348 11201 3339 11175 3322 11180
TIME...MOT...LOC 0137Z 103DEG 6KT 3332 11188
$$
WOODALL

WWUS85 KPSR 070151
AWWPHX
AZZ023-070300-
AIRPORT WEATHER WARNING FOR SKY HARBOR AIRPORT
NATIONAL WEATHER SERVICE PHOENIX AZ
651 PM MST SAT SEP 6 2014
...AIRPORT WEATHER WARNING FOR SKY HARBOR AIRPORT IN EFFECT UNTIL
800 PM MST...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED AN AIRPORT WEATHER
WARNING FOR SKY HARBOR AIRPORT DUE TO OBSERVED LIGHTNING WITHIN
10 MILES OF THE AIRPORT...AND SOUTHERLY WIND GUSTS IN EXCESS OF 35
MPH...IN ADDITION TO DENSE BLOWING DUST REDUCING VISIBILITIES TO LESS
THAN 1 MILE.
$$

NWUS55 KPSR 070154
LSRPSR
PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PHOENIX AZ
654 PM MST SAT SEP 06 2014

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0630 PM	HEAVY RAIN	2 SSE SAN TAN VALLEY	33.14N 111.56W
09/06/2014	M1.24 INCH	PINAL AZ	TRAINED SPOTTER
	1.24 INCHES IN 45 MINUTES. CURB TO CURB FLOODING IN JOHNSON RANCH		

&&
EVENT NUMBER PSR1400260
$$
KINCAID

WWUS85 KPSR 070215
SPSPSR
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
715 PM MST SAT SEP 6 2014
AZZ028-070300-
PINAL AZ-
715 PM MST SAT SEP 6 2014
...SIGNIFICANT WEATHER ADVISORY...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
  WEST CENTRAL PINAL COUNTY IN SOUTHEAST ARIZONA
UNTIL 800 PM MST
AT 711 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A
STRONG THUNDERSTORM 17 MILES WEST OF CASA GRANDE...OR 4 MILES
SOUTHWEST OF STANFIELD...MOVING WEST AT 5 MPH.
WIND GUSTS UP TO 50 MPH ARE EXPECTED WITH THIS STORM.
LOCATIONS IMPACTED INCLUDE...
  INTERSTATE 8 SOUTH AND SOUTHWEST OF STANFIELD...
SOME UNSECURED OBJECTS WILL BE BLOWN AROUND...TREE LIMBS COULD BE
SNAPPED OFF...AND ISOLATED POWER OUTAGES WILL BE POSSIBLE. SEEK
SHELTER INDOORS UNTIL THE STORM PASSES.

HEAVY RAINFALL MAY CAUSE TEMPORARY PONDING ON SOME ROADS AND MINOR
FLOODING OF POOR DRAINAGE AREAS. IN HEAVY RAINFALL...SLOW DOWN TO
REDUCE THE RISK OF HYDROPLANING...AND LEAVE A SAFE DISTANCE BETWEEN
YOURSELF AND OTHER VEHICLES.
LAT...LON 3293 11214 3291 11190 3277 11191 3276 11200
      3276 11204 3275 11205 3274 11215
TIME...MOT...LOC 0214Z 091DEG 6KT 3282 11201
$$
WOODALL

NWUS55 KPSR 070218
LSRPSR
PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PHOENIX AZ
718 PM MST SAT SEP 06 2014

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0535 PM	TSTM WND DMG	1 S SAN TAN VALLEY	33.16N 111.57W
09/06/2014		PINAL AZ	TRAINED SPOTTER
	MULTIPLE TREES DOWN. FLAGPOLES DOWN. ROOF DAMAGE.		

&&
EVENT NUMBER PSR1400261
$$
KINCAID

WWUS85 KPSR 070234
SPSPSR
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
734 PM MST SAT SEP 6 2014
AZZ023-070315-
MARICOPA AZ-
734 PM MST SAT SEP 6 2014
...SIGNIFICANT WEATHER ADVISORY...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
  CENTRAL MARICOPA COUNTY IN SOUTH CENTRAL ARIZONA
UNTIL 815 PM MST
AT 731 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A
STRONG THUNDERSTORM OVER NORTH CENTRAL PHOENIX...MOVING WEST AT
5 MPH.
WIND GUSTS UP TO 40 MPH ARE EXPECTED WITH THIS STORM...ALONG WITH
HEAVY RAINFALL.
LOCATIONS IMPACTED INCLUDE...
   PIESTEWA PEAK PARK...
   DEER VALLEY AIRPORT... NORTH MOUNTAIN PARK... METRO CENTER AND
   PHOENIX...
SOME UNSECURED OBJECTS COULD BE BLOWN AROUND. SEEK SHELTER INDOORS
UNTIL THE STORM PASSES.
HEAVY RAINFALL MAY CAUSE TEMPORARY PONDING ON SOME ROADS AND MINOR
FLOODING OF POOR DRAINAGE AREAS. IN HEAVY RAINFALL...SLOW DOWN TO
REDUCE THE RISK OF HYDROPLANING...AND LEAVE A SAFE DISTANCE BETWEEN
YOURSELF AND OTHER VEHICLES.
LAT...LON 3352 11219 3376 11218 3372 11189 3354 11191
TIME...MOT...LOC 0233Z 094DEG 4KT 3364 11201
$$
WOODALL

WWUS85 KPSR 070257

SPSPSR
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
757 PM MST SAT SEP 6 2014
AZZ022-023-070345-
MARICOPA AZ-
757 PM MST SAT SEP 6 2014
...SIGNIFICANT WEATHER ADVISORY...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
  CENTRAL MARICOPA COUNTY IN SOUTH CENTRAL ARIZONA
UNTIL 845 PM MST
AT 755 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A
STRONG THUNDERSTORM NEAR PEORIA...MOVING WEST AT 10 MPH.
WIND GUSTS UP TO 45 MPH ARE EXPECTED WITH THIS STORM.
LOCATIONS IMPACTED INCLUDE...
   PEORIA...
SOME UNSECURED OBJECTS COULD BE BLOWN AROUND. SEEK SHELTER INDOORS
UNTIL THE STORM PASSES.
BLOWING DUST IS POSSIBLE. IF YOU ENCOUNTER BLOWING DUST WHILE
DRIVING...PULL OVER AS FAR OFF THE ROADWAY AS POSSIBLE AND PARK.
TURN OFF YOUR HEADLIGHTS AND KEEP YOUR FOOT OFF THE BRAKE.
HEAVY RAINFALL MAY CAUSE TEMPORARY PONDING ON SOME ROADS AND MINOR
FLOODING OF POOR DRAINAGE AREAS. IN HEAVY RAINFALL...SLOW DOWN TO
REDUCE THE RISK OF HYDROPLANING...AND LEAVE A SAFE DISTANCE BETWEEN
YOURSELF AND OTHER VEHICLES.
LAT...LON 3384 11206 3364 11209 3365 11248 3389 11231
TIME...MOT...LOC 0256Z 095DEG 7KT 3374 11220
$$
WOODALL

NWUS55 KPSR 070346
LSRPSR
PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PHOENIX AZ
846 PM MST SAT SEP 06 2014

..TIME...	...EVENT...	...CITY LOCATION...		...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION	..ST..	...SOURCE....
	..REMARKS..			
0843 PM	HEAVY RAIN	3 ESE PEORIA		33.67N 112.19W
09/06/2014	M1.65 INCH	MARICOPA	AZ	TRAINED SPOTTER
	1.65 INCHES IN 45 MINUTES			

&&
EVENT NUMBER PSR1400262
$$
KINCAID

FXUS65 KPSR 070411
AFDPSR
AREA FORECAST DISCUSSION...UPDATED
NATIONAL WEATHER SERVICE PHOENIX AZ
910 PM MST SAT SEP 6 2014
.SYNOPSIS...
MOISTURE WILL CONTINUE TO INCREASE ACROSS THE AREA THIS WEEKEND.
SHOWERS AND THUNDERSTORMS ARE EXPECTED AT TIMES EACH DAY THROUGH
EARLY NEXT WEEK...WITH SOME LOCATIONS POSSIBLY SEEING BRIEF PERIODS
OF HEAVY RAIN. A GRADUAL DRYING TREND IS EXPECTED TO BEGIN NEXT WEEK
AS HIGH PRESSURE SLOWLY REBUILDS OVER THE REGION.
&&
.DISCUSSION...
A RATHER ACTIVE DAY THIS AFTERNOON AND EVENING ACROSS OUR

CWA...ESPECIALLY ACROSS SOUTH-CENTRAL ARIZONA...AS MOISTURE FROM WEAKENING HURRICANE NORBERT BEGINS TO MOVE NORTHWARD INTO OUR REGION. AS EXPECTED...WITH PWAT VALUES STILL AOB 1.50 INCH...THE MAIN ISSUES THIS AFTERNOON AND EVENING WERE STRONG WINDS AND WIDESPREAD DENSE BLOWING ACROSS THE GREATER PHOENIX AREA AS OUTFLOWS FROM THUNDERSTORMS OVER PIMA AND PINAL COUNTIES MOVED NORTHWESTWARD OVER THE REGION. LOCALLY HEAVY RAIN DID FALL IN SOME SPOTS...BUT THEY HAVE BEEN MAINLY CONFINED SO FAR TO THE SAN TAN VALLEY AREA AND OVER PORTIONS OF THE NORTH-CENTRAL AND SOUTH-CENTRAL PARTS OF THE GREATER PHOENIX AREA...WITH MOST LOCATIONS STAYING DRY. ALONG WITH THE HEAVY RAIN...PARTS OF THE SAN TAN VALLEY AREA ALSO SAW DAMAGING WINDS...WITH GUSTS AS HIGH AS 60 MPH. ISOLATED THUNDERSTORMS ALSO BROUGHT STRONG WINDS AND HEAVY DOWNPOURS TO A FEW LOCATIONS ACROSS LA PAZ COUNTY IN AZ AND IMPERIAL COUNTY IN SE CA.
AS FAR AS THE FORECAST FOR THE REST OF TONIGHT AND INTO EARLY SUNDAY IS CONCERNED...THE HRRR CONTINUES TO SHOW THE DEVELOPMENT OF SPOTTY SHOWERS AND THUNDERSTORMS THROUGH THIS PERIOD...WITH ACTIVITY GRADUALLY WORKING ITS WAY BACK WESTWARD INTO SW AZ AND SE CA...WHICH IS CONSISTENT WITH CURRENT FORECASTS. ALTHOUGH THE LATEST NAM AND GFS MODEL SUITES CONTINUE TO PUSH PWATS AOA 2.00 INCHES ON SUNDAY...THERE IS STILL A FAIR BIT OF UNCERTAINTY ON HOW MUCH/HOW WIDESPREAD RAINFALL WILL FALL ON SUNDAY...DUE TO THE FACT THAT LEFTOVER DEBRIS CLOUDS AND A RATHER WORKED-OVER ATMOSPHERE MAY INHIBIT CONVECTIVE DEVELOPMENT DURING THIS PERIOD. GIVEN THE AMPLE MOISTURE THAT IS EXPECTED TO BE AVAILABLE...ANY STORMS SHOULD BE EFFICIENT RAIN PRODUCERS...MAKING THE GREATEST THREAT FROM THESE STORMS BEING HEAVY RAIN/FLOODING RATHER THAN STRONG WINDS OR BLOWING DUST. AT THIS POINT...GIVEN ALL THESE UNCERTAINTIES...WILL PRETTY MUCH GO WITH THE CURRENT FORECAST.
&&
.PREVIOUS DISCUSSION...
AS OF 130PM MST...PER LOCAL HI-RES FORECAST MODELS...SOME CONVECTIVE ACTIVITY HAS BEGUN ABOUT 2 HOURS EARLIER THAN FORECAST. SOME ISOLATED STORMS IN THE WESTERN ZONES OF ARIZONA AND SOUTHEAST CALIFORNIA HAVE POPPED UP. NOT SURPRISING AS THIS AREA HAS BEEN UNDER NEARLY CLEAR SKIES ALL DAY SO THE HEATING AND INSTABILITY HAS REMAINED IN THESE AREAS. OTHER LOCATIONS THAT HAVE FIRED UP ARE OUT EAST IN THE WHITE MOUNTAINS AND SOUTH SOUTH AND WEST OF TUCSON. FOR THE REMAINDER OF TONIGHT...EXPECT ACTIVITY TO CONTINUE INCREASING OVER THE SOUTHERN PART OF THE STATE WHICH WILL IN TURN GIVE OFF SOME OUTFLOW AND REDEVELOPMENT ACROSS SOUTHERN MARICOPA COUNTY AND NORTHWEST PINAL AND SHOULD CREATE AREAS OF BLOWING DUST.
EMBEDDED INVERTED TROUGH MOVING THROUGH SOUTHERN ARIZONA TODAY WILL BE THE LIFT NEEDED FOR CONVECTIVE ACTIVITY TO TRIGGER. KEEPING A SOUTHERLY-SOUTHEASTERLY FLOW WITH THE SUBSTANTIAL AMOUNT OF MOISTURE IN PLACE.../TAPPING INTO BLENDED TPW SATELLITE 1.8 - 2.0 INCHES OF PWAT/...THE INGREDIENTS ARE AVAILABLE AND READY FOR HEAVY RAIN PRODUCERS. AS HURRICANE NORBERT CONTINUES A MOSTLY NORTHWARD TRAJECTORY AND AN INVERTED TROUGH SCOOTS NORTH-NORTHEAST...A VERY DIFLUENT COLUMN FROM NORTHERN MEXICO THROUGH CENTRAL ARIZONA WILL REMAIN IN PLACE THROUGH SUNDAY. AS THE FLOW TURNS MORE SOUTHEASTERLY SUNDAY...WITH INCREASED MOISTURE YET AGAIN...THE BEST WINDOW OF HEAVY RAINFALL LOOKS TO BE SUNDAY AFTERNOON THROUGH MONDAY MID DAY. OF COURSE...EACH DAY/S ACTIVITY HIGHLY DEPENDS ON THE PREVIOUS DAY.../TOO CLOUDED OVER OR THE BOUNDARY LAYER BEING TOO OVER WORKED/...AND THIS REMAINS THE TRICKY PART OF THE FORECAST. RAINFALL AMOUNTS AND TIMING CONTINUE TO BE FOCUSED AND FINE TUNED FOR THIS FORECAST. REGARDLESS OF THE QPF AMOUNTS CERTAIN AREAS RECEIVE...MOST ALL LOCATIONS ACROSS ARIZONA SHOULD RECEIVE RAIN DURING THIS EVENT.
AFTER MONDAY...OPERATIONAL AND ENSEMBLE FORECAST MODELS HAVE THE REMNANT LOW FORMERLY KNOWN AS NORBERT ABSORBING INTO A WAVE WHICH GETS SWEPT IN THE LONGWAVE TROUGH THROUGH THE PACIFIC NORTHWEST. DIFFERENCES ARISE IN THE TIMING AND SPEED OF THAT TROUGH MOVING

THROUGH ARIZONA INTO THE FOUR CORNERS AND ON TO NEW MEXICO. THE
AIRMASS ACROSS THE SOUTHWEST WILL SLOWLY RECOVER...WITH HEIGHT
CHANGES EVER SO SLIGHT. TEMPERATURES WILL BE SLOW TO CLIMB BACK TO
SEASONAL NORMALS IF THEY EVEN REACH THAT /103F FOR PHOENIX...104F
FOR YUMA/ BY NEXT SATURDAY.
&&
.AVIATION...
SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...
QUITE A BIT OF CLOUD COVER ACROSS SE AZ WHICH MAY INHIBIT CONVECTION
UNTIL LATER THIS EVENING. NONETHELESS IT STILL LOOKS LIKE STORMS
WILL FIRE AND MOVE INTO THE METRO THIS EVENING. THE POTENTIAL FOR
BLOWING DUST IS STILL THERE AND I WILL RETAIN THE TEMPO GROUPS FOR
BLDU THROUGH THE EVENING. THERE SHOULD BE SOME SHOWERS IN THE AREA
AS WELL ALTHOUGH I'M NOT CONFIDENT ENOUGH TO INCLUDE PREVAILING RAIN
SHOWERS OR THUNDERSTORMS AT ANY POINT DURING THE TAF PERIOD. MID
CLOUDS SHOULD LINGER THROUGH THE NIGHT INTO LATE SUNDAY MORNING AT
ALL PHOENIX SITES.
SOUTHEAST CALIFORNIA AND SOUTHWEST ARIZONA INCLUDING KIPL AND KBLH...
THUNDERSTORMS SHOULD DEVELOP AND APPROACH THE SE CA TAF SITES LATE
IN THE PERIOD...BUT THERE SHOULD BE A THREAT OF BLOWING DUST
BEFOREHAND. VCSH LOOKS INCREASINGLY LIKELY AFTER 12Z AS DEEPER
MOISTURE MOVES INTO THE AREA.
AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.
&&
.FIRE WEATHER...
TUESDAY THROUGH SATURDAY.
A GRADUAL DRYING TREND WILL COMMENCE TUESDAY AS MOISTURE FROM
HURRICANE NORBERT EXITS THE AREA. HOWEVER...THERE WILL REMAIN AT
LEAST A SLIGHT CHANCE OF AFTERNOON SHOWERS AND THUNDERSTORMS THROUGH
THE END OF THE WEEK. LOW LEVEL MOISTURE WILL BE SLOW TO ERODE
HOWEVER AND GOOD/EXCELLENT RECOVERIES ARE EXPECTED ALL WEEK. AS FOR
WINDS...NO MAJOR WIND EVENTS EXPECTED NEXT WEEK OUTSIDE OF LOCALLY
DRIVEN THUNDERSTORM WINDS.
&&
.PSR WATCHES/WARNINGS/ADVISORIES...
AZ...NONE.
CA...NONE.
&&
$$
VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX
DISCUSSION...PERCHA/DEWEY
AVIATION...LEINS
FIRE WEATHER...LEINS

NWUS55 KPSR 070425
LSRPSR
PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PHOENIX AZ
925 PM MST SAT SEP 06 2014
..TIME...   ...EVENT...   ...CITY LOCATION...   ...LAT.LON...
..DATE...   ....MAG....   ..COUNTY LOCATION..ST.. ...SOURCE....
            ..REMARKS..
0915 PM   FLOOD   4 E PEORIA   33.70N 112.17W
09/06/2014   MARICOPA   AZ   BROADCAST MEDIA
            OVER 1 FOOT OF FLOODING FOR HALF MILE ALONG 5100 TO
            5500 W. PINNACLE PEAK RD.
&&
EVENT NUMBER PSR1400263
$$
MP

APPENDIX C

NOTICE OF PUBLIC COMMENT PERIOD

AFFIDAVIT OF PUBLICATION

THE ARIZONA REPUBLIC

STATE OF ARIZONA
COUNTY OF MARICOPA } SS.

Manuel Vargas, being first duly sworn, upon oath deposes and says: That he is a legal advertising representative of the Arizona Business Gazette, a newspaper of general circulation in the county of Maricopa, State of Arizona, published at Phoenix, Arizona, by Phoenix Newspapers Inc., which also publishes The Arizona Republic, and that the copy hereto attached is a true copy of the advertisement published in the said paper on the dates as indicated.

The Arizona Republic

November 24, 2014

Request for Public Comments on Exceptional Events in the Maricopa County (Greater Phoenix) PM10 Nonattainment Area

In 2005, Congress identified a need to account for events that result in exceedances of the National Ambient Air Quality Standards (NAAQS) that are exceptional in nature (e.g., not expected to reoccur or caused by acts of nature beyond man-made controls.) In response, EPA promulgated the Exceptional Events Rule (EER) to address exceptional events in 40 CFR Parts 50 and 51 on March 22, 2007 (72 FR 13560). On May 10, 2013, EPA released interim guidance documents to State, tribal and local air agencies for review. These guidance documents clarify key provisions of the 2007 EER in response to questions and issues that have arisen since the rule was promulgated. The EER allows for states and tribes to "flag" air quality monitoring data as an exceptional event. If flagged, these data can be excluded from consideration in air quality planning if EPA concurs with the demonstration submitted by the flagging agency documenting that all procedural and technical requirements have been met.

Pursuant to 40 CFR 50.14(c)(3)(i), the Arizona Department of Environmental Quality (ADEQ) is soliciting comments on its final demonstration of an event that has caused elevated concentrations of PM10 in the Maricopa County (Greater Phoenix) PM10 Nonattainment area on September 4 and 6, 2014. ADEQ has decided to flag these episodes based on this analysis. A copy of the demonstration is available for review beginning Monday, November 24, 2014, on the ADEQ website at www.azdeq.gov/environ/air/plan/nee.html. Interested parties can submit written comments throughout the comment period which will end at 5:00 p.m. on Tuesday, December 23, 2014. Any comments received will be responded to and forwarded to EPA with the final demonstration.

Written comments should be addressed, faxed, or e-mailed to:
Andra Juniel, Air Assessment Section, Arizona Department of Environmental Quality, 1110 W. Washington Street, 3415-A, Phoenix, AZ 85007, PHONE: (602) 771-4417; FAX: (602) 771-2366, E-mail: juniel.andra@azdeq.gov.

In addition to being available on-line, a copy of the analysis is available for review, Monday through Friday, 8:30 a.m. to 4:30 p.m., at the ADEQ Records Management Center, 1110 W. Washington St., Phoenix, AZ, 85007, Attn: Records Center, (602) 771-4380, e-mail: recordscenter@azdeq.gov.

Persons with a disability may request reasonable accommodations, such as a sign language interpreter, by contacting Alicia Pollard at (602) 771-4791 or at pollard.alicia@azdeq.gov. The TDD line for hearing impaired individuals is (602) 771-4829. Requests should be made as early as possible to allow time to arrange for the accommodation.

Pub: Nov. 24, 2014

Sworn to before me this
24TH day of
November A.D. 2014

BRIAN BILLINGS
Notary Public - State of Arizona
MARICOPA COUNTY
My Commission Expires
July 25, 2018

Notary Public