

TYPE	DATE	TIME		AGENCY	DESCRIPTION	PAGE
Area Forecast Discussion	1/17/2018	0215	MST	Phoenix	<p>...Model guidance remains very consistent in calling for another progressive Pacific upper trof to move inland and across the desert southwest Friday night through Saturday night; this system still appears to be moisture starved and we do not expect much in terms of precipitation either with the frontal band or behind it. There will be a bit of snow, as snow levels will drop near or even a bit below 4000 feet by Saturday afternoon but accumulations will be minimal and should not pose serious impacts. As the trof approaches from the west on Friday, gradients tighten and we should see breezy to locally windy conditions develop over the western deserts during the afternoon and early evening hours with the strongest winds over favored and higher terrain locations across far southeast California.</p>	51
Area Forecast Discussion	1/17/2018	0952	PST	San Diego	<p>At 9 AM PST, water vapor satellite showed an upper-level ridge centered 700 miles southwest of San Diego with a weak ridge pushing over central California, an upper-level low was around 600 miles off the Washington Coast....An upper-level trough will swing across the region from the aforementioned low Friday through early Saturday. Not much moisture or instability is available with the trough, however light showers (mostly over and west of the mountains) are expected as the system moves through....The front should exit the region by late Friday afternoon, then post-frontal showers are possible over portions of San Diego County Friday night through early Saturday morning. Snow levels start around 7500 ft, then crash to around 4000 ft by Friday night. Most precipitation should end before snow levels drop, therefore snowfall amounts are expected to be fairly light, from a trace to 0.5 inches 5000-7000 ft, and 1-2 inches above 7000 ft. Westerly wind gusts of 35-45 mph will develop across the mountains and deserts Friday, with isolated gusts to 60 mph along desert mountain slopes. Highs will lower 5-10 degrees below normal Friday.</p>	54
Area Forecast Discussion	1/18/2018	0220	MST	Phoenix	<p>The ridge will shift off to the southeast Friday as a deep, cold but somewhat dry Pacific upper trof approaches the southern California coast. Gradients will tighten out west Friday afternoon, leading to breezy or locally windy conditions mainly over far southeast California, with gusts over 30 mph expected in the favored higher terrain locations west of the lower Colorado River valley. Friday should be the warmest of the next 7 days, as a southerly component to the low level flow ahead of the approaching cold front will lead to some warm air advection, pushing deserts highs into the mid to upper 70s in many locations. Model guidance has been very consistent over the past few days regarding this upcoming weather system; both the operational GFS and ECMWF are in lock-step and most of the GEFS ensemble members agree nicely with respect to the track and timing of this upper trof. The open wave nature of this large trof has aided in the models ability to accurately move this system through our area; large closed upper lows are always harder to time</p>	57

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE	
Area Forecast Discussion	1/18/2018	0239	PST	San Diego	The ridge will flatten over CA on Friday as a trough slides east across the Pacific. The trough has a strong jet moving through it and a modest amount of moisture ahead of it. The combination of the right-rear quadrant lift associated with the jet and deep cyclonic flow and vorticity look sufficient for accumulating snowfall over the the higher mountains Friday night into Saturday morning. Accompanying the snow will be gusty westerly winds. A Winter Weather Advisory has been issued.	60
Area Forecast Discussion	1/18/2018	0930	PST	San Diego	Expect another fair and mild winter day today, ahead of a fast-moving trough to kick off the weekend. This system will have limited moisture, but will produce gusty winds in the mountains and deserts, and drop temperatures sufficiently for some light snowfall in the mountains later Friday into early Saturday.	62
Area Forecast Discussion	1/18/2018	1021	MST	Phoenix	.UPDATE...Updated aviation discussions...Southeast California/Southwest Arizona including KIPL and KBLH: Very light winds will continue through tomorrow morning with extended periods of variable flow less than 5 kts. Southerly breezes will begin at KBLH late Friday morning ahead of our next weather system although light winds will continue at KIPL through much of the day before picking up Friday evening . Ceilings will not be of concern through our TAF period with only a FEW to SCT high clouds.	65
Area Forecast Discussion	1/18/2018	1340	MST	Phoenix	A positively tilted Pacific trough will move into the Western States through Friday, reaching southern California as early as Friday evening. Increasing southerly flow ahead of the trough will allow for winds to become gusty across southeast California and southwest Arizona by late Friday afternoon and into the evening hours . Even warmer temperatures are anticipated for Friday before the trough moves into the region.	68
Area Forecast Discussion	1/18/2018	1502	PST	San Diego	...Deeper marine layer will develop later tonight with patchy drizzle developing near the coast and mesas as the cold Pacific trough approaches the region. By Friday afternoon this trough will move through Southern California and bring a period of strong westerly winds over the mountains, and light precipitation for the coast, valleys, and mountains. The deserts will see gusty winds but not likely to reach wind advisory criteria and little or no precipitation . Overall precipitation amounts will be low with this one without good moisture transport parameters. The main concern with the incoming trough, besides the gusty winds, will be light rain causing wet road concerns for the cities, and accumulating snowfall down to around 3500 feet Friday night through Saturday morning (pass level) which could create some slick spots on the roads. Although only a few inches of snow are expected, the slick roads will have the potential to bring significant travel hazards and delays...	71
Area Forecast Discussion	1/18/2018	1949	PST	San Diego	...The forecast remains on track with the main weather story being an incoming upper level trough from the Pacific. This will be a cold system with noticeably colder weather for Southern California Friday and through the weekend. The system will be fast moving and moisture will be limited.	74

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE	
Area Forecast Discussion	1/18/2018	2148	MST	Phoenix	...Farther upstream, trough heights are beginning to dive down the Pac NW coast and the deepening and movement on-shore of that system will be focus for this weekend's weather.	77
Area Forecast Discussion	1/19/2018	0300	MST	Phoenix	Early this morning, NE to SW oriented ridge continued to fold over and move to the southeast across Arizona, as a deep and cold Pacific upper trof approached the California coast....We still do not expect significant wind issues Friday afternoon and evening and our forecast reflect slightly weaker winds than what we called for a couple of days ago. We should see breezy southwest to west winds develop over the western deserts Friday afternoon with some windy conditions over favored higher terrain locations in far SE California, such as Joshua Tree NP. Winds should stay below wind advisory thresholds. Surface cold front should race across the western deserts Friday night, then move across south central Arizona and pass through the Phoenix area during late morning/early afternoon on Saturday.	80
Area Forecast Discussion	1/19/2018	0300	PST	San Diego	...A low pressure system off the West Coast will move inland through California through tonight...then into Arizona Saturday. It will bring stronger onshore flow with areas of strong gusty southwest to west winds in the mountains and deserts...and west to northwest winds across the coastal waters for this afternoon into Saturday....Scattered mostly light showers will spread southward across the area during the afternoon and early evening...then end from the northwest late tonight into Saturday morning. Rainfall is expected to range from less than one tenth inch near the coast to one tenth to one quarter inch in the mountains with local amounts to around one half inch. Snow levels above 7000 feet will lower to around 5500 to 6000 feet during the late afternoon...to around 4500 feet during the evening...and around 3500 feet by Saturday morning with a few inches of snowfall...mostly above 4500 feet	83
Area Forecast Discussion	1/19/2018	0535	MST	Phoenix	UPDATE...Updated Aviation and Fire Weather sections...Southeast California/Southwest Arizona including KIPL and KBLH: Surface winds will be light and variable this morning before southerly winds develop this afternoon ahead of an approaching cold front (most noticeably over the Lower Colorado River Valley). Anticipate winds will be strongest between 03Z-09Z tonight as the front passes through with gusts of 20-30kts. Winds will weaken after FROPA before strengthening again in the afternoon. Some local patchy blowing dust is possible.	86
Area Forecast Discussion	1/19/2018	0846	PST	San Diego	...Clouds will gradually increase into this afternoon as a weak storm moves into Southern California. This wave will feature rain, snow, and winds, but not a whole lot of of any. Winds will increase during the day in all areas, but diminish west of the mountains tonight. Showers will begin this afternoon at the coast and spread east into the mountains overnight....The moisture with this storm is greatest ahead of most of the dynamics and cold air aloft, and that means any snow showers lower in the mountains late tonight into Saturday will be very light....Dry northwest flow on Saturday will help skies clear out and breezy winds to continue in the mountains, deserts and coastal waters.	89

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE	
Area Forecast Discussion	1/19/2018	1050	MST	Phoenix	<p>UPDATE...Updated Aviation and Fire Weather sections...Southeast California/Southwest Arizona including KIPL and KBLH: An approaching cold front will gradually increase wind speeds at KBLH today with a more abrupt start at KIPL this evening. The strongest winds (gusts 20-30kts) look to be between 04-10Z tonight ahead of the front with winds weakening after the frontal passage. No precipitation is expected with the front but a FEW low clouds (5-8kft) and isolated areas of blowing dust are possible. Wind speeds will increase again tomorrow afternoon as higher momentum air mixes down to the surface with the daytime heating.</p>	92
Area Forecast Discussion	1/19/2018	1320	PST	San Diego	<p>Low clouds continue to ebb and flow near the coast, but thicker higher clouds are moving through L.A. and into Orange County. These will continue to increase from northwest to southeast this afternoon as a weak storm moves into Southern California. This wave will feature rain, snow, and winds, but not a whole lot of any. Winds are already quite brisk along the mountain ridgetops, with some gusts over 30 mph. These will increase this afternoon and evening in all areas, but diminish west of the mountains tonight. Showers will begin later this afternoon at the coast and spread east into the mountains overnight....Dry northwest flow on Saturday will help skies clear out and breezy winds to continue in the mountains, deserts and coastal waters. It will be quite cool as well.</p>	95
Area Forecast Discussion	1/19/2018	1332	MST	Phoenix	<p>...Bigger weather changes are on the horizon, however, as an upstream trough is digging southeastward along the California coast. The edge of colder air aloft was observed in the morning sounding from Vandenberg AFB, and this will continue to rapidly spread eastward. Surface observations show the position of the cold front entering the Los Angeles Basin and Mojave Desert of California as of 1:30 PM MST. The current timing of the cold front suggests that it will enter southeast California early Saturday morning, before spreading into south-central Arizona by late Saturday morning. This will substantially limit diurnal heating tomorrow with persistent low-level cold advection occurring throughout the day. Winds will also kick up a bit due to the relatively strong low-level thermal gradient in place, but speeds are expected to remain below criteria.</p>	98
Area Forecast Discussion	1/19/2018	2125	PST	San Diego	<p>While most areas were reporting light rain or drizzle this evening, a line of stronger echoes were focused over the Inland Empire between 8-9 PM this evening...The highest amounts have fallen over the foothills and lower mountain slopes with 0.10-0.20" at most other locations...</p>	101
Area Forecast Discussion	1/19/2018	2214	MST	Phoenix	<p>.UPDATE...Updated Aviation Discussion....Southeast California/Southwest Arizona including KIPL and KBLH: With a strong cold front currently sweeping through southeast CA expect breezy to occasionally windy westerly winds near 14kt gusting to 20-25kt at KIPL. Winds at KBLH are expected to be southwesterly at 8-12kt tonight becoming westerly to northwesterly and breezy by early to mid morning at 8-12kt gusting to 17-20kt. Expect mostly cloudy skies tonight with high cloud CIGS and FEW-SCT low to mid clouds at 4-10K.</p>	104

TYPE	DATE	TIME		AGENCY	DESCRIPTION	PAGE
Urgent Weather Message	1/20/2018	0050	Mmst	Phoenix	Imperial County Southwest-Imperial County West-Imperial Valley-Including the cities of Mountain Spring, Coolidge Springs, Salton City, Winona, Coyote Wells, Ocotillo, Plaster City, El Centro, Calexico, Alamorio, and Brawley ... WIND ADVISORY IN EFFECT UNTIL 4 AM PST SATURDAY ...The National Weather Service in Phoenix has issued a Wind Advisory, which is in effect until 4 AM PST Saturday. * AFFECTED AREA...Southwestern Imperial County including the Imperial Valley and the communities of Imperial and El Centro. * TIMING...Through 4am PST. * WINDS...West winds 20 to 35 mph with gusts to around 45 mph at times. * IMPACTS...Strong wind gusts will produce patchy dense blowing dust which will lead to sharply restricted visibility and hazardous driving conditions.	107
Area Forecast Discussion	1/20/2018	0255	MST	Phoenix	At 2 am this morning, the deep and cold open wave Pacific trof was bearing in on the southern California coast; the surface cold front had already moved into the far southeast CA deserts and had just passed through the Imperial Valley. Wind gusts to around 50 mph occurred briefly in parts of El Centro associated with the frontal passage; due to the unexpected strong winds we issued a Wind Advisory for southwest Imperial County thru 12Z this morning. So far it has been a very dry frontal passage and the surface radar mosaic showed little if any echo over the western deserts. I	108

TYPE	DATE	TIME		AGENCY	DESCRIPTION	PAGE
Urgent Weather Message	1/20/2018	0355	PST	San Diego	<p>...WINDY FOR LATE MORNING THROUGH THE AFTERNOON... ...AREAS OF FROST FOR PORTIONS OF THE INLAND EMPIRE FOR LATE TONIGHT INTO SUNDAY MORNING... .A low pressure system moving through Southern California into Arizona today will bring stronger onshore flow today with stronger and gusty west to northwest winds during the late morning through the afternoon. Winds will be strongest in the mountains and deserts...and in coastal and valley areas of San Diego County. Behind this low pressure system...a cold dry atmosphere and radiational cooling will bring areas of frost to colder wind sheltered portions of the Inland Empire late tonight into early Sunday morning.....San Bernardino County Mountains-Riverside County Mountains-San Diego County Mountains-Apple and Lucerne Valleys-Coachella Valley-San Diego County Deserts-San Gorgonio Pass Near Banning- Including the cities of Julian, Pine Valley, Indio, Palm Springs, Cathedral City, Palm Desert, Palm Desert Country, La Quinta, Coachella, Borrego Springs, and Desert Hot Springs...WIND ADVISORY IN EFFECT FROM 10 AM THIS MORNING TO 6 PM PSTTHIS EVENING...</p> <p>The National Weather Service in San Diego has issued a Wind Advisory...which is in effect from 10 AM this morning to 6 PM PST this evening.</p> <p>* Winds...Areas of west to northwest winds 20 to 30 mph with gusts to 45 mph. Isolated gusts to 55 mph.</p> <p>* Timing...Strongest winds during the late morning through the afternoon...then decreasing by early evening.</p> <p>* Location...Strongest winds from mountain ridge tops...along desert slopes of the mountains...into adjacent desert areas.</p> <p>* Visibility...Locally reduced in blowing sand and blowing dust in the deserts.</p> <p>* Impacts...Driving will be hazardous for high profile vehicles. Watch for broken tree limbs and other debris on roadways.</p>	111
Area Forecast Discussion	1/20/2018	0431	PST	San Diego	<p>A cold low pressure system is centered near Point Conception early this morning. It will move into Arizona by late afternoon...and into the central and southern Rockies Sunday. Radar and surface reports show scattered showers continuing early this morning with the greatest coverage from the valleys into the mountains. Snow levels have lowered to 3000 to 3500 feet. The coldest air at mid levels will move across the area this with briefly more intense showers possible. Scattered showers will continue into this morning...then decrease from the northwest during the late morning and afternoon. Isolated stronger showers with brief heavy downpours are possible throughthis morning. The snow level will be near 3000 to 3500 feet early...Strong and gusty west winds have continued overnight in the mountains with strongest gusts near mountain ridge tops onto the desert slopes of the mountains with the strongest gust overnight of 63 mph at Volcan Mountain in the San Diego County mountains. During the late morning through the afternoon...the stronger winds in the mountains will expand into portions of the deserts...and stronger winds across the coastal waters will spread inland across coastal and valley areas of San Diego County and portions of southern Orange County with strongest winds near the coast.</p>	114

TYPE	DATE	TIME	AGENCY	DESCRIPTION	PAGE	
Area Forecast Discussion	1/20/2018	0507	MST	Phoenix	.UPDATE... Updated Aviation and Fire Weather sections....Southeast California/Southwest Arizona including KIPL and KBLH: Very strong west winds over Imperial County will decrease markedly by 14Z this morning. Elsewhere, winds haven't been nearly as strong (gusting 20-25 kts). Anticipate strengthening of westerly winds after 18Z with gusts of 25-30 kts common. Local blowing dust is possible but too isolated to depict in TAFs. Most areas will have cloud bases AOA FL100 except for La Paz County which will have some local ceilings of FL070-090 with isolated showers until about 19Z.	117
Area Forecast Discussion	1/20/2018	0845	PST	San Diego	.MORNING UPDATE... The forecast was updated this morning to add isolated thunderstorms in the San Diego County Valleys and Mountains with marginal instability indicated on the hi-res models and morning sounding. Scattered showers and isolated thunderstorms will continue through midday and then decrease through the afternoon as the shortwave trough moves east of the area. No other changes were made to the forecast at this time.	121
Area Forecast Discussion	1/20/2018	1142	MST	Phoenix	.UPDATE... Updated Aviation and Fire Weather sections....Southeast California/Southwest Arizona including KIPL and KBLH: Strong winds, although intermittent, will continue through the afternoon before subsiding after sunset. The strong winds may be able to loft enough dust to cause some slantwise visibility issues. Ceilings should remain at or above 10k feet although some areas east of the Colorado River may drop an additional few thousand feet lower. Most of the shower activity will remain to the east but isolated showers or thunderstorms are possible this afternoon.	125
Urgent Weather Message	1/20/2018	1419	PST	San Diego	...San Bernardino County Mountains-Riverside County Mountains- San Diego County Mountains -Apple and Lucerne Valleys- Coachella Valley-San Diego County Deserts -San Gorgonio Pass Near Banning- Including the cities of Julian, Pine Valley, Indio, Palm Springs, Cathedral City, Palm Desert, Palm Desert Country, La Quinta, Coachella, Borrego Springs, and Desert Hot Springs... WIND ADVISORY REMAINS IN EFFECT UNTIL 6 PM PST THIS EVENING... * Winds...Areas of west to northwest winds 20 to 25 mph with gusts to 40 mph. * Timing...decreasing this evening. * Location...Strongest winds from mountain ridge tops...along desert slopes of the mountains...into adjacent desert areas. * Visibility...May be reduced in blowing sand and blowing dust in the deserts. * Impacts...Driving will be hazardous for high profile vehicles. Watch for broken tree limbs and other debris on roadways.	129
Area Forecast Discussion	1/20/2018	1441	PST	San Diego	...A departing vigorous upper level trough now moving into Arizona with subsidence helping to squash out the few remaining rain and snow showers in SoCal. Earlier we did have some brief heavy snow showers in the mountains which dropped a coating of snow on some mountain roads, causing slippery conditions for travelers. Breezy conditions will remain early this evening and the wind advisories will remain in effect until 6 pm....	131

January 20, 2018 Exceptional Event, Imperial County

Appendix A

TYPE	DATE	TIME		AGENCY	DESCRIPTION	PAGE
Urgent Weather Message	1/20/2018	1746	PST	San Diego	San Bernardino County Mountains-Riverside County Mountains- San Diego County Mountains-Apple and Lucerne Valleys- Coachella Valley-San Diego County Deserts- San Gorgonio Pass Near Banning-Including the cities of Julian, Pine Valley, Indio, Palm Springs,Cathedral City, Palm Desert, Palm Desert Country, La Quinta, Coachella, Borrego Springs, and Desert Hot Springs ...WIND ADVISORY WILL EXPIRE AT 6 PM PST THIS EVENING... Winds have weakened significantly, so the Wind Advisory for the mountains and deserts will be allowed to expire at 6 PM.	134
Area Forecast Discussion	1/20/2018	2039	PST	San Diego	At 830 PM...The trough that brought unsettled weather over the last 36 hours had pushed eastward, and was centered over northern AZ. Northwest flow behind the trough was bringing drying to the mid and upper levels (evident on the 00Z NKX sounding)....	136

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FXUS65 KPSR 170916

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

215 AM MST Wed Jan 17 2018

.SYNOPSIS...

High pressure will prevail across the region most of the week with above normal temperatures and dry conditions. A notable storm system will move into the Southwest late Friday and into Saturday. While it does not look like a very wet system at this time, it will result in increasing winds and a significant drop in temperatures. After a cool Saturday and Sunday, temperatures will slowly rebound heading into next week.

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.DISCUSSION...

At 2 am this morning, a weak and dry shortwave was embedded in northwest flow aloft, and dropping southeastward through eastern Arizona. IR imagery showed variable amounts of mainly high clouds moving across the area; some associated with the shortwave and other bands moving through the upper ridge situated to our west. The only real impact of the passing wave will be to drop temperatures a few degrees over south central Arizona; Phoenix is expected to top out at just 72 degrees today. The upper ridge is expected to move east and into Arizona Thursday, bringing some more high clouds but allowing high temperatures to rise slightly, with many of the lower deserts to reach the middle 70s under partly sunny skies.

Model guidance remains very consistent in calling for another progressive Pacific upper trof to move inland and across the desert southwest Friday night through Saturday night; this system still appears to be moisture starved and we do not expect much in terms of precipitation either with the frontalband or behind it. There will be a bit of snow, as snow levels will drop near or even a bit below 4000 feet by Saturday afternoon but accumulations will be minimal and should not pose serious impacts. As the trof approaches from the west on Friday, gradients tighten and we should see breezy to locally windy conditions develop over the western deserts during the afternoon and early evening hours with the strongest winds over favored and higher terrain locations across far southeast California. Friday will likely be the warmest day of the week; warm advection ahead of the cold front will push desert highs into the middle or even upper 70s. We are calling for Phoenix to hit 77 degrees Friday despite the presence of increasing and thickening mid and high clouds.

The front will race inland and across the western deserts Friday night and push through south central Arizona during the day on

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

Saturday; POPS will stay low Friday night - only in the slight chance category over south-central/southwest Arizona - and on Saturday they climb into the chance category over higher terrain areas to the east of Phoenix. On Saturday evening, as the main trough axis slides into New Mexico, considerable clearing is expected from Phoenix westward, although there will be a lingering chance of mainly evening rain and snow showers over southern Gila County, mainly a result of instability as colder air moves in aloft. High temperatures will fall sharply Saturday with the lower deserts dropping into the low to mid 60s and there will be some central deserts that struggle to even reach 60 degrees. We will call for a high of just 60 degrees in Phoenix with many locales, especially far north and east Phoenix, staying in the mid to upper 50s.

For Sunday through Tuesday, a drier west to northwest flow aloft will settle into the desert southwest; rain chances will be virtually nil but there will be occasional mainly high clouds passing overhead. High temperatures will be slow to rebound, staying in the 60s for the most part each day. It will be rather cold Sunday morning as clearing skies and drier air moving in will allow for good radiational cooling. Many of the lower deserts will fall into the 30s but at this time we should stay a bit above freeze warning thresholds. There will be little change with the low temperatures on Monday morning and only minor warming the following night.

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.AVIATION...

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

A weak weather disturbance will shift into New Mexico overnight. It will leave behind thin cirrus with no significant clouds otherwise. Surface winds will be light through Wednesday (favoring easterly directions over south-central AZ and north-northeast over SE CA and SW AZ). One exception may be foothill areas on the northern and eastern fringes of metro Phoenix that may have localized easterly breeziness overnight.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Thursday through Monday:

Above normal temperatures will continue on Thursday as the forecast area remains dry. Winds will generally remain light as well. Afternoon minimum humidity will range between the upper teens and mid 20s Thursday, even for the higher elevations, while overnight recoveries will range between 40-60%. Breezy/windy conditions look to materialize Friday/Friday night as a relatively dry weather system moves through our area. Clouds and humidity levels will increase Friday. The weather system may bring a isolated to

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

scattered showers to south central Arizona later Friday night through Saturday evening with some higher elevation snow possible east of Phoenix. It will also turn much cooler Saturday into Sunday behind a passing cold front with high temperatures into the low to mid 60s. It will turn drier over the weekend as minimum RH values fall into the teens to around 20 percent. It will be less windy Saturday, but local breezes from the west to northwest will still occur mainly during the afternoon. Even less wind is expected Sunday. On Monday, high pressure aloft will bring dry and warmer conditions with near seasonal normal high temperatures and minimum RH values in the mid teens over the deserts.

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

DISCUSSION...CB

AVIATION...AJ

FIRE WEATHER...Wilson/CB

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FXUS66 KSGX 171752

AFDSGX

Area Forecast Discussion

National Weather Service San Diego CA

952 AM PST Wed Jan 17 2018

.SYNOPSIS...

A high pressure ridge aloft will keep our weather fair and mild through Thursday with above average temperatures and patchy fog along the coast. High surf will continue into Saturday. A fast-moving low pressure trough will drag a cold front across the region on Friday, with gusty westerly winds and scattered showers. Precipitation will be light. Fair, dry and mild again over the weekend and into next week.

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

At 9 AM PST, water vapor satellite showed an upper-level ridge centered 700 miles southwest of San Diego with a weak ridge pushing over central California, an upper-level low was around 600 miles off the Washington Coast. Visible satellite showed few high clouds streaming over the region, and patchy dense fog along the coast. Fog will clear from the coast over the next hour. Highs will remain around 5-10 degrees above normal through Thursday under weak ridging aloft and weak offshore flow near the foothills. Patchy dense fog is possible along the coast again tonight.

An upper-level trough will swing across the region from the aforementioned low Friday through early Saturday. Not much moisture or instability is available with the trough, however light showers (mostly over and west of the mountains) are expected as the system moves through. Around 0.05-0.25 inches of precipitation is expected, with highest amount over and near the mountains. Isolated locations in the San Diego County mountains could receive up to 0.50 inches. High-res models show showers developing first over northern areas mid-Friday morning, and into southern areas by late morning. Drizzle may develop earlier before showers move through. The morning commute in San Diego and Riverside Counties should not be greatly affected at this time. The front should exit the region by late Friday afternoon, then post-frontal showers are possible over portions of San Diego County Friday night through early Saturday morning. Snow levels start around 7500 ft, then crash to around 4000 ft by Friday night. Most precipitation should end before snow levels drop, therefore snowfall amounts are expected to be fairly light, from a

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

trace to 0.5 inches 5000-7000 ft, and 1-2 inches above 7000 ft. Westerly wind gusts of 35-45 mph will develop across the mountains and deserts Friday, with isolated gusts to 60 mph along desert mountain slopes. Highs will lower 5-10 degrees below normal Friday.

Northwest flow aloft will help keep highs below normal through Monday, then weak ridging will increase high temperatures to around 5 degrees above normal by next Wednesday. Next week looks to be dry at this time.

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.AVIATION...

171741Z...Coast...Through 18/0300 UTC, SCT clouds AOA 20000 ft msl and P6SM vis. 18/0300-1500 UTC, patchy dense fog/low stratus may gradually develop within 3 sm of the coast, with bases 100-300 ft msl, tops 500 ft msl, and local vis AOB 1/4 sm. Confidence in KSAN, KCRQ or KSNA being impacted with dense fog is low.

Valleys/Mountains/Deserts...P6SM vis and SCT clouds AOA 20000 ft msl will continue through Thursday morning.

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.MARINE...

A shallow marine layer is producing some patchy dense fog over the coastal waters this morning. This fog should lift or burn off later this morning. However, a shallow marine layer will persist tonight, with more patchy dense fog possible.

A storm system moving through California will bring 10+ foot seas and possible gale-force winds late Friday through Saturday. A Gale Watch may need to be issued.

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.BEACHES...

Latest nearshore buoy reports indicate that the west-northwest swell from 280 degrees has been steady at around 4-7 feet/14-15 seconds, and surf height observations along the coast show high surf of 5-8 feet continuing this morning. This swell should gradually lower today through Thursday, with surf heights likely falling below 7 feet by early Thursday. However, Wave Watch 3 shows another large west-northwest swell from 280 degrees moving in Thursday night, peaking at 11 feet/18 seconds Friday, and then gradually lowering Saturday into Sunday. This will bring another round of high surf, with surf heights of 5-9 feet with sets 10-12 feet. Strong rip currents will be a concern throughout the period. A High Surf Advisory remains in effect until 8 PM Saturday.

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.SKYWARN...

January 20, 2018 Exceptional Event, Imperial County

Appendix A

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

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...High Surf Advisory until 8 PM PST Saturday for Orange County Coastal Areas-San Diego County Coastal Areas.

PZ...NONE.

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PUBLIC...JJT

AVIATION/MARINE/BEACHES...Harrison

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FXUS65 KPSR 180922

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

220 AM MST Thu Jan 18 2018

.SYNOPSIS...

High pressure will prevail across the region through Friday with above normal temperatures and dry conditions. A notable storm system will move into the Southwest late Friday and into Saturday.

While it still does not look like a very wet system, it will result in increasing winds and a significant drop in temperatures. After a cool Saturday and Sunday, temperatures will slowly rebound heading into the first part of next week.

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.DISCUSSION...

At 2 am this morning, skies were basically clear across the area although there were a few high clouds starting to approach far western Arizona; they should thin as they move through the ridge and into Arizona. For today, expect the high pressure ridge just to our west to slide east and squarely overhead allowing slight warming as most of the lower deserts reach the low to mid 70s under mostly to partly sunny skies. The ridge will shift off to the southeast Friday as a deep, cold but somewhat dry Pacific upper trof approaches the southern California coast. Gradients will tighten out west Friday afternoon, leading to breezy or locally windy conditions mainly over far southeast California, with gusts over 30 mph expected in the favored higher terrain locations west of the lower Colorado River valley. Friday should be the warmest of the next 7 days, as a southerly component to the low level flow ahead of the approaching cold front will lead to some warm air advection, pushing deserts highs into the mid to upper 70s in many locations.

Model guidance has been very consistent over the past few days regarding this upcoming weather system; both the operational GFS and ECMWF are in lock-step and most of the GEFS ensemble members agree nicely with respect to the track and timing of this upper trof. The open wave nature of this large trof has aided in the models ability to accurately move this system through our area; large closed upper lows are always harder to time. A look at IVT (Integrated Vapor Transport) continues to show a weak atmospheric river moving into Arizona ahead of the trof Friday into Friday night, but we will not be seeing a lot of moisture spreading into the area and QPF values will stay very low over the deserts. SREF plumes output for Phoenix show a few members picking up less than 0.05 inches on Saturday and that's about it.

We still expect the cold front to race through the western deserts

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

Friday night, then move through south-central Arizona during the day on Saturday; POPs will stay low and in the slight chance category on Friday night, and will increase as the day wears on Saturday; by late morning to early afternoon the best chances for rain and mountain snow will focus over the higher terrain areas to the north and east of Phoenix. Although the snow level will drop to around 4000 feet by Saturday afternoon, given the very low QPF expected there will not be any significant snow across southern Gila County and no real impacts are expected. Following the front on Saturday, much cooler air filters across the deserts resulting in high temperature readings mostly in the upper 50s to low 60s. The greater Phoenix area will struggle to reach 60 on Saturday, the forecast high of 59 is nearly 10 degrees below the seasonal normal of 68.

After skies clear from the west overnight Saturday night, the much cooler and drier air combined with good radiational cooling potential will result in a cold morning with many lower deserts dropping into the 30s. Phoenix should see a low Sunday morning of about 39 degrees; although some of the outlying deserts especially over portions of northwest Pinal County will drop to near freezing we do not expect conditions to be quite cold enough to warrant the issuance of a Freeze Warning. The following morning, Monday morning, will have similarly cold temperatures with Phoenix again expected to have a low of 39 degrees.

Otherwise, for Sunday into the middle of next week, a drier west to northwest flow aloft will overspread the desert southwest; gradually rising heights will result in a modest warming trend. Highs Sunday will stay quite cool with Phoenix only reaching to around 61, and then each day will see a slow bump-up with highs pretty much staying in the 60s through Tuesday. The low 70s should return by next Wednesday. For the most part mostly sunny days and clear nights are expected but there will be occasional high clouds moving through the area during the extended forecast period.

&&

.AVIATION...

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

Dry and relatively quiet weather conditions forecast for the terminals through Thursday as the region falls under northerly flow aloft. Patches of thin cirrus will drift in from the north periodically. Phoenix area winds to follow typical diurnal tendencies, with another period of elevated easterly winds lasting through midday tomorrow. Through SE California, winds will be light taking up calm and VRB observations with subtle pulls to W and NW headings.

Aviation Discussion not updated for amended TAFs.

&&

January 20, 2018 Exceptional Event, Imperial County

Appendix A

.FIRE WEATHER...

Friday through Tuesday:

A cold front will rapidly move through the districts Friday night and Saturday resulting in cooler than average conditions over the weekend and into early next week. Wind gusts in excess of 30 mph will be common in SE California following the frontal passage Friday evening with weaker wind speeds further to the east into Arizona. A few light showers will be possible over higher terrain locations Friday night and Saturday (both rain and snow), however wetting amounts will be highly unlikely. Despite the cooler weather, minimum humidity levels will still fall into a 15-25% range with good overnight recovery. Temperature will moderate into the middle of next week though dry weather looks to continue.

&&

.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...CB

AVIATION...NoIte

FIRE WEATHER...MO

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878

FXUS66 KSGX 181039

AFDSGX

Area Forecast Discussion

National Weather Service San Diego CA

239 AM PST Thu Jan 18 2018

.SYNOPSIS...

Expect another fair and mild winter day today, ahead of a fast-moving trough to kick off the weekend. This system will have limited moisture, but will produce gusty winds in the mountains and deserts, and drop temperatures sufficiently for some light snowfall in the mountains later Friday into early Saturday. It will be noticeably cooler all areas through Sunday, then a bit warmer into the first half of next week as afternoon high temperatures slowly return to near average values.

&&

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

Another batch of high clouds was drifting south over the region at 2 AM PST. Patchy fog was visible at times over the coastal waters just offshore of San Diego County. Weak offshore sfc pressure gradients were holding from the deserts supporting easterly winds over the mts/foothills of San Diego County with local gusts to 25 MPH. The sfc dewpoints were a bit lower along the coast this morning, so drainage winds, coupled with the offshore gradient and high clouds should keep any fog threat to a minimum.

It looks like another fantastic day is on tap across SoCal, thanks to a high pressure ridge aloft. Afternoon temperatures will again be running some 8 to 14 degrees F above average just inland from the coast. The ridge will flatten over CA on Friday as a trough slides east across the Pacific. The trough has a strong jet moving through it and a modest amount of moisture ahead of it. The combination of the right-rear quadrant lift associated with the jet and deep cyclonic flow and vorticity look sufficient for accumulating snowfall over the the higher mountains Friday night into Saturday morning. Accompanying the snow will be gusty westerly winds. A Winter Weather Advisory has been issued. Weekend travelers should check the latest forecast and road conditions before heading out. For details please see LAXWSWSGX.

The colder air associated with the trough will linger through the weekend, followed by modest warming early next week as the trough drifts east and heights/thickness recover. The 00Z GFS/ECMWF runs bring another trough/inside slider across CA later next week which will likely rev up winds and the marine layer again, but at this

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

time, any precip looks spotty unless it can manage to dig farther to the west than currently forecast.

&&

.AVIATION...

181000Z...Coast...Patchy fog impacting coastal airports is remotely possible this morning through 15Z. If and where it occurs, bases would be 200-400 feet msl with vis below 1sm. Also areas of vis 3-5sm. Low clouds will develop and move ashore after 03Z this evening. Low bases around 500 feet will rise and spread into some valleys overnight. Across the region, VFR conditions with variable thin high clouds today and tonight.

&&

.MARINE...

Isolated patches of fog with visibility 1nm or less this morning. A storm arriving Friday will bring hazardous winds and seas late Friday through Saturday. Refer to the Gale Watch for details.

&&

.BEACHES...

Northwest swell and surf will decrease today, but increase again tonight through Friday. High surf will peak Friday night into Saturday morning before diminishing late Saturday. Consult the High Surf Advisory for details.

&&

.SKYWARN...

Skywarn activation will not be needed through early next week.

&&

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...Winter Weather Advisory from 5 PM Friday to noon PST Saturday for Riverside County Mountains-San Diego County Mountains.

Winter Weather Advisory from 2 PM Friday to noon PST Saturday for San Bernardino County Mountains.

High Surf Advisory until 8 PM PST Saturday for Orange County Coastal Areas-San Diego County Coastal Areas.

PZ...Gale Watch from Friday afternoon through Saturday evening for Coastal Waters from San Mateo Point to the Mexican Border and out to 30 nm-Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

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FXUS66 KSGX 181734 AAA

AFDSGX

Area Forecast Discussion

National Weather Service San Diego CA

930 AM PST Thu Jan 18 2018

.MORNING UPDATE...

Low clouds and fog near the SD Coast this morning due a quick eddy spin up earlier this morning. Low clouds and patchy fog will continue through midday and should scatter out by early afternoon. An update has been sent this morning to the forecast to account for this rapid change in the forecast. Otherwise the previous forecast remains in place.

&&

.SYNOPSIS...

Expect another fair and mild winter day today, ahead of a fast-moving trough to kick off the weekend. This system will have limited moisture, but will produce gusty winds in the mountains and deserts, and drop temperatures sufficiently for some light snowfall in the mountains later Friday into early Saturday. It will be noticeably cooler all areas through Sunday, then a bit warmer into the first half of next week as afternoon high temperatures slowly return to near average values.

&&

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

(previous)

Another batch of high clouds was drifting south over the region at 2 AM PST. Patchy fog was visible at times over the coastal waters just offshore of San Diego County. Weak offshore sfc pressure gradients were holding from the deserts supporting easterly winds over the mts/foothills of San Diego County with local gusts to 25 MPH. The sfc dewpoints were a bit lower along the coast this morning, so drainage winds, coupled with the offshore gradient and high clouds should keep any fog threat to a minimum.

It looks like another fantastic day is on tap across SoCal, thanks to a high pressure ridge aloft. Afternoon temperatures will again be running some 8 to 14 degrees F above average just inland from the coast. The ridge will flatten over CA on Friday as a trough slides east across the Pacific. The trough has a strong jet moving through it and a modest amount of moisture ahead of it. The combination of the right-rear quadrant lift associated with the jet

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

and deep cyclonic flow and vorticity look sufficient for accumulating snowfall over the the higher mountains Friday night into Saturday morning. Accompanying the snow will be gusty westerly winds. A Winter Weather Advisory has been issued. Weekend travelers should check the latest forecast and road conditions before heading out. For details please see LAXWSWSGX.

The colder air associated with the trough will linger through the weekend, followed by modest warming early next week as the trough drifts east and heights/thickness recover. The 00Z GFS/ECMWF runs bring another trough/inside slider across CA later next week which will likely rev up winds and the marine layer again, but at this time, any precip looks spotty unless it can manage to dig farther to the west than currently forecast.

&&

.AVIATION...

181716Z...COAST/VALLEYS...Very low clouds and fog over the coastal waters and and locally onshore near KSAN will impact KSAN south with bases 200-400 feet MSL with tops to near 800 feet MSL and visibilities below 1SM in fog til about 18/18Z. SCT-BKN low clouds with bases around 600-900 feet MSL by around 18/18Z. After around 19/00Z this afternoon the low clouds will develop and move locally into the valleys overnight. The risk of an early arrival of the low clouds this afternoon is moderate so the probability of low cloud arrival near sundown is moderate.

Mountains/Deserts...Variable high clouds today and tonight then increasing clouds by midday Friday, mainly mountain areas.

&&

.MARINE...

Isolated patches of fog with visibility 1nm or less this morning. A storm arriving Friday will bring hazardous winds and seas late Friday through Saturday. Refer to the Gale Watch for details.

&&

.BEACHES...

Northwest swell and surf will decrease today, but increase again tonight through Friday. High surf will peak Friday night into Saturday morning before diminishing late Saturday. Consult the High Surf Advisory for details.

&&

.SKYWARN...

Skywarn activation will not be needed through early next week.

&&

January 20, 2018 Exceptional Event, Imperial County

Appendix A

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...Winter Weather Advisory from 5 PM Friday to noon PST Saturday for Riverside County Mountains-San Diego County Mountains.

Winter Weather Advisory from 2 PM Friday to noon PST Saturday for San Bernardino County Mountains.

High Surf Advisory until 8 PM PST Saturday for Orange County Coastal Areas-San Diego County Coastal Areas.

PZ...Gale Watch from Friday afternoon through Saturday evening for Coastal Waters from San Mateo Point to the Mexican Border and out to 30 nm-Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

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PUBLIC...JAD/JMB

AVIATION/MARINE/BEACHES...Small

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268

FXUS65 KPSR 181721

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

1021 AM MST Thu Jan 18 2018

.UPDATE...Updated aviation discussions

&&

.SYNOPSIS...

High pressure will prevail across the region through Friday with above normal temperatures and dry conditions. A notable storm system will move into the Southwest late Friday and into Saturday.

While it still does not look like a very wet system, it will result in increasing winds and a significant drop in temperatures. After a cool Saturday and Sunday, temperatures will slowly rebound heading into the first part of next week.

&&

.DISCUSSION...

At 2 am this morning, skies were basically clear across the area although there were a few high clouds starting to approach far western Arizona; they should thin as they move through the ridge and into Arizona. For today, expect the high pressure ridge just to our west to slide east and squarely overhead allowing slight warming as most of the lower deserts reach the low to mid 70s under mostly to partly sunny skies. The ridge will shift off to the southeast Friday as a deep, cold but somewhat dry Pacific upper trof approaches the southern California coast. Gradients will tighten out west Friday afternoon, leading to breezy or locally windy conditions mainly over far southeast California, with gusts over 30 mph expected in the favored higher terrain locations west of the lower Colorado River valley. Friday should be the warmest of the next 7 days, as a southerly component to the low level flow ahead of the approaching cold front will lead to some warm air advection, pushing deserts highs into the mid to upper 70s in many locations.

Model guidance has been very consistent over the past few days regarding this upcoming weather system; both the operational GFS and ECMWF are in lock-step and most of the GEFS ensemble members agree nicely with respect to the track and timing of this upper trof. The open wave nature of this large trof has aided in the models ability to accurately move this system through our area; large closed upper lows are always harder to time. A look at IVT (Integrated Vapor Transport) continues to show a weak atmospheric river moving into Arizona ahead of the trof Friday into Friday night, but we will not be seeing a lot of moisture spreading into the area and QPF values will stay very low over the deserts. SREF plumes output for Phoenix

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

show a few members picking up less than 0.05 inches on Saturday and that's about it.

We still expect the cold front to race through the western deserts Friday night, then move through south-central Arizona during the day on Saturday; POPs will stay low and in the slight chance category on Friday night, and will increase as the day wears on Saturday; by late morning to early afternoon the best chances for rain and mountain snow will focus over the higher terrain areas to the north and east of Phoenix. Although the snow level will drop to around 4000 feet by Saturday afternoon, given the very low QPF expected there will not be any significant snow across southern Gila County and no real impacts are expected. Following the front on Saturday, much cooler air filters across the deserts resulting in high temperature readings mostly in the upper 50s to low 60s. The greater Phoenix area will struggle to reach 60 on Saturday, the forecast high of 59 is nearly 10 degrees below the seasonal normal of 68.

After skies clear from the west overnight Saturday night, the much cooler and drier air combined with good radiational cooling potential will result in a cold morning with many lower deserts dropping into the 30s. Phoenix should see a low Sunday morning of about 39 degrees; although some of the outlying deserts especially over portions of northwest Pinal County will drop to near freezing we do not expect conditions to be quite cold enough to warrant the issuance of a Freeze Warning. The following morning, Monday morning, will have similarly cold temperatures with Phoenix again expected to have a low of 39 degrees.

Otherwise, for Sunday into the middle of next week, a drier west to northwest flow aloft will overspread the desert southwest; gradually rising heights will result in a modest warming trend. Highs Sunday will stay quite cool with Phoenix only reaching to around 61, and then each day will see a slow bump-up with highs pretty much staying in the 60s through Tuesday. The low 70s should return by next Wednesday. For the most part mostly sunny days and clear nights are expected but there will be occasional high clouds moving through the area during the extended forecast period.

&&

.AVIATION...

South-Central Arizona including KPHX, KIWA, and KSDL: No major aviation concerns for the next 24 hours as winds remain light and mainly out of the east. Light and variable flow is likely for KPHX this afternoon before returning back east late this evening and continuing through much of the afternoon on Friday. Otherwise, only a FEW to SCT high clouds can be expected.

Southeast California/Southwest Arizona including KIPL and KBLH:

Very light winds will continue through tomorrow morning with extended periods of variable flow less than 5 kts. Southerly

January 20, 2018 Exceptional Event, Imperial County

Appendix A

breezes will begin at KBLH late Friday morning ahead of our next weather system although light winds will continue at KIPL through much of the day before picking up Friday evening. Ceilings will not be of concern through our TAF period with only a FEW to SCT high clouds.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...

Saturday through Wednesday:

A cold front will clear the districts by Saturday afternoon resulting in much cooler conditions over the weekend and into early next week. Numerous light showers will be possible over higher terrain locations east of Phoenix Saturday (both rain and snow), however widespread wetting amounts will be highly unlikely. In addition, a few stronger westerly wind gusts near 30 mph will be possible behind the cold front, though winds will weaken substantially next week. Despite the cooler weather, minimum humidity levels will still fall into a 15-25% range with good overnight recovery. Temperature will moderate back to near average into the middle of next week though dry weather will continue.

&&

.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...CB

AVIATION...Wilson

FIRE WEATHER...MO



College of Ag
Department of Agronomy

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FXUS65 KPSR 182040

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

140 PM MST Thu Jan 18 2018

.SYNOPSIS...

High pressure will prevail across the region through Friday with above normal temperatures and dry conditions. A notable storm system will move into the Southwest late Friday and into Saturday.

While it still does not look like a very wet system, it will result in increasing winds and a significant drop in temperatures. After a cool Saturday and Sunday, temperatures will slowly rebound heading into the first part of next week.

&&

.DISCUSSION...

A high amplitude ridge is pushing through the region with the ridge axis now over western Arizona with 500mb heights as high as 582dm. Some high cirrus is beginning to spill through the ridge, but for the most part skies will remain mostly clear through tonight. Under the increasing heights aloft, some slight warming will boost afternoon highs into the middle 70s across the majority of the lower deserts. A positively tilted Pacific trough will move into the Western States through Friday, reaching southern California as early as Friday evening. Increasing southerly flow ahead of the trough will allow for winds to become gusty across southeast California and southwest Arizona by late Friday afternoon and into the evening hours. Even warmer temperatures are anticipated for Friday before the trough moves into the region. Highs should easily reach into the middle 70s across the lower deserts with a few spots likely nearing 80 degrees before clouds increase by sunset Friday. The previous discussion for this weekend into early next week still applies.

&&

.PREVIOUS DISCUSSION...

Model guidance has been very consistent over the past few days regarding this upcoming weather system; both the operational GFS and ECMWF are in lock-step and most of the GEFS ensemble members agree nicely with respect to the track and timing of this upper trof. The open wave nature of this large trof has aided in the models ability to accurately move this system through our area; large closed upper lows are always harder to time. A look at IVT (Integrated Vapor Transport) continues to show a weak atmospheric river moving into Arizona ahead of the trof Friday into Friday night, but we will not be seeing a lot of moisture spreading into the area and QPF values will stay very low over the deserts. SREF

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

plumes output for Phoenix show a few members picking up less than 0.05 inches on Saturday and that's about it.

We still expect the cold front to race through the western deserts Friday night, then move through south-central Arizona during the day on Saturday; POPs will stay low and in the slight chance category on Friday night, and will increase as the day wears on Saturday; by late morning to early afternoon the best chances for rain and mountain snow will focus over the higher terrain areas to the north and east of Phoenix. Although the snow level will drop to around 4000 feet by Saturday afternoon, given the very low QPF expected there will not be any significant snow across southern Gila County and no real impacts are expected. Following the front on Saturday, much cooler air filters across the deserts resulting in high temperature readings mostly in the upper 50s to low 60s. The greater Phoenix area will struggle to reach 60 on Saturday, the forecast high of 59 is nearly 10 degrees below the seasonal normal of 68.

After skies clear from the west overnight Saturday night, the much cooler and drier air combined with good radiational cooling potential will result in a cold morning with many lower deserts dropping into the 30s. Phoenix should see a low Sunday morning of about 39 degrees; although some of the outlying deserts especially over portions of northwest Pinal County will drop to near freezing we do not expect conditions to be quite cold enough to warrant the issuance of a Freeze Warning. The following morning, Monday morning, will have similarly cold temperatures with Phoenix again expected to have a low of 39 degrees.

Otherwise, for Sunday into the middle of next week, a drier west to northwest flow aloft will overspread the desert southwest; gradually rising heights will result in a modest warming trend. Highs Sunday will stay quite cool with Phoenix only reaching to around 61, and then each day will see a slow bump-up with highs pretty much staying in the 60s through Tuesday. The low 70s should return by next Wednesday. For the most part mostly sunny days and clear nights are expected but there will be occasional high clouds moving through the area during the extended forecast period.

&&

.AVIATION...

South-Central Arizona including KPHX, KIWA, and KSDL: No major aviation concerns for the next 24 hours as winds remain light and mainly out of the east. Light and variable flow is likely for KPHX this afternoon before returning back east late this evening and continuing through much of the afternoon on Friday. Otherwise, only a FEW to SCT high clouds can be expected.

Southeast California/Southwest Arizona including KIPL and KBLH:

Very light winds will continue through tomorrow morning with extended periods of variable flow less than 5 kts. Southerly

January 20, 2018 Exceptional Event, Imperial County

Appendix A

breezes will begin at KBLH late Friday morning ahead of our next weather system although light winds will continue at KIPL through much of the day before picking up Friday evening. Ceilings will not be of concern through our TAF period with only a FEW to SCT high clouds.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...

Saturday through Wednesday:

A cold front will clear the districts by Saturday afternoon resulting in much cooler conditions over the weekend and into early next week. Numerous light showers will be possible over higher terrain locations east of Phoenix Saturday (both rain and snow), however widespread wetting amounts will be highly unlikely. In addition, a few stronger westerly wind gusts near 30 mph will be possible behind the cold front, though winds will weaken substantially next week. Despite the cooler weather, minimum humidity levels will still fall into a 15-25% range with good overnight recovery. Temperature will moderate back to near average into the middle of next week though dry weather will continue.

&&

.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

PREVIOUS DISCUSSION...CB

AVIATION...Wilson

FIRE WEATHER...MO



College of Ag

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FXUS66 KSGX 182302

AFDSGX

Area Forecast Discussion

National Weather Service San Diego CA

302 PM PST Thu Jan 18 2018

.SYNOPSIS...

Partly to mostly cloudy skies through Friday morning with low clouds, patchy fog, and drizzle possible overnight. A fast-moving low pressure area will kick off the weekend with limited moisture, but will produce gusty winds in the mountains and deserts, and drop temperatures startlingly for some light snowfall in the mountains Friday afternoon through Saturday morning. It will be noticeably cooler all areas through Sunday, then a bit warmer into the first half of next week as afternoon high temperatures slowly return to near average values.

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

An aggressive afternoon seabreeze blowing through the valleys this afternoon is dropping temperatures significantly and bringing increased haze along the foothills. A coastal eddy spun up earlier today generating low clouds along the San Diego County coastline. This activity has again pushed into the coast...further north into northern San Diego County and southern Orange County.

Deeper marine layer will develop later tonight with patchy drizzle developing near the coast and mesas as the cold Pacific trough approaches the region. By Friday afternoon this trough will move through Southern California and bring a period of strong westerly winds over the mountains, and light precipitation for the coast, valleys, and mountains. The deserts will see gusty winds but not likely to reach wind advisory criteria and little or no precipitation. Overall precipitation amounts will be low with this one without good moisture transport parameters.

The main concern with the incoming trough, besides the gusty winds, will be light rain causing wet road concerns for the cities, and accumulating snowfall down to around 3500 feet Friday night through Saturday morning (pass level) which could create some slick spots on the roads. Although only a few inches of snow are expected, the slick roads will have the potential to bring significant travel hazards and delays.

A couple of weak troughs will move through next week but the models are indicating weak moisture transport at best so there are

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

no chances for precip in the forecast through next week. The first trough will come through on Monday with a decaying front and will keep temperatures near normal. Another trough will come through around Thursday with another period of gusty winds and cooler temperatures but no precip expected at this time.

&&

.AVIATION...

182156Z...COAST/VALLEYS...Low clouds and fog over the coastal waters and locally onshore will impact immediate coastal area with bases locally 200-400 feet MSL with tops to near 800 feet MSL and visibilities locally below 1SM in fog til about 19/03Z. After around 19/03Z this afternoon the low cloud bases should slowly rise to around 600 feet MSL with tops to around 1200 feet MSL along with visibilities locally below 3SM in fog. The risk of an early arrival of the low clouds this afternoon at KSAN is moderate so the probability of a low cloud arrival near sundown at KSAN is moderate.

Mountains/Deserts...Variable high clouds into tonight then increasing clouds by midday Friday, mainly mountain areas.

&&

.MARINE...

Patches of fog with visibility 1nm or less but improving during the evening. A storm arriving Friday will bring hazardous winds and seas late Friday through Saturday. Refer to the Gale Watch for details.

&&

.BEACHES...

Northwest swell and surf will increase tonight through Friday. High surf will peak Friday night into Saturday morning before diminishing late Saturday. Consult the High Surf Advisory for details.

&&

.SKYWARN...

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

&&

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...Winter Weather Advisory from 5 PM Friday to noon PST Saturday for Riverside County Mountains-San Diego County Mountains.

Winter Weather Advisory from 2 PM Friday to noon PST Saturday for San Bernardino County Mountains.

January 20, 2018 Exceptional Event, Imperial County

Appendix A

High Surf Advisory until 8 PM PST Saturday for Orange County Coastal Areas-San Diego County Coastal Areas.

PZ...Gale Watch from Friday afternoon through Saturday evening for Coastal Waters from San Mateo Point to the Mexican Border and out to 30 nm-Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

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PUBLIC...Brotherton
AVIATION/MARINE...Small

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FXUS66 KSGX 190349

AFDSGX

Area Forecast Discussion

National Weather Service San Diego CA

749 PM PST Thu Jan 18 2018

.SYNOPSIS...

Partly to mostly cloudy skies will prevail through Friday morning with low clouds, patchy fog, and drizzle possible overnight. A fast-moving low pressure system will move across the area Friday through Saturday bringing much cooler temperatures, a few showers, light snow in the mountains, and gusty winds in the mountains and deserts. The storm system will depart the area early next week with a return to dry weather and a gradual moderation in temperatures.

&&

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

...Update...

The forecast remains on track with the main weather story being an incoming upper level trough from the Pacific. This will be a cold system with noticeably colder weather for Southern California Friday and through the weekend. Temps will continue on the cool side even into the first part of next week while some gradual moderation of temps occurs.

The system will be fast moving and moisture will be limited. GFS shows max PW at only around 0.85 inches with continued dry air in the mid levels. This will limit precip amounts projected to be 0.15 inches or less west of the mountains. Some high res model runs show many areas west of the mountains not even receiving measurable precip, which seems possible. However, decided not to lower QPF as it is already forecast to be low. The bulk of the precip will be in the mountains where around 0.25-0.50" of precip is forecast along with a few inches of snow at higher elevations. The snow levels will fall to about 3500 FT by Friday night.

No changes were made to the forecast this evening.

...Previous Discussion (Issued at 302 PM PST Thu Jan 18 2018)...

An aggressive afternoon seabreeze blowing through the valleys this afternoon is dropping temperatures significantly and bringing increased haze along the foothills. A coastal eddy spun up earlier today generating low clouds along the San Diego County

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

coastline. This activity has again pushed into the coast...further north into northern San Diego County and southern Orange County.

Deeper marine layer will develop later tonight with patchy drizzle developing near the coast and mesas as the cold Pacific trough approaches the region. By Friday afternoon this trough will move through Southern California and bring a period of strong westerly winds over the mountains, and light precipitation for the coast, valleys, and mountains. The deserts will see gusty winds but not likely to reach wind advisory criteria and little or no precipitation. Overall precipitation amounts will be low with this one without good moisture transport parameters.

The main concern with the incoming trough, besides the gusty winds, will be light rain causing wet road concerns for the cities, and accumulating snowfall down to around 3500 feet Friday night through Saturday morning (pass level) which could create some slick spots on the roads. Although only a few inches of snow are expected, the slick roads will have the potential to bring significant travel hazards and delays.

A couple of weak troughs will move through next week but the models are indicating weak moisture transport at best so there are no chances for precip in the forecast through next week. The first trough will come through on Monday with a decaying front and will keep temperatures near normal. Another trough will come through around Thursday with another period of gusty winds and cooler temperatures but no precip expected at this time.

&&

.AVIATION...

190300Z...COAST/VALLEYS...Patches of low clouds and fog along the coast not currently impacting TAF sites. Cloud bases are around 1000 ft MSL and the fog is locally restricting vis to 3-5 miles in a few locations. Expect low clouds and fog to increase in coverage after 06Z. BKN-OVC cigs 1000-1500 ft MSL could impact coastal TAF sites til 12Z. Aft 12Z, ceilings will likely lift to 2000-2500 ft MSL through about 21Z then cigs lift to 3000 ft MSL or higher.

Mountains/Deserts...Variable high clouds into tonight then increasing clouds by midday Friday, with higher terrain obscured. Strong southwest winds will develop Friday afternoon, producing mdt-strong up/downrafts and LLWS over and east of the mtns.

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.MARINE...

Patches of fog with visibility 1 NM or less this evening, improving overnight. A storm arriving Friday will bring periods of gale-force winds and hazardous seas late Friday through Saturday. Refer to the Gale Watch for details.

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January 20, 2018 Exceptional Event, Imperial County**Appendix A**

.BEACHES...

Northwest swell and surf will increase tonight through Friday. High surf will peak Friday night into Saturday morning before diminishing late Saturday. Consult the High Surf Advisory for details.

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.SKYWARN...

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

&&

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...Winter Weather Advisory from 5 PM Friday to noon PST Saturday for Riverside County Mountains-San Diego County Mountains.

Winter Weather Advisory from 2 PM Friday to noon PST Saturday for San Bernardino County Mountains.

High Surf Advisory until 8 PM PST Saturday for Orange County Coastal Areas-San Diego County Coastal Areas.

PZ...Gale Watch from Friday afternoon through Saturday evening for Coastal Waters from San Mateo Point to the Mexican Border and out to 30 nm-Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

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PUBLIC...Gregoria (Update)/Brotherton (Prev Discussion)
AVIATION/MARINE...PG

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716 Farm House Ln
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FXUS65 KPSR 190448

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

948 PM MST Thu Jan 18 2018

.SYNOPSIS...

High pressure will prevail across the region through Friday with above normal temperatures and dry conditions. A notable storm system will move into the Southwest late Friday and into Saturday.

While it still does not look like a very wet system, it will result in increasing winds and a significant drop in temperatures. After a cool Saturday and Sunday, temperatures will slowly rebound heading into the first part of next week.

&&

.DISCUSSION...

Upper ridge axis has flopped over the central Rockies while trailing back through the Four Corners and our forecast area this evening. Broad area of moisture remains throughout the ridge heights, with a few strips of it dropping into Arizona and producing broken skies this evening. Farther upstream, trough heights are beginning to dive down the Pac NW coast and the deepening and movement on-shore of that system will be focus for this weekend's weather. For tonight however, conditions will remain quiet weather-wise after a warm January afternoon with high temps of 75 in Phoenix and 79 in Yuma. Temperatures will take quite a tumble for Saturday, where high temperatures may struggle to warm to what our current temperatures are reading this 9 o'clock hour this evening. Before we make the drop on the temperature roller coaster, another mild afternoon forecast for tomorrow with periodic cloudiness and temperatures as warm (possibly warmer) than today. No updates planned for tonight's grids. Good night.

&&

.PREVIOUS DISCUSSION...

A positively tilted Pacific trough will move into the Western States through Friday, reaching southern California as early as Friday evening. Increasing southerly flow ahead of the trough will allow for winds to become gusty across southeast California and southwest Arizona by late Friday afternoon and into the evening hours. Even warmer temperatures are anticipated for Friday before the trough moves into the region. Highs should easily reach into the middle 70s across the lower deserts with a few spots likely nearing 80 degrees before clouds increase by sunset Friday.

Model guidance has been very consistent over the past few days

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

regarding this upcoming weather system; both the operational GFS and ECMWF are in lock-step and most of the GEFs ensemble members agree nicely with respect to the track and timing of this upper trof. The open wave nature of this large trof has aided in the models ability to accurately move this system through our area; large closed upper lows are always harder to time. A look at IVT (Integrated Vapor Transport) continues to show a weak atmospheric river moving into Arizona ahead of the trof Friday into Friday night, but we will not be seeing a lot of moisture spreading into the area and QPF values will stay very low over the deserts. SREF plumes output for Phoenix show a few members picking up less than 0.05 inches on Saturday and that's about it.

We still expect the cold front to race through the western deserts Friday night, then move through south-central Arizona during the day on Saturday; POPs will stay low and in the slight chance category on Friday night, and will increase as the day wears on Saturday; by late morning to early afternoon the best chances for rain and mountain snow will focus over the higher terrain areas to the north and east of Phoenix. Although the snow level will drop to around 4000 feet by Saturday afternoon, given the very low QPF expected there will not be any significant snow across southern Gila County and no real impacts are expected. Following the front on Saturday, much cooler air filters across the deserts resulting in high temperature readings mostly in the upper 50s to low 60s. The greater Phoenix area will struggle to reach 60 on Saturday, the forecast high of 59 is nearly 10 degrees below the seasonal normal of 68.

After skies clear from the west overnight Saturday night, the much cooler and drier air combined with good radiational cooling potential will result in a cold morning with many lower deserts dropping into the 30s. Phoenix should see a low Sunday morning of about 39 degrees; although some of the outlying deserts especially over portions of northwest Pinal County will drop to near freezing we do not expect conditions to be quite cold enough to warrant the issuance of a Freeze Warning. The following morning, Monday morning, will have similarly cold temperatures with Phoenix again expected to have a low of 39 degrees.

Otherwise, for Sunday into the middle of next week, a drier west to northwest flow aloft will overspread the desert southwest; gradually rising heights will result in a modest warming trend. Highs Sunday will stay quite cool with Phoenix only reaching to around 61, and then each day will see a slow bump-up with highs pretty much staying in the 60s through Tuesday. The low 70s should return by next Wednesday. For the most part mostly sunny days and clear nights are expected but there will be occasional high clouds moving through the area during the extended forecast period.

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.AVIATION...

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

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

Southeast California/Southwest Arizona including KIPL and KBLH:

High pressure remains largely in control of the terminal weather for the next 18hrs or so, resulting in no concerns for weather impacts at the TAF sites. Wind regimes will be on the light side, taking subtle drifts from diurnal trends, otherwise periods of calm or VRB with light speeds will be likely. Passing high level clouds varying between 20-25kft will be common. Ahead of the weather system and associated front forecast to move through the area Saturday, southerly winds will increase for the western terminals of KIPL and KBLH through the day, becoming breezy by the evening hours.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...

Saturday through Wednesday:

A cold front will clear the districts by Saturday afternoon resulting in much cooler conditions over the weekend and into early next week. Numerous light showers will be possible over higher terrain locations east of Phoenix Saturday (both rain and snow), however widespread wetting amounts will be highly unlikely. In addition, a few stronger westerly wind gusts near 30 mph will be possible behind the cold front, though winds will weaken substantially next week. Despite the cooler weather, minimum humidity levels will still fall into a 15-25% range with good overnight recovery. Temperatures will moderate back to near average into the middle of next week though dry weather will continue.

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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...CB

AVIATION...Nolte

FIRE WEATHER...MO

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265

FXUS65 KPSR 191001

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

300 AM MST Fri Jan 19 2018

.SYNOPSIS...

High pressure will prevail across the region today with above normal temperatures and dry conditions. A notable storm system will move into the Southwest later today and into Saturday. While it still does not look like a very wet system, it will result in increasing winds and a significant drop in temperatures. After a cool Saturday and Sunday, temperatures will slowly rebound heading into the first part of next week.

&&

.DISCUSSION...

Early this morning, NE to SW oriented ridge continued to fold over and move to the southeast across Arizona, as a deep and cold Pacific upper trof approached the California coast. IR imagery showed some high clouds moving through the ridge but for the most part skies were clear across the lower deserts. Despite the falling heights today as the trof approaches, and the increase in high clouds from the west, high temperatures should stay similar to yesterday and may even climb a couple of degrees across south-central Arizona under the influence of some low level warm advection ahead of the approaching cold front.

Very little has changed in our forecast thinking and very few changes have been made to our package this morning. Operational runs of the GFS and ECMWF maintain good consistency between themselves, and run to run consistency is high. GEFS spaghetti ensemble members are very much in agreement with the timing and track of the approaching system. It still looks to be on the dry side with respect to QPF although our POPs have climbed slightly - mainly for higher terrain areas to the east of Phoenix on Saturday - as the system may not be quite as moisture-starved as we previously thought. Latest IVT forecasts from the GFS show a slightly more enhanced atmospheric river moving into Arizona Friday night into Saturday, ahead of the front and with dynamics expected to be rather strong, shower coverage may also be a bit enhanced, at least for higher terrain locations in southern Gila County. Latest SREF plumes data still advertises minimal QPF for Phoenix with this system; most of the members call for total deserts rains less than 0.05 inches.

We still do not expect significant wind issues Friday afternoon and evening and our forecast reflect slightly weaker winds than what we called for a couple of days ago. We should see breezy southwest to west winds develop over the western deserts Friday afternoon with

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

some windy conditions over favored higher terrain locations in far SE California, such as Joshua Tree NP. Winds should stay below wind advisory thresholds.

Surface cold front should race across the western deserts Friday night, then move across south central Arizona and pass through the Phoenix area during late morning/early afternoon on Saturday. Best rain and snow chances will be over higher terrain areas north and east of Phoenix and highest POPs are in the likely category (at least 60 percent) for much of southern Gila County. QPF is still low, mostly below 0.15 inches east of Phoenix and despite snow levels lowering to near 4000 feet by Saturday evening, snow amounts will be minimal and should not pose any real impacts.

Following the cold front, we expect a very cool day Saturday with deserts falling into the upper 50s to low 60s; Phoenix should top out around 59 degrees. Very little change in temps expected Sunday due to limited mixing and only very modest height rises expected.

As the main trof moves into New Mexico Saturday night, there will be lingering chance of mainly evening showers east of Phoenix, mainly of the instability variety as cold air aloft moves overhead. By Sunday morning precip threat will be basically over for our area. With skies clearing significantly behind the front Saturday night, the cold airmass combined with lighter winds and good radiational cooling will result in a rather cold morning Sunday morning. Most of the deserts will fall into the 30s, including the greater Phoenix area. Some of the outlying desert areas including communities such as Casa Grande, Wickenburg, Bouse and Tacna, will see lows drop to near freezing. Cold temps not widespread enough or cold enough to warrant the issuance of a Freeze Warning at this time.

For Monday into the middle of next week, overall we expect dry conditions as dry west to northwest flow aloft sets up over the desert southwest. A weak dry wave will move through the area, embedded in the northwest flow aloft, on Monday and this will result in some increased high cloud cover. Otherwise expect mostly sunny days and clear nights to go along with a gradual warming trend. Central desert highs should remain in the 60s through Tuesday, then finally climb into the lower 70s on Wednesday.

For the very end of the forecast period, Thursday, both the GFS and ECMWF indicate the potential for another deep and cold upper trof to move through the western CONUS. At this time it appears rather dry for our area (southern Arizona) but should lead to a cooling trend later next week. We do have some single digit POPs in the forecast as a precaution.

&&

.AVIATION...

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

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

High pressure remains largely in control of the terminal weather for the next 18hrs or so, resulting in no concerns for weather impacts at the TAF sites. Wind regimes will be on the light side, taking subtle drifts from diurnal trends, otherwise periods of calm or VRB with light speeds will be likely. Passing high level clouds varying between 20-25kft will be common. Ahead of the weather system and associated front forecast to move through the area Saturday, southerly winds will increase for the western terminals of KIPL and KBLH through the day, becoming breezy by the evening hours.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...

Saturday through Wednesday:

A cold front will clear the districts by Saturday afternoon resulting in much cooler conditions over the weekend and into early next week. Numerous light showers will be possible over higher terrain locations east of Phoenix Saturday (both rain and snow), however widespread wetting amounts will be highly unlikely. In addition, a few stronger westerly wind gusts near 30 mph will be possible behind the cold front, though winds will weaken substantially next week. Despite the cooler weather, minimum humidity levels will still fall into a 15-25% range with good overnight recovery. Temperatures will moderate back to near average into the middle of next week though dry weather will continue.

&&

.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

&&

.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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DISCUSSION...CB

AVIATION...NoIte

FIRE WEATHER...MO

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407

FXUS66 KSGX 191100

AFDSGX

Area Forecast Discussion

National Weather Service San Diego CA

300 AM PST Fri Jan 19 2018

.SYNOPSIS...

Through Saturday...a low pressure system will move inland through California and into Arizona bringing stronger onshore flow with cooling...strong gusty west winds in the mountains and deserts...and scattered mostly light showers along and west of the mountains for this afternoon into Saturday morning. Dry with a warming trend for Sunday through Wednesday. Another low pressure system could move quickly through California around Thursday of next week bringing cooling...strong gusty west winds in the mountains and deserts...and mostly light precipitation along and west of the mountains. High surf will continue at the beaches through Saturday.

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

A low pressure system off the West Coast will move inland through California through tonight...then into Arizona Saturday. It will bring stronger onshore flow with areas of strong gusty southwest to west winds in the mountains and deserts...and west to northwest winds across the coastal waters for this afternoon into Saturday. Cooling will begin for coastal and valley areas today with greater cooling for all areas tonight and Saturday.

Scattered mostly light showers will spread southward across the area during the afternoon and early evening...then end from the northwest late tonight into Saturday morning. Rainfall is expected to range from less than one tenth inch near the coast to one tenth to one quarter inch in the mountains with local amounts to around one half inch. Snow levels above 7000 feet will lower to around 5500 to 6000 feet during the late afternoon...to around 4500 feet during the evening...and around 3500 feet by Saturday morning with a few inches of snowfall...mostly above 4500 feet.

Dry weather will follow for Sunday through Wednesday with slow warming on Sunday and greater warming for Monday through Wednesday with high temperatures returning to near to a little above average for Tuesday and Wednesday.

Another low pressure system could move quickly through California around Thursday of next week bringing cooling...strong gusty west

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

winds in the mountains and deserts...and mostly light precipitation along and west of the mountains. The current forecast leans towards the faster timing of the ECMWF for late Wednesday through Thursday which is supported by the Canadian model and the GFS ensemble mean with the 00Z and 06Z runs of the GFS a little slower.

&&

.AVIATION...

191020Z...COAST/VALLEYS...Marine stratus with bases 015-020 and tops 025-030 expanding inland through 18Z. from 18Z through 06Z expect variable CIGS with layers to FL100 and isold rain showers or drizzle at times. VIS mostly P6SM, but 3-5SM at times along the higher coastal terrain and inland foothills due to scattered pcpn and briefly lower CIGS.

Mountains/Deserts...Variable clouds AOA FL150 with unrestricted VIS through 18Z. After 18Z clouds will increase over the mts obscuring the terrain at times with light pcpn after 00Z. SW-W winds 20-30KT with gusts 50KT at times developing after 20Z over the ridges and along the desert slopes, producing mdt-strong up/downdrafts and LLWS over and east of the mtns.

&&

.MARINE...

A weak cold front will pass over the coastal waters today, with increasing westerly winds in its wake. Wind gusts to gale force are expected at times later this afternoon through Saturday evening. A large long-period northwest swell and shorter-period wind swell will combine to create hazardous small craft conditions. Please refer to LAXMWSGX for details on the Small Craft Advisory and Gale Warning now in effect.

&&

.BEACHES...

a large, long-period northwest swell will increase surf into Saturday. A High Surf Warning is in effect. Please refer to LAXCFWSGX for details.

&&

.SKYWARN...

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

&&

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...Winter Weather Advisory from 4 PM this afternoon to 6 AM PST Saturday for Riverside County Mountains-San Diego County Mountains.

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

Winter Weather Advisory from 2 PM this afternoon to 6 AM PST Saturday for San Bernardino County Mountains.

High Surf Advisory until 8 PM PST Saturday for Orange County Coastal Areas-San Diego County Coastal Areas.

PZ...Gale Warning from 2 PM this afternoon to 10 PM PST Saturday for Coastal Waters from San Mateo Point to the Mexican Border and out to 30 nm-Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

Small Craft Advisory for hazardous seas until 2 PM PST this afternoon for Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

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PUBLIC...17

AVIATION/MARINE/BEACHES...JAD

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189

FXUS65 KPSR 191235

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

535 AM MST Fri Jan 19 2018

.UPDATE...

Updated Aviation and Fire Weather sections.

&&

.SYNOPSIS...

High pressure will prevail across the region today with above normal temperatures and dry conditions. A notable storm system will move into the Southwest later today and into Saturday. While it still does not look like a very wet system, it will result in increasing winds and a significant drop in temperatures. After a cool Saturday and Sunday, temperatures will slowly rebound heading into the first part of next week.

&&

.DISCUSSION...

Early this morning, NE to SW oriented ridge continued to fold over and move to the southeast across Arizona, as a deep and cold Pacific upper trof approached the California coast. IR imagery showed some high clouds moving through the ridge but for the most part skies were clear across the lower deserts. Despite the falling heights today as the trof approaches, and the increase in high clouds from the west, high temperatures should stay similar to yesterday and may even climb a couple of degrees across south-central Arizona under the influence of some low level warm advection ahead of the approaching cold front.

Very little has changed in our forecast thinking and very few changes have been made to our package this morning. Operational runs of the GFS and ECMWF maintain good consistency between themselves, and run to run consistency is high. GEFS spaghetti ensemble members are very much in agreement with the timing and track of the approaching system. It still looks to be on the dry side with respect to QPF although our POPs have climbed slightly - mainly for higher terrain areas to the east of Phoenix on Saturday - as the system may not be quite as moisture-starved as we previously thought. Latest IVT forecasts from the GFS show a slightly more enhanced atmospheric river moving into Arizona Friday night into Saturday, ahead of the front and with dynamics expected to be rather strong, shower coverage may also be a bit enhanced, at least for higher terrain locations in southern Gila County. Latest SREF plumes data still advertises minimal QPF for Phoenix with this system; most of the members call for total deserts rains less than 0.05 inches.

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

We still do not expect significant wind issues Friday afternoon and evening and our forecast reflect slightly weaker winds than what we called for a couple of days ago. We should see breezy southwest to west winds develop over the western deserts Friday afternoon with some windy conditions over favored higher terrain locations in far SE California, such as Joshua Tree NP. Winds should stay below wind advisory thresholds.

Surface cold front should race across the western deserts Friday night, then move across south central Arizona and pass through the Phoenix area during late morning/early afternoon on Saturday. Best rain and snow chances will be over higher terrain areas north and east of Phoenix and highest POPs are in the likely category (at least 60 percent) for much of southern Gila County. QPF is still low, mostly below 0.15 inches east of Phoenix and despite snow levels lowering to near 4000 feet by Saturday evening, snow amounts will be minimal and should not pose any real impacts.

Following the cold front, we expect a very cool day Saturday with deserts falling into the upper 50s to low 60s; Phoenix should top out around 59 degrees. Very little change in temps expected Sunday due to limited mixing and only very modest height rises expected.

As the main trof moves into New Mexico Saturday night, there will be lingering chance of mainly evening showers east of Phoenix, mainly of the instability variety as cold air aloft moves overhead. By Sunday morning precip threat will be basically over for our area. With skies clearing significantly behind the front Saturday night, the cold airmass combined with lighter winds and good radiational cooling will result in a rather cold morning Sunday morning. Most of the deserts will fall into the 30s, including the greater Phoenix area. Some of the outlying desert areas including communities such as Casa Grande, Wickenburg, Bouse and Tacna, will see lows drop to near freezing. Cold temps not widespread enough or cold enough to warrant the issuance of a Freeze Warning at this time.

For Monday into the middle of next week, overall we expect dry conditions as dry west to northwest flow aloft sets up over the desert southwest. A weak dry wave will move through the area, embedded in the northwest flow aloft, on Monday and this will result in some increased high cloud cover. Otherwise expect mostly sunny days and clear nights to go along with a gradual warming trend. Central desert highs should remain in the 60s through Tuesday, then finally climb into the lower 70s on Wednesday.

For the very end of the forecast period, Thursday, both the GFS and ECMWF indicate the potential for another deep and cold upper trof to move through the western CONUS. At this time it appears rather dry for our area (southern Arizona) but should lead to a cooling trend later next week. We do have some single digit POPs in the forecast as a precaution.

&&

.AVIATION...

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

Light easterly winds will take on a southerly component this afternoon with PHX struggling to turn westerly. An approaching cold front will favor southeasterly winds tonight. Anticipate the front to track across metro Phoenix in the 12Z-16Z Saturday time frame. In addition to stronger winds with a westerly component, it will bring stratocumulus clouds with ceilings as low as FL050-070 before rising in the afternoon. Showers will be spotty and light (a bit more numerous north and east portions of metro Phoenix).

Southeast California/Southwest Arizona including KIPL and KBLH: Surface winds will be light and variable this morning before southerly winds develop this afternoon ahead of an approaching cold front (most noticeably over the Lower Colorado River Valley). Anticipate winds will be strongest between 03Z-09Z tonight as the front passes through with gusts of 20-30kts. Winds will weaken after FROPA before strengthening again in the afternoon. Some local patchy blowing dust is possible.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...

Sunday through Thursday:

Anticipate a warming trend during the first half of next week. Accordingly, humidities will trend downward though overnight recovery will remain good. Winds will be light and favor north and northeasterly directions. During the latter part of next week, a passing weather system will bring cooler temperatures and stronger winds. At this time, rain chances will be slight at best and will be limited to the higher terrain of south-central AZ.

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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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FXUS66 KSGX 191646

AFDSGX

Area Forecast Discussion

National Weather Service San Diego CA

846 AM PST Fri Jan 19 2018

.SYNOPSIS...

A weak storm will bring winds and light showers to the region today into Saturday. Showers will begin this afternoon and finish up early Saturday. It will be quite breezy today through Saturday, particularly in the mountains and deserts. Fair weather returns this weekend although there will be some cold nights. High pressure will bring warmer weather Tuesday and Wednesday. A trough of low pressure will bring cool and breezy weather Thursday and Friday, and a slight chance of showers.

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

Low clouds and fog in the coastal basin have ebbed and flowed like waves on a beach last night and this morning. Some inland valley pockets had some dense fog as well. Clouds will gradually increase into this afternoon as a weak storm moves into Southern California. This wave will feature rain, snow, and winds, but not a whole lot of of any. Winds will increase during the day in all areas, but diminish west of the mountains tonight. Showers will begin this afternoon at the coast and spread east into the mountains overnight. Nearly all showers will be done by sunrise Saturday. Snow will only fall at higher elevations today, but snow level will drop fast tonight. The moisture with this storm is greatest ahead of most of the dynamics and cold air aloft, and that means any snow showers lower in the mountains late tonight into Saturday will be very light. A few inches are expected in the higher mountains. Dry northwest flow on Saturday will help skies clear out and breezy winds to continue in the mountains, deserts and coastal waters. It will be quite cool as well. As winds calm down Saturday night and skies clear, patchy frost is forecast for some of the cooler inland valleys. That will be true for Sunday night as well. High pressure doesn't exactly rebound much Sunday and Monday so temperatures will stay on the cool side. Not until Tuesday and Wednesday do we see some form of high pressure ridge develop. That will bring temperatures back up above average into the 70s at lower elevations. Models have been showing the next trough of low pressure heading into California either late Wednesday or Thursday. This trough has some power to it, but most of the energy and moisture stay north of Southern California. We have confidence that it should still bring us cool and breezy

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

weather late Wednesday into Friday, but less confident about any showers. Slight chance is our preferred forecast for now.

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.AVIATION...

191639Z...Stratus, currently about 10-35 sm inland with bases 2000 ft msl, tops around 2500-3000 ft msl, and areas of vis 3-5 sm in mist, will continue to surge inland through 20/0200 UTC, reaching the mountain ridges and going into the mountain passes, with bases rising to 2000-3000 ft msl and tops rising to 6000-10000 ft msl as the day progresses. Expect mountain obscuration of coastal slopes to begin by 1900 UTC and scattered showers to start moving into the region by 2100 UTC. 20/0200-1500 UTC, clouds will gradually become SCT-FEW from west to east, with light shower activity, BKN-OVC clouds (tops around 6000-10000 ft msl) and mountain obscuration persisting in the mountains. Shower activity dissipating 20/1000-1500 UTC. The deserts should continue to have P6SM vis through Saturday morning, except for the high deserts possibly getting some light shower activity 2300-20/0500 UTC along with BKN clouds in the 4000-10000 ft msl layer and locally lower vis. Otherwise, clouds in the deserts will be SCT AOA 10000 ft msl.

After 1900 UTC, W/SW winds 15-25 KT with gusts 40-50 KT at times developing over the ridges and along the desert slopes, producing mod-strong up/downdrafts and LLWS over and east of the mountains.

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.MARINE...

The San Clemente Basin buoy continues to report 11-12 foot seas as of 8 am this morning, so a Small Craft Advisory remains in effect for the outer waters due to hazardous seas. A weak cold front will pass over the coastal waters today, with increasing northwesterly winds in its wake. Northwest wind gusts to gale force are expected at times later this afternoon through Saturday evening for the inner and outer waters. The strong winds, in addition to large long-period northwest swell and shorter-period wind swells, will combine to create hazardous boating conditions. A Gale Warning goes into effect at 2 pm this afternoon and continues through 10 pm Saturday.

&&

.BEACHES...

8 am reports from the nearshore buoys show wave heights/periods of around 7-9 feet with 17 second periods. This large west-northwest swell from 280 degrees is bringing high surf this morning, with reports of 5-10 foot surf at exposed area beaches. Surf at around this height, with sets to 12 feet occasionally, will continue through Saturday before the swell lowers Sunday into Monday. Strong rip currents will accompany the high surf, resulting in dangerous swimming conditions. A High Surf Advisory remains in effect until 8 PM Saturday.

January 20, 2018 Exceptional Event, Imperial County

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.SKYWARN...

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

&&

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...Winter Weather Advisory from 4 PM this afternoon to 6 AM PST Saturday for Riverside County Mountains-San Diego County Mountains.

Winter Weather Advisory from 2 PM this afternoon to 6 AM PST Saturday for San Bernardino County Mountains.

High Surf Advisory until 8 PM PST Saturday for Orange County Coastal Areas-San Diego County Coastal Areas.

PZ...Gale Warning from 2 PM this afternoon to 10 PM PST Saturday for Coastal Waters from San Mateo Point to the Mexican Border and out to 30 nm-Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

Small Craft Advisory for hazardous seas until 2 PM PST this afternoon for Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

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PUBLIC...MM

AVIATION/MARINE/BEACHES...Harrison

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□

865

FXUS65 KPSR 191750

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

1050 AM MST Fri Jan 19 2018

.UPDATE...Updated aviation discussions

&&

.SYNOPSIS...

High pressure will prevail across the region today with above normal temperatures and dry conditions. A notable storm system will move into the Southwest later today and into Saturday. While it still does not look like a very wet system, it will result in increasing winds and a significant drop in temperatures. After a cool Saturday and Sunday, temperatures will slowly rebound heading into the first part of next week.

&&

.DISCUSSION...

Early this morning, NE to SW oriented ridge continued to fold over and move to the southeast across Arizona, as a deep and cold Pacific upper trof approached the California coast. IR imagery showed some high clouds moving through the ridge but for the most part skies were clear across the lower deserts. Despite the falling heights today as the trof approaches, and the increase in high clouds from the west, high temperatures should stay similar to yesterday and may even climb a couple of degrees across south-central Arizona under the influence of some low level warm advection ahead of the approaching cold front.

Very little has changed in our forecast thinking and very few changes have been made to our package this morning. Operational runs of the GFS and ECMWF maintain good consistency between themselves, and run to run consistency is high. GEFS spaghetti ensemble members are very much in agreement with the timing and track of the approaching system. It still looks to be on the dry side with respect to QPF although our POPs have climbed slightly - mainly for higher terrain areas to the east of Phoenix on Saturday - as the system may not be quite as moisture-starved as we previously thought. Latest IVT forecasts from the GFS show a slightly more enhanced atmospheric river moving into Arizona Friday night into Saturday, ahead of the front and with dynamics expected to be rather strong, shower coverage may also be a bit enhanced, at least for higher terrain locations in southern Gila County. Latest SREF plumes data still advertises minimal QPF for Phoenix with this system; most of the members call for total deserts rains less than 0.05 inches.

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

We still do not expect significant wind issues Friday afternoon and evening and our forecast reflect slightly weaker winds than what we called for a couple of days ago. We should see breezy southwest to west winds develop over the western deserts Friday afternoon with some windy conditions over favored higher terrain locations in far SE California, such as Joshua Tree NP. Winds should stay below wind advisory thresholds.

Surface cold front should race across the western deserts Friday night, then move across south central Arizona and pass through the Phoenix area during late morning/early afternoon on Saturday. Best rain and snow chances will be over higher terrain areas north and east of Phoenix and highest POPs are in the likely category (at least 60 percent) for much of southern Gila County. QPF is still low, mostly below 0.15 inches east of Phoenix and despite snow levels lowering to near 4000 feet by Saturday evening, snow amounts will be minimal and should not pose any real impacts.

Following the cold front, we expect a very cool day Saturday with deserts falling into the upper 50s to low 60s; Phoenix should top out around 59 degrees. Very little change in temps expected Sunday due to limited mixing and only very modest height rises expected.

As the main trof moves into New Mexico Saturday night, there will be lingering chance of mainly evening showers east of Phoenix, mainly of the instability variety as cold air aloft moves overhead. By Sunday morning precip threat will be basically over for our area. With skies clearing significantly behind the front Saturday night, the cold airmass combined with lighter winds and good radiational cooling will result in a rather cold morning Sunday morning. Most of the deserts will fall into the 30s, including the greater Phoenix area. Some of the outlying desert areas including communities such as Casa Grande, Wickenburg, Bouse and Tacna, will see lows drop to near freezing. Cold temps not widespread enough or cold enough to warrant the issuance of a Freeze Warning at this time.

For Monday into the middle of next week, overall we expect dry conditions as dry west to northwest flow aloft sets up over the desert southwest. A weak dry wave will move through the area, embedded in the northwest flow aloft, on Monday and this will result in some increased high cloud cover. Otherwise expect mostly sunny days and clear nights to go along with a gradual warming trend. Central desert highs should remain in the 60s through Tuesday, then finally climb into the lower 70s on Wednesday.

For the very end of the forecast period, Thursday, both the GFS and ECMWF indicate the potential for another deep and cold upper trof to move through the western CONUS. At this time it appears rather dry for our area (southern Arizona) but should lead to a cooling trend later next week. We do have some single digit POPs in the forecast as a precaution.

&&

.AVIATION...

South-Central Arizona including KPHX, KIWA, and KSDL: Light easterly winds will continue through much of today and tonight although variable flow is likely at KPHX from 23-04Z this evening. Winds will switch to the west early tomorrow morning as a front pushes through the Phoenix metro during the 12-18Z time frame on Saturday. Expecting low stratocumulus to accompany this front with BKN ceilings in the 5-7 kft range. Rapid clearing is expected behind the front with only a FEW low clouds Saturday afternoon. Showers are possible Saturday morning but will be spotty and light if they materialize.

Southeast California/Southwest Arizona including KIPL and KBLH: An approaching cold front will gradually increase wind speeds at KBLH today with a more abrupt start at KIPL this evening. The strongest winds (gusts 20-30kts) look to be between 04-10Z tonight ahead of the front with winds weakening after the frontal passage. No precipitation is expected with the front but a FEW low clouds (5-8 kft) and isolated areas of blowing dust are possible. Wind speeds will increase again tomorrow afternoon as higher momentum air mixes down to the surface with the daytime heating.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...

Sunday through Thursday:

Anticipate a warming trend during the first half of next week. Accordingly, humidities will trend downward though overnight recovery will remain good. Winds will be light and favor north and northeasterly directions. During the latter part of next week, a passing weather system will bring cooler temperatures and stronger winds. At this time, rain chances will be slight at best and will be limited to the higher terrain of south-central AZ.

&&

.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

&&

.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...None.

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

DISCUSSION...CB

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184

FXUS66 KSGX 192120

AFDSGX

Area Forecast Discussion

National Weather Service San Diego CA

120 PM PST Fri Jan 19 2018

.SYNOPSIS...

A weak storm will bring winds and light showers to the region today into Saturday. Showers will begin this afternoon and finish up early Saturday. It will be quite breezy today through Saturday, particularly in the mountains and deserts. Fair weather returns this weekend although there will be some cold nights. High pressure will bring warmer weather Tuesday and Wednesday. A trough of low pressure will bring cool and breezy weather Thursday and Friday, and a slight chance of showers.

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

Low clouds continue to ebb and flow near the coast, but thicker higher clouds are moving through L.A. and into Orange County. These will continue to increase from northwest to southeast this afternoon as a weak storm moves into Southern California. This wave will feature rain, snow, and winds, but not a whole lot of any. Winds are already quite brisk along the mountain ridgetops, with some gusts over 30 mph. These will increase this afternoon and evening in all areas, but diminish west of the mountains tonight. Showers will begin later this afternoon at the coast and spread east into the mountains overnight. Nearly all showers will be done by sunrise Saturday. Snow will only fall at higher elevations today, but snow level will drop fast overnight. The moisture with this storm is greatest ahead of most of the dynamics and cold air aloft, and that means any snow showers lower in the mountains late tonight into Saturday will be very light. A few inches at most are expected in the higher mountains. Dry northwest flow on Saturday will help skies clear out and breezy winds to continue in the mountains, deserts and coastal waters. It will be quite cool as well. As winds calm down Saturday night and skies clear, patchy frost is forecast for some of the cooler inland valleys. That will be true for Sunday night as well. High pressure doesn't exactly rebound much Sunday and Monday so temperatures will stay cooler than average. Not until Tuesday and Wednesday do we see some form of high pressure ridge develop. That will bring temperatures back up a few degrees above average into the 70s at lower elevations. Models have been showing the next trough of low pressure heading into California either late Wednesday or Thursday. This trough has some power to it, but most

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

of the energy and moisture stay north of Southern California. We have confidence that it should still bring us cool and breezy weather late Wednesday into Friday, but less confident about any showers. Slight chance is our preferred forecast for now. Following that trough there is a substantial ridge of high pressure and also some offshore flow developing. Add those together and it could be pretty hot next weekend.

&&

.AVIATION...

192102Z...Patchy clouds in the coast and valleys, with bases 2000-2500 ft msl and tops around 2500-3000 ft msl, should gradually become widespread BKN-OVC across the coast, valleys, coastal slopes, mountain ridges and mountain passes through 20/0200 UTC, with bases rising to 2000-3000 ft msl and tops rising to 6000-10000 ft msl as the day progresses. Expect mountain obscuration of coastal slopes and scattered showers to start moving into the region by 20/0000 UTC. 20/0200-1500 UTC, clouds will gradually become SCT-FEW from west to east as the front moves through, with light shower activity, BKN-OVC clouds (tops around 6000-10000 ft msl) and mountain obscuration persisting in the mountains. Shower activity dissipating 20/1000-1500 UTC. The deserts should continue to have P6SM vis through Saturday morning, except for the high deserts possibly getting some light shower activity 20/0000-0500 UTC along with BKN clouds in the 4000-10000 ft msl layer and locally lower vis. Otherwise, clouds in the deserts will be SCT AOA 10000 ft msl.

W/SW winds 15-25 KT with gusts 40-50 KT at times developing over the ridges and along the desert slopes, producing mod-strong up/downdrafts and LLWS over and east of the mountains.

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.MARINE...

The San Clemente Basin buoy continues to report 11-12 foot seas as of noon today, so a Small Craft Advisory remains in effect for the outer waters due to hazardous seas through 2 pm. A weak cold front will pass over the coastal waters today, with increasing northwesterly winds in its wake. Northwest wind gusts to gale force are expected at times later this afternoon through Saturday evening for the inner and outer waters. The strong winds, in addition to large long-period northwest swell and shorter-period wind swells, will combine to create hazardous boating conditions. A Gale Warning goes into effect at 2 pm this afternoon and continues through 10 pm Saturday.

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.BEACHES...

12 pm reports from the nearshore buoys show wave heights/periods of around 7-9 feet with 17 second periods. This large west-northwest swell from 280 degrees is bringing high surf today with reports of 5-10 foot surf at exposed area beaches. Surf at around this height,

January 20, 2018 Exceptional Event, Imperial County

Appendix A

with sets to 12 feet occasionally, will continue through Saturday before the swell lowers Sunday into Monday. Strong rip currents will accompany the high surf, resulting in dangerous swimming conditions. A High Surf Advisory remains in effect until 8 PM Saturday.

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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...Winter Weather Advisory from 4 PM this afternoon to 6 AM PST Saturday for Riverside County Mountains-San Diego County Mountains.

Winter Weather Advisory until 6 AM PST Saturday for San Bernardino County Mountains.

High Surf Advisory until 8 PM PST Saturday for Orange County Coastal Areas-San Diego County Coastal Areas.

PZ...Gale Warning until 10 PM PST Saturday for Coastal Waters from San Mateo Point to the Mexican Border and out to 30 nm- Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

Small Craft Advisory for hazardous seas until 2 PM PST this afternoon for Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

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PUBLIC...MM

AVIATION/MARINE/BEACHES...Harrison

IOWA STATE UNIVERSITY

College of Ag
Department of Agronomy

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FXUS65 KPSR 192032

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

132 PM MST Fri Jan 19 2018

.SYNOPSIS...

High pressure will prevail across the region today with above normal temperatures and dry conditions. A notable storm system will move into the Southwest later today and into Saturday. While it still does not look like a very wet system, it will result in increasing winds and a significant drop in temperatures. After a cool Saturday and Sunday, temperatures will slowly rebound heading into the first part of next week.

&&

.DISCUSSION...

Mostly clear skies with only very thin cirrus are observed this afternoon across the region, as temperatures heat up into the mid-70s. Bigger weather changes are on the horizon, however, as an upstream trough is digging southeastward along the California coast. The edge of colder air aloft was observed in the morning sounding from Vandenburg AFB, and this will continue to rapidly spread eastward. Surface observations show the position of the cold front entering the Los Angeles Basin and Mojave Desert of California as of 1:30 PM MST. The current timing of the cold front suggests that it will enter southeast California early Saturday morning, before spreading into south-central Arizona by late Saturday morning. This will substantially limit diurnal heating tomorrow with persistent low-level cold advection occurring throughout the day. Winds will also kick up a bit due to the relatively strong low-level thermal gradient in place, but speeds are expected to remain below criteria.

Due to the progressive nature of this system, the amount of moisture will remain fairly limited. As previously advertised, this will likely remain an event more favorable for precipitation north and east of the Phoenix area across the higher terrain. Current forecast trends suggest precipitation will start across northern Arizona during the late morning, and spread southeastward across northeastern Maricopa and southern Gila Counties by afternoon. The temperature profile aloft will be very cold, and will result in snow levels initially starting around 6500 ft and falling to near 4000 feet by late Saturday evening. Regardless, accumulations across south-central Arizona should be fairly light. A few light showers are also possible across the lower deserts, including the Greater Phoenix area, but any rainfall totals are currently expected to be very light.

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

Well below-normal temperatures will persist into Sunday with highs only expected to reach the upper 50s in most lower desert locations. Not much change to the previous thinking in terms of the cold overnight temperatures, with lows forecast to generally remain close to or above freezing in most areas with exception to localized outlying spots.

&&

.PREVIOUS DISCUSSION...

As the main trof moves into New Mexico Saturday night, there will be lingering chance of mainly evening showers east of Phoenix, mainly of the instability variety as cold air aloft moves overhead. By Sunday morning precip threat will be basically over for our area. With skies clearing significantly behind the front Saturday night, the cold airmass combined with lighter winds and good radiational cooling will result in a rather cold morning Sunday morning. Most of the deserts will fall into the 30s, including the greater Phoenix area. Some of the outlying desert areas including communities such as Casa Grande, Wickenburg, Bouse and Tacna, will see lows drop to near freezing. Cold temps not widespread enough or cold enough to warrant the issuance of a Freeze Warning at this time.

For Monday into the middle of next week, overall we expect dry conditions as dry west to northwest flow aloft sets up over the desert southwest. A weak dry wave will move through the area, embedded in the northwest flow aloft, on Monday and this will result in some increased high cloud cover. Otherwise expect mostly sunny days and clear nights to go along with a gradual warming trend. Central desert highs should remain in the 60s through Tuesday, then finally climb into the lower 70s on Wednesday.

For the very end of the forecast period, Thursday, both the GFS and ECMWF indicate the potential for another deep and cold upper trof to move through the western CONUS. At this time it appears rather dry for our area (southern Arizona) but should lead to a cooling trend later next week. We do have some single digit POPs in the forecast as a precaution.

&&

.AVIATION...

South-Central Arizona including KPHX, KIWA, and KSDL: Light easterly winds will continue through much of today and tonight although variable flow is likely at KPHX from 23-04Z this evening. Winds will switch to the west early tomorrow morning as a front pushes through the Phoenix metro during the 12-18Z time frame on Saturday. Expecting low stratocumulus to accompany this front with BKN ceilings in the 5-7 kft range. Rapid clearing is expected behind the front with only a FEW low clouds Saturday afternoon. Showers are possible Saturday morning but will be spotty and light if they materialize.

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

Southeast California/Southwest Arizona including KIPL and KBLH: An approaching cold front will gradually increase wind speeds at KBLH today with a more abrupt start at KIPL this evening. The strongest winds (gusts 20-30kts) look to be between 04-10Z tonight ahead of the front with winds weakening after the frontal passage. No precipitation is expected with the front but a FEW low clouds (5-8 kft) and isolated areas of blowing dust are possible. Wind speeds will increase again tomorrow afternoon as higher momentum air mixes down to the surface with the daytime heating.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...

Sunday through Thursday:

Anticipate a warming trend during the first half of next week. Accordingly, humidities will trend downward though overnight recovery will remain good. Winds will be light and favor north and northeasterly directions. During the latter part of next week, a passing weather system will bring cooler temperatures and stronger winds. At this time, rain chances will be slight at best and will be limited to the higher terrain of south-central AZ.

&&

.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...Rogers

PREVIOUS DISCUSSION...CB

AVIATION...Wilson

FIRE WEATHER...AJ

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935

FXUS66 KSGX 200526

AFDSGX

Area Forecast Discussion

National Weather Service San Diego CA

925 PM PST Fri Jan 19 2018

.SYNOPSIS...

A cold front will bring rain, mountain snow and gusty winds as it moves across the region tonight. The precipitation will end Saturday morning. Saturday will be breezy and cold with gusty west winds adding a chill to the air. Sunny and a little warmer Sunday, followed by even warmer days Monday through Wednesday. A trough of low pressure will bring cool and breezy weather Thursday and Friday, and a slight chance of showers.

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

While most areas were reporting light rain or drizzle this evening, a line of stronger echoes were focused over the Inland Empire between 8-9 PM this evening. A narrow band of 40-50dBz returns stretched from Loma Linda through Highland and up in the mountains to Running Springs. Through 9 PM...Devore reported 0.48" of rain, and Highland had 0.47". The highest amounts have fallen over the foothills and lower mountain slopes with 0.10-0.20" at most other locations. In the coastal and valley stations in Riverside, Orange and San Diego County the rain amounts ranged from 0.01 to 0.05". Snow levels were still fairly high, around 7000 feet. Big Bear had a temperature of 37 at 830 PM. The snow levels will steadily lower overnight as the cold core trough centered off the coast moves slowly east tonight. However, the coldest air doesn't reach SoCal until Saturday morning, and that will probably limit the snow amounts below 5500 feet. But above 6000 feet, 1-4" is expected with locally higher amounts in areas that see stronger convective cells. As of this evening, those cells were focused over the San Bernardino Mountains between Crestline and Big Bear Lake. Precipitation amounts were raised in these areas.

The moist layer extends up to 10kft feet this evening and will remain in place through 12Z. After 12Z the winds shift northwest and drier air will slowly filter into the area. Cold air aloft (500 mb temperatures bottom out around -27C) and residual moisture will keep the threat for showers going through Saturday, mainly in San Diego County.

Saturday will be cold day with highs in the mid 50s to low 60s west of the mountains, and in the 30s and 40s in the mountains. Low

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

Desert highs will be in the 60s, and High Desert highs will be in the low 50s. Strong northwest winds will make it feel even colder. There is an outside chance for record low highs tomorrow.

From Previous Discussion

As winds calm down Saturday night and skies clear, patchy frost is forecast for some of the cooler inland valleys. That will be true for Sunday night as well. High pressure doesn't exactly rebound much Sunday and Monday so temperatures will stay cooler than average. Not until Tuesday and Wednesday do we see some form of high pressure ridge develop. That will bring temperatures back up a few degrees above average into the 70s at lower elevations. Models have been showing the next trough of low pressure heading into California either late Wednesday or Thursday. This trough has some power to it, but most of the energy and moisture stay north of Southern California. We have confidence that it should still bring us cool and breezy weather late Wednesday into Friday, but less confident about any showers. Slight chance is our preferred forecast for now. Following that trough there is a substantial ridge of high pressure and also some offshore flow developing. Add those together and it could be pretty hot next weekend.

&&

.AVIATION...

200445Z...Multiple low cloud bases, from 2000-5000 ft MSL and tops to 7000 ft MSL, will continue over and west of the mountains through Sat morning. -SHRA will move across the coast/valleys/mountains as an upper-level system moves across the area. VIS may lower to 1-3 SM in heavier showers. Showers will decrease in coverage Saturday morning. Mountains will be obscured most of tonight.

Westerly wind gusts of 30-40 kt will continue over mountains and into adjacent deserts through Saturday. Mod-strong up/downdrafts and LLWS are expected over and east of the mountains.

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.MARINE...

A weak cold front moving over the coastal waters tonight will create northwest wind gusts of 25-35 kt. Wind waves and an elevated swell already in the area will create combined seas of 10-15 ft at times through Saturday. The strong winds, in addition to large long-period northwest swell and shorter-period wind swells, will combine to create hazardous boating conditions. A Gale Warning remains in effect through 10 pm Saturday.

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.BEACHES...

5-10 ft surf will continue from an elevated westerly swell. Sets to 12 feet are possible on west-facing beaches in southern San Diego County through Saturday, then the swell lowers Sunday into Monday.

January 20, 2018 Exceptional Event, Imperial County

Appendix A

Strong rip currents will accompany the high surf, resulting in dangerous swimming conditions. A High Surf Advisory remains in effect until 8 PM Saturday.

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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...Winter Weather Advisory through 6 AM PST Saturday for Riverside County Mountains-San Diego County Mountains.

Winter Weather Advisory until 6 AM PST Saturday for San Bernardino County Mountains.

High Surf Advisory until 8 PM PST Saturday for Orange County Coastal Areas-San Diego County Coastal Areas.

PZ...Gale Warning until 10 PM PST Saturday for Coastal Waters from San Mateo Point to the Mexican Border and out to 30 nm- Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

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PUBLIC...Moede

AVIATION/MARINE/BEACHES...JJT

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257

FXUS65 KPSR 200514

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

1014 PM MST Fri Jan 19 2018

.UPDATE...Updated Aviation Discussion.

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.SYNOPSIS...

High pressure will prevail across the region today with above normal temperatures and dry conditions. A notable storm system will move into the Southwest later today and into Saturday. While it still does not look like a very wet system, it will result in increasing winds and a significant drop in temperatures. After a cool Saturday and Sunday, temperatures will slowly rebound heading into the first part of next week.

&&

.DISCUSSION...

Mostly clear skies with only very thin cirrus are observed this afternoon across the region, as temperatures heat up into the mid-70s. Bigger weather changes are on the horizon, however, as an upstream trough is digging southeastward along the California coast. The edge of colder air aloft was observed in the morning sounding from Vandenburg AFB, and this will continue to rapidly spread eastward. Surface observations show the position of the cold front entering the Los Angeles Basin and Mojave Desert of California as of 1:30 PM MST. The current timing of the cold front suggests that it will enter southeast California early Saturday morning, before spreading into south-central Arizona by late Saturday morning. This will substantially limit diurnal heating tomorrow with persistent low-level cold advection occurring throughout the day. Winds will also kick up a bit due to the relatively strong low-level thermal gradient in place, but speeds are expected to remain below criteria.

Due to the progressive nature of this system, the amount of moisture will remain fairly limited. As previously advertised, this will likely remain an event more favorable for precipitation north and east of the Phoenix area across the higher terrain. Current forecast trends suggest precipitation will start across northern Arizona during the late morning, and spread southeastward across northeastern Maricopa and southern Gila Counties by afternoon. The temperature profile aloft will be very cold, and will result in snow levels initially starting around 6500 ft and falling to near 4000 feet by late Saturday evening. Regardless, accumulations across south-central Arizona should be fairly

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

light. A few light showers are also possible across the lower deserts, including the Greater Phoenix area, but any rainfall totals are currently expected to be very light.

Well below-normal temperatures will persist into Sunday with highs only expected to reach the upper 50s in most lower desert locations. Not much change to the previous thinking in terms of the cold overnight temperatures, with lows forecast to generally remain close to or above freezing in most areas with exception to localized outlying spots.

&&

.AVIATION...

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

On Saturday morning expect a strong cold front to move into the area with breezy westerly winds, lowering CIGS and a chance of rain showers through much of the period. Tonight a light wind regime will continue until early morning. Expect the cold front's arrival between 11-16Z with breezy southwesterly winds 8-11kt gusting to 14-18kt. This system will also bring light to moderate rain showers along with low cloud CIGS from 5-9K and FEW-SCT low clouds near at 3-4K. The chances for rain showers will continue into Saturday evening.

Southeast California/Southwest Arizona including KIPL and KBLH:

With a strong cold front currently sweeping through southeast CA expect breezy to occasionally windy westerly winds near 14kt gusting to 20-25kt at KIPL. Winds at KBLH are expected to be southwesterly at 8-12kt tonight becoming westerly to northwesterly and breezy by early to mid morning at 8-12kt gusting to 17-20kt. Expect mostly cloudy skies tonight with high cloud CIGS and FEW-SCT low to mid clouds at 4-10K.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Sunday through Thursday:

Anticipate a warming trend during the first half of next week. Accordingly, humidities will trend downward though overnight recovery will remain good. Winds will be light and favor north and northeasterly directions. During the latter part of next week, a passing weather system will bring cooler temperatures and stronger winds. At this time, rain chances will be slight at best and will be limited to the higher terrain of south-central AZ.

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

DISCUSSION...Rogers

AVIATION...Sawtelle

FIRE WEATHER...AJ

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WWUS75 KPSR 200750

NPWPSR

URGENT - WEATHER MESSAGE

National Weather Service Phoenix AZ

1250 AM MST Sat Jan 20 2018

CAZ562-566-567-201200-

/O.NEW.KPSR.WI.Y.0002.180120T0750Z-180120T1200Z/

Imperial County Southwest-Imperial County West-Imperial Valley-

Including the cities of Mountain Spring, Coolidge Springs,

Salton City, Winona, Coyote Wells, Ocotillo, Plaster City,

El Centro, Calexico, Alamo, and Brawley

1150 PM PST Fri Jan 19 2018

...WIND ADVISORY IN EFFECT UNTIL 4 AM PST SATURDAY...

The National Weather Service in Phoenix has issued a Wind Advisory, which is in effect until 4 AM PST Saturday.

* AFFECTED AREA...Southwestern Imperial County including the Imperial Valley and the communities of Imperial and El Centro.

* TIMING...Through 4am PST.

* WINDS...West winds 20 to 35 mph with gusts to around 45 mph at times.

* IMPACTS...Strong wind gusts will produce patchy dense blowing dust which will lead to sharply restricted visibility and hazardous driving conditions.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Wind Advisory means that sustained wind speeds of between 30 and 40 mph are expected, or wind gusts of between 40 and 58 mph. Winds this strong can make driving difficult, especially for high profile vehicles. In addition, strong winds over desert areas could result in briefly lowered visibilities to well under a mile at times in blowing dust or blowing sand. Use extra caution.

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207

FXUS65 KPSR 200955

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

255 AM MST Sat Jan 20 2018

.SYNOPSIS...

A notable storm system will move into the Southwest today and into Saturday. While it still does not look like a very wet system, it will still bring scattered showers to the central deserts this afternoon and evening and will result in increasing winds and a significant drop in temperatures. High temperatures over the lower deserts will be very cool today and Sunday with many areas in the 50s to around 60; starting next Monday temperatures will slowly rebound as we move into the middle of next week. Morning low temperatures will be rather cold early next week, especially Monday morning, as the deserts drop into the 30s.

&&

.DISCUSSION...

At 2 am this morning, the deep and cold open wave Pacific trof was bearing in on the southern California coast; the surface cold front had already moved into the far southeast CA deserts and had just passed through the Imperial Valley. Wind gusts to around 50 mph occurred briefly in parts of El Centro associated with the frontal passage; due to the unexpected strong winds we issued a Wind Advisory for southwest Imperial County thru 12Z this morning. So far it has been a very dry frontal passage and the surface radar mosaic showed little if any echo over the western deserts. IR imagery showed considerable lee cirrus spreading across much of western AZ and far SE California, with skies virtually clear over the Phoenix area.

Operational guidance, including GFS and ECMWF runs, maintain good consistency with the timing and track of the trof and associated cold front and GEFS ensemble members are pretty much all on the same page. Surface front should move into the central deserts late this morning and pass through the Phoenix area by late morning to early afternoon. The most significant precipitation will develop later this morning and affect areas to the north and east of central PHoenix this afternoon. One minor wrinkle; the system again appears to be a bit more dynamic and moist than we previously thought; GFS has raised its QPF and GEFS plumes suggest many locations in the Phoenix area may pick up one tenth of an inch or more with this system. MEX/MRA POPs for PHoenix area are also higher and now in the 50 percent ballpark for today. NAEFS POPs are a bit higher as well, especially east of Phoenix where they call for categorical rain/snow this afternoon. We have raised our POPs a bit with values rising over 70 percent across the higher terrain east of PHoenix, and into

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

the 30-40 percent ballpark over the Phoenix metro. Snow level lowers to around 4500 feet this afternoon, then below 4000 feet tonight across south-central AZ but given the low QPF we do not expect significant new snow accumulations across the higher terrain east of Phoenix.

Although the main cold front passes quickly east and into New Mexico this afternoon, a secondary short wave/vort lobe will rotate around the back side of the departing trof and lead to a continued threat for scattered showers and higher elevation snow from Phoenix eastward this evening. POPs have been raised overnight, with Phoenix staying in the 20-30 percent range this evening. Given that we will probably see more cloud cover overnight, and thus less radiational cooling, low temps Sunday morning have been raised a few degrees and the low in Phoenix is now expected to be about 41 degrees. It now appears that the coldest morning with this system will actually be Monday morning, when many of the lower deserts fall into the 30s, and the outlying deserts drop to around freezing. For now we still do not expect to issue a Freeze Warning due to temps not quite cold enough, and readings near freezing not quite widespread enough.

Otherwise, for max temps, today still looks to be very cool with most of the lower deserts falling into the mid 50s to low 60s. Still going with a high in Phoenix today of just 59 degrees, nearly 10 degrees below seasonal normals. Very little change is expected on Sunday, as Phoenix should still struggle to reach 60 degrees under mostly sunny skies.

For Monday into the middle of the week, the weather pattern still looks to be dry with periods of high clouds passing through the area. A gradual warming trend will take place as the desert southwest comes under a dry northwest flow aloft with weak high pressure building in overhead. High temps in Phoenix should finally reach to around 70 on Tuesday and then climb into the low to possibly the middle 70s Wednesday into Thursday. Guidance still suggests that a deep and cold upper trof may develop over the western CONUS by late next week. This still looks to be dry for our area and we only have some single digit POPs in place Thursday into Friday, but the biggest impact may again be much cooler temperatures developing by next Friday. For now we have lowered our Friday max temps into the mid 60s over the central deserts; time will tell if we need some additional cooling.

&&

.AVIATION...

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

On Saturday morning expect a strong cold front to move into the area with breezy westerly winds, lowering CIGS and a chance of rain showers through much of the period. Tonight a light wind regime will continue until early morning. Expect the cold front's arrival between 11-16Z with breezy southwesterly winds 8-11kt gusting to 14-18kt. This system will also bring light to moderate rain

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

showers along with low cloud CIGS from 5-9K and FEW-SCT low clouds near at 3-4K. The chances for rain showers will continue into Saturday evening.

Southeast California/Southwest Arizona including KIPL and KBLH:

With a strong cold front currently sweeping through southeast CA expect breezy to occasionally windy westerly winds near 14kt gusting to 20-25kt at KIPL. Winds at KBLH are expected to be southwesterly at 8-12kt tonight becoming westerly to northwesterly and breezy by early to mid morning at 8-12kt gusting to 17-20kt. Expect mostly cloudy skies tonight with high cloud CIGS and FEW-SCT low to mid clouds at 4-10K.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...

Sunday through Thursday:

Anticipate a warming trend during the first half of next week. Accordingly, humidities will trend downward though overnight recovery will remain good. Winds will be light and favor north and northeasterly directions. During the latter part of next week, a passing weather system will bring cooler temperatures and stronger winds. At this time, rain chances will be slight at best and will be limited to the higher terrain of south-central AZ.

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.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...Wind Advisory until 4 AM PST early this morning for CAZ562-566-567.

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DISCUSSION...CB

AVIATION...Sawtelle

FIRE WEATHER...AJ

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WWUS76 KSGX 201155

NPWSGX

URGENT - WEATHER MESSAGE

National Weather Service San Diego CA

355 AM PST Sat Jan 20 2018

...WINDY FOR LATE MORNING THROUGH THE AFTERNOON...

...AREAS OF FROST FOR PORTIONS OF THE INLAND EMPIRE FOR LATE
TONIGHT INTO SUNDAY MORNING...

.A low pressure system moving through Southern California into Arizona today will bring stronger onshore flow today with stronger and gusty west to northwest winds during the late morning through the afternoon. Winds will be strongest in the mountains and deserts...and in coastal and valley areas of San Diego County. Behind this low pressure system...a cold dry atmosphere and radiational cooling will bring areas of frost to colder wind sheltered portions of the Inland Empire late tonight into early Sunday morning.

CAZ048-202230-

/O.NEW.KSGX.FR.Y.0001.180121T1000Z-180121T1600Z/

San Bernardino and Riverside County Valleys-The Inland Empire-
Including the cities of Moreno Valley and Corona

355 AM PST Sat Jan 20 2018

...FROST ADVISORY IN EFFECT FROM 2 AM TO 8 AM PST SUNDAY...

The National Weather Service in San Diego has issued a Frost Advisory...which is in effect from 2 AM to 8 AM PST Sunday.

* Location...Lower...colder...wind sheltered areas.

* Duration...Up to 6 hours of temperatures in the upper 20s to mid 30s with areas of frost.

* Temperature...Falling into the upper 20s to mid 30s.

* Impacts...Sensitive outdoor plants may be killed if left uncovered.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Frost Advisory means that widespread frost is expected. Sensitive outdoor plants may be killed if left uncovered.

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January 20, 2018 Exceptional Event, Imperial County**Appendix A**

CAZ055-056-058-060>062-065-202230-

/O.NEW.KSGX.WI.Y.0003.180120T1800Z-180121T0200Z/

San Bernardino County Mountains-Riverside County Mountains-

San Diego County Mountains-Apple and Lucerne Valleys-

Coachella Valley-San Diego County Deserts-

San Gorgonio Pass Near Banning-

Including the cities of Julian, Pine Valley, Indio, Palm Springs,

Cathedral City, Palm Desert, Palm Desert Country, La Quinta,

Coachella, Borrego Springs, and Desert Hot Springs

355 AM PST Sat Jan 20 2018

...WIND ADVISORY IN EFFECT FROM 10 AM THIS MORNING TO 6 PM PST
THIS EVENING...

The National Weather Service in San Diego has issued a Wind
Advisory...which is in effect from 10 AM this morning to 6 PM PST
this evening.

* Winds...Areas of west to northwest winds 20 to 30 mph with gusts
to 45 mph. Isolated gusts to 55 mph.

* Timing...Strongest winds during the late morning through the
afternoon...then decreasing by early evening.

* Location...Strongest winds from mountain ridge tops...along
desert slopes of the mountains...into adjacent desert areas.

* Visibility...Locally reduced in blowing sand and blowing dust in
the deserts.

* Impacts...Driving will be hazardous for high profile vehicles.
Watch for broken tree limbs and other debris on roadways.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Wind Advisory means that winds of 35 mph are expected. Winds
this strong can make driving difficult...especially for high
profile vehicles. Use extra caution.

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CAZ043-050-202230-

/O.NEW.KSGX.WI.Y.0003.180120T1800Z-180121T0200Z/

San Diego County Coastal Areas-San Diego County Valleys-

Including the cities of Vista, Carlsbad, Encinitas, Chula Vista,

National City, San Diego, Escondido, El Cajon, San Marcos,

La Mesa, Santee, and Poway

355 AM PST Sat Jan 20 2018

...WIND ADVISORY IN EFFECT FROM 10 AM THIS MORNING TO 6 PM PST
THIS EVENING...

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

The National Weather Service in San Diego has issued a Wind Advisory...which is in effect from 10 AM this morning to 6 PM PST this evening.

- * Winds...Areas of west to northwest winds 15 to 25 mph with gusts to 35 mph. Local gusts to 40 mph near the coast in the afternoon.
- * Timing...Strongest winds from late morning into the afternoon...then decreasing by early evening.
- * Location...Strongest winds near the coast.
- * Impacts...Driving will be hazardous for high profile vehicles. Watch for broken tree limbs and downed palm fronds.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Wind Advisory means that winds of 35 mph are expected. Winds this strong can make driving difficult...especially for high profile vehicles. Use extra caution.

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072

FXUS66 KSGX 201231

AFDSGX

Area Forecast Discussion

National Weather Service San Diego CA

431 AM PST Sat Jan 20 2018

.SYNOPSIS...

A low pressure system moving from Southern California into Arizona will bring much cooler and breezy conditions today. Scattered showers...with snow showers in the mountains...will continue into this morning...then end from the northwest in the afternoon. There will be slow warming for Sunday...with greater warming for Monday through Wednesday with high pressure aloft. Weak offshore lower level flow will bring locally gusty northeast winds near the coastal foothills at times. For next Thursday...another fast moving low pressure system moving inland through California will bring cool and windy conditions with a chance of mostly light showers. Then dry with a warming trend for Friday through next weekend as high pressure aloft strengthens near the West Coast. High surf with strong rip currents will continue at the beaches today.

&&

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

A cold low pressure system is centered near Point Conception early this morning. It will move into Arizona by late afternoon..and into the central and southern Rockies Sunday. Radar and surface reports show scattered showers continuing early this morning with the greatest coverage from the valleys into the mountains. Snow levels have lowered to 3000 to 3500 feet. The coldest air at mid levels will move across the area this with briefly more intense showers possible.

Scattered showers will continue into this morning...then decrease from the northwest during the late morning and afternoon. Isolated stronger showers with brief heavy downpours are possible through this morning. The snow level will be near 3000 to 3500 feet early this morning...then rise to near 4000 feet during the afternoon. The greatest additional precipitation totals will be across the inland valleys into the mountains with one to locally two tenths of an inch in these areas and a few hundredths of an inch or less elsewhere. In the mountains...local additional snowfall of one to two inches above 3500 feet is possible through this morning.

Strong and gusty west winds have continued overnight in the mountains with strongest gusts near mountain ridge tops onto the

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

desert slopes of the mountains with the strongest gust overnight of 63 mph at Volcan Mountain in the San Diego County mountains. During the late morning through the afternoon...the stronger winds in the mountains will expand into portions of the deserts...and stronger winds across the coastal waters will spread inland across coastal and valley areas of San Diego County and portions of southern Orange County with strongest winds near the coast.

As the storm exits to the east tonight...a cold dry atmosphere will remain and with radiational cooling...temperatures in lower portions of the Inland Empire will fall into the upper 20s to mid 30s late tonight into early Sunday morning with areas of frost. Patchy frost is also possible in some for the inland valleys in San Diego County with some patchy radiational fog in some coastal and valley areas as well. Frost should be patchier for late Sunday night into early Monday morning.

High temperatures will be coolest today...then warm slightly on Sunday. Greater warming is expected for Monday through Wednesday as high pressure aloft strengthens near the California coast and surface high pressure over the Great Basin brings weak offshore lower level flow with locally gusty northeast winds near the coastal foothills and below passes and canyons at times.

For next Thursday...another fast moving low pressure system moving inland through California will bring cool and windy conditions with a chance of mostly light showers. There remain some slight timing and intensity differences among the global models...but the main impacts are expected for late Wednesday night through Thursday. Then dry with a warming trend for Friday through next weekend as high pressure aloft strengthens near the West Coast.

&&

.AVIATION...

200930Z...Coast/Valleys...SCT-BKN clouds with variable bases AOB 6000 FT MSL through mid afternoon. Isolated rain showers may lower briefly lower VIS to 3-5SM through midday, otherwise P6SM. Clouds becoming SCT 20Z-23Z with VFR conditions and unrestricted VIS through the evening.

Mountains/Deserts...Mts Partially obscured most of the day in clouds with scattered PCPN, mainly San Diego County. Westerly winds 25 to 35 KTS with gusts 45 KTS into the evening creating mod-stg up/down drafts over and east of the mts.

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.MARINE...

Northwest winds of 20-30 KTS with gusts to 35 KTS over the coastal waters this morning...decreasing to 20 KTS with gusts 25 KTS late this evening. Large wind waves on top of an elevated swell, will create combined seas of 10-15 ft at times. Refer to the Gale Warning

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

in effect for additional detail. Conditions will be hazardous for small craft through this evening.

&&

.BEACHES...

A building fresh swell from a local wind fetch will augment the large west-northwest swell in place over the coastal waters this morning, to drive some of the biggest surf of this event. Occasional sets of 12 to 15 feet are possible for west-facing beaches in southern San Diego County this morning. Elsewhere along the SoCal coast...5 to 10 foot surf will continue into this evening before subsiding later tonight. Strong rip currents will accompany the high surf, resulting in dangerous swimming conditions. Please refer to the High Surf Advisory for additional details.

&&

.SKYWARN...

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

&&

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...Winter Weather Advisory until 10 AM PST this morning for Riverside County Mountains-San Diego County Mountains.

Wind Advisory from 10 AM this morning to 6 PM PST this evening for Apple and Lucerne Valleys-Coachella Valley-Riverside County Mountains-San Bernardino County Mountains-San Diego County Coastal Areas-San Diego County Deserts-San Diego County Mountains-San Diego County Valleys-San Geronio Pass Near Banning.

Winter Weather Advisory until 6 AM PST early this morning for San Bernardino County Mountains.

Frost Advisory from 2 AM to 8 AM PST Sunday for San Bernardino and Riverside County Valleys-The Inland Empire.

High Surf Advisory until 8 PM PST this evening for Orange County Coastal Areas-San Diego County Coastal Areas.

PZ...Gale Warning until 10 PM PST this evening for Coastal Waters from San Mateo Point to the Mexican Border and out to 30 nm-Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

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FXUS65 KPSR 201207

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

507 AM MST Sat Jan 20 2018

.UPDATE...

Updated Aviation and Fire Weather sections.

&&

.SYNOPSIS...

A notable storm system will move into the Southwest today and into Saturday. While it still does not look like a very wet system, it will still bring scattered showers to the central deserts this afternoon and evening and will result in increasing winds and a significant drop in temperatures. High temperatures over the lower deserts will be very cool today and Sunday with many areas in the 50s to around 60; starting next Monday temperatures will slowly rebound as we move into the middle of next week. Morning low temperatures will be rather cold early next week, especially Monday morning, as the deserts drop into the 30s.

&&

.DISCUSSION...

At 2 am this morning, the deep and cold open wave Pacific trof was bearing in on the southern California coast; the surface cold front had already moved into the far southeast CA deserts and had just passed through the Imperial Valley. Wind gusts to around 50 mph occurred briefly in parts of El Centro associated with the frontal passage; due to the unexpected strong winds we issued a Wind Advisory for southwest Imperial County thru 12Z this morning. So far it has been a very dry frontal passage and the surface radar mosaic showed little if any echo over the western deserts. IR imagery showed considerable lee cirrus spreading across much of western AZ and far SE California, with skies virtually clear over the Phoenix area.

Operational guidance, including GFS and ECMWF runs, maintain good consistency with the timing and track of the trof and associated cold front and GEFS ensemble members are pretty much all on the same page. Surface front should move into the central deserts late this morning and pass through the Phoenix area by late morning to early afternoon. The most significant precipitation will develop later this morning and affect areas to the north and east of central PHoenix this afternoon. One minor wrinkle; the system again appears to be a bit more dynamic and moist than we previously thought; GFS has raised its QPF and GEFS plumes suggest many locations in the Phoenix area may pick up one tenth of an inch or more with this

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

system. MEX/MRA POPs for Phoenix area are also higher and now in the 50 percent ballpark for today. NAEFS POPs are a bit higher as well, especially east of Phoenix where they call for categorical rain/snow this afternoon. We have raised our POPs a bit with values rising over 70 percent across the higher terrain east of Phoenix, and into the 30-40 percent ballpark over the Phoenix metro. Snow level lowers to around 4500 feet this afternoon, then below 4000 feet tonight across south-central AZ but given the low QPF we do not expect significant new snow accumulations across the higher terrain east of Phoenix.

Although the main cold front passes quickly east and into New Mexico this afternoon, a secondary short wave/vort lobe will rotate around the back side of the departing trof and lead to a continued threat for scattered showers and higher elevation snow from Phoenix eastward this evening. POPs have been raised overnight, with Phoenix staying in the 20-30 percent range this evening. Given that we will probably see more cloud cover overnight, and thus less radiational cooling, low temps Sunday morning have been raised a few degrees and the low in Phoenix is now expected to be about 41 degrees. It now appears that the coldest morning with this system will actually be Monday morning, when many of the lower deserts fall into the 30s, and the outlying deserts drop to around freezing. For now we still do not expect to issue a Freeze Warning due to temps not quite cold enough, and readings near freezing not quite widespread enough.

Otherwise, for max temps, today still looks to be very cool with most of the lower deserts falling into the mid 50s to low 60s. Still going with a high in Phoenix today of just 59 degrees, nearly 10 degrees below seasonal normals. Very little change is expected on Sunday, as Phoenix should still struggle to reach 60 degrees under mostly sunny skies.

For Monday into the middle of the week, the weather pattern still looks to be dry with periods of high clouds passing through the area. A gradual warming trend will take place as the desert southwest comes under a dry northwest flow aloft with weak high pressure building in overhead. High temps in Phoenix should finally reach to around 70 on Tuesday and then climb into the low to possibly the middle 70s Wednesday into Thursday. Guidance still suggests that a deep and cold upper trof may develop over the western CONUS by late next week. This still looks to be dry for our area and we only have some single digit POPs in place Thursday into Friday, but the biggest impact may again be much cooler temperatures developing by next Friday. For now we have lowered our Friday max temps into the mid 60s over the central deserts; time will tell if we need some additional cooling.

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.AVIATION...

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

A cold front over southwest AZ and extending northeastward across

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

north-central AZ (and beyond) as of 12Z will continue moving eastward as the day progresses. Anticipate the front to track across metro Phoenix in the 14Z through 18Z time frame bringing a wind shift from southeast to southwest (reaching PHX between 15Z-16Z). Gusts look to be modest with the front (10-20 kts). It will be accompanied by stratocumulus with bases of FL060-080 along with scattered showers for a few hours. Can't rule out PHX ceiling touching BKN050 in a shower but confidence too low to show that in the TAF. Anticipate some temporary thinning of clouds in the afternoon with more frequent gusts of 20-25 kts. Cloud bases will lower again after 00Z this evening with isolated showers but anticipate they will remain above BKN050. Expect more numerous showers and lower cigs over higher terrain north and east of metro Phoenix (higher mountain tops obscured). Anticipate clearing from west to east beginning after 06Z.

Southeast California/Southwest Arizona including KIPL and KBLH:

Very strong west winds over Imperial County will decrease markedly by 14Z this morning. Elsewhere, winds haven't been nearly as strong (gusting 20-25 kts). Anticipate strengthening of westerly winds after 18Z with gusts of 25-30 kts common. Local blowing dust is possible but too isolated to depict in TAFs. Most areas will have cloud bases AOA FL100 except for La Paz County which will have some local ceilings of FL070-090 with isolated showers until about 19Z.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...

Monday through Friday:

A warming trend can be expected Monday through Thursday with lower deserts highs climbing well into the 70s again Wed-Thu. Humidities trend down early in the workweek but overnight recovery remains good. Winds will generally be light and favor north and northeasterly directions with some local breeziness Tuesday. A dry weather system moves through late in the workweek for breezy conditions (starting Thursday) and cooler temperatures by Friday.

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.SPOTTER INFORMATION STATEMENT...

Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...None.

CA...Wind Advisory until 4 AM PST early this morning for CAZ562-566-567.

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DISCUSSION...CB

AVIATION...AJ

FIRE WEATHER...AJ

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FXUS66 KSGX 201651 AAA

AFDSGX

Area Forecast Discussion

National Weather Service San Diego CA

845 AM PST Sat Jan 20 2018

.MORNING UPDATE...

The forecast was updated this morning to add isolated thunderstorms in the San Diego County Valleys and Mountains with marginal instability indicated on the hi-res models and morning sounding. Scattered showers and isolated thunderstorms will continue through midday and then decrease through the afternoon as the shortwave trough moves east of the area. No other changes were made to the forecast at this time.

&&

.SYNOPSIS...

A low pressure system moving from Southern California into Arizona will bring much cooler and breezy conditions today with scattered rain and showers. There will be slow warming Sunday...with greater warming Monday through Wednesday with high pressure. Weak offshore lower level flow will bring gusty northeast winds near the coastal foothills at times. For next Thursday...another fast moving low pressure system moving inland through California will bring cool and windy conditions with a chance of light showers. Then dry with a warming trend Friday through next weekend as high pressure strengthens near the West Coast. High surf with strong rip currents will continue at the beaches today.

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

(previous)

A cold low pressure system is centered near Point Conception early this morning. It will move into Arizona by late afternoon..and into the central and southern Rockies Sunday. Radar and surface reports show scattered showers continuing early this morning with the greatest coverage from the valleys into the mountains. Snow levels have lowered to 3000 to 3500 feet. The coldest air at mid levels will move across the area this with briefly more intense showers possible.

Scattered showers will continue into this morning...then decrease from the northwest during the late morning and afternoon. Isolated stronger showers with brief heavy downpours are possible through

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

this morning. The snow level will be near 3000 to 3500 feet early this morning...then rise to near 4000 feet during the afternoon. The greatest additional precipitation totals will be across the inland valleys into the mountains with one to locally two tenths of an inch in these areas and a few hundredths of an inch or less elsewhere. In the mountains...local additional snowfall of one to two inches above 3500 feet is possible through this morning.

Strong and gusty west winds have continued overnight in the mountains with strongest gusts near mountain ridge tops onto the desert slopes of the mountains with the strongest gust overnight of 63 mph at Volcan Mountain in the San Diego County mountains. During the late morning through the afternoon...the stronger winds in the mountains will expand into portions of the deserts...and stronger winds across the coastal waters will spread inland across coastal and valley areas of San Diego County and portions of southern Orange County with strongest winds near the coast.

As the storm exits to the east tonight...a cold dry atmosphere will remain and with radiational cooling...temperatures in lower portions of the Inland Empire will fall into the upper 20s to mid 30s late tonight into early Sunday morning with areas of frost. Patchy frost is also possible in some for the inland valleys in San Diego County with some patchy radiational fog in some coastal and valley areas as well. Frost should be patchier for late Sunday night into early Monday morning.

High temperatures will be coolest today...then warm slightly on Sunday. Greater warming is expected for Monday through Wednesday as high pressure aloft strengthens near the California coast and surface high pressure over the Great Basin brings weak offshore lower level flow with locally gusty northeast winds near the coastal foothills and below passes and canyons at times.

For next Thursday...another fast moving low pressure system moving inland through California will bring cool and windy conditions with a chance of mostly light showers. There remain some slight timing and intensity differences among the global models...but the main impacts are expected for late Wednesday night through Thursday. Then dry with a warming trend for Friday through next weekend as high pressure aloft strengthens near the West Coast.

&&

.AVIATION...

201644Z...Coast...Primarily P6SM vis will continue through Sunday morning with SCT-FEW cloud decks in the 3000-6000 ft msl layer, except for local BKN cigs and locally lower vis in San Diego county through 2000 UTC due to isolated -SHRA.

Valleys/Coastal Mountain Slopes/Mountain Ridges...BKN-OVC cloud decks in the 3000-15000 ft msl layer over the mountains and portions of the inland valleys, with scattered showers, mountain obscuration

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

of the slopes and locally lower vis underneath showers, will continue through 2000 UTC. There is a slight chance of an isolated thunderstorm over Southern San Diego County valleys and mountains through 2000 UTC. 2000-21/1500 UTC, showers ending and clouds becoming FEW-SCT with primarily P6SM vis.

Desert Slopes/Deserts...SCT-BKN clouds in the 6000-15000 ft msl layer and isolated -SHRA with locally lower vis continuing through 2000 UTC. 2000-21/1500 UTC, clouds gradually clearing and P6SM vis expected. Westerly winds 20 to 30 KTS with gusts 45 KTS into the evening creating mod-stg up/down drafts over and east of the mountains.

&&

.MARINE...

The San Clemente Basin buoy has been seeing northwest winds gusting to 33 KT the past several hours with wave heights of around 12 feet. Northwest winds of 20-30 KTS with gusts to 35 KTS will likely continue over the coastal waters this morning and afternoon, decreasing to 20 KTS with gusts 25 KTS late this evening. Large wind waves on top of an elevated swell will create combined seas of 10-15 ft at times. A Gale Warning continues through 10 pm Tonight.

&&

.BEACHES...

A building fresh swell from a local wind fetch will augment the large west-northwest swell in place over the coastal waters this morning, to drive some of the biggest surf of this event. 7 am observations from the nearshore buoys show 9-12 foot waves at 14 seconds, and surf height observations from lifeguards and Surfline show 6-10 foot surf occurring this morning. Occasional sets of 12 to 14 feet are likely for exposed west-facing beaches in southern San Diego County this morning into this afternoon. Elsewhere along the Southern California coast, 5 to 9 foot surf will continue into this evening before subsiding later tonight. Strong rip currents will accompany the high surf, resulting in dangerous swimming conditions. A High Surf Advisory continues through 8 PM Tonight.

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.SKYWARN...

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

&&

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...Winter Weather Advisory until 10 AM PST this morning for Riverside County Mountains-San Diego County Mountains.

Wind Advisory from 10 AM this morning to 6 PM PST this evening for Apple and Lucerne Valleys-Coachella Valley-Riverside

January 20, 2018 Exceptional Event, Imperial County

County Mountains-San Bernardino County Mountains-San Diego County Coastal Areas-San Diego County Deserts-San Diego County Mountains-San Diego County Valleys-San Gorgonio Pass Near Banning.

Winter Weather Advisory until 6 AM PST early this morning for San Bernardino County Mountains.

Frost Advisory from 2 AM to 8 AM PST Sunday for San Bernardino and Riverside County Valleys-The Inland Empire.

High Surf Advisory until 8 PM PST this evening for Orange County Coastal Areas-San Diego County Coastal Areas.

PZ...Gale Warning until 10 PM PST this evening for Coastal Waters from San Mateo Point to the Mexican Border and out to 30 nm- Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

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PUBLIC...17/JMB

AVIATION/MARINE/BEACHES...Harrison

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991

FXUS65 KPSR 201842

AFDPSR

Area Forecast Discussion

National Weather Service Phoenix AZ

1142 AM MST Sat Jan 20 2018

.UPDATE...Updated Aviation Discussion.

.SYNOPSIS...

A notable storm system will move into the Southwest today and into Saturday. While it still does not look like a very wet system, it will still bring scattered showers to the central deserts this afternoon and evening and will result in increasing winds and a significant drop in temperatures. High temperatures over the lower deserts will be very cool today and Sunday with many areas in the 50s to around 60; starting next Monday temperatures will slowly rebound as we move into the middle of next week. Morning low temperatures will be rather cold early next week, especially Monday morning, as the deserts drop into the 30s.

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.DISCUSSION...

Observational trends show light showers developing within an upslope regime mainly north and northeast of Phoenix this morning. A band of midlevel moisture and ascent accompanying the progressive upper trough is favorably positioned across central Arizona to support the continued development of light precipitation through later today, mainly across the higher terrain. Still can't rule out some light showers affecting the lower desert locations as well. The forecast has been adjusted today and tonight more in line with current trends.

There is also at least some potential for a couple low-topped thunderstorms to develop this afternoon parts of Maricopa and La Paz Counties. The steep post-frontal lapse rate environment combined with cold temperatures aloft will be supportive for some modest destabilization, and any storm that does develop could produce small hail. This scenario is still highly uncertain, but will be worth monitoring short-term trends for.

&&

.PREVIOUS DISCUSSION...

At 2 am this morning, the deep and cold open wave Pacific trof was bearing in on the southern California coast; the surface cold front had already moved into the far southeast CA deserts and had just passed through the Imperial Valley. Wind gusts to around 50 mph

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

occurred briefly in parts of El Centro associated with the frontal passage; due to the unexpected strong winds we issued a Wind Advisory for southwest Imperial County thru 12Z this morning. So far it has been a very dry frontal passage and the surface radar mosaic showed little if any echo over the western deserts. IR imagery showed considerable lee cirrus spreading across much of western AZ and far SE California, with skies virtually clear over the Phoenix area.

Operational guidance, including GFS and ECMWF runs, maintain good consistency with the timing and track of the trof and associated cold front and GEFS ensemble members are pretty much all on the same page. Surface front should move into the central deserts late this morning and pass through the Phoenix area by late morning to early afternoon. The most significant precipitation will develop later this morning and affect areas to the north and east of central PHOenix this afternoon. One minor wrinkle; the system again appears to be a bit more dynamic and moist than we previously thought; GFS has raised its QPF and GEFS plumes suggest many locations in the Phoenix area may pick up one tenth of an inch or more with this system. MEX/MRA POPs for PHOenix area are also higher and now in the 50 percent ballpark for today. NAEFS POPs are a bit higher as well, especially east of Phoenix where they call for categorical rain/snow this afternoon. We have raised our POPs a bit with values rising over 70 percent across the higher terrain east of PHOenix, and into the 30-40 percent ballpark over the Phoenix metro. Snow level lowers to around 4500 feet this afternoon, then below 4000 feet tonight across south-central AZ but given the low QPF we do not expect significant new snow accumulations across the higher terrain east of Phoenix.

Although the main cold front passes quickly east and into New Mexico this afternoon, a secondary short wave/vort lobe will rotate around the back side of the departing trof and lead to a continued threat for scattered showers and higher elevation snow from Phoenix eastward this evening. POPs have been raised overnight, with Phoenix staying in the 20-30 percent range this evening. Given that we will probably see more cloud cover overnight, and thus less radiational cooling, low temps Sunday morning have been raised a few degrees and the low in Phoenix is now expected to be about 41 degrees. It now appears that the coldest morning with this system will actually be Monday morning, when many of the lower deserts fall into the 30s, and the outlying deserts drop to around freezing. For now we still do not expect to issue a Freeze Warning due to temps not quite cold enough, and readings near freezing not quite widespread enough.

Otherwise, for max temps, today still looks to be very cool with most of the lower deserts falling into the mid 50s to low 60s. Still going with a high in Phoenix today of just 59 degrees, nearly 10 degrees below seasonal normals. Very little change is expected on Sunday, as Phoenix should still struggle to reach 60 degrees under mostly sunny skies.

For Monday into the middle of the week, the weather pattern still

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

looks to be dry with periods of high clouds passing through the area. A gradual warming trend will take place as the desert southwest comes under a dry northwest flow aloft with weak high pressure building in overhead. High temps in Phoenix should finally reach to around 70 on Tuesday and then climb into the low to possibly the middle 70s Wednesday into Thursday. Guidance still suggests that a deep and cold upper trof may develop over the western CONUS by late next week. This still looks to be dry for our area and we only have some single digit POPs in place Thursday into Friday, but the biggest impact may again be much cooler temperatures developing by next Friday. For now we have lowered our Friday max temps into the mid 60s over the central deserts; time will tell if we need some additional cooling.

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.AVIATION...

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

There are several aviation weather concerns through this evening. Winds will remain westerly in the wake of a passing cold front with speeds of 10-15 kts with some stronger gusts. Shower activity will increase through the early afternoon, with some breaks, before a second opportunity for showers and a possible thunderstorm this afternoon. Ceilings will continue to be low and drop to 5 kft, but will more likely remain above that mark for most of the time, especially at KPHX. The ceilings should lift and shower activity cease later tonight. Lastly, the general visibility should remain above 6 statute miles outside of any showers. However, stronger winds further west may be able to transport enough lofted dust to create some slantwise visibility issues for aircraft during departures and approaches.

Southeast California/Southwest Arizona including KIPL and KBLH: Strong winds, although intermittent, will continue through the afternoon before subsiding after sunset. The strong winds may be able to loft enough dust to cause some slantwise visibility issues. Ceilings should remain at or above 10k feet although some areas east of the Colorado River may drop an additional few thousand feet lower. Most of the shower activity will remain to the east but isolated showers or thunderstorms are possible this afternoon.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...

Monday through Friday:

A warming trend can be expected Monday through Thursday with lower deserts highs climbing well into the 70s again Wed-Thu. Humidities trend down early in the workweek but overnight recovery remains good. Winds will generally be light and favor north and northeasterly directions with some local breeziness Tuesday. A dry

January 20, 2018 Exceptional Event, Imperial County

Appendix A

weather system moves through late in the workweek for breezy conditions (starting Thursday) and cooler temperatures by Friday.

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

DISCUSSION...Rogers

PREVIOUS DISCUSSION...CB

AVIATION...AD

FIRE WEATHER...AJ

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WWUS76 KSGX 202219

NPWSGX

URGENT - WEATHER MESSAGE

National Weather Service San Diego CA

219 PM PST Sat Jan 20 2018

CAZ048-210630-

/O.CON.KSGX.FR.Y.0001.180121T1000Z-180121T1600Z/

San Bernardino and Riverside County Valleys-The Inland Empire-
Including the cities of Moreno Valley and Corona

219 PM PST Sat Jan 20 2018

...FROST ADVISORY REMAINS IN EFFECT FROM 2 AM TO 8 AM PST
SUNDAY...

- * Location...Lower...colder...and wind sheltered areas.
- * Duration...Up to 6 hours of temperatures in the upper 20s to lower 30s with areas of frost.
- * Temperature...Falling into the upper 20s to lower 30s.
- * Impacts...Sensitive outdoor plants may be killed if left outdoors uncovered.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Frost Advisory means that widespread frost is expected.
Sensitive outdoor plants may be killed if left uncovered.

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CAZ055-056-058-060>062-065-210200-

/O.CON.KSGX.WI.Y.0003.000000T0000Z-180121T0200Z/

San Bernardino County Mountains-Riverside County Mountains-
San Diego County Mountains-Apple and Lucerne Valleys-

Coachella Valley-San Diego County Deserts-

San Geronio Pass Near Banning-

Including the cities of Julian, Pine Valley, Indio, Palm Springs,
Cathedral City, Palm Desert, Palm Desert Country, La Quinta,

Coachella, Borrego Springs, and Desert Hot Springs

219 PM PST Sat Jan 20 2018

...WIND ADVISORY REMAINS IN EFFECT UNTIL 6 PM PST THIS EVENING...

- * Winds...Areas of west to northwest winds 20 to 25 mph with gusts to 40 mph.

January 20, 2018 Exceptional Event, Imperial County

Appendix A

- * Timing...decreasing this evening.
- * Location...Strongest winds from mountain ridge tops...along desert slopes of the mountains...into adjacent desert areas.
- * Visibility...May be reduced in blowing sand and blowing dust in the deserts.
- * Impacts...Driving will be hazardous for high profile vehicles. Watch for broken tree limbs and other debris on roadways.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Wind Advisory means that winds of 35 mph are expected. Winds this strong can make driving difficult...especially for high profile vehicles. Use extra caution.

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CAZ043-050-210200-

/O.CON.KSGX.WI.Y.0003.000000T0000Z-180121T0200Z/

San Diego County Coastal Areas-San Diego County Valleys-
Including the cities of Vista, Carlsbad, Encinitas, Chula Vista,
National City, San Diego, Escondido, El Cajon, San Marcos,
La Mesa, Santee, and Poway
219 PM PST Sat Jan 20 2018

...WIND ADVISORY REMAINS IN EFFECT UNTIL 6 PM PST THIS EVENING...

- * Winds...Areas of west to northwest winds 15 to 20 mph with gusts to 35 mph.
- * Timing...Winds decreasing by early evening.
- * Location...Strongest winds near the coast.
- * Impacts...Driving will be hazardous for high profile vehicles. Watch for broken tree limbs and downed palm fronds.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Wind Advisory means that winds of 35 mph are expected. Winds this strong can make driving difficult...especially for high profile vehicles. Use extra caution.

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FXUS66 KSGX 202241

AFDSGX

Area Forecast Discussion

National Weather Service San Diego CA

241 PM PST Sat Jan 20 2018

.SYNOPSIS...

Breezy conditions will continue this evening in the wake of a low pressure system moving from Southern California into Arizona. There will be slow warming Sunday...with greater warming Monday through Wednesday with high pressure. Weak offshore flow will bring gusty northeast winds near the coastal foothills at times. For next Thursday...another fast moving low pressure system moving through California will bring cool and windy conditions with a chance of light precipitation. Then dry with a warming trend Friday through next weekend as high pressure strengthens near the West Coast. High surf with strong rip currents will continue this evening.

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

A departing vigorous upper level trough now moving into Arizona with subsidence helping to squash out the few remaining rain and snow showers in SoCal. Earlier we did have some brief heavy snow showers in the mountains which dropped a coating of snow on some mountain roads, causing slippery conditions for travelers. Breezy conditions will remain early this evening and the wind advisories will remain in effect until 6 pm. Cool airmass will remain in place through Sunday with cold temperatures tonight and Sunday morning with frost likely in the inland valleys.

Ridging the next several days will bring a slow but pronounced warming trend to the area, especially west of the mountains. Temperatures will gradually warmup to above normal levels, peaking in the upper 70s in the valleys on Wednesday.

Another fast moving upper level trough will bring a chance for mainly light rain and snow to the region Thursday through Thursday evening. The moisture transport parameters are still quite marginal with this system so pops were held in check in the chance category. Beyond Thursday evening, another pattern of upper level ridging will bring another warmup to the region with benign weather through next weekend.

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January 20, 2018 Exceptional Event, Imperial County**Appendix A****.AVIATION...**

202024Z...Coast...Primarily P6SM vis will continue through Sunday morning with SCT-FEW cloud decks in the 3000-6000 ft msl layer.

Valleys/Coastal Mountain Slopes/Mountain Ridges...BKN-SCT cloud decks in the 3000-15000 ft msl layer over the mountains and portions of the inland valleys (with areas of mountain obscuration) will gradually become FEW-SCT through 21/1500 UTC with primarily P6SM vis.

Desert Slopes/Deserts...Through 21/1500 UTC, SCT-FEW cloud decks in the 6000-15000 ft msl layer gradually clearing with P6SM vis expected. Westerly winds 20 to 30 KTS with gusts 45 KTS into the evening creating mod-stg up/down drafts over and east of the mountains.

&&

.MARINE...

The San Clemente Basin buoy has been seeing northwest winds gusting to 29-33 KT the past several hours with wave heights of around 12-13 feet. Northwest winds of 20-30 KTS with gusts to 35 KTS will likely continue over the coastal waters this afternoon, decreasing to 20 KTS with gusts 25 KTS late this evening. Large wind waves on top of an elevated swell will create combined seas of 8-14 ft this afternoon and then gradually subsiding tonight into Sunday. A Gale Warning continues through 10 pm Tonight.

Another storm system may move through the region next Thursday, possibly bringing another round of strong winds in the coastal waters and steep seas.

&&

.BEACHES...

A building fresh swell from a local wind fetch will augment the large west-northwest swell in place over the coastal waters this morning, to drive some of the biggest surf of this event. 11 am observations from the nearshore buoys show 9-12 foot waves at 14 seconds, and surf height observations from lifeguards and Surfline show 6-10 foot surf occurring earlier this morning. Occasional sets of 12 to 14 feet are likely for exposed west-facing beaches in southern San Diego County into this afternoon. Elsewhere along the Southern California coast, 5 to 9 foot surf will continue into this evening before subsiding later tonight. Strong rip currents will accompany the high surf, resulting in dangerous swimming conditions. A High Surf Advisory continues through 8 PM Tonight.

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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...Wind Advisory until 6 PM PST this evening for Apple and Lucerne Valleys-Coachella Valley-Riverside County Mountains-San Bernardino County Mountains-San Diego County Coastal Areas-San Diego County Deserts-San Diego County Mountains-San Diego County Valleys-San Gorgonio Pass Near Banning.

Frost Advisory from 2 AM to 8 AM PST Sunday for San Bernardino and Riverside County Valleys-The Inland Empire.

High Surf Advisory until 8 PM PST this evening for Orange County Coastal Areas-San Diego County Coastal Areas.

PZ...Gale Warning until 10 PM PST this evening for Coastal Waters from San Mateo Point to the Mexican Border and out to 30 nm-Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

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PUBLIC...Brotherton
AVIATION/MARINE/BEACHES...Harrison

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WWUS76 KSGX 210146

NPWSGX

URGENT - WEATHER MESSAGE

National Weather Service San Diego CA

546 PM PST Sat Jan 20 2018

CAZ055-056-058-060>062-065-210300-

/O.EXP.KSGX.WI.Y.0003.000000T0000Z-180121T0200Z/

San Bernardino County Mountains-Riverside County Mountains-

San Diego County Mountains-Apple and Lucerne Valleys-

Coachella Valley-San Diego County Deserts-

San Gorgonio Pass Near Banning-

Including the cities of Julian, Pine Valley, Indio, Palm Springs,

Cathedral City, Palm Desert, Palm Desert Country, La Quinta,

Coachella, Borrego Springs, and Desert Hot Springs

546 PM PST Sat Jan 20 2018

...WIND ADVISORY WILL EXPIRE AT 6 PM PST THIS EVENING...

Winds have weakened significantly, so the Wind Advisory for the

mountains and deserts will be allowed to expire at 6 PM.

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CAZ043-050-210300-

/O.EXP.KSGX.WI.Y.0003.000000T0000Z-180121T0200Z/

San Diego County Coastal Areas-San Diego County Valleys-

Including the cities of Vista, Carlsbad, Encinitas, Chula Vista,

National City, San Diego, Escondido, El Cajon, San Marcos,

La Mesa, Santee, and Poway

546 PM PST Sat Jan 20 2018

...WIND ADVISORY WILL EXPIRE AT 6 PM PST THIS EVENING...

Winds have weakened significantly, so the Wind Advisory for the

San Diego County coast and valleys will be allowed to expire at 6

PM.

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CAZ048-211000-

/O.CON.KSGX.FR.Y.0001.180121T1000Z-180121T1600Z/

San Bernardino and Riverside County Valleys-The Inland Empire-

Including the cities of Moreno Valley and Corona

546 PM PST Sat Jan 20 2018

...FROST ADVISORY REMAINS IN EFFECT FROM 2 AM TO 8 AM PST

SUNDAY...

January 20, 2018 Exceptional Event, Imperial County

Appendix A

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PRECAUTIONARY/PREPAREDNESS ACTIONS...

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Albright

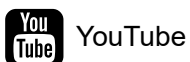
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FXUS66 KSGX 210439

AFDSGX

Area Forecast Discussion

National Weather Service San Diego CA

839 PM PST Sat Jan 20 2018

.SYNOPSIS...

Dry weather returns for all areas Sunday, with a slow warming trend bringing the region back to above average temperatures by midweek. Cooler conditions, a slight chance for light showers and breezy west winds are expected Thursday into Friday as a trough traverses the region. Warmer and dry for next weekend with a ridging returning along the West Coast.

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

At 830 PM...The trough that brought unsettled weather over the last 36 hours had pushed eastward, and was centered over northern AZ. Northwest flow behind the trough was bringing drying to the mid and upper levels (evident on the 00Z NKX sounding). Skies were mostly clear over the region, apart from a few cumulus lingering in southern SD County. Winds were on a downward trend, with just a few gusts over 20 mph lingering over the mountains/desert slopes and in the coastal waters.

Predominantly clear skies tonight will allow good radiational cooling. The best frost potential will be over the southern Inland Empire, where some spots may fall into the upper 20s/low 30s. This, along with dewpoints in a similar range should lead to frost formation. Pockets of frost will also be possible in the San Diego County valleys, though coverage should be less widespread. Frost isn't anticipated for the Coachella Valley and Borrego area.

Zonal flow should be in place on Sunday, though 500 mb heights will increase by about 20 dm and 850 temperatures will trend upward by about 4 degrees C. This will bring a few degrees of warming to the coast and deserts, with larger jumps of around 8-12 degrees for the mountains (in afternoon highs). High clouds will be on the increase through the day, and may be of sufficient thickness to limit frost potential Sunday night.

No real notable weather is expected through midweek, as a ridge slowly builds over the Western U.S. Temperatures will slowly trend upward through Wednesday, as they return to above average values.

A trough of low pressure forecast to move onshore

January 20, 2018 Exceptional Event, Imperial County**Appendix A**

Thursday/Friday, bringing the potential for another round of pitifully light rain/mountain snow showers. At this time PW values in faint ribbon of moisture extending from the central Pacific are only projected to be around 0.80 inches by the time it reaches SoCal, not a good sign. Wind looks more notable at this time, with gusty west winds possible in the coastal waters and over the mountains and deserts.

Generally speaking the ECMWF and GFS suggest a return to ridging next weekend. This should mean a warming trend and dry weather. Given this and the CPC outlook for below average precipitation over the Southwest during the 8-14 day period, it looks like we may be done with meaningful rain for the remainder of the month.

&&

.AVIATION...

210345Z...Coast/Valleys/Mountains...SKC-SCT030 through Sunday.

Desert Slopes/Deserts...Areas of west winds 20G30 KTS on the desert slopes through 10Z with moderate up/down drafts. Otherwise mostly clear with unrestricted vis through Sunday afternoon.

&&

.MARINE...

Winds at the San Clemente Basin buoy were still strong at 7 pm with northwest winds 19G23KT and wave heights of 11 feet. The winds will slowly decrease overnight. The Gale Warning will expire at 10 pm tonight. Large wind waves combined with the high swells will produce combined seas of 8-12 ft tonight, decreasing Sunday morning.

On Thursday and Friday a Pacific storm will bring another round of gusty winds and elevated seas.

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.BEACHES...

Elevated surf of 4 to 8 feet this evening will gradually lower tonight. Surf on Sunday will range from 3 to 6 feet with higher sets to 7 feet at times south of La Jolla.

&&

.SKYWARN...

Skywarn activation will not be needed this week.

&&

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...Frost Advisory from 2 AM to 8 AM PST Sunday for San Bernardino and Riverside County Valleys-The Inland Empire.

January 20, 2018 Exceptional Event, Imperial County

High Surf Advisory until 8 PM PST this evening for Orange County Coastal Areas-San Diego County Coastal Areas.

PZ...Gale Warning until 10 PM PST this evening for Coastal Waters from San Mateo Point to the Mexican Border and out to 30 nm-Waters from San Mateo point to the Mexican Border Extending 30 to 60 nm out including San Clemente Island.

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PUBLIC...Albright
AVIATION/MARINE/BEACHES...Moede

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