

DOCKETED

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Appendix 5.1B
Modeling Support Data

Modeling Support Data

Tables presented in this Appendix are as follows:

5.1B-1	WSO Climate Summaries for Ventura, Ojai, and Santa Paula
5.1B-2	Air Monitoring Summary Data for 2012-2014
5.1B-3a-d	Facility Impact/Modeling Results Summary
5.1B-4	Construction Impact/Modeling Summary

In addition, this appendix contains the following figures:

5.1B-1	Facility BPIP Modeling Plot
5.1B-2a-b	Coarse and Fine Receptor Grids Plot
5.1B-3	SCCAB/VCAPCD Monitoring Stations Map
5.1B-4a-e	Annual and Quarterly Wind Roses

Modeling input/output files are included in the enclosed CD's.

VENTURA, CALIFORNIA (049285)

Period of Record Monthly Climate Summary

Period of Record : 01/01/1900 to 08/31/2013

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	66.9	65.3	68.2	68.0	67.7	70.9	73.0	74.3	74.3	73.7	71.2	69.9	70.3
Average Min. Temperature (F)	45.0	43.2	45.8	47.0	48.7	53.0	55.1	54.3	52.8	51.6	48.1	45.1	49.1
Average Total Precipitation (in.)	3.05	3.26	2.55	0.98	0.23	0.04	0.01	0.02	0.22	0.49	1.46	2.37	14.67
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.

Max. Temp.: 0.1% Min. Temp.: 0.1% Precipitation: 87.1% Snowfall: 87% Snow Depth: 86.8%

Check [Station Metadata](#) or [Metadata graphics](#) for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

Table 5.1B-1 Climate Summaries (11 Pages)

OJAI, CALIFORNIA (046399)

Period of Record Monthly Climate Summary

Period of Record : 5/ 1/1905 to 3/31/2013

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	66.6	67.9	70.1	74.0	77.4	83.4	90.9	91.5	88.7	82.1	74.7	67.9	77.9
Average Min. Temperature (F)	35.9	38.0	39.9	43.1	46.9	50.3	54.5	54.3	52.1	46.7	40.3	36.4	44.9
Average Total Precipitation (in.)	4.92	4.94	3.53	1.42	0.40	0.07	0.02	0.04	0.27	0.66	1.82	3.13	21.21
Average Total SnowFall (in.)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.

Max. Temp.: 99% Min. Temp.: 98.7% Precipitation: 99.7% Snowfall: 99.8% Snow Depth: 99.7%

Check [Station Metadata](#) or [Metadata graphics](#) for more detail about data completeness.

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OJAI, CALIFORNIA

NCDC 1981-2010 Monthly Normals

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean Max. Temperature (F)	67.2	67.5	70.3	74.1	77.7	82.6	88.8	90.5	87.3	80.1	72.6	66.3	77.1
Highest Mean Max. Temperature (F)													
Year Highest Occurred													
Lowest Mean Max. Temperature (F)													
Year Lowest Occurred													
Mean Temperature (F)	51.6	52.9	55.5	58.6	62.8	67.0	72.2	72.8	70.0	63.6	56.2	50.9	61.2
Highest Mean Temperature (F)													
Year Highest Occurred													
Lowest Mean Temperature (F)													
Year Lowest Occurred													
Mean Min. Temperature (F)	36.1	38.3	40.6	43.2	48.0	51.5	55.7	55.1	52.7	47.2	39.8	35.4	45.3
Highest Mean Min. Temperature (F)													
Year Highest Occurred													
Lowest Mean Min. Temperature (F)													
Year Lowest Occurred													
Mean Precipitation (in.)	5.02	5.22	3.33	1.22	0.47	0.10	0.03	0.05	0.20	0.98	1.70	2.94	21.26
Highest Precipitation (in.)													

Year Highest
Occurred

Lowest
Precipitation (in.)

Year Lowest
Occurred

Heating Degree Days (F)	414.	340.	298.	206.	108.	35.	3.	3.	19.	93.	269.	439.	2226.
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Cooling Degree Days (F)	0.	1.	2.	15.	41.	97.	227.	245.	169.	51.	5.	0.	854.
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Western Regional Climate Center, wrcc@dri.edu

OJAI, CALIFORNIA

NCDC 1961-1990 Monthly Normals

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean Max. Temperature (F)	67.3	68.8	69.8	74.0	76.8	82.6	89.7	90.0	86.8	81.6	73.0	67.5	77.3
Highest Mean Max. Temperature (F)	75.8	77.4	76.5	80.6	86.3	90.7	94.2	96.5	93.8	88.7	81.2	74.9	80.4
Year Highest Occurred	1976	1977	1988	1987	1984	1981	1977	1967	1979	1965	1977	1989	1961
Lowest Mean Max. Temperature (F)	60.2	59.0	64.3	64.3	70.7	72.4	82.4	84.5	78.1	76.1	68.5	59.8	73.9
Year Lowest Occurred	1979	1969	1975	1967	1980	1969	1987	1989	1986	1972	1985	1971	1969
Mean Temperature (F)	52.0	53.8	55.3	58.8	62.3	67.1	72.4	72.9	70.2	64.8	57.2	52.1	61.6
Highest Mean Temperature (F)	56.8	59.9	61.1	63.1	67.4	73.5	75.9	79.4	77.9	69.4	62.4	57.7	62.8
Year Highest Occurred	1986	1963	1972	1962	1984	1981	1984	1967	1984	1964	1977	1977	1984
Lowest Mean Temperature (F)	48.7	48.7	51.8	51.3	58.5	61.1	66.8	69.4	64.6	59.9	53.6	47.2	59.9
Year Lowest Occurred	1979	1969	1973	1967	1980	1982	1987	1989	1985	1981	1978	1971	1982
Mean Min. Temperature (F)	36.6	38.8	40.8	43.4	47.7	51.5	55.1	55.7	53.5	48.0	41.3	36.5	45.7
Highest Mean Min. Temperature (F)	43.1	44.9	47.3	47.9	50.7	56.3	60.0	62.3	62.4	53.9	47.7	44.7	47.3
Year Highest Occurred	1980	1963	1978	1990	1969	1981	1984	1967	1984	1987	1967	1977	1983
Lowest Mean Min. Temperature (F)	31.5	32.5	35.3	38.3	43.5	46.2	49.7	50.4	48.9	42.4	37.2	28.7	43.7
Year Lowest Occurred	1989	1964	1977	1967	1989	1989	1986	1985	1985	1979	1980	1990	1989
Mean Precipitation (in.)	4.26	4.67	3.47	1.32	0.27	0.05	0.01	0.08	0.47	0.45	2.67	2.98	20.70
Highest Precipitation (in.)	25.76	19.56	14.50	6.32	3.45	0.49	0.13	1.22	5.57	2.92	13.78	10.03	47.30

Year Highest Occurred	1969	1962	1978	1965	1977	1963	1969	1983	1976	1983	1965	1966	1978
Lowest Precipitation (in.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.32
Year Lowest Occurred	1976	1984	1972	1985	1988	1989	1990	1989	1987	1990	1980	1989	1972
Heating Degree Days (F)	403.	317.	305.	212.	113.	60.	6.	9.	26.	81.	241.	400.	2173.
Cooling Degree Days (F)	0.	0.	0.	26.	29.	123.	235.	254.	182.	75.	7.	0.	931.

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SANTA PAULA, CALIFORNIA (047957)

Period of Record Monthly Climate Summary

Period of Record : 5/ 1/1894 to 10/31/2008

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	66.7	68.4	70.5	73.5	75.2	77.8	81.5	82.1	81.7	78.5	73.5	68.3	74.8
Average Min. Temperature (F)	41.6	42.2	43.8	45.6	49.2	52.3	55.1	55.0	53.7	49.6	44.8	42.0	47.9
Average Total Precipitation (in.)	4.29	4.19	3.06	1.13	0.33	0.04	0.01	0.05	0.23	0.51	1.68	2.42	17.93
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.

Max. Temp.: 91.7% Min. Temp.: 91.6% Precipitation: 96.6% Snowfall: 96.8% Snow Depth: 96.4%

Check [Station Metadata](#) or [Metadata graphics](#) for more detail about data completeness.

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SANTA PAULA, CALIFORNIA

NCDC 1961-1990 Monthly Normals

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean Max. Temperature (F)	67.9	69.2	69.4	72.6	73.6	76.7	80.8	81.5	80.6	78.0	72.0	67.6	74.2
Highest Mean Max. Temperature (F)	74.8	75.4	75.2	77.7	80.8	84.6	86.5	89.2	89.0	83.9	79.2	75.2	77.0
Year Highest Occurred	1961	1977	1984	1989	1984	1981	1972	1971	1984	1965	1976	1989	1984
Lowest Mean Max. Temperature (F)	61.7	61.3	64.7	64.7	69.7	71.2	74.8	76.5	74.1	72.0	64.8	60.1	71.3
Year Lowest Occurred	1979	1962	1962	1967	1980	1965	1987	1987	1961	1975	1962	1987	1987
Mean Temperature (F)	54.6	55.7	56.1	58.9	61.2	64.5	67.8	68.7	67.6	64.1	58.2	54.3	61.0
Highest Mean Temperature (F)	60.0	60.4	60.3	64.1	66.0	70.6	72.1	73.9	75.0	68.8	63.9	58.8	63.0
Year Highest Occurred	1986	1963	1988	1989	1978	1981	1984	1971	1984	1983	1976	1980	1983
Lowest Mean Temperature (F)	50.4	51.2	52.4	51.8	57.1	60.0	63.2	64.2	63.4	59.2	53.3	48.7	58.5
Year Lowest Occurred	1973	1969	1962	1967	1964	1965	1987	1976	1986	1975	1975	1971	1975
Mean Min. Temperature (F)	41.2	42.2	42.8	45.2	48.7	52.3	54.7	55.9	54.5	50.0	44.2	41.0	47.7
Highest Mean Min. Temperature (F)	48.6	48.8	50.7	50.7	53.1	56.5	59.7	60.9	61.0	56.1	50.0	45.3	50.7
Year Highest Occurred	1980	1980	1978	1990	1979	1981	1988	1983	1984	1987	1967	1980	1983
Lowest Mean Min. Temperature (F)	36.1	37.2	38.6	38.8	43.5	48.7	50.6	47.8	49.0	44.3	38.7	36.5	45.3
Year Lowest Occurred	1972	1966	1964	1967	1964	1965	1965	1976	1970	1976	1975	1971	1964
Mean Precipitation (in.)	3.72	3.63	2.91	1.07	0.14	0.03	0.01	0.09	0.38	0.39	2.45	2.57	17.39
Highest Precipitation (in.)	18.63	18.10	11.79	5.22	2.08	0.52	0.10	1.11	4.06	3.60	10.37	8.20	38.60
	1969	1962	1978	1967	1977	1963	1969	1983	1976	1983	1965	1971	1978

Year Highest Occurred													
Lowest Precipitation (in.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.02
Year Lowest Occurred	1976	1984	1990	1990	1988	1990	1990	1990	1990	1990	1980	1990	1989
Heating Degree Days (F)	327.	266.	280.	199.	139.	77.	35.	30.	52.	82.	217.	335.	2039.
Cooling Degree Days (F)	0.	6.	0.	16.	21.	62.	122.	145.	130.	54.	13.	0.	569.

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SANTA PAULA, CALIFORNIA

NCDC 1981-2010 Monthly Normals

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean Max. Temperature (F)	69.3	69.2	71.0	74.0	75.1	77.2	80.7	82.7	81.6	78.5	73.8	69.2	75.2
Highest Mean Max. Temperature (F)													
Year Highest Occurred													
Lowest Mean Max. Temperature (F)													
Year Lowest Occurred													
Mean Temperature (F)	55.2	55.9	57.5	60.0	62.5	65.1	68.8	69.4	68.1	64.4	59.1	55.2	61.8
Highest Mean Temperature (F)													
Year Highest Occurred													
Lowest Mean Temperature (F)													
Year Lowest Occurred													
Mean Min. Temperature (F)	41.1	42.5	43.9	45.9	50.0	53.1	56.9	56.1	54.7	50.2	44.4	41.1	48.4
Highest Mean Min. Temperature (F)													
Year Highest Occurred													
Lowest Mean Min. Temperature (F)													
Year Lowest Occurred													
Mean Precipitation (in.)	3.72	4.85	2.69	0.83	0.35	0.07	0.01	0.04	0.16	0.69	1.44	2.53	17.38
Highest Precipitation (in.)													

Year Highest
 Occurred
 Lowest
 Precipitation (in.)
 Year Lowest
 Occurred

Heating Degree Days (F)	309.	262.	239.	165.	98.	40.	6.	5.	15.	65.	190.	309.	1701.
Cooling Degree Days (F)	5.	6.	5.	13.	22.	44.	124.	141.	109.	44.	13.	4.	531.

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Table 5.1B-2 Mission Rock Background Air Quality Values for 2012-2014 (3 Pages)

Historical Monitored Air Quality Values

Pollutant	Units	Avg Time	Station	2012	2013	2014	Pollutant	Units	Avg Time	Station	2012	2013	2014		
Ozone	ppm	1-Hr State	El Rio	0.082	0.067	0.112	NO2	ppm	1-Hr State	El Rio	0.057	0.04	0.039		
			Piru	0.087	0.092	0.097				Simi Valley	0.058	0.043	0.047		
			1000 Oaks	0.09	0.099	0.092									
		8-Hr State	EWS Beach	-	-	-			AAM-State	El Rio	0.007	0.007	0.007	0.009	0.009
			El Rio	0.065	0.063	0.077									
			Piru	0.076	0.082	0.082									
		8-Hr Federal	1000 Oaks	0.076	0.081	0.082			1-Hr Federal	El Rio	0.033	0.033	0.033	0.037	0.041
			EWS Beach	-	-	-									
			El Rio	0.054	0.059	0.067									
			Piru	0.073	0.069	0.079									
AAM-Federal	1000 Oaks	0.069	0.062	0.074	AAM-Federal	El Rio	0.007	0.007	0.007	0.009	0.009				
	EWS Beach	-	-	-											

Data Sources: CARB ADAM website, 9/22/15
EPA AIRS database website, 9/22/15

1. CAAQS background is the highest value in the 3 year period.
2. NAAQS background is the 3 year avg of the 4th high 8 hr values.

1. CAAQS background is the highest value in the 3 year period.
2. NAAQS background for 1 hr is the 3 year avg of the 1 hr 98th percentile values.
3. NAAQS background for annual is the 3 year avg of the AAM values.

Background Values:

	ppm	ug/m3
1-Hr State	0.112	224.0
8-Hr State	0.082	160.5
8-Hr Fed	0.074	145.0

AAM = annual arithmetic mean.

Historical Monitored Air Quality Values

Pollutant	Units	Avg Time	Station	2012	2013	2014	Pollutant	Units	Avg Time	Station	2012	2013	2014															
CO	ppm	1-Hr State	Santa Maria Santa Barb	2.5 2.1	2.5 2.5	2.7 4	SO ₂	ppm	1-Hr State	Lompoc	0.003	0.004	0.005															
		8-Hr State	Santa Maria Santa Barb	1.11 0.9	0.9 1.1	1 1.1			Exxon UCSB	0.002	0.002	0.004																
	1-Hr Federal	Santa Maria Santa Barb	2.5 2.1	2.5 2.5	2.7 4	Lompoc			0.002	0.002	0.003																	
	8-Hr Federal	Santa Maria Santa Barb	1.11 0.9	0.9 1.1	1 1.1	Exxon UCSB			0.001	0.002	0																	
	1-Hr Federal	Santa Maria Santa Barb	2.5 2.1	2.5 2.5	2.7 4	Lompoc			0.003	0.004	0.005																	
	8-Hr Federal	Santa Maria Santa Barb	1.11 0.9	0.9 1.1	1 1.1	Exxon UCSB			0.002	0.002	0.004																	
<p>1. CAAQS background is the highest value in the 3 year period.</p> <p>2. NAAQS background is the 3 year avg of the first high 1 and 8 hr values.</p>																												
<p>Background Values:</p> <table border="1"> <thead> <tr> <th></th> <th>ppm</th> <th>ug/m3</th> </tr> </thead> <tbody> <tr> <td>1-Hr State</td> <td>4</td> <td>4600.0</td> </tr> <tr> <td>8-Hr State</td> <td>1.1</td> <td>1222.2</td> </tr> <tr> <td>1-Hr Fed</td> <td>2.87</td> <td>3280.0</td> </tr> <tr> <td>8-Hr Fed</td> <td>1.03</td> <td>1144.4</td> </tr> </tbody> </table>															ppm	ug/m3	1-Hr State	4	4600.0	8-Hr State	1.1	1222.2	1-Hr Fed	2.87	3280.0	8-Hr Fed	1.03	1144.4
	ppm	ug/m3																										
1-Hr State	4	4600.0																										
8-Hr State	1.1	1222.2																										
1-Hr Fed	2.87	3280.0																										
8-Hr Fed	1.03	1144.4																										
<p>Background Values:</p> <table border="1"> <thead> <tr> <th></th> <th>ppm</th> <th>ug/m3</th> </tr> </thead> <tbody> <tr> <td>1-Hr State</td> <td>0.005</td> <td>13.1</td> </tr> <tr> <td>24-Hr State</td> <td>0.003</td> <td>7.9</td> </tr> <tr> <td>1-Hr Fed</td> <td>0.004</td> <td>10.5</td> </tr> </tbody> </table>															ppm	ug/m3	1-Hr State	0.005	13.1	24-Hr State	0.003	7.9	1-Hr Fed	0.004	10.5			
	ppm	ug/m3																										
1-Hr State	0.005	13.1																										
24-Hr State	0.003	7.9																										
1-Hr Fed	0.004	10.5																										
<p>1. CAAQS background is the highest value in the 3 year period.</p> <p>2. NAAQS background is the 3 year avg of the first high 1 hr values.</p>																												

Table 5.1B-3d EXPECTED INTERNAL COMBUSTION ENGINE EMISSIONS

Liquid Fuel
Emergency Fire Pump

of Identical Engines: 1

Mfg: Clark
 Engine #: JU6H-UFADP8
 kW_e: 164
 BHP: 220
 RPM: 1760
 Fuel: #2 ULS Diesel
 Fuel Use: 11.2 gal/hr
 Fuel HHV: 139000 Btu/gal
 mmbtu/hr: 1.56 HHV
 EPA Tier: 3

Stack Data
 Height: 25 Ft. 7.62 meters
 Temp: 986 deg F 803.2 Kelvins
 ACFM: 1189 44.30 m/s
 Diameter: 0.4167 Ft. 0.1270 meters
 input the mfg ACFM or calculate per Exhaust sheet
 Area: 0.1364 Sq.Ft.
 Velocity: 145.33 Ft/Sec
 Max Daily Op Hrs: 0.5
 Max Annual Op Hrs: 52

Fuel Wt: 6.87 lbs/gal
 Fuel S: 0.0015 % wt.
 Fuel S: 0.10305 lbs/1000 gal
 SO₂: 0.2061 lbs/1000 gal
 SO₂: 1.047 equiv.g/hr

If the engines will operate less than an hour for purposes of testing, correct the modeled emissions rates accordingly.

Emissions	--- for 60 mins/hour ---							All Engines				
	g/hp-hr	EF(g/hr)	g/s	Lb/Hr	Lb/Day	Lbs/Yr	Tons/Yr	Lb/Hr	Lb/Day	Lbs/Yr	Tons/Yr	
NO _x (1)	2.80	616	0.171	1.358	0.679	70.6	0.035	1.358	0.679	70.6	0.035	
CO (1)	2.60	572	0.159	1.261	0.631	65.6	0.033	1.261	0.631	65.6	0.033	
HC (1)	0.20	44	1.222E-2	9.700E-2	4.850E-2	5.0	0.003	0.097	0.049	5.0	0.003	
PM (1,2)	0.15	33	9.167E-3	7.275E-2	3.638E-2	3.8	0.002	0.073	0.036	3.8	0.002	
SO _x (3)	NA	1.047	2.908E-4	2.308E-3	1.154E-3	0.12	6.001E-5	0.0023	0.0012	0.12	0.0001	

Notes:

- (1) NSPS values for emergency generator size/year
- (2) PM₁₀/PM_{2.5} equals PM, used in HRA for DPM emissions
- (3) SO_x g/hr equal to sulfur content of 15 ppm
~0.0015 %s

Modeled Emission Rates

	g/s
1-hr NO _x	0.086
0.5 hr/test Ann NO _x	1.016E-3 and 1-hr NO ₂ NAAQS
1 test/day 1-hr CO	0.079
8-hr CO	9.931E-3
1-hr SO ₂	1.454E-4 and 1-hr SO ₂ NAAQS
3-hr SO ₂	4.847E-5
24-hr SO ₂	6.059E-6
Ann SO ₂	1.726E-6
1-hr PM	4.583E-3
24-hr PM	1.910E-4
Ann PM	5.441E-5

Table 5.1B-4 Modeling Inputs/Results for Palmdale Construction Impacts (Combustion Sources as Point Sources) - FASTALL

Short Term Impacts (24 hrs and less)				Long Term Impacts (annual)							
Ref Table 4.1E-1	NOx	CO	SOx	PM10	PM2.5	Ref Table 4.1E-2	NOx	CO	SOx	PM10	PM2.5
Combustion (lbs/day)	49.7	34.3	0.1	2.68	2.44	Combustion (tons/year)	5.7	4.3	0.05	0.3	0.3
Combustion (hrs/day)	10	10	10	10	10	Combustion (days/year)*	264	264	264	264	264
Combustion (lbs/hr)	4.97	3.43	0.01	0.27	0.24	Combustion (hrs/day)	10	10	10	10	10
Combustion (g/sec)	6.26E-1	4.32E-1	1.26E-3	3.38E-2	3.07E-2	Combustion (lbs/hr)*	3.12	2.36	0.03	0.16	0.16
Construction Dust (lbs/day)				43.7	9.76	Combustion (g/sec)	3.94E-1	2.97E-1	3.45E-3	2.07E-2	2.07E-2
Construction Dust (hrs/day)	1.0 g/s=					Construction Dust (tons/year)				4.9	1.2
Construction Dust (lbs/hr)	5.603E-6 g/s/sq.m			10	10	Construction Dust (days/year)				264	264
Construction Dust (g/sec)	44.1 acres			4.37	0.98	Construction Dust (hrs/day)				10	10
AERMOD Inputs	178,484 m²	15 Pt.Srcs		5.51E-1	1.23E-1	Construction Dust (lbs/hr)*	44.1 acres			2.685	0.658
Combustion (g/s/src)	4.175E-2	2.881E-2	8.400E-5	2.251E-3	2.050E-3	Construction Dust (g/sec)				3.38E-1	8.28E-2
Construction Dust (g/s/m ²)				3.085E-6	6.890E-7	178,484 m²	178,484 m²	15 Pt.Srcs			
AERMOD Results (ug/m³)						Combustion (g/s/src)	2.624E-2	1.979E-2	2.301E-4	1.381E-3	1.381E-3
Combustion Only						Construction Dust (g/s/m ²)				1.895E-6	4.642E-7
1-hour Max	32.259	22.263	0.065	1.73951							
3-hour Max			0.042	1.11388		Combustion Only					
8-hour Max	8.917			0.69671							
24-hour Max			0.012	0.30869	0.28113	Annual	0.945			0.04974	0.04974
All Particulate Sources						All Particulate Sources					
24-hour Max				64.64182	14.49724	Annual				5.12633	1.28826
1-hour NO2 w/ ARM	25.807	based on ARM Ratio of:		80%		Annual NO2 w/ ARM	0.709	based on ARM Ratio of:		75%	
Background (ug/m ³)						Background (ug/m ³)					
1-hour Max	98	CAAQS									
3-hour Max	81	2176	16								
8-hour Max		1603	16								
24-hour Max			8	185	18	Annual	15.1			28.3	7.2
Total + Background (ug/m ³)	123.8	CAAQS				Total + Background (ug/m ³)					
1-hour Max	106.8	2198	16.06								
3-hour Max		16.04									
8-hour Max		1612									
24-hour Max			8.01	249.6	32.5	Annual	15.8			33.4	8.5

Maximum NOx/CO/SO2 impacts ratioed from PM10 combustion source impact.

*Even for construction projects taking less than 12-months or 7 days/wk, the hourly emissions for modeling are still based on total tons (projects<12 months) or tons/year (projects>12months) divided by 365 days since all days in the met dataset (i.e., all 12 months and all 365 days - i.e., 7 days/week) are modeled.

Figure 5.1B-1 Facility BPIP Layout

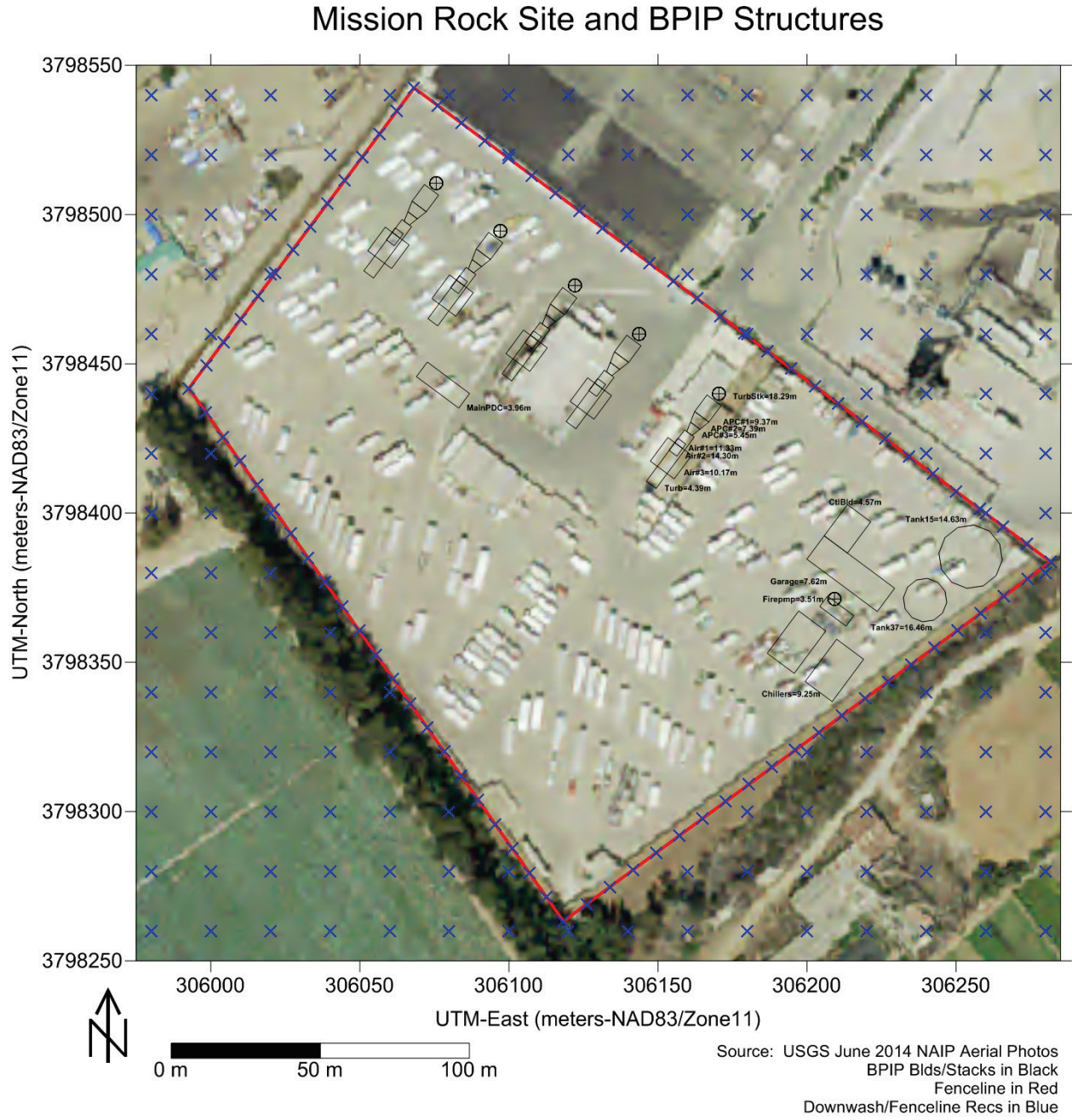


Figure 5.1B-2a Coarse Receptor Grid Plot

Mission Rock Coarse Receptor Grids

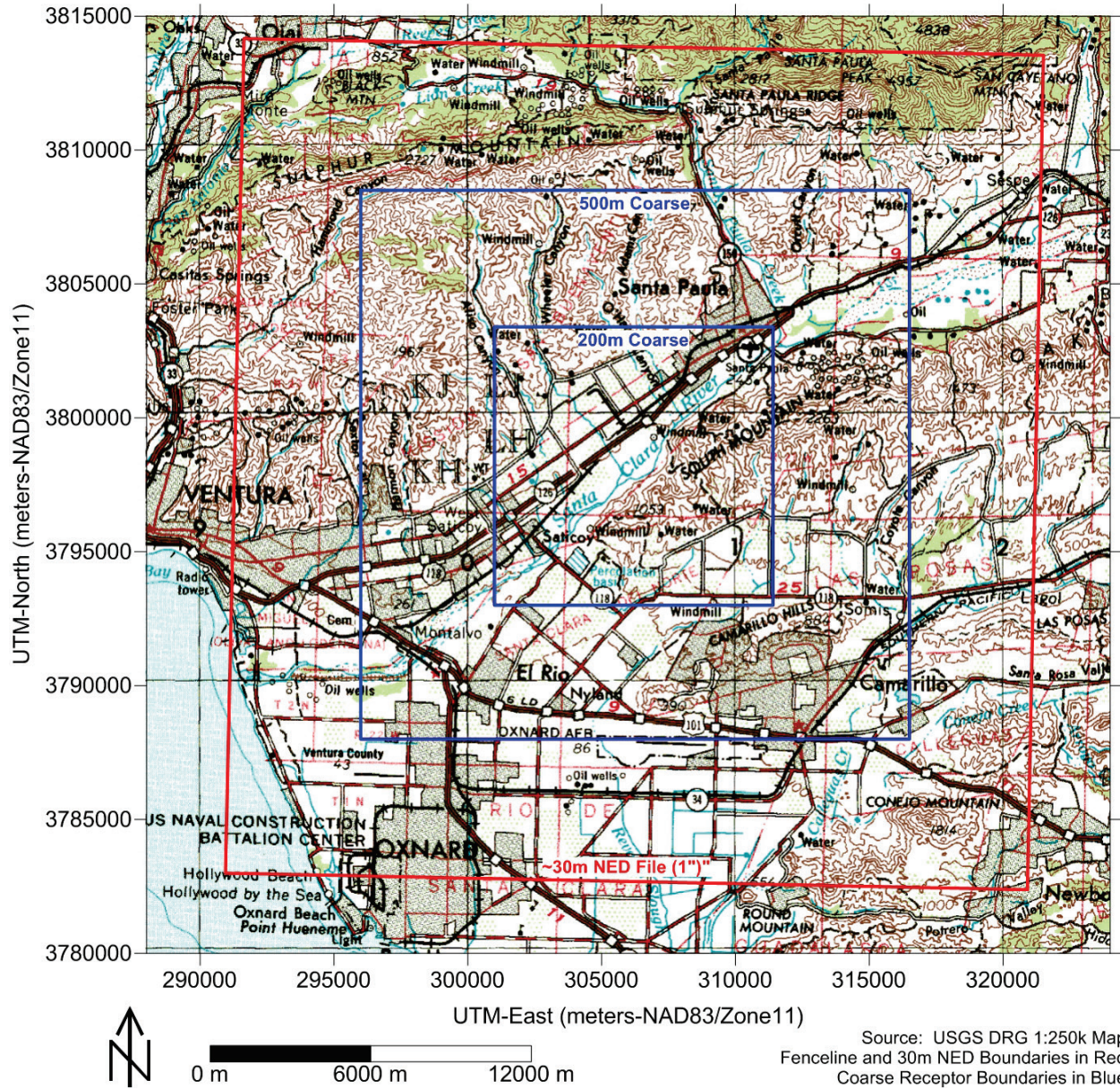


Figure 5.1B-2b MREC Fine Receptor Grid Plot

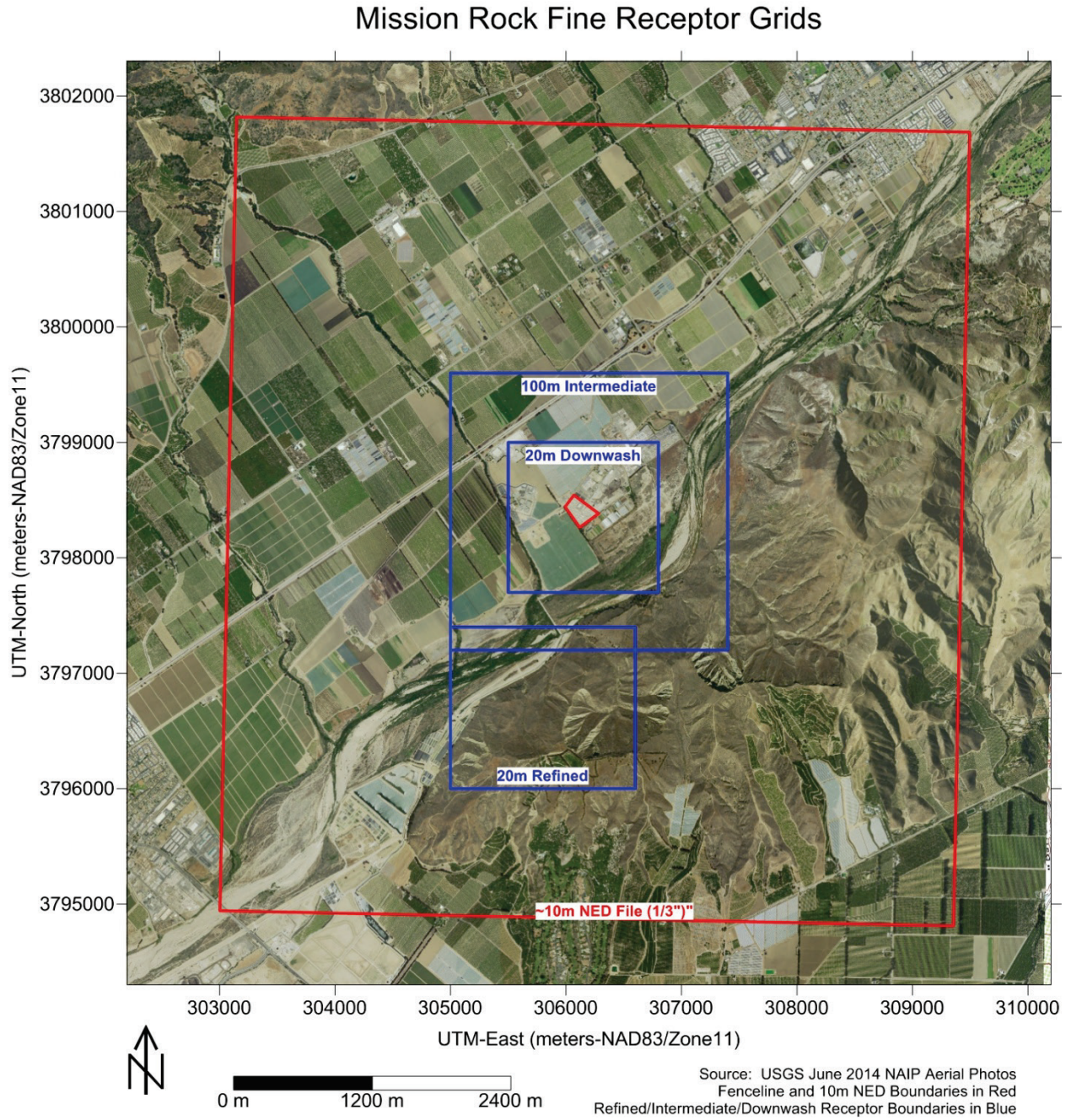


Figure 5.1B-3 South Central Coast Air Basin Monitoring Stations

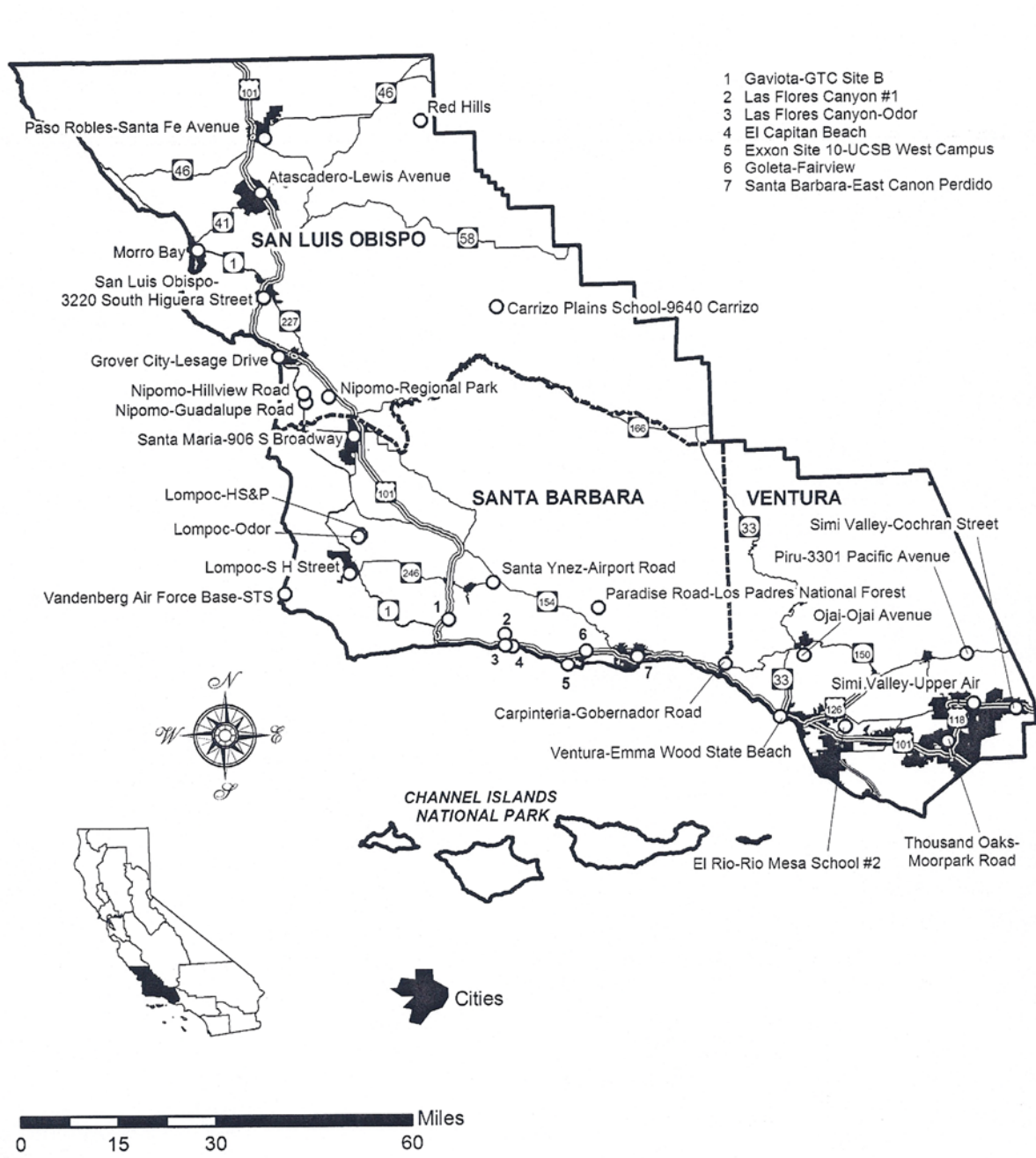


Figure 5.1B-4a First Quarter Windrose

El Rio Monitoring Site Meteorology for 2009-2013
Processed as AERMOD Surface Data

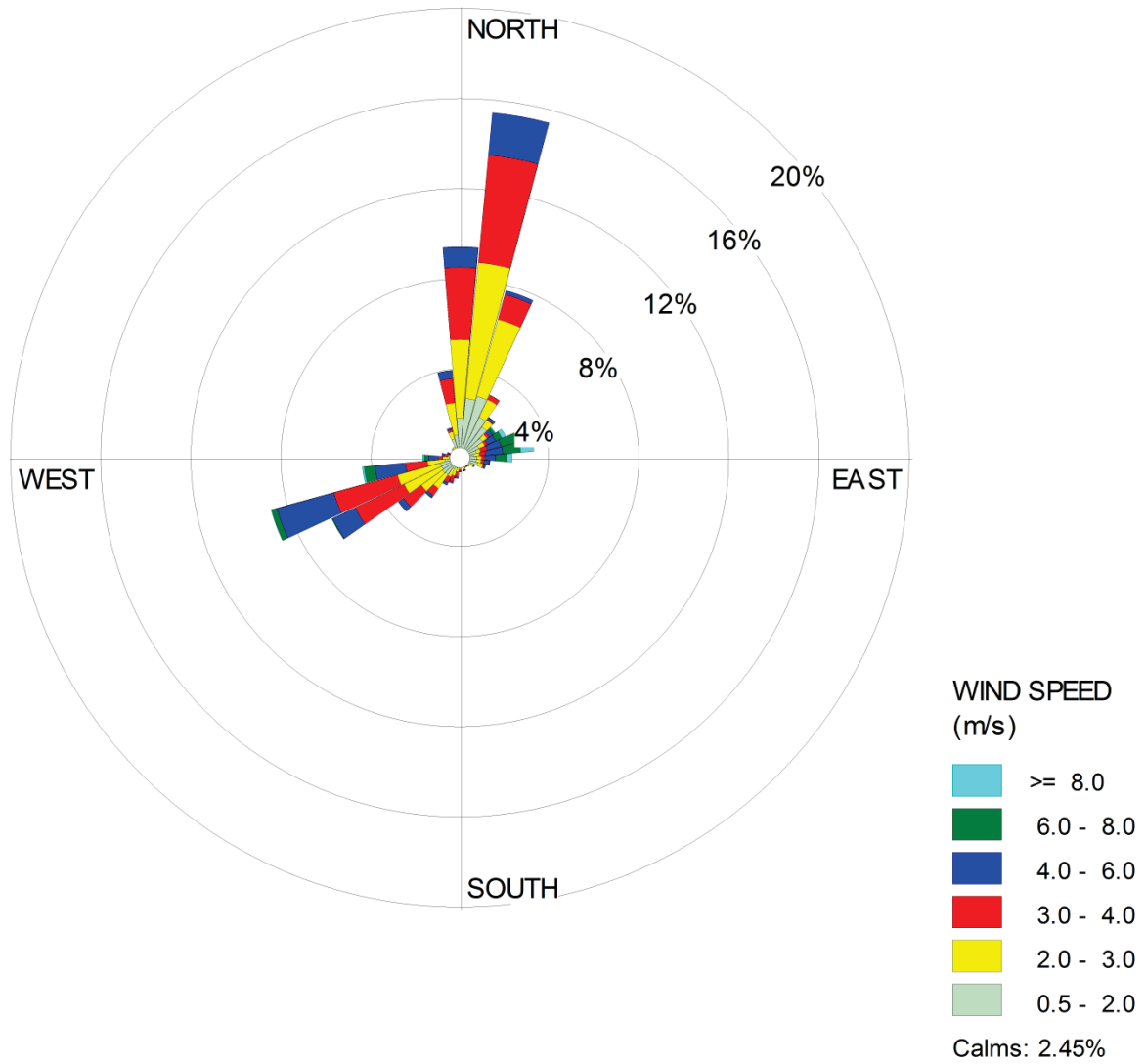


Figure 5.1B-4b Second Quarter Windrose

El Rio Monitoring Site Meteorology for 2009-2013
Processed as AERMOD Surface Data

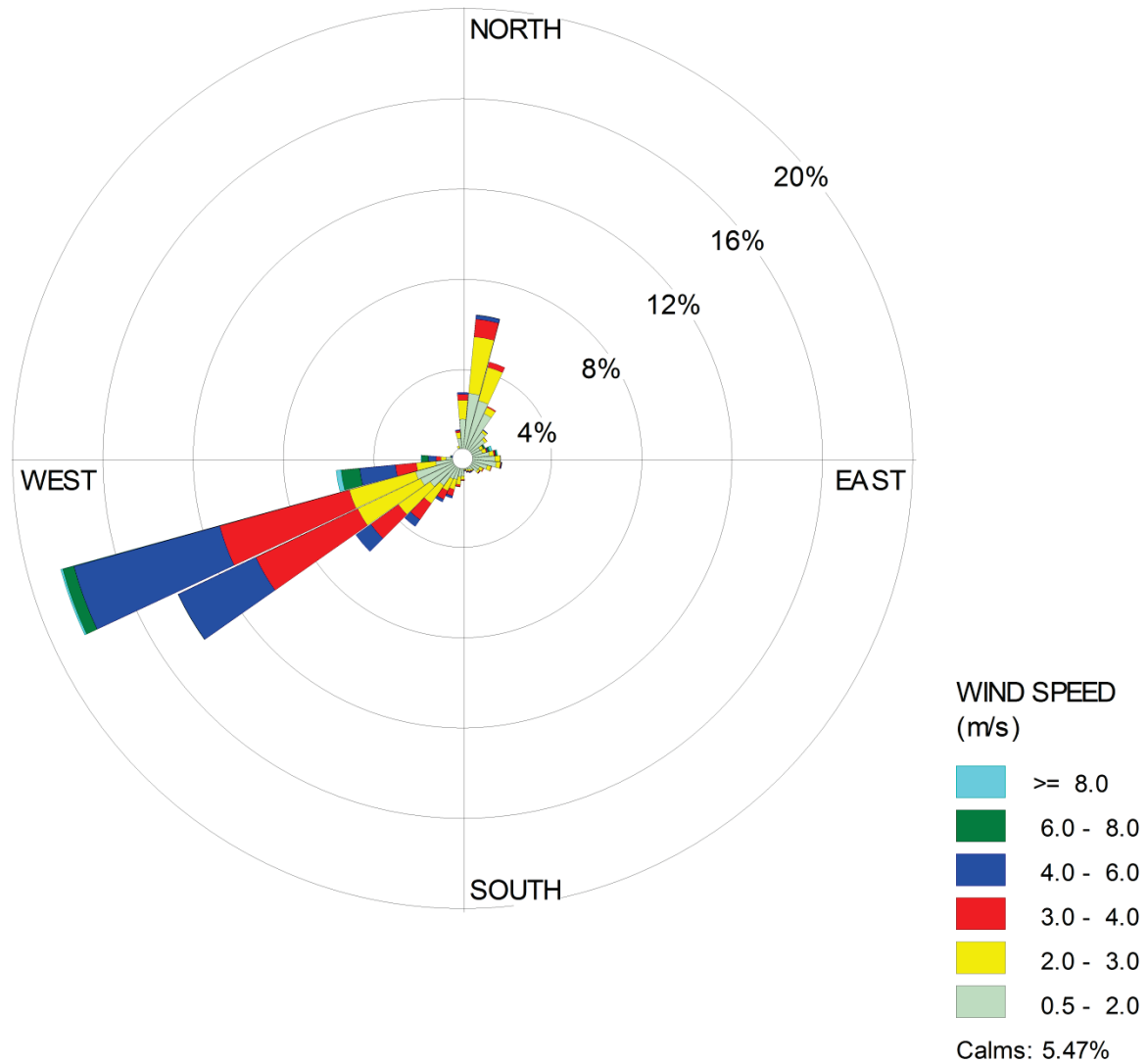


Figure 5.1B-4c Third Quarter Windrose

El Rio Monitoring Site Meteorology for 2009-2013
Processed as AERMOD Surface Data

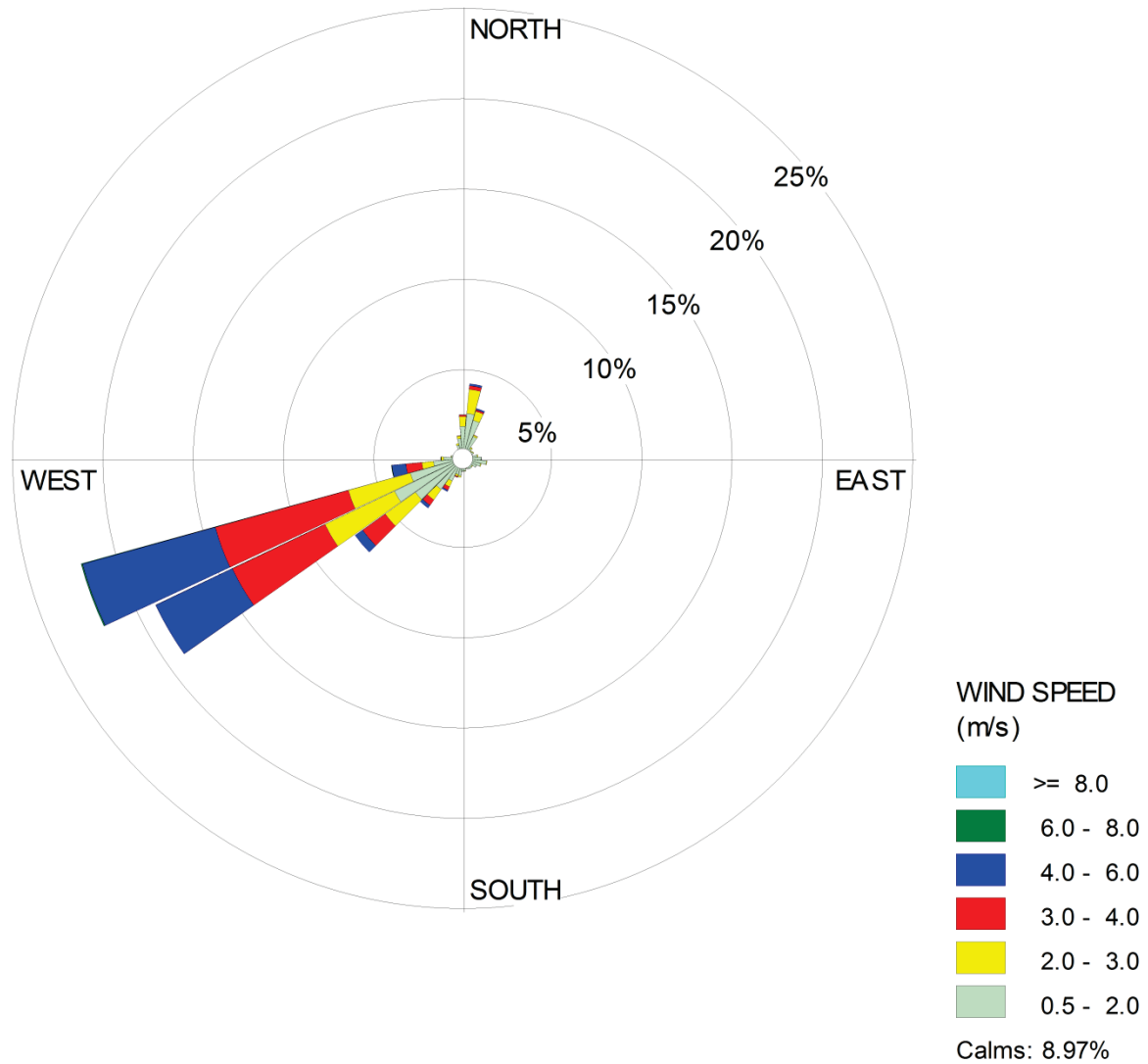


Figure 5.1B-4d Fourth Quarter Windrose

El Rio Monitoring Site Meteorology for 2009-2013
Processed as AERMOD Surface Data

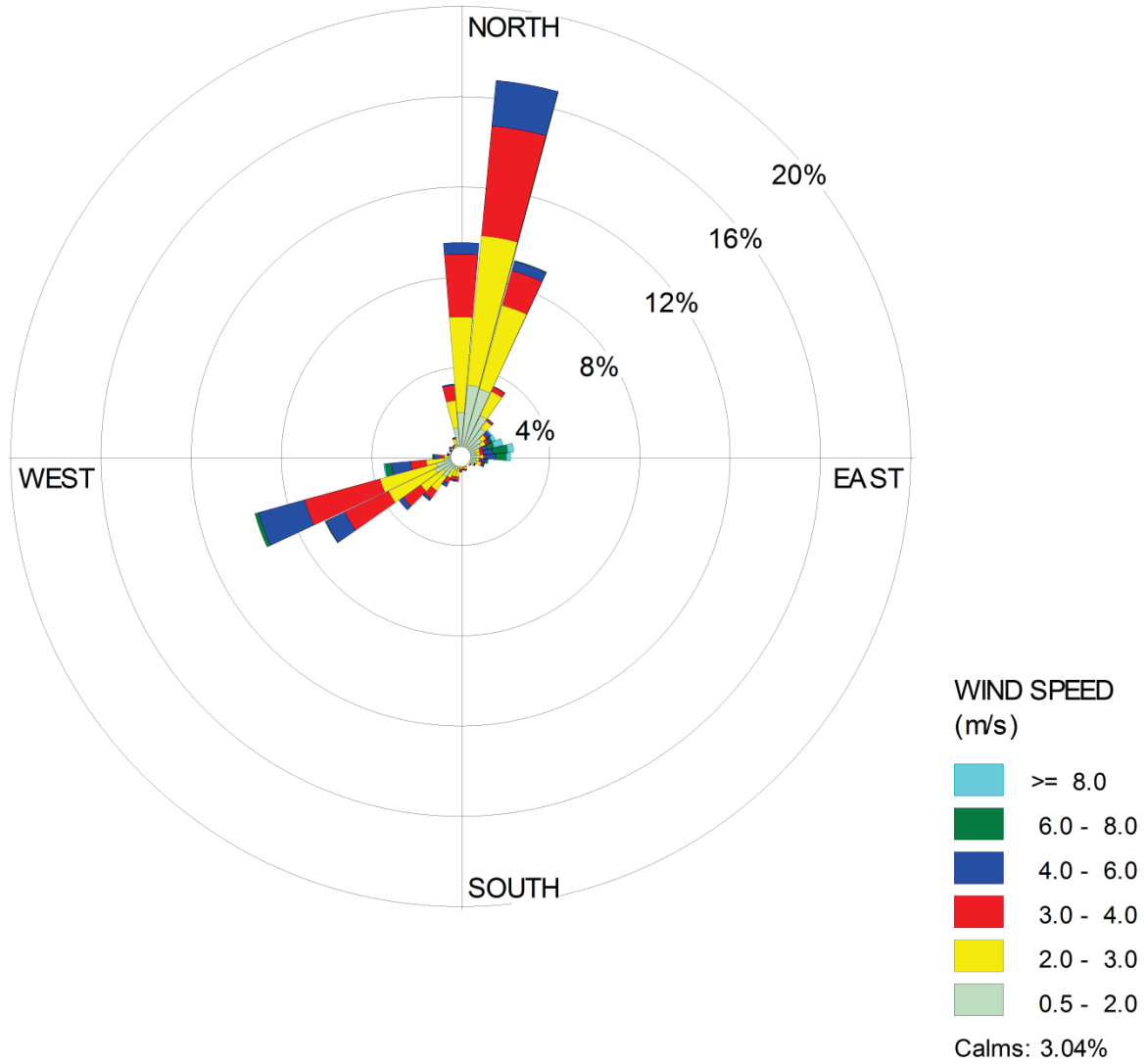


Figure 5.1B-4e Annual Windrose

El Rio Monitoring Site Meteorology for 2009-2013
Processed as AERMOD Surface Data

