Appendix A
Public Notification that a potential event was occurring
(40 CFR §50.14(c)(1)(i))

FIGURE A-1
NATIONAL WEATHER SERVICE PUBLIC ZONES

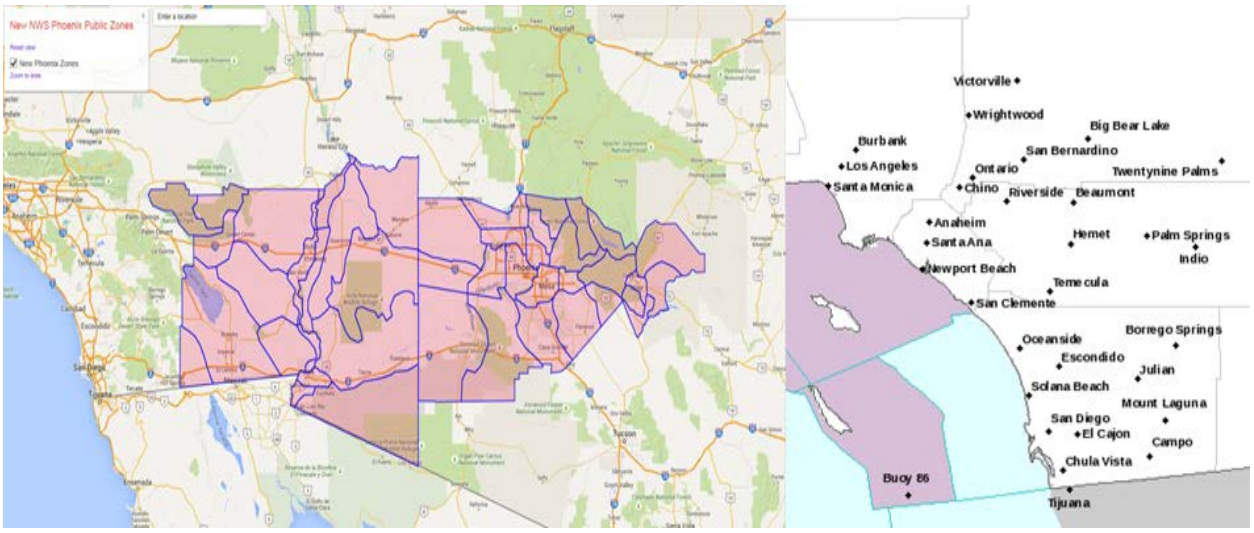

Fig A-1: Illustrates the public zones serviced by the National Weather Service Office in Phoenix and San Diego. Imperial County, including southeast sections of Riverside County are part of the reporting public zone areas from the Phoenix office

FIGURE A-2
NATIONAL WEATHER SERVICE ZONE FORECAST FOR MAY 18, 2015

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Current Conditions, Forecasts, Watches and Warnings for Imperial County, CA

- Current Conditions in California
- Zone Forecast for Imperial County, CA
- State Forecast for California
- Area Conditions for Imperial County, CA

Zone Forecast for Imperial County, CA

Top of page Table of contents for Imperial County, CA

FPUS55 KPSR 180948
ZFPPSR
ZONE FORECASTS FOR SOUTHWEST ARIZONA/SOUTHEAST CALIFORNIA
NATIONAL WEATHER SERVICE PHOENIX AZ
248 AM MST MON MAY 18 2015

CAZ033-182330-
IMPERIAL COUNTY-
INCLUDING THE CITIES OF...BRAWLEY...CALEXICO...EL CENTRO...GLAMIS...
IMPERIAL...AND THE SALTON SEA
248 AM MST MON MAY 18 2015

TODAY
MOSTLY SUNNY AND BREEZY. HIGHS 79 TO 84. WEST WIND 5 TO
15 MPH IN THE MORNING INCREASING TO 15 TO 25 MPH IN THE AFTERNOON.

TONIGHT
CLEAR AND BREEZY. LOWS 53 TO 63. WEST WIND 15 TO 20 MPH IN
THE EVENING DECREASING TO 5 TO 15 MPH AFTER MIDNIGHT. GUSTS UP TO
30 MPH IN THE EVENING.

TUESDAY
SUNNY. HIGHS 81 TO 86. WEST WIND 5 TO 15 MPH.

TUESDAY NIGHT
MOSTLY CLEAR. LOWS 52 TO 62. WEST WIND 5 TO 10 MPH.

WEDNESDAY
MOSTLY SUNNY. HIGHS 82 TO 87. SOUTHWEST WIND 5 TO
10 MPH.

WEDNESDAY NIGHT
PARTLY CLOUDY. LOWS IN THE MID 50S TO MID 60S.

THURSDAY

http://weather.noaa.gov/cgi-bin/iwszone3 5/18/2015

Fig A-2: Zone Forecast (148am PST) May 18, 2015 forecasted winds of 15 to 20 mph with gusts up to 30 mph by the evening. The affected area: Imperial County including the cities of Brawley, Calexico, El Centro, Glamis, Imperial and the Salton Sea

FIGURE A-3
NWS PHOENIX OFFICE AREA FORECAST DISCUSSION MAY 17, 2015

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800
FXUS65 KPSR 171948
AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
1248 PM MST SUN MAY 17 2015

.SYNOPSIS...
LOW PRESSURE OFF THE CALIFORNIA COAST WILL MOVE INLAND ON
MONDAY...BRINGING INCREASED CLOUD COVER AND A SLIGHT CHANCE OF
SHOWERS TO THE MOUNTAINS NORTH OF PHOENIX. SUNNY SKIES AND DRY
WEATHER WILL RETURN ON TUESDAY BUT TEMPERATURES WILL REMAIN SLIGHTLY
BELOW NORMAL. YET ANOTHER UPPER LEVEL LOW PRESSURE SYSTEM WILL
APPROACH THE REGION FROM CALIFORNIA LATE IN THE WEEK ALTHOUGH THE
PRIMARY IMPACTS WILL BE COOLER TEMPERATURES AND INCREASED CLOUD
COVER.

&&

.DISCUSSION...
WEAK SHORTWAVE RIDGING IS EVIDENT ON WATER VAPOR IMAGERY THIS
AFTERNOON...AS THE REGION SITS BETWEEN TWO UPPER LEVEL LOW PRESSURE
SYSTEMS. THE STORM SYSTEM THAT BROUGHT COOL TEMPERATURES AND RECORD
RAINFALL TO THE REGION ON FRIDAY HAS LONG SINCE MOVED OUT INTO THE
UPPER PLAINS...MEANWHILE A BROAD UPPER LOW WAS DEEPENING OFF THE
CENTRAL CALIFORNIA COAST. IN BETWEEN...SKIES WERE SUNNY WITH DESERT
TEMPERATURES GENERALLY IN THE LOWER 80S AS OF 19Z.

12Z DETERMINISTIC MODELS AS WELL AS PROBABILISTIC GUIDANCE ARE IN
FAIRLY GOOD AGREEMENT OVER THE COURSE OF THE NEXT 7 DAYS...WITH
LITTLE SPREAD NOTED IN THE MODELS UNTIL DAY 7 OR 8. THE
AFOREMENTIONED UPPER LOW WEST OF CALIFORNIA WILL MOVE INLAND AND INTO
ARIZONA ON MONDAY. PWATS AHEAD OF THIS SYSTEM WILL NOT BE ANYWHERE
NEAR AS MOIST AS WHAT WAS OBSERVED A FEW DAYS AGO...MODEL CONSENSUS
SUGGESTS VALUES WILL ONLY APPROACH 0.5 TO 0.6 INCHES MONDAY
AFTERNOON /WITHIN A FEW PERCENT OF NORMAL FOR MID MAY/. MOISTURE
TRANSPORT AHEAD OF THIS TROUGH IS A BIT ANOMALOUS HOWEVER
/APPROACHING THE 90TH PERCENTILE IN AREAS EAST OF PHOENIX/. NAEFS IS
SUGGESTING A BROAD 10-20 PERCENT CHANCE OF RAINFALL MAINLY NORTH/EAST
OF PHOENIX MONDAY AFTERNOON AND THIS SEEMS REASONABLE GIVEN UPSLOPE
COMPONENT TO THE FLOW. THE DESERTS WILL BE HARD PRESSED TO SEE MUCH
IN THE WAY OF RAINFALL...MORE THAN LIKELY LOOKING AT INCREASED CLOUD
COVER AND A STRAY SPRINKLE OR LIGHT SHOWER BUT THAT'S ABOUT IT.
LATEST HI-RES GUIDANCE IS ALSO MATCHES THIS LINE OF THINKING.

TUESDAY THROUGH THURSDAY WILL SEE WEAK RIDGING/BROAD SOUTHWESTERLY
FLOW BUILD ACROSS THE AREA IN THE WAKE OF THE DEPARTING UPPER LOW.
THIS WILL RESULT IN SLOWLY INCREASING TEMPERATURES ALTHOUGH HIGHS AT
NO POINT DURING THIS PERIOD APPEAR TO CLIMB ABOVE NORMAL. LOOKS LIKE
UPPER 80S/LOWER 90S ARE LIKELY FOR THE DESERTS THROUGH MID WEEK.

THE PARADE OF UPPER LOWS MOVING THROUGH THE AREA CONTINUES LATE IN
THE WEEK...AS YET ANOTHER LOW IS FORECAST TO MOVE THROUGH CALIFORNIA
INTO ARIZONA LATE THURSDAY INTO FRIDAY. MUCH LIKE THE MONDAY
SYSTEM...THERE WILL BE SOME MOISTURE ASSOCIATED WITH THE TROUGH BUT
AT LEAST AS OF NOW IT DOESN'T LOOK MUCH ABOVE WHAT WOULD NORMALLY
OCCUR IN MID/LATE MAY. GIVEN THE MODEST ISENTROPIC LIFT SUGGESTED BY
THE DETERMINISTIC GUIDANCE AND THE SLIGHTLY ABOVE NORMAL MOISTURE
TRANSPORT PER THE NAEFS...ELECTED TO GO WITH SLIGHT CHANCE POPS IN
THE HIGHER ELEVATION AREAS OF THE FORECAST AREA. AT THIS POINT IT
DOESN'T LOOK LIKE A MAJOR RAINFALL PRODUCER BUT IT SHOULD KNOCK
TEMPERATURES BACK INTO THE LOW/MID 80S. EXPECT CONDITIONS TO DRY OUT
AND TEMPERATURES TO CLIMB SLIGHTLY GOING INTO NEXT WEEKEND.

&&

.AVIATION...
SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...
SOUTHEAST CALIFORNIA AND SOUTHWEST ARIZONA INCLUDING KIPL AND
KBLH...

AFTER A NIGHT OF MAINLY CLEAR SKIES AND LIGHT WINDS...ALL OF
TERMINALS WILL SEE AN INCREASE IN CLOUDINESS AND AFTERNOON WINDS AS
ANOTHER PACIFIC WEATHER DISTURBANCE MOVES OVER THE REGION. SCT-BKN
MID-HIGH CLOUD LAYERS WILL MOVE ACROSS THE REGION BY MONDAY
AFTERNOON. THERE IS A REMOTE CHANCE THAT SPRINKLES/LIGHT SHOWERS
COULD AFFECT THE PHX AREA TERMINALS MONDAY AFTERNOON AS WELL...BUT
CONFIDENCE IS FAR TOO LOW TO INCLUDE IN THE TAFS AT THIS TIME. WIND
SPEEDS WILL LIKELY PEAK IN THE 15-18KT RANGE ON MONDAY
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Fig A-3: An excerpt from an Area Forecast Discussion issued by the NWS Phoenix office on May 17, 2015. It references the low-pressure off the California coast expected to move inland on Monday May 18, 2015. Source: Iowa Environmental Mesonet

FIGURE A-4
NWS PHOENIX OFFICE AREA FORECAST DISCUSSION MAY 17, 2015

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245
FXUS65 KPSR 180420
AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
920 PM MST SUN MAY 17 2015

.SYNOPSIS...
LOW PRESSURE OFF THE CALIFORNIA COAST WILL MOVE INLAND ON
MONDAY...BRINGING INCREASED CLOUD COVER AND A SLIGHT CHANCE OF
SHOWERS TO THE MOUNTAINS NORTH OF PHOENIX. SUNNY SKIES AND DRY
WEATHER WILL RETURN ON TUESDAY BUT TEMPERATURES WILL REMAIN SLIGHTLY
BELOW NORMAL. YET ANOTHER UPPER LEVEL LOW PRESSURE SYSTEM WILL
APPROACH THE REGION FROM CALIFORNIA LATE IN THE WEEK ALTHOUGH THE
PRIMARY IMPACTS WILL BE COOLER TEMPERATURES AND INCREASED CLOUD
COVER.

&&

.DISCUSSION...
CLEAR SKIES AND LIGHT WINDS PREVAIL ACROSS THE DESERT SOUTHWEST THIS
EVENING. LATEST 00Z TUCSON SOUNDING SHOWS SOUTHWESTERLY FLOW AHEAD
OF A LOW PRESSURE SYSTEM OFF THE WEST COAST WITH ALL MOISTURE
PARAMETERS WITHIN THE CLIMO LOWER AND UPPER QUARTILES. FORECAST
REMAINS ON TRACK. ONLY MINOR ADJUSTMENTS TO THE SHORT-TERM
TEMPERATURES AND DEWPOINTS WERE NEEDED THIS EVENING.

&&

.PREVIOUS DISCUSSION...
WEAK SHORTWAVE RIDGING IS EVIDENT ON WATER VAPOR IMAGERY THIS
AFTERNOON...AS THE REGION SITS BETWEEN TWO UPPER LEVEL LOW PRESSURE
SYSTEMS. THE STORM SYSTEM THAT BROUGHT COOL TEMPERATURES AND RECORD
RAINFALL TO THE REGION ON FRIDAY HAS LONG SINCE MOVED OUT INTO THE
UPPER PLAINS...MEANWHILE A BROAD UPPER LOW WAS DEEPENING OFF THE
CENTRAL CALIFORNIA COAST. IN BETWEEN...SKIES WERE SUNNY WITH DESERT
TEMPERATURES GENERALLY IN THE LOWER 80S AS OF 19Z.

12Z DETERMINISTIC MODELS AS WELL AS PROBABILISTIC GUIDANCE ARE IN
FAIRLY GOOD AGREEMENT OVER THE COURSE OF THE NEXT 7 DAYS...WITH
LITTLE SPREAD NOTED IN THE MODELS UNTIL DAY 7 OR 8. THE
AFOREMENTIONED UPPER LOW WEST OF CALIFORNIA WILL MOVE INLAND AND INTO
ARIZONA ON MONDAY. PWATS AHEAD OF THIS SYSTEM WILL NOT BE ANYWHERE
NEAR AS MOIST AS WHAT WAS OBSERVED A FEW DAYS AGO...MODEL CONSENSUS
SUGGESTS VALUES WILL ONLY APPROACH 0.5 TO 0.6 INCHES MONDAY
AFTERNOON /WITHIN A FEW PERCENT OF NORMAL FOR MID MAY/. MOISTURE
TRANSPORT AHEAD OF THIS TROUGH IS A BIT ANOMALOUS HOWEVER
/APPROACHING THE 90TH PERCENTILE IN AREAS EAST OF PHOENIX/. NAEFS IS
SUGGESTING A BROAD 10-20 PERCENT CHANCE OF RAINFALL MAINLY NORTH/EAST
OF PHOENIX MONDAY AFTERNOON AND THIS SEEMS REASONABLE GIVEN UPSLOPE
COMPONENT TO THE FLOW. THE DESERTS WILL BE HARD PRESSED TO SEE MUCH
IN THE WAY OF RAINFALL...MORE THAN LIKELY LOOKING AT INCREASED CLOUD
COVER AND A STRAY SPRINKLE OR LIGHT SHOWER BUT THAT'S ABOUT IT.
LATEST HI-RES GUIDANCE IS ALSO MATCHES THIS LINE OF THINKING.

TUESDAY THROUGH THURSDAY WILL SEE WEAK RIDGING/BROAD SOUTHWESTERLY
FLOW BUILD ACROSS THE AREA IN THE WAKE OF THE DEPARTING UPPER LOW.
THIS WILL RESULT IN SLOWLY INCREASING TEMPERATURES ALTHOUGH HIGHS AT
NO POINT DURING THIS PERIOD APPEAR TO CLIMB ABOVE NORMAL. LOOKS LIKE
UPPER 80S/LOWER 90S ARE LIKELY FOR THE DESERTS THROUGH MID WEEK.

THE PARADE OF UPPER LOWS MOVING THROUGH THE AREA CONTINUES LATE IN
THE WEEK...AS YET ANOTHER LOW IS FORECAST TO MOVE THROUGH CALIFORNIA
INTO ARIZONA LATE THURSDAY INTO FRIDAY. MUCH LIKE THE MONDAY
SYSTEM...THERE WILL BE SOME MOISTURE ASSOCIATED WITH THE TROUGH BUT
AT LEAST AS OF NOW IT DOESN'T LOOK MUCH ABOVE WHAT WOULD NORMALLY
OCCUR IN MID/LATE MAY. GIVEN THE MODEST ISENTROPIC LIFT SUGGESTED BY
THE DETERMINISTIC GUIDANCE AND THE SLIGHTLY ABOVE NORMAL MOISTURE
TRANSPORT PER THE NAEFS...ELECTED TO GO WITH SLIGHT CHANCE POPS IN
THE HIGHER ELEVATION AREAS OF THE FORECAST AREA. AT THIS POINT IT
DOESN'T LOOK LIKE A MAJOR RAINFALL PRODUCER BUT IT SHOULD KNOCK
TEMPERATURES BACK INTO THE LOW/MID 80S. EXPECT CONDITIONS TO DRY OUT
AND TEMPERATURES TO CLIMB SLIGHTLY GOING INTO NEXT WEEKEND.

&&

.AVIATION...
SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...
SOUTHEAST CALIFORNIA AND SOUTHWEST ARIZONA INCLUDING KIPL AND
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Fig A-4: An excerpt from an Area Forecast Discussion issued by the NWS Phoenix office on May 17, 2015. It references the low-pressure system that brought associated winds. Source: Iowa Environmental Mesonet

FIGURE A-5
NWS SAN DIEGO OFFICE AREA FORECAST DISCUSSION MAY 17, 2015

108
FXUS66 KSGX 180441
AFDSGX

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE SAN DIEGO CA
940 PM PDT SUN MAY 17 2015

.SYNOPSIS...

A SERIES OF WEAK LOW PRESSURE SYSTEMS WILL MAINTAIN BELOW AVERAGE TEMPERATURES...A DEEPER MARINE LAYER...AND STRONG ONSHORE FLOW WITH GUSTY WINDS IN THE MOUNTAINS AND DESERTS AT TIMES. THERE IS ALSO CHANCE OF DRIZZLE OR LIGHT RAIN SHOWERS MONDAY MORNING...AND MORE WIDESPREAD...SIGNIFICANT RAINFALL THURSDAY NIGHT AND FRIDAY.

&&

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

A QUASI-STATIONARY LONG WAVE TROUGH OVER THE WEST COAST WILL BRING COOLER THAN AVERAGE WEATHER TO SOUTHERN CALIFORNIA THIS WEEK. A SERIES OF EASTPAC SHORTWAVES OF VARYING INTENSITIES ROUNDING THE BASE OF THIS TROUGH WILL BRING CHANCES FOR LIGHT PRECIPIATION AS THEY TRAVERSE SO-CAL.

THE FIRST SHORTWAVE WAS ABOUT 400 MILES WEST OF PT CONCEPTION THIS EVENING AND WILL MOVE SOUTHEAST ACROSS NORTHERN BAJA ON MONDAY. INFRARED SATELLITE IMAGERY IS NOT SHOWING MUCH IN THE WAY OF COLD CLOUD TOP ENHANCEMENT OVER THE OCEAN WITH THIS FEATURE...BUT SOME ENHANCEMENT IS EXPECTED OVERNIGHT AS A 110 KT 300 MB JET DEEPENS THE TROUGH. LATEST WRF TIME-HEIGHT CROSS SXNS SHOW THE MARINE LAYER DEEPENING TO AROUND 5000 FEET MONDAY MORNING. PATCHY LIGHT RAIN OR DRIZZLE IS POSSIBLE WEST OF THE MTNS MONDAY MORNING...AND ISOLATED CONVECTIVE SHOWERS MAY FORM OVER THE MOUNTAINS IN THE AFTERNOON. IT WILL BE WINDY IN THE MOUNTAINS AND DESERTS.

A WEAKER SHORTWAVE ON WEDNESDAY WILL KEEP THE MARINE LAYER FAIRLY DEEP. ON THURSDAY AND FRIDAY A STRONGER SHORTWAVE WITH MORE AVAILABLE MOISTURE WILL BRING BETTER CHANCES FOR MORE WIDESPREAD SHOWERS. THE 00Z GFS SHOWS PRECIPITABLE WATER VALUES OF 0.75" WITH THIS SHORTWAVE...AND THE ECMWF IS IN CLOSE AGREEMENT WITH THE GFS ON ITS TRACK AND STRENGTH. SO RAIN CHANCES ARE LOOKING BETTER FOR THIS LATE SEASON STORM.

THE TROUGH SHIFTS EAST NEXT WEEKEND WITH WEAK RIDGING ALOFT BRINGING A MODEST WARM-UP WITH TEMPERATURES CLOSER TO AVERAGE FOR THE END OF MAY.

&&

.AVIATION... 180400Z...COAST/VALLEYS...AREAS OF BKN/OVC STRATUS WILL OCCUR AGAIN WEST OF THE MOUNTAINS...THOUGH SOME AIRPORTS WILL HAVE PERIODS OF JUST SCT CLOUDS AT TIMES OVERNIGHT. MOST CIGS WILL BE 2000-3000 FT MSL WITH LAYERS TO 6000 FT MSL OR HIGHER. ISOLATED -SHRA OR -DZ WILL OCCUR 09Z-18Z WITH LOCAL CIGS BELOW 2000 FT MSL. SCT/BKN STRATUS...MOSTLY ABOVE 3000 FT MSL...WILL OCCUR AFTER 19Z MONDAY...WITH INCREASING CLOUDS AGAIN MONDAY EVENING. MOST VIS WILL REMAIN ABOVE 5 MILES THROUGH MONDAY EVENING.

MOUNTAIN/DESERTS...WIDESPREAD TERRAIN OBSCURATIONS DUE TO CLOUDS WILL CONTINUE ON THE COASTAL SLOPES BELOW 6000 FT MSL THROUGH 19Z MONDAY WITH ISOLATED TERRAIN OBSCURATIONS ELSEWHERE. TERRAIN OBSCURATIONS WILL BECOME MORE SCATTERED AFTER 18Z MONDAY BEFORE INCREASING AGAIN MONDAY NIGHT. OTHERWISE...SCT CLOUDS AT/ABOVE 20000 FEET AND UNRESTRICTED VIS WILL CONTINUE THROUGH MON EVENING.

&&

.MARINE... 900 PM...NO HAZARDOUS MARINE WEATHER IS EXPECTED THROUGH FRIDAY.

&&

.SKYWARN... SKYWARN ACTIVATION IS NOT REQUESTED. HOWEVER WEATHER SPOTTERS ARE ENCOURAGED TO REPORT SIGNIFICANT WEATHER CONDITIONS.

Fig A-5: An excerpt from an Area Forecast Discussion issued by the NWS San Diego office on May 17, 2015. The forecast identifies a series of weak low-pressure systems maintaining a strong onshore flow with gusty winds in the mountains and deserts. Source: Iowa Environmental Mesonet

FIGURE A-6
NWS PHOENIX OFFICE AREA FORECAST DISCUSSION MAY 18, 2015

522
FXUS65 KPSR 180949 CCA
AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
248 AM MST MON MAY 18 2015

.SYNOPSIS...
LOW PRESSURE OFF THE CALIFORNIA COAST WILL MOVE INLAND TODAY...BRINGING INCREASED CLOUD COVER AND A SLIGHT CHANCE OF SHOWERS TO THE MOUNTAINS NORTH OF PHOENIX. SUNNY SKIES AND DRY WEATHER WILL RETURN TUESDAY WITH TEMPERATURES STILL SLIGHTLY BELOW NORMAL. YET ANOTHER UPPER LEVEL LOW PRESSURE SYSTEM WILL APPROACH THE REGION FROM CALIFORNIA LATE IN THE WEEK ALTHOUGH THE PRIMARY IMPACTS WILL BE COOLER TEMPERATURES AND INCREASED CLOUD COVER.

&&

.DISCUSSION...
THE NEXT IN THE SERIES OF PACIFIC STORMS CURRENTLY EXPANDS OFF THE NORTHERN CA COAST INTO THE NORTHEAST PACIFIC...WITH THE CIRC CENTER OVER THE BAY AREA THIS EARLY AM. BROADLY DIFLUENT FLOW AROUND THE BASE OF THE SYSTEM ALREADY WORKING INTO THE FORECAST AREA PER 00Z RAOBS AND OVERNIGHT IR SATELLITE TRENDS. 00Z RAOB PWATS AND BLENDED TPW INDICATE 0.5 TO 0.75 INCH VALUES SPANNING THE AREA...IN LINE WITH EARLIER FORECASTS AND OVERNIGHT/EARLY AM MODEL FCSTS.

UPPER LOW WILL DIP SOUTHWESTWARD THROUGH THE DAY BEFORE TRACKING INTO THE GREAT BASIN...SWEEPING UPPER 560 TO MID 570DM 500MB HEIGHTS OVER SOUTHEAST CA BY MIDDAY AND INTO SOUTH-CENTRAL AZ THROUGH THE AFTERNOON. NEAR 100KT SWSTRLY JET STREAK WILL ALSO NOSE INTO AZ BY MIDDAY. WHILE THIS SYSTEM IS NOT AS MOISTURE RICH AS FRIDAY'S...FAVORABLE OROGRAPHIC ORIENTATION AND DYNAMICS SUPPORT AT LEAST SLIGHT CHANCES FOR SHOWER AND THUNDERSTORMS FOR THE HIGHER TERRAIN LOCALES OF THE FORECAST AREA...THE AREAS NORTH AND EAST OF PHOENIX AS WELL AS JOSHUA TREE NP. VERY SLIGHT CHANCES EXTEND INTO PORTIONS OF THE SOUTH-CENTRAL AZ DESERTS...INCLUDING PHOENIX AND GILA BEND...TO ACCOUNT FOR JET ENTRANCE DYNAMICS BUT NOT EXPECTING MUCH BY WAY OF QPF VALUES. FCST CROSS SECTIONS KEEP THE MOISTURE IN NARROW LAYER BETWEEN 600-500MB. THIS WILL RESULT IN THICKER MID-LEVEL CLOUD DECKS...PLENTY OF VIRGA AND TRACE PRECIP AMOUNTS FOR SOME THIS AFTERNOON OVER THE LOWER AZ DESERTS.

LOWER TROUGH HEIGHTS MOVING THROUGH THE WESTERN FORECAST AREA DURING PEAK HEATING WILL KEEP LOCALES LIKE YUMA AND EL CENTRO SLIGHTLY COOLER THAN THEIR CITY COUNTERPARTS TO THE EAST. TEMPERATURES OUT ACROSS SOUTHEAST CA TO PEAK IN THE LOW TO MID 80S...WHILE WE'LL BE IN THE UPPER 80S TO FLIRTING WITH THE 90 DEGREE MARK ACROSS SOUTH-CENTRAL AZ. THE AFOREMENTIONED UPPER JET AND DIFLUENT FLOW SET-UP WILL ALSO SUPPORT ELEVATED BREEZES DURING THE DAY PARTICULARLY MARICOPA COUNTY EASTWARD...WITH GUSTS 20 TO 30 MPH POSSIBLE. DEEPER MIXING COURTESY OF THE WINDY CONDITIONS WILL ALSO HELP NUDGE TEMPERATURES UPWARD FOR PHOENIX...COOLIDGE AND GILA BEND.

TUESDAY THROUGH THURSDAY...THE UPPER LOW WILL BEGIN TO CLEAR EAST OF THE AREA AS WEAK RIDGING AND BROAD SOUTHWEST FLOW ALOFT TRANSITION INTO THE FOUR CORNERS. 500MB HEIGHTS GRADUALLY RISE TO VALUES CLOSER TO MID-MAY NORMALS AND SFC TEMPERATURES RESPOND IN KIND...HEADING BACK INTO THE 90S FOR MIDWEEK. DESPITE THE SUBTLE INCREASE IN ML THICKNESSES...STILL LOOKS LIKE IT WON'T BE ENOUGH TO PEAK OUR TEMPERATURES ABOVE NORMAL VALUES...WHICH ARE IN THE MID TO UPPER 90S FOR PHOENIX AND YUMA RESPECTIVELY.

MEDIUM RANGE DETERMINISTIC AND ENSEMBLE FORECASTS CONTINUE TO ADVERTISE A FAIRLY ACTIVE SOUTHERN STORM TRACK...WITH WEAK RIDGING OVER THE NE PACIFIC/NORTH AMERICAN WEST COAST AND AN ACTIVE 300MB JET UNDERCUTTING AND SPINNING OFF ADDITIONAL STORM SYSTEMS NORTH OF THE HAWAIIAN ISLANDS. BY THE LATE WEEK PERIOD...YET ANOTHER PACIFIC LOW WILL TRANSITION OFF THE PACIFIC AND INTO THE SOUTHWEST. THE MOISTURE PROFILE WITH SYSTEM IS SIMILAR TO THAT OF TODAY'S AT THIS TIME...WITH ELEVATED MOISTURE/RH FIELDS THROUGH PORTIONS OF THE MID- LEVELS AND SOMEWHAT DRY SUB-CLOUD LAYERS. ANOTHER COOL DOWN WILL RESULT FRIDAY INTO THE EARLY WEEKEND...KNOCKING TEMPERATURES DOWN INTO THE 80S AND A POTENTIAL 10 DEGREES BELOW LATE MAY NORMALS. LATE WEEKEND CONDITIONS EXPECTED TO BE ON THE DRIER SIDE IN THE WAKE OF THE NEXT SYSTEM WITH ENOUGH WARMING TO INTRODUCE THE POSSIBILITY OF HEADING BACK INTO THE 90S BY THE MEMORIAL DAY HOLIDAY.

&&

Fig A-6: An excerpt from an Area Forecast Discussion including El Centro issued by the NWS Phoenix office on May 18, 2015. It references lower trough heights moving through the area will keep temperatures lower than eastern cities. Source: Iowa Environmental Mesonet

FIGURE A-7
NWS SAN DIEGO OFFICE AREA FORECAST DISCUSSION MAY 18, 2015

```
968
FXUS66 KSGX 180952
AFDSGX

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE SAN DIEGO CA
255 AM PDT MON MAY 18 2015

.SYNOPSIS...

A WEAK LOW PRESSURE SYSTEM WILL MOVE INLAND THROUGH CALIFORNIA
TODAY...A SECOND WEAK LOW PRESSURE SYSTEM WILL BE NEAR THE
CALIFORNIA COAST WEDNESDAY AND THURSDAY...WITH A THIRD WEAK LOW
PRESSURE SYSTEM MOVING INLAND THROUGH SOUTHERN CALIFORNIA
FRIDAY. THIS WILL CONTINUE BELOW AVERAGE INLAND TEMPERATURES...
A DEEPER MARINE LAYER WITH AREAS OF COASTAL LOW CLOUDS AND PATCHY
FOG EXTENDING WELL INLAND...AND STRONGER ONSHORE FLOW WITH GUSTY
WEST WINDS IN THE MOUNTAINS AND DESERTS. THERE IS ALSO A CHANCE OF
SHOWERS LATE THURSDAY NIGHT AND FRIDAY. HIGH PRESSURE WILL BRING DRY
WEATHER WITH A WARMING TREND FOR SATURDAY THROUGH MONDAY.

&&

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

A WEAK LOW PRESSURE SYSTEM WILL MOVE INLAND THROUGH CALIFORNIA
TODAY. A SECOND WEAK LOW PRESSURE SYSTEM WILL BE NEAR THE
CALIFORNIA COAST WEDNESDAY AND THURSDAY WITH A TRAILING WEAK LOW
PRESSURE SYSTEM MOVING INLAND THROUGH SOUTHERN CALIFORNIA THURSDAY
NIGHT AND FRIDAY.

THIS WILL CONTINUE BELOW AVERAGE INLAND TEMPERATURES AND STRONGER
ONSHORE FLOW WITH GUSTY WEST WINDS IN THE MOUNTAINS AND DESERTS. IT
WILL ALSO MAINTAIN A DEEP MARINE LAYER WITH NIGHT AND MORNING
COASTAL LOW CLOUDS AND PATCHY FOG EXTENDING ONTO THE COASTAL
MOUNTAIN SLOPES WITH SLOW AND SOMETIMES LIMITED AFTERNOON CLEARING.
AS THE FINAL WEAK LOW PRESSURE SYSTEM MOVES INLAND ON THURSDAY NIGHT
AND FRIDAY THROUGH SOUTHERN CALIFORNIA...THERE IS ALSO A CHANCE OF
SHOWERS ALONG AND WEST OF THE MOUNTAINS.

DRY WITH A WARMING TREND FOR SATURDAY THROUGH MONDAY UNDER HIGH
PRESSURE AS HIGH TEMPERATURES COULD RETURN TO NEAR AVERAGE FOR
MEMORIAL DAY.

&&

AVIATION...

180900Z...CLOUDS IN THE COASTAL BASIN WILL HAVE BASES AROUND 3000
FEET MSL WITH TOPS REACHING UP TO 5500 FEET. COASTAL MOUNTAIN SLOPES
BETWEEN THOSE ELEVATIONS WILL BE PARTIALLY OBSCURED IN FOG. ISOLATED
DRIZZLE OR LIGHT SHOWERS ARE POSSIBLE THROUGH 16Z. THE CLOUDS WILL
ONLY PARTIALLY SCATTER OUT THIS AFTERNOON...MOST LIKELY INLAND. SOME
CLOUDS ARE EXPECTED IN THE MOUNTAINS AND IN THEIR LEE THIS AFTERNOON
AT AROUND 10000 FEET MSL. LOW CLOUDS WILL FILL THE ENTIRE COASTAL
BASIN OVERNIGHT WITH SIMILAR BASES/TOPS AS THIS MORNING.

&&

.MARINE...

200 AM...NO HAZARDOUS MARINE WEATHER IS EXPECTED THROUGH FRIDAY.

&&

.SKYWARN...
SKYWARN ACTIVATION IS NOT REQUESTED. HOWEVER WEATHER SPOTTERS ARE
ENCOURAGED TO REPORT SIGNIFICANT WEATHER CONDITIONS.

&&

.SGX WATCHES/WARNINGS/ADVISORIES...
CA...NONE.
PZ...NONE.
&&

$$
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Fig A-7: An excerpt from an Area Forecast Discussion issued by the NWS San Diego office on May 18, 2015. The forecast discusses the continued gusty winds in the mountains and deserts. Source: Iowa Environmental Mesonet

FIGURE A-8
NWS PHOENIX OFFICE AREA WEATHER DISCUSSION MAY 18, 2015

929
FXUS65 KPSR 181119
AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
418 AM MST MON MAY 18 2015

.UPDATE...UPDATED AVIATION AND FIRE WEATHER DISCUSSIONS.

&&

.SYNOPSIS...
LOW PRESSURE OFF THE CALIFORNIA COAST WILL MOVE INLAND TODAY...BRINGING INCREASED CLOUD COVER AND A SLIGHT CHANCE OF SHOWERS TO THE MOUNTAINS NORTH OF PHOENIX. SUNNY SKIES AND DRY WEATHER WILL RETURN TUESDAY WITH TEMPERATURES STILL SLIGHTLY BELOW NORMAL. YET ANOTHER UPPER LEVEL LOW PRESSURE SYSTEM WILL APPROACH THE REGION FROM CALIFORNIA LATE IN THE WEEK ALTHOUGH THE PRIMARY IMPACTS WILL BE COOLER TEMPERATURES AND INCREASED CLOUD COVER.

&&

.DISCUSSION...
THE NEXT IN THE SERIES OF PACIFIC STORMS CURRENTLY EXPANDS OFF THE NORTHERN CA COAST INTO THE NORTHEAST PACIFIC...WITH THE CIRC CENTER OVER THE BAY AREA THIS EARLY AM. BROADLY DIFLUENT FLOW AROUND THE BASE OF THE SYSTEM ALREADY WORKING INTO THE FORECAST AREA PER 00Z RAOBS AND OVERNIGHT IR SATELLITE TRENDS. 00Z RAOB PWATS AND BLENDED TPW INDICATE 0.5 TO 0.75 INCH VALUES SPANNING THE AREA...IN LINE WITH EARLIER FORECASTS AND OVERNIGHT/EARLY AM MODEL FCSTS.

UPPER LOW WILL DIP SOUTHWESTWARD THROUGH THE DAY BEFORE TRACKING INTO THE GREAT BASIN...SWEEPING UPPER 550 TO MID 570DM 500MB HEIGHTS OVER SOUTHEAST CA BY MIDDAY AND INTO SOUTH-CENTRAL AZ THROUGH THE AFTERNOON. NEAR 100KT SWSTRLY JET STREAK WILL ALSO NOSE INTO AZ BY MIDDAY. WHILE THIS SYSTEM IS NOT AS MOISTURE RICH AS FRIDAY'S...FAVORABLE OROGRAPHIC ORIENTATION AND DYNAMICS SUPPORT AT LEAST SLIGHT CHANCES FOR SHOWER AND THUNDERSTORMS FOR THE HIGHER TERRAIN LOCALES OF THE FORECAST AREA...THE AREAS NORTH AND EAST OF PHOENIX AS WELL AS JOSHUA TREE NP. VERY SLIGHT CHANCES EXTEND INTO PORTIONS OF THE SOUTH-CENTRAL AZ DESERTS...INCLUDING PHOENIX AND GILA BEND...TO ACCOUNT FOR JET ENTRANCE DYNAMICS BUT NOT EXPECTING MUCH BY WAY OF QPF VALUES. FCST CROSS SECTIONS KEEP THE MOISTURE IN NARROW LAYER BETWEEN 600-500MB. THIS WILL RESULT IN THICKER MID-LEVEL CLOUD DECKS...PLENTY OF VIRGA AND TRACE PRECIP AMOUNTS FOR SOME THIS AFTERNOON OVER THE LOWER AZ DESERTS.

LOWER TROUGH HEIGHTS MOVING THROUGH THE WESTERN FORECAST AREA DURING PEAK HEATING WILL KEEP LOCALES LIKE YUMA AND EL CENTRO SLIGHTLY COOLER THAN THEIR CITY COUNTERPARTS TO THE EAST. TEMPERATURES OUT ACROSS SOUTHEAST CA TO PEAK IN THE LOW TO MID 80S...WHILE WE'LL BE IN THE UPPER 80S TO FLIRTING WITH THE 90 DEGREE MARK ACROSS SOUTH-CENTRAL AZ. THE AFOREMENTIONED UPPER JET AND DIFLUENT FLOW SET-UP WILL ALSO SUPPORT ELEVATED BREEZES DURING THE DAY PARTICULARLY MARICOPA COUNTY EASTWARD...WITH GUSTS 20 TO 30 MPH POSSIBLE. DEEPER MIXING COURTESY OF THE WINDY CONDITIONS WILL ALSO HELP NUDGE TEMPERATURES UPWARD FOR PHOENIX...COOLIDGE AND GILA BEND.

TUESDAY THROUGH THURSDAY...THE UPPER LOW WILL BEGIN TO CLEAR EAST OF THE AREA AS WEAK RIDGING AND BROAD SOUTHWEST FLOW ALOFT TRANSITION INTO THE FOUR CORNERS. 500MB HEIGHTS GRADUALLY RISE TO VALUES CLOSER TO MID-MAY NORMALS AND SFC TEMPERATURES RESPOND IN KIND...HEADING BACK INTO THE 90S FOR MIDWEEK. DESPITE THE SUBTLE INCREASE IN ML THICKNESSES...STILL LOOKS LIKE IT WON'T BE ENOUGH TO PEAK OUR TEMPERATURES ABOVE NORMAL VALUES...WHICH ARE IN THE MID TO UPPER 90S FOR PHOENIX AND YUMA RESPECTIVELY.

MEDIUM RANGE DETERMINISTIC AND ENSEMBLE FORECASTS CONTINUE TO ADVERTISE A FAIRLY ACTIVE SOUTHERN STORM TRACK...WITH WEAK RIDGING OVER THE NE PACIFIC/NORTH AMERICAN WEST COAST AND AN ACTIVE 300MB JET UNDERCUTTING AND SPINNING OFF ADDITIONAL STORM SYSTEMS NORTH OF THE HAWAIIAN ISLANDS. BY THE LATE WEEK PERIOD...YET ANOTHER PACIFIC LOW WILL TRANSITION OFF THE PACIFIC AND INTO THE SOUTHWEST. THE MOISTURE PROFILE WITH SYSTEM IS SIMILAR TO THAT OF TODAY'S AT THIS TIME...WITH ELEVATED MOISTURE/RH FIELDS THROUGH PORTIONS OF THE MID- LEVELS AND SOMEWHAT DRY SUB-CLOUD LAYERS. ANOTHER COOL DOWN WILL RESULT FRIDAY INTO THE EARLY WEEKEND...KNOCKING TEMPERATURES DOWN INTO THE 80S AND A POTENTIAL 10 DEGREES BELOW LATE MAY NORMALS. LATE WEEKEND CONDITIONS EXPECTED TO BE ON THE DRIER SIDE IN THE WAKE OF THE NEXT

SYSTEM WITH ENOUGH WARMING TO INTRODUCE THE POSSIBILITY OF HEADING
BACK INTO THE 90S BY THE MEMORIAL DAY HOLIDAY.

&&

.AVIATION...

SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...
SOUTHEAST CALIFORNIA AND SOUTHWEST ARIZONA INCLUDING KIPL AND KBLH...

A MOSTLY DRY COLD FRONT WILL MOVE ACROSS THE REGION TODAY RESULTING
IN STRONG GUSTY SOUTH TO SOUTHWEST WINDS AREA-WIDE. THROUGH 17Z
MON...MOSTLY CLEAR SKIES. SOUTH WIND 5 TO 10 KNOTS. FROM 17Z MON
THROUGH 03Z TUE...MOSTLY CLEAR SKIES. INCREASING AFTERNOON SOUTH TO
SOUTHWEST WIND 15 TO 25 KNOTS WITH GUSTS TO 30 KNOTS. PEAK WIND NEAR
23Z MON.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

&&

.FIRE WEATHER...

THURSDAY THROUGH MONDAY...A COUPLE OF MOSTLY DRY AND RELATIVELY COOL
LOW PRESSURE SYSTEMS WILL MOVE INTO THE REGION THURSDAY AND FRIDAY.
THIS WILL RESULT IN GUSTY AFTERNOON SOUTHWEST WINDS AREA-WIDE 15 TO
25 MPH WITH GUSTS TO 30 MPH BOTH THURSDAY AND FRIDAY. DRY WESTERLY
FLOW ALOFT WITH MUCH LIGHTER AFTERNOON WIND IS EXPECTED SATURDAY
THROUGH MONDAY. CONTINUED BELOW NORMAL TEMPERATURES. LITTLE CHANGE
IN MINIMUM RH EACH DAY WITH VALUES RANGING FROM 15 TO 20 PERCENT.
FAIR TO POOR RECOVERY IS EXPECTED OVERNIGHT DUE TO SOME BREEZINESS
WITH THE PASSING LOW PRESSURE SYSTEMS.

&&

.PSR WATCHES/WARNINGS/ADVISORIES... AZ...NONE. CA...NONE.

&&

$$

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

DISCUSSION...NOLTE
AVIATION...VASQUEZ
FIRE WEATHER...VASQUEZ

Fig A-8: An excerpt from an Area Forecast Discussion including southeast California issued by the NWS Phoenix office on May 18, 2015. The forecast discusses the upper low dipping southward through the day and identified the movement of the low pressure inland. Source: Iowa Environmental Mesonet

FIGURE A-9
NWS SAN DIEGO OFFICE AREA FORECAST DISCUSSION MAY 18, 2015

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255
FXUS66 KSGX 181600
AFDSGX

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE SAN DIEGO CA
900 AM PDT MON MAY 18 2015

.SYNOPSIS...

A SERIES OF THREE WEAK LOW PRESSURE SYSTEMS WILL MOVE INLAND THROUGH
CALIFORNIA THIS WEEK. THIS WILL CONTINUE BELOW AVERAGE INLAND
TEMPERATURES... A DEEPER MARINE LAYER WITH AREAS OF COASTAL LOW
CLOUDS AND PATCHY FOG EXTENDING WELL INLAND...AND STRONGER ONSHORE
FLOW WITH GUSTY WEST WINDS IN THE MOUNTAINS AND DESERTS. THERE IS A
CHANCE OF SHOWERS WITH THE THIRD LOW PRESSURE SYSTEM MOVING THROUGH
LATE THURSDAY NIGHT AND FRIDAY. HIGH PRESSURE WILL BRING DRY WEATHER
WITH A WARMING TREND FOR SATURDAY THROUGH MONDAY.

&&

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

VISIBLE SATELLITE IMAGERY SHOWED AREAS OF LOW CLOUDS FILLING THE
COASTAL BASIN THIS MORNING WITH HOLES HERE AND THERE AND A FEW MID-
LEVEL CLOUDS OVER THE UPPER DESERTS. THE MARINE LAYER DEPTH WAS
AROUND 4000 FT ON THE 12Z NKX SOUNDING WITH A INVERSION OF 4 DEGREES
C. PARTIAL CLEARING OF LOW CLOUDS IS EXPECTED TODAY. THERE IS ALSO
SUFFICIENT MID-LEVEL MOISTURE AND INSTABILITY ABOVE 700 MB FOR A
SLIGHT CHANCE OF A FEW SHOWERS OVER THE NORTHERN MOUNTAINS THIS
AFTERNOON.

A SERIES OF WEAK UPPER-LEVEL LOW PRESSURE SYSTEMS WILL MOVE THROUGH
THE WEST THIS WEEK. THE FIRST WILL TRAVERSE CALIFORNIA TODAY...THE
SECOND WILL BE JUST OFF THE CALIFORNIA COAST WEDNESDAY AND THURSDAY
WITH A TRAILING WEAK LOW PRESSURE SYSTEM MOVING INLAND THROUGH
SOUTHERN CALIFORNIA THURSDAY NIGHT AND FRIDAY. THIS WILL CONTINUE
BELOW AVERAGE INLAND TEMPERATURES AS WELL AS STRONGER ONSHORE FLOW
WITH GUSTY WEST WINDS IN THE MOUNTAINS AND DESERTS AT TIMES. THE
PATTERN WILL ALSO MAINTAIN A DEEP MARINE LAYER WITH NIGHT AND
MORNING COASTAL LOW CLOUDS AND PATCHY FOG EXTENDING ONTO THE COASTAL
MOUNTAIN SLOPES WITH SLOW AND SOMETIMES LIMITED AFTERNOON CLEARING.
A CHANCE OF SHOWERS ALONG AND WEST OF THE MOUNTAINS WILL ACCOMPANY
THE FINAL WEAK LOW PRESSURE SYSTEM MOVING INLAND THURSDAY NIGHT AND
FRIDAY. AT THIS POINT PRECIPITATION AMOUNTS APPEAR MOSTLY LIGHT.

DRY WITH A WARMING TREND FOR SATURDAY THROUGH MONDAY AS HIGH
PRESSURE RETURNS AND HIGH TEMPERATURES REBOUNDING TO NEAR
SEASONAL AVERAGES FOR MEMORIAL DAY.

&&

..AVIATION... 181500Z...PATCHY BKN-OVC STRATUS OVER THE
COAST...VALLEYS AND MTNS...WITH BASES 4000-4500 FT MSL...TOPS 4500-
5500 FT MSL...AND MTN OBSCURATION OF COASTAL MTN SLOPES WILL
PARTIALLY CLEAR THROUGH 1900 UTC. MARINE LAYER INVERSION OF 4 DEG C
THIS MORNING. 1900-19/0200 UTC...SCT-FEW CLOUDS IN THE 4000-5000 FT
MSL LAYER OVER THE COAST...VALLEYS AND COASTAL MTN SLOPES...WITH A
CHANCE FOR SHOWERS TO DEVELOP OVER THE MTN RIDGES WITH SHOWER TOPS
OF 25000 FT MSL POSSIBLE. 19/0200-1500 UTC...BKN-OVC STRATUS RE-
DEVELOPING IN THE COAST...VALLEYS AND COASTAL MTN SLOPES...WITH
BASES 2500-3500 FT MSL AND TOPS 4000-4500 FT MSL.

FOR THE DESERT MTN SLOPES AND DESERTS...UNRESTRICTED VIS AND MOSTLY
SKC THROUGH TUESDAY MORNING. WEST WINDS 15-25 KT WITH GUSTS 30-40 KT
OVER MTN RIDGES...THROUGH/BELOW PASSES/CANYONS...DESERT MTN SLOPES
AND INTO ADJACENT DESERT AREAS WILL CREATE STG UDDFS/LLWS AND
POSSIBLE ROTORS OVER AND EAST OF THE MTNS.

&&

.MARINE... 800 AM...NO HAZARDOUS MARINE WEATHER IS EXPECTED THROUGH
FRIDAY.

&&

.SGX WATCHES/WARNINGS/ADVISORIES...
CA...NONE.
```

Fig A-9: An excerpt from an Area Forecast Discussion issued by the NWS San Diego office on May 18, 2015. The forecast discussion identified a series of three weak low-pressure systems moving inland through California causing strong onshore flow with gusty west winds in the mountains and deserts. Source: Iowa Environmental Mesonet

FIGURE A-10
NWS PHOENIX OFFICE AREA FORECAST DISCUSSION MAY 18, 2015

913
FXUS65 KPSR 181625
AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
925 AM MST MON MAY 18 2015

.SYNOPSIS...
LOW PRESSURE OFF THE CALIFORNIA COAST WILL MOVE INLAND TODAY...BRINGING INCREASED CLOUD COVER AND A SLIGHT CHANCE OF SHOWERS TO THE MOUNTAINS NORTH OF PHOENIX. SUNNY SKIES AND DRY WEATHER WILL RETURN TUESDAY WITH TEMPERATURES STILL SLIGHTLY BELOW NORMAL. YET ANOTHER UPPER LEVEL LOW PRESSURE SYSTEM WILL APPROACH THE REGION FROM CALIFORNIA LATE IN THE WEEK ALTHOUGH THE PRIMARY IMPACTS WILL BE COOLER TEMPERATURES AND INCREASED CLOUD COVER.

&&

.DISCUSSION...
MID MORNING WATER VAPOR IMAGERY INDICATES A LARGE AREA OF LOW PRESSURE OVER CENTRAL CALIFORNIA...WITH A LEADING SHORTWAVE TROUGH MOVING THROUGH WESTERN ARIZONA AS OF 16Z. VIS IMAGERY AND REGIONAL RADAR MOSAIC SUGGESTS SOME ISOLATED SHOWERS ACROSS NORTHERN LA PAZ AND NORTHWEST MARICOPA COUNTIES BUT LITTLE IN THE WAY OF MEASURABLE PRECIP HAS FALLEN AT THIS POINT...MORE THAN LIKELY A FEW SPRINKLES AT MOST.

FORECAST FOR THE REST OF THE DAY REQUIRES ONLY A FEW MINOR ADJUSTMENTS...MAINLY BASED ON OBSERVATIONAL TRENDS THROUGH 16Z. TEMPS STILL LOOK ON TRACK TO TOP OUT AROUND THE 90 DEGREE MARK...WHICH WOULD PHOENIX'S FIRST 90 DEGREE DAY IN NEARLY A WEEK /MAY 13/. AS FOR PRECIP CHANCES...HRRR KEEPS ALL PRECIP CONFINED TO NORTHERN ARIZONA TODAY BUT UAWRFS...HIRESW WRF MODELS...AND GFS ALL INDICATE A FEW LIGHT SHOWERS NORTH/EAST OF PHOENIX. DO NOT WANT TO ENTIRELY REMOVE POPS GIVEN STRONG 250MB JET SUPPORT AND MODEST MERIDIONAL COMPONENT OF THE LOW LEVEL PRE-TROUGH WINDS. I WILL LEAVE 10-30 POPS IN PLACE FROM WICKENBURG TO SUNFLOWER TO GLOBE...ANY RAINFALL AMOUNTS THAT OCCUR WILL BE LIGHT.

&&

.PREVIOUS DISCUSSION...
LOWER TROUGH HEIGHTS MOVING THROUGH THE WESTERN FORECAST AREA DURING PEAK HEATING WILL KEEP LOCALES LIKE YUMA AND EL CENTRO SLIGHTLY COOLER THAN THEIR CITY COUNTERPARTS TO THE EAST. TEMPERATURES OUT ACROSS SOUTHEAST CA TO PEAK IN THE LOW TO MID 80S...WHILE WE'LL BE IN THE UPPER 80S TO FLIRTING WITH THE 90 DEGREE MARK ACROSS SOUTH-CENTRAL AZ. THE AFOREMENTIONED UPPER JET AND DIFLUENT FLOW SET-UP WILL ALSO SUPPORT ELEVATED BREEZES DURING THE DAY PARTICULARLY MARICOPA COUNTY EASTWARD...WITH GUSTS 20 TO 30 MPH POSSIBLE. DEEPER MIXING COURTESY OF THE WINDY CONDITIONS WILL ALSO HELP NUDGE TEMPERATURES UPWARD FOR PHOENIX...COOLIDGE AND GILA BEND.

TUESDAY THROUGH THURSDAY...THE UPPER LOW WILL BEGIN TO CLEAR EAST OF THE AREA AS WEAK RIDGING AND BROAD SOUTHWEST FLOW ALOFT TRANSITION INTO THE FOUR CORNERS. 500MB HEIGHTS GRADUALLY RISE TO VALUES CLOSER TO MID-MAY NORMALS AND SFC TEMPERATURES RESPOND IN KIND...HEADING BACK INTO THE 90S FOR MIDWEEK. DESPITE THE SUBTLE INCREASE IN ML THICKNESSES...STILL LOOKS LIKE IT WON'T BE ENOUGH TO PEAK OUR TEMPERATURES ABOVE NORMAL VALUES...WHICH ARE IN THE MID TO UPPER 90S FOR PHOENIX AND YUMA RESPECTIVELY.

MEDIUM RANGE DETERMINISTIC AND ENSEMBLE FORECASTS CONTINUE TO ADVERTISE A FAIRLY ACTIVE SOUTHERN STORM TRACK...WITH WEAK RIDGING OVER THE NE PACIFIC/NORTH AMERICAN WEST COAST AND AN ACTIVE 300MB JET UNDERCUTTING AND SPINNING OFF ADDITIONAL STORM SYSTEMS NORTH OF THE HAWAIIAN ISLANDS. BY THE LATE WEEK PERIOD...YET ANOTHER PACIFIC LOW WILL TRANSITION OFF THE PACIFIC AND INTO THE SOUTHWEST. THE MOISTURE PROFILE WITH SYSTEM IS SIMILAR TO THAT OF TODAY'S AT THIS TIME...WITH ELEVATED MOISTURE/RH FIELDS THROUGH PORTIONS OF THE MID- LEVELS AND SOMEWHAT DRY SUB-CLOUD LAYERS. ANOTHER COOL DOWN WILL RESULT FRIDAY INTO THE EARLY WEEKEND...KNOCKING TEMPERATURES DOWN INTO THE 80S AND A POTENTIAL 10 DEGREES BELOW LATE MAY NORMALS. LATE WEEKEND CONDITIONS EXPECTED TO BE ON THE DRIER SIDE IN THE WAKE OF THE NEXT SYSTEM WITH ENOUGH WARMING TO INTRODUCE THE POSSIBILITY OF HEADING BACK INTO THE 90S BY THE MEMORIAL DAY HOLIDAY.

&&

Fig A-10: An excerpt from an Area Forecast Discussion issued by the NWS Phoenix office on May 18, 2015. The forecast discussion identifies the low pressure off the California coast moving inland (mostly dry cold front). Source: Iowa Environmental Mesonet

FIGURE A-11
NWS PHOENIX OFFICE AREA FORECAST DISCUSSION MAY 18, 2015

9/21/2017 IEM :: AFD from NWS SGX

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542
FXUS66 KSGX 182301 CCA
AFDSGX

AREA FORECAST DISCUSSION...CORRECTED
NATIONAL WEATHER SERVICE SAN DIEGO CA
100 PM PDT MON MAY 18 2015

CORRECTED ISSUANCE TIME

.SYNOPSIS...

A SERIES OF THREE WEAK LOW PRESSURE SYSTEMS WILL MOVE INLAND THROUGH
CALIFORNIA THIS WEEK. THIS WILL CONTINUE BELOW AVERAGE INLAND
TEMPERATURES... A DEEPER MARINE LAYER WITH AREAS OF COASTAL LOW
CLOUDS AND PATCHY FOG EXTENDING WELL INLAND...AND STRONGER ONSHORE
FLOW WITH GUSTY WEST WINDS IN THE MOUNTAINS AND DESERTS. THERE IS A
CHANCE OF SHOWERS WITH THE THIRD LOW PRESSURE SYSTEM MOVING THROUGH
LATE THURSDAY NIGHT AND FRIDAY. HIGH PRESSURE WILL BRING DRY WEATHER
WITH A WARMING TREND FOR SATURDAY THROUGH MONDAY.

&&

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

AREAS OF LOW CLOUDS REMAIN IN MUCH OF THE COASTAL BASIN THIS
AFTERNOON WITH GREATEST COVERAGE IN THE NORTHERN COUNTIES. A FEW
CUMULUS ARE BEGINNING TO FORM OVER THE SAN BERNARDINO MOUNTAINS AND
SUFFICIENT MID-LEVEL MOISTURE/INSTABILITY ABOVE 700 MB REMAINS FOR A
SLIGHT CHANCE OF A FEW SHOWERS OVER THE NORTHERN MOUNTAINS THIS
AFTERNOON. THE TROUGH PASSING THROUGH THE AREA TODAY AND TONIGHT
WILL RESULT IN GUSTY WINDS THROUGH THE SAN GORGONIO PASS AND ALONG
THE DESERT SLOPES OF THE SAN DIEGO COUNTY MOUNTAINS WITH LOCAL GUSTS
50 TO 55 MPH. A WIND ADVISORY HAS BEEN ISSUED FOR THESE AREAS
TONIGHT THROUGH TOMORROW MORNING.

A SERIES OF WEAK UPPER-LEVEL LOW PRESSURE SYSTEMS WILL MOVE THROUGH
THE WEST THIS WEEK. THE FIRST WILL TRAVERSE CALIFORNIA TODAY...THE
SECOND WILL BE JUST OFF THE CALIFORNIA COAST WEDNESDAY AND THURSDAY
WITH A TRAILING WEAK LOW PRESSURE SYSTEM MOVING INLAND THROUGH
SOUTHERN CALIFORNIA THURSDAY NIGHT AND FRIDAY. THIS WILL CONTINUE
BELOW AVERAGE INLAND TEMPERATURES AS WELL AS STRONGER ONSHORE FLOW
WITH GUSTY WEST WINDS IN THE MOUNTAINS AND DESERTS AT TIMES. THE
PATTERN WILL ALSO MAINTAIN A DEEP MARINE LAYER WITH NIGHT AND
MORNING COASTAL LOW CLOUDS AND PATCHY FOG EXTENDING ONTO THE COASTAL
MOUNTAIN SLOPES WITH SLOW AND SOMETIMES LIMITED AFTERNOON CLEARING.
A CHANCE OF SHOWERS ALONG AND WEST OF THE MOUNTAINS WILL ACCOMPANY
THE FINAL WEAK LOW PRESSURE SYSTEM MOVING INLAND THURSDAY NIGHT AND
FRIDAY. THE LATEST MODEL RUNS STILL SHOW LIMITED MOISTURE WITH THIS
SYSTEM DESPITE GOOD DYNAMICS SO WILL KEEP PRECIPITATION AMOUNTS
MOSTLY LIGHT AT THIS POINT.

DRY WITH A WARMING TREND FOR SATURDAY THROUGH MONDAY AS HIGH
PRESSURE RETURNS AND HIGH TEMPERATURES REBOUND TO NEAR SEASONAL
AVERAGES FOR MEMORIAL DAY.

&&

.AVIATION...
182015Z...THROUGH 19/0200 UTC...BKN-SCT CLOUDS IN THE 4000-5000 FT
MSL LAYER OVER THE COAST...VALLEYS AND COASTAL MTN SLOPES...WITH A
CHANCE FOR SHOWERS TO DEVELOP OVER THE MTN RIDGES WITH SHOWER TOPS
OF 20000 FT MSL POSSIBLE. 19/0200-1500 UTC...BKN-OVC STRATUS RE-
DEVELOPING IN THE COAST...VALLEYS AND COASTAL MTN SLOPES...WITH
BASES 2000-3000 FT MSL AND TOPS 4000 FT MSL. SLOW CLEARING DURING
THE 19/1500-1900 UTC TIME-PERIOD.

FOR THE DESERT MTN SLOPES AND DESERTS...UNRESTRICTED VIS AND MOSTLY
SKC THROUGH TUESDAY MORNING. WEST WINDS 15-25 KT WITH GUSTS 30-40 KT
OVER MTN RIDGES...THROUGH/BELOW PASSES/CANYONS...DESERT MTN SLOPES
AND INTO ADJACENT DESERT AREAS WILL CREATE STG UDDFS/LLWS AND
POSSIBLE ROTORS OVER AND EAST OF THE MTNS.

&&

.MARINE...
115 PM...NO HAZARDOUS MARINE WEATHER IS EXPECTED THROUGH SATURDAY.
```

https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDSGX&e=201505182000 2/3

Fig A-11: An excerpt from an Area Forecast Discussion issued by the NWS San Diego office on May 18, 2015. The forecast discussion identifies a series of three weak low-pressure system moving inland through California with stronger onshore flow and gusty west wins in the mountains and deserts. Source: Iowa Environmental Mesonet

FIGURE A-12
URGENT WEATHER MESSAGE WITH WIND ADVISORY MAY 18, 2015

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252
WWUS76 KSGX 182010
NPWSGX

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE SAN DIEGO CA
110 PM PDT MON MAY 18 2015

...STRONG GUSTY WEST WINDS IN THE LOWER DESERTS AND ADJACENT
DESERT MOUNTAIN SLOPES TONIGHT AND EARLY TUESDAY MORNING...

.AN UPPER LEVEL TROUGH OF LOW PRESSURE MOVING THROUGH CALIFORNIA
TONIGHT WILL BRING A PERIOD OF STRONG GUSTY WEST WINDS TO THE
LOWER DESERTS. THE STRONGEST WINDS WILL BE THROUGH AND BELOW THE
SAN GORGONIO PASS AND THE LOWER DESERT SLOPES OF THE SAN DIEGO
MOUNTAINS. WIND GUSTS WILL BE MOSTLY 45 TO 50 MPH WITH LOCAL GUSTS
OVER 50 MPH POSSIBLE AT TIMES. ONSHORE FLOW WILL WEAKEN SOMEWHAT
DURING THE DAY TUESDAY...LOWERING WIND SPEEDS.

CAZ062-065-190415-
/O.NEW.KSGX.WI.Y.0020.150519T0600Z-150519T1600Z/
SAN DIEGO COUNTY DESERTS-SAN GORGONIO PASS NEAR BANNING-
110 PM PDT MON MAY 18 2015

...WIND ADVISORY IN EFFECT FROM 11 PM THIS EVENING TO 9 AM PDT
TUESDAY...

THE NATIONAL WEATHER SERVICE IN SAN DIEGO HAS ISSUED A WIND
ADVISORY...WHICH IS IN EFFECT FROM 11 PM THIS EVENING TO 9 AM PDT
TUESDAY.

* WINDS...WEST 20 TO 30 MPH WITH LOCAL GUSTS 50 TO 55 MPH.

* TIMING...TONIGHT THROUGH TUESDAY MORNING.

* LOCATION...LOWER DESERTS INCLUDING THE SAN GORGONIO PASS AREA
  AND LOWER DESERT SLOPES AND DESERT FLOOR OF THE SAN DIEGO
  COUNTY MOUNTAINS.

* VISIBILITY...LOCALLY BELOW 2 MILES IN THE DESERT IN BLOWING DUST
  AND SAND.

* IMPACTS...DRIVING COULD BE HAZARDOUS FOR PEOPLE DRIVING HIGH
  PROFILE VEHICLES. INTERSTATES 8 AND 10 WILL BE IMPACTED.

* OUTLOOK...WIND SPEEDS WILL LOWER DURING THE DAY TUESDAY BEFORE
  INCREASING AGAIN SLIGHTLY TUESDAY NIGHT...ALTHOUGH NOT AS
  STRONG.

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.
```

Fig A-12: An Urgent Weather Message issued at 110pm on May 18, 2015 contained a wind advisory for the desert slopes and desert floor within San Diego County. Forecasted west winds 20 to 30 mph with local gust 50 to 55 mph and reduced visibility due to blowing dust and sand. Source: Iowa Environmental Mesonet; https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=NPWSGX&e=201505182010

FIGURE A-13
NWS PHOENIX OFFICE AREA FORECAST DISCUSSION MAY 18, 2015

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017
FXUS65 KPSR 182029
AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
129 PM MST MON MAY 18 2015

.SYNOPSIS...
LOW PRESSURE WILL SLOWLY MOVE THROUGH THE AREA THIS
EVENING...BRINGING ISOLATED SHOWERS TO THE MOUNTAINS NORTH AND EAST
OF PHOENIX. FOLLOWING THE TROUGH...MOSTLY SUNNY SKIES AND SLIGHTLY
BELOW NORMAL TEMPERATURES WILL PERSIST THROUGH LATE WEEK. ANOTHER
UPPER LEVEL LOW PRESSURE SYSTEM WILL APPROACH THE REGION FROM
CALIFORNIA LATE IN THE WEEK ALTHOUGH THE PRIMARY IMPACTS WILL BE
COOLER TEMPERATURES AND INCREASED CLOUD COVER.

&&

.DISCUSSION...
LOW PRESSURE CONTINUES ITS SLOW EASTWARD PROGRESSION THIS AFTERNOON
AND IS CENTERED OVER WESTERN NEVADA AS OF 19Z. THE BAND OF CLOUDS AND
SPRINKLES THAT MOVED THROUGH THE AREA THIS MORNING HAS SHIFTED INTO
NORTHERN ARIZONA ALTHOUGH THERE ARE SOME SHOWERS BEGINNING TO SHOW UP
OVER PORTIONS OF GILA COUNTY. MEANWHILE THE DESERTS REMAIN DRY WITH
TEMPERATURES IN THE MID 80S.

HI-RES GUIDANCE REMAINS FIRM IN THEIR SOLUTIONS OF A DRY EVENING
ACROSS THE DESERTS WITH VERY ISOLATED SHOWERS NORTH/EAST OF PHOENIX.
SREF HOLDING TOUGH WITH 30-40 POPS ACROSS GILA COUNTY THIS EVENING.
ELECTED TO TRIM POPS BELOW 10 PERCENT AROUND THE PHOENIX AREA AND
INTO THE 10-20 PERCENT RANGE AROUND GLOBE. MLCAPES ONLY TOP OUT
AROUND 100 J/KG ACROSS GILA COUNTY THIS AFTERNOON SO I OPTED TO
MAINTAIN THE SLIGHT CHANCE OF THUNDER.

FORECAST FOR MID WEEK APPEARS RELATIVELY STRAIGHTFORWARD WITH HIGH
CONFIDENCE AND GOOD AGREEMENT AMONG ENSEMBLE MEMBERS. A PERSISTENT
SOUTHWESTERLY FLOW ALOFT WILL BRING VARYING AMOUNTS OF HIGH CLOUDS
THROUGH THURSDAY...AND WILL ALSO PREVENT STRONG RIDGING FROM PARKING
OVER THE DESERT SOUTHWEST AS WOULD TYPICALLY BE THE CASE THIS TIME OF
YEAR. WHILE WARMER THAN WHAT WAS SEEN THIS WEEKEND...TEMPS THROUGH
THURSDAY WILL STILL BE BELOW NORMAL FOR MID MAY AND WILL ONLY REACH
THE UPPER 80S/LOWER 90S EACH AFTERNOON.

MEDIUM RANGE DETERMINISTIC AND ENSEMBLE FORECASTS CONTINUE TO
ADVERTISE A FAIRLY ACTIVE SOUTHERN STORM TRACK...WITH WEAK RIDGING
OVER THE NE PACIFIC/NORTH AMERICAN WEST COAST AND AN ACTIVE 300MB JET
UNDERCUTTING AND SPINNING OFF ADDITIONAL STORM SYSTEMS NORTH OF THE
HAWAIIAN ISLANDS. BY THE LATE WEEK PERIOD...YET ANOTHER PACIFIC LOW
WILL TRANSITION OFF THE PACIFIC AND INTO THE SOUTHWEST. THE MOISTURE
PROFILE WITH SYSTEM IS SIMILAR TO THAT OF TODAY'S AT THIS TIME...WITH
ELEVATED MOISTURE/RH FIELDS THROUGH PORTIONS OF THE MID- LEVELS AND
SOMEWHAT DRY SUB-CLOUD LAYERS. ANOTHER COOL DOWN WILL RESULT FRIDAY
INTO THE EARLY WEEKEND...KNOCKING TEMPERATURES DOWN INTO THE 80S AND
A POTENTIAL 10 DEGREES BELOW LATE MAY NORMALS. LATE WEEKEND
CONDITIONS EXPECTED TO BE ON THE DRIER SIDE IN THE WAKE OF THE NEXT
SYSTEM WITH ENOUGH WARMING TO INTRODUCE THE POSSIBILITY OF HEADING
BACK INTO THE 90S BY THE MEMORIAL DAY HOLIDAY.

&&

.AVIATION...
SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...
A DRY COLD FRONT...THAT HAS NOW MOVED TO THE EAST OF THE PHX
AREA...WILL CONTINUE TO BRING GUSTY WESTERLY WINDS TO THE PHX AREA
TERMINALS THROUGH THE REST OF THE EVENING....WITH WINDS DIMINISHING
OVERNIGHT AND BECOMING EASTERLY TOWARDS MORNING. WEAKER SFC PRESSURE
GRADIENTS ON TUESDAY WILL KEEP WINDS LIGHTER...WITH THE TYPICAL
WESTERLY AFTERNOON BREEZES MAINLY REMAINING AOB 10 KTS. SCT MID TO
HIGH CLOUD DECKS THIS EVENING TO GIVE WAY TO MAINLY CLEAR SKIES LATER
TONIGHT AND TUESDAY.

SOUTHEAST CALIFORNIA AND SOUTHWEST ARIZONA INCLUDING KIPL AND KBLH...
GUSTY WESTERLY WINDS AT KIPL...AND SOUTHWESTERLY WINDS AT KBLH
TONIGHT TO GRADUALLY DIMINISH EARLY TUESDAY AS SFC PRESSURE GRADIENTS
WEAKEN. A DRY AIRMASS TO KEEP SKIES MAINLY CLEAR THROUGH THE TAF
PERIOD.
```

Fig A-13: An excerpt from an Area Forecast Discussion issued by the NWS Phoenix office on May 18, 2015. The aviation section identifies gusty westerly winds. Source: Iowa Environmental Mesonet

FIGURE A-14
BLOWING DUST IDENTIFIED OVER THE SALTON SEA

Monday, May 18, 2015

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 0215Z May 19, 2015

```
SMOKE
Western Gulf of Mexico:
Remnant smoke from the seasonal agricultural burning in Central America
covered much of the western Gulf from the Bay of Campeche northward
to the Texas Coast. The smoke was mostly light density with a patch of
moderate embedded within.

Eastern Gulf of Mexico:
Light smoke from a wildfire burning in the western Everglades was seen
tracking to the west into the eastern Gulf. A patch of remnant smoke
from the fire was seen in the straight between Cuba and the Yucatan.

South central and western Canada:
Remnant smoke from a wildfire near Prince George in central British
Columbia was mixing with smoke from agricultural burning in southern
Saskatchewan creating a broad areas of mostly light smoke that covers
much of southern Saskatchewan and southern and central Alberta. The smoke
extends into British Columbia where more extensive cloud cover makes the
full extent of the smoke difficult to assess. Fires in northern British
Columbia were creating locally moderate to dense smoke this evening.

BLOWING DUST:
An area of light blowing dust was seen over southern California that
originated from the desert areas west of the Salton Sea. This dust was
moving to the east. A small plume of blowing dust was also seen to the
northwest of the Salton Sea and was moving to the south.

Ruminski

THIS TEXT PRODUCT IS PRIMARILY INTENDED TO DESCRIBE SIGNIFICANT AREAS
OF SMOKE ASSOCIATED WITH ACTIVE FIRES AND SMOKE WHICH HAS BECOME
DETACHED FROM THE FIRES AND DRIFTED SOME DISTANCE AWAY FROM THE SOURCE
FIRE..TYPICALLY OVER THE COURSE OF ONE OR MORE DAYS. AREAS OF BLOWING DUST
ARE ALSO DESCRIBED. USERS ARE ENCOURAGED TO VIEW A GRAPHIC DEPICTION OF
THESE AND OTHER PLUMES WHICH ARE LESS EXTENSIVE AND STILL ATTACHED TO
THE SOURCE FIRE IN VARIOUS GRAPHIC FORMATS ON OUR WEB SITE:

JPEG:   http://www.ospo.noaa.gov/Products/land/hms.html
GIS:    http://www.firedetect.noaa.gov/viewer.htm
KML:    http://www.ssd.noaa.gov/PS/FIRE/kml.html
ANY QUESTIONS OR COMMENTS REGARDING THIS PRODUCT SHOULD BE SENT TO
SSDFireTeam@noaa.gov
```

Unless otherwise indicated:

- Areas of smoke are analyzed using GOES-EAST and GOES-WEST Visible satellite imagery.
- Only a general description of areas of smoke or significant smoke plumes will be analyzed.
- A quantitative assessment of the density/amount of particulate or the vertical distribution is not included.
- Widespread cloudiness may prevent the detection of smoke even from significant fires.

Fig A-14: NOAA's Satellite Services Division issued a Smoke Text Product that identified blowing dust within the vicinity of the Salton Sea. The notice was effective through 18:15 PST which was during the time that the Brawley FEM monitor was measuring elevated hourly concentrations. Source: http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015E190623.html

FIGURE A-15
NWS PHOENIX OFFICE AREA FORECAST DISCUSSION MAY 18, 2015

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480
FXUS65 KPSR 190341
AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
840 PM MST MON MAY 18 2015

.SYNOPSIS...
LOW PRESSURE WILL SLOWLY MOVE THROUGH THE AREA THIS
EVENING...BRINGING ISOLATED SHOWERS TO THE MOUNTAINS NORTH AND EAST
OF PHOENIX. FOLLOWING THE TROUGH...MOSTLY SUNNY SKIES AND SLIGHTLY
BELOW NORMAL TEMPERATURES WILL PERSIST THROUGH LATE WEEK. ANOTHER
UPPER LEVEL LOW PRESSURE SYSTEM WILL APPROACH THE REGION FROM
CALIFORNIA LATE IN THE WEEK ALTHOUGH THE PRIMARY IMPACTS WILL BE
COOLER TEMPERATURES AND INCREASED CLOUD COVER.

&&

.DISCUSSION... UPPER LEVEL LOW CONTINUED TO PUSH EAST ACROSS THE
DESERT SOUTHWEST THIS EVENING...AND THE LATEST PLOT DATA ALONG WITH
VAPOR IMAGERY SHOWED THE MAIN VORT LOBE/TROF AXIS MOVING ACROSS
SOUTH CENTRAL AZ AT 8 PM WITH MOST OF THE PVA AND UVV FOCUSED OVER
SOUTHERN GILA COUNTY. RADAR INDICATED A FEW SHOWERS LINGERING OVER
THE HIGHER TERRAIN EAST OF PHOENIX...BUT LATEST MESOANALYSIS
GRAPHICS SHOWED VIRTUALLY ZERO MLCAPE...SO IT APPEARS THUNDER IS
PRETTY MUCH OUT OF THE QUESTION FOR THE REST OF THE EVENING.
STRONGER SUBSIDENCE BEHIND THE VORT TROF LED TO GENLY CLEAR SKIES
FROM PHOENIX WESTWARD AS SEEN IN THE LATEST IR IMAGERY. FOR THE REST
OF TONIGHT...EXPECT CLEARING SKIES BY MIDNIGHT ACROSS SRN GILA
COUNTY...WITH MOSTLY CLEAR OR CLEAR SKIES AND DECREASING WINDS
ELSEWHERE. FORECASTS LOOK TO BE IN GOOD SHAPE AND NO UPDATES ARE
NEEDED.

.PREVIOUS DISCUSSION... LOW PRESSURE CONTINUES ITS SLOW EASTWARD
PROGRESSION THIS AFTERNOON AND IS CENTERED OVER WESTERN NEVADA AS OF
19Z. THE BAND OF CLOUDS AND SPRINKLES THAT MOVED THROUGH THE AREA
THIS MORNING HAS SHIFTED INTO NORTHERN ARIZONA ALTHOUGH THERE ARE
SOME SHOWERS BEGINNING TO SHOW UP OVER PORTIONS OF GILA COUNTY.
MEANWHILE THE DESERTS REMAIN DRY WITH TEMPERATURES IN THE MID 80S.

HI-RES GUIDANCE REMAINS FIRM IN THEIR SOLUTIONS OF A DRY EVENING
ACROSS THE DESERTS WITH VERY ISOLATED SHOWERS NORTH/EAST OF PHOENIX.
SREF HOLDING TOUGH WITH 30-40 POPS ACROSS GILA COUNTY THIS EVENING.
ELECTED TO TRIM POPS BELOW 10 PERCENT AROUND THE PHOENIX AREA AND
INTO THE 10-20 PERCENT RANGE AROUND GLOBE. MLCAPES ONLY TOP OUT
AROUND 100 J/KG ACROSS GILA COUNTY THIS AFTERNOON SO I OPTED TO
MAINTAIN THE SLIGHT CHANCE OF THUNDER.

FORECAST FOR MID WEEK APPEARS RELATIVELY STRAIGHTFORWARD WITH HIGH
CONFIDENCE AND GOOD AGREEMENT AMONG ENSEMBLE MEMBERS. A PERSISTENT
SOUTHWESTERLY FLOW ALOFT WILL BRING VARYING AMOUNTS OF HIGH CLOUDS
THROUGH THURSDAY...AND WILL ALSO PREVENT STRONG RIDGING FROM PARKING
OVER THE DESERT SOUTHWEST AS WOULD TYPICALLY BE THE CASE THIS TIME OF
YEAR. WHILE WARMER THAN WHAT WAS SEEN THIS WEEKEND...TEMPS THROUGH
THURSDAY WILL STILL BE BELOW NORMAL FOR MID MAY AND WILL ONLY REACH
THE UPPER 80S/LOWER 90S EACH AFTERNOON.

MEDIUM RANGE DETERMINISTIC AND ENSEMBLE FORECASTS CONTINUE TO
ADVERTISE A FAIRLY ACTIVE SOUTHERN STORM TRACK...WITH WEAK RIDGING
OVER THE NE PACIFIC/NORTH AMERICAN WEST COAST AND AN ACTIVE 300MB JET
UNDERCUTTING AND SPINNING OFF ADDITIONAL STORM SYSTEMS NORTH OF THE
HAWAIIAN ISLANDS. BY THE LATE WEEK PERIOD...YET ANOTHER PACIFIC LOW
WILL TRANSITION OFF THE PACIFIC AND INTO THE SOUTHWEST. THE MOISTURE
PROFILE WITH SYSTEM IS SIMILAR TO THAT OF TODAY'S AT THIS TIME...WITH
ELEVATED MOISTURE/RH FIELDS THROUGH PORTIONS OF THE MID- LEVELS AND
SOMEWHAT DRY SUB-CLOUD LAYERS. ANOTHER COOL DOWN WILL RESULT FRIDAY
INTO THE EARLY WEEKEND...KNOCKING TEMPERATURES DOWN INTO THE 80S AND
A POTENTIAL 10 DEGREES BELOW LATE MAY NORMALS. LATE WEEKEND
CONDITIONS EXPECTED TO BE ON THE DRIER SIDE IN THE WAKE OF THE NEXT
SYSTEM WITH ENOUGH WARMING TO INTRODUCE THE POSSIBILITY OF HEADING
BACK INTO THE 90S BY THE MEMORIAL DAY HOLIDAY.

&&

.AVIATION... SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...
DRY COOL FRONT HAS PASSED EAST OF THE TERMINALS AND GUSTY WEST WINDS
SHOULD SLOWLY TAPER OFF AS THE EVENING PROGRESSES...RETURNING TO
SOUTHEAST OR EAST BY 10Z OR SO. EXPECT WINDS TO AGAIN FAVOR THE
SOUTHWEST TO WEST BY EARLY AFTERNOON TUESDAY. SKIES HAVE CLEARED AND
```

Fig A-15: An excerpt from an Area Forecast Discussion issued by the NWS Phoenix office on May 18, 2015. The aviation section references gusty westerly and southwesterly winds. Source: Iowa Environmental Mesonet

FIGURE A-16
URGENT WEATHER MESSAGE WIND ADVISORY SAN DIEGO MAY 18, 2015

```
130
WWUS76 KSGX 190418
NPWSGX

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE SAN DIEGO CA
918 PM PDT MON MAY 18 2015

...STRONG GUSTY WEST WINDS IN THE LOWER DESERTS AND ADJACENT
DESERT MOUNTAIN SLOPES TONIGHT AND EARLY TUESDAY MORNING...

.AN UPPER LEVEL TROUGH WILL BRING STRONG GUSTY WEST WINDS TO THE
LOWER DESERTS TONIGHT THROUGH EARLY TUESDAY MORNING. THE
STRONGEST WINDS WILL BE THROUGH AND BELOW THE SAN GORGONIO PASS
INTO THE NORTHERN COACHELLA VALLEY...AND THE LOWER DESERT SLOPES
OF THE SAN DIEGO COUNTY MOUNTAINS. WIND GUSTS OF 45 TO 50 MPH ARE
EXPECTED WITH ISOLATED GUSTS TO 65 MPH.

CAZ062-065-191300-
/O.CON.KSGX.WI.Y.0020.150519T0600Z-150519T1600Z/
SAN DIEGO COUNTY DESERTS-SAN GORGONIO PASS NEAR BANNING-
918 PM PDT MON MAY 18 2015

...WIND ADVISORY REMAINS IN EFFECT UNTIL 9 AM PDT TUESDAY...

* WINDS...WEST 20 TO 30 MPH WITH LOCAL GUSTS TO 65 MPH.

* TIMING...THROUGH EARLY TUESDAY MORNING.

* LOCATION...THE SAN GORGONIO PASS AREA AND LOWER DESERT SLOPES
  AND DESERT FLOOR OF THE SAN DIEGO COUNTY MOUNTAINS.

* VISIBILITY...LOCALLY BELOW 2 MILES IN THE DESERT IN BLOWING
  DUST AND SAND.

* IMPACTS...HAZARDOUS DRIVING FOR MOTORISTS WITH HIGH PROFILE
  VEHICLES. INTERSTATES 8 AND 10 WILL BE IMPACTED.

* REPORTS...AT 8 PM EDOM HILL REPORTED A WIND GUST OF 64 MPH. WIND
  GUSTS ELSEWHERE RANGED FROM 45 TO 55 MPH AT WHITE WATER IN THE
  SAN GORGONIO PASS...AND MOUNTAIN SPRINGS GRADE ALONG I-8.

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.

&&

$$

MOEDE
```

Fig A-16: An Urgent Weather Message issued on May 18, 2015 identified strong gusty west winds in the lower deserts and adjacent desert mountain slopes. West winds 20 to 30 mph with local gusts to 65 mph. Source: Iowa Environmental Mesonet

FIGURE A-17
NWS SAN DIEGO OFFICE AREA FORECAST DISCUSSION MAY 18, 2015

```
649
FXUS66 KSGX 190457
AFDSGX

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE SAN DIEGO CA
955 PM PDT MON MAY 18 2015

.SYNOPSIS...

A SERIES OF WEAK LOW PRESSURE SYSTEMS WILL MOVE INLAND ACROSS
CALIFORNIA THIS WEEK. THIS WILL KEEP A DEEP MARINE LAYER IN
PLACE AND ALSO PRODUCE GUSTY WEST WINDS IN THE MOUNTAINS AND
DESERTS EACH AFTERNOON AND EVENING. SHOWERS ARE POSSIBLE THURSDAY
NIGHT AND FRIDAY WITH THE STRONGEST UPPER LEVEL DISTURBANCE. WEAK
HIGH PRESSURE ALOFT WILL BRING DRY WEATHER AND A WARMING TREND
SUNDAY AND MONDAY.

&&

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

THE WEAK TROUGH PASSING THROUGH THE AREA TODAY DID NOT DO MUCH IN
THE PRECIPITATION DEPARTMENT...BUT IT DID GENERATE STRONG
WEST WINDS IN THE MOUNTAINS AND DESERTS THIS EVENING. WIND GUSTS
RANGED FROM 40 TO 50 MPH IN THE WIND PRONE AREAS. A PEAK WIND GUST
OF 64 MPH WAS RECORDED AT EDOM HILL IN THE COACHELLA VALLEY AT 8 PM.
WIND GUSTS AT PALM SPRINGS AND THERMAL WERE AROUND 30 MPH THIS
EVENING.

THE NEGATIVE TILT TROUGH AXIS OVER SE CA THIS EVENING WILL MOVE EAST
INTO ARIZONA OVERNIGHT. THE SOUTHERN BRANCH OF THE JET WILL REMAIN
OVER SOUTHERN CALIFORNIA THROUGH THE END OF THE WEEK. SOME OF THIS
WIND ENERGY WILL TRANSFER TOWARD THE SURFACE WITH AFTERNOON MIXING
AND RESULT IN GUSTY AFTERNOON AND EVENING WINDS IN THE MOUNTAINS AND
DESERTS EACH DAY.

THE GFS AND EUROPEAN MODELS REMAIN CONSISTENT WITH THE TRACK AND
STRENGTH OF THE STRONGEST SHORTWAVE THAT WILL MOVE INLAND ACROSS
SOUTHERN CALIFORNIA THURSDAY NIGHT AND FRIDAY. THERE WILL BE A
SIGNIFICANT INCREASE IN BOUNDARY LAYER MOISTURE AHEAD OF THIS SYSTEM
ON THURSDAY WITH NEAR SATURATION TO 6000 FEET THURSDAY NIGHT. THE
VORT MAX...STRONGER ONSHORE FLOW AND DEEPER MOIST LAYER WILL BRING A
CHANCE FOR SHOWERS JUST ABOUT ANYWHERE FROM THE MOUNTAINS TO THE
COAST. THE BEST CHANCE FOR MEASURABLE PRECIP WILL BE ON THE WEST
FACING MTNS SLOPES WHERE MIDLEVEL SOUTHWEST FLOW.

A DEEP MARINE LAYER WILL REMAIN IN PLACE SATURDAY...BUT DRY AND
WARMER WEATHER WITH A SHALLOWER MARINE LAYER WILL FOLLOW ON SUNDAY
AND MONDAY WITH WEAK RIDGING OVER THE SOUTHWEST.

&&

.AVIATION...
190400Z...BKN-OVC STRATUS WITH BASES 2000-3000 FT MSL AND TOPS 4000
FT MSL FILLING IN WEST OF THE MOUNTAINS OVERNIGHT. CIGS MAY LOCALLY
LOWER TO 1500-2000 FT MSL THROUGH 15Z. STRATUS GRADUALLY BECOMING
SCT-BKN WITH BASES GENERALLY 3000-5000 FT MSL 15-19Z. STRATUS
BECOMING BKN-OVC AFTER 20/02Z WITH BASES NEAR 2000-2500 FT MSL AND
TOPS TO 4500 FT MSL. COASTAL MTN SLOPES WILL BE OBSCURED AT TIMES IN
CLOUDS.

DESERT MTN SLOPES AND DESERTS...UNRESTRICTED VIS AND MOSTLY SKC
THROUGH TUESDAY EVENING. WEST WINDS 15-25 KT WITH GUSTS 30-40 KT
OVER MTN RIDGES...THROUGH/BELOW PASSES/CANYONS...DESERT MTN SLOPES
AND INTO ADJACENT DESERT AREAS WILL CREATE STG UDDFS/LLWS AND
POSSIBLE ROTORS OVER AND EAST OF THE MTNS THROUGH ABOUT
12Z...GRADUALLY WEAKENING DURING THE MORNING AND EARLY AFTERNOON.

&&

.MARINE...
906 PM...NO HAZARDOUS MARINE WEATHER IS EXPECTED THROUGH SATURDAY.

&&

.SKYWARN...
SKYWARN ACTIVATION IS NOT REQUESTED. HOWEVER WEATHER SPOTTERS ARE
```

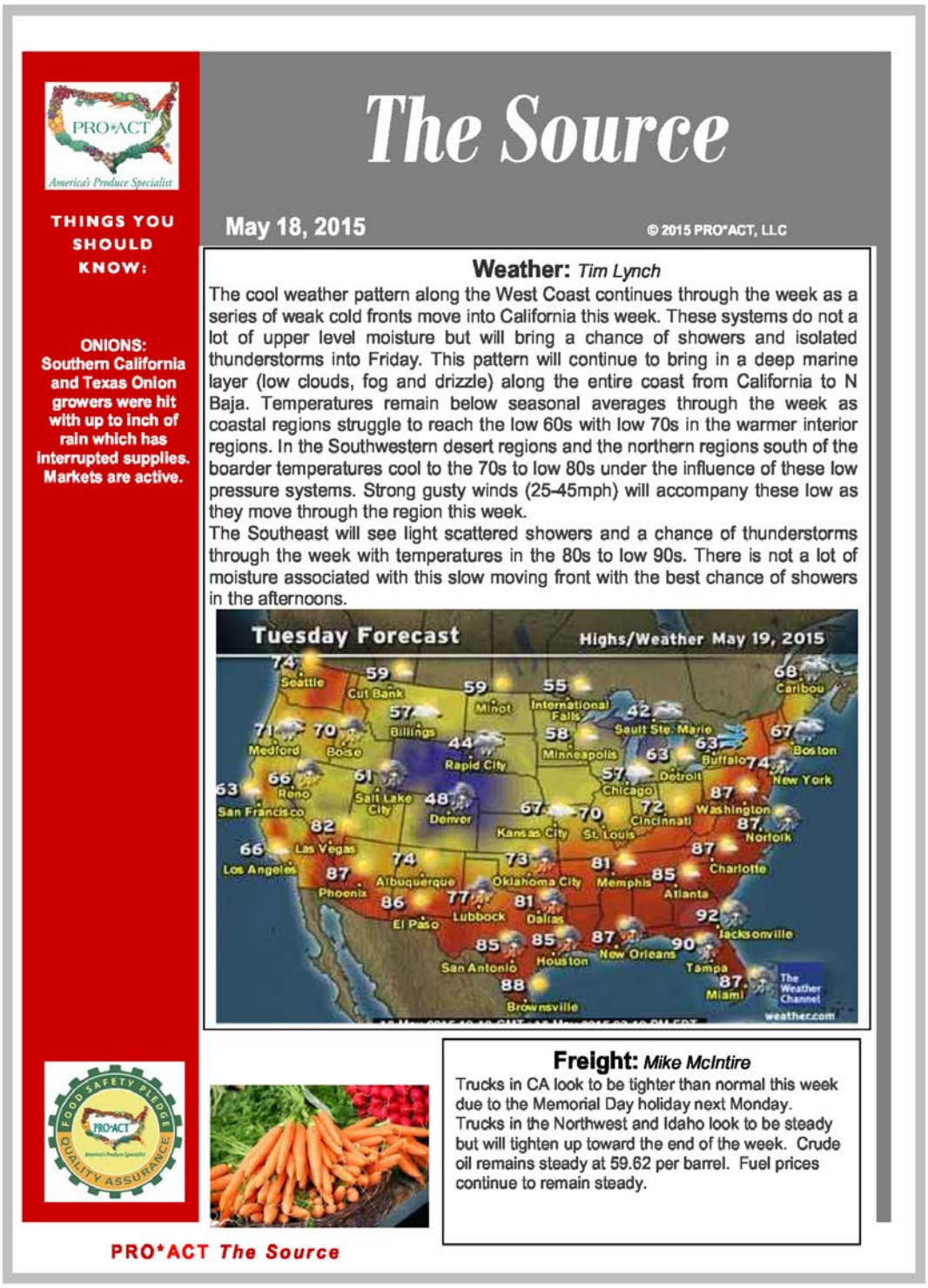
Fig A-17: An excerpt from an Area Forecast Discussion issued by the NWS San Diego office on May 18, 2015. Forecast discusses how the weak trough passing through generated strong west winds in the mountains and deserts within San Diego County. Source: Iowa Environmental Mesonet

FIGURE A-18
NWS SAN DIEGO OFFICE AREA FORECAST DISCUSSION MAY 18, 2015

```
043
FXUS66 KSGX 182034
AFDSGX

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE SAN DIEGO CA
1000 PM PDT MON MAY 18 2015

.SYNOPSIS...

A SERIES OF THREE WEAK LOW PRESSURE SYSTEMS WILL MOVE INLAND THROUGH
CALIFORNIA THIS WEEK. THIS WILL CONTINUE BELOW AVERAGE INLAND
TEMPERATURES... A DEEPER MARINE LAYER WITH AREAS OF COASTAL LOW
CLOUDS AND PATCHY FOG EXTENDING WELL INLAND...AND STRONGER ONSHORE
FLOW WITH GUSTY WEST WINDS IN THE MOUNTAINS AND DESERTS. THERE IS A
CHANCE OF SHOWERS WITH THE THIRD LOW PRESSURE SYSTEM MOVING THROUGH
LATE THURSDAY NIGHT AND FRIDAY. HIGH PRESSURE WILL BRING DRY WEATHER
WITH A WARMING TREND FOR SATURDAY THROUGH MONDAY.

&&

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

AREAS OF LOW CLOUDS REMAIN IN MUCH OF THE COASTAL BASIN THIS
AFTERNOON WITH GREATEST COVERAGE IN THE NORTHERN COUNTIES. A FEW
CUMULUS ARE BEGINNING TO FORM OVER THE OVER THE SAN BERNARDINO
MOUNTAINS AND SUFFICIENT MID-LEVEL MOISTURE/INSTABILITY ABOVE 700 MB
REMAINS FOR A SLIGHT CHANCE OF A FEW SHOWERS OVER THE NORTHERN
MOUNTAINS THIS AFTERNOON. THE TROUGH PASSING THROUGH THE AREA TODAY
AND TONIGHT WILL RESULT IN GUSTY WINDS THROUGH THE SAN GORGONIO PASS
AND ALONG THE DESERT SLOPES OF THE SAN DIEGO COUNTY MOUNTAINS WITH
LOCAL GUSTS 50 TO 55 MPH. A WIND ADVISORY HAS BEEN ISSUED FOR THESE
AREAS TONIGHT THROUGH TOMORROW MORNING.

A SERIES OF WEAK UPPER-LEVEL LOW PRESSURE SYSTEMS WILL MOVE THROUGH
THE WEST THIS WEEK. THE FIRST WILL TRAVERSE CALIFORNIA TODAY...THE
SECOND WILL BE JUST OFF THE CALIFORNIA COAST WEDNESDAY AND THURSDAY
WITH A TRAILING WEAK LOW PRESSURE SYSTEM MOVING INLAND THROUGH
SOUTHERN CALIFORNIA THURSDAY NIGHT AND FRIDAY. THIS WILL CONTINUE
BELOW AVERAGE INLAND TEMPERATURES AS WELL AS STRONGER ONSHORE FLOW
WITH GUSTY WEST WINDS IN THE MOUNTAINS AND DESERTS AT TIMES. THE
PATTERN WILL ALSO MAINTAIN A DEEP MARINE LAYER WITH NIGHT AND
MORNING COASTAL LOW CLOUDS AND PATCHY FOG EXTENDING ONTO THE COASTAL
MOUNTAIN SLOPES WITH SLOW AND SOMETIMES LIMITED AFTERNOON CLEARING.
A CHANCE OF SHOWERS ALONG AND WEST OF THE MOUNTAINS WILL ACCOMPANY
THE FINAL WEAK LOW PRESSURE SYSTEM MOVING INLAND THURSDAY NIGHT AND
FRIDAY. THE LATEST MODEL RUNS STILL SHOW LIMITED MOISTURE WITH THIS
SYSTEM DESPITE GOOD DYNAMICS SO WILL KEEP PRECIPITATION AMOUNTS
MOSTLY LIGHT AT THIS POINT.

DRY WITH A WARMING TREND FOR SATURDAY THROUGH MONDAY AS HIGH
PRESSURE RETURNS AND HIGH TEMPERATURES REBOUNDING TO NEAR SEASONAL
AVERAGES FOR MEMORIAL DAY.

&&

.AVIATION...
182015Z...THROUGH 19/0200 UTC...BKN-SCT CLOUDS IN THE 4000-5000 FT
MSL LAYER OVER THE COAST...VALLEYS AND COASTAL MTN SLOPES...WITH A
CHANCE FOR SHOWERS TO DEVELOP OVER THE MTN RIDGES WITH SHOWER TOPS
OF 20000 FT MSL POSSIBLE. 19/0200-1500 UTC...BKN-OVC STRATUS RE-
DEVELOPING IN THE COAST...VALLEYS AND COASTAL MTN SLOPES...WITH
BASES 2000-3000 FT MSL AND TOPS 4000 FT MSL. SLOW CLEARING DURING
THE 19/1500-1900 UTC TIME-PERIOD.

FOR THE DESERT MTN SLOPES AND DESERTS...UNRESTRICTED VIS AND MOSTLY
SKC THROUGH TUESDAY MORNING. WEST WINDS 15-25 KT WITH GUSTS 30-40 KT
OVER MTN RIDGES...THROUGH/BELOW PASSES/CANYONS...DESERT MTN SLOPES
AND INTO ADJACENT DESERT AREAS WILL CREATE STG UDDFS/LLWS AND
POSSIBLE ROTORS OVER AND EAST OF THE MTNS.

&&

.MARINE...
115 PM...NO HAZARDOUS MARINE WEATHER IS EXPECTED THROUGH SATURDAY.

&&
```

Fig A-18: An excerpt from an Area Forecast Discussion issued by the NWS San Diego office on May 18, 2015. The forecast discussion confirms the validity of the wind advisory and continues to discuss the series of weak upper-level low-pressure systems. Source: Iowa Environmental Mesonet

FIGURE A-19
THE SOURCE MAY 18, 2015



PRO*ACT
America's Produce Specialist

The Source

THINGS YOU SHOULD KNOW:

ONIONS: Southern California and Texas Onion growers were hit with up to inch of rain which has interrupted supplies. Markets are active.

May 18, 2015

© 2015 PRO*ACT, LLC

Weather: *Tim Lynch*

The cool weather pattern along the West Coast continues through the week as a series of weak cold fronts move into California this week. These systems do not a lot of upper level moisture but will bring a chance of showers and isolated thunderstorms into Friday. This pattern will continue to bring in a deep marine layer (low clouds, fog and drizzle) along the entire coast from California to N Baja. Temperatures remain below seasonal averages through the week as coastal regions struggle to reach the low 60s with low 70s in the warmer interior regions. In the Southwestern desert regions and the northern regions south of the boarder temperatures cool to the 70s to low 80s under the influence of these low pressure systems. Strong gusty winds (25-45mph) will accompany these low as they move through the region this week.

The Southeast will see light scattered showers and a chance of thunderstorms through the week with temperatures in the 80s to low 90s. There is not a lot of moisture associated with this slow moving front with the best chance of showers in the afternoons.

Freight: *Mike McIntire*

Trucks in CA look to be tighter than normal this week due to the Memorial Day holiday next Monday. Trucks in the Northwest and Idaho look to be steady but will tighten up toward the end of the week. Crude oil remains steady at 59.62 per barrel. Fuel prices continue to remain steady.

PRO*ACT *The Source*

Fig A-19: An excerpt from a The Source market report by Pro*Act USA including the southwestern desert region of California. It references the low pressure system and the strong gusty winds from 25 to 45 mph. Source: ProAct Usa

FIGURE A-20
NWS SAN DIEGO OFFICE URGENT WEATHER MESSAGE

Fig A-20: An Urgent Weather Message issued on May 19, 2015 provided notice cancelling the wind advisory in effect for May 18, 2015. Source: Iowa Environmental Mesonet

FIGURE A-21
IMPERIAL VALLEY AIR QUALITY FORECAST

Imperial Valley

Pollutant	Sat 05/17	Sun 05/18	Mon 05/19	Tue 05/20	Wed 05/21	Thu 05/22	Fri 05/23
O3	77	67	58	47	44	49	61

Discussion

Today and tomorrow, sunny and warm conditions will enhance ozone formation in the Imperial Valley. However, strong westerly winds will help to disperse pollutants. These conditions will result in Moderate ozone levels on both days.

Issued 8:57 AM on Sunday, May 18, 2014

Fig A-21: An air quality forecast issued by the ICAPCD that emphasized strong westerly winds during the wind event of May 18, 2015. Although this weather notice concerned ozone, the weather forecast contained therein emphasizes the strong westerly winds that swept through the area

FIGURE A-22
IMPERIAL COUNTY ISSUED NO BURN DAY

Imperial County Air Pollution Control District
Daily Weather and Ag. Burning Information

Date: Monday, May 18, 2015
Yesterday's Weather Observations at Imperial Airport (ASOS) FAA/NWS

LOCAL TIME	TEMP °F	WINDS MILES PER HOUR	VISIBILITY MILES
7 AM	61	CALM	10
8 AM	66	W 3	10
9 AM	71	NNW 3	10
10 AM	74	NW 3	10
11 AM	77	VRBL 5	10
NOON	78	-	10
1 PM	80	E 7	10
2 PM	83	SE 7	10
3 PM	83	VRBL 7	10
4 PM	85	ESE 3	10
5 PM	84	W 6	10
6 PM	84	E 5	10
7 PM	84	E 7	10

Max. Temperature yesterday was 86 degrees

Today's Mt. Signal Visibility at 7:30 AM Clear NKX 12Z 500 MB Height _____
1Y7 12Z 500 MB Height _____

Forecasts
High Today 79 to 84

	Local Forecast (Issued 8 AM Local)		Computer Forecast (RUC 40KM 12Z)	
Est. Time Mixing Height reaches 3000 feet	-		10:00 am	
Forecast of Maximum Mixing Height	-	feet	8,776	feet
Forecast for Morning surface winds	W 5-15	mph	W 10	mph
Forecast for afternoon surface winds	W 15-25	mph	W 15-20	mph
Forecast for evening surface winds	W 15-20	mph		
Forecast 10 AM - 3 PM transport winds	W 10-15	mph		

Comments/Complaints: Breezy/Windy today in Imperial County.

Burn Hours _____ ARB No Burn Day _____ District called No Burn Day XX
Total actually burned today _____ acres Crops burned _____
IMPERIAL COUNTY AIR POLLUTION CONTROL DISTRICT 2011 Int CM

Fig A-22: Is a copy of the Imperial County Air Pollution Control District official record of a designated "No Burn" day on May 18, 2015

FIGURE A-23
IMPERIAL COUNTY AFFIDAVIT OF 30 DAY PUBLIC NOTICE

AFFIDAVIT OF PUBLICATION
(2015.5 C.C.P.)

STATE OF CALIFORNIA

County of Imperial

I am a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk* of the printer of the

Imperial Valley Press

a newspaper of general circulation, printed and published daily in the City of El Centro, County of Imperial and which newspaper has been adjudged a newspaper of genera circulation by the Superior Court of the County of Imperial, State of California, under the date of October 9, 1951, Case Number 26775; that the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

11/19 .

all in the year 2017

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

SIGNATURE

Name of Account: I C AIR POLLUTION CONTROL
Order Number: 11118243
Ad Number: 31335544

* Printer, Foreman of the Printer, or Principal Clerk of the Printer
Date: 20 th day of November, 2017.
at El Centro, California.

This space is for the County Clerk's Filling Stamp:

Proof of Publication of:

NOTICE OF AVAILABILITY
OF THE DEMONSTRATION OF THE OCCURRENCE
OF THREE EXCEPTIONAL EVENTS (EE) FOR
MAY 2015 AND JAN/FEB 2016

The Imperial County Air Pollution Control District (Air District) has prepared three Draft Exceptional Event (EE) Demonstrations, which support the requested exclusion of the measured concentrations at the Brawley, Niland and Westmorland monitors on May 18, 2015, May 21-22, 2015 and January 31-February 1, 2016. (See below).

May 18, 2015
Brawley 24 hr concentration from the Federal Reference Method monitor of 304 ug/m3

May 21-22, 2015
Brawley 24 hr concentration from the Federal Equivalent Method BAM monitor of 225 ug/m3
Niland 24 hr concentration from the Federal Equivalent Method BAM monitor of 171 ug/m3
Brawley 24 hr concentration from the Federal Equivalent Method BAM monitor of 227 ug/m3

January 31-February 1, 2016
Brawley 24 hr concentration from the Federal Reference Method monitor of 218 ug/m3
Brawley 24 hr concentration from the Federal Equivalent Method BAM monitor of 236 ug/m3
Niland 24 hr concentration from the Federal Reference Method monitor of 225 ug/m3
Niland 24 hr concentration from the Federal Equivalent Method BAM monitor of 259 ug/m3
Westmorland 24 hr concentration from the Federal Equivalent Method BAM monitor of 344 ug/m3
Brawley 24 hr concentration from the Federal Equivalent Method BAM monitor of 208 ug/m3

The public and all interested parties are encouraged to review and comment on the Draft EE's for May 18, 2015, May 21-22, 201 and January 31-February 1, 2016. These demonstrations provide the supporting evidence that on the days indicated for 2015 and 2016 the Brawley, Niland and Westmorland monitors were affected by entrained elevated levels of particulate matter of an aerodynamic size less than 10 microns (PM10). West winds, which precede a weather system, entrained PM10 into the region affecting Riverside, Imperial and San Diego counties. The Draft EE Demonstrations provide the scientific justification for the requested exclusions. The Air District is soliciting and accepting comments for 30 days commencing the date of the publication of this notice. The final closing date for submitting comments is December 20, 2017 by close of business.

The Draft EE's for May of 2015 and January/February 2016 are available for download at the Air District website at www.co.imperial.ca.us, under "Air Pollution". To view a hard copy of the Draft EE demonstrations, please visit the Air Pollution Control District office at 150 S. 9th Street, El Centro. Should you have any questions or concerns please feel free to call our office between 8am and 5pm at (442) 265-1800 and ask for Monica N. Soucier.
L584 N19

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CONTROL DISTRICT

Fig A-23: Is a copy of the Imperial County Air Pollution Control District official record (affidavit) affirming the publication of the notice of availability of the Exceptional Events Demonstration for May 18, 2015. The date for closing comments was December 20, 2017

FIGURE A-24
IMPERIAL COUNTY COMMENTS
REGARDING THE MAY 18, 2015 EE DEMONSTRATION

No Comments were received during the 30 day public review period