

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE	
Area Forecast Discussion	6/21/2018	0606	MST	Phoenix	A strong upper level high pressure ridge has continued to build into the desert southwest; looking at latest plots indicated the high centered over far south-central Arizona were running around 596dm. IR imagery at 2 am showed clear skies area-wide...As for the Excessive Heat warning that is in effect today into Friday,....	40
Area Forecast Discussion	6/22/2018	0325	PDT	San Diego	High pressure aloft centered over northern Baja will bring a few degrees of additional warming with the heat peaking today.....For the weekend...high pressure aloft will weaken and shift southward as a low pressure system moves inland through the Great Basin....	42
Area Forecast Discussion	6/22/2018	0520	MST	Phoenix	...Clear skies continue across the Southwest this morning, with a mid-level anticyclone centered across northwest Mexico forecast to gradually weaken throughout the day as a weak shortwave trough passes through the northern Rockies....The Excessive Heat Warning for parts of the forecast area (including the Greater Phoenix area and Yuma) will continue for today....	44
Area Forecast Discussion	6/22/2018	0858	PDT	San Diego	...But the high pressure ridge remains and will not dampen desert temperatures today. The excessive heat will continue there one more day with temperatures reaching up to 105 in the high desert and 115 in the low desert....	47
Area Forecast Discussion	6/22/2018	1400	MST	Phoenix	A deep midtropospheric anti-cyclone has become depressed from southern Arizona into the northern Gulf of California this afternoon in response to shortwave energy and a modest jet streak digging southeast into the Great Basin.....Despite this seemingly boring transition, there is very good evidence the combination of a tightening pressure gradient and differential heating will result in a shallow Gulf surge of moisture through far SW Arizona and SE California Saturday morning. This surge is best identified by high resolution models, but even consensus blends suggest temperatures muted by this richer near surface moisture.	49
Area Forecast Discussion	6/22/2018	2134	MST	Phoenix	.UPDATE...Updated aviation discussion....Southeast California/Southwest Arizona including KIPL and KBLH: Skies will remain clear with increasingly gusty S/SE winds during the late morning and afternoon hours. At KIPL, wind gusts up to 15 to 25 kts will be possible and at KBLH wind gusts up to 20 to 30 kts will be possible.	51
Area Forecast Discussion	6/23/2018	0209	MST	Phoenix	Quiescent weather conditions continue across the Southwest amidst a benign large-scale weather pattern....The minor pattern change will also support an increase in winds this afternoon, as southerly to southwesterly winds gust to 20 mph this afternoon across south-central Arizona, to 30 mph across southwest Arizona and the lower Colorado River Valley. Also of interest, a very shallow layer of richer moisture from the Gulf of California is advecting northward this morning, with 60s dewpoints funneling through the lower Colorado River Valley and Imperial Valley, and low 50s into south-central Arizona. While this will have virtually no impact on sensible weather conditions other than to facilitate a slight increase in boundary-layer RH, it is at least evidence that low-level moisture will more easily be able to spread northward once a more typical Monsoonal pattern takes hold again.	53

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE	
Area Forecast Discussion	6/23/2018	0310	MST	Phoenix	.UPDATE...Updated aviation discussion.....Southeast California/Southwest Arizona including KIPL and KBLH: High pressure and dry northwesterly flow aloft to keep skies mainly clear through the TAF period. WInds to remain southerly at KBLH and southeasterly at KIPL through the taf period. At KIPL, wind gusts up to 15 to 25 kts will be possible and at KBLH wind gusts up to 20 to 30 kts will be possible during the day on Saturday.	55
Area Forecast Discussion	6/23/2018	1326	MST	Phoenix	.UPDATE...Updated aviation discussion.....Southeast California/Southwest Arizona including KIPL and KBLH: The strong winds across the area will be of some concern through the early evening. At KIPL, wind gusts up to 15 to 25 kts will be possible and at KBLH wind gusts up to 20 to 30 kts will be possible before subsiding early evening. Otherwise, clear skies will prevail.	57
Area Forecast Discussion	6/23/2018	1338	PDT	San Diego	In addition, a tepid gulf surge brought dew points up and temps down in the lower desert, insomuch that Daggett in the high desert is our unusual hot spot today at 105 so far.	59
Area Forecast Discussion	6/23/2018	1455	MST	Phoenix	Concurrently, the tightening synoptic pressure gradient has been magnified by inland thermal low pressure facilitating a well defined Gulf surge early this morning. Over SE California and far SW Arizona, shallow mid 60 dewpoints persist and likely are making upper 90 ambient temperatures feel even more miserable. Gusty southerly winds have stirred up a few dust plumes (most evident over Mexico per GOES-16 dust RGB composite difference channels) adding to the magnitude of haze and air quality issues.	61
Area Forecast Discussion	6/23/2018	2050	PDT	San Diego	The coastal eddy was king today, holding clouds firmly over coastal areas in typical "June Gloom" fashion. At 8 PM PDT...clouds were beginning to expand farther inland and were solid offshore. The 00Z Miramar sounding had a marine layer just over 2K FT deep and topped by a massive 12C inversion. Surface pressure gradients KSAN to the deserts had increased to 6-9 MBS, with a corresponding increase in westerly mtn/desert winds. Peak gusts at 8 PM PDT were 30-35 MPH in onshore wind-prone areas. No forecast changes this evening.	63
Area Forecast Discussion	6/23/2018	2249	MST	Phoenix	.UPDATE...Updated Aviation section.....Southeast California/Southwest Arizona including KIPL and KBLH: The Gulf surge has weakened quite a bit this evening. There could be some lingering lofted dust for decreased slant visibilities but not like what was seen earlier in the day. Anticipate surface winds to follow familiar warm season patterns (favoring south and southeast directions near and west of the Lower Colorado River Valley). Otherwise, clear skies.	65

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FXUS65 KPSR 211306

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

606 AM MST Thu Jun 21 2018

.UPDATE...Updated Aviation and Fire Weather discussions.

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.SYNOPSIS...

Strong high pressure aloft will continue area-wide through Friday leading to some excessive heat with many lower desert communities exceeding the 110 degree threshold today and Friday. Some cooling is anticipated over the weekend as a weak low pressure system passes north of the region and as we move into the early to middle portion of next week, high temperatures will climb again with hottest deserts back to near 110 by next Wednesday. There are no signs of rainfall through at least early next week as generally sunny days and clear nights will be the rule through the 7 day period.

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.DISCUSSION...

A strong upper level high pressure ridge has continued to build into the desert southwest; looking at latest plots indicated the high centered over far south-central Arizona near the Mexican border and 500mb heights over southern Arizona were running around 596dm. IR imagery at 2 am showed clear skies area-wide.

Really, the only weather impacts that we are looking at over the next 7 days will be a brief period of excessive heat today into Friday, after that it's just a matter of some temperature trends as we cool into the weekend and then warm up again during the early to middle part of next week. We can expect generally sunny days and clear nights each day as high pressure aloft dominates our weather pattern.

As for the Excessive Heat Warning that is in effect today into Friday, it still looks to be very borderline; latest NAEFS percentile data from the Ensemble Situational Awareness Table mostly keep the low levels (850mb and below) at or below the 90th percentiles and most of the better performing (or even available) temperature guidances keep warmer desert highs today and Friday in the 110-112 ballpark which is just below excessive heat thresholds. For now we will keep the warning going, but if guidance continues to keep temps suppressed we may decide to drop some or all of the zones from the warning later today. This is something the day shift will need to take a close look at.

**June 23, 2018 Exceptional Event, Imperial County****Appendix A**

A short wave passing by to our north, and dropping southeast and just north of the 4 corners will usher in a modest cooling trend this weekend; by Sunday desert highs should fall slightly below seasonal normal levels with Phoenix falling to around 104 by Sunday. High pressure then builds back into the area Monday into the middle of next week allowing warmer deserts to climb back to the 110 degree mark.

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.AVIATION...

South-Central Arizona including KPHX, KIWA, and KSDL and Southeast California/Southwest Arizona including KIPL and KBLH:

No aviation weather concerns through Friday morning. Strong high pressure will predominate, resulting in clear skies along with typical diurnal winds at all TAF sites.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Saturday through Wednesday:

Low pressure passing well to the north will push temperatures back to near-normal values this weekend. Another warming trend is then expected early next week as high pressure rebuilds across the Desert Southwest. Minimum afternoon humidity values will fall into an 8 to 15% range each day. Overnight recoveries will be poor to fair. Occasionally gusty winds can be expected Saturday ahead of the aforementioned low pressure system. Otherwise typical afternoon upslope gustiness will be common during the period. There are no signs of rain through the middle of next week.

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.SPOTTER INFORMATION STATEMENT...

Spotter activation will not be needed.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...Excessive Heat Warning from 10 AM this morning to 9 PM MST Friday for AZZ537-540>546-548>551-553>556-560-562.

Heat Advisory from 10 AM this morning to 9 PM MST Friday for AZZ563.

Excessive Heat Warning from 10 AM to 9 PM MST Friday for AZZ532-536-539.

CA...Excessive Heat Warning from 10 AM this morning to 9 PM PDT Friday for CAZ561-566.

FXUS66 KSGX 221025

AFDSGX

**Area Forecast Discussion****National Weather Service** San Diego CA

325 AM PDT Fri Jun 22 2018

**.SYNOPSIS...**

High pressure aloft will bring a few degrees of additional warming today with the heat peaking today. Weakening high pressure aloft and stronger **onshore flow** will bring about 5 degrees of cooling for inland areas on Saturday and another 5 degrees on Sunday. This will be followed by slow warming for the early part of next week...then gradual cooling the for the latter half of next week. The marine layer will keep coastal areas cooler with areas of night and morning coastal **low clouds** and **fog** extending inland into the western valleys...except farther into the inland valleys for late Saturday night into Sunday morning.

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

**.SHORT TERM (Today through Sunday)...**

High pressure aloft centered over northern Baja will bring a few degrees of additional warming with the heat peaking today.

The marine layer is near 1500 to 2000 feet deep with satellite imagery showing widespread **stratus** over the **coastal waters** extending inland across about the western half to two-thirds of the San Diego County valleys...and into the western and southern portions of the Inland Empire. Similar coverage is expected for tonight into Saturday morning.

For the weekend...high pressure aloft will weaken and shift southward as a **low pressure system** moves inland through the Great **Basin**. This will strengthen the **onshore flow** which will spread cooling inland. Inland areas will cool around 5 degrees on Saturday and another 5 degrees on Sunday. The marine layer will deepen with coastal **low clouds** extending farther into the inland valleys for late Saturday night into Sunday morning.

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.LONG TERM (Monday through Thursday)...

Weak high pressure aloft will move across Southern California early next week. This will bring a slow warming trend from Monday through Tuesday or Wednesday with Tuesday and Wednesday not quite as hot for inland areas as today. A **trough** of low pressure will develop near the West Coast late in the week with a cooling trend for Thursday into next weekend. Areas of night and morning coastal **low clouds** and **fog** will extend inland into the western valleys.

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.AVIATION...

220925Z...Coast/Valleys...**Low clouds** with bases 900-1500 ft **MSL** and tops to 1800 ft **MSL** continuing up to 25-30 miles inland this morning. Local **vis** 3-5 SM likely where clouds extend into the inland valleys. Clearing inland 15Z-17Z and partial clearing at the coast 18Z-22Z. Clouds will begin to spread inland again after 23/00Z with bases remaining near 1000-1500 ft **MSL**.

Mountains/Deserts...**Mostly clear** with unrestricted **VIS** through Saturday morning.

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.MARINE...

No hazardous marine weather is expected through Tuesday.

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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...**Excessive Heat Warning** until 8 PM PDT this evening for Apple and Lucerne Valleys-Coachella Valley-San Diego County Deserts-San Gorgonio Pass Near Banning.

PZ...NONE.

FXUS65 KPSR 221246 CCA

AFDPSR

**Area Forecast Discussion...Corrected Synopsis****National Weather Service** Phoenix AZ

520 AM MST Fri Jun 22 2018

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

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.SYNOPSIS...

High pressure across the southwest will result in some excessive heat today, with many lower desert communities exceeding the 110 degree threshold. Some cooling is anticipated over the weekend as a weak **low pressure system** passes north of the region. By early next week, high temperatures will again climb with hottest deserts back near 110 by next Wednesday. There are no signs of rainfall through at least early next week as **sunny** days and clear nights will be the rule.

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.DISCUSSION...

Clear skies continue across the Southwest this morning, with a mid-level **anticyclone** centered across northwest Mexico forecast to gradually weaken throughout the day as a weak **shortwave trough** passes through the northern Rockies. 00Z upper-air soundings from Thursday afternoon showed nearly identical low-level temperatures at 850 mb compared to the previous 24 hours. Forecast high temperatures for this afternoon will remain very similar to what was observed on Thursday, with highs approaching 110 within the Phoenix area, and slightly warmer temperatures expected across the lower Colorado River Valley and southeast California. The **Excessive Heat Warning** for parts of the forecast area (including the Greater Phoenix area and Yuma) will continue for today.

A more significant **shortwave** upper **trough** will evolve across the northern Rockies this weekend, and lead to a decrease in midlevel heights across most of the western CONUS, and a slight cooling trend Saturday and Sunday. In fact, many locations may be a degree or two below normal by Sunday, with highs of 100-103 forecast across most of the lower deserts. This cooling trend will be short-lived, as temperatures near 110 degrees return by the middle

of next week. High pressure will rebuild across Arizona/New Mexico during this period, with a broad **ridge** extending northward across most of the interior **CONUS**.

The **storm track** will still remain fairly active for late June across the Pacific Northwest/northern tier, making it difficult for high pressure to become established across the Southwest for more than a couple consecutive days. In fact, there is some signal for a seasonably strong upper **trough** to develop late next week across the western CONUS, which would bring another cooldown to the Southwest. This also means that the necessary **moisture advection** from Mexico to achieve a more active Monsoon period will remain confined primarily to northern Mexico, meaning there are currently no signs of **precipitation** through late next week.

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.AVIATION...

South-Central Arizona including KPHX, KIWA, and KSDL, and Southeast California/Southwest Arizona including KIPL and KBLH:

No aviation concerns are expected for at least the next 24 hours as dry westerly **flow** aloft will continue to affect the terminals leading to **sunny** days and clear nights. Winds in the greater Phoenix area will follow typical **diurnal** tendencies, with just a few gusts into the teens possible between about 20z and 02z. Otherwise, winds at KBLH should favor the south today with some gustiness during the afternoon possible, and winds to favor the southeast for the most part at KIPL with speeds genly **aob** 10kt.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Sunday through Thursday:

Low pressure passing well to the north will push temperatures back to near-normal values Sunday. Another warming trend is then expected during the first half of next week as high pressure rebuilds across the Desert Southwest causing high temperatures to climb above seasonal normals by Tuesday. Minimum afternoon **humidity** values between 12 and 20 percent Sunday will fall mostly into the single digits starting Monday. Overnight recoveries will be poor to fair. No strong winds are expected during the period, although typical afternoon upslope gustiness will be common each day with wind



directions favoring south to southwest. There are no signs of rain through the middle of next week.

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.SPOTTER INFORMATION STATEMENT...

Spotter activation will not be needed this week.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...**Excessive Heat Warning** until 9 PM MST this evening for AZZ537-540>546-548>551-553>556-560-562.

**Heat Advisory** until 9 PM MST this evening for AZZ563.

**Excessive Heat Warning** from 10 AM this morning to 9 PM MST this evening for AZZ532-536-539.

CA...**Excessive Heat Warning** until 9 PM PDT this evening for CAZ561-566.

**Excessive Heat Warning** from 10 AM this morning to 9 PM PDT this evening for CAZ567-568-570.

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DISCUSSION...Rogers

AVIATION...CB

FIRE WEATHER...Hirsch/CB



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FXUS66 KSGX 221558

AFDSGX

## Area Forecast Discussion

National Weather Service San Diego CA

858 AM PDT Fri Jun 22 2018

## .SYNOPSIS...

High pressure will alternate with weak low pressure aloft in the coming week. Hot inland weather will peak today, fade this weekend, return early next week before some cooling arrives later next week.

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

Low clouds got into much of the Inland Empire this morning. The clouds were a little thicker and visibility a little murkier, including a couple reports of drizzle. A weak low pressure trough zoomed through the West to our north this morning, which I suppose explains the deeper marine layer. But the high pressure ridge remains and will not dampen desert temperatures today. The excessive heat will continue there one more day with temperatures reaching up to 105 in the high desert and 115 in the low desert.

Another trough of low pressure moves a little more slowly through the interior West this weekend. That will help generate a coastal eddy, but the extent of clouds each night and morning will be similar to this morning. Temperatures west of the mountains will decrease a little, but mountain and desert temperatures will drop 5-10 degrees Saturday and an additional 5-10 degrees Sunday. It's possible the marine inversion will remain strong enough to prevent much beach clearing. On Monday and Tuesday high pressure aloft builds over the Southwest again, but not to the levels of the past few days. So it will be warmer inland, but not excessively hot. The marine layer will be shallower and the nocturnal clouds confined closer to the coast. Wednesday and Thursday, the guidance shows a western trough developing. So after a few more hot inland days early next week, we'll get noticeably cooler weather for the latter half of the week. The coastal low clouds will probably fill most if not all of the coastal basin those nights.

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## .AVIATION...

221600Z...Coast/Valleys...Low clouds with bases 900-1500 ft MSL and tops to 1800 ft MSL will continue to slowly burn off this morning to the coast through 20Z. Vis down to 2 SM in the valleys through about

**June 23, 2018 Exceptional Event, Imperial County****Appendix A**

18Z. Low clouds will begin to spread inland again after 23/00Z with bases likely near 900-1500 ft MSL.

Mountains/Deserts...Mostly clear with unrestricted VIS through Saturday.

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.MARINE...

No hazardous marine weather is expected through Tuesday.

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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...Excessive Heat Warning until 8 PM PDT this evening for Apple and Lucerne Valleys-Coachella Valley-San Diego County Deserts-San Gorgonio Pass Near Banning.

PZ...NONE.

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PUBLIC...MM

AVIATION/MARINE...Brotherton

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FXUS65 KPSR 222100

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

200 PM MST Fri Jun 22 2018

.SYNOPSIS...

Somewhat cooler temperatures will spread over the Southwest through the weekend as a weak low pressure system passes north of the region. This period of more moderate temperatures will be brief as by early next week, high temperatures in lower elevation communities will once again be flirting with the 110 degree mark. There are still no signs of rain through next week as deeper moisture remains trapped south of the international border.

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.DISCUSSION...

A deep midtropospheric anti-cyclone has become depressed from southern Arizona into the northern Gulf of California this afternoon in response to shortwave energy and a modest jet streak digging southeast into the Great Basin. Prior to this evolution, 12Z KTWC sounding data sampled H5 heights at 595dm (near record levels for the date) and thermal profiles nearly identical to Thursday. Not surprisingly, surface temperatures were trending fairly close to 24 hours ago and eventual highs should be approaching and/or touching the 110 degree threshold.

The aforementioned shortwave upper trough will evolve across the northern Rockies this weekend leading to a decrease in midlevel heights across most of the western CONUS, and correspondingly a slight cooling trend Saturday and Sunday. Despite this seemingly boring transition, there is very good evidence the combination of a tightening pressure gradient and differential heating will result in a shallow Gulf surge of moisture through far SW Arizona and SE California Saturday morning. This surge is best identified by high resolution models, but even consensus blends suggest temperatures muted by this richer near surface moisture. However even with afternoon highs nearly 10F cooler than today, mid 60 dewpoints in cities like Yuma and El Centro may actually make it feel more uncomfortable than the current dry environment.

This overall cooling trend will be short-lived as ridging and heights near 594dm build back over Arizona and New Mexico early next week. There is good model consensus that temperatures nearing 110 degrees will return to lower desert communities as early as Tuesday. With the breadth of the ridge axis extending through the southern tier of the Conus and the storm track remaining fairly active for late June across the Pacific Northwest/northern tier, it will be difficult for high pressure to become established in a more

**June 23, 2018 Exceptional Event, Imperial County****Appendix A**

favorable location necessary for moisture transport into the forecast area. In fact, there is some signal for a seasonably strong upper trough to develop late next week across the western CONUS, which would bring another cool down to the Southwest and continue to trap better quality moisture into central Mexico.

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.AVIATION...

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

No aviation concerns will exist through Saturday afternoon under clear skies. Some afternoon westerly wind gusts around 20kt will be likely around the Phoenix terminals, but otherwise timing of directional changes will be similar to the past several days.

Southeast California/Southwest Arizona including KIPL and KBLH:

Under clear skies, increasingly gusty S/SE winds Saturday will be the primary aviation concern. By mid morning, sustained winds 10-15kt will be common with stronger gusts impacting the terminal sites by noon. KBLH will experience the strongest winds well over 20kt with only slightly weaker speeds at KIPL.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Monday through Friday:

A rapid warming trend will spread into the districts early next week with temperatures easily climbing above seasonal normals by Tuesday. By the middle of the week, conditions will be similar to the past several days (i.e hot and dry). Minimum afternoon humidity values will fall back mostly into the single digits with a return of poor to fair overnight recovery. No strong winds are expected next week, although typical afternoon upslope gustiness will be common around terrain features. There are still no signs of rain through next week.

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.SPOTTER INFORMATION STATEMENT...

Spotter activation will not be needed through at least the middle of next week.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...Excessive Heat Warning until 9 PM MST this evening for AZZ532-536-537-539>546-548>551-553>556-560-562.

Heat Advisory until 9 PM MST this evening for AZZ563.

CA...Excessive Heat Warning until 9 PM PDT this evening for CAZ561-566>568-570.

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FXUS65 KPSR 230434

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

934 PM MST Fri Jun 22 2018

.UPDATE...Updated aviation discussion.

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.SYNOPSIS...

Somewhat cooler temperatures will spread over the Southwest through the weekend as a weak low pressure system passes north of the region. This period of more moderate temperatures will be brief as by early next week, high temperatures in lower elevation communities will once again be flirting with the 110 degree mark. There are still no signs of rain through next week as deeper moisture remains trapped south of the international border.

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.DISCUSSION...

A deep midtropospheric anti-cyclone has become depressed from southern Arizona into the northern Gulf of California this afternoon in response to shortwave energy and a modest jet streak digging southeast into the Great Basin. Prior to this evolution, 12Z KTWC sounding data sampled H5 heights at 595dm (near record levels for the date) and thermal profiles nearly identical to Thursday. Not surprisingly, surface temperatures were trending fairly close to 24 hours ago and eventual highs should be approaching and/or touching the 110 degree threshold.

The aforementioned shortwave upper trough will evolve across the northern Rockies this weekend leading to a decrease in midlevel heights across most of the western CONUS, and correspondingly a slight cooling trend Saturday and Sunday. Despite this seemingly boring transition, there is very good evidence the combination of a tightening pressure gradient and differential heating will result in a shallow Gulf surge of moisture through far SW Arizona and SE California Saturday morning. This surge is best identified by high resolution models, but even consensus blends suggest temperatures muted by this richer near surface moisture. However even with afternoon highs nearly 10F cooler than today, mid 60 dewpoints in cities like Yuma and El Centro may actually make it feel more uncomfortable than the current dry environment.

This overall cooling trend will be short-lived as ridging and heights near 594dm build back over Arizona and New Mexico early next week. There is good model consensus that temperatures nearing 110 degrees will return to lower desert communities as early as Tuesday. With the breadth of the ridge axis extending through the southern

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tier of the Conus and the storm track remaining fairly active for late June across the Pacific Northwest/northern tier, it will be difficult for high pressure to become established in a more favorable location necessary for moisture transport into the forecast area. In fact, there is some signal for a seasonably strong upper trough to develop late next week across the western CONUS, which would bring another cool down to the Southwest and continue to trap better quality moisture into central Mexico.

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.AVIATION...

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

Minimal aviation concerns through the TAF period. Winds will follow normal diurnal tendencies and skies will remain clear. Some afternoon westerly wind gusts up to 15 to 20 kts will be likely tomorrow afternoon and early evening.

Southeast California/Southwest Arizona including KIPL and KBLH:  
Skies will remain clear with increasingly gusty S/SE winds during the late morning and afternoon hours. At KIPL, wind gusts up to 15 to 25 kts will be possible and at KBLH wind gusts up to 20 to 30 kts will be possible.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Monday through Friday:

A rapid warming trend will spread into the districts early next week with temperatures easily climbing above seasonal normals by Tuesday. By the middle of the week, conditions will be similar to the past several days (i.e hot and dry). Minimum afternoon humidity values will fall back mostly into the single digits with a return of poor to fair overnight recovery. No strong winds are expected next week, although typical afternoon upslope gustiness will be common around terrain features. There are still no signs of rain through next week.

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.SPOTTER INFORMATION STATEMENT...

Spotter activation will not be needed through at least the middle of next week.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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647  
FXUS65 KPSR 230909  
AFDPSR

Area Forecast Discussion  
National Weather Service Phoenix AZ  
209 AM MST Sat Jun 23 2018

.SYNOPSIS...

Temperatures closer to seasonal normals can be expected through Monday as high pressure weakens across the Southwest. Another warmup is expected Tuesday and Wednesday, with high temperatures forecast to be near 110 degrees across the lower deserts. A dry weather pattern will continue through late next week as richer moisture remains fixed over northern Mexico.

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.DISCUSSION...

Quiescent weather conditions continue across the Southwest amidst a benign large-scale weather pattern. Broad west-northwesterly flow is positioned across the Great Basin, with Arizona positioned along the southern fringe of the stronger flow aloft. A shortwave impulse over the northern Rockies will dig southeastward towards the central High Plains, prompting a weakening of midlevel height fields across Arizona this weekend. As a result, a minor cooling trend closer to seasonal normals will commence today, with high temperatures generally within a couple degrees of 105 this afternoon across the lower deserts. The minor pattern change will also support an increase in winds this afternoon, as southerly to southwesterly winds gust to 20 mph this afternoon across south-central Arizona, to 30 mph across southwest Arizona and the lower Colorado River Valley. Also of interest, a very shallow layer of richer moisture from the Gulf of California is advecting northward this morning, with 60s dewpoints funneling through the lower Colorado River Valley and Imperial Valley, and low 50s into south-central Arizona. While this will have virtually no impact on sensible weather conditions other than to facilitate a slight increase in boundary-layer RH, it is at least evidence that low-level moisture will more easily be able to spread northward once a more typical Monsoonal pattern takes hold again.

Into next week, a mid-level anticyclone will quickly rebuild in the wake of the aforementioned shortwave trough, leading to another minor warming trend. The hottest temperatures of the week (and perhaps the year, so far) will occur on Tuesday and Wednesday, with Phoenix forecast to reach 111 degrees on Tuesday. While current HeatRisk output suggests this will remain just shy of excessive heat thresholds, these temperatures will still result in heat-related impacts across the lower deserts.

In what has remained the theme thus far in June, the climatologically favored anticyclone near the Four Corners that



**June 23, 2018 Exceptional Event, Imperial County**

typically supports prolonged periods of excessive heat, will instead be short-lived as another upper trough develops over the western CONUS. This will act to weaken the anticyclone, and bring temperatures back closer to seasonal normals by late next week, while amplified ridging (and associated heat) is focused east of the Rockies. While Monsoonal moisture will struggle to make it into south-central Arizona with this pattern given the slightly west of south component to the flow aloft, it will be more likely to reach New Mexico and far eastern Arizona by late next week.

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**.AVIATION...**

South-Central Arizona including KPHX, KIWA, and KSDL:  
Minimal aviation concerns through the TAF period. Winds will follow normal diurnal tendencies and skies will remain clear. Some afternoon westerly wind gusts up to 15 to 20 kts will be likely tomorrow afternoon and early evening.

Southeast California/Southwest Arizona including KIPL and KBLH:  
Skies will remain clear with increasingly gusty S/SE winds during the late morning and afternoon hours. At KIPL, wind gusts up to 15 to 25 kts will be possible and at KBLH wind gusts up to 20 to 30 kts will be possible.

Aviation Discussion not updated for amended TAFs.

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**.FIRE WEATHER...**

Monday through Friday:

A rapid warming trend will spread into the districts early next week with temperatures easily climbing above seasonal normals by Tuesday. By the middle of the week, hot and dry conditions will return with highs near or just above 110 degrees across the lower deserts. Minimum afternoon humidity values will fall back mostly into the single digits with a return of poor to fair overnight recovery. No strong winds are expected next week, although typical afternoon upslope gustiness will be common around terrain features. There are still no signs of rain through late next week.

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**.SPOTTER INFORMATION STATEMENT...**

Spotter activation will not be needed through at least the middle of next week.

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**.PSR WATCHES/WARNINGS/ADVISORIES...**

AZ...None.

CA...None.

□

769

FXUS65 KPSR 231012 AAA

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

310 AM MST Sat Jun 23 2018

.UPDATE...Updated aviation discussion.

.SYNOPSIS...

Temperatures closer to seasonal normals can be expected through Monday as high pressure weakens across the Southwest. Another warmup is expected Tuesday and Wednesday, with high temperatures forecast to be near 110 degrees across the lower deserts. A dry weather pattern will continue through late next week as richer moisture remains fixed over northern Mexico.

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.DISCUSSION...

Quiescent weather conditions continue across the Southwest amidst a benign large-scale weather pattern. Broad west-northwesterly flow is positioned across the Great Basin, with Arizona positioned along the southern fringe of the stronger flow aloft. A shortwave impulse over the northern Rockies will dig southeastward towards the central High Plains, prompting a weakening of midlevel height fields across Arizona this weekend. As a result, a minor cooling trend closer to seasonal normals will commence today, with high temperatures generally within a couple degrees of 105 this afternoon across the lower deserts. The minor pattern change will also support an increase in winds this afternoon, as southerly to southwesterly winds gust to 20 mph this afternoon across south-central Arizona, to 30 mph across southwest Arizona and the lower Colorado River Valley. Also of interest, a very shallow layer of richer moisture from the Gulf of California is advecting northward this morning, with 60s dewpoints funneling through the lower Colorado River Valley and Imperial Valley, and low 50s into south-central Arizona. While this will have virtually no impact on sensible weather conditions other than to facilitate a slight increase in boundary-layer RH, it is at least evidence that low-level moisture will more easily be able to spread northward once a more typical Monsoonal pattern takes hold again.

Into next week, a mid-level anticyclone will quickly rebuild in the wake of the aforementioned shortwave trough, leading to another minor warming trend. The hottest temperatures of the week (and perhaps the year, so far) will occur on Tuesday and Wednesday, with Phoenix forecast to reach 111 degrees on Tuesday. While current HeatRisk output suggests this will remain just shy of excessive heat thresholds, these temperatures will still result in heat-related impacts across the lower deserts.

**June 23, 2018 Exceptional Event, Imperial County****Appendix A**

In what has remained the theme thus far in June, the climatologically favored anticyclone near the Four Corners that typically supports prolonged periods of excessive heat, will instead be short-lived as another upper trough develops over the western CONUS. This will act to weaken the anticyclone, and bring temperatures back closer to seasonal normals by late next week, while amplified ridging (and associated heat) is focused east of the Rockies. While Monsoonal moisture will struggle to make it into south-central Arizona with this pattern given the slightly west of south component to the flow aloft, it will be more likely to reach New Mexico and far eastern Arizona by late next week.

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.AVIATION...

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

High pressure and dry northwesterly flow aloft to keep skies mainly clear through the TAF period. Winds to mainly follow normal diurnal patterns, with some gustiness (up to 15-20 kt gusts) during the afternoon/early evening hours on Saturday. Minimal aviation concerns through the TAF period.

Southeast California/Southwest Arizona including KIPL and KBLH:

High pressure and dry northwesterly flow aloft to keep skies mainly clear through the TAF period. Winds to remain southerly at KBLH and southeasterly at KIPL through the taf period. At KIPL, wind gusts up to 15 to 25 kts will be possible and at KBLH wind gusts up to 20 to 30 kts will be possible during the day on Saturday.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Monday through Friday:

A rapid warming trend will spread into the districts early next week with temperatures easily climbing above seasonal normals by Tuesday. By the middle of the week, hot and dry conditions will return with highs near or just above 110 degrees across the lower deserts. Minimum afternoon humidity values will fall back mostly into the single digits with a return of poor to fair overnight recovery. No strong winds are expected next week, although typical afternoon upslope gustiness will be common around terrain features. There are still no signs of rain through late next week.

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.SPOTTER INFORMATION STATEMENT...

Spotter activation will not be needed through at least the middle of next week.

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672

FXUS65 KPSR 232026

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

126 PM MST Sat Jun 23 2018

.UPDATE...Updated aviation discussion.

.SYNOPSIS...

Temperatures closer to seasonal normals can be expected through Monday as high pressure weakens across the Southwest. Another warmup is expected Tuesday and Wednesday, with high temperatures forecast to be near 110 degrees across the lower deserts. A dry weather pattern will continue through late next week as richer moisture remains fixed over northern Mexico.

&&

.DISCUSSION...

Quiescent weather conditions continue across the Southwest amidst a benign large-scale weather pattern. Broad west-northwesterly flow is positioned across the Great Basin, with Arizona positioned along the southern fringe of the stronger flow aloft. A shortwave impulse over the northern Rockies will dig southeastward towards the central High Plains, prompting a weakening of midlevel height fields across Arizona this weekend. As a result, a minor cooling trend closer to seasonal normals will commence today, with high temperatures generally within a couple degrees of 105 this afternoon across the lower deserts. The minor pattern change will also support an increase in winds this afternoon, as southerly to southwesterly winds gust to 20 mph this afternoon across south-central Arizona, to 30 mph across southwest Arizona and the lower Colorado River Valley. Also of interest, a very shallow layer of richer moisture from the Gulf of California is advecting northward this morning, with 60s dewpoints funneling through the lower Colorado River Valley and Imperial Valley, and low 50s into south-central Arizona. While this will have virtually no impact on sensible weather conditions other than to facilitate a slight increase in boundary-layer RH, it is at least evidence that low-level moisture will more easily be able to spread northward once a more typical Monsoonal pattern takes hold again.

Into next week, a mid-level anticyclone will quickly rebuild in the wake of the aforementioned shortwave trough, leading to another minor warming trend. The hottest temperatures of the week (and perhaps the year, so far) will occur on Tuesday and Wednesday, with Phoenix forecast to reach 111 degrees on Tuesday. While current HeatRisk output suggests this will remain just shy of excessive heat thresholds, these temperatures will still result in heat-related impacts across the lower deserts.

**June 23, 2018 Exceptional Event, Imperial County****Appendix A**

In what has remained the theme thus far in June, the climatologically favored anticyclone near the Four Corners that typically supports prolonged periods of excessive heat, will instead be short-lived as another upper trough develops over the western CONUS. This will act to weaken the anticyclone, and bring temperatures back closer to seasonal normals by late next week, while amplified ridging (and associated heat) is focused east of the Rockies. While Monsoonal moisture will struggle to make it into south-central Arizona with this pattern given the slightly west of south component to the flow aloft, it will be more likely to reach New Mexico and far eastern Arizona by late next week.

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.AVIATION...

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

There are no major aviation weather concerns through tonight. The winds this afternoon will maintain a westerly direction at 10 to 15 knots with a some stronger gusts before subsiding this evening. Otherwise, clear skies and typical diurnal winds will prevail.

Southeast California/Southwest Arizona including KIPL and KBLH:  
The strong winds across the area will be of some concern through the early evening. At KIPL, wind gusts up to 15 to 25 kts will be possible and at KBLH wind gusts up to 20 to 30 kts will be possible before subsiding early evening. Otherwise, clear skies will prevail.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Monday through Friday:

A rapid warming trend will spread into the districts early next week with temperatures easily climbing above seasonal normals by Tuesday. By the middle of the week, hot and dry conditions will return with highs near or just above 110 degrees across the lower deserts. Minimum afternoon humidity values will fall back mostly into the single digits with a return of poor to fair overnight recovery. No strong winds are expected next week, although typical afternoon upslope gustiness will be common around terrain features. There are still no signs of rain through late next week.

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.SPOTTER INFORMATION STATEMENT...

Spotter activation will not be needed through at least the middle of next week.

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711  
FXUS66 KSGX 232038  
AFDSGX

Area Forecast Discussion  
National Weather Service San Diego CA  
138 PM PDT Sat Jun 23 2018

.SYNOPSIS...

Weak low pressure will alternate with weak high pressure this coming week. Cooler with more coastal clouds this weekend, warmer with less coastal cloudiness Monday through Wednesday, then cooler with more coastal clouds later next week.

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

The coastal eddy we've got spinning out there is a textbook specimen of what a coastal eddy should be. It has produced brisk southerly winds along the coast, prevented clouds from clearing in coastal areas (not just beaches), and even produced spotty drizzle this morning. It is poised to push the clouds inland early this evening to fill nearly all of the valleys overnight. Temperatures at 1 pm are 3 to 15 degrees lower in all areas from yesterday's temps at this time. The eddy and cooling trend come courtesy of a low pressure trough moving through the interior West. In addition, a tepid gulf surge brought dew points up and temps down in the lower desert, insomuch that Daggett in the high desert is our unusual hot spot today at 105 so far. The coastal eddy will continue into Sunday for a very similar day. The marine inversion weakens a bit Sunday, so there should be just a little more sunshine at the coast. High pressure aloft rebuilds Sunday into Tuesday across the Southwest, which will bring warmer weather to all areas and a diminished marine layer. Coastal clouds will probably not make it into inland valleys Tuesday through Thursday mornings. Temperatures will head back above average inland on those days. A low pressure trough will deepen in timid June fashion across the West Thursday into next weekend. That will reverse the trends, bringing down daytime temperatures and extending the coastal clouds into the valleys each night and morning. A weak trough and a weak ridge continue to jockey for position over Southern California next weekend, but the result will be little variation around seasonal weather.

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.AVIATION...

232030Z...Coast/Valleys...Stratus continues mainly along the coast and 5-10 SM inland this afternoon with BKN-OVC bases ranging from 1500-2200 ft MSL and tops 2500-3000 ft MSL. Stratus will once again

**June 23, 2018 Exceptional Event, Imperial County****Appendix A**

move back inland this evening after 01Z and spread into the valleys with bases lowering to 700-1500 ft MSL with tops to 2000 ft MSL. All coast and valley airports will likely be affected by the stratus. Areas of vis 1-3 SM in BR/HZ in the valleys between 10-17Z Sunday. Clearing to the coast may be a little quicker Sunday morning... approximately 17-19Z.

Mountains/Deserts...Mostly clear with unrestricted VIS through Sunday evening.

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.MARINE...

No hazardous marine weather is expected through Thursday.

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.SKYWARN...

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

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...NONE.

PZ...NONE.

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PUBLIC...MM

AVIATION/MARINE...Brotherton

# IOWA STATE UNIVERSITY

College of Ag

Department of Agronomy

## Department of Agronomy

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□

487

FXUS65 KPSR 232156

AFDPSR

## Area Forecast Discussion

National Weather Service Phoenix AZ

255 PM MST Sat Jun 23 2018

## .SYNOPSIS...

Temperatures closer to seasonal normals will prevail through Monday as high pressure has temporarily weakened. However, another warmup will quickly materialize through the middle of next week with high temperatures forecast to be near 110 degrees across the lower deserts. A dry weather pattern will continue through late next week as richer moisture remains fixed into Mexico.

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## .DISCUSSION...

As shortwave energy over the northern Rockies continues to dig towards the central Plains, a subtropical anti-cyclone center has become further displaced equatorward over the central Baja peninsula. The forecast area has now become positioned along the southern fringes of stronger northwest flow aloft; and 12Z KTWC sounding data sampled H5 heights some 4dm lower than Friday. As a result, early afternoon temperatures were trending some 4F to 6F cooler as the overall deeper thermal ridge relaxes.

Concurrently, the tightening synoptic pressure gradient has been magnified by inland thermal low pressure facilitating a well defined Gulf surge early this morning. Over SE California and far SW Arizona, shallow mid 60 dewpoints persist and likely are making upper 90 ambient temperatures feel even more miserable. Gusty southerly winds have stirred up a few dust plumes (most evident over Mexico per GOES-16 dust RGB composite difference channels) adding to the magnitude of haze and air quality issues. Some mixing of drier air aloft will cut into dewpoints later today while the loosening of the synoptic and thermal gradients will allow winds to slacken somewhat overnight. However, a more complete reversal to these winds and moisture will probably not be accomplished until Monday keeping air quality issues prevalent through much of Imperial County this weekend.

Through the middle of next week, a midtropospheric anti-cyclone will quickly rebuild over the SW Conus with models in excellent agreement depicting central H5 heights near 595dm becoming reestablished over eastern Arizona/western New Mexico. The synoptic pattern and forecast thermal profiles appear nearly identical to the spell of hot weather earlier this week, and very similar temperatures are forecast with many lower elevation areas almost certainly touching the 110 degree mark once again. While current HeatRisk output suggests this will remain just shy of excessive heat thresholds,



**June 23, 2018 Exceptional Event, Imperial County****Appendix A**

these temperatures will still result in some heat-related impacts if proper precautions are not heeded.

In what has remained a common theme thus far in June, the climatologically favored anti-cyclone near the Four Corners that typically supports prolonged periods of excessive heat will instead be short lived as another upper trough develops over the western CONUS. This will act to weaken the anti-cyclone and bring temperatures back closer to seasonal normals by late next week, while amplified ridging (and associated heat) becomes focused east of the Rockies. The operational ECMWF remains more progressive with this western Conus wave feature placing the region under predominant WNW flow through the end of next week. However, NAEFS members give far more support to a slower, deeper GFS solution which may be sufficient to bring better quality moisture northward into eastern Arizona and New Mexico. While the majority of the forecast area will likely have to wait for the first taste of the active part of the monsoon, there are inklings that this evolution could be the first impetus to get more daily high terrain thunderstorms and outflows rolling - perfect timing for the beginning of a new month.

&&

.AVIATION...

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

There are no major aviation weather concerns through tonight. The winds this afternoon will maintain a westerly direction at 10 to 15 knots with a some stronger gusts before subsiding this evening. Otherwise, clear skies and typical diurnal winds will prevail.

Southeast California/Southwest Arizona including KIPL and KBLH:

The strong winds across the area will be of some concern through the early evening. At KIPL, wind gusts up to 15 to 25 kts will be possible and at KBLH wind gusts up to 20 to 30 kts will be possible before subsiding early evening. Otherwise, clear skies will prevail.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...

Tuesday through Saturday:

Temperatures will easily climb above seasonal normals by Tuesday with midweek conditions very similar to the previous hot spell. Only modest cooling will take place by next weekend. Minimum afternoon humidity values will fall back mostly into the single digits with a return of poor to fair overnight recovery. No very strong winds are expected next week, although typical afternoon upslope gustiness will be common around terrain features. There will be a general increase in daily wind speeds beyond the midweek time frame, but nothing approaching critical thresholds. There are still no signs of rain through late next week.

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FXUS66 KSGX 240351

AFDSGX

**Area Forecast Discussion****National Weather Service San Diego CA**

850 PM PDT Sat Jun 23 2018

.SYNOPSIS...

Weak low pressure will alternate with weak high pressure this coming week. Cooler with more coastal clouds this weekend, warmer with less coastal cloudiness Monday through Wednesday, then cooler with more coastal clouds later next week.

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

The coastal **eddy** was king today, holding clouds firmly over coastal areas in typical "June Gloom" fashion. At 8 PM PDT...clouds were beginning to expand farther inland and were solid offshore. The 00Z Miramar **sounding** had a marine layer just over 2K FT deep and topped by a massive 12C **inversion**. Surface pressure gradients KSAN to the deserts had increased to 6-9 MBS, with a corresponding increase in westerly **mtn**/desert winds. Peak gusts at 8 PM PDT were 30-35 MPH in onshore wind-prone areas. No forecast changes this evening.

From previous discussion...

The coastal **eddy** we've got spinning out there is a textbook specimen of what a coastal **eddy** should be. It has produced brisk southerly winds along the coast, prevented clouds from clearing in coastal areas (not just beaches), and even produced spotty **drizzle** this morning. It is poised to push the clouds inland early this evening to fill nearly all of the valleys overnight. Temperatures at 1 pm are 3 to 15 degrees lower in all areas from yesterday's **temps** at this time. The **eddy** and cooling trend come courtesy of a low pressure **trough** moving through the interior West. In addition, a tepid gulf surge brought dew points up and **temps** down in the lower desert, insomuch that Daggett in the high desert is our unusual hot spot today at 105 so far. The coastal **eddy** will continue into Sunday for a very similar day. The marine **inversion** weakens a bit Sunday, so there should be just a little

more sunshine at the coast. High pressure aloft rebuilds Sunday into Tuesday across the Southwest, which will bring warmer weather to all areas and a diminished marine layer. Coastal clouds will probably not make it into inland valleys Tuesday through Thursday mornings. Temperatures will **head** back above average inland on those days. A low pressure **trough** will deepen in timid June fashion across the West Thursday into next weekend. That will reverse the trends, bringing down daytime temperatures and extending the coastal clouds into the valleys each night and morning. A weak **trough** and a weak **ridge** continue to jockey for position over Southern California next weekend, but the result will be little variation around seasonal weather.

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.AVIATION...

240325Z...Coast/Valleys...**Low clouds** spreading inland with **OVC cigs** around 1500 ft **MSL** and tops to 2500 ft **MSL**. **Low clouds** likely to spread up to 25 miles inland by 12Z Sun. Bases could lower to around 1000 ft **MSL** with tops to 2000 ft **MSL** but confidence is low. All coast and valley airports will likely be impacted by low **cigs**. Areas of **vis** 1-3 SM in BR/HZ in the valleys between 10-17Z Sunday. Clearing to the coast may be a little quicker Sunday morning... approximately 17-20Z but **low clouds** may still linger at the beaches into Sun afternoon.

Mountains/Deserts...**Mostly clear** with unrestricted **VIS** through Sunday evening.

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.MARINE...

No hazardous marine weather is expected through Thursday.

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.SKYWARN...

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

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...NONE.

PZ...NONE.

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125

FXUS65 KPSR 240549

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

1049 PM MST Sat Jun 23 2018

.UPDATE...

Updated Aviation section.

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.SYNOPSIS...

Temperatures closer to seasonal normals will prevail through Monday as high pressure has temporarily weakened. However, another warmup will quickly materialize through the middle of next week with high temperatures forecast to be near 110 degrees across the lower deserts. A dry weather pattern will continue through late next week as richer moisture remains fixed into Mexico.

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.DISCUSSION...

As shortwave energy over the northern Rockies continues to dig towards the central Plains, a subtropical anti-cyclone center has become further displaced equatorward over the central Baja peninsula. The forecast area has now become positioned along the southern fringes of stronger northwest flow aloft; and 12Z KTWK sounding data sampled H5 heights some 4dm lower than Friday. As a result, early afternoon temperatures were trending some 4F to 6F cooler as the overall deeper thermal ridge relaxes.

Concurrently, the tightening synoptic pressure gradient has been magnified by inland thermal low pressure facilitating a well defined Gulf surge early this morning. Over SE California and far SW Arizona, shallow mid 60 dewpoints persist and likely are making upper 90 ambient temperatures feel even more miserable. Gusty southerly winds have stirred up a few dust plumes (most evident over Mexico per GOES-16 dust RGB composite difference channels) adding to the magnitude of haze and air quality issues. Some mixing of drier air aloft will cut into dewpoints later today while the loosening of the synoptic and thermal gradients will allow winds to slacken somewhat overnight. However, a more complete reversal to these winds and moisture will probably not be accomplished until Monday keeping air quality issues prevalent through much of Imperial County this weekend.

Through the middle of next week, a midtropospheric anti-cyclone will quickly rebuild over the SW Conus with models in excellent agreement depicting central H5 heights near 595dm becoming reestablished over eastern Arizona/western New Mexico. The synoptic pattern and

**June 23, 2018 Exceptional Event, Imperial County****Appendix A**

forecast thermal profiles appear nearly identical to the spell of hot weather earlier this week, and very similar temperatures are forecast with many lower elevation areas almost certainly touching the 110 degree mark once again. While current HeatRisk output suggests this will remain just shy of excessive heat thresholds, these temperatures will still result in some heat-related impacts if proper precautions are not heeded.

In what has remained a common theme thus far in June, the climatologically favored anti-cyclone near the Four Corners that typically supports prolonged periods of excessive heat will instead be short lived as another upper trough develops over the western CONUS. This will act to weaken the anti-cyclone and bring temperatures back closer to seasonal normals by late next week, while amplified ridging (and associated heat) becomes focused east of the Rockies. The operational ECMWF remains more progressive with this western Conus wave feature placing the region under predominant WNW flow through the end of next week. However, NAEFS members give far more support to a slower, deeper GFS solution which may be sufficient to bring better quality moisture northward into eastern Arizona and New Mexico. While the majority of the forecast area will likely have to wait for the first taste of the active part of the monsoon, there are inklings that this evolution could be the first impetus to get more daily high terrain thunderstorms and outflows rolling - perfect timing for the beginning of a new month.

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.AVIATION...

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

Westerly surface winds will linger past midnight - possibly to near sunrise - before trending to downvalley patterns (mostly easterly). Anticipate a continuation of familiar warm season wind patterns with a transition to upvalley/southwesterly winds by early afternoon (if not sooner). There is a small possibility of lofted dust from southeast California wafting over metro Phoenix by morning for reduced slantwise visibilities. Otherwise, clear skies.

Southeast California/Southwest Arizona including KIPL and KBLH:  
The Gulf surge has weakened quite a bit this evening. There could be some lingering lofted dust for decreased slant visibilities but not like what was seen earlier in the day. Anticipate surface winds to follow familiar warm season patterns (favoring south and southeast directions near and west of the Lower Colorado River Valley). Otherwise, clear skies.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

**June 23, 2018 Exceptional Event, Imperial County****Appendix A**

Tuesday through Saturday:

Temperatures will easily climb above seasonal normals by Tuesday with midweek conditions very similar to the previous hot spell. Only modest cooling will take place by next weekend. Minimum afternoon humidity values will fall back mostly into the single digits with a return of poor to fair overnight recovery. No very strong winds are expected next week, although typical afternoon upslope gustiness will be common around terrain features. There will be a general increase in daily wind speeds beyond the midweek time frame, but nothing approaching critical thresholds. There are still no signs of rain through late next week.

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.SPOTTER INFORMATION STATEMENT...

Spotter activation will not be needed through at least the middle of next week.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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DISCUSSION...MO/Rogers

AVIATION...AJ

FIRE WEATHER...Rogers/MO