Appendix B
Meteorological Data

The following graphs contained wind speed[1] and wind direction data collected from various sites in southeastern California and southwestern Arizona. Note that wind speed measurements may be taken at any time during the hour. Therefore, the following graphs reflect only the hour in which wind measurements were taken, and not necessarily the exact time.

FIGURE B-1
METEOROLOGICAL SITES USED IN THIS DOCUMENT

Fig B-1: A Collection of sites used in this document

[1] National Weather Service; NOAA's Glossary – Wind Speed: The rate at which air is moving horizontally past a given point. It may be a 2-minute average speed (reported as wind speed) or an instantaneous speed (reported as a peak wind speed, wind gust, or squall); http://w1.weather.gov/glossary/index.php?letter=w.

IMPERIAL COUNTY SITES
FIGURES B-2 THROUGH B-6

FIGURE B-2
IMPERIAL COUNTY AIRPORT
WIND SPEED, GUSTS & DIRECTION

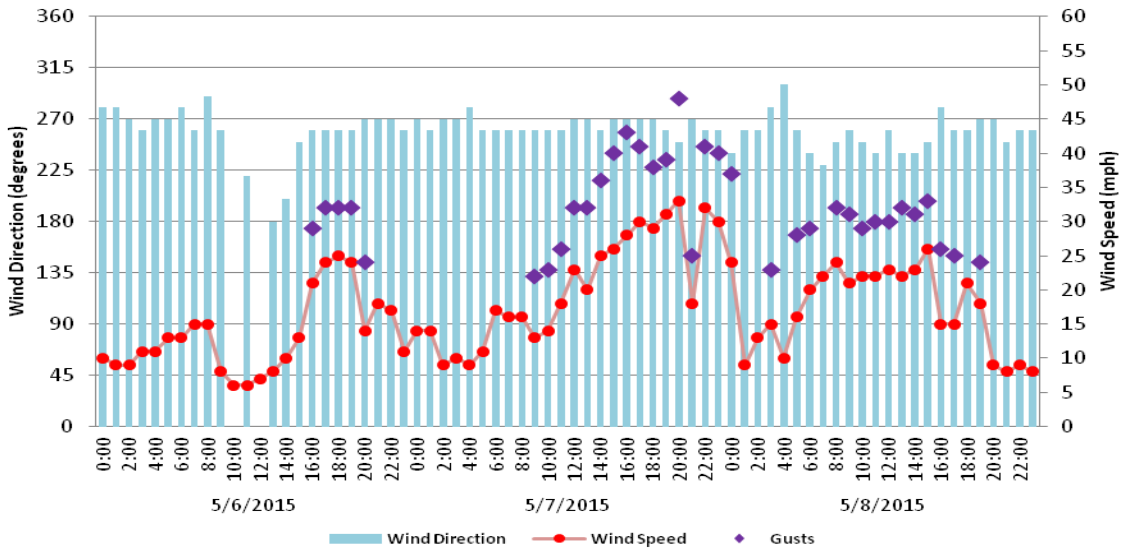
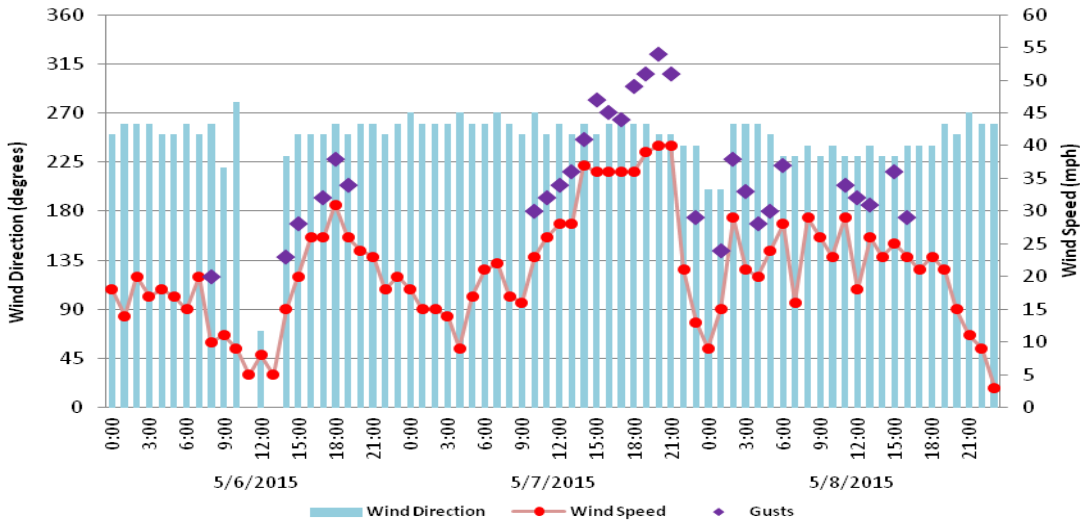


FIGURE B-3
EL CENTRO NAVAL AIR FACILITY (KNJK0
WIND SPEED, GUSTS & DIRECTION



Figs B-2 & B-3: Imperial County Airport and the El Centro Naval Air Facility meteorological data for May 6, 2015 through May 8, 2015 support and collaborates the increases in wind speed and gust as early as May 6, 2015. Wind data from the NCE's QCLCD system

FIGURE B-4
NILAND (ENGLISH RD.)
WIND SPEED & DIRECTION

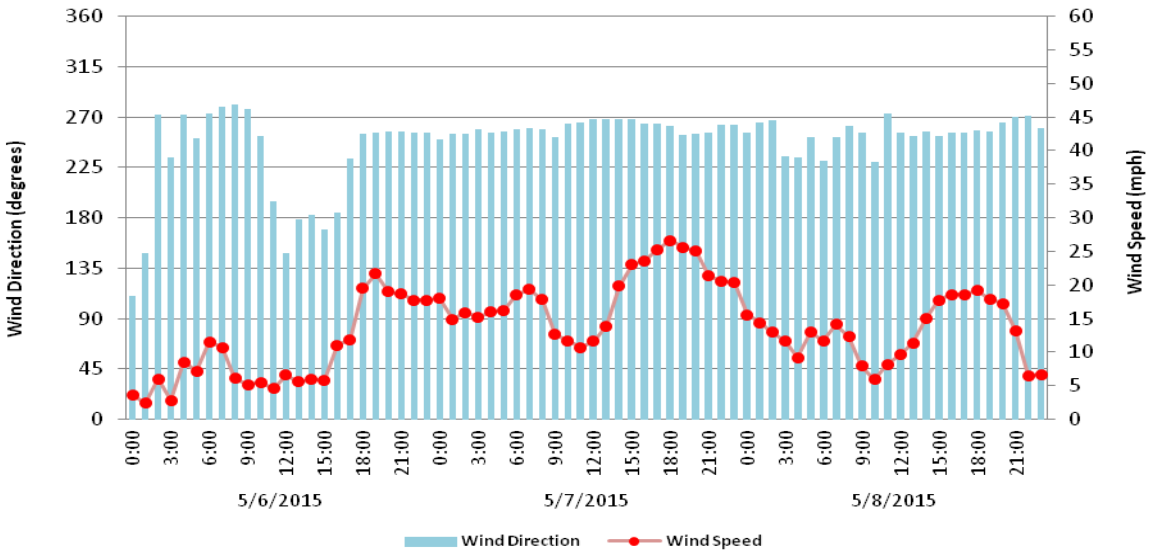


Fig B-4: Niland meteorological data for May 6, 2015 through May 8, 2015, supports the increase in wind speed as early as May 6, 2015 on through May 8, 2015 peaking on May 7, 2015. Wind data from the EPA's AQS data bank

FIGURE B-5
NILAND (ENGLISH RD.) WIND ROSE – MAY 7

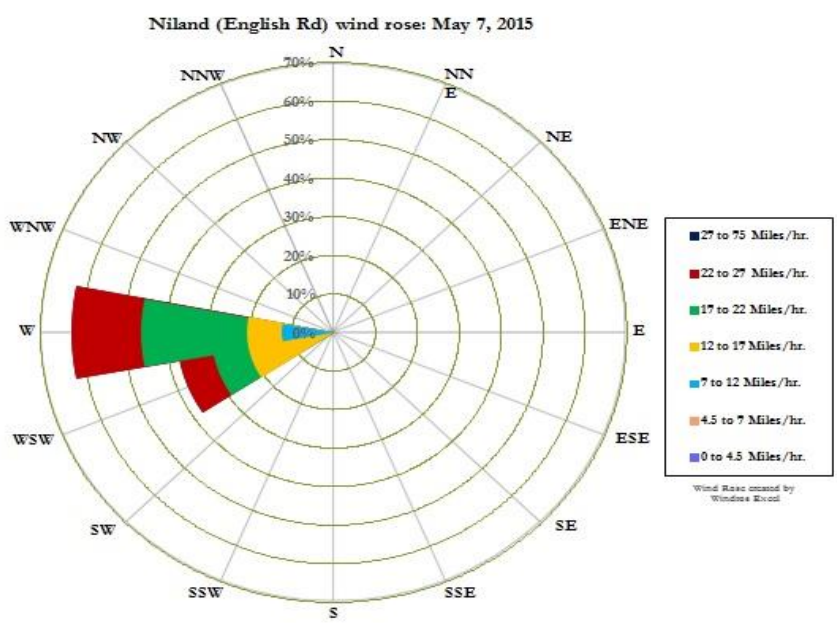
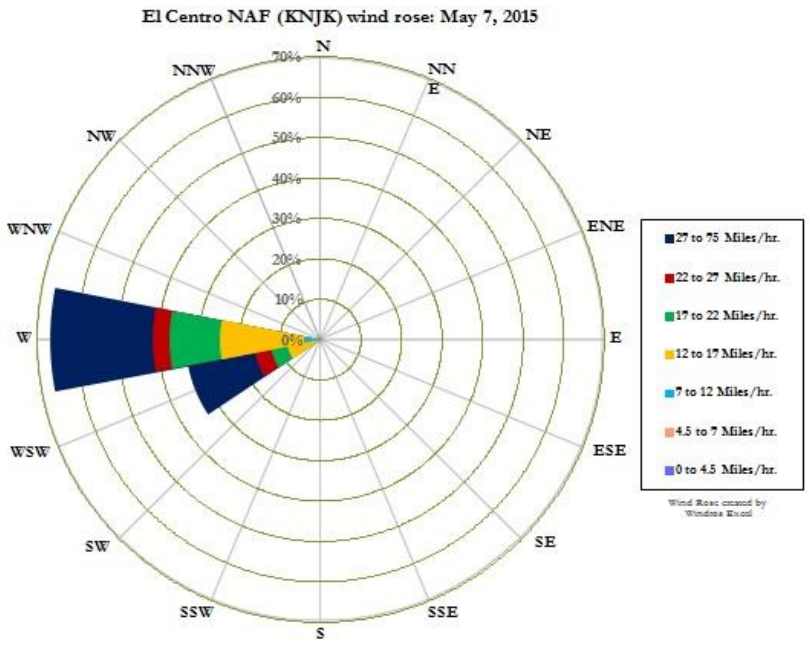


FIGURE B-6
EL CENTRO NAF (KNJK) WIND ROSE – MAY 7



Figs B-5 and B-6: Strong westerly and west-southwesterly winds were measured at both the Niland monitor and at the El Centro Naval Air Facility, supporting the forecast models and news reports issued in San Diego as early as May 6, 2015

EASTERN RIVERSIDE COUNTY SITES
FIGURES B-7 THROUGH B-9

FIGURE B-7
PALM SPRINGS AIRPORT (KPSP)
WIND SPEED, GUSTS & DIRECTION

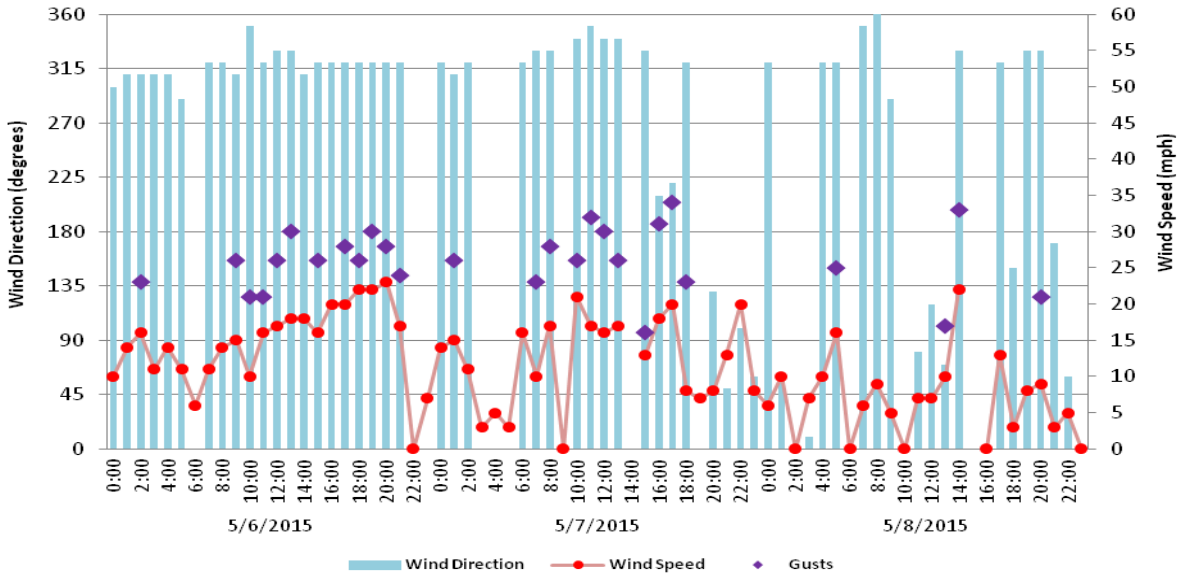


FIGURE B-8
JACQUELINE COCHRAN (aka DESERT RESORTS) AIRPORT (KTRM)
WIND SPEED, GUSTS & DIRECTION

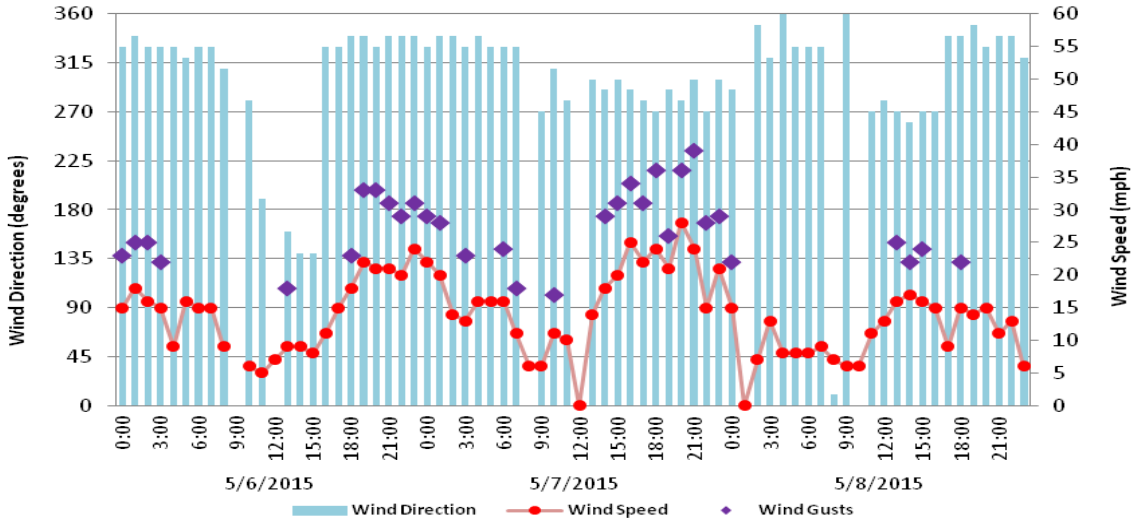
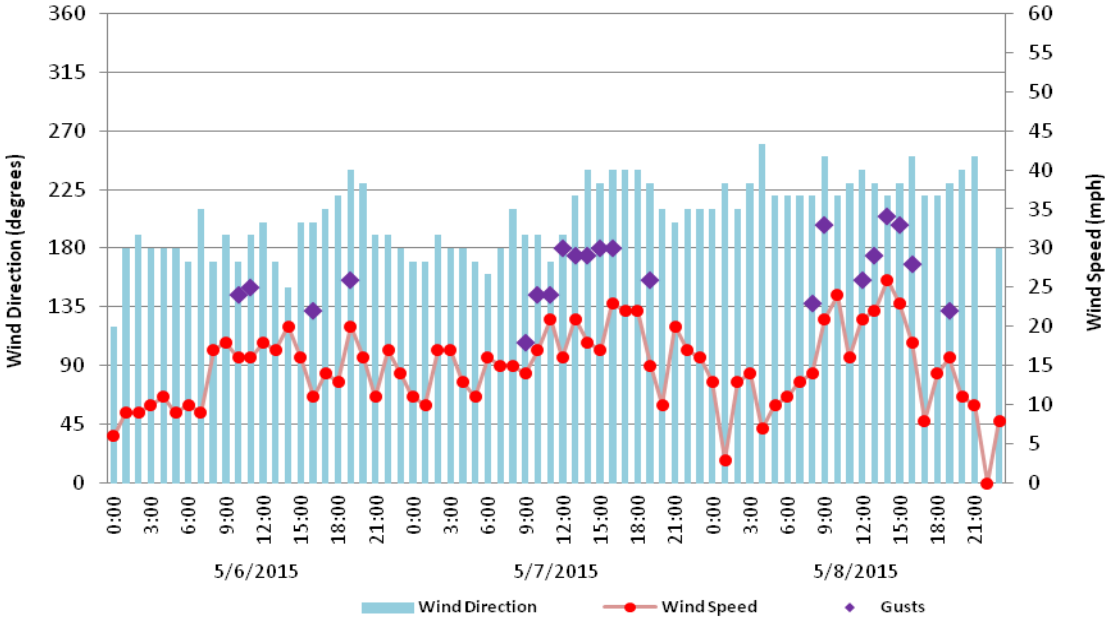


FIGURE B-9
BLYTHE AIRPORT (KBLH)
WIND SPEED, GUSTS & DIRECTION



Figs B-7 through B-9: All sites in eastern Riverside County support the elevated increase in wind speeds beginning as early as May 6, 2015 through May 8, 2015. Data from the NCEI's QCLCD system

ARIZONA AND MEXICO SITES
FIGURES B-10 AND B-11

FIGURE B-10
YUMA, ARIZONA MCAS (KNYL)
WIND SPEED, GUSTS & DIRECTION

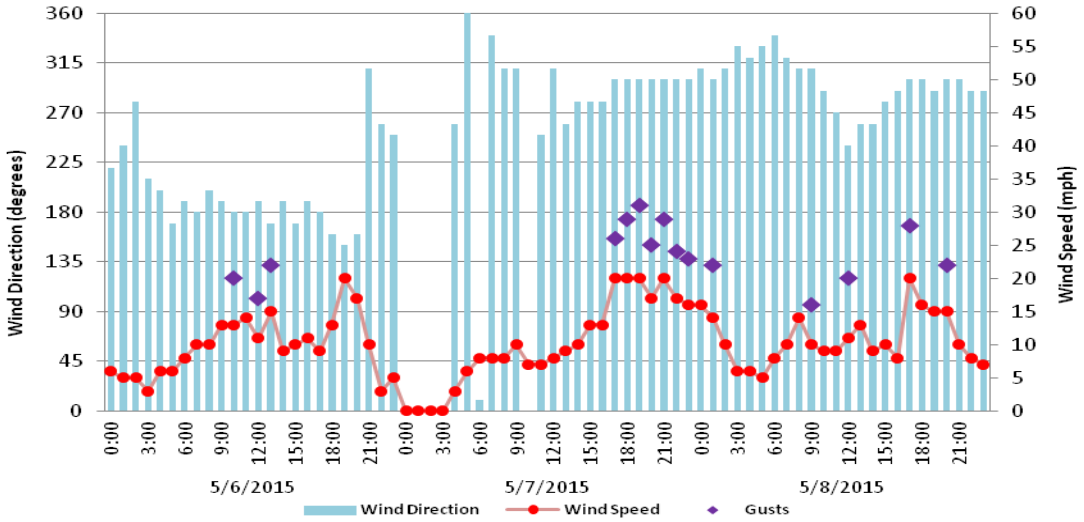


Fig B-10: Yuma MCAS similarly supports the increase in winds as early as May 6, 2015 through May 8, 2015. Source: Wind data from the NCEI's QCLCD system and the air quality data is from the EPA's AQS data bank

FIGURE B-11
MEXICALI (MEXICO) AIRPORT (MMML)
WIND SPEED & DIRECTION

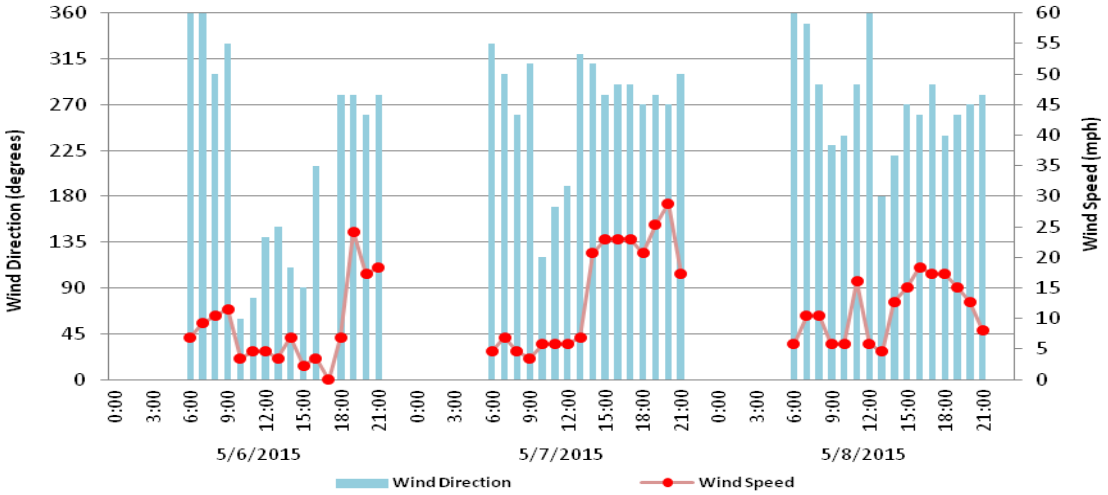


Fig B-11: Mexicali, Mexico airport data similarly supports the increase in winds as early as May 6, 2015 through May 8, 2015. Source: University of Utah's MesoWest

UPSTREAM WIND SITES

FIGURE B-12
CAMPO AIRPORT (KCZZ)
WIND SPEED, GUSTS & DIRECTION

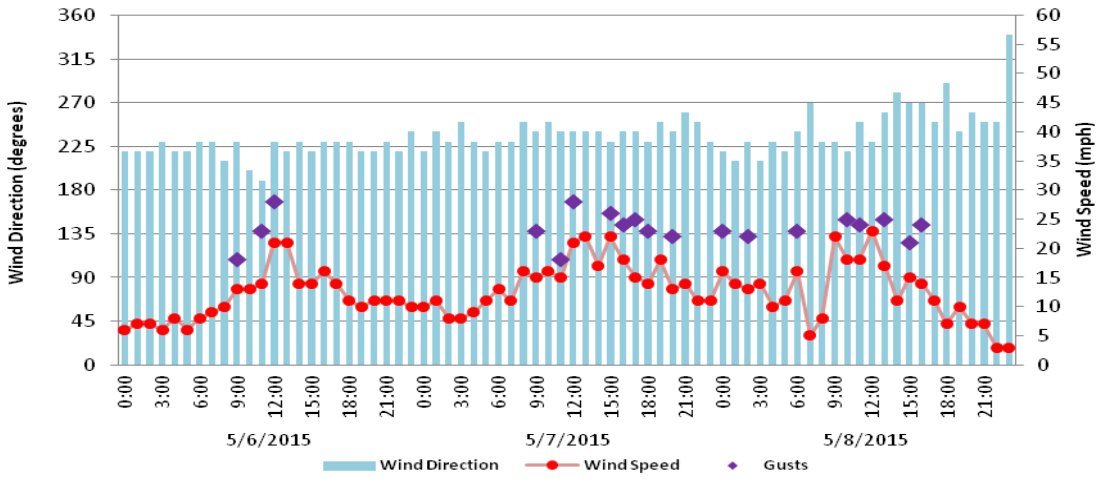


Fig B-12: The Campo Airport is within mountains of southeast San Diego County. This site is southwest of the Niland monitor. Data used from the QCLCD system

FIGURE B-13
OCOTILLO WELLS
WIND SPEED, GUSTS & DIRECTION

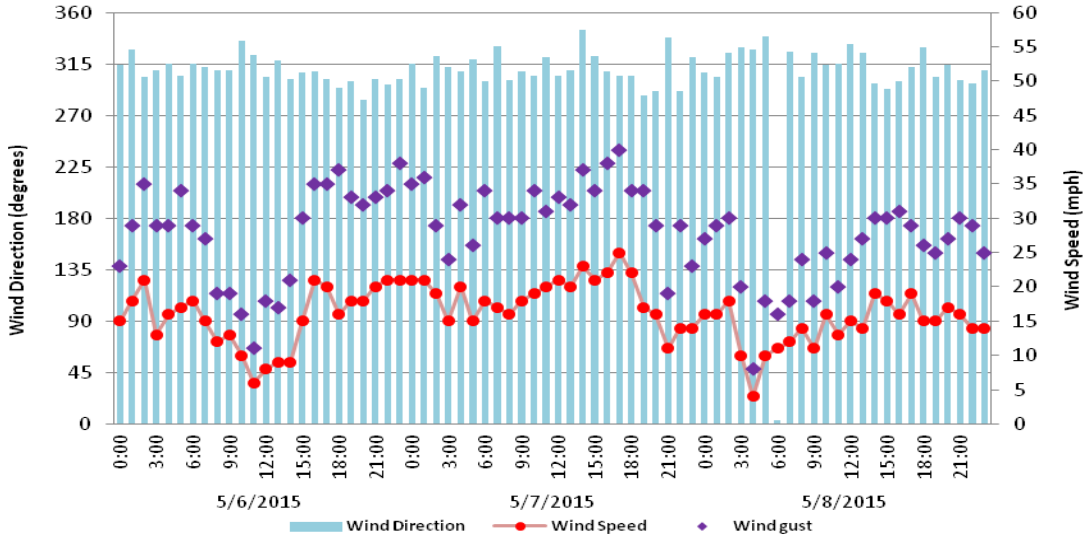


Fig B-13: Ocotillo Wells is located to the west of the Niland station. MesoWest Station ID: KD6RSQ-5

FIGURE B-14
SALTON CITY
WIND SPEED & DIRECTION

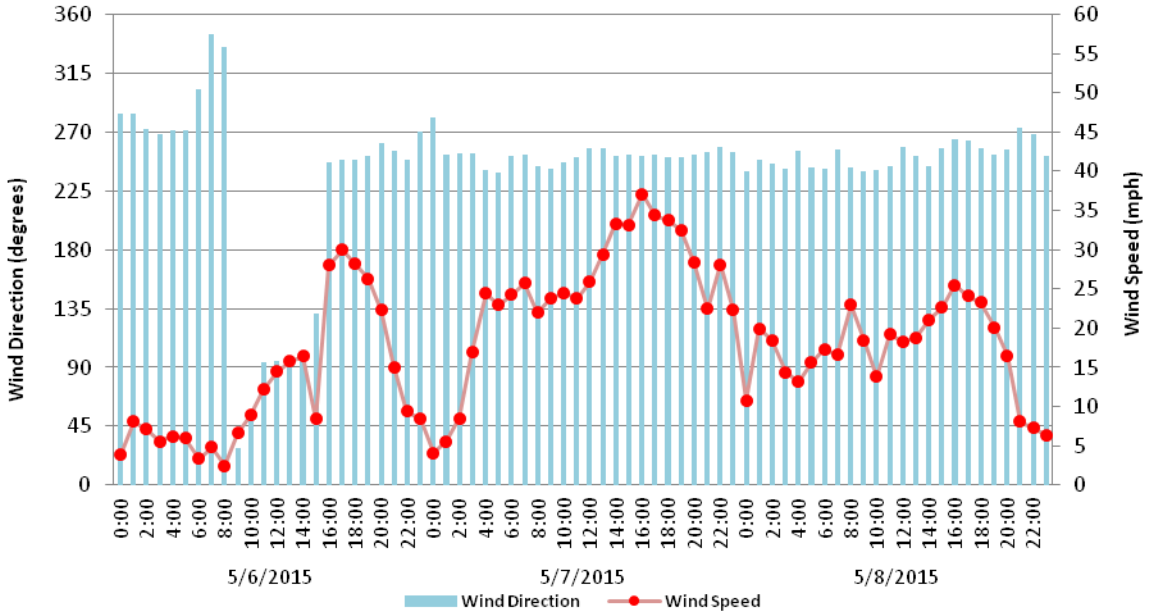


Fig B-14: Salton City is to the west-northwest of the Niland station. Data from CARB's AQMIS

FIGURE B-15
FISH CREEK MOUNTAINS
WIND SPEED, GUSTS & DIRECTION

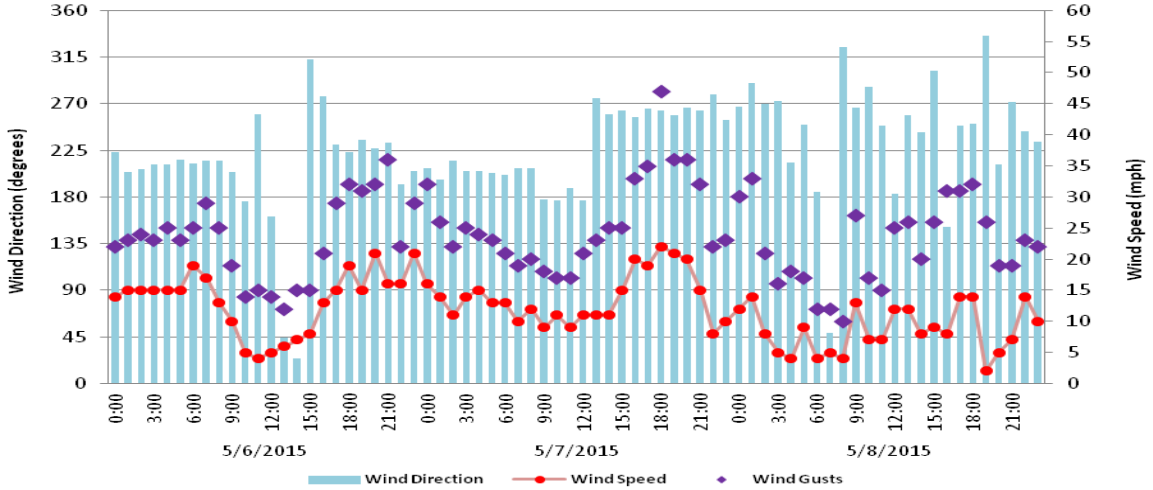


Fig B-15: The Fish Creek Mountains are to the west-southwest of the Niland station. MesoWest Station ID: FHCC1

FIGURE B-16
SUNRISE-OCOTILLO
WIND SPEED, GUSTS & DIRECTION

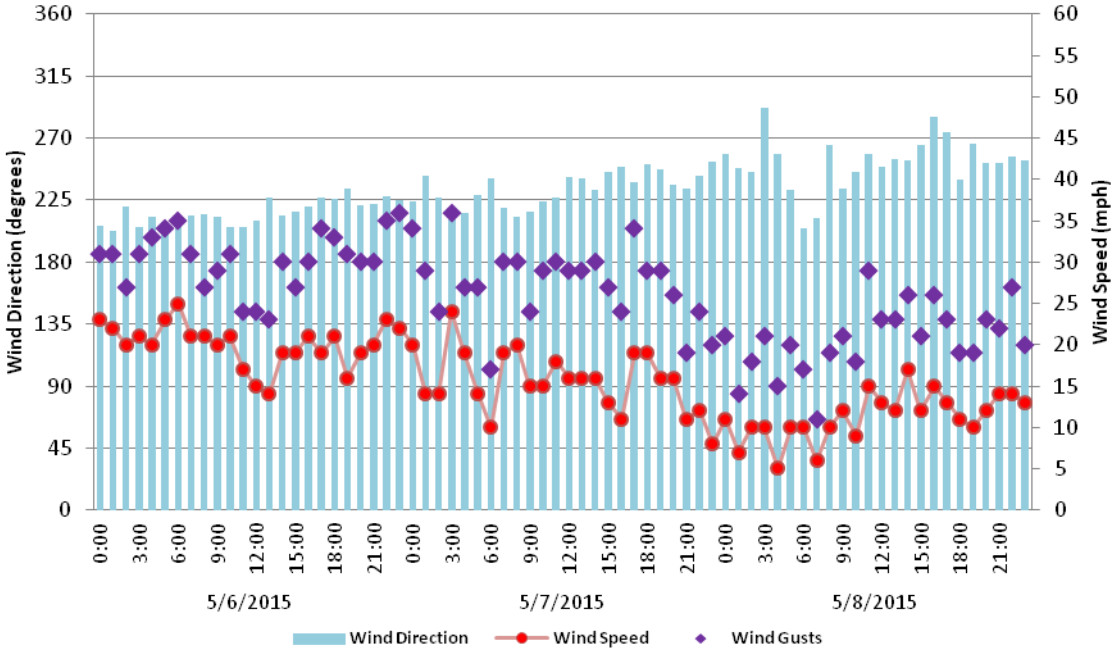


Fig B-16: Sunrise-Ocotillo is to the southwest of the Niland station on the desert floor. MesoWest Station ID: IMPSD

FIGURE B-17
EL CENTRO NAF QCLCD

3/9/2016 QUALITY CONTROLLED Local Climatological Data: NAF

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA
(may be updated)
HOURLY OBSERVATIONS TABLE
NAF (23199)
EL CENTRO, CA
(05/2015)

Elevation: -42 ft. below sea level
Latitude: 32.816
Longitude: -115.683
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp (F)	Dry Bulb Temp (C)	Wet Bulb Temp (F)	Wet Bulb Temp (C)	Dew Point Temp (F)	Dew Point Temp (C)	Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
07	0056	5	CLR	10.00		64	17.8	53	11.5	42	5.6	45	18	270		29.78			29.78	AA		29.74
07	0156	5	CLR	10.00		63	17.2	52	11.0	41	5.0	45	15	260		29.78			29.78	AA		29.74
07	0256	5	CLR	10.00		62	16.7	51	10.8	41	5.0	46	15	260		29.79			29.80	AA		29.75
07	0356	5	CLR	10.00		61	16.1	50	10.1	39	3.9	44	14	260		29.81			29.81	AA		29.77
07	0456	5	FEW050 FEW250	10.00		59	15.0	49	9.3	38	3.3	46	9	270		29.82			29.82	AA		29.78
07	0556	5	FEW050 FEW250	10.00		62	16.7	50	10.1	38	3.3	41	17	260		29.84			29.84	AA		29.80
07	0656	5	FEW050 FEW200	10.00		66	18.9	52	11.3	39	3.9	37	21	260		29.86			29.86	AA		29.82
07	0756	5	FEW050 FEW200	10.00		70	21.1	53	11.7	36	2.2	29	22	270		29.86			29.86	AA		29.82
07	0856	5	FEW050 FEW200	10.00		71	21.7	53	11.9	36	2.2	28	17	260		29.86			29.86	AA		29.82
07	0956	5	FEW050 FEW250	10.00		74	23.3	54	12.4	35	1.7	24	16	250		29.86			29.86	AA		29.82
07	1056	5	FEW050 FEW250	10.00		77	25.0	55	12.9	34	1.1	21	23	270	30	29.85			29.85	AA		29.81
07	1156	5	FEW050 FEW250	10.00		77	25.0	55	12.9	34	1.1	21	26	250	32	29.84			29.84	AA		29.80
07	1256	5	FEW050 FEW250	10.00		78	25.6	56	13.1	34	1.1	20	28	260	34	29.82			29.83	AA		29.78
07	1356	5	FEW050 FEW250	10.00		77	25.0	56	13.1	35	1.7	22	28	250	36	29.81			29.81	AA		29.77
07	1456	5	FEW050 FEW250	8.00		75	23.9	56	13.0	37	2.8	25	37	260	41	29.79			29.80	AA		29.75
07	1556	5	FEW050 FEW250	4.00	HZ BLDU	73	22.8	55	12.5	37	2.8	27	36	250	47	29.79			29.79	AA		29.75
07	1656	5	FEW050 FEW250	6.00	BLDU	70	21.1	53	11.8	37	2.8	30	36	260	45	29.79			29.79	AA		29.75
07	1739	5	FEW050 FEW250	2.50	BLDU	68	20.0	52	11.2	36	2.2	31	36	260	44	29.80			M	SP		29.76
07	1743	5	BKN005	1.25	BLDU	68	20.0	53	11.4	37	2.8	32	32	260	43	29.81			M	SP		29.77
07	1754	5	BKN005	0.75	BLDU	66	19.0	52	10.9	37	3.0	34	32	260	41	29.81			M	SP		29.77
07	1756	5	BKN005	0.75	BLDU	67	19.4	52	11.1	37	2.8	33	29	260	40	29.81			29.81	AA		29.77
07	1800	5	SCT010	1.00	BLDU	67	19.4	52	11.1	37	2.8	33	30	260	40	29.80			M	SP		29.76
07	1815	5	FEW060 FEW180	2.50	BLDU	66	18.9	52	10.9	37	2.8	34	28	270	38	29.81			M	SP		29.77
07	1831	5	FEW060	3.00	BLDU	65	18.3	52	10.8	38	3.3	37	36	260	49	29.81			M	SP		29.77
07	1856	5	FEW060 FEW250	6.00	BLDU	64	17.8	51	10.4	37	2.8	37	30	260	41	29.82			29.82	AA		29.78
07	1914	5	VV001	0.12	+DS	64	17.8	51	10.4	37	2.8	37	38	250	46	29.80			M	SP		29.76
07	1951	5	FEW060	0.50s	DSs	63	17.0	50	10.1	37	3.0	38	39	250	51	29.83			M	SP		29.79
07	1956	5	FEW060	0.50s	DSs	63	17.2	50	10.1	37	2.8	38	38	260	48	29.82			29.83	AA		29.78
07	2002	5	VV000	0.00	+DS	63	17.2	50	10.1	37	2.8	38	40	260	49	29.83			M	SP		29.79
07	2020	5	FEW060	6.00	BLDU	63	17.2	50	10.1	37	2.8	38	37	250	45	29.85			M	SP		29.81
07	2037	5	VV001	0.12	+DS	62	16.7	50	9.7	36	2.2	38	40	250	52	29.85			M	SP		29.81
07	2043	5	FEW000	1.00	BLDU	62	16.7	50	9.7	36	2.2	38	44	250	51	29.86			M	SP		29.82
07	2056	5	FEW060	2.00	BLDU	62	16.7	50	9.7	36	2.2	38	40	250	54	29.87			29.88	AA		29.83
07	2117	5	FEW060	10.00		62	16.7	50	9.9	37	2.8	40	40	240	51	29.89			M	SP		29.85
07	2156	5	FEW060	10.00		61	16.1	49	9.6	37	2.8	41	28	250	41	29.90			29.91	AA		29.86
07	2256	5	CLR	10.00		60	15.6	48	9.0	35	1.7	39	21	240		29.91			29.91	AA		29.87

http://www.ncdc.noaa.gov/qclcd/QCLCD 1/2

FIGURE B-18
IMPERIAL CO. AIRPORT QCLCD

3/9/2016 QUALITY CONTROLLED Local Climatological Data: IMPERIAL COUNTY AIRPORT

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA
(final)
HOURLY OBSERVATIONS TABLE
IMPERIAL COUNTY AIRPORT (03144)
IMPERIAL, CA
(05/2015)

Elevation: -58 ft. below sea level
Latitude: 32.834
Longitude: -115.578
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp (F)	Dry Bulb Temp (C)	Wet Bulb Temp (F)	Wet Bulb Temp (C)	Dew Point Temp (F)	Dew Point Temp (C)	Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
07	0053	12	CLR	10.00		63	17.2	53	11.7	44	6.7	50	14	270		29.77			29.71	AA		29.71
07	0153	12	CLR	10.00		62	16.7	52	11.2	43	6.1	50	14	260		29.77			29.71	AA		29.71
07	0253	12	CLR	10.00		59	15.0	51	10.5	43	6.1	56	9	270		29.79			29.73	AA		29.73
07	0353	12	CLR	10.00		58	14.4	50	10.2	43	6.1	58	10	270		29.80			29.74	AA		29.74
07	0453	12	CLR	10.00		57	13.9	49	9.5	41	5.0	55	9	280		29.81			29.75	AA		29.75
07	0553	12	FEW049	10.00		60	15.6	51	10.2	41	5.0	50	11	260		29.83			29.77	AA		29.77
07	0653	12	BKN050	10.00		65	18.3	53	11.7	42	5.6	43	17	260		29.85			29.79	AA		29.79
07	0753	12	FEW055	10.00		69	20.6	53	11.6	37	2.8	31	16	260		29.85			29.79	AA		29.79
07	0853	12	BKN060	10.00		72	22.2	54	12.3	37	2.8	28	16	260		29.85			29.79	AA		29.79
07	0953	12	CLR	10.00		73	22.8	55	12.8	38	3.3	28	13	260	22	29.86			29.79	AA		29.80
07	1053	12	CLR	10.00		76	24.4	56	13.1	36	2.2	23	14	260	23	29.85			29.78	AA		29.79
07	1153	12	CLR	10.00		76	24.4	56	13.2	37	2.8	24	18	260	26	29.83			29.77	AA		29.77
07	1253	12	CLR	10.00	-RA	77	25.0	56	13.5	37	2.8	24	23	270	32	29.82			29.75	AA	T	29.76
07	1353	12	CLR	10.00	-RA	76	24.4	56	13.2	37	2.8	24	20	270	32	29.80			29.74	AA	T	29.74
07	1453	12	CLR	10.00	-RA	75	23.9	56	13.2	38	3.3	26	25	260	36	29.78			29.72	AA	T	29.72
07	1553	12	FEW024	6.00	HZ	73	22.8	56	13.2	40	4.4	30	26	270	40	29.78			29.72	AA	T	29.72
07	1653	12	FEW017	6.00	HZ	70	21.1	54	12.0	38	3.3	31	28	270	43	29.78			29.72	AA		29.72
07	1745	12	BKN018	2.50	HZ	67	19.4	52	11.3	38	3.3	35	25	280	38	29.79			M	SP		29.73
07	1751	12	BKN016	1.75	HZ	66	19.0	52	10.9	37	3.0	34	30	270	41	29.79			M	SP		29.73
07	1753	12	BKN016	1.50	HZ	67	19.4	52	11.3	38	3.3	35	26	270	41	29.80			29.73	AA		29.74
07	1757	12	OVC014	1.25	HZ	66	18.9	52	11.3	39	3.9	37	24	270	41	29.79			M	SP		29.73
07	1815	12	OVC013	2.00	HZ	65	18.3	52	10.8	38	3.3	37	21	270	33	29.80			M	SP		29.74
07	1824	12	BKN013	3.00	HZ	65	18.3	52	11.1	39	3.9	39	29	270	38	29.81			M	SP		29.75
07	1842	12	SCT013	5.00	HZ	64	17.8	52	11.0	40	4.4	42	22	270	33	29.82			M	SP		29.76
07	1853	12	FEW017	7.00		64	17.8	52	10.8	39	3.9	40	23	270	36	29.82			29.76	AA		29.76
07	1953	12	FEW013	8.00		63	17.2	51	10.3	38	3.3	40	31	260	39	29.82			29.75	AA		29.76
07	2015	12	FEW007	4.00	HZ	63	17.2	51	10.6	39	3.9	41	33	260	48	29.83			M	SP		29.77
07	2053	12	CLR	10.00		62	16.7	50	9.7	36	2.2	38	26	250	39	29.86			29.80	AA		29.80
07	2153	12	CLR	10.00		60	15.6	50	9.8	39	3.9	46	18	270	25	29.87			29.80	AA		29.81
07	2253	12	CLR	10.00		60	15.6	49	9.2	36	2.2	41	32	260	41	29.85			29.79	AA		29.79
07	2353	12	CLR	10.00		60	15.6	49	9.4	37	2.8	43	30	260	40	29.87			29.80	AA		29.81

Dynamically generated Wed Mar 09 19:53:54 EST 2016 via http://www.ncdc.noaa.gov/qclcd/QCLCD