

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE	
Area Forecast Discussion	9/11/2017	0222	MST	Phoenix	Dry air continues to gradually filter into the region from the south and southeast while the cut-off low remains nearly stationary off southern California....Eventually the high center over the Four Corners area will shift southward into northern Mexico for the middle of the week. During this time, the cut-off low will finally get kicked out by an upstream trough from the northern Pacific. The low is forecast to quickly weaken as it moves through central California late Wednesday and then through northern Arizona as nearly vanishes. Even drier air is then seen moving into the Desert Southwest on Thursday as afternoon surface dew points mix out to around 40 degrees.	
Area Forecast Discussion	9/11/2017	0249	PDT	San Diego	Minor cooling west of the mountains Tuesday, followed by more significant cooling Wednesday through Friday as the low moves inland across Central CA. Onshore flow will strengthen, creating gusty west winds in the mountains and deserts Wednesday and Thursday, strongest in the afternoons and evenings.	
Area Forecast Discussion	9/11/2017	0922	PDT	San Diego	At 830 AM, a cut off upper low remained off the coast of SoCal, with weak diffluent flow and mid level instability proving sufficient for a few showers and thunderstorms over Riverside and San Bernardino CountiesThe upper low off the coast will transition to and open wave Tuesday into Wednesday as it is absorbed into a trough digging through the Pacific Northwest. This pattern will bring a transition to drier southwest flow and a deepening of the marine layer as onshore flow strengthens and heights fall. Temperatures will take a downward trend, with afternoon highs running 6-12 degrees below seasonal normals Wednesday-Saturday. Patchy drizzle or a light shower will be possible Wednesday night and Thursday night west of the mountains as the marine layer deepens to around 4000 ft MSL.	
Area Forecast Discussion	9/11/2017	1400	PDT	San Diego	At 2 PM, a closed upper low remained off the coast of SoCal, with weak diffluent flow and mid level instability proving sufficient for a few cumulus buildups over the mountains and deserts despite a strong capping inversion near 600 mb and mid level winds....Increasing mid level clouds are possible again tonight as a weak push of moisture between 700 mb and 500 mb arrives from the southwest. Precipitation with this push of moisture, though not impossible, appears unlikely....	
Area Forecast Discussion	9/11/2017	1400	PDT	San DiegoThe upper low off the coast will transition to and open wave on Wednesday as it is absorbed into a trough digging through the Pacific Northwest. This will result in a deepening of the marine layer Wednesday as heights fall and the trough moves onshore. Decent low level moisture, a marine layer depth near 4000 ft MSL and limited low level instability may be sufficient for a few light showers or drizzle Wednesday night/Thursday morning west of the mountains. A second weak shortwave trough may impact the area on Thursday night/Friday morning, again brining the potential for light showers or drizzle. High temperatures Wednesday through Friday will be running 6-12 degrees below seasonal averages. <u>With the aforementioned troughs, westerly winds will be on the increase along the desert slopes of the mountains. Strongest winds are anticipated Wednesday-Thursday.</u>	
Area Forecast Discussion	9/11/2017	1426	MST	Phoenix	A general southeast-to-northwest flow continues across our forecast area with an upper level low situated off the southern California coast....Through the coming days, the closed low off the California coast will open up as it is ingested by an approaching PacNW trough....	

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE
SOUTHWESTERN CALIFORNIA TEMPERATURE AND PRECIPITATION SUMMARY	9/11/2017	1730 PDT	San Diego	TRM : THERMAL -117 : 108 / 81 / T /	
Area Forecast Discussion	9/11/2017	2123 PDT	San Diego	UPDATE...At 9 PM PDT, water vapor satellite imagery displayed an upper-level low around 200 miles west of Point Conception. Fog satellite showed a few patches of low clouds over the coastal waters. Only a few showers and thunderstorms developed today across portions of the San Bernardino County mountains and deserts. Most of the activity developed just to our north. Patchy fog and low clouds are expected again tonight along the coast, similar to the past few nights.	
Area Forecast Discussion	9/12/2017	0239 PDT	San Diego	...Another small push of mid-level moisture lifting north over the area may be enough for some afternoon showers and thunderstorms over portions of the northern mountains and high deserts. The upper level low has lifted north and is currently about 220 miles southwest of San Francisco. The low will drop remain relatively stationary today, then slowly move inland across the Central Coast and southern San Joaquin Valley tonight into early Thursday. This will bring noticeable cooling and drying, a deeper marine layer with more widespread low clouds, and gusty west winds in the mountains and deserts. The strongest winds are forecast to occur Wednesday and Thursday evenings as the trough passes. A weaker wave moving inland on Friday will continue the gusty winds, though they won't be as strong.	
Area Forecast Discussion	9/12/2017	0350 MST	Phoenix	...Looking at the bigger picture, there is an upper low centered off the central California coast and a big ridge over the interior West and into the Rockies.....On Wednesday and Thursday, the upper low moves inland in response to a larger upstream trough and in turn the ridge shifts eastward... In the process, moisture improves a little bit (mainly east of the Lower Colorado River Valley). Still quite modest precip potential though. On Thursday, the low/trough moves further inland and pushes a cool front across the forecast area.	
Area Forecast Discussion	9/12/2017	0909 PDT	San Diego	A look at the morning water vapor satellite image shows a cut-off low off the coast of Central California and a large ridge over the Four Corners region....Meanwhile, the sounding also shows south to southwest flow through most of the profile, with 1.6 inches of precipitable water and 857 J/KG of MUCAPE. Although models show moisture decreasing through the day, the lack of a mid-level capping inversion and decent instability may be enough to bring some isolated thunderstorms to the mountains and deserts this afternoon.	
Area Forecast Discussion	9/12/2017	0909 PDT	San DiegoThe low will move inland near Point Conception on Wednesday then weaken into an open short-wave trough on Thursday as it moves into extreme southern Nevada. Then, another short-wave will rotate down into Nevada on Friday. ...Models continue to generate some light precipitation over and west of the coastal slopes Wednesday night/Thursday morning and again Thursday night/Friday morning, so we may see drizzle/light showers during those periods. Any rainfall accumulation should range from a trace to as much as 0.10 inches. Stratus may not clear much during the day Thursday, and onshore pressure gradients will strengthen significantly (up to 11 mb from San Diego to Las Vegas). As a result, stronger westerly winds in the mountain ridges, desert slopes, passes and adjacent deserts will occur Wednesday night through Friday morning, with gusts of 40-50 mph possible.	

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE
Area Forecast Discussion	9/12/2017	1408	PDT San Diego (Los Angeles/Oxnard)	... The closed low that has been spinning off the coast for the last few days will finally move east and through central California Wednesday into Thursday. Meanwhile a deepening trough currently over central British Columbia will drop into Idaho by Friday, interacting with the low off our coast forming a large trough that will cover the western half of our country. This all should add up to ample cooling everywhere, with a deepening and expanding marine layer starting tonight. This marine layer will peak Thursday and Friday morning at which time we have a good shot at drizzle or light showers over the coasts and valleys and poor clearing into the afternoon. Any precipitation accumulations will be light (around 0.01 inches) but some foothill spots could see more like 0.10 inches. Onshore pressure gradients strengthen in response to the upper level pattern, and gusty winds through the mountains and deserts might require with a wind advisory (40-50 mph gusts).	
Area Forecast Discussion	9/12/2017	1453	MST Phoenix	... On Wednesday and Thursday, the upper low moves inland in response to a larger upstream trough and in turn the ridge shifts eastward. In the process, moisture improves a little bit (mainly east of the Lower Colorado River Valley). Still quite modest precip potential though. On Thursday, the low/trough moves further inland and pushes a cool front across the forecast area. Aloft, a lobe of cooler air aloft moves through as the trough axis brushes the area which leads to better potential instability....	
Area Forecast Discussion	9/12/2017	2125	PDT San Diego	An upper level low off the central coast helped to generate scattered diurnal convection over eastern CA and our high deserts earlier this evening. Convection has since dissipated. A deepening marine layer and troughy pattern along the coast tonight through Thursday will trend weather conditions with below normal temperatures and drizzle and occasional light showers along the coast and coastal-mountain slopes each late night and morning. In addition, with increasing pressure gradients, onshore winds will become strong by Thursday afternoon and evening and may reach wind advisory thresholds....	
Area Forecast Discussion	9/12/2017	2157	MST PhoenixUPDATE... Updated Aviation Discussion.Southeast California/Southwest Arizona including KIPL and KBLH: A low pressure system will move into southern California Wednesday evening. Although no storms are expected, winds will increase ahead of this system. Gusts as high as 20-25 kt are likely at KIPL/KBLH Wednesday afternoon and will continue into the evening.	
Area Forecast Discussion	9/13/2017	0304	PDT San Diego	..Surface pressure gradients were weak but trending onshore and some gusty westerly winds to around 35 MPH were occurring in wind-prone mtn/pass areas earlier.... For this morning...with gusty westerly winds redeveloping over the mtns/deserts by late afternoon....Low pressure off the Central Coast will begin to drift toward the Coast today, and then inland overnight as a larger long wave trough digs south from the PacNW....AVIATION.....Mountains/Deserts...sct-bkn clouds at or abv 10000 feet MSL will gradually move east out of the area today. Locally strong winds through mountain passes and into adjacent deserts above 25 mph with gusts over 40 mph this afternoon through Thursday evening.	

TYPE	DATE	TIME		AGENCY	DESCRIPTION	PAGE
Area Forecast Discussion	9/13/2017	0343	MST	Phoenix	<p>Today through Thursday... A band of weak showers/sprinkles has developed over the Mohave Desert early this morning including Joshua Tree National Park. Embedded within that band have been very isolated and short- lived convective showers. This activity is associated with the eastern periphery of an upper low centered near Monterrey Bay which is tapping into a batch of moisture near the southern California and northern Baja coast....The upper low begins moving in tonight with the center reaching southern Nevada by midday Thursday but weakens quickly as it moves northeastward during the afternoon...Breeziness will be manageable but portions of western Imperial County could have some strong local windiness tonight....Southeast California/Southwest Arizona including KIPL and KBLH: A low pressure system will move into southern California Wednesday evening. Although no storms are expected, winds will increase ahead of this system. Gusts as high as 20-25 kt are likely at KIPL/KBLH Wednesday afternoon and will continue into the evening.</p>	
Area Forecast Discussion	9/13/2017	0848	PDT	San Diego	<p>At 845 AM, a closed low was off the coast was producing a few isolated thunderstorms near San Francisco and a few altocumulus over the SoCal deserts....The closed low currently off the coast and a second weak shortwave close on its heels will traverse the region through Saturday. This will result in height falls, a deeper marine layer, and stronger onshore flow that will bring SoCal its first glimpse of more fall like weather...Breezy winds will occur over the desert slopes and into the deserts over Riverside and San Diego Counties this evening and Thursday.</p>	
Area Forecast Discussion	9/13/2017	0915	MST	Phoenix	<p>...Lingering moisture ... with steep midlevel lapse rates ... and weak divergence aloft have combined to support rather extensive accas and isold showers/storms lifting into Yavapai County....additional deep convective development along this moisture axis through western Pima and SW Maricopa counties will be possible this afternoon despite the limited boundary layer moisture availability. High resolution modeling hits on some of this isolated afternoon activity followed by outflow and minimal overall coverage....Aviation. Southeast California/Southwest Arizona including KIPL and KBLH: A low pressure system will move into southern California Wednesday evening. Although no storms are expected, winds will increase ahead of this system. Gusts as high as 20-25 kt are likely at KIPL/KBLH Wednesday afternoon and will continue into the evening.</p>	
Area Forecast Discussion	9/13/2017	1410	MST	Phoenix	<p>...The preponderance of high resolution convective models continue to show this isold shower/storm activity popping up into this evening in a weakly capped, but also weakly unstable (MLCapes just about 500 J/kg) environment. With DCape values largely exceeding 1500 J/kg, some outflow winds will be possible....Otherwise, a notable negative height anomaly will translate from central California towards the four corners Thursday sweeping the first cool season frontal boundary across the region. The prefrontal pressure gradient will begin to steepen through SE California and evening/overnight gap flow through western Imperial and Riverside counties may become quite strong and gusty. This will aid in tightening and progressing the frontal boundary and moisture gradient heading through the overnight.</p>	

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE
Area Forecast Discussion	9/13/2017	1410	MST	Phoenix	...
Area Forecast Discussion	9/13/2017	2120	PDT	San Diego	Evening Update...
Area Forecast Discussion	9/13/2017	2136	MST	Phoenix	...Limited areas of convection developed in our forecast area this afternoon and evening, with short-lived showers near El Centro off a Baja Spine boundary and one slightly longer-lived cluster of thunderstorms across SW Maricopa and Pinal counties closer towards sunset....
Area Forecast Discussion	9/13/2017	2136	MST	PhoenixAVIATION...Southeast California/Southwest Arizona including KIPL and KBLH: A low pressure system moving in/across SE CA to keep westerly winds at KIPL and southwesterly winds at KBLH at elevated levels through the TAF period. Sustained wind speeds as high as 20 kts with gusts as high as 28 kts are possible at KIPL with lesser speeds at KBLH. Drier air moving into the region to keep skies mainly clear at KIPL with just some evening mid-high level clouds at KBLH.
Area Forecast Discussion	9/14/2107	0311	MST	Phoenix	The upper low has been tracking east-southeastward and is centered north of Los Angeles early this morning. The associated cold front looks to have reached AZ as dew points have dropped off quite a bit over southeast California and the Lower Colorado River Valley....AVIATION...Southeast California/Southwest Arizona including KIPL and KBLH: A low pressure system moving in/across SE CA to keep westerly winds at KIPL and southwesterly winds at KBLH at elevated levels through the TAF period. Sustained wind speeds as high as 20 kts with gusts as high as 28 kts are possible at KIPL with lesser speeds at KBLH. Drier air moving into the region to keep skies mainly clear at KIPL with just some evening mid-high level clouds at KBLH.
Area Forecast Discussion	9/14/2017	0316	PDT	San Diego	Satellite imagery showed clouds well into the desert passes, which, coupled with cig reports indicate the depth of the marine layer exceeds 5K FT. Surface pressure gradients have trended sharply onshore at 6-8 MBS KSAN to the deserts, which has been supporting peak westerly wind gusts of 40-50. Expect a breezy day in the mts/deserts today with some gusts to Advisory levels in wind prone areas. There may be some patchy blowing dust as well.

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE	
Area Forecast Discussion	9/14/2107	0540	MST	Phoenix	.UPDATE...Updated aviation and fire weather discussions.... AVIATION ...Southeast California/Southwest Arizona including KIPL and KBLH: No weather expected at the terminals as drier air will spread into the deserts behind an upper low moving into Arizona . Expect mostly clear skies next 24 hours with strong gusty west winds at KIPL this morning. We have seen gusts over 40kt earlier and we may see a few gusts between 30 and 40kt through 15Z or so before winds gradually taper off...staying elevated through early evening. Blowing dust likely with stronger gusts lowering vis values to 2-3SM . Less wind at KBLH but favoring southwest today and becoming gusty by afternoon with peak gusts 18-25kt at times. Winds to taper off at KBLH early this evening but remaining mostly southwest.	
Area Forecast Discussion	9/14/2017	0930	PDT	San Diego	Moderately strong west winds will occur , including through San Gorgonio Pass due to gap winds and the San Diego County Deserts due to mountain wave activity with the inversion just above most of the mountain crests.	
Area Forecast Discussion	9/14/2107	1340	MST	Phoenix AVIATION ...Southeast California/Southwest Arizona including KIPL and KBLH: Strong gusty W/SW winds at KIPL will be the main aviation hazard through Friday afternoon under clear skies. Gusts this evening may approach 35kt for a brief period, but speeds should stay lower than last night . A few gusts will be possible at KBLH, but likely remaining below 25kt.	
Area Forecast Discussion	9/14/2017	1400	PDT	San Diego	Strong onshore MSLP gradients , over 6 MB from the coast to the deserts and a marine inversion in the 4500-6500 ft MSL range will result in locally gusty winds through San Gorgonio Pass and the desert mountain/foothill slopes the rest of this afternoon and tonight .	
Area Forecast Discussion	9/14/2017	2050	PDT	San Diego	... Mountains/Deserts ...Clear with unrestricted vis through Friday morning. West winds 20-30 kt with gusts 40 kt will continue to create mod-stg udfs/lws. Strong surface winds likely at KPSP and KTRM with gusts 30 kt at times .	
Area Forecast Discussion	9/14/2107	2131	MST	Phoenix	...Evening satellite loops this PM paint a near textbook example of an upper low pressure system and associated cloud fields as the main circulation center lifted through southern NV/UT into northern UT/CO..... AVIATION ...Southeast California/Southwest Arizona including KIPL and KBLH: West to southwest winds to persist overnight under mostly clear skies for the terminals . Southerly headings with some gusts 15-20kts possible Friday midday for KBLH, while KIPL will stay west for the entirety of the TAF period .	

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Area Forecast Discussion
National Weather Service Phoenix AZ
222 AM MST Mon Sep 11 2017

.SYNOPSIS...

Dry air moving into the region will end rain chances starting today while also bringing warmer temperatures through the middle of this week. A slight cooling trend is expected late this week into the weekend before a possible increase in moisture and a return to rain chances by Sunday into next Monday.

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.DISCUSSION...

Dry air continues to gradually filter into the region from the south and southeast while the cut-off low remains nearly stationary off southern California. Temperatures recovered quite a bit yesterday under mostly sunny skies and drier conditions. This trend will continue over the next couple days as PWATs hover around one inch. Highs will inch up a degree or two today and Tuesday as lower desert readings top out in a 104-107 degree range, or roughly five degrees below records.

Eventually the high center over the Four Corners area will shift southward into northern Mexico for the middle of the week. During this time, the cut-off low will finally get kicked out by an upstream trough from the northern Pacific. The low is forecast to quickly weaken as it moves through central California late Wednesday and then through northern Arizona as nearly vanishes. Even drier air is then seen moving into the Desert Southwest on Thursday as afternoon surface dew points mix out to around 40 degrees. The passing of the weakening low will also bring in some cooler air as lower desert highs decrease to between 95-100 degrees starting Thursday.

Model uncertainty remains high for the coming weekend as models continue to struggle with the potential remnants of a tropical wave moving northward out of the Baja area. The general consensus shows moisture surging northward out of northern Mexico sometime Sunday into Monday. It is too early to tell the extent of the moisture, but it seems likely at least portions Arizona will see rain chances return briefly starting Sunday or Monday. This moisture increase looks to only last a day or two as by early next week, dry westerly flow looks to again overtake the region.

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

September 13 and 14, 2017 Exceptional Event, Imperial County**Appendix A**

Most thunderstorm activity this evening has been confined to central and northern portions of the state, well away from the Phoenix area. Dry air will continue to move into the region, and will suppress thunderstorm activity into Monday. Skies will remain mostly clear. Winds should maintain an easterly component throughout most of the day, with a brief window of westerly winds mainly after 02Z Monday evening.

Southeast California/Southwest Arizona including KIPL and KBLH:

Expect mostly light winds with normal diurnal shifts along with episodes of light and variable and calm conditions. In addition, skies will be mostly clear with FEW-SCT mid-level clouds.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

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.FIRE WEATHER...

Wednesday through Sunday...

As a fairly dry low pressure system moves across the area from the west, expect warmer than normal max Ts on Wednesday to become seasonably warm by Thursday. Breezy to very breezy southwesterly winds with gusts of 15 to 24 mph are expected on both Wednesday and Thursday afternoons. Expect relatively stable min RH values in mid teens to lower 20s throughout the period with fair to good overnight recoveries improving to good to excellent by Saturday morning. A slight chance of T-storms are possible over the higher elevations of eastern ares on Sunday evening due to a possible influx of tropical moisture from the remnants of a tropical system from Baja CA.

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.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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DISCUSSION...Kuhlman

AVIATION...Rogers/Sawtelle

FIRE WEATHER...Sawtelle

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FXUS66 KSGX 110949
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
249 AM PDT Mon Sep 11 2017

.SYNOPSIS...

Low pressure off the Southern California Coast will continue a threat of showers and thunderstorms over the mountains and high desert areas into Tuesday. The low moves north and inland for drying, strengthening onshore flow, and a deeper marine layer for the latter half of the week. It will be noticeably cooler beginning Wednesday, and marine clouds will be more extensive each morning into the weekend. Patchy drizzle is possible west of the mountains Thursday and Friday mornings.

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

The line of thunderstorms near San Clemente Island continues to weaken this morning, with most of the activity from Catalina Island northward. Elsewhere do not expect any precipitation this morning. A few patches of low clouds and fog are possible along the San Diego County coast and up to around 10 miles inland with scattered mid and high clouds across the rest of the region.

Morning water vapor imagery shows drier air moving north across interior Southern CA and deeper moisture wrapping around the northeast and north sides of the cut-off low, which is currently around 365 miles west of San Diego and slowly lifting northwest. There will be enough residual moisture in the San Bernardino County mountains and high deserts for a slight chance of thunderstorms each afternoon through Tuesday. Warm weather will continue today with highs near to slightly above normal. Minor cooling west of the mountains Tuesday, followed by more significant cooling Wednesday through Friday as the low moves inland across Central CA. Onshore flow will strengthen, creating gusty west winds in the mountains and deserts Wednesday and Thursday, strongest in the afternoons and evenings. Marine layer low clouds and fog will also become more widespread and extend further inland each night. The passing trough and deep marine layer may be enough to squeeze out some drizzle west of the mountains Thursday and Friday mornings. High temps will range anywhere from 5 to 15 degrees across the region Thu and Fri. A broad longwave trough lingers over the West through the weekend, maintaining below normal temps and onshore flow.

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.AVIATION...

110900Z...Coast/Valleys...Scattered to broken clouds above 8000 feet msl today. Patchy low clouds in coastal areas through 16Z most likely KSAN and KCRQ. Where low clouds form, bases would be about 1000 feet msl with tops to 1400 feet and local vis less than 2-5sm on higher coastal terrain. Greater coastal cloud coverage after 06Z tonight with similar bases/vis.

Mountains/Deserts...Scattered to broken clouds above 8000 feet MSL through this evening. A slight chance of TSRA with tops to 40000 feet MSL 19-01Z.

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.MARINE...

Thunderstorms around San Clemente Island will decrease this morning. No additional hazardous marine weather is expected through Friday.

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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...NONE.

PZ...NONE.

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PUBLIC...SS

AVIATION/MARINE...MM

**IOWA STATE
UNIVERSITY**

College of Ag

Department of Agronomy

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Area Forecast Discussion
National Weather Service San Diego CA
922 AM PDT Mon Sep 11 2017

.SYNOPSIS...

A closed low off the coast may help a couple isolated thunderstorms form this afternoon, mainly over San Bernardino County. Otherwise quiet weather and near average afternoon high temperatures will reign today and Tuesday. A transition in the weather pattern will occur during the second half of the week with below average temperatures, a deeper marine layer, and dry upper level southwest flow taking hold.

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

.SYNOPSIS...

At 830 AM, a cut off upper low remained off the coast of SoCal, with weak diffluent flow and mid level instability proving sufficient for a few showers and thunderstorms over Riverside and San Bernardino Counties despite a strong capping inversion evident near 600 mb on the 12Z NKX sounding. Outside of this, notable weather was limited with light winds and little to no marine layer stratus.

The low off the coast will shift slightly northward, pushing the region of best diffluent flow to points north of San Bernardino County by this afternoon. When paired with a continued strong capping inversion near 600 mb, this should limit the potential for additional convection today. The mid level cumulus field this morning is expected dissipate by mid day, with a few largely flat surface based cumulus developing over the mountain peaks and upper deserts this afternoon. Temperatures today will be the definition of average, with all areas running within +/- 5 degrees of seasonal norms.

The upper low off the coast will transition to and open wave Tuesday into Wednesday as it is absorbed into a trough digging through the Pacific Northwest. This pattern will bring a transition to drier southwest flow and a deepening of the marine layer as onshore flow strengthens and heights fall. Temperatures will take a downward trend, with afternoon highs running 6-12 degrees below seasonal normals Wednesday-Saturday. Patchy drizzle or a light shower will be possible Wednesday night and Thursday night west of the mountains as the marine layer deepens to around 4000 ft MSL.

Over the weekend and into early next week, the global models generally keep troughing over the Western US. A pattern that would favor the continuation of near to slightly below average temperatures and dry southwest flow.

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.AVIATION...

111615Z...Coast/Valleys...Scattered to broken clouds above 8000 feet msl today. After 04Z...BKN010-015 over the coastal waters spreading 5 to 10 miles in through 12Z Tuesday.

Mountains/Deserts...SCT-BKN080-120 today with a chance of SHRA/TSRA through 01Z.

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.MARINE...

No additional hazardous marine weather is expected through Friday.

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.SKYWARN...

Skywarn activation will not be needed this week.

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...NONE.

PZ...NONE.

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PUBLIC...Albright

AVIATION/MARINE...Moede

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Department of Agronomy

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FXUS66 KSGX 112100
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
200 PM PDT Mon Sep 11 2017

.SYNOPSIS...

A closed low will linger off the coast through tomorrow before shifting eastward Wednesday. This will bring one more day of near average temperatures on Tuesday, before temperatures dip below average for the remainder of the week. There is an off chance of a shower or thunderstorm over the mountains and deserts this afternoon or Tuesday. Light shower activity is possible west of the mountains Wednesday night and Thursday night into Friday Morning.

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

.SYNOPSIS...

At 2 PM, a closed upper low remained off the coast of SoCal, with weak diffluent flow and mid level instability proving sufficient for a few cumulus buildups over the mountains and deserts despite a strong capping inversion near 600 mb and mid level winds.

Outside of this, notable weather was limited with light winds and little to no marine layer stratus.

The capping inversion near 600 mb and strong winds in the mid level should continue to limit the convective potential this afternoon and evening. As such, any thunderstorm or shower activity should be isolated and limited to the mountains and

deserts of San Bernardino/Riverside Counties. Increasing mid level clouds are possible again tonight as a weak push of moisture between 700 mb and 500 mb arrives from the southwest.

Precipitation with this push of moisture, though not impossible, appears unlikely. The marine layer should remain patchy for a third night in a row.

The upper low off the coast will transition to and open wave on Wednesday as it is absorbed into a trough digging through the Pacific Northwest. This will result in a deepening of the marine layer Wednesday as heights fall and the trough moves onshore. Decent low level moisture, a marine layer depth near 4000 ft MSL and limited low level instability may be sufficient for a few light showers or drizzle Wednesday night/Thursday morning west of the mountains. A second weak shortwave trough may impact the area on Thursday night/Friday morning, again bringing the potential for light showers or drizzle. High temperatures Wednesday through

September 13 and 14, 2017 Exceptional Event, Imperial County**Appendix A**

Friday will be running 6-12 degrees below seasonal averages. With the aforementioned troughs, westerly winds will be on the increase along the desert slopes of the mountains. Strongest winds are anticipated Wednesday-Thursday.

Over the weekend and into early next week, the global models generally keep troughing over the Western US. A pattern that would favor the continuation of slightly below average temperatures and dry southwest flow.

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.AVIATION...

112015Z...Coast/Valleys...SCT008-012 over the coastal waters becoming BKN008-012 and spreading 5-10 miles inland through 14Z Tuesday. Local vis 3-5 miles on higher terrain. Coastal low clouds lifting through 16Z. After 16Z...SCT-BKN100.

Mountains/Deserts...SCT-BKN0080 with a slight chance of SHRA/TSRA through 02Z. After 02Z...SCT-BKN100.

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.MARINE...

No hazardous marine weather is expected through Friday. Breezy each afternoon with northwest winds 10-20 kt.

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.SKYWARN...

Skywarn activation will not be needed this week.

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...NONE.

PZ...NONE.

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PUBLIC...Albright

AVIATION/MARINE...Moede

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Area Forecast Discussion
National Weather Service Phoenix AZ
226 PM MST Mon Sep 11 2017

.SYNOPSIS...

Dry air moving into the region will end rain chances starting today while also bringing warmer temperatures through the middle of this week. A slight cooling trend is expected late this week into the weekend before a possible increase in moisture and a return to rain chances by Sunday into early next week.

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.DISCUSSION...

A general southeast-to-northwest flow continues across our forecast area with an upper level low situated off the southern California coast. The airmass was stable across the lower elevations with a few showers/storms developing over the mountains. A pocket of modest instability remained to our south, across Pima county, where convective activity was found at 2 PM. Not expecting the convection to grow/expand beyond current areas. Temperatures continued to run warm, a few degrees above normal.

Through the coming days, the closed low off the California coast will open up as it is ingested by an approaching PacNW trough. This will spread much drier air across SoCal/AZ and bring temperatures down slightly. More notable will be a cooling of overnight lows with the dry air and clear skies.

Still seeing a lot of uncertainty regarding the evolution of the forecast this weekend and into early next week regarding a resurgence of subtropical moisture. The mid/upper level pattern will favor west coast troughing, which would suggest a supportive southeast ageostrophic flow to impart moisture from a remnant tropical system. The latest GEFS and ECens doesn't suggest very high PoPs or precip amounts. Both suggest precip chances will hold off a bit more and arrive early next week (instead of this weekend).

&&

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

Light winds attempting to swing to the south-southwest this afternoon despite the broader weather pattern supporting more south-southeast winds. No threat of storms or outflows this evening.

Southeast California/Southwest Arizona including **59**KIPL and KBLH:

Light winds and typical winds patterns expected.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

&&

.FIRE WEATHER...

Wednesday through Sunday...

As a fairly dry low pressure system moves across the area from the west will bring a slight downward trend in temperatures.

Breezy to very breezy southwesterly winds expected on both

Wednesday and Thursday afternoons. Expect relatively stable min RH values in mid teens to lower 20s through the week with increasing RH values this weekend, especially over the far west/southwest deserts. Otherwise fair to good overnight recoveries improving to good to excellent this weekend. A slight chance of T-storms are possible over the higher elevations of eastern ares beginning Sunday.

&&

.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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Visit us on Facebook, Twitter, and at weather.gov/phoenix

DISCUSSION...Iniguez

AVIATION...Iniguez

FIRE WEATHER...Iniguez

**IOWA STATE
UNIVERSITY**

College of Ag

Department of Agronomy

173
ASUS66 KSGX 120020
RTPSGX

:SOUTHWESTERN CALIFORNIA TEMPERATURE AND PRECIPITATION SUMMARY
:NATIONAL WEATHER SERVICE SAN DIEGO CA
:530 PM PDT MON SEP 11 2017

:***** UPDATED *****

:18 HOUR HIGH AND LOW TEMPERATURES AS OF 5 PM TODAY.
: * DENOTES 24 HOUR HIGH TEMPERATURES BETWEEN 5 PM YESTERDAY
: AND 5 PM TODAY. OCCASIONALLY THE HIGH TEMPERATURE MAY HAVE
: OCCURRED AFTER 5 PM YESTERDAY.

:PRECIPITATION FOR THE PAST 24 HOURS. M DENOTES MISSING.
:T DENOTES TRACE OF PRECIPITATION

.BR SGX 0911 P DH17/TAIRZS/TAIRZI/PPDRZZ/SDIRZZ

: ID : STATION ELEV : HIGH / LOW / PCPN / SNODEP
: FEET INCHES

: ...COASTAL AREAS...

Table with 5 columns: Station ID, Station Name, Elevation, High Temp, Low Temp, Precipitation. Rows include SDYBL, FUL, ANAC1, STAC1, SDHTB, SNA, 3L3, LAGC1, SDDPC, SDFRH, L34, OKB, SDVIS, CRQ, SDETS, SOL, SDDMB, NKX, MYF, SAN, L13, SDNAC, CVAC1, NRS, SDM.

: ...INLAND AREAS...

September 13 and 14, 2017 Exceptional Event, Imperial County

Appendix A

ONT :	ONTARIO	943 :	101 /	70 /	0.02 /
CNO :	CHINO	652 :	104 /	69 /	0.05 /
SDALO:	RANCHO CUCAMONGA	1940 :	98 /	71 /	0.01 /
SDSBO:	SAN BERNARDINO	1050 :	M /	M /	M /
AJO :	CORONA	531 :	100 /	65 /	T /
RAL :	RIVERSIDE AIRPORT	818 :	101 /	72 /	T /
UCRC1:	RIVERSIDE	986 :	M /	M /	M /
RIV :	RIVERSIDE MARCH	1542 :	101 /	68 /	T /
BUO :	BEAUMONT	2680 :	96 /	67 /	0.00 /
SDLEL:	LAKE ELSINORE	1275 :	104 /	71 /	0.00 /
SDHET:	HEMET	2050 :	97 /	71 /	0.00 /
SDTEC:	TEMECULA	1020 :	99 /	69 /	0.01 /
SDFBK:	FALLBROOK	698 :	97 /	66 /	0.00 /
VCFC1:	VALLEY CENTER	1312 :	100 /	65 /	0.00 /
SDSMP:	SAN MARCOS	630 :	92 /	68 /	0.00 /
ESCC1:	ESCONDIDO	645 :	95 /	69 /	0.00 /
PSQC1:	SAN PASQUAL VALLEY	255 :	100 /	63 /	0.00 /
RNM :	RAMONA AIRPORT	1393 :	99 /	62 /	0.00 /
SGX :	RANCHO BERNARDO	690 :	89 /	67 /	0.00 /
SDPOY:	POWAY	597 :	94 /	66 /	0.00 /
ALPC1:	ALPINE	1695 :	94 /	67 /	0.00 /
SDLAM:	LA MESA	500 :	91 /	68 /	0.00 /
SDSNL:	SANTEE	435 :	94 /	67 /	0.00 /
ELJC1:	EL CAJON	405 :	94 /	70 /	M /
SDRSC:	RANCHO SAN DIEGO	400 :	93 /	66 /	0.00 /
LMGC1:	LEMON GROVE	427 :	88 /	69 /	0.00 /
:					
:	...MOUNTAIN AREAS...				
:					
ECSC1:	EL CARISO	2730 :	96 /	70 /	0.00 /
SDWRT:	WRIGHTWOOD	5980 :	77 /	59 /	0.05 /
SDARN:	LAKE ARROWHEAD	5180 :	84 /	58 /	0.00 /
BBLC1:	BIG BEAR LAKE	6768 :	76 /	52 /	0.00 /
SDBDN:	BALDWIN LAKE	6770 :	76 /	47 /	0.06 /
SDAOK:	ANGELUS OAKS	5800 :	81 /	60 /	0.00 /
SDPCV:	PINE COVE	6299 :	79 /	65 /	0.00 /
IDYC1:	IDYLLWILD	5380 :	84 /	63 /	0.00 /
NZAC1:	ANZA	3939 :	90 /	65 /	0.00 /
PYNC1:	PINYON PINES	4060 :	91 /	62 /	0.00 /
PLRC1:	* PALOMAR MOUNTAIN	5550 :	83 /	63 /	0.00 /
JULC1:	JULIAN	4240 :	90 /	63 /	0.00 /
MLNC1:	* MOUNT LAGUNA	5920 :	78 /	61 /	0.00 /
CPMC1:	* CAMPO COOP	2615 :	96 /	60 /	0.00 /
:					
:	...DESERT AREAS...				
:					
HESC1:	HESPERIA	3055 :	95 /	66 /	0.04 /
APLC1:	APPLE VALLEY	2780 :	91 /	72 /	M /
PSP :	PALM SPRINGS	425 :	107 /	85 /	0.00 /
IDOC1:	INDIO	-21 :	106 /	86 /	0.00 /
TRM :	THERMAL	-117 :	108 /	81 /	T /
BROC1:	BORREGO SPRINGS	805 :	106 /	83 /	0.00 /
SDOCL:	OCOTILLO WELLS	149 :	108 /	86 /	0.00 /
TYEC1:	JOSHUA TREE N.P.	1975 :	102 /	75 /	0.00 /

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BLH :      BLYTHE      397 :  106 /  81 /  0.00 /
IPL :      IMPERIAL    -56 :  108 /  83 /  0.00 /
.END

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THESE DATA ARE PRELIMINARY AND HAVE NOT UNDERGONE FINAL QUALITY CONTROL BY THE NATIONAL CLIMATIC DATA CENTER (NCDC). THEREFORE, THESE DATA ARE SUBJECT TO REVISION. FINAL AND CERTIFIED CLIMATE DATA CAN BE ACCESSED AT WWW.NCDC.NOAA.GOV.

\$\$

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Non-discrimination Policy

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966
FXUS66 KSGX 120423
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
923 PM PDT Mon Sep 11 2017

.UPDATE...

At 9 PM PDT, water vapor satellite imagery displayed an upper-level low around 200 miles west of Point Conception. Fog satellite showed a few patches of low clouds over the coastal waters. Only a few showers and thunderstorms developed today across portions of the San Bernardino County mountains and deserts. Most of the activity developed just to our north. Patchy fog and low clouds are expected again tonight along the coast, similar to the past few nights. No changes to the forecast needed with the update this evening.

&&

.SYNOPSIS...

A closed low will linger off the coast through Tuesday before shifting eastward Wednesday. This will bring one more day of near average temperatures on Tuesday, before temperatures dip below average for the remainder of the week. There is an off chance of a shower or thunderstorm over the mountains and deserts Tuesday. Light showers or drizzle are possible west of the mountains Wednesday night and Thursday night into Friday morning.

&&

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

.PREV DISCUSSION...

Increasing mid-level clouds are possible again tonight as a weak push of moisture between 700 mb and 500 mb arrives from the southwest. Precipitation with this push of moisture, though not impossible, appears unlikely. The marine layer should remain patchy for a third night in a row.

The upper low off the coast will transition to and open wave on Wednesday as it is absorbed into a trough digging through the Pacific Northwest. This will result in a deepening of the marine layer Wednesday as heights fall and the trough moves onshore. Decent low-level moisture, a marine layer depth near 4000 ft MSL and limited low-level instability may be sufficient for a few light showers or drizzle Wednesday night/Thursday morning west of the mountains. A second weak shortwave trough may impact the area on Thursday night/Friday morning, again bringing the potential for light showers or drizzle. High temperatures Wednesday through

- September 13 and 14, 2017 Exceptional Event, Imperial County

Friday will be running 6-12 degrees below seasonal averages. With the aforementioned troughs, westerly winds will be on the increase along the desert slopes of the mountains. Strongest winds are anticipated Wednesday-Thursday.

Over the weekend and into early next week, the global models generally keep troughing over the Western US. A pattern that would favor the continuation of slightly below average temperatures and dry southwest flow.

&&

.AVIATION...

120400Z...Coast/Valleys...Mostly SCT clouds at/above 9000 ft MSL will prevail through Tue evening. Patchy BKN stratus will develop late tonight, mostly within 10-15 miles of the coast with timing mostly 08Z-16Z Tue. Bases will be 800-1200 ft MSL with tops to 1400 ft MSL. Most likely, KSAN and KCRQ will have several hours of a BKN cig, with confidence lower for KSNA. Stratus will likely develop earlier Tue night.

Mountains/Deserts...Mostly SCT clouds at/above 9000 ft MSL will occur through Tue evening with mostly unrestricted VIS. There is a slight chance of SHRA/TSRA over the mountains Tue afternoon with tops to 35000 ft MSL possible.

&&

.MARINE...

No hazardous marine weather is expected through Saturday.

&&

.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...NONE.

PZ...NONE.

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UPDATE...JJT

PUBLIC...BA

AVIATION/MARINE...Maxwell

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394
FXUS66 KSGX 120939
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
239 AM PDT Tue Sep 12 2017

.SYNOPSIS...

A closed low will linger off the coast today before shifting eastward Wednesday. This will bring one more day of near average temperatures, before temperatures dip below average for the remainder of the week. There is a small chance of a shower or thunderstorm over the mountains and deserts this afternoon. Light showers or drizzle are possible west of the mountains Wednesday night and Thursday night into Friday morning.

&&

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

All is quiet in Southwest CA this morning. Patchy low clouds were developing along the coast and a few miles inland in San Diego County with a few mid clouds elsewhere. Low clouds will continue to develop through the morning, but given the somewhat weak inversion on the 00Z sounding expect coverage to remain patchy.

Another small push of mid-level moisture lifting north over the area may be enough for some afternoon showers and thunderstorms over portions of the northern mountains and high deserts.

The upper level low has lifted north and is currently about 220 miles southwest of San Francisco. The low will drop remain relatively stationary today, then slowly move inland across the Central Coast and southern San Joaquin Valley tonight into early Thursday. This will bring noticeable cooling and drying, a deeper marine layer with more widespread low clouds, and gusty west winds in the mountains and deserts. The strongest winds are forecast to occur Wednesday and Thursday evenings as the trough passes. A weaker wave moving inland on Friday will continue the gusty winds, though they won't be as strong. The marine layer will extend well into the valleys and lower coastal foothills each morning through Friday with the potential for drizzle and perhaps a few light showers during the nights and mornings.

Heights increase slightly over the weekend into early next week as the second trough lifts out, bringing minor warming and less extensive night and morning low clouds. Long wave troughing over the West will maintain dry west to southwest flow aloft for fair and mild weather into next week with high temps a few degrees below normal.

&&

.AVIATION...

120900Z...Coast/Valleys...Low clouds will develop in the coastal areas with bases between 600-900 feet msl and tops to 1500 feet. Scatter out by 16-18Z. Low clouds will develop after 03Z this evening and spread farther inland overnight. Bases/vis would be a little higher.

Mountains/Deserts...Scattered to locally broken clouds at/above 9000 feet MSL will occur through this evening. There is a slight chance of SHRA/TSRA over the mountains and high desert 19-01Z with tops to 35000 feet MSL possible.

&&

.MARINE...

No hazardous marine weather is expected through Saturday.

&&

.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...SS

AVIATION/MARINE...MM

IOWA STATE UNIVERSITY

College of Ag

Department of Agronomy

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835
FXUS65 KPSR 121050
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
350 AM MST Tue Sep 12 2017

.SYNOPSIS...

Storm chances will be slight and confined to the higher terrain of Arizona today and Wednesday. On Thursday, a weather system moving into the western states will lead to a cooling trend. There will also be a slight chance of thunderstorms over south-central Arizona. Highs in mid and upper 90s will prevail through the weekend and into early next week. Slight chances for storms will return Sunday...mainly for Arizona.

&&

.DISCUSSION...

Today through Thursday...

Isolated weak thunderstorms have popped up over western Maricopa County early this morning. Hard to see a distinct looking perturbation in the water vapor imagery that would be associated with this activity though the RAP depicts a weak vort max coincident with that activity. There may also be some weak upper level divergence helping as well. Plus, we still have steep lapse rates above the surface. The latest NAM Nest and HRRR have picked up on the activity and keep it weak. The former goes on to show activity further west this morning before dissipating but the HRRR dissipates it more quickly. In short, they won't add up to much.

Looking at the bigger picture, there is an upper low centered off the central California coast and a big ridge over the interior West and into the Rockies. Moisture over our forecast area is relatively modest with 1000-700mb mean mixing ratios in the 6-8 g/kg range. The models are in generally good agreement that the mid-tropospheric high will become centered over far northwest Mexico today. On Wednesday and Thursday, the upper low moves inland in response to a larger upstream trough and in turn the ridge shifts eastward. In the process, moisture improves a little bit (mainly east of the Lower Colorado River Valley). Still quite modest precip potential though. On Thursday, the low/trough moves further inland and pushes a cool front across the forecast area.

Aloft, a lobe of cooler air aloft moves through as the trough axis brushes the area which leads to better potential instability. There will also be some dynamical forcing with the trough (better over VEF and FGZ CWAs). However, the GFS keeps CIN values relatively high as the mixed layer cools and some dry advection starts moving in. Thus PoPs remain modest given what is otherwise

a very interesting pattern. Temperatures drop nicely though - especially over our western areas.

Friday through Monday...

Highs in the 90s continue through the weekend and into early next week as lingering troughing keeps the ridge at bay. However, there is some indication that as the ridge tries to expand westward, there will be some modest moisture increase for slight chances once again during the beginning of the week.

&&

.AVIATION...

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

Typical westerly afternoon winds will continue at the terminals through the evening and into the very early morning when easterly winds will take hold. Expect no other aviation weather concerns for the period.

Southeast California/Southwest Arizona including KIPL and KBLH:

Winds will shift more westerly before becoming variable overnight. However, wind speeds will remain relatively light with no major aviation weather concerns.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

&&

.FIRE WEATHER...

Wednesday through Sunday...

As a fairly dry low pressure system moves across the area from the west will bring a slight downward trend in temperatures. Breezy to very breezy southwesterly winds expected on both Wednesday and Thursday afternoons. Expect relatively stable min RH values in mid teens to lower 20s through the week with increasing RH values this weekend, especially over the far west/southwest deserts. Otherwise fair to good overnight recoveries improving to good to excellent this weekend. A slight chance of T-storms are possible over the higher elevations of eastern areas beginning Sunday.

&&

.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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685
FXUS66 KSGX 121609
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
909 AM PDT Tue Sep 12 2017

.SYNOPSIS...

A closed low will linger off the coast today before shifting eastward Wednesday. This will bring one more day of near average temperatures, before temperatures dip below average for Wednesday and 10 to 20 degrees below normal Thursday and Friday. There is a small chance of a shower or thunderstorm over the mountains and deserts this afternoon. Light showers or drizzle are possible over and west of the coastal mountain slopes Wednesday night and Thursday morning and again Thursday night into Friday morning as a couple troughs of low pressure move into Nevada. It will get windy as well for the mountains and deserts. A little warmer but still below normal Saturday through Monday with a trough over the west coast with night and morning marine layer clouds over the coast and portions of the valleys.

&&

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

A look at the morning water vapor satellite image shows a cut-off low off the coast of Central California and a large ridge over the Four Corners region. Visible satellite indicates patchy marine layer stratus over the coast and western valleys, while scattered mid level clouds move over portions of the forecast area. The 12Z Miramar sounding shows a weak 4 deg C marine layer inversion around 700 ft msl, while pilot reports show the tops of the marine layer cloud layer at around 1200-1600 feet msl. Given the weak inversion and lack of a coastal eddy, stratus should clear by late morning for most areas. Meanwhile, the sounding also shows south to southwest flow through most of the profile, with 1.6 inches of precipitable water and 857 J/KG of MUCAPE. Although models show moisture decreasing through the day, the lack of a mid-level capping inversion and decent instability may be enough to bring some isolated thunderstorms to the mountains and deserts this afternoon. Some cooling is expected across the area today with pressure gradients trending onshore and lower 500 mb heights moving in due to the low moving closer to the coast. Expect highs today falling to near normal for most areas.

The low will move inland near Point Conception on Wednesday then weaken into an open short-wave trough on Thursday as it moves into extreme southern Nevada. Then, another short-wave will rotate down into Nevada on Friday. This will result in **70** continued

September 13 and 14, 2017 Exceptional Event, Imperial County**Appendix A**

cooling trend, with high temperatures falling to several degrees below normal on Wednesday, then 10-20 degrees below normal

Thursday. The marine layer will deepen significantly as well, with stratus filling the coastal basin and the coastal slopes/passes.

Models continue to generate some light precipitation over and west of the coastal slopes Wednesday night/Thursday morning and again Thursday night/Friday morning, so we may see drizzle/light showers during those periods. Any rainfall accumulation should range from a trace to as much as 0.10 inches. Stratus may not clear much during the day Thursday, and onshore pressure gradients will strengthen significantly (up to 11 mb from San Diego to Las Vegas). As a result, stronger westerly winds in the mountain ridges, desert slopes, passes and adjacent deserts will occur

Wednesday night through Friday morning, with gusts of 40-50 mph possible.

Trouching will continue over the West coast Saturday through Monday, but with 500 mb heights a little higher and weakening of onshore flow, there should be some warming and a shallower marine layer will night and morning stratus over the coast and portions of the valleys. The amount of warming that occurs will depend on how much the ridge to the east and southeast is able to intrude into the region. The ECMWF shows stronger ridging moving into the forecast area than the GFS, which would mean warmer conditions than currently forecast. Nevertheless, the current forecast shows temperatures still remaining below normal through Monday.

&&

.AVIATION...

121600Z...Coast/Valleys...BKN006-010 this morning clearing from the coastal airports through 18Z. After 18Z...SCT-BKN080-100.

Low clouds with BKN-OVC010-020 TOPS 025 returning to the coastal areas between 02-05Z and spreading 25 miles inland through 14Z Wednesday. Vis restrictions of 4-5SM BR in the higher terrain.

Mountains/Deserts...SCT-BKN080 today with a chance of SHRA/TSRA over the mountains and high deserts 19-01Z. Tops to 35000 feet MSL.

&&

.MARINE...

No hazardous marine weather is expected through Saturday.

&&

.SKYWARN...

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

&&

.SGX WATCHES/WARNINGS/ADVISORIES...

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625
FXUS66 KSGX 122108
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
Issued by National Weather Service LOS ANGELES/OXNARD CA
208 PM PDT Tue Sep 12 2017

.SYNOPSIS...

A closed low off the coast will move through central California on Wednesday. Generally cooler conditions likely through Thursday. A large trough covering the entire western United States will impact the area on Friday maintaining cooler conditions...and enhancing low clouds with light drizzle or showers possible Thursday and Friday mornings. Onshore winds will increase as well over the mountains and deserts. Warmer conditions expected Saturday through Monday as the large trough departs. Another large trough with cooling is possible next Tuesday.

&&

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

The deeper marine layer has brought cooler conditions across the region except for little change over the mountains and deserts. A few clouds have bubbled up over the mountains and deserts this afternoon, but so far nothing has turned into a shower or thunderstorm. With marginally unstable air and still warm surface temperature, there remains a 20 percent chance of one or two showers/thunderstorms forming into the evening.

The closed low that has been spinning off the coast for the last few days will finally move east and through central California Wednesday into Thursday. Meanwhile a deepening trough currently over central British Columbia will drop into Idaho by Friday, interacting with the low off our coast forming a large trough that will cover the western half of our country. This all should add up to ample cooling everywhere, with a deepening and expanding marine layer starting tonight. This marine layer will peak Thursday and Friday morning at which time we have a good shot at drizzle or light showers over the coasts and valleys and poor clearing into the afternoon. Any precipitation accumulations will be light (around 0.01 inches) but some foothill spots could see more like 0.10 inches. Onshore pressure gradients strengthen in response to the upper level pattern, and gusty winds through the mountains and deserts might require with a wind advisory (40-50 mph gusts).

Fairly good agreement between the GFS and ECMWF for the extended part of the forecast. The large trough will move ⁹²northeast on

September 13 and 14, 2017 Exceptional Event, Imperial County**Appendix A**

Saturday as a weak peak-a-boo ridge forms, which should bring some decrease in the marine layer stronghold and noticeable warming with temperatures returning to near normal. A weak trough forms quickly after that on Sunday and Monday, but 500 MB heights actually increase a little so not expecting a whole lot of change. Models show another large trough forming over the western United States by Tuesday which would lead to cooling and more marine layer. The ECMWF actually swings the low through southern California next Wednesday, which is something to keep an eye on.

&&

.AVIATION...

122000Z...Coast/Valleys...20 percent chance of an hour or two of BKN015 at KCRQ KSAN through 02Z, otherwise VFR likely. Low clouds with BKN-OVC010-020 TOPS 025 returning for good to the coastal areas between 02-05Z and spreading 25 miles inland through 14Z Wednesday. Vis restrictions of 4-5SM BR in the higher terrain.

Mountains/Deserts...SCT-BKN080 today with a chance of SHRA/TSRA over the mountains and high deserts 19-01Z. Tops to 35000 feet MSL.

&&

.MARINE...

No hazardous marine weather is expected through Saturday.

&&

.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...Kittell

AVIATION/MARINE...Moede/Kittell

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801
FXUS65 KPSR 122153
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
253 PM MST Tue Sep 12 2017

.SYNOPSIS...

Storm chances will be slight and confined to the higher terrain of Arizona today and Wednesday. On Thursday, a weather system moving into the western states will lead to a cooling trend. There will also be a slight chance of thunderstorms over south-central Arizona. Highs in mid and upper 90s will prevail through the weekend and into early next week. Slight chances for storms will return Sunday...mainly for Arizona.

&&

.DISCUSSION...

Today through Thursday...
Broad anticyclonic flow is rotating through the region as we are sandwiched between low pressure off the central CA coast and high pressure over northwestern Mexico and through the Four Corners. PWATs are holding 1.10-1.30 inches around the area with warm daytime temperatures - 7 to 9 degrees above normal for this time in September. Limited pockets of upper divergence in between the closed low and the high circulation will dot the AZ higher terrain and skirt portions of the forecast area, supporting at least slight chances for the foothills/higher terrain of Maricopa, Pinal and Gila counties into the evening. Shallow layer of greater RH values are being sampled via AMDAR data into KPHX, with large drying around 500mb and higher. Any shower/storm activity that does develop will favor the higher terrain/foothill locales, struggle for longevity and generally quiet with sunset and loss of diurnal heating.

On Wednesday and Thursday, the upper low moves inland in response to a larger upstream trough and in turn the ridge shifts eastward. In the process, moisture improves a little bit (mainly east of the Lower Colorado River Valley). Still quite modest precip potential though. On Thursday, the low/trough moves further inland and pushes a cool front across the forecast area. Aloft, a lobe of cooler air aloft moves through as the trough axis brushes the area which leads to better potential instability. There will also be some dynamical forcing with the trough (better over VEF and FGZ CWAs). However, the GFS keeps CIN values relatively high as the mixed layer cools and some dry advection starts moving in. Thus PoPs remain modest given what is otherwise a very interesting pattern. Temperatures drop nicely though - especially over our western areas.

Friday through Monday...

September 13 and 14, 2017 Exceptional Event, Imperial County**Appendix A**

Highs in the 90s continue through the weekend and into early next week as lingering troughing keeps the ridge at bay. However, there is some indication that as the ridge tries to expand westward, there will be some modest moisture increase for slight chances once again during the beginning of the week.

&&

.AVIATION...

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

No aviation concerns through the TAF period. Winds will stay light and follow normal diurnal headings. Skies will remain mostly clear with FEW-SCT cloud decks aloft 10 kft.

Southeast California/Southwest Arizona including KIPL and KBLH:

No aviation concerns through the TAF Period. Winds will remain light and mainly out of the southwest. Skies will remain mostly clear with FEW-SCT cloud decks aloft 10 kft.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

&&

.FIRE WEATHER...

Friday through Tuesday...

A series of low pressure systems will move across the area from the west heading into the weekend leading to a cooling and drying trend. High temperatures will be below seasonal normals for much of the period with most lower desert dropping into the 90s. Storm chances will drop to near zero Friday and Saturday. Sunday into Monday there may be a tropical moisture intrusion from the south which will increase storm chances primarily across south-central Arizona. Minimum RH values will not become overly low, tending to range from 15 to 25 percent over the lower deserts Thursday through Sunday, then increasing on Monday as rain chances improve. Expect locally breezy southwest winds Thursday into Friday, becoming relatively light over the weekend and then picking up on Monday, tending to favor the south.

&&

.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

&&

.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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496
FXUS66 KSGX 130425
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
925 PM PDT Tue Sep 12 2017

.SYNOPSIS...

An upper low will linger off the coast tonight before shifting east Wednesday. Temperatures will dip below normal Wednesday and 10 to 20 degrees below normal Thursday and Friday. Light showers or drizzle are possible over and west of the coastal mountain slopes Wednesday night and Thursday morning and again Thursday night into Friday morning. It will get windy as well for the mountains and deserts. A little warmer but still below normal Saturday through Monday.

&&

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

An upper level low off the central coast helped to generate scattered diurnal convection over eastern CA and our high deserts earlier this evening. Convection has since dissipated. A deepening marine layer and troughy pattern along the coast tonight through Thursday will trend weather conditions with below normal temperatures and drizzle and occasional light showers along the coast and coastal-mountain slopes each late night and morning. In addition, with increasing pressure gradients, onshore winds will become strong by Thursday afternoon and evening and may reach wind advisory thresholds. No significant changes to the forecast were made this evening.

&&

.AVIATION...

130230Z...Coast/Valleys...Areas of low clouds beginning to move ashore in San Diego County with cigs 1000-1300 ft MSL currently impacting KSAN and KCRQ. Likely to impact KSNA around 09Z. Could also impact KONT and KSBD around 12Z, but that is somewhat uncertain. Low clouds and fog could spread up to 20 miles inland by 12Z. Vis restrictions of 4-5SM BR are likely where clouds and terrain intersect. Expect clearing back to the coast around 18Z Wed.

Mountains/Deserts...SCT clouds at or abv 10000 ft MSL with unrestricted vis through Wed.

&&

.MARINE...

No hazardous marine weather is expected through Saturday.

&&

.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...NONE.

PZ...NONE.

&&

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PUBLIC...Brotherton
AVIATION/MARINE...PG

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975
FXUS65 KPSR 130457
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
957 PM MST Tue Sep 12 2017

.UPDATE...Updated Aviation Discussion.

&&

.SYNOPSIS...

Storm chances will be slight and confined to the higher terrain of Arizona today and Wednesday. On Thursday, a weather system moving into the western states will lead to a cooling trend. There will also be a slight chance of thunderstorms over south-central Arizona. Highs in mid and upper 90s will prevail through the weekend and into early next week. Slight chances for storms will return Sunday...mainly for Arizona.

&&

.DISCUSSION...

Today through Thursday...

Broad anticyclonic flow is rotating through the region as we are sandwiched between low pressure off the central CA coast and high pressure over northwestern Mexico and through the Four Corners. PWATs are holding 1.10-1.30 inches around the area with warm daytime temperatures - 7 to 9 degrees above normal for this time in September. Limited pockets of upper divergence in between the closed low and the high circulation will dot the AZ higher terrain and skirt portions of the forecast area, supporting at least slight chances for the foothills/higher terrain of Maricopa, Pinal and Gila counties into the evening. Shallow layer of greater RH values are being sampled via AMDAR data into KPHX, with large drying around 500mb and higher. Any shower/storm activity that does develop will favor the higher terrain/foothill locales, struggle for longevity and generally quiet with sunset and loss of diurnal heating.

On Wednesday and Thursday, the upper low moves inland in response to a larger upstream trough and in turn the ridge shifts eastward. In the process, moisture improves a little bit (mainly east of the Lower Colorado River Valley). Still quite modest precip potential though. On Thursday, the low/trough moves further inland and pushes a cool front across the forecast area. Aloft, a lobe of cooler air aloft moves through as the trough axis brushes the area which leads to better potential instability. There will also be some dynamical forcing with the trough (better over VEF and FGZ CWAs). However, the GFS keeps CIN values relatively high as the mixed layer cools and some dry advection starts moving in. Thus PoPs remain modest given what is otherwise **78** very interesting

pattern. Temperatures drop nicely though - especially over our western areas.

Friday through Monday...

Highs in the 90s continue through the weekend and into early next week as lingering troughing keeps the ridge at bay. However, there is some indication that as the ridge tries to expand westward, there will be some modest moisture increase for slight chances once again during the beginning of the week.

&&

.AVIATION...

South-Central Arizona including KPHX, KIWA, and KSDL:
Mainly clear skies will prevail overnight. Only a slight chance of thunderstorms is expected for Wednesday afternoon, though the best chances will be across the higher terrain north and east of Phoenix. Otherwise, breezy conditions are anticipated with westerly winds potentially gusting as high as 20 kt at KPHX late Wednesday afternoon and evening.

Southeast California/Southwest Arizona including KIPL and KBLH:
A low pressure system will move into southern California Wednesday evening. Although no storms are expected, winds will increase ahead of this system. Gusts as high as 20-25 kt are likely at KIPL/KBLH Wednesday afternoon and will continue into the evening.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...

Friday through Tuesday...

A series of low pressure systems will move across the area from the west heading into the weekend leading to a cooling and drying trend. High temperatures will be below seasonal normals for much of the period with most lower desert dropping into the 90s. Storm chances will drop to near zero Friday and Saturday. Sunday into Monday there may be a tropical moisture intrusion from the south which will increase storm chances primarily across south-central Arizona. Minimum RH values will not become overly low, tending to range from 15 to 25 percent over the lower deserts Thursday through Sunday, then increasing on Monday as rain chances improve. Expect locally breezy southwest winds Thursday into Friday, becoming relatively light over the weekend and then picking up on Monday, tending to favor the south.

&&

.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

&&

.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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DISCUSSION...Nolte/AJ

AVIATION...Hirsch

FIRE WEATHER...Iniguez/CB

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of Science and Technology

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184
FXUS66 KSGX 131004
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
304 AM PDT Wed Sep 13 2017

.SYNOPSIS...

A low pressure trough will develop over the West for the remainder of the week. The trough will increase onshore flow and build the marine layer for much cooler weather. Some light showers or drizzle are possible along and west of the mountains nights and mornings as the marine layer deepens to the coastal slopes. It will become breezy over the mountains and deserts with a strengthening sea breeze in the afternoons and evenings. A little warmer again early next week, then noticeably cooler with as autumn arrives later in the week.

&&

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

Satellite imagery through 3 AM PDT showed low clouds covering most of the coast/western valley areas. Patchy higher clouds continued to form and drift northward over our mtn/desert areas. Temps were mostly in the 60s west of the mts. Surface pressure gradients were weak but trending onshore and some gusty westerly winds to around 35 MPH were occurring in wind-prone mtn/pass areas earlier.

For this morning...with the high dewpoints, expect some patchy fog to form. Where the stratus is thick, some light drizzle is possible in spots as well. Otherwise, the morning clouds should clear, but a cooler day is expected all around, with gusty westerly winds redeveloping over the mtns/deserts by late afternoon.

Low pressure off the Central Coast will begin to drift toward the Coast today, and then inland overnight as a larger long wave trough digs south from the PacNW. The longwave trough will dominate our weather into the weekend forcing stronger onshore flow, building the marine layer and keeping daytime temps well below average. Not so cool overnight under the marine cloud deck, but drizzle will be possible at times.

A weakening of the pattern will allow some warming over the weekend, but the 00Z ECMWF/GFS operational runs have come into better agreement for the middle of next week, aggressively digging another trough over the West. This trough will bring much cooler air from the PacNW and may make it feel like the change of season the calendar will display. Some light precip and strong westerly winds may accompany this change as well.

&&

.AVIATION...

130900Z...Coast/Valleys...Low clouds will continue to gather and move into western valleys by sunrise. Cigs will be around 1200-1500 feet msl with tops around 2000 feet. Local vis 3-5sm on higher coastal terrain and in valleys. Scatter out by 18-20Z. Low clouds will move ashore with higher bases and vis anytime after 00Z and head farther inland overnight.

Mountains/Deserts...sct-bkn clouds at or abv 10000 feet MSL will gradually move east out of the area today. Locally strong winds through mountain passes and into adjacent deserts above 25 mph with gusts over 40 mph this afternoon through Thursday evening.

&&

.MARINE...

No hazardous marine weather is expected through Sunday.

&&

.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...NONE.

PZ...NONE.

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PUBLIC...JAD

AVIATION/MARINE...MM

**IOWA STATE
UNIVERSITY**

College of Ag

Department of Agronomy

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455
FXUS65 KPSR 131043
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
343 AM MST Wed Sep 13 2017

.SYNOPSIS...

Storm chances will be slight and primarily confined to the higher terrain of Arizona today. On Thursday, a weather system moving into the western states will lead to a cooling trend. There will also be a slight chance of thunderstorms over south-central Arizona...including the lower deserts. Highs in mid and upper 90s will prevail through the weekend and into early next week. Slight chances for storms will return to Arizona Sunday through Tuesday...mainly eastern portions.

&&

.DISCUSSION...

Today through Thursday...

A band of weak showers/sprinkles has developed over the Mohave Desert early this morning including Joshua Tree National Park. Embedded within that band have been very isolated and short-lived convective showers. This activity is associated with the eastern periphery of an upper low centered near Monterrey Bay which is tapping into a batch of moisture near the southern California and northern Baja coast. Possibly some local convergence there taking advantage of some shallow elevated CAPE. SPC mesoanalysis not hitting on any distinct forcing but RAP indicates a weak batch of vorticity tracking northward toward the northeast quadrant of the low. Latest HRRR indicates it will be very short lived while the latest NAM Nest indicates there will be more development but very weak before dissipating later this morning. These will not add up to much at all. As for convection later today, hi-res models have a variety of different solutions but are not very enthusiastic for our area and in fact depict only isolated activity overall for Arizona with little or nothing for southeast California. This is due to high CIN values as opposed to an absence of CAPE. In fact, even the GFS depicts boundary layer CAPE values roughly near 500 J/kg in some areas (east of the Lower Colorado River Valley). made some very subtle upward adjustments to the PoPs for today with slight chances for thunderstorms on the fringes of the metro. Moisture availability still remains unimpressive. With somewhat weaker high pressure, high temps will be a few degrees lower today but still above normal. Afternoon breezes will be a bit stronger today as well.

The upper low begins moving in tonight with the center reaching southern Nevada by midday Thursday but weakens quickly as it moves northeastward during the afternoon. In the process, there will be

a variety of lifting mechanisms that come into play including a couple of jet streaks (a subtropical/southern branch jet and another one wrapping around the low), some Div-Q forcing, and a cool front. Overall, the best forcing in the region will be just north of our forecast area. So there will be some welcome cool advection but drier air quickly moves in with it as well. Even before the dry advection, models only indicating modest improvement in moisture availability. Thus PoPs remain conservative. Vertical wind shear increases though and any storms that manage to pop could have some marginally severe potential. Breeziness will be manageable but portions of western Imperial County could have some strong local windiness tonight.

Friday and Saturday...

A larger trough settles in over the western CONUS but with dry air in place, expect conditions will be dry. Highs will be below normal highs for a change (still upper 90s though on the lower deserts).

Sunday through Tuesday...

For early next week, there is some general agreement on the larger scale flow pattern with troughing centered near the Pacific Northwest and a ridge centered to our east/southeast. However, the GFS is more amplified than the ECMWF. The key impact is that it tracks the remnants of a tropical storm northeastward across northwest Mexico and into New Mexico and brings deeper moisture into the eastern half of Arizona. The ECMWF keeps the tropical storm off to the west and southwest of Cabo San Lucas because it has a broader subtropical ridge which extends further west than the GFS. Of note, both models have some run to run consistency and are not dissimilar from their respective ensemble means. GEFS plumes for precipitable water show quite a bit of spread during this time with the operational run being on the low end. The net result for the forecast is a return of slight chance PoPs to our Arizona zones starting Sunday.

&&

.AVIATION...

South-Central Arizona including KPHX, KIWA, and KSDL:
Mainly clear skies will prevail overnight. Only a slight chance of thunderstorms is expected for Wednesday afternoon, though the best chances will be across the higher terrain north and east of Phoenix. Otherwise, breezy conditions are anticipated with westerly winds potentially gusting as high as 20 kt at KPHX late Wednesday afternoon and evening.

Southeast California/Southwest Arizona including KIPL and KBLH:
A low pressure system will move into southern California Wednesday evening. Although no storms are expected, winds will increase ahead of this system. Gusts as high as 20-25 kt are likely at KIPL/KBLH Wednesday afternoon and will continue into the evening.

Aviation Discussion not updated for amended TAF **84**

&&

.FIRE WEATHER...

Friday through Tuesday...

A series of low pressure systems will move across the area from the west heading into the weekend leading to a cooling and drying trend. High temperatures will below seasonal normals for much of the period with most lower desert dropping into the 90s. Storm chances will drop to near zero Friday and Saturday. Sunday into Monday there may be a tropical moisture intrusion from the south which will increase storms chances primarily across south- central Arizona. Minimum RH values will not become overly low, tending to range from 15 to 25 percent over the lower deserts Thursday through Sunday, then increasing on Monday as rain chances improve. Expect locally breezy southwest winds Thursday into Friday, becoming relatively light over the weekend and then picking up on Monday, tending to favor the south.

&&

.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

&&

.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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DISCUSSION...AJ

AVIATION...Hirsch

FIRE WEATHER...Iniguez/CB



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995
FXUS66 KSGX 131548
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
848 AM PDT Wed Sep 13 2017

.SYNOPSIS...

Cooler weather will set in today and continue through next week, with afternoon highs remaining below seasonal averages for all areas. A deep marine layer along the coast will bring more prevalent low clouds through next week, with a chance for light drizzle near the coast tonight and Thursday night. Breezy winds are expected along the desert slopes in Riverside and San Diego Counties tonight and Thursday.

&&

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

At 845 AM, a closed low was off the coast was producing a few isolated thunderstorms near San Francisco and a few altocumulus over the SoCal deserts. The marine layer deepened by around 1000 ft, per the 12Z NKX sounding, over the last 24 hours. With the deeper marine layer the stratus deck covered most of the valleys this morning.

The closed low currently off the coast and a second weak shortwave close on its heels will traverse the region through Saturday. This will result in height falls, a deeper marine layer, and stronger onshore flow that will bring SoCal its first glimpse of more fall like weather. Light drizzle will be possible tonight and Thursday night as the cloud thickness of the marine layer stratus

increases to 1500-2500 ft. Clearing may also be slow or limited Thursday and Friday. Temperatures will cool considerably, with afternoon highs running 8-16 degrees below seasonal averages for inland areas and 4-8 degrees below average along the coast

Thursday and Friday. Breezy winds will occur over the desert slopes and into the deserts over Riverside and San Diego Counties this evening and Thursday.

Global models remain in good agreement, suggesting a transition to a longwave trough over the Western US by this weekend. This pattern should hold through next week, with fluctuations in the day to day forecast dependent on the timing of individual shortwaves rotating through the broader longwave trough. Given this, the forecast through next week favors the continuation of below average temperatures for all areas, a deep marine layer, and dry southwest flow in the mid and upper levels.

&&

.AVIATION...

131525Z...Coast/Valleys/Coastal Mountain Slopes...Stratus 25-40 sm inland with bases 1000-2000 ft msl, tops 1800-2800 ft msl, and local vis 1-5 sm, will gradually and partially clear to near the coast through 2100 UTC, while P6SM vis and SCT-FEW clouds AOA 10000 ft msl continue elsewhere. Marine layer inversion strength of 4 deg C. 2100-14/0000 UTC, mostly P6SM vis, with SCT-FEW clouds AOA 10000 ft msl and FEW-SCT clouds in the 1500-3000 ft msl layer, except for possibly BKN cigs 1500-3000 ft msl near the coast. 14/0000-1500 UTC, OVC stratus developing and moving inland quickly, filling the coast, valleys, coastal slopes and into the passes, with variable bases 1500-3500 ft msl and tops 4000-5000 ft msl, with drizzle/isol -SHRA, local vis 2-5 sm, and mountain obscuration due to clouds/drizzle.

Mountain Ridges/Desert Slopes/Deserts...SCT-BKN clouds AOA 10000 ft msl becoming FEW after 14/0300 UTC. Primarily P6SM vis expected through Thursday morning. After 14/0000 UTC, southwest to west winds 20-30 kt with gusts 40 kt will result in mod-stg uddfs/llws.

&&

.MARINE...

No hazardous marine weather is expected through Sunday.

&&

.SKYWARN...

Skywarn activation will not be needed this week.

&&

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...NONE.

PZ...NONE.

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PUBLIC...Albright

AVIATION/MARINE...Harrison

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015
FXUS65 KPSR 131618
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
915 AM MST Wed Sep 13 2017

.SYNOPSIS...

Thunderstorm chances will be primarily confined to the higher terrain of Arizona today. On Thursday, a fast moving weather system and cold front will sweep through the area leading to a cooling trend. Highs in mid and upper 90s will prevail through the weekend and into early next week. A Slight chances for rain will return to eastern Arizona Sunday through Tuesday.

&&

.DISCUSSION...

Lingering moisture around the 600mb layer juxtaposed with steep midlevel lapse rates (better than 7 C/km) and weak divergence aloft have combined to support rather extensive accas and isold showers/storms lifting into Yavapai County. While this activity will generally be dampened through the remainder of the morning, additional deep convective development along this moisture axis through western Pima and SW Maricopa counties will be possible this afternoon despite the limited boundary layer moisture availability. High resolution modeling hits on some of this isolated afternoon activity followed by outflow and minimal overall coverage. Primary forecast updates this morning were concentrated on the very near term trends.

&&

.PREVIOUS DISCUSSION...

/343 AM MST Wed Sep 13 2017/

Today through Thursday:

As for convection later today, hi-res models have a variety of different solutions but are not very enthusiastic for our area and in fact depict only isolated activity overall for Arizona with little or nothing for southeast California. This is due to high CIN values as opposed to an absence of CAPE. In fact, even the GFS depicts boundary layer CAPE values roughly near 500 J/kg in some areas (east of the Lower Colorado River Valley). made some very subtle upward adjustments to the PoPs for today with slight chances for thunderstorms on the fringes of the metro. Moisture availability still remains unimpressive. With somewhat weaker high pressure, high temps will be a few degrees lower today but still above normal. Afternoon breezes will be a bit stronger today as well.

The upper low begins moving in tonight with the center reaching southern Nevada by midday Thursday but weakens quickly as it moves northeastward during the afternoon. In the process, there will be

a variety of lifting mechanisms that come into play including a couple of jet streaks (a subtropical/southern branch jet and another one wrapping around the low), some Div-Q forcing, and a cool front. Overall, the best forcing in the region will be just north of our forecast area. So there will be some welcome cool advection but drier air quickly moves in with it as well. Even before the dry advection, models only indicating modest improvement in moisture availability. Thus PoPs remain conservative. Vertical wind shear increases though and any storms that manage to pop could have some marginally severe potential. Breeziness will be manageable but portions of western Imperial County could have some strong local windiness tonight.

Friday and Saturday...

A larger trough settles in over the western CONUS but with dry air in place, expect conditions will be dry. Highs will be below normal highs for a change (still upper 90s though on the lower deserts).

Sunday through Tuesday...

For early next week, there is some general agreement on the larger scale flow pattern with troughing centered near the Pacific Northwest and a ridge centered to our east/southeast. However, the GFS is more amplified than the ECMWF. The key impact is that it tracks the remnants of a tropical storm northeastward across northwest Mexico and into New Mexico and brings deeper moisture into the eastern half of Arizona. The ECMWF keeps the tropical storm off to the west and southwest of Cabo San Lucas because it has a broader subtropical ridge which extends further west than the GFS. Of note, both models have some run to run consistency and are not dissimilar from their respective ensemble means. GEFS plumes for precipitable water show quite a bit of spread during this time with the operational run being on the low end. The net result for the forecast is a return of slight chance PoPs to our Arizona zones starting Sunday.

&&

.AVIATION...

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

Mainly clear skies will prevail overnight. Only a slight chance of thunderstorms is expected for Wednesday afternoon, though the best chances will be across the higher terrain north and east of Phoenix. Otherwise, breezy conditions are anticipated with westerly winds potentially gusting as high as 20 kt at KPHX late Wednesday afternoon and evening.

Southeast California/Southwest Arizona including KIPL and KBLH:
A low pressure system will move into southern California Wednesday evening. Although no storms are expected, winds will increase ahead of this system. Gusts as high as 20-25 kt are likely at KIPL/KBLH Wednesday afternoon and will continue into the evening.

Aviation Discussion not updated for amended TAF⁸⁹

&&

.FIRE WEATHER...

Friday through Tuesday...

A series of low pressure systems will move across the area from the west heading into the weekend leading to a cooling and drying trend. High temperatures will be below seasonal normals for much of the period with most lower desert dropping into the 90s. Storm chances will drop to near zero Friday and Saturday. Sunday into Monday there may be a tropical moisture intrusion from the south which will increase storm chances primarily across south-central Arizona. Minimum RH values will not become overly low, tending to range from 15 to 25 percent over the lower deserts Thursday through Sunday, then increasing on Monday as rain chances improve. Expect locally breezy southwest winds Thursday into Friday, becoming relatively light over the weekend and then picking up on Monday, tending to favor the south.

&&

.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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DISCUSSION...MO/AJ

AVIATION...Hirsch

FIRE WEATHER...Iniguez/CB



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819
FXUS65 KPSR 132110
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
210 PM MST Wed Sep 13 2017

.SYNOPSIS...

A fast moving weather system and cold front will sweep through the area Thursday leading to much cooler weather through the weekend. Highs only in middle 90s and overnight lows in the 60s and 70s will make it feel more like the beginning of October. A very slight chance for rain will return to eastern Arizona during the beginning of next week.

&&

.DISCUSSION...

Lingering moisture around the 600mb layer juxtaposed with steep midlevel lapse rates (better than 7 C/km) and weak divergence aloft have combined to support extensive accas and isold storms lifting through Yavapai County early this afternoon. And even a few sprinkles/showers were percolating through the Phoenix metro on the southern edge of a theta-e boundary despite meager low level moisture profiles (albeit a deeper sfc-600mb moisture profile per 12Z KPSR sounding data). The preponderance of high resolution convective models continue to show this isold shower/storm activity popping up into this evening in a weakly capped, but also weakly unstable (MLCapes just about 500 J/kg) environment. With DCape values largely exceeding 1500 J/kg, some outflow winds will be possible. But given the probable limited convective strength, not convinced on the extent of any sort of organized outflow.

Otherwise, a notable negative height anomaly will translate from central California towards the four corners Thursday sweeping the first cool season frontal boundary across the region. The prefrontal pressure gradient will begin to steepen through SE California and evening/overnight gap flow through western Imperial and Riverside counties may become quite strong and gusty. This will aid in tightening and progressing the frontal boundary and moisture gradient heading through the overnight.

Much like this morning, lingering moisture and steep lapse in the H7-H5 layer will support more accas (and likely showers) through central Arizona. Though midtropospheric ascent will likely be lagging and weaker than the sfc reflection, the combination of midlevel saturation, weak frontal lift, and upslope flow should be sufficient for similar type elevated showers and embedded storms Friday morning. Have kept POPs fairly muted during the morning hours, and certainly better coverage of showers north and east of Phoenix is possible. Throughout the daylight hours, the frontal boundary and dry advection will make steady progress through the

September 13 and 14, 2017 Exceptional Event, Imperial County**Appendix A**

forecast area. Forcing (both synoptic and orographic) will be maximized over Gila County before the deeper dry finally scours the entire atmospheric column and CWA.

Seasonally low H5 heights (582-586dm) will settle over the SW Conus reinforced by a series of low amplitude shortwaves such that temperatures will fall slightly below normal (and more typical of early October). Dry air will have essentially fully enveloped the region precluding almost all deep convection. One caveat will be the potential for tropical moisture to become entrained in the southwest flow sheared off from a disturbance in the SE Pacific. NAEFS members are very disparate in their solutions with the CMC members somewhat more aggressive with the western edge of the moisture axis into central AZ.

Monday through Tuesday:

For early next week, there is some general agreement on the larger scale flow pattern with troughing centered near the Pacific Northwest and a ridge centered to our east/southeast. However, the GFS is more amplified than the ECMWF; and the key impact is the GFS tracks moisture from a tropical system northeastward across Mexico and into New Mexico. This would bring deeper moisture and rainfall chances into the eastern portions of Arizona. The ECMWF keeps the tropical system to the west and southwest of Cabo San Lucas stemming from a broader subtropical ridge. Of note, both models have some run to run consistency and are not dissimilar from their respective ensemble means. GEFS plumes for precipitable water show quite a bit of spread during this time with the operational run being on the low end. The net result for the forecast is a return of slight chance PoPs to the eastern Arizona zones.

&&

.AVIATION...

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

A weak cold front approaching the region from the west will help to elevate typical afternoon/evening westerly winds and keep them going well into the night. Sustained winds as high as 15 kts with gusts as high as 25 kts are possible later this afternoon/early evening before finally diminishing later tonight. This front combined with a bit of lingering moisture is also expected to trigger isolated showers/thunderstorm over the higher terrain north and east of the Phoenix metro area through tonight, but chances are quite low (10 percent or less) that they would affect the terminals themselves. After a period of easterly winds Thursday morning, gusty westerly winds to once again return Thursday afternoon with sustained winds as high as 20 kts and gusts as high as 28 kts possible.

Southeast California/Southwest Arizona including KIPL and KBLH:

A low pressure system moving in/across SE CA to keep westerly winds at KIPL and southwesterly winds at KBLH at elevated levels through the taf period. Sustained wind speeds as high as 20 kts with gusts as high as 28 kts are possible at KIPL with lesser speeds at KBLH. Drier air moving into the region to keep skies mainly clear at KIPL

with just some evening mid-high level clouds at KBLH.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Saturday through Wednesday:

A series of weather systems will move through the Great Basin keeping westerly flow and generally drier weather locked into the districts. However, some subtropical moisture could sneak into eastern Arizona early next week providing some slight chance for wetting rains. Regardless behind the first cold front of the autumn

season, temperatures will fall to some 5 degrees below average across the region. With the cooler weather, afternoon humidity levels will only fall into a 15-30% range following mostly good overnight recovery. With the first frontal passage, winds will become occasionally gusty favoring a south or westerly direction.

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.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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DISCUSSION...MO/AJ

AVIATION...Percha

FIRE WEATHER...MO

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458
FXUS66 KSGX 140420
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
920 PM PDT Wed Sep 13 2017

.SYNOPSIS...

Cooler weather will linger through next week, with afternoon highs remaining below seasonal normals for all areas. A deep marine layer along the coast will bring more prevalent low clouds west of the mountains over the Thursday and Friday, with a chance for light drizzle or showers near the coast tonight and Thursday night. Breezy winds are expected along the desert slopes in Riverside and San Diego Counties tonight and Thursday.

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

...Evening Update...

Gusty onshore winds are developing this evening as the gradients pick up in advance of a coastal trough. Upper low will shift east across Central California tomorrow. Deep marine layer will bring a chance for sprinkles and light showers late tonight through midday Thursday and possibly again Thursday night and Friday morning. Winds may reach advisory level in remote locations Thursday afternoon and evening and gusty westerly winds in the deserts could pick up some dust and sand at times which has been added to the forecast this evening. No other updates have been needed and the previous discussion remains below.

...Previous Discussion...

At 2 PM, a closed low remained off the coast of central California and was helping to bring a few thunderstorms to the Sierra and Great Basin. SoCal remained to stable for any storms or cumulus buildups, with just a couple wave clouds over the deserts and patches of lingering stratus closer to the coast.

Through Friday, look for the marine layer to deepened as heights fall, onshore flow increases and a pair of shortwaves traverse the region. Marine layer depth tonight should be around 4500 ft MSL, with a cloud depth of 1500-2500 ft potentially producing some light drizzle near the coast. Clearing of the stratus deck should be slow or limited on Thursday with drizzle possible again Thursday night. The mountains and deserts will see mostly clear skies, though winds will be breezy tonight and Thursday.

Temperatures will be below average for all areas 94 6-16 degrees for

inland areas and 3-6 degrees along the coast.

Global models remain in good agreement, suggesting a transition to a longwave trough over the Western US by this weekend. This pattern should hold through next week, with fluctuations in the day to day forecast dependent on the timing of individual shortwaves rotating through the broader longwave trough. Given this, the forecast through next week favors the continuation of below average temperatures for all areas, a persistent marine layer near the coast, and dry southwest flow in the mid and upper levels.

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.AVIATION...

140300Z...Coast/Valleys...SCT-BKN low clouds beginning to move into the coastal areas with bases 1500-2500 ft MSL and tops to 3000 ft MSL. Currently impacting KCRQ. Other coastal TAF sites likely to be impacted between 06Z and 09Z. Low clouds expected to spread inland to the coastal mtn slopes by 12Z with cigs at all TAF sites west of the mtns. CIGs will become variable 1500-3000 ft MSL with tops to 5000 ft MSL. Expect local vis 2-5 sm, and mountain obscuration due to clouds/drizzle. Clearing likely to be slow on Thu with CIGs lingering at some locations into the afternoon.

Mountains/Deserts...SCT clouds AOA 10000 ft MSL with unrestricted vis through Thursday. Southwest to west winds 20-25 kt with gusts 35 kt will result in mod-stg udfs/llws through Thu.

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.MARINE...

No hazardous marine weather is expected through Monday.

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.SKYWARN...

Skywarn activation will not be needed the week.

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...NONE.

PZ...NONE.

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PUBLIC...Albright/JMB

AVIATION/MARINE...PG

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804
FXUS65 KPSR 140436
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
936 PM MST Wed Sep 13 2017

.SYNOPSIS...

A fast moving weather system and cold front will sweep through the area Thursday leading to much cooler weather through the weekend. Highs only in middle 90s and overnight lows in the 60s and 70s will make it feel more like the beginning of October. A very slight chance for rain will return to eastern Arizona during the beginning of next week.

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.DISCUSSION...

Limited areas of convection developed in our forecast area this afternoon and evening, with short-lived showers near El Centro off a Baja Spine boundary and one slightly longer-lived cluster of thunderstorms across SW Maricopa and Pinal counties closer towards sunset. 00z PSR RAOB maintained mostly unstable conditions with weak caps but healthy drying above 500mb. Two areas of activity remain on the radar around the state: storms north of I-40 on either side of Flagstaff and additional small thundershowers over southeast Pinal County. Lapse rates should remain conditionally unstable into the evening ahead of the approaching Pacific front and in combination with increasing winds and moisture still available near 600mb (albeit thin), could see additional isolated showers bubble up mainly from the CO River eastward into early Thursday AM. Still timing FROPA into SE CA mid-morning Thursday before sweeping eastward into Arizona. Narrow window where remaining moisture could interact with frontal ascent and forcing from Phoenix eastward in the afternoon before dry advection shuts off potential and dewpoints take a dip into the 40s by the early evening.

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.PREVIOUS DISCUSSION...

A notable negative height anomaly will translate from central California towards the four corners Thursday sweeping the first cool season frontal boundary across the region. The prefrontal pressure gradient will begin to steepen through SE California and evening/overnight gap flow through western Imperial and Riverside counties may become quite strong and gusty. This will aid in tightening and progressing the frontal boundary and moisture gradient heading through the overnight.

Much like this morning, lingering moisture and steep lapse in the H7-H5 layer will support more accas (and likely 98 showers) through

central Arizona. Though midtropospheric ascent will likely be lagging and weaker than the sfc reflection, the combination of midlevel saturation, weak frontal lift, and upslope flow should be sufficient for similar type elevated showers and embedded storms Friday morning. Have kept POPs fairly muted during the morning hours, and certainly better coverage of showers north and east of Phoenix is possible. Throughout the daylight hours, the frontal boundary and dry advection will make steady progress through the forecast area. Forcing (both synoptic and orographic) will be maximized over Gila County before the deeper dry finally scours the entire atmospheric column and CWA.

Seasonally low H5 heights (582-586dm) will settle over the SW Conus reinforced by a series of low amplitude shortwaves such that temperatures will fall slightly below normal (and more typical of early October). Dry air will have essentially fully enveloped the region precluding almost all deep convection. One caveat will be the potential for tropical moisture to become entrained in the southwest flow sheared off from a disturbance in the SE Pacific. NAEFS members are very disparate in their solutions with the CMC members somewhat more aggressive with the western edge of the moisture axis into central AZ.

Monday through Tuesday:

For early next week, there is some general agreement on the larger scale flow pattern with troughing centered near the Pacific Northwest and a ridge centered to our east/southeast. However, the GFS is more amplified than the ECMWF; and the key impact is the GFS tracks moisture from a tropical system northeastward across Mexico and into New Mexico. This would bring deeper moisture and rainfall chances into the eastern portions of Arizona. The ECMWF keeps the tropical system to the west and southwest of Cabo San Lucas stemming from a broader subtropical ridge. Of note, both models have some run to run consistency and are not dissimilar from their respective ensemble means. GEFS plumes for precipitable water show quite a bit of spread during this time with the operational run being on the low end. The net result for the forecast is a return of slight chance PoPs to the eastern Arizona zones.

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.AVIATION...

South-Central Arizona including KPHX, KIWA, and KSDL: West-southwest winds, 5-10kts, will persist into the early morning hours before turning to typical southeasterly headings near or after 14/0900z. Approaching Pacific cool front will first keep SCT-BKN clouds around the region with another round of morning ACCAS/towering CU possible with some isolated light showers. Hi-res models point to some activity across the far SE Valley in the AM and included mention of VCSH for KIWA for a period. Gusty west winds will redevelop ahead of and with frontal passage with sustained speeds nearing 20kts and gusts heading towards 30kts possible. Some additional showers/storms may develop but quickly translate eastward with the front as drier air will begin to

settle into the area tomorrow aftn/evening.

Southeast California/Southwest Arizona including KIPL and KBLH:
A low pressure system moving in/across SE CA to keep westerly winds at KIPL and southwesterly winds at KBLH at elevated levels through the TAF period. Sustained wind speeds as high as 20 kts with gusts as high as 28 kts are possible at KIPL with lesser speeds at KBLH. Drier air moving into the region to keep skies mainly clear at KIPL with just some evening mid-high level clouds at KBLH.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Saturday through Wednesday:

A series of weather systems will move through the Great Basin keeping westerly flow and generally drier weather locked into the districts. However, some subtropical moisture could sneak into eastern Arizona early next week providing some slight chance for wetting rains. Regardless behind the first cold front of the autumn season, temperatures will fall to some 5 degrees below average across the region. With the cooler weather, afternoon humidity levels will only fall into a 15-30% range following mostly good overnight recovery. With the first frontal passage, winds will become occasionally gusty favoring a south or westerly direction.

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.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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DISCUSSION...NoIte

PREVIOUS DISCUSSION...MO/AJ

AVIATION...NoIte/Percha

FIRE WEATHER...MO

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681
FXUS65 KPSR 141011
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
311 AM MST Thu Sep 14 2017

.SYNOPSIS...

A low pressure system sweeps through the area today leading to a significant cooling trend with highs only in middle and upper 90s. For south-central Arizona there will also be at least a slight chance for showers and thunderstorms...mainly for the higher terrain. Highs in the 90s with lows in the 60s and 70s will continue well into next week. A very slight chance for rain will return to Arizona during the first half of next week.

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.DISCUSSION...

Today...

The upper low has been tracking east-southeastward and is centered north of Los Angeles early this morning. The associated cold front looks to have reached AZ as dew points have dropped off quite a bit over southeast California and the Lower Colorado River Valley. There is a band of scattered shallow convective clouds over Mohave County flirting with La Paz County. Most of the current thunderstorm activity has been over the southern Great Basin where the northeast quadrant of the low is. But isolated storms have been ongoing over/near Gila County. This is within a larger area of moisture convergence extending into portions of the metro and where there is a batch of CAPE. The frontal zone is another area with CAPE which peaks roughly near 12Z over Maricopa County (tapping a little bit of Gulf of California moisture) before beginning to decrease. These areas are where the best chances for showers/t-storms will be (for our CWA). Another source of lift is some modest Q forcing associated with the upper low but the bulk of that passes north. There may also be just a little bit of jet dynamics associated with the left exit region of a jet streak tracking over far NW Mexico and into SE AZ which brushes south-central AZ today. However, there is also CIN to overcome and without more robust moist advection that will be a limiting factor which keeps PoPs conservative. Plus, dry advection is underway behind the front. But with a variety of forcing mechanisms in play for part of the day, made some subtle upward adjustments to this morning's PoPs over south-central AZ. With bulk shear values roughly in the 30-40 kt range, any storms that form today will favor multi-cell structures and move quickly. Could see some hail with the storms as well.

Anticipate a nice drop off in temperatures today (especially over our western areas) with a little bit of additional cooling Friday over south-central AZ. That will mean below normal ⁹⁹ highs for a

September 13 and 14, 2017 Exceptional Event, Imperial County**Appendix A**

change (though not a lot below normal). Breezy to locally windy conditions can be expected as well.

Friday and Saturday...

Drier air will keep PoPs out of the forecast area on these days and troughing over the Western CONUS will keep highs a bit below normal (mid-upper 90s on the lower deserts).

Sunday through Wednesday...

The forecast for next week remains tricky as the GFS continues to depict the remnants of a tropical disturbance (currently located roughly near 10N/110W) tracking through northwest Mexico and brushing southeast AZ as it passes between an upper trough to the northwest and a ridge centered near the Texas coast. In the process, deeper moisture returns to the eastern third of AZ starting Sunday before largely drying out on Tuesday. GEFS plumes for precipitable water generally support that trend but there is a lot of dispersion. Meanwhile, the ECMWF is more expansive with the ridge and deflects the tropical system further west - initially. However, unlike recent runs, it is now advecting quite a bit of moisture into Arizona starting Monday night before moving the sheared out remnants into Sonora by early Wednesday - all in response to a deep West coast trough. ECENS mean indicates the operational run is a bit too amplified but not out to lunch. A lot of uncertainty remains on just how much moisture will return, how far west does it get, and what the timing is (both arrival and departure). The end result for the forecast is a return of slight chance PoPs starting over the higher terrain of south-central AZ Sunday and expanding westward into southwest AZ by Tuesday. As for temps, the troughing prevents strong high pressure from returning and thus desert highs remain in the 90s.

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.AVIATION...

South-Central Arizona including KPHX, KIWA, and KSDL:
West-southwest winds, 5-10kts, will persist into the early morning hours before turning to typical southeasterly headings near or after 14/0900z. Approaching Pacific cool front will first keep SCT-BKN clouds around the region with another round of morning ACCAS/towering CU possible with some isolated light showers. Hires models point to some activity across the far SE Valley in the AM and included mention of VCSH for KIWA for a period. Gusty west winds will redevelop ahead of and with frontal passage with sustained speeds nearing 20kts and gusts heading towards 30kts possible. Some additional showers/storms may develop but quickly translate eastward with the front as drier air will begin to settle into the area tomorrow aftn/evening.

Southeast California/Southwest Arizona including KIPL and KBLH:
A low pressure system moving in/across SE CA to keep westerly winds at KIPL and southwesterly winds at KBLH at elevated levels through the TAF period. Sustained wind speeds as high as 20 kts with gusts as high as 28 kts are possible at KIPL with lesser

speeds at KBLH. Drier air moving into the region to keep skies mainly clear at KIPL with just some evening mid-high level clouds at KBLH.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Saturday through Wednesday:

A series of weather systems will move through the Great Basin keeping westerly flow and generally drier weather locked into the districts. However, some subtropical moisture could sneak into eastern Arizona early next week providing some slight chance for wetting rains. Regardless behind the first cold front of the autumn season, temperatures will fall to some 5 degrees below average across the region. With the cooler weather, afternoon humidity levels will only fall into a 15-30% range following mostly good overnight recovery. With the first frontal passage, winds will become occasionally gusty favoring a south or westerly direction.

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.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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DISCUSSION...AJ

AVIATION...NoIte/Percha

FIRE WEATHER...MO

**IOWA STATE
UNIVERSITY**

College of Ag

Department of Agronomy

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FXUS66 KSGX 141016
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
316 AM PDT Thu Sep 14 2017

.SYNOPSIS...

Stronger onshore flow will maintain a deep marine layer, gusty winds over the mountains and deserts, and cooler days through Friday. Marine clouds could linger into the afternoons, especially along the coastal slopes of the mountains, and a few spotty, light showers or patchy drizzle could dampen roadways in the mornings. A little warmer this weekend as the onshore flow weakens and the marine layer shrinks. Then, cooler again next week as a deep trough develops over the West.

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

Marine stratus has been filling into the coastal basin early this morning, but bases have been fairly high and discontinuous, decreasing the chance for drizzle, although some very light precip reports (0.01-0.05 inch) have come in on the coastal slopes of the San Bernardino Mts through 3 AM PDT. Satellite imagery showed clouds well into the desert passes, which, coupled with cig reports indicate the depth of the marine layer exceeds 5K FT. Surface pressure gradients have trended sharply onshore at 6-8 MBS KSAN to the deserts, which has been supporting peak westerly wind gusts of 40-50.

Expect a breezy day in the mts/deserts today with some gusts to Advisory levels in wind prone areas. There may be some patchy blowing dust as well. West of the mtns, expect partial clearing, with some clouds holding over the foothills and along the coastal slopes. It will be cooler with high temps ranging from a few degrees, to as much as 15 degrees below average from the coast, inland. Any further precip is expected to remain very light and spotty.

The cut-off low which brought a lot of active weather across Central CA/NV over the past few days has moved inland east of Point Conception and will continue eastbound across NV today. Lift associated with the low may keep some light precip into the morning along the coastal slopes and points west, but significant precip accumulations are not expected.

A broad trough will remain over the West into the weekend, which will maintain onshore flow and cooler than average max temps each

September 13 and 14, 2017 Exceptional Event, Imperial County

Appendix A

day. Coolest days will be today and Fri, then a bit warmer Sat through Mon. A strong shortwave may amplify the trough southward over SoCal Tue/Wed of next week. The 00Z GFS/EC operational solutions have significant timing differences with regard to the amplification of the trough. The 00Z ECMWF is close to the CMC so trended the forecast with the ECMWF model this morning. This could mean daytime temps of 15-20 degrees F below average by Wednesday. If the GFS is correct, the additional cooling will be delayed a bit more.

A dry SW flow aloft prevails during this forecast period, so any precip that may develop would be generated from the marine layer and remain quite light.

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.AVIATION...

140900Z...Mountain crests westward...SCT-BKN clouds with variable bases between 2500-4500 feet and tops to about 6000 feet. Vis reduced with fog on western/southern slopes between those elevations. Isolated light showers, but more consistent -RA on the mountain slopes. Scatter out expected to follow a reverse clearing pattern, more likely near the coast by 18-20Z and later or not at all inland toward the mountain slopes. Variable low clouds will fill the coastal basin in similar fashion tonight after 02Z, along with isolated sprinkles or light showers.

Mountain crests east into Deserts...mostly clear skies today and tonight. Southwest to west winds 20-25 mph with gusts over 35 mph will result in mod-stg uddfs/llws.

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.MARINE...

No hazardous marine weather is expected through Monday.

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.SKYWARN...

Skywarn activation will not be needed this week.

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...NONE.

PZ...NONE.

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PUBLIC...JAD

AVIATION/MARINE...MM

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459
FXUS65 KPSR 141239
AFDPSR

Area Forecast Discussion...Updated
National Weather Service Phoenix AZ
540 AM MST Thu Sep 14 2017

.UPDATE...Updated aviation and fire weather discussions.

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.SYNOPSIS...

A low pressure system sweeps through the area today leading to a significant cooling trend with highs only in middle and upper 90s. For south-central Arizona there will also be at least a slight chance for showers and thunderstorms...mainly for the higher terrain. Highs in the 90s with lows in the 60s and 70s will continue well into next week. A very slight chance for rain will return to Arizona during the first half of next week.

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.DISCUSSION...

Today...

The upper low has been tracking east-southeastward and is centered north of Los Angeles early this morning. The associated cold front looks to have reached AZ as dew points have dropped off quite a bit over southeast California and the Lower Colorado River Valley. There is a band of scattered shallow convective clouds over Mohave County flirting with La Paz County. Most of the current thunderstorm activity has been over the southern Great Basin where the northeast quadrant of the low is. But isolated storms have been ongoing over/near Gila County. This is within a larger area of moisture convergence extending into portions of the metro and where there is a batch of CAPE. The frontal zone is another area with CAPE which peaks roughly near 12Z over Maricopa County (tapping a little bit of Gulf of California moisture) before beginning to decrease. These areas are where the best chances for showers/t-storms will be (for our CWA). Another source of lift is some modest Q forcing associated with the upper low but the bulk of that passes north. There may also be just a little bit of jet dynamics associated with the left exit region of a jet streak tracking over far NW Mexico and into SE AZ which brushes south-central AZ today. However, there is also CIN to overcome and without more robust moist advection that will be a limiting factor which keeps PoPs conservative. Plus, dry advection is underway behind the front. But with a variety of forcing mechanisms in play for part of the day, made some subtle upward adjustments to this morning's PoPs over south-central AZ. With bulk shear values roughly in the 30-40 kt range, any storms that form today will favor multi-cell structures and move quickly. Could see some hail with the storms as well.

Anticipate a nice drop off in temperatures today (especially over our western areas) with a little bit of additional cooling Friday over south-central AZ. That will mean below normal highs for a change (though not a lot below normal). Breezy to locally windy conditions can be expected as well.

Friday and Saturday...

Drier air will keep PoPs out of the forecast area on these days and troughing over the Western CONUS will keep highs a bit below normal (mid-upper 90s on the lower deserts).

Sunday through Wednesday...

The forecast for next week remains tricky as the GFS continues to depict the remnants of a tropical disturbance (currently located roughly near 10N/110W) tracking through northwest Mexico and brushing southeast AZ as it passes between an upper trough to the northwest and a ridge centered near the Texas coast. In the process, deeper moisture returns to the eastern third of AZ starting Sunday before largely drying out on Tuesday. GEFS plumes for precipitable water generally support that trend but there is a lot of dispersion. Meanwhile, the ECMWF is more expansive with the ridge and deflects the tropical system further west - initially. However, unlike recent runs, it is now advecting quite a bit of moisture into Arizona starting Monday night before moving the sheared out remnants into Sonora by early Wednesday - all in response to a deep West coast trough. ECENS mean indicates the operational run is a bit too amplified but not out to lunch. A lot of uncertainty remains on just how much moisture will return, how far west does it get, and what the timing is (both arrival and departure). The end result for the forecast is a return of slight chance PoPs starting over the higher terrain of south-central AZ Sunday and expanding westward into southwest AZ by Tuesday. As for temps, the troughing prevents strong high pressure from returning and thus desert highs remain in the 90s.

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.AVIATION...

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

An upper low moving into the area may impact the terminals today but chances for thunder at the terminals is slim. A better bet is just some increased wind mainly during the afternoon and early evening as gradients tighten. We do expect SCT to BKN mid decks this morning ahead of the low with bases 11k to 15k feet and VCSH has been added to the TAFS to cover the morning hours. We may see some ACCAS and slight threat of an elevated high based weak storm, but it would be very isolated and confidence too low to mention in the TAFs for now. Otherwise expect southeast winds 7-10kt to swing towards the southwest by early afternoon with potential for gusts 20 to 30kt during the afternoon. Clearing to take place by early evening as winds start to taper off and then eventually swing back to the east after midnight.

Southeast California/Southwest Arizona including KIPL and KBLH:

No weather expected at the terminals as drier air will spread into the deserts behind an upper low moving into Arizona. Expect mostly clear skies next 24 hours with strong gusty west winds at KIPL this morning. We have seen gusts over 40kt earlier and we may see a few gusts between 30 and 40kt through 15Z or so before winds gradually taper off...staying elevated through early evening. Blowing dust likely with stronger gusts lowering vis values to 2-3SM. Less wind at KBLH but favoring southwest today and becoming gusty by afternoon with peak gusts 18-25kt at times. Winds to taper off at KBLH early this evening but remaining mostly southwest.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Saturday through Wednesday:

A series of weather systems will move through the Great Basin keeping westerly flow and generally drier weather locked into the districts. However, some subtropical moisture could sneak into eastern Arizona early next week providing some slight chance for wetting rains. Regardless behind the first cold front of the autumn season, temperatures will fall to some 5 degrees below average across the region with desert highs in the 90s each day. With the cooler weather, afternoon humidity levels will only fall into a 15-30% range following mostly good overnight recovery. With the first frontal passage, winds will become occasionally gusty favoring a south or westerly direction.

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.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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DISCUSSION...AJ

AVIATION...CB

FIRE WEATHER...MO/CB

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267
FXUS66 KSGX 141639
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
930 AM PDT Thu Sep 14 2017

.SYNOPSIS...

A trough of low pressure will bring unseasonably cool weather through Friday along with patchy morning drizzle or light showers on mainly the coastal mountain slopes and foothills. Moderately windy conditions will occur in the mountains and deserts. The night and morning low clouds will only partial clear in some areas in the afternoon, mainly the coastal mountain slopes. Slight warming will occur over the weekend into Monday as the trough weakens a bit, but more cool weather is likely by the middle of next week as the trough expands again.

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

Marine layer was unusually deep for September, with the 5 AM NKX sounding having a 6-deg C inversion base around 6400 feet above sea level. Areas of low clouds were occurring from the mountain crests west to the coastal waters, but some areas had mostly sunny skies. A few locations mainly in SW San Bernardino County had very light precipitation, around 0.01" this morning as the closed low moved by just to the north. Most areas should actually clear this afternoon except along the coastal mountain slopes and foothills due to the onshore flow and deep marine layer. Moderately strong west winds will occur, including through San Geronio Pass due to gap winds and the San Diego County Deserts due to mountain wave activity with the inversion just above most of the mountain crests. Highs will mostly stay below 80 west of the mountains, with temps not much above 90 in the lower deserts.

The overall pattern will have troughing in the western US and ridging in the eastern US for the next week, which is different from most of the recent weeks. For tonight and Friday morning, a similar scenario to last night and this morning should occur as a short wave moves through So-Cal associated with the upper trough axis over the Great Basin. Thus, stratus extending to the mountain crests in some areas with patchy drizzle or light showers along the coastal mountain slopes and a few of the valleys. With 850 MB temps remaining quite low Friday, around 10 C west of the mountains, surface temps will not change much versus today.

Some warming will occur aloft and translate to the surface over the weekend, with temps approaching seasonal norms again by Sunday and

September 13 and 14, 2017 Exceptional Event, Imperial County**Appendix A**

Monday as the upper trough lifts north, even though short waves will continue to move through the region. The local WRF time-height cross sections show a shallower marine layer for inland penetration of the stratus. Another deeper trough will move into the West by Tuesday and bring more cooling, a deeper marine layer and more wind in the mountains/deserts.

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.AVIATION...

141529Z...Coast/Valleys/Coastal Slopes...BKN clouds with variable bases 2500-5000 ft msl, tops up to 6000-6500 ft msl, and primarily P6SM vis except for mountain obscuration of coastal slopes, will

likely clear near the coast first and only partially clear for inland areas through 15/0000 UTC. Marine layer inversion strength of around 6 deg C. 15/0000-1500 UTC, BKN-OVC clouds re-developing, with bases 2000-3500 ft msl, tops around 4500-5000 ft msl, primarily P6SM vis except for locally lower vis in isol -SHRA/DZ and mountain obscuration of coastal slopes.

Mountain Ridges/Desert Slopes/Deserts...Mostly SKC and P6SM vis through Friday morning. West winds 20-30 kt with gusts 40 kt will continue to create mod-stg uddfs/llws.

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.MARINE...

No hazardous marine weather is expected through Monday. &&

.SKYWARN...

Skywarn activation will not be needed this week.

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...NONE.

PZ...NONE.

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PUBLIC...Maxwell

AVIATION/MARINE...Harrison

**IOWA STATE
UNIVERSITY**

College of Ag

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788
FXUS65 KPSR 142040
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
140 PM MST Thu Sep 14 2017

.SYNOPSIS...

A cold front will continue to sweep through the area tonight resulting in much cooler autumn like temperatures this weekend. Lower elevation afternoon highs only in the 90s and lows in the 70s will continue through much of next week. A slight chance for rain will return to the southeastern parts of Arizona during the middle of next week.

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.DISCUSSION...

A compact, yet mature cyclone near KLAS has obtained a negative tilt per objective analysis as jet streak energy lifts from the basal portion of the circulation. This orientation has placed northern AZ in a very favorable left front ascent region while southern AZ continues to fall within a more subsident anti-cyclonic part of the jet configuration. Within the lower boundary layer, a cold/dry front has pushed into Maricopa County per observational data with both satellite and ground sensors depicting a significantly deep, dry airmass now lagging the actual wind shift.

A pre-frontal tongue of better moisture is still objectively analyzed along and east of the Phoenix metro area with MLCape values approaching 1000 J/kg. Some of this instability was being released within an upslope orographic regime north and east of Phoenix (also aided by weak ascent over Gila County). Satellite visualization of convection through central Arizona has not been impressive thus far with a flat, non-crisp appearance likely owing to the limited synoptic support. Current analysis and model interrogation still supports scattered showers through higher terrain areas this afternoon followed by rapid clearing tonight.

By mid-September standards, an absolutely delightful weekend with slightly below average temperatures and unusually dry air. Ensemble means depict U-wind component anomalies some 2 normalized standard deviations above normal, or greater than the 95th percentile in the H8-H5 layer practically assuring a deep, dry airmass will be advected through the entire forecast area. Forget about rainfall, even clouds may be difficult to come by this weekend. Given the abrupt change in airmass contradictory to recent biases, have based much of the forecast on raw guidance blends and towards the lower end of the guidance envelope.

Sunday through Wednesday:

The forecast for next week remains tricky as models are quite

September 13 and 14, 2017 Exceptional Event, Imperial County**Appendix A**

dispersive on tracking the remnant moisture from Tropical Storm Norma through northwest Mexico in towards the SW Conus. Deeper moisture may return to the southeastern third of AZ as early as Sunday before largely drying out later in the week. GEFS PWAT plumes generally support this timing trend, though there is also the chance with persistent deep westerly flow that moisture deflects into New Mexico. Meanwhile, the ECMWF is more expansive with a subtropical ridge and initially pushes Norma westward before drawing moisture north during the middle of the week.

A lot of uncertainty remains on just how much moisture will return, how far west does it get, and what the timing is (both arrival and departure). The end result for the forecast is a return of slight chance PoPs starting over the higher terrain of south-central AZ Monday and persisting into the middle of the week. As for temps, troughing lingering over much of the western Conus will prevent stronger high pressure from building back north keeping readings at or slightly below the seasonal normal.

&&

.AVIATION...

South-Central Arizona including KPHX, KIWA, and KSDL:
Gusty W/SW winds through this evening will be the primary aviation hazard as storm/shower activity remains well north and east of the Phoenix terminals. Gusts approaching 30kt will be probable late afternoon/early evening before weakening prior to midnight. Winds should turn back to east late tonight, but timing may be somewhat later than typical. Otherwise, FEW-SCT clouds will clear fairly quickly after sunset.

Southeast California/Southwest Arizona including KIPL and KBLH:
Strong gusty W/SW winds at KIPL will be the main aviation hazard through Friday afternoon under clear skies. Gusts this evening may approach 35kt for a brief period, but speeds should stay lower than last night. A few gusts will be possible at KBLH, but likely remaining below 25kt.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...

Sunday through Thursday:
A series of weather systems will move through the Great Basin keeping generally drier mid-September weather locked into the districts. Some subtropical moisture could sneak into eastern Arizona during the middle of next week providing some slight chance for wetting rains. Regardless, temperatures will hover slightly below average across the region throughout the week. With the cooler weather, afternoon humidity levels will only fall into a 15-30% range following mostly good overnight recovery. Through the week, there may be periods of afternoon upslope gustiness with winds Wednesday and Thursday likely the strongest. **110**

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.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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DISCUSSION...MO/AJ

AVIATION...MO

FIRE WEATHER...MO

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107
FXUS66 KSGX 142051
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
200 PM PDT Thu Sep 14 2017

.SYNOPSIS...

A trough of low pressure will bring unseasonably cool weather through Friday along with patchy morning drizzle or light showers on mainly the coastal mountain slopes and foothills. Moderately windy conditions will occur in the mountains and deserts. Slight warming will occur over the weekend into Monday as the trough weakens a bit, but more cool weather is likely by the middle of next week as the trough deepens and expands again.

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

Partly to mostly cloudy skies prevailed early this afternoon from the coast to the mountain slopes, with sunny skies elsewhere. It is quite cool west of the mountains, with temperatures mostly in the 70s. Even in the lower deserts, most temperatures have not yet reached 90. Some additional stratus clearing will occur this

afternoon, but not complete. Strong onshore MSLP gradients, over 6 MB from the coast to the deserts and a marine inversion in the 4500-6500 ft MSL range will result in locally gusty winds through San Geronimo Pass and the desert mountain/foothill slopes the rest of this afternoon and tonight.

The overall pattern will have troughing in the western US and ridging in the eastern US for the next week, which is different from most of the recent weeks. For tonight and Friday morning, a similar scenario to last night and this morning should occur as a short wave moves through So-Cal associated with the upper trough axis over the Great Basin. Thus, stratus extending to the mountain crests in some areas with patchy drizzle or light showers along the coastal mountain slopes and a few of the valleys. With 850 MB temps remaining quite low Friday, around 10 C west of the mountains, surface temps will not change much versus today.

Some warming will occur aloft and translate to the surface over the weekend, with temps approaching seasonal norms again by Sunday and Monday as the upper trough lifts north, even though short waves will continue to move through the region. The local WRF time-height cross sections show a shallower marine layer for inland penetration of the stratus. Another deeper trough will move into the West by Tuesday and bring more cooling, a deeper marine layer and more wind in the mountains/deserts.

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.AVIATION...

142004Z...Coast/Valleys/Coastal Slopes...BKN-SCT clouds with variable bases 2500-5000 ft msl, tops up to 6000-6500 ft msl, and primarily P6SM vis except for mountain obscuration of coastal slopes, will likely continue for inland areas through 15/0000 UTC, while SCT-FEW clouds 2500-6500 ft msl exist at/near the beaches. 15/0000-1500 UTC, BKN-OVC clouds re-developing, with bases probably lowering to 2000-3500 ft msl, tops likely lowering to around 4500-5000 ft msl, and primarily P6SM vis except for locally lower vis in isol -SHRA/DZ and mountain obscuration of coastal slopes. Forecast marine layer inversion strength of around 6 deg C at 15/1200 UTC.

Mountain Ridges/Desert Slopes/Deserts...Mostly SKC and P6SM vis through Friday morning. West winds 20-30 kt with gusts 40 kt will continue to create mod-stg udfs/llws. Strong surface winds likely at KPSP and KTRM with gusts up to 30 kt.

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.MARINE...

No hazardous marine weather is expected through Monday afternoon. However, northwest winds may gust to 25 kt in the outer waters Monday night and Tuesday as a trough of low pressure moves by north of the region.

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.SKYWARN...

Skywarn activation will not be needed this week.

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...NONE.

PZ...NONE.

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PUBLIC...Maxwell

AVIATION/MARINE...Harrison

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FXUS66 KSGX 150352
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
850 PM PDT Thu Sep 14 2017

.SYNOPSIS...

A trough of low pressure will bring patchy morning drizzle or light showers west of the mountains ridges Friday. It will be breezy in the mountains and deserts tomorrow afternoon. Slightly warmer Saturday through Monday as the trough weakens, but another deep trough will bring more cool weather by the middle of next week.

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

Thursday was a noteworthy September day with temperatures 10-15 degrees lower than Wednesday in the Valleys, Mountains and Deserts. Palm Springs barely made 90 (average is 101), and Julian didn't even reach 60 (high of 59). Coastal sites were actually a little warmer than most valley locations due to the reverse clearing pattern that held clouds in the valleys and foothills most of the day. The marine layer wasn't quite as deep this evening (4800 ft) as it was this morning (6200 ft), but clouds will spread back inland overnight toward the foothills.

From Previous Discussion

The overall pattern will have troughing in the western US and ridging in the eastern US for the next week, which is different from most of the recent weeks. For tonight and Friday morning, a similar scenario to last night and this morning should occur as a short wave moves through So-Cal associated with the upper trough axis over the Great Basin. Thus, stratus extending to the mountain crests in some areas with patchy drizzle or light showers along the coastal mountain slopes and a few of the valleys. With 850 MB temps remaining quite low Friday, around 10 C west of the mountains, surface temps will not change much versus today.

Some warming will occur aloft and translate to the surface over the weekend, with temps approaching seasonal norms again by Sunday and Monday as the upper trough lifts north, even though short waves will continue to move through the region. The local WRF time-height cross sections show a shallower marine layer for inland penetration of the stratus. Another deeper trough will move into the West by Tuesday and bring more cooling, a deeper marine layer and more wind in the mountains/deserts.

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.AVIATION...

150300Z...Coast/Valleys...Areas of low clouds with variable bases 2000-5000 ft MSL and tops to 6000 ft MSL are mostly inland but are beginning to increase in coverage and spread westward toward the coast. Expect this trend to continue with widespread clouds impacting all TAF sites west of the mtns by 12Z Fri. Bases will likely lower to 2000-3500 ft MSL with tops around 4500-5000 ft MSL, and primarily P6SM vis except for locally lower vis in isol -DZ and obscuration of higher terrain. Expect most areas to clear by 20Z Fri, but a few clouds could linger through the afternoon.

Mountains/Deserts...Clear with unrestricted vis through Friday morning. West winds 20-30 kt with gusts 40 kt will continue to create mod-stg udfs/llws. Strong surface winds likely at KPSP and KTRM with gusts 30 kt at times.

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.MARINE...

No hazardous marine weather is expected through Monday afternoon. Northwest winds may increase with gusts to 25 kt in the outer waters Monday night and Tuesday.

&&

.SKYWARN...

Skywarn activation will not be needed this week.

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...NONE.

PZ...NONE.

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PUBLIC...Moede

AVIATION/MARINE...PG



College of Ag
Department of Agronomy

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156
FXUS65 KPSR 150431
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
931 PM MST Thu Sep 14 2017

.SYNOPSIS...

A cold front will continue to sweep through the area tonight resulting in much cooler autumn like temperatures for this weekend. Lower elevation afternoon highs only in the 90s and lows in the 70s will continue through much of next week. A slight chance for rain will return to the southeastern parts of Arizona during the middle of next week.

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.DISCUSSION...

Evening satellite loops this PM paint a near textbook example of an upper low pressure system and associated cloud fields as the main circulation center lifted through southern NV/UT into northern UT/CO. Trailing frontal band and dry advection continues to work through the region, with dewpoints slowly dropping on the western side of Maricopa County. Winds have mostly calmed from their daytime gustiness, but will remain elevated regionally due to the presence of the upper low and front. Cooler and drier conditions will close out the work week and open the weekend, with highs below seasonal normals (101 for Phoenix and 102 for Yuma). Only minor updates to the forecast this evening timing the slightly slower arrival of drier air into points from Phoenix eastward.

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.PREVIOUS DISCUSSION...

By mid-September standards, an absolutely delightful weekend with slightly below average temperatures and unusually dry air. Ensemble means depict U-wind component anomalies some 2 normalized standard deviations above normal, or greater than the 95th percentile in the H8-H5 layer practically assuring a deep, dry airmass will be advected through the entire forecast area. Forget about rainfall, even clouds may be difficult to come by this weekend. Given the abrupt change in airmass contradictory to recent biases, have based much of the forecast on raw guidance blends and towards the lower end of the guidance envelope.

Sunday through Wednesday:

The forecast for next week remains tricky as models are quite dispersive on tracking the remnant moisture from Tropical Storm Norma through northwest Mexico in towards the SW Conus. Deeper moisture may return to the southeastern third of AZ as early as Sunday before largely drying out later in the week. GEFS PWAT plumes

September 13 and 14, 2017 Exceptional Event, Imperial County**Appendix A**

generally support this timing trend, though there is also the chance with persistent deep westerly flow that moisture deflects into New Mexico. Meanwhile, the ECMWF is more expansive with a subtropical ridge and initially pushes Norma westward before drawing moisture north during the middle of the week.

A lot of uncertainty remains on just how much moisture will return, how far west does it get, and what the timing is (both arrival and departure). The end result for the forecast is a return of slight chance PoPs starting over the higher terrain of south-central AZ Monday and persisting into the middle of the week. As for temps, troughing lingering over much of the western Conus will prevent stronger high pressure from building back north keeping readings at or slightly below the seasonal normal.

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.AVIATION...

South-Central Arizona including KPHX, KIWA, and KSDL:
West winds will remain stronger than usual (for the overnight hours) in the wake of today's frontal passage. Southeasterly headings will return after 09z or so. Skies will remain mostly clear for much of the TAF period, save for some limited CU development Friday afternoon with FEW coverage between 8-10kft.

Southeast California/Southwest Arizona including KIPL and KBLH:
West to southwest winds to persist overnight under mostly clear skies for the terminals. Southerly headings with some gusts 15-20kts possible Friday midday for KBLH, while KIPL will stay west for the entirety of the TAF period.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Sunday through Thursday:

A series of weather systems will move through the Great Basin keeping generally drier mid-September weather locked into the districts. Some subtropical moisture could sneak into eastern Arizona during the middle of next week providing some slight chance for wetting rains. Regardless, temperatures will hover slightly below average across the region throughout the week. With the cooler weather, afternoon humidity levels will only fall into a 15-30% range following mostly good overnight recovery. Through the week, there may be periods of afternoon upslope gustiness with winds Wednesday and Thursday likely the strongest.

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.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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DISCUSSION...Nolte

PREVIOUS DISCUSSION...MO/AJ

AVIATION...Nolte

FIRE WEATHER...MO

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