

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE
Area Forecast Discussion	7/7/2018	0343	MST	Phoenix	58
Area Forecast Discussion	7/7/2018	1431	MST	Phoenix	60
Area Forecast Discussion	7/7/2018	2153	PDT	San Diego	62
Area Forecast Discussion	7/8/2018	0319	MST	Phoenix	64

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE
Area Forecast Discussion	7/8/2018	1336	PDT	San Diego	66
Area Forecast Discussion	7/8/2018	1432	MST	Phoenix	68
Area Forecast Discussion	7/8/2018	1432	MST	Phoenix	69
Area Forecast Discussion	7/8/2018	2112	PDT	San Diego	70

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE
Dust Advisory	7/9/2018	0003	MST	Phoenix	71
Dust Advisory	7/9/2018	0050	MST	Phoenix	72
Dust Advisory	7/9/2018	0110	MST	Phoenix	73

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE
Dust Advisory	7/9/2018	0149	MST	Phoenix	74
				...THE DUST ADVISORY FOR SOUTHWESTERN LA PAZ...WEST CENTRAL YUMA...EASTERN IMPERIAL AND RIVERSIDE COUNTIES HAS EXPIRED...The blowing dust that prompted the advisory has exited the area. Therefore, the dust advisory has been allowed to expire. <b>The most dense areas of blowing dust is further west including the El Centro area. Areas of blowing dust will continue to make travel difficult</b>	
Urgent Weather Message	7/9/2018	0249	PDT	San Diego	75
				<b>Coachella Valley</b> -San Diego County Deserts-San Geronio Pass Near Banning-Including the cities of <b>Indio, Palm Springs, Cathedral City, Palm Desert, Palm Desert Country, La Quinta, Coachella, Borrego Springs</b> , Banning, and Desert Hot Springs ... <b>BLOWING DUST ADVISORY IN EFFECT UNTIL 5 AM PDT EARLY THIS MORNING</b> ...The National Weather Service in San Diego has issued a Blowing Dust Advisory...which is in effect until 5 AM PDT early this morning. * <b>Winds</b> ...Areas of east to southeast winds 20 to 30 mph with gusts to 40 mph. * <b>Timing</b> ...Spreading westward across the San Diego County deserts through 330 AM and spreading northwestward through the Coachella Valley through 4 AM. * <b>Visibility</b> ...Occasionally falling below one mile in blowing sand and blowing dust. * <b>Impacts</b> ...Sharply reduced visibility will make driving difficult. * Outlook...The lowest visibilities are expected before 6 AM. In the Coachella Valley...visibilities may only slowly improve through the morning.	
Area Forecast Discussion	7/9/2018	0335	MST	Phoenix	76
				.. <b>Monsoon activity on Sunday was a bit underwhelming for the Phoenix area, but it ended up quite active across far southern Arizona and southeast California.</b> Showers and isolated thunderstorms are still ongoing early this morning, but they should begin to wind down by sunrise. The elongated upper level high to our north is currently shifting to the northeast while a distinct upper level wave is seen moving westward across New Mexico...	
Special Weather Statement	7/9/2018	0338	MST	Phoenix	79
				... <b>SIGNIFICANT WEATHER ADVISORY FOR RIVERSIDE COUNTY UNTIL 430 AM PDT</b> ... At 337 AM PDT, <b>Doppler radar was tracking a strong thunderstorm 13 miles east of Desert Center, moving west at 35 mph. Wind gusts of 50 to 55 mph will be possible with this storm.</b>	
Area Forecast Discussion	7/9/2018	0903	PDT	San Diego	80
				<b>The dust storm early this morning pushed westward through the lower deserts and into and through the mountains.</b> Visibilities are down in the deserts as well as the inland valleys as a result. The winds have decreased, but it will take at least several hours for the dust to settle and the vis to improve. <b>The dust storm resulted from a thunderstorm complex last night around Yuma Arizona. The outflow from that storm traveled across the desert and the Salton Sea into our lower deserts.</b> A layer of clouds between 10 and 20 thousand feet up have shrouded the entire region this morning. Isolated sprinkles and light showers associated with this cloud deck have also been noted.	

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE
Area Forecast Discussion	7/9/2018	1354	PDT	San Diego	82
Area Forecast Discussion	7/9/2018	1505	MST	Phoenix	84
Dust Storm Warning	7/9/2018	1925	MST	Phoenix	86
Dust Storm Warning	7/9/2018	1948	MST	Phoenix	87

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE
Severe Thunderstorm Warning	7/9/2018	2008	MST	Phoenix	88
<p>The National Weather Service in Phoenix has issued a * Severe Thunderstorm Warning for...West central Yuma County in southwestern Arizona...<b>Southeastern Imperial County in southeastern California</b>...</p> <p>* Until 845 PM MST/845 PM PDT/.</p> <p>* At 808 PM MST/808 PM PDT/, <b>severe thunderstorms were located along a line extending from 9 miles southeast of Yuma Proving Ground to near Ligurta to 9 miles south of Tacna, moving southwest at 45 mph.</b></p> <p><b>HAZARD</b>...60 mph wind gusts.</p> <p><b>SOURCE</b>...Radar indicated.</p> <p><b>IMPACT</b>...Expect damage to roofs, siding, and trees.</p> <p>* Locations impacted include...</p> <p>Yuma, Somerton, Fortuna Foothills, Wellton, Blaisdell, Kinter, Ligurta, Winterhaven and Araby.</p> <p>* This includes the following highways...</p> <p>AZ Interstate 8 between mile markers 1 and 32.</p> <p><b>CA Interstate 8 between mile markers 91 and 96.</b></p> <p>AZ Route 95 between mile markers 29 and 56.</p>					
Severe Weather Statement	7/9/2018	2036	MST	Phoenix	89
<p>Yuma AZ-<b>Imperial CA</b>-...A SEVERE THUNDERSTORM WARNING REMAINS IN EFFECT UNTIL 845 PM MST/845 PM PDT/ FOR WEST CENTRAL YUMA AND <b>SOUTHEASTERN IMPERIAL COUNTIES</b>...</p> <p>At 835 PM MST/835 PM PDT/, <b>severe thunderstorms were located along a line extending from 7 miles southwest of Martinez Lake to 7 miles south of Araby to 16 miles south of Ligurta, moving southwest at 45 mph.</b></p> <p><b>HAZARD</b>...60 mph wind gusts.</p> <p><b>SOURCE</b>...Radar indicated.</p> <p><b>IMPACT</b>...Expect damage to roofs, siding, and trees.</p> <p>Locations impacted include...</p> <p>Yuma, Somerton, Fortuna Foothills, Wellton, Blaisdell, Kinter, Ligurta, Winterhaven and Araby.</p> <p>This includes the following highways...</p> <p>AZ Interstate 8 between mile markers 1 and 32.</p> <p><b>CA Interstate 8 between mile markers 91 and 96.</b></p> <p>AZ Route 95 between mile markers 29 and 56.</p>					
Severe Thunderstorm Warning	7/9/2018	2044	MST	Phoenix	90
<p>The National Weather Service in Phoenix has issued a * Severe Thunderstorm Warning for...West central Yuma County in southwestern Arizona...<b>Southeastern Imperial County in southeastern California</b>...</p> <p>* Until 915 PM MST/915 PM PDT/. * At 843 PM MST/843 PM PDT/, <b>severe thunderstorms were located along a line extending from 10 miles northwest of Winterhaven to Andrade to near Somerton to 11 miles east of San Luis to 16 miles south of Fortuna Foothills, moving west at 40 mph.</b></p> <p><b>HAZARD</b>...60 mph wind gusts.</p> <p><b>SOURCE</b>...Radar indicated.</p> <p><b>IMPACT</b>...Expect damage to roofs, siding, and trees.</p> <p>* Locations impacted include...</p> <p>Yuma, Somerton, Gadsden and Andrade.</p> <p>* This includes the following highways...</p> <p>CA Interstate 8 between mile markers 86 and 94.</p> <p>AZ Route 195 between mile markers 5 and 18.</p>					

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE
Dust Storm Warning	7/9/2018	2051	MST	Phoenix	91
Dust Storm Warning	7/9/2018	2057	MST	Phoenix	92
Dust Storm Warning	7/9/2018	2114	MST	Phoenix	93
Area Forecast Discussion	7/9/2018	2130	PDT	San Diego	94
Special Weather Statement	7/9/2018	2135	MST	Phoenix	96

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE
Dust Advisory	7/9/2018	2207	MST	Phoenix	97
Dust Storm Warning	7/9/2018	2212	MST	Phoenix	98
Dust Advisory	7/9/2018	2300	MST	Phoenix	99



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FXUS65 KPSR 071043

AFDPSR

## Area Forecast Discussion

National Weather Service Phoenix AZ

343 AM MST Sat Jul 7 2018

## .SYNOPSIS...

Hot temperatures will continue through the weekend before seasonably cool temperatures arrive early next week. Anticipate only isolated storm activity on Saturday. Storm chances increase Sunday and remain in the forecast through the week as a favorable monsoon pattern remains in place.

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## .DISCUSSION...

We will see another warm start to the weekend with morning lows in the low 90's across many desert locations. The ridge of high pressure will stay centered over the western CONUS with H5 heights of 596-598 dm heights across Arizona which will allow hot temperatures to hang around a few more days with highs in the 110 degree ballpark through Sunday. Temperatures will begin to drop to below seasonal normals by early next as moisture levels increase and we have our first big dose of the monsoon.

Monsoon activity looks a bit more elevated today compared to Friday, although thunderstorm activity will leave more to be desired for most folks. Storm development looks most favorable over Gila County and along the Rim where the HI-RES models are showing convection initiating by the early afternoon. Storms surviving into the Phoenix area looks questionable at best, but with a dry sub-cloud layer and high DCAPE, there is a slight threat for outflow winds and perhaps some blowing dust. However, Sunday afternoon looks to be a better shot for more widespread activity with better moisture and upper air support including a 45-55 knot jet at the 250 mb level across South-Central Arizona. GEFS plumes mean shows 400-500 j/kg of CAPE across the area with decent shear suggesting a threat of strong to severe thunderstorms, primarily for the eastern half of the CWA, but some storms further west are not out of the question either.

Looking further into the week, the general flow, instability and moisture remain favorable for thunderstorm activity. Of course, the extent of storms from the previous day can often be the fly in the ointment for long range forecasting. That said, GEFS plumes keeps 300-500 j/kg of CAPE over the area while increasing precipitable water values into the 1.6 to 2.0 inches by the middle of the week. As such, storms will begin to possess a larger flood threat due to heavy rains. Storm chances remain in the forecast

**July 9, 2018 Exceptional Event, Imperial County****Appendix A**

through the week but begin to taper off by next weekend as the monsoon may take a breather as the high shifts slightly and moisture levels decrease.

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**.AVIATION...**

South-Central Arizona including KPHX, KIWA, and KSDL: No storms are expected to affect the TAF sites through at least Saturday afternoon, and chances are slim that a storm will make it into the lower deserts tomorrow evening as well. Biggest issue is continued enhanced easterly gradient winds which will persist across the greater Phoenix area overnight tonight and into the day Saturday. Appears that the gustiness has abated but expect winds favoring the east up to around 12kt for the rest of tonight and although they will taper off Saturday morning and into the afternoon, it may be difficult for winds to turn to the west in the afternoon Saturday. Some debris cloud will move in tonight but most bases should stay 12k or higher with decks mostly on the SCT side. May see some BKN decks aoa 15k feet later tonight with clouds thinning for much of the day Saturday.

Southeast California/Southwest Arizona including KIPL and KBLH: Strong gusty northeast outflow winds at KBLH should end by 06z with winds to favor the northeast or east overnight at speeds less than 12kt. No storms are expected into the western deserts rest of tonight or through the day Saturday. Winds at KIPL to favor the southeast for most of the period with some light variable winds at times. No significant aviation concerns thru at least Saturday afternoon.

Aviation Discussion not updated for amended TAFs.

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**.FIRE WEATHER...**

Monday through Friday:

Thunderstorm chances will prevail just about every afternoon across Gila and eastern Maricopa counties as a favorably wet monsoon pattern becomes established. Wetting rains and much improved humidity levels will become common over the higher terrain with these beneficial conditions working westward into lower elevation areas through the week. Minimum relative humidity values should increase early in the week to a 20-30 percent range while overnight recovery becomes fair to good helping mitigate fire weather concerns. Outside of gusty thunderstorm induced winds, prevailing winds may become highly variable in direction and typical of the summer monsoon season.

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**.SPOTTER INFORMATION STATEMENT...**

Spotter reports will likely be needed this weekend and early next week.

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FXUS65 KPSR 072131

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

231 PM MST Sat Jul 7 2018

.SYNOPSIS...

Hot temperatures will continue through the weekend before decreasing to average levels beginning Monday. Storm chances trend modestly upward beginning tonight followed by a more distinct uptrend Sunday and Monday. A Monsoon pattern will remain in place through the week.

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.DISCUSSION...

Rest of Today/Tonight...

Afternoon temps quite hot again. More storm activity over Arizona and especially southwest California early this afternoon than yesterday. The latter is due not only to better moisture availability but an inverted trough/vort max evident in the water vapor imagery centered San Diego. The better moisture availability extends into southeast CA and southwest AZ. However, general lack of high terrain in those areas makes it more difficult for storms to initiate and thus not anticipating a lot of activity this afternoon and evening. Over much of southeast AZ and the lower elevations of south-central AZ, conditions are a bit drier and this will also hinder storm development at least for this afternoon and early evening. That being said, there are storms over east-central AZ and western Pima as well as northern AZ. Storms over those areas will have the potential to produce outflows that affect our forecast territory. Later on however, things may get a bit more interesting as a vort max (currently over northern NM) moves into Arizona). CAMs show varying amounts of convection associated with feature for late evening and overnight...generally weakening over the lower deserts. Raised PoPs conservatively to account for this.

Sunday and Monday...

For the first part of the week, the models trend the moisture upward with the flow maintaining a general easterly component. They also bring wave features of varying sizes through the region. In the process, there will be enhanced steering flow and associated shear as well as better CAPE. This is reflected in the CAMs which depict more numerous showers and storms over the lower elevations than what we've had so far. Thus, the potential for severe storms along with localized heavy rain trends up. Often times if the preceding day is active, then instability suffers.

**July 9, 2018 Exceptional Event, Imperial County****Appendix A**

However, Monday may be just as active with the steering flow clearing out the clouds along with a bit of dynamical forcing. Stay tuned.

Tuesday through Saturday...

GEFS plumes depict precipitable water values into the 1.6 to 2.0 inches by the middle of the week. As such, storms will carry a larger flood threat due to heavy rains. Storm chances remain in the forecast through the week but begin to taper off by next weekend as the monsoon may take a breather as the high shifts slightly and moisture levels decrease.

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.AVIATION... South-Central Arizona including KPHX, KIWA, and KSDL:

Expect periodically breezy winds favoring the south and southeast with gusts of 14-17kt during the afternoon. There is also a chance of a brief westerly switch around later in the afternoon at some sites. Easterly outflow winds with gusts of 15-20kt are likely to move through the area this evening and tonight mainly from distant storms. Although there is a better chance of thunderstorms than yesterday, most storms are expected to favor the higher elevations to the east and other locales to the south and southwest. Also expect partly cloudy skies with FEW-BKN mid level clouds near 10-15kft.

Southeast California/Southwest Arizona including KIPL and KBLH:

With only a slight chance of thunderstorms, moderate winds will favor the south at KBLH and the southeast to westerly directions at KIPL. Expect mostly clear skies with FEW-SCT mid and high level clouds.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Tuesday through Saturday:

In the midst of a favorable Monsoon pattern, expect good chances of thunderstorms, including some wetting rains, to dominate the region through the period. Expect min RH values in the low to upper 20s over the lower deserts, to the low 30s over S. Gila county. In addition to any gusty thunderstorm winds, expect rather typical Monsoon season winds with significantly variable directions and periods of gustiness. Overnight recovery will be good to excellent.

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.SPOTTER INFORMATION STATEMENT...

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FXUS66 KSGX 080453  
AFDSGX

Area Forecast Discussion  
National Weather Service San Diego CA  
953 PM PDT Sat Jul 7 2018

.UPDATE...

Today was another scorcher across SW CA, with 8 sites breaking or tying high temperature records. The monsoon season came with full force as well, with scattered showers and thunderstorms across many inland locations, and a few beaches. Please see the record event report and the rainfall report headlined on our webpage for the details. Temperatures look to be high enough in the Inland Empire and San Diego County Valleys Sunday for a continued risk of heat-related illnesses. A Heat Advisory has been issued for the aforementioned areas through 9 PM Sunday. Previous forecast remains on track.

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.SYNOPSIS...

High pressure aloft will continue the hot weather, but temperatures will slowly decrease the next few days. Monsoonal moisture will produce some thunderstorms through Monday, mainly in the mountains. There will be a better chance of more significant rainfall across more areas on Tuesday and Wednesday as moisture increases with a passing easterly wave.

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.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE...  
SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO  
COUNTIES...

.PREV DISCUSSION FROM 218 PM THIS AFTERNOON...

The strong high pressure aloft will slowly weaken through Monday. That will allow the sea breeze to redevelop and a weak and intermittent coastal eddy to continue. Monsoon moisture will not move as aggressively into the region Sunday. Sunday will be a little cooler and the chance of thunderstorms looks more marginal. However, conditions will be dangerously hot for some inland areas Sunday. On Monday and Tuesday models show an increase in moisture and through a deeper layer, along with an easterly wave that would provide some lifting energy. It could be we get a couple thunderstorms Monday in the mountains, followed by more clouds, showers and thunderstorms Monday night through Wednesday. These could happen anywhere, including west of the mountains, and even during the night and morning. These easterly waves are so ill-defined so confidence is not high on timing or location of showers. For Thursday and beyond, the models differ on the moisture pattern, some solutions dry it out a little while others

**July 9, 2018 Exceptional Event, Imperial County**

keep it coming heading into next weekend. We'll keep riding with the chance each afternoon mainly in the mountains. Temperatures will come back down to near average levels for mid July next week. The air mass is still quite summery and warm, but we'll have less subsidence and more cloud cover to keep those temps in check.

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.AVIATION...

080415Z...Coast/Valleys...Unrestricted VIS with occasional SCT clouds at/above 10000 ft MSL will prevail through Sunday.

Mountains/Deserts...Unrestricted VIS with occasional SCT clouds

at/above 10000 ft MSL will prevail through early Sunday morning. There is a chance of TSRA Sunday midday/afternoon with cloud bases 8000-9000 ft MSL and tops to 40000 ft MSL along with local surface winds at/above 40 knots, strong up/downdrafts and LLWS.

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.MARINE...

No hazardous marine weather is expected through Thursday.

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.SKYWARN...

Skywarn activation is not requested. However weather spotters are encouraged to report significant weather conditions.

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...Heat Advisory until 9 PM PDT Sunday for San Bernardino and Riverside County Valleys-The Inland Empire-San Diego County Valleys.

PZ...NONE.

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UPDATE...JJT

PUBLIC...MM

AVIATION/MARINE...Maxwell

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UNIVERSITY**

College of Ag

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FXUS65 KPSR 081019

AFDPSR

## Area Forecast Discussion

National Weather Service Phoenix AZ

319 AM MST Sun Jul 8 2018

## .SYNOPSIS...

Hot temperatures will continue for one more day before decreasing closer to seasonal normal values beginning Monday. Storm chances trend modestly upward beginning tonight followed by a more distinct uptrend Sunday and Monday. A Monsoon pattern will remain in place through the week.

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## .DISCUSSION...

The upper air analysis still shows a high pressure ridge parked over the western CONUS with the center of circulation near the Four Corners with easterly/southeasterly flow across the entire forecast area. There were a few light showers across southern Gila and Maricopa counties early this morning but those have mostly subsided. Before the storm chances later today, temperatures will again swell into the 110 degree ballpark for most desert locations. However, additional moisture will continue to infiltrate the area through midweek which will provide both fuel for thunderstorms while also keeping temperatures near or below seasonal normal values.

Today looks to be the most active day for widespread thunderstorms so far this monsoon, primarily across Gila-Pinal-and Maricopa counties, as moisture and instability increases across the area. The GOES-16 Total Precipitable Water channel indicates some areas of 1.6 inches of PW early this morning which corresponds well with GEFS plume guidance. Early this afternoon, thunderstorms will initiate over the higher terrain north and east of Phoenix, but with stronger steering flow aloft, storms very well may survive the journey into the desert. Given the elevated levels of bulk shear and strong inverted-V atmospheric profiles, the primary threats will strong downburst winds and dense blowing dust from outflow winds. The long-fused blowing dust advisory "watch" was issued this morning for southwestern Maricopa and Pinal counties due to strong confidence for blowing dust in those areas. However, blowing dust may very well impact portions outside of the advisory including the Phoenix area and locations further west along the Colorado River. Furthermore, this setup has also prompted the Storm Prediction Center to put much of Pinal and Maricopa counties, including the Phoenix area, in a Slight Risk for severe thunderstorms Sunday due to the strong wind threat. Storms across western Arizona and Southeast California are also possible but not likely until late in the evening/night. Monday also has indications of being fairly active given another upper

**July 9, 2018 Exceptional Event, Imperial County****Appendix A**

level disturbance, as well as continued upward trends for moisture and instability. However, we will have to play the wait-and-see game to see how the atmosphere recovers from Sunday's activity.

The forecast for the rest of the week looks to maintain at least some monsoon activity with CAPE values ranging between 200-600 j/kg according to the GEFS plumes. Atmospheric moisture looks to peak by Wednesday with PW values nearing 2 inches across a Phoenix-El Centro axis. In addition to maintaining storm chances, the additional moisture will also do well to moderate the daytime temperatures.

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.AVIATION... South-Central Arizona including KPHX, KIWA, and KSDL:

Biggest aviation concern this evening was gusty outflow winds moving through the Phoenix area, coming in from a variety of directions. It appears that winds still be somewhat variable but gradually taper off and eventually mostly favor an easterly component after midnight. Expect variable amounts of mid/high clouds to spread into the area overnight tonight into Sunday morning with bases 12k and higher. BKN decks mostly 15k and up. Should see some thinning of the decks by mid morning Sunday. Better chances for storms in the area Sunday evening and they will likely produce stronger gusty outflow winds with potential for dense dust - much of this likely after 02z Monday. Too late in the TAF period for putting in overly pessimistic CIGS, wind or VIS values but Sunday evening could be rather interesting. Confidence rather high that storms will impact the terminals sometime during the evening hours on Sunday.

Southeast California/Southwest Arizona including KIPL and KBLH:

No significant aviation concerns tonight and into the afternoon hours on Sunday. Winds to favor the south at KBLH and the southeast at KIPL with speeds mostly 12k or below. Expect some increase in mid/high clouds later tonight, spreading in from the east and persisting into the morning hours Sunday. Most bases 15k and up with BKN high cloud decks much of the day tomorrow.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Tuesday through Saturday:

In the midst of a favorable Monsoon pattern, expect good chances of thunderstorms, including some wetting rains, to dominate the region through the period. Expect min RH values in the low to upper 20s over the lower deserts, to the low 30s over S. Gila county. In addition to any gusty thunderstorm winds, expect rather typical Monsoon season winds with significantly variable directions and periods of gustiness. Overnight recovery will be good to excellent.



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FXUS66 KSGX 082036

AFDSGX

## Area Forecast Discussion

National Weather Service San Diego CA

136 PM PDT Sun Jul 8 2018

## .SYNOPSIS...

High pressure aloft will continue the hot weather, but temperatures will slowly decrease the next few days. Monsoonal moisture will bring a chance of showers and thunderstorms each day, mainly over the mountains and deserts. There will be a better chance of more significant rainfall across more areas on Tuesday and Wednesday as moisture increases with passing easterly waves.

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.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE...  
SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO  
COUNTIES...

It's hot again today, but several degrees off Saturday's pace. The century mark is in the rear view mirror again for many valley and desert locations with ample sunshine. The worst of the heat will be over by dusk, so hang on a few more hours. Cumulus buildups started right on schedule over the mountains late this morning, but some upper level winds seem to be the reason they have tipped over and are struggling to grow into legit thunderstorms today. However, strong thunderstorms had no problem developing south of the border and over in Twentynine Palms. The blow off from Mexico has shrouded the sun in southwest San Diego County. Given those nearby success stories, isolated strong thunderstorms are still possible this afternoon. Humidity is up today and winds are down, so our fire potential is also down. On Monday the monsoon flow channels a deeper, thicker layer of moisture and clouds into the region. If the cloud deck is thick enough, it would suppress the surface heating and destabilize the atmosphere to where few if any thunderstorms really get pumping. It seems like that's the scenario that guidance is showing us right now. However, if the cloud isn't thick enough, we could get lots of thunderstorms. On Monday night and Tuesday an easterly wave brings a bit more instability and even deeper moisture to the region, which continues into Wednesday. Tuesday and Wednesday look better for thunderstorms, not only during the afternoons, and not only in the mountains, but possible light showers or thunderstorms during nights and mornings and anywhere in the region. Temperatures will continue to come down close to average by midweek thanks to weaker high pressure aloft, the added moisture and increased clouds. Most guidance is showing the moisture tapering off a bit toward the week's end, so we'll go back to our regularly scheduled program of thunderstorm chances only in the mountains only during afternoons. Next weekend might

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not have any thunderstorms. At some point our wounded marine layer might come back to give us some coastal clouds late in the week. Some guidance also shows high pressure strengthening again for a warming trend, but other guidance does not. Temperatures a little above average is the best forecast for now.

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.AVIATION...

082027Z...Coast/Valleys...SCT clouds AOA 10000 ft MSL and unrestricted vis through Monday morning.

Mountains/Deserts...There is a chance of TSRA through 09/03Z this evening with CB bases 8000-9000 ft MSL and tops to 40000 ft MSL along with local surface outflow winds at/above 40 knots, strong up/downdrafts and LLWS. Otherwise, FEW-SCT clouds AOA 10000 ft MSL and unrestricted vis through Monday morning. The risk of BKN low clouds into KSAN tonight is rather low, so confidence in no BKN low clouds at KSAN per current TAF is moderate to high.

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.MARINE...

No hazardous marine weather is expected through Thursday.

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.SKYWARN...

Skywarn activation is not requested at this time, but Skywarn spotters should be attentive for any activation possibilities this afternoon and this coming week. Weather spotters are always encouraged to report significant weather conditions.

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...Heat Advisory until 9 PM PDT this evening for San Bernardino and Riverside County Valleys-The Inland Empire-San Diego County Valleys.

PZ...NONE.

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PUBLIC...MM

AVIATION/MARINE...Small

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FXUS65 KPSR 082132

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

232 PM MST Sun Jul 8 2018

.SYNOPSIS...

Storm chances trend upward tonight and remain elevated into Tuesday. Temperatures continue to trend downward on Monday with near to below normal temperatures the rest of the week. A Monsoon pattern will remain in place through the week for ongoing storm chances.

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.DISCUSSION...

Rest of Today/Tonight...

Storm activity over the higher terrain areas of the state is fairly modest early this afternoon. With east-northeasterly steering flow, activity over southern Yavapai, the Mogollon Rim, and White Mountains will have a large influence on our forecast area. The lack of more robust activity so far is due largely to some drier continental air drifting in from New Mexico - especially for the White Mountain/east Rim. The lack of activity is very distinct over southeast AZ where dry advection has been more pronounced. The richer moisture is further west with the axis roughly near the Lower Colorado River Valley with peak PWat values of 1.7 - 1.9 inches per SPC mesoanalysis. That is generally where the best CAPE is as well. There has already been storm activity on the edges of Joshua Tree national Park. However, for much of that area, there is significant CIN to overcome due to a thick batch of mid clouds that was over SW AZ this morning and now over SE CA. A flow feature of interest is a weak upper trough over New Mexico. The western end of it is pushing across SE AZ. With it is some potential vorticity in the upper troposphere along with some meager absolute vorticity. These factors may help offset the drying just enough to get more activity going for later on. In turn, this would keep the strong wind and blowing dust threat going. Even just one strong storm in the right place could produce dense blowing dust. Thus will hold on to Blowing Dust Advisory for now. Also related to that feature is strengthening flow aloft and in turn vertical wind shear which would aid in storm longevity and severe potential. In addition to southern Gila and portions of Pinal and Maricopa Counties, La Paz County may also see some storm activity due to proximity to storms initiating over southern Yavapai and southern Mohave County.

All that being said, the best storm action for our area may not be until well after sunset. To varying degrees, the CAMs are

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depicting something of a second wave of storms tonight which eventually dissipate over SE CA tomorrow. This appears to be predicated on storm development over western Colorado and northwest New Mexico with long lived propagation apparently aided some upper level divergence and subtle vorticity advection.

Monday and Tuesday...

The aforementioned upper low moves westward into Arizona on Monday bringing the main batch of potential vorticity - especially to SE AZ. CAMs generally depict north-south oriented zone of storms reaching central AZ by 00Z Tuesday and SE CA by 06Z Tuesday. They go on to show a batch of weaker showers move through south-central AZ early Tuesday morning. Tuesday afternoon looks to be less

active than Monday. Anticipate a continued threat of strong storms also capable of producing brief heavy rain. As always, the coverage will be HIGHLY variable. A lot of uncertainties remain. Temperatures will be at, or slightly below normal for a change.

Wednesday through Sunday...

A Monsoon pattern remains in place, albeit with fluctuations of the steering flow. Perhaps the biggest change will be a decline in moisture over SW AZ and SE CA by late in the week.

&&

.AVIATION... South-Central Arizona including KPHX, KIWA, and KSDL:

There is a decent chance of Monsoon storms moving into parts of the valley this evening from the east and northeast and lingering into tonight. Expect light to occasionally breezy winds this afternoon, prior to any storms, that increasingly favor the southwest and west. Strong and gusty northeasterly outflow winds become more likely beginning in the early evening and lingering into tonight at 14-22mph with gusts up of 28-33mph. In the absence of storms, the onset of easterly winds is expected slightly later tonight around 05-08Z. Skies will be partly cloudy with FEW-BKN decks from 12-20kft, or 8-10kft near any storms. Areas of possible blowing dust are expected to stay south of the area today.

Southeast California/Southwest Arizona including KIPL and KBLH:

Expect periodic chances of thunderstorms and rain showers through the period. Moderate winds will favor the south and northeast at KBLH, and southeast and westerly directions at KIPL. Wind gusts of 27 to 32mph can also be expected closer to storms. Expect SCT to occasionally BKN-OVC cloud decks from 11-20kft.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Wednesday through Sunday:

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432  
FXUS66 KSGX 090412  
AFDSGX

Area Forecast Discussion  
National Weather Service San Diego CA  
912 PM PDT Sun Jul 8 2018

.UPDATE...

Record heat stuck around for another day across SW CA, with Vista and Escondido breaking their high temp records, and Santa Ana tying theirs. The Heat Advisory was allowed to expire at 9 PM for inland locations since temperatures will continue a downward trend through the week. Isolated thunderstorms developed over portions of the mountains and deserts this afternoon, and quickly diminished just after 5 PM. A rainfall summary and record event report are headlined on our webpage with the details. The weather should be quiet overnight, with no additional storms expected. No additional updates were needed to the forecast this evening.

&&

.SYNOPSIS...

Temperatures will slowly decrease the next few days. Monsoonal moisture will bring a chance of showers and thunderstorms each day, mainly over the mountains and deserts. There will be a better chance of more significant rainfall across more areas on Tuesday and Wednesday as moisture increases with passing easterly waves.

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.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE...  
SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO  
COUNTIES...

.PREV DISCUSSION FROM 136 PM THIS AFTERNOON...

On Monday the monsoon flow channels a deeper, thicker layer of moisture and clouds into the region. If the cloud deck is thick enough, it would suppress the surface heating and destabilize the atmosphere to where few if any thunderstorms really get pumping. It seems like that's the scenario that guidance is showing us right now. However, if the cloud isn't thick enough, we could get lots of thunderstorms. On Monday night and Tuesday an easterly wave brings a bit more instability and even deeper moisture to the region, which continues into Wednesday. Tuesday looks better for thunderstorms, not only during the afternoons, and not only in the mountains, but possible light showers or thunderstorms during nights and mornings and anywhere in the region. Temperatures will continue to come down close to average by midweek thanks to weaker high pressure aloft, the added moisture and increased clouds. Most guidance is showing the moisture tapering off a bit toward the week's end, so we'll go back to our regularly scheduled program of thunderstorm chances only in the mountains only during

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644

WWUS55 KPSR 090703

DSWPSR

Dust Advisory

National Weather Service Phoenix AZ

1203 AM MST Mon Jul 9 2018

AZC012-027-CAC025-090800-

/O.NEW.KPSR.DS.Y.0013.180709T0703Z-180709T0800Z/

La Paz AZ-Yuma AZ-Imperial CA-

1203 AM MST Mon Jul 9 2018

The National Weather Service in Phoenix has issued a

\* Dust Advisory for...

Southwestern La Paz County in west central Arizona...

Southwestern Yuma County in southwestern Arizona...

Southeastern Imperial County in southeastern California...

\* Until 100 AM MST/100 AM PDT/.

\* At 1203 AM MST/1203 AM PDT/, a wall of dust was along a line extending from near Martinez Lake to near Fortuna Foothills to 29 miles south of Wellton, moving west at 20 mph.

HAZARD...Less than one half mile visibility with strong wind in excess of 40 mph.

SOURCE...Doppler radar.

IMPACT...Hazardous travel.

\* This includes the following highways...

AZ Interstate 8 between mile markers 1 and 28.

CA Interstate 8 between mile markers 81 and 96.

AZ Route 95 between mile markers 29 and 58.

Locations impacted include...

Yuma, Somerton, Martinez Lake, Gadsden, Fortuna Foothills, San Luis, Algodones Dunes, Kinter, Andrade, Winterhaven, Araby, Blaisdell and Ligurta.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Blowing dust brings reduced visibility, leading to dangerous driving conditions. If driving, avoid blowing dust if possible. If caught in dense blowing dust, pull off the road, turn off your lights and keep your foot off the brake.

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520

WWUS55 KPSR 090751

DSWPSR

Dust Advisory

National Weather Service Phoenix AZ

1250 AM MST Mon Jul 9 2018

AZC012-027-CAC025-065-090845-

/O.NEW.KPSR.DS.Y.0014.180709T0750Z-180709T0845Z/

La Paz AZ-Yuma AZ-Imperial CA-Riverside CA-

1250 AM MST Mon Jul 9 2018

The National Weather Service in Phoenix has issued a

\* Dust Advisory for...

Southwestern La Paz County in west central Arizona...

West central Yuma County in southwestern Arizona...

Eastern Imperial County in southeastern California...

Riverside County in southern California...

\* Until 145 AM MST/145 AM PDT/.

\* At 1250 AM MST/1250 AM PDT/, a wall of dust was along a line extending from 11 miles west of Martinez Lake to 9 miles east of Cibola to 9 miles west of Quartzsite, moving west at 45 mph.

HAZARD...Less than one half mile visibility with strong wind in excess of 40 mph.

SOURCE...Doppler radar.

IMPACT...Hazardous travel.

\* This includes the following highways...

AZ Interstate 10 between mile markers 1 and 17.

CA Interstate 10 between mile markers 129 and 156.

AZ Interstate 8 between mile markers 1 and 9.

Locations impacted include...

Yuma, Martinez Lake, Blythe, Quartzsite, Nicholls Warm Springs, Cibola, Palo Verde, Gordon's Well, Algodones Dunes, Andrade, Blythe Airport, Winterhaven, Araby, Ripley and Yuma Proving Ground.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Blowing dust brings reduced visibility, leading to dangerous driving conditions. If driving, avoid blowing dust if possible. If caught in dense blowing dust, pull off the road, turn off your lights and keep your foot off the brake.

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570

WWUS55 KPSR 090810

DSWPSR

Dust Advisory

National Weather Service Phoenix AZ

110 AM PDT Mon Jul 9 2018

CAC025-065-090945-

/O.NEW.KPSR.DS.Y.0015.180709T0810Z-180709T0945Z/

Imperial CA-Riverside CA-

110 AM PDT Mon Jul 9 2018

The National Weather Service in Phoenix has issued a

\* Dust Advisory for...

Imperial County in southeastern California...

Riverside County in southern California...

\* Until 245 AM PDT.

\* At 110 AM PDT, a wall of dust was along a line extending from 7 miles west of Gordon's Well to 22 miles southwest of Cibola to near Palo Verde, moving west at 50 mph.

HAZARD...Less than one mile visibility with strong wind in excess of 40 mph.

SOURCE...Doppler radar.

IMPACT...Hazardous travel.

\* This includes the following highways...

CA Interstate 10 between mile markers 87 and 144.

CA Interstate 8 near mile marker 1, and between mile markers 3 and 68.

CA Route 78 between mile markers 1 and 45.

Locations impacted include...

El Centro, Calexico, Brawley, Imperial, Plaster City, Salton City, Desert Center, Ocotillo, Blythe, Holtville, Westmorland, Salton Sea Beach, Desert Shores, Bombay Beach and Mt. Signal.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Blowing dust brings reduced visibility, leading to dangerous driving conditions. If driving, avoid blowing dust if possible. If caught in dense blowing dust, pull off the road, turn off your lights and keep your foot off the brake.

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LAT...LON 3307 11611 3312 11608 3342 11608 3343 11603



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346

WWUS55 KPSR 090850

DSWPSR

Dust Advisory

National Weather Service Phoenix AZ

149 AM MST Mon Jul 9 2018

AZC012-027-CAC025-065-090859-

/O.EXP.KPSR.DS.Y.0014.000000T0000Z-180709T0845Z/

La Paz AZ-Yuma AZ-Imperial CA-Riverside CA-

149 AM MST Mon Jul 9 2018

...THE DUST ADVISORY FOR SOUTHWESTERN LA PAZ...WEST CENTRAL YUMA...  
EASTERN IMPERIAL AND RIVERSIDE COUNTIES HAS EXPIRED...

The blowing dust that prompted the advisory has exited the area.  
Therefore, the dust advisory has been allowed to expire. The most  
dense areas of blowing dust is further west including the El Centro  
area. Areas of blowing dust will continue to make travel difficult.

LAT...LON 3393 11489 3375 11422 3261 11450 3261 11481

3262 11481 3266 11475 3272 11472 3269 11515

3344 11508

TIME...MOT...LOC 0849Z 103DEG 40KT 3316 11539 3348 11525 3383 11512

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AD

# IOWA STATE UNIVERSITY

College of Ag

Department of Agronomy

## Department of Agronomy

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□

136

WWUS76 KSGX 090959

NPWSGX

URGENT - WEATHER MESSAGE

National Weather Service San Diego CA

259 AM PDT Mon Jul 9 2018

CAZ061-062-065-091200-

/O.NEW.KSGX.DU.Y.0001.180709T0959Z-180709T1200Z/

Coachella Valley-San Diego County Deserts-

San Geronio Pass Near Banning-

Including the cities of Indio, Palm Springs, Cathedral City,

Palm Desert, Palm Desert Country, La Quinta, Coachella,

Borrego Springs, Banning, and Desert Hot Springs

259 AM PDT Mon Jul 9 2018

...BLOWING DUST ADVISORY IN EFFECT UNTIL 5 AM PDT EARLY THIS  
MORNING...

The National Weather Service in San Diego has issued a Blowing  
Dust Advisory...which is in effect until 5 AM PDT early this  
morning.

\* Winds...Areas of east to southeast winds 20 to 30 mph with gusts  
to 40 mph.

\* Timing...Spreading westward across the San Diego County deserts  
through 330 AM and spreading northwestward through the Coachella  
Valley through 4 AM.

\* Visibility...Occasionally falling below one mile in blowing sand  
and blowing dust.

\* Impacts...Sharply reduced visibility will make driving  
difficult.

\* Outlook...The lowest visibilities are expected before 6 AM. In  
the Coachella Valley...visibilities may only slowly improve  
through the morning.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Blowing Dust Advisory means that blowing dust will restrict  
visibilities. Travelers are urged to use caution.

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FXUS65 KPSR 091035

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

335 AM MST Mon Jul 9 2018

.SYNOPSIS...

Monsoon moisture levels will continue to remain high enough this week to bring daily thunderstorm chances to the bulk of the region. An upper level trough moving through today and early Tuesday should enhance monsoon activity creating better chances for more widespread storms than a typical monsoon day. Temperatures will continue to trend downward through the middle of the week and then level off a few degrees below normals.

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.DISCUSSION...

Monsoon activity on Sunday was a bit underwhelming for the Phoenix area, but it ended up quite active across far southern Arizona and southeast California. Showers and isolated thunderstorms are still ongoing early this morning, but they should begin to wind down by sunrise. The elongated upper level high to our north is currently shifting to the northeast while a distinct upper level wave is seen moving westward across New Mexico. This upper level wave is a bit stronger than we typically see this time of year with a closed low seen at 250/300mb and a 50kt northeasterly jet max on the western edge of the low. Moisture across the region is also a bit atypical with high PWATs of 1.5-1.8" from Phoenix westward to below 1" across far eastern Arizona and western New Mexico.

Current water vapor imagery continues to show dry air getting advected out ahead of the upper level low which is situated across the eastern half of New Mexico. Eventually this dry air tap will get pinched off later today, but as with yesterday eastern Arizona will see PWATs mostly around 1". This area of drier air will likely hinder high terrain storm development somewhat, but the upper level enhancement from the incoming trough may be enough to overcome the lower instability. Initial storm development early to mid afternoon should focus first along the Mogollon Rim and then across southeast Arizona as the upper level low moves over the area. Winds aloft will be stronger than normal yielding 0-6km Bulk Shear of 20-35kts and CAPE should be a healthy 500-1000J/kg. More than sufficient moisture levels will exist over the deserts, but a fairly dry sub-cloud layer will still be in place resulting in modest to high DCAPE values. All this should make for a rather active monsoon day with the potential for a few severe wind producing storms and a decent probability of widespread blowing dust. An easterly steering flow of 10-15kts will be high enough to keep flood impacts on the lower side, but localized

**July 9, 2018 Exceptional Event, Imperial County**

flooding still could be a problem in a few areas given the higher than typical moisture levels over the deserts. Timing is still a bit difficult, but storm activity should affect the Phoenix area sometime late this afternoon and early evening before moving westward into the Lower Colorado River Valley by mid to late evening.

For Tuesday and Wednesday, moisture levels will remain a bit higher than typical monsoon levels, but we will lose the support of the upper level low. Steering flow will also weaken and become a bit more southerly resulting in slower moving storms and a higher probability of flooding. Moisture levels peak on Wednesday and forecast soundings show CAPE values rising to above 1000 J/kg. At this point it seems either day could be rather active, but it may depend on how much the previous day's activity affects the atmosphere. Am currently leaning toward Wednesday being a bit more active given the higher forecast instability and that storms Tuesday may be dampened some if today ends up being quite active.

Late this week into the weekend the forecast becomes more challenging as the upper level high reorientates itself over the Great Basin while the flow over the Desert Southwest is very weak. Moisture levels should remain at or maybe even above typical monsoon levels, so chances for storms should be there each day. One thing to note is that the GFS and the European deviate quite a bit on moisture levels with the GFS trending lower while the European remains above typical monsoon levels.

Temperatures over the next week will be trending downward, but will be heavily dependent on the day to day monsoon activity and cloud cover. Daily highs should remain at or below normal levels with overnight lows near or slightly above normals.

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.AVIATION... South-Central Arizona including KPHX, KIWA, and KSDL:

Despite the favorable outlook for thunderstorms affecting the terminals in the greater Phoenix area tonight, they have so far stayed off to the north and south. No strong storms look to be close to moving in later this evening but cannot rule out new convection affecting one or more of the TAF sites by 06z tonight. Will keep a threat of thunder in til 06z, after that expect mainly SCT=BKN mid and high level decks with a few showers possible into the morning hours. Most CIGS should stay aov 10k feet after 06z tonight. Cannot completely rule out a weak thunderstorm during the morning hours (06-12Z) but confidence too low to mention in the TAFs. Gusty and variable outflow winds should not be much of a factor after 06z and we expect winds to generally favor the east/southeast at less than 12kt into the late morning. Winds likely to weakly turn back towards the southwest during the afternoon Monday.

Should be better chances for storms (and associated gusty outflow winds) to move into the Phoenix area Monday evening as a large

**July 9, 2018 Exceptional Event, Imperial County**

disturbance starts to move into eastern Arizona. Expect increasing aviation concerns associated with this wave Monday late afternoon and evening.

Southeast California/Southwest Arizona including KIPL and KBLH:

For the most part convection should not be much of a factor over the western deserts for the rest of tonight. There may be a stray shower or two overnight, especially in the Blythe area, but mainly we expect variable amounts of mid/high clouds with some CIGS mainly aob 12k feet. Winds to favor the south at KBLH and the southeast at KIPL.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...

Wednesday through Sunday:

With continued favorable Monsoon conditions, expect good chances of thunderstorms, including periods of wetting rains, to prevail through the period. Expect min RH values generally in the mid 20s to low 30 percent range across the region to fall only slightly by Friday. In addition to any gusty thunderstorm winds, expect rather typical Monsoon season winds with significant variability with gusty periods. Overnight recovery will be good to excellent.

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.SPOTTER INFORMATION STATEMENT...

Spotters may be needed late this afternoon and evening.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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DISCUSSION...Kuhlman

AVIATION...CB

FIRE WEATHER...Sawtelle

**IOWA STATE  
UNIVERSITY**

College of Ag

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053

WWUS85 KPSR 091038

SPSPSR

Special Weather Statement

National Weather Service Phoenix AZ

338 AM PDT MON JUL 9 2018

CAZ560-561-564-568-570-091130-

Chuckwalla Mountains CA-Chuckwalla Valley CA-Chiriaco Summit CA-

Joshua Tree NP West CA-Joshua Tree NP East CA-

338 AM PDT MON JUL 9 2018

...SIGNIFICANT WEATHER ADVISORY FOR RIVERSIDE COUNTY UNTIL 430 AM  
PDT...

At 337 AM PDT, Doppler radar was tracking a strong thunderstorm 13  
miles east of Desert Center, moving west at 35 mph.

Wind gusts of 50 to 55 mph will be possible with this storm.

Locations impacted include...

Desert Center.

This includes the following highways...

CA Interstate 10 between mile markers 91 and 125.

CA Route 177 between mile markers 1 and 6.

LAT...LON 3375 11507 3357 11507 3349 11564 3382 11564

TIME...MOT...LOC 1037Z 090DEG 32KT 3366 11517

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AD

# IOWA STATE UNIVERSITY

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Department of Agronomy

## Department of Agronomy

716 Farm House Ln

Ames, IA 50011

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574

FXUS66 KSGX 091603

AFDSGX

## Area Forecast Discussion

National Weather Service San Diego CA

903 AM PDT Mon Jul 9 2018

## .SYNOPSIS...

Temperatures will be milder the next few days. Monsoonal moisture will bring a chance of showers and thunderstorms each day, mainly over the mountains and deserts. There will be a greater chance of more significant rainfall across more areas on Tuesday and Wednesday as moisture increases with passing easterly waves. Some drying and inland warming late in the week.

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.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE...  
SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO  
COUNTIES...

The dust storm early this morning pushed westward through the lower deserts and into and through the mountains. Visibilities are down in the deserts as well as the inland valleys as a result. The winds have decreased, but it will take at least several hours for the dust to settle and the vis to improve. The dust storm resulted from a thunderstorm complex last night around Yuma Arizona. The outflow from that storm traveled across the desert and the Salton Sea into our lower deserts. A layer of clouds between 10 and 20 thousand feet up have shrouded the entire region this morning. Isolated sprinkles and light showers associated with this cloud deck have also been noted. It will act as a stabilizer for today's atmosphere. Although some sprinkles might be noticed mainly far inland, it will disallow some of the surface heating from the sun needed to produce convection and thunderstorms. If there are any decent breaks in the cloud shield, look for a couple thunderstorms to develop, most likely in the mountains this afternoon. Early morning temps are up, thanks to the cloud blanket, but that shade will keep afternoon temps down. An easterly wave will continue to bring lots of clouds and enhance the monsoon flow tonight through Wednesday. There could be light showers or sprinkles anytime and anywhere. Instability increases Tuesday and continues Wednesday, so there is a greater chance of thunderstorms and heavy rains, but most likely during the afternoons and most likely in the mountains. The moisture decreases some on Thursday and even more Friday and Saturday, although some guidance doesn't feel that way. We have incrementally decreasing chances of afternoon thunderstorms over the interior Thursday and Friday. Expect warm, but not oppressively hot days and warm nights in this warm and mostly cloudy air mass through Wednesday. A little warmer inland later in the week with less cloudiness.

**July 9, 2018 Exceptional Event, Imperial County****Appendix A**

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.AVIATION...

091550Z...Coast/Valleys...BKN clouds mainly above 10000 FT MSL, except some BKN low clouds from overnight desert thunderstorms based near 3000 feet MSL in the valleys that should become SCT around 09/18Z in the valleys.

Mountains/Deserts...BKN clouds above 10000 ft MSL.

VIS will be locally reduced in the deserts at times this morning due to lofted dust generated by gusty outflow from thunderstorm activity earlier this

morning over the eastern deserts. Some BKN low clouds from overnight desert thunderstorms based near 3000 feet MSL should become SCT around 09/18Z in the valleys. Lower confidence in the timing and degree of VIS restrictions/improvements for KTRM and KPSP. The risk of development of BKN low clouds at the coast overnight tonight is low, so the confidence in the forecast of no BKN low clouds at the coastal TAF sites is moderate to high.

There is a slight chance of TSRA this afternoon, mainly over the mountains, with cloud bases 8000-9000 ft MSL and tops to 35000 FT MSL. Any storms that form could be accompanied by strong UDDFS and wind shear with surface gusts over 35 knots.

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.MARINE...

No hazardous marine weather is expected through Friday.

&amp;&amp;

.SKYWARN...

Skywarn activation is not requested. However weather spotters are encouraged to report significant weather conditions.

&amp;&amp;

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...NONE.

PZ...NONE.

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PUBLIC...MM

AVIATION/MARINE...Small



760  
FXUS66 KSGX 092054  
AFDSGX

Area Forecast Discussion  
National Weather Service San Diego CA  
154 PM PDT Mon Jul 9 2018

.SYNOPSIS...

Temperatures will be milder the next few days. Monsoonal moisture will bring a chance of showers and thunderstorms each day, mainly over the mountains and deserts. There will be a greater chance of more significant rainfall across more areas on Tuesday and Wednesday as moisture increases with passing easterly waves. Some drying and inland warming late in the week.

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.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE...  
SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO  
COUNTIES...

The dust storm swept desert dust through the mountains and into the valleys this morning, which explains the very hazy dusty conditions across a wide area of the interior today. Mostly cloudy skies and isolated sprinkles have put a damper on rising temperatures keeping them in more comfortable levels. The thick cloud deck has stabilized today's atmosphere, which explains why we don't have many convective thunderstorms going on. We've seen a couple of cells in the mountains pop up and peter out so far. But where the sun is allowed to heat the surface this afternoon, some showers and thunderstorms are possible, most likely in the mountains. An easterly wave will continue to bring lots of clouds and actually deepen the moisture further in our monsoon flow tonight through Wednesday. There could be light showers or sprinkles anytime and anywhere. Instability increases Tuesday and even more Wednesday, so there is a greater chance of thunderstorms and heavy rains, but most likely during the afternoons and most likely in the mountains. Wednesday looks like a primed pump so we'll have to see if subsequent guidance supports a high flash flood potential. The moisture decreases some on Thursday and even more Friday and Saturday, although some guidance doesn't feel that way. We have incrementally decreasing chances of afternoon thunderstorms over the interior Thursday and Friday. Expect warm, but not oppressively hot days and warm nights in this warm and mostly cloudy air mass through Wednesday. A little warmer inland later in the week with less cloudiness. Believe it or not, there's a stratus cloud deck off the coast lurking underneath all these higher clouds, indicating a marine layer present. But we don't expect coastal low clouds to cover much if any land area until later in the week.

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**July 9, 2018 Exceptional Event, Imperial County****Appendix A**

.AVIATION...

092015Z...Coast/Valleys...BKN clouds mainly above 10000 FT MSL.  
Some BKN low clouds and dust near KSBD and KONT from  
overnight desert thunderstorms based near 2000-3000 feet MSL and  
visibilities locally 3-5SM should become SCT around 10/00Z  
with improving visibilities.

Mountains/Deserts...BKN clouds above 10000 ft MSL.

VIS will be locally reduced in the deserts at  
times this morning due to lofted dust generated by  
gusty outflow from thunderstorm activity earlier this  
morning over the eastern deserts. Some BKN low clouds from

overnight desert thunderstorms based near 3000 feet MSL  
should become SCT around 09/23Z. Lower confidence in  
the timing and degree of VIS restrictions/improvements  
for KTRM and KPSP. The risk of development of BKN low clouds at  
the coast overnight tonight is low, so the confidence in the  
forecast of no BKN low clouds at the coastal TAF sites is moderate  
to high.

There is a slight chance of TSRA this afternoon, mainly over the  
mountains, with cloud bases 8000-9000 ft MSL and tops to 35000 FT  
MSL. Any storms that form could be accompanied by strong UDDFS and  
wind shear with surface gusts over 35 knots.

&&

.MARINE...

No hazardous marine weather is expected through Friday.

&&

.SKYWARN...

Skywarn activation is not requested. However weather spotters are  
encouraged to report significant weather conditions.

&&

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...NONE.

PZ...NONE.

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PUBLIC...MM

AVIATION/MARINE...Small

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869

FXUS65 KPSR 092205

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

305 PM MST Mon Jul 9 2018

.SYNOPSIS...

Monsoon moisture levels will continue to remain high enough this week to bring daily thunderstorm chances to most of the region. An upper level trough moving through today and early Tuesday should enhance monsoon activity creating better chances for more widespread storms than a typical monsoon day. Temperatures will continue to trend downward through the middle of the week and then level off a few degrees below normals.

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.DISCUSSION...

Current radar shows showers and thunderstorms that have developed southeast and east of the Phoenix from Pinal cty. to S. Gila county with more extensive storm development taking place in south central and northern Arizona. The very strong Monsoon high pressure system remains in place over the central Rockies. It is in an excellent position to continue to provide moist easterly flow from the Gulf of Mexico and Mexico into the Desert Southwest via it's attendant south stream easterly jet. A pronounced upper level low and inverted trough seen in water vapor imagery over east AZ with a dry slot wrapping into is progged to move over our region this afternoon and evening where it will expand and dramatically decelerate.

The strong easterly wave will have plenty of moisture to work with as it moves into a well conditioned Monsoon environment. Boundary layer dewpoint temperatures remain very high with 60s and 70s F being reported at the surface and 12-20C being reported through 925 and 850mb. Amidst significant mid level moisture advection from the southeast, strong sounding and model CAPE of up to 1500-2000 j/kg., and sfc-6km shear of 30-35kt expect a good chance of a mixed bag of Monsoon threats from this afternoon through tonight. This includes the threat of severe thunderstorm winds, flash flooding and dense blowing dust. The strongest storms will be capable of producing gusts near 60mph and peak rainfall rates over 4in./hr as well as the potential for hail. High-res models indicate the prime threat areas to be from Phoenix westward to the California border. Expect a series of strong easterly outflows to span our forecast area from north to south and sweep from Maricopa and Pinal counties all the way to southeast CA.

Tuesday looks to be a bit drier and more of a down day, however Tuesday night and Wednesday morning are shaping up to be another fairly active Monsoon period.

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.AVIATION...

South-Central Arizona including KPHX, KIWA, and KSDL:  
Storm activity over Pinal, Gila, and Yavapai Counties will converge over Maricopa County - including metro Phoenix - between 22Z- 00Z. Storms then track westward. Expect large swaths of strong surface winds from thunderstorm outflow. The winds will also cause areas of reduced visibility in blowing dust. The stronger storms will produce brief heavy rain and small hail. Anticipate much quieter conditions over metro Phoenix beginning by 03Z. However, renewed shower development is anticipated overnight but not with very strong storms.

Southeast California/Southwest Arizona including KIPL and KBLH:

Strong storms are expected to move out of Yavapai and Maricopa Counties and into southwest Arizona beginning by about 23Z. Storms are anticipated to track westward and weaken as they move west of the Lower Colorado River Valley. However, large swaths of strong winds and blowing dust are possible throughout the area.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Thursday through Monday:

An active Monsoon pattern continues the rest of the week into early next week. As usual, south-central AZ will have better chances than areas west of there. Minimum humidities will remain above 15% with good overnight recovery. Apart from thunderstorm activity, winds will generally be light.

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.SPOTTER INFORMATION STATEMENT...

Spotters may be needed late this afternoon and evening.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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DISCUSSION...Sawtelle

AVIATION...AJ

FIRE WEATHER...AJ

□

047

WWUS55 KPSR 100226

DSWPSR

BULLETIN - EAS ACTIVATION REQUESTED

Dust Storm Warning

National Weather Service Phoenix AZ

725 PM MST Mon Jul 9 2018

AZC012-027-CAC025-100400-

/O.NEW.KPSR.DS.W.0017.180710T0225Z-180710T0400Z/

La Paz AZ-Yuma AZ-Imperial CA-

725 PM MST Mon Jul 9 2018

The National Weather Service in Phoenix has issued a

\* Dust Storm Warning for...

Southern La Paz County in west central Arizona...

Central Yuma County in southwestern Arizona...

Southeastern Imperial County in southeastern California...

\* Until 900 PM MST/900 PM PDT/.

\* At 725 PM MST/725 PM PDT/, a wall of dust was along a line extending from 6 miles southeast of Kofa Wildlife Refuge to 15 miles northwest of Paloma to 13 miles southeast of Mohawk, moving southwest at 40 mph.

HAZARD...Less than a quarter mile visibility with strong wind in excess of 40 mph.

SOURCE...Doppler radar.

IMPACT...Dangerous life-threatening travel.

\* This includes the following highways...

AZ Interstate 8 between mile markers 1 and 66.

CA Interstate 8 between mile markers 88 and 96.

AZ Route 95 between mile markers 29 and 64.

Locations impacted include...

Yuma, Somerton, Martinez Lake, Gadsden, Fortuna Foothills, San Luis, Wellton, Tacna, Kinter, Andrade, Winterhaven, Araby, Blaisdell, Tyson and Ligurta.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Dust storms lead to dangerous driving conditions with visibility reduced to near zero. If driving, avoid dust storms if possible. If caught in one, pull off the road, turn off your lights and keep your foot off the brake.

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555

WWUS55 KPSR 100249

DSWPSR

Dust Storm Warning

National Weather Service Phoenix AZ

748 PM MST Mon Jul 9 2018

AZC012-027-CAC025-100400-

/O.CON.KPSR.DS.W.0017.000000T0000Z-180710T0400Z/

La Paz AZ-Yuma AZ-Imperial CA-

748 PM MST Mon Jul 9 2018

...A DUST STORM WARNING REMAINS IN EFFECT UNTIL 900 PM MST/900 PM PDT/ FOR SOUTHERN LA PAZ...CENTRAL YUMA AND SOUTHEASTERN IMPERIAL COUNTIES...

At 748 PM MST/748 PM PDT/, a wall of dust was along a line extending from 13 miles southwest of Kofa Wildlife Refuge to 11 miles north of Tyson to 15 miles southeast of Tacna, moving southwest at 40 mph. Storm spotter reported visibilities down to less than 100 feet near Tacna.

HAZARD...Near zero visibility with strong wind in excess of 40 mph.

SOURCE...Doppler radar.

IMPACT...Dangerous life-threatening travel.

This includes the following highways...

AZ Interstate 8 between mile markers 1 and 66.

CA Interstate 8 between mile markers 88 and 96.

AZ Route 95 between mile markers 29 and 64.

Locations impacted include...

Yuma, Somerton, Martinez Lake, Gadsden, Fortuna Foothills, San Luis, Wellton, Tacna, Kinter, Andrade, Winterhaven, Araby, Blaisdell, Tyson and Ligurta.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Dust storms lead to dangerous driving conditions with visibility reduced to near zero. If driving, avoid dust storms if possible. If caught in one, then pull off the road, turn off your lights and keep your foot off the brake.

&&

LAT...LON 3251 11482 3255 11479 3256 11481 3262 11481

3263 11478 3272 11472 3272 11478 3282 11478

3301 11485 3320 11375 3306 11361 3253 11350

3247 11474

□

495

WUUS55 KPSR 100308

SVRPSR

AZC027-CAC025-100345-

/O.NEW.KPSR.SV.W.0016.180710T0308Z-180710T0345Z/

BULLETIN - IMMEDIATE BROADCAST REQUESTED

Severe Thunderstorm Warning

National Weather Service Phoenix AZ

808 PM MST MON JUL 9 2018

The National Weather Service in Phoenix has issued a

\* Severe Thunderstorm Warning for...

West central Yuma County in southwestern Arizona...

Southeastern Imperial County in southeastern California...

\* Until 845 PM MST/845 PM PDT/.

\* At 808 PM MST/808 PM PDT/, severe thunderstorms were located along a line extending from 9 miles southeast of Yuma Proving Ground to near Ligurta to 9 miles south of Tacna, moving southwest at 45 mph.

HAZARD...60 mph wind gusts.

SOURCE...Radar indicated.

IMPACT...Expect damage to roofs, siding, and trees.

\* Locations impacted include...

Yuma, Somerton, Fortuna Foothills, Wellton, Blaisdell, Kinter, Ligurta, Winterhaven and Araby.

\* This includes the following highways...

AZ Interstate 8 between mile markers 1 and 32.

CA Interstate 8 between mile markers 91 and 96.

AZ Route 95 between mile markers 29 and 56.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

For your protection move to an interior room on the lowest floor of a building.

&&

LAT...LON 3284 11472 3247 11472 3241 11452 3254 11386

3272 11420 3301 11423

TIME...MOT...LOC 0308Z 060DEG 38KT 3300 11426 3270 11425 3256 11397

HAIL...<.75IN

WIND...60MPH

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□

130

WWUS55 KPSR 100336

SVSPSR

Severe Weather Statement

National Weather Service Phoenix AZ

836 PM MST MON JUL 9 2018

AZC027-CAC025-100345-

/O.CON.KPSR.SV.W.0016.000000T0000Z-180710T0345Z/

Yuma AZ-Imperial CA-

836 PM MST MON JUL 9 2018

...A SEVERE THUNDERSTORM WARNING REMAINS IN EFFECT UNTIL 845 PM MST/845 PM PDT/ FOR WEST CENTRAL YUMA AND SOUTHEASTERN IMPERIAL COUNTIES...

At 835 PM MST/835 PM PDT/, severe thunderstorms were located along a line extending from 7 miles southwest of Martinez Lake to 7 miles south of Araby to 16 miles south of Ligurta, moving southwest at 45 mph.

HAZARD...60 mph wind gusts.

SOURCE...Radar indicated.

IMPACT...Expect damage to roofs, siding, and trees.

Locations impacted include...

Yuma, Somerton, Fortuna Foothills, Wellton, Blaisdell, Kinter, Ligurta, Winterhaven and Araby.

This includes the following highways...

AZ Interstate 8 between mile markers 1 and 32.

CA Interstate 8 between mile markers 91 and 96.

AZ Route 95 between mile markers 29 and 56.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

For your protection move to an interior room on the lowest floor of a building.

&amp;&amp;

LAT...LON 3284 11472 3247 11472 3241 11452 3254 11386

3272 11420 3301 11423

TIME...MOT...LOC 0335Z 060DEG 38KT 3287 11452 3257 11451 3243 11423

HAIL...&lt;.75IN

WIND...60MPH

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□

306

WUUS55 KPSR 100344

SVRPSR

AZC027-CAC025-100415-

/O.NEW.KPSR.SV.W.0017.180710T0344Z-180710T0415Z/

BULLETIN - IMMEDIATE BROADCAST REQUESTED

Severe Thunderstorm Warning

National Weather Service Phoenix AZ

844 PM MST MON JUL 9 2018

The National Weather Service in Phoenix has issued a

\* Severe Thunderstorm Warning for...

West central Yuma County in southwestern Arizona...

Southeastern Imperial County in southeastern California...

\* Until 915 PM MST/915 PM PDT/.

\* At 843 PM MST/843 PM PDT/, severe thunderstorms were located along a line extending from 10 miles northwest of Winterhaven to Andrade to near Somerton to 11 miles east of San Luis to 16 miles south of Fortuna Foothills, moving west at 40 mph.

HAZARD...60 mph wind gusts.

SOURCE...Radar indicated.

IMPACT...Expect damage to roofs, siding, and trees.

\* Locations impacted include...

Yuma, Somerton, Gadsden and Andrade.

\* This includes the following highways...

CA Interstate 8 between mile markers 86 and 94.

AZ Route 195 between mile markers 5 and 18.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

For your protection move to an interior room on the lowest floor of a building.

&amp;&amp;

LAT...LON 3251 11482 3255 11479 3256 11481 3262 11481

3263 11478 3272 11472 3272 11484 3284 11473

3286 11466 3272 11465 3257 11457 3242 11444

3242 11456

TIME...MOT...LOC 0343Z 072DEG 35KT 3285 11473 3271 11472 3256 11464

3249 11457 3242 11448

HAIL...&lt;.75IN

WIND...60MPH

□

461

WWUS55 KPSR 100352

DSWPSR

BULLETIN - EAS ACTIVATION REQUESTED

Dust Storm Warning

National Weather Service Phoenix AZ

851 PM PDT Mon Jul 9 2018

CAC025-100415-

/O.NEW.KPSR.DS.W.0018.180710T0351Z-180710T0415Z/

Imperial CA-

851 PM PDT Mon Jul 9 2018

The National Weather Service in Phoenix has issued a

\* Dust Storm Warning for...  
Eastern Imperial County in southeastern California...

\* Until 915 PM PDT.

\* At 851 PM PDT, a wall of dust was along a line extending from 8 miles southwest of Cibola to 19 miles west of Martinez Lake to 6 miles northeast of Algodones Dunes to near Somerton, moving west at 40 mph.

HAZARD...Less than a quarter mile visibility with strong wind in excess of 40 mph.

SOURCE...Doppler radar.

IMPACT...Dangerous life-threatening travel.

\* This includes the following highways...  
CA Interstate 8 between mile markers 51 and 90.  
CA Route 78 between mile markers 26 and 69.  
CA Route 98 between mile markers 44 and 57.

Locations impacted include...

Gordon's Well, Algodones Dunes, Andrade and Glamis.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Dust storms lead to dangerous driving conditions with visibility reduced to near zero. If driving, avoid dust storms if possible. If caught in one, pull off the road, turn off your lights and keep your foot off the brake.

&amp;&amp;

LAT...LON 3330 11532 3303 11533 3280 11535 3268 11531  
3272 11472 3282 11476 3304 11474 3329 11476

TIME...MOT...LOC 0351Z 088DEG 36KT 3326 11478 3305 11480 3282 11482

□

846

WWUS55 KPSR 100359

DSWPSR

Dust Storm Warning

National Weather Service Phoenix AZ

857 PM MST Mon Jul 9 2018

AZC012-027-CAC025-100407-

/O.EXP.KPSR.DS.W.0017.000000T0000Z-180710T0400Z/

La Paz AZ-Yuma AZ-Imperial CA-

857 PM MST Mon Jul 9 2018

...THE DUST STORM WARNING FOR SOUTHERN LA PAZ...CENTRAL YUMA AND  
SOUTHEASTERN IMPERIAL COUNTIES WILL EXPIRE AT 900 PM MST/900 PM  
PDT/...

The dust storm which prompted the warning has exited the area and  
therefore the dust storm warning will be allowed to expire. A new  
Dust Storm Warning has been issued for areas along I8 west of Yuma.

LAT...LON 3251 11482 3255 11479 3256 11481 3262 11481

3263 11478 3272 11472 3272 11478 3282 11478

3301 11485 3320 11375 3306 11361 3253 11350

3247 11474

TIME...MOT...LOC 0357Z 067DEG 34KT 3309 11483 3272 11458 3226 11448

\$\$

Hernandez

# IOWA STATE UNIVERSITY

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## National Weather Service

# Watches, Warnings & Advisories

## Dust Storm Warning

DUST STORM WARNING  
NWS PHOENIX AZ  
914 PM PDT MON JUL 9 2018

CAC025-100507-  
/O.NEW.KPSR.DS.W.0019.180710T0414Z-180710T0515Z/  
914 PM PDT MON JUL 9 2018  
Imperial County-

The National Weather Service in Phoenix has issued a

\* Dust Storm Warning for...  
Central Imperial County in southeastern California...

\* Until 1015 PM PDT.

\* At 914 PM PDT, a wall of dust was along a line extending from 17 miles southwest of Palo Verde to 19 miles northwest of Algodones Dunes to Gordon's Well, moving west at 35 mph.

HAZARD...Less than a quarter mile visibility with strong wind in excess of 40 mph.

SOURCE...Doppler radar.

IMPACT...Dangerous life-threatening travel.

\* This includes the following highways...  
CA Interstate 8 between mile markers 25 and 70.  
CA Route 78 between mile markers 14 and 43.  
CA Route 111 between mile markers 1 and 47.

Locations impacted include...  
El Centro, Calexico, Brawley, Imperial, Holtville, Westmorland, Mt. Signal, El Centro Naval Airfield, Calipatria, Alamo, Seeley, Wiest, Bonds Corner, Niland and Heber.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Dust storms lead to dangerous driving conditions with visibility reduced to near zero. If driving, avoid dust storms if possible. If caught in one, pull off the road, turn off your lights and keep your

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601

FXUS66 KSGX 100451

AFDSGX

Area Forecast Discussion

National Weather Service San Diego CA

930 PM PDT Mon Jul 9 2018

.SYNOPSIS...

Monsoonal moisture will bring showers and thunderstorms at times through Thursday, especially over the mountains and deserts, with the greatest chances Tuesday and Wednesday afternoons. A period of strong gusty winds and blowing dust will move into the Coachella Valley, San Diego County Deserts and possibly eastern parts of the Inland Empire overnight due to thunderstorms farther east. Temperatures will remain a little above normal west of the mountains but be a little below normal in the deserts through Thursday, but with somewhat high humidity. Drier weather will return Friday with some desert warming, but moisture could return early next week.

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.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE...  
SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO  
COUNTIES...

Isolated thunderstorms were occurring over some of the mountains and deserts, mainly from Palm Springs south, but most of the cells were small. More notably, strong thunderstorms in southwestern Arizona sent a strong gust front with blowing dust to the west, and it is currently half way through Imperial County. This will likely move into the Coachella Valley starting around 11 PM and also affect the San Diego County Deserts and possibly move through San Gorgonio/Banning Pass into eastern parts of the Inland Empire. Visibilities could fall to a mile or less in some locations.

An inverted trough over Arizona will very slowly move west to So-Cal Wednesday, and this will be accompanied by substantial moisture between 800 and 500 MB with total precip water values of 1.5 inches or greater at lower elevations. Instability will be defined partly on whatever mid-high clouds exist during the day, but any clear periods will likely be followed by thunderstorms over the mountains and deserts, with a few stray showers/thunderstorms possible in the inland valleys. There is some potential of flooding in heavier precip, as well as small hail and strong gusty winds. The moisture begins to lift north Thursday with some decrease in the chance of thunderstorms, then dry weather will most likely return Fri/Sat.

There is a chance more moisture will return early next week for more thunderstorms.

&&

.AVIATION...

100330Z...Coast/Valleys...Expect mid level clouds around 12000 ft MSL to persist through the period. Isolated thunderstorms may develop over the mountains beginning later tonight with a higher likelihood Tuesday afternoon. A small area of stratus with bases 800-1200 ft MSL and tops around 2000 ft MSL has developed around KCRQ but think this will be short-lived. Isolated TSRA could impact the inland valleys Tuesday afternoon with bases 2000-3000 ft MSL. Hazy conditions are likely Tuesday for the inland empire terminals (KONT/KSBD).

Mountains/Deserts...Scattered SHRA developing over the Coachella Valley this evening. Will mention VCTS/VCSH for the desert terminals through 06Z. Gusty outflow from thunderstorms over western Arizona will impact the desert terminals tonight. Best estimate on timing is 06-08Z arrival. Local wind gusts of 25 to 40 knots will be possible this period. Visibility restrictions of 3-5SM and locally lower visibilities due to blowing dust can be expected. Scattered thunderstorms are expected to develop over the mountains Tuesday, with the potential for activity to spread to the deserts as well. Expect cloud bases 8000-9000 ft MSL and tops to 35000 FT MSL with this activity. Any storms that form could be accompanied by strong UDDFS and wind shear with surface gusts over 35 knots.

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.MARINE...

No hazardous marine weather is expected through Friday.

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.SKYWARN...

Skywarn activation is not requested for now, though it might be needed Tuesday and Wednesday. Weather spotters are encouraged to report significant weather conditions.

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...NONE.

PZ...NONE.

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938

WWUS85 KPSR 090435

SPSPSR

Special Weather Statement

National Weather Service Phoenix AZ

935 PM MST SUN JUL 8 2018

AZZ530-533-CAZ569-090515-

Parker Valley AZ-Central La Paz AZ-Palo Verde Valley CA-

935 PM MST SUN JUL 8 2018

...SIGNIFICANT WEATHER ADVISORY FOR WEST CENTRAL LA PAZ AND RIVERSIDE COUNTIES UNTIL 1015 PM MST/1015 PM PDT/...

At 935 PM MST/935 PM PDT/, Doppler radar was tracking a strong thunderstorm 9 miles north of Quartzsite, or 22 miles south of Parker, moving southwest at 25 mph.

Wind gusts up to 50 mph and locally dense blowing dust will be possible with this storm.

Locations impacted include...

Quartzsite and Ehrenberg.

This includes the following highways...

AZ Interstate 10 between mile markers 5 and 21.

AZ Route 95 between mile markers 102 and 128.

CA Route 95 between mile markers 9 and 18.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Frequent cloud to ground lightning is occurring with this storm.

Lightning can strike 10 miles away from a thunderstorm. Seek a safe shelter inside a building or vehicle.

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LAT...LON 3396 11418 3381 11405 3348 11434 3381 11462

TIME...MOT...LOC 0435Z 059DEG 20KT 3380 11423

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18

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057

WWUS55 KPSR 100507

DSWPSR

Dust Advisory

National Weather Service Phoenix AZ

1007 PM PDT Mon Jul 9 2018

CAC025-100600-

/O.NEW.KPSR.DS.Y.0023.180710T0507Z-180710T0600Z/

Imperial CA-

1007 PM PDT Mon Jul 9 2018

The National Weather Service in Phoenix has issued a

\* Dust Advisory for...

Western Imperial County in southeastern California...

\* Until 1100 PM PDT.

\* At 1007 PM PDT, a wall of dust was along a line extending from 22 miles north of Brawley to 13 miles southeast of Bombay Beach to near Westmorland to near El Centro Naval Airfield to near Mt. Signal, moving northwest at 40 mph.

HAZARD...Less than one mile visibility with strong wind in excess of 30 mph.

SOURCE...Doppler radar.

IMPACT...Hazardous travel.

\* This includes the following highways...

CA Interstate 8 near mile marker 1, and between mile markers 3 and 34.

CA Route 78 between mile markers 1 and 13.

CA Route 111 between mile markers 40 and 48.

Locations impacted include...

Plaster City, Salton City, Ocotillo, Westmorland, Mt. Signal, El Centro Naval Airfield, Fish Creek Wash, Niland, Coyote Wells, Winona, Dixieland and Seeley.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Blowing dust brings reduced visibility, leading to dangerous driving conditions. If driving, avoid blowing dust if possible. If caught in dense blowing dust, pull off the road, turn off your lights and keep your foot off the brake.

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LAT...LON 3307 11611 3308 11609 3312 11608 3332 11608



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500

WWUS55 KPSR 100515

DSWPSR

Dust Storm Warning

National Weather Service Phoenix AZ

1012 PM PDT Mon Jul 9 2018

CAC025-100522-

/O.EXP.KPSR.DS.W.0019.000000T0000Z-180710T0515Z/

Imperial CA-

1012 PM PDT Mon Jul 9 2018

...THE DUST STORM WARNING FOR CENTRAL IMPERIAL COUNTY WILL EXPIRE AT  
1015 PM PDT...

The dust storm which prompted the warning has weakened and exited  
the area, therefore, the dust storm warning will be allowed to  
expire. However, a line of dust with visibilities around a mile or  
less continues to propagate westward along I8 and a Dust Advisory  
has been issued for these areas.

LAT...LON 3332 11578 3306 11584 3292 11584 3265 11574

3270 11501 3284 11503 3300 11504 3330 11495

TIME...MOT...LOC 0512Z 096DEG 32KT 3334 11557 3304 11563 3289 11561

3276 11556

\$\$

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401

WWUS55 KPSR 100601

DSWPSR

Dust Advisory

National Weather Service Phoenix AZ

1100 PM PDT Mon Jul 9 2018

CAC025-100610-

/O.EXP.KPSR.DS.Y.0023.000000T0000Z-180710T0600Z/

Imperial CA-

1100 PM PDT Mon Jul 9 2018

...THE DUST ADVISORY FOR WESTERN IMPERIAL COUNTY HAS EXPIRED...

The blowing dust that prompted the advisory has mostly exited the area. Therefore, the dust advisory has been allowed to expire. Areas of blowing dust may continue to produce low visibility at times.

LAT...LON 3307 11611 3308 11609 3312 11608 3332 11608

3332 11544 3319 11555 3303 11560 3283 11562

3266 11559 3262 11610

TIME...MOT...LOC 0600Z 116DEG 36KT 3347 11587 3339 11595 3323 11601

3304 11604 3282 11601

\$\$

AD

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