

# Meteorological Summary Page



[Background](#)

[Historical Data Summaries](#)

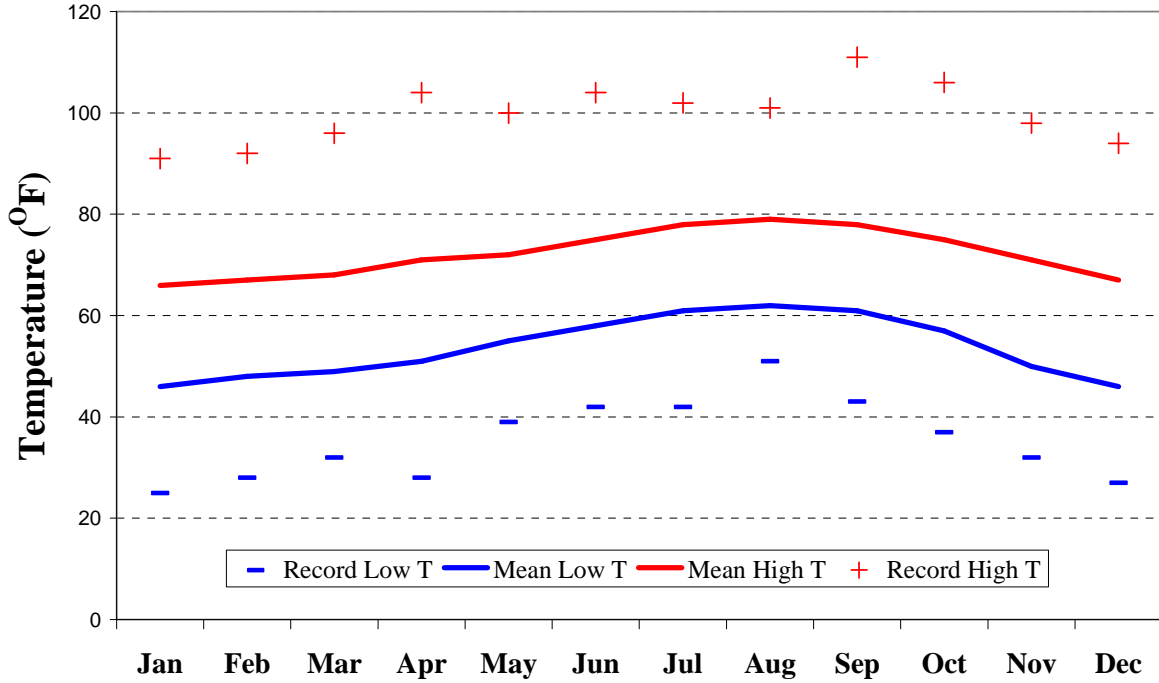
[Harbor Communities Monitoring Study Data Summaries](#)

## **Background**

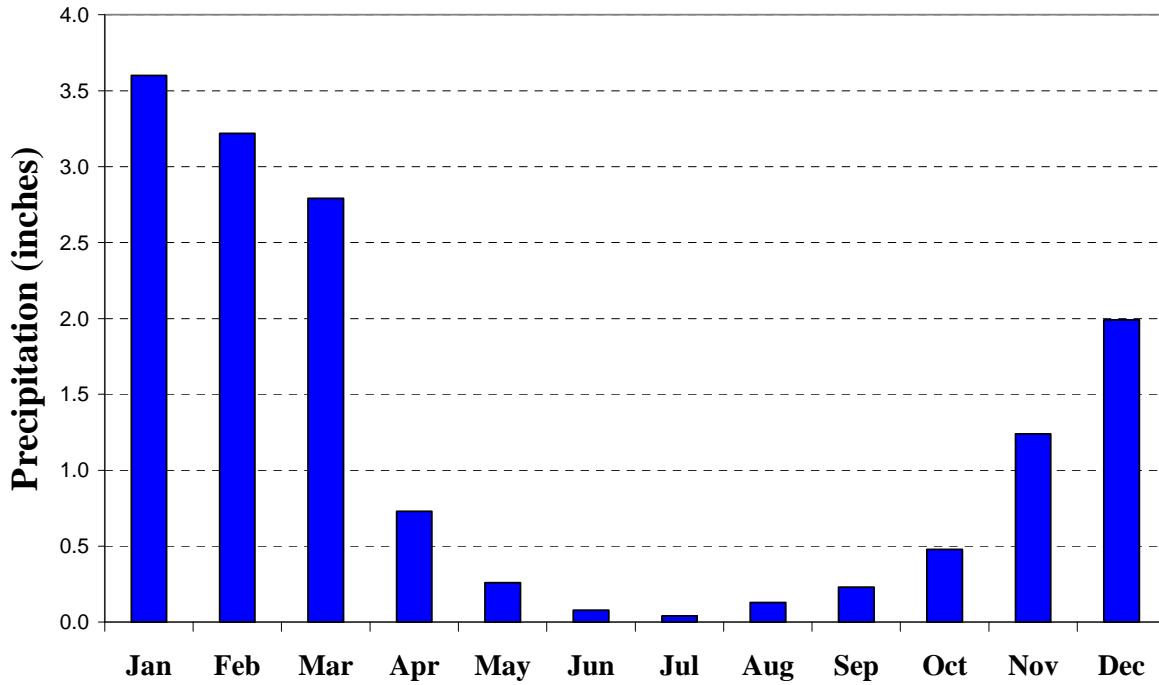
The climate in the Harbor Communities Study area (southern Los Angeles County) is Mediterranean in nature, meaning that it is relatively warm and dry with most of the precipitation falling during the winter months ([Figure 1](#)). Temperatures on the Palos Verdes peninsula are moderated by the Pacific Ocean and are generally comfortable with limited variation during the day and year ([Figure 2](#)). The Harbor Communities Monitoring Study area experiences complex low-level air flows. The winds are influenced by the Palos Verdes Hills to the southwest and west, by the ocean/land interface, and by synoptic weather patterns. The unique setting works to create diurnal and seasonal variations in wind patterns. On the synoptic scale, surface airflow over the Pacific is generally from the northwest. As the surface winds encounter the Palos Verdes Hills, the airflow splits around the obstruction. As the air flows to the south of the Palos Verdes Hills, an eddy frequently forms causing roughly southerly airflow on the east side of the Palos Verdes peninsula. This southerly flow is reinforced during daylight hours as heating over the land during the day draws in the sea-breeze. The depth of the sea-breeze can vary and may be very shallow at times. This southerly flow east of the Palos Verdes Hills encounters the westerly flow north of the Hills. These surface airflows converge on the northeast side of the Hills. The location of this convergence zone can vary from day to day, depending on the synoptic condition and the strength of the sea-breeze. Thus, the variety of pollution sources in the area do not always impact the same areas as pollutants may move to the east, north, or south on occasion. During periods of light winds at night, pollutants are frequently carried from the north/northeast toward San Pedro Bay. During Santa Ana conditions, winds are also from the northeast quadrant but are much stronger and can occur at all hours of the day rather than primarily during the early morning hours.

Meteorological summaries (primarily wind roses, which show the frequency of winds from various directions at various speeds) are presented below. Detailed summaries are presented for the North Long Beach and Port of Los Angeles monitoring sites in the historical section while wind data collected at selected sites during the HCMS are summarized in the last section. A map showing the approximate location of many of the meteorological monitoring sites is presented in [Figure 3](#). [Table 1](#) identifies the meteorological data that is anticipated to be available during the HCMS.

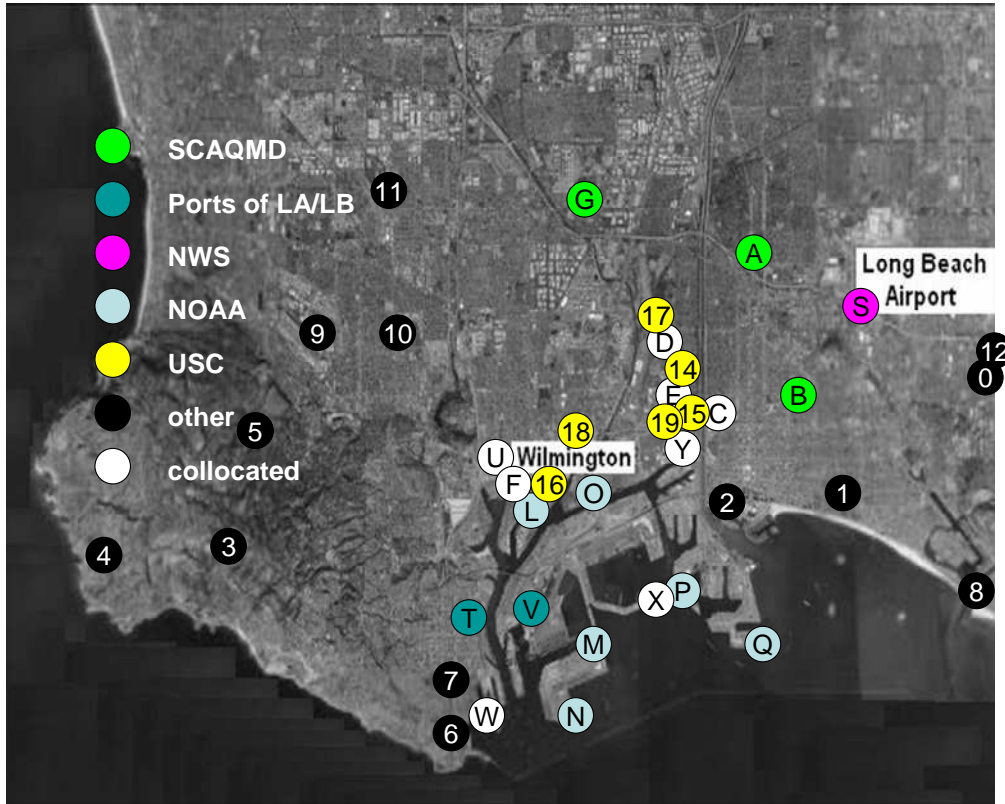
**Figure 1.** Climatological Temperature Summary for Rancho Palos Verdes, California.



**Figure 2.** Climatological Precipitation Summary for Rancho Palos Verdes.



**Figure 3.** Map showing most of the real-time meteorological monitoring site locations in the Harbor Communities Monitoring Study area.



**Table 1.** Listing of Meteorological Monitoring Sites shown in Figure 3.

Map ID	Site Name	Site Code	Parameters	R*	AD^	Source
A	N. Long Beach	NLB	WS,WD,T,RH,(SR),BP	<u>N</u>	X	SCAQMD
B	S. Long Beach	SLB	WS,WD,T		X	SCAQMD
C	LB-Public Works (Anaheim St)	LBPW			X	SCAQMD
D	Hudson Elem School Maintenance	HUD			X	SCAQMD
E	Wilmington-MATES III	WILM			X	SCAQMD
F	Wilmington-SPPS	SPPS			X	SCAQMD
G	S. Wilmington	SWIL			X	SCAQMD
H	<del>LA International AP</del>	<del>LAX</del>	<del>VT,VW</del>		<del>X</del>	<del>SCAQMD</del>
I	<del>Berth 47</del>	<del>B47</del>	<del>(WS,WD,vWS),VW</del>		<del>X</del>	<del>ARB</del>
J	<del>LACIWPCP</del>	<del>WTP</del>	<del>WS,WD,T,RH,vWS,VW</del>		<del>X</del>	<del>ARB</del>

K	Marine Exchange SoCal (Pt. Fermin)	MXS	WS,WD,T,RH,DP,BP,R	<u>M</u>	---	MXSC
L	Berth 161	B161	WS,WD	<u>P</u>	X	NOAA
M	Pier 400	P400	WS,WD	<u>P</u>	X	NOAA
N	Angel's Gate	A_G	WS,WD,T,BP	<u>P</u>	X	NOAA
O	Badger Ave. Bridge	BAB	WS,WD	<u>P</u>	X	NOAA
P	Pier F	P_F	WS,WD	<u>P</u>	X	NOAA
Q	Pier J	P_J	WS,WD	<u>P</u>	X	NOAA
R	Pier S	P_S	WS,WD (inactive)	---	---	NOAA
S	Long Beach AP	KLGB	WS,WD,T,RH,DP,PB,Vis,R	<u>N</u>	X	NWS
T	San Pedro - LHP	LHP/SCS	WS,WD,T	---	X	PoLA
U	Wilmington – SP&P School	SPPS /WCS	WS,WD,T	---	X	PoLA
V	Terminal Island Treatment Plant	TITP/SDS	WS,WD,T	---	X	PoLA
W	Berth 47	B47/CBS	WS,WD,T	---	X	PoLA
X	Outer Harbor-Pier F	LBOH	WS,WD,T,RH	<u>B</u>	X	PoLB
Y	Inner Harbor	LBIH	WS,WD,T,RH,R	<u>B</u>	X	PoLB
<del>Z</del>	<del>Conoco-Philips Refinery</del>	<del>CPR</del>		<del>---</del>	<del>?</del>	<del>CP</del>
0	Long Beach (AQMIS #5504; KE6JDC)	LB	WS,WD,T,RH,WG	<u>A</u>	X	CWOP
1	Long Beach (AQMIS #6810; CW6147)	LB3	WS,WD,T,RH	<u>A</u>	X	CWOP
2	LB Aquarium	LBA	WS,WD,T,RH	<u>A</u>	X	
3	Palos Verdes (AQMIS #6697; WA6MEM)	PV	WS,WD,T,RH	<u>A</u>	X	CWOP
4	Rancho Palos Verdes (AQMIS #5689; CW4793)	RPV	WS,WD,WG,T,RH	<u>A</u>	X	CWOP
5	Rolling Hills Estates (AQMIS #5645; CW3786)	RHE	WS,WD,WG,T,RH	<u>A</u>	X	CWOP
6	San Pedro (AQMIS #5619; CW3247)	SP	WS,WD,WG,T,RH	<u>A</u>	X	CWOP
7	San Pedro #2 (AQMIS #6716; CW5520)	SP2	WS,WD,WG,T,RH	<u>A</u>	X	CWOP

8	Seal Beach #2 (AQMIS #5128; CW0181)	SB2	WS,WD,WG,T,RH	<u>A</u>	X	CWOP
9	Zamperini Airport	KTOA	WS,WD,WG,T,RH	<u>N</u>	X	METAR
10	Torrance #2 (AQMIS #5528; W6AHM)	TOR2	WS,WD,WG,T,RH	<u>A</u>	X	CWOP
11	Torrance	TOR	WS,WD,WG,T,RH	<u>A</u>	X	CWOP
12	Long Beach #2 (AQMIS #5816)	LB2	WS,WD,T,RH	<u>A</u>	X	CWOP
13						
14						

\* R = Real-Time data available

A = AQMIS2 program of CARB, B = Port of Long Beach, M = Marine Exchange of So Cal, N = National Weather Service, P = PORTS program of NOAA

^ AD = Archived data

**Historical Data Summaries**

**Seasonal 3-hr Wind Rose Summaries for N. Long Beach in 2005**

**Seasons**

Winter = January

Spring = April

Summer = July

Fall = October

**3-hr Periods (PST)**

0000-0300

0300-0600

0600-0900

0900-1200

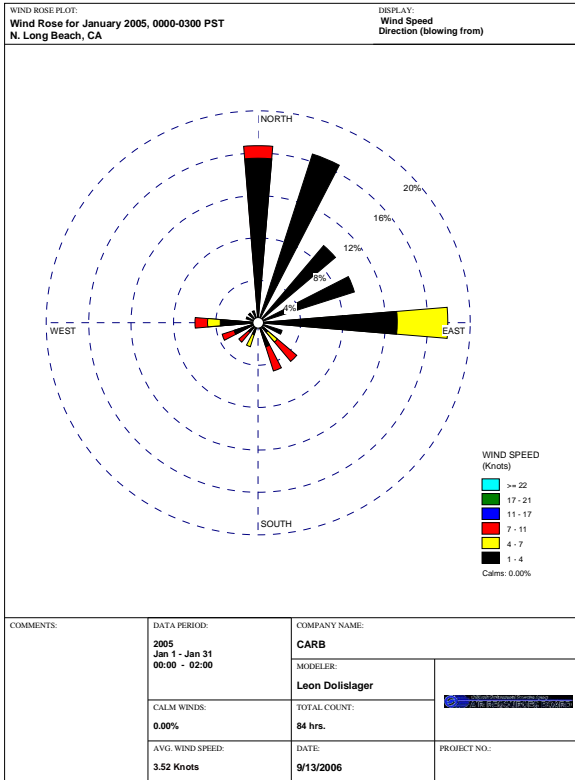
1200-1500

1500-1800

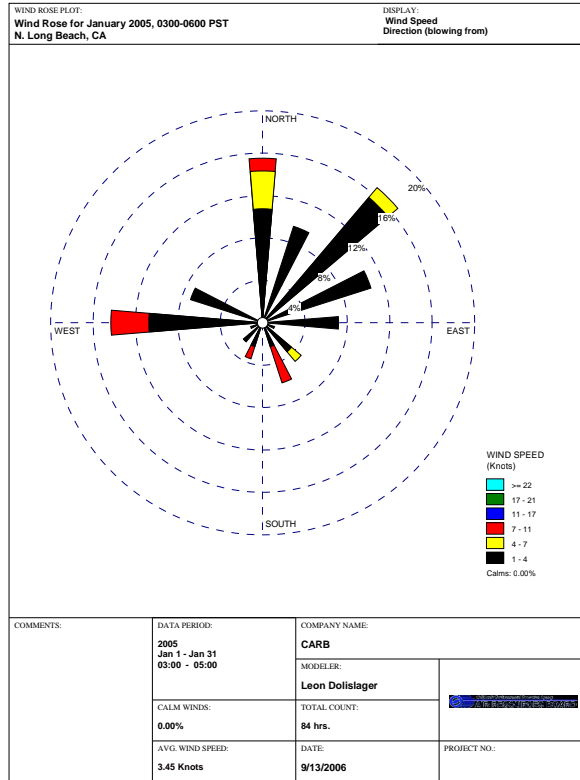
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2100-2400

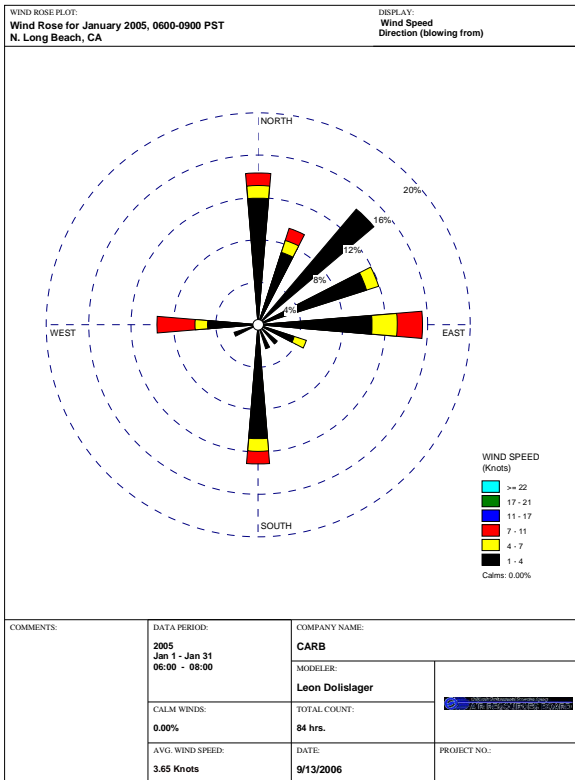
# Winter (January)



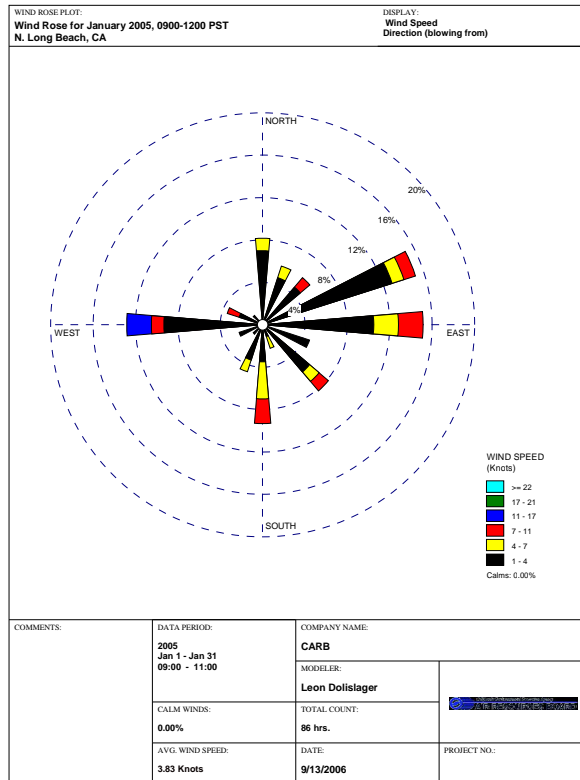
WRPLOT View - Lakes Environmental Software



WRPLOT View - Lakes Environmental Software

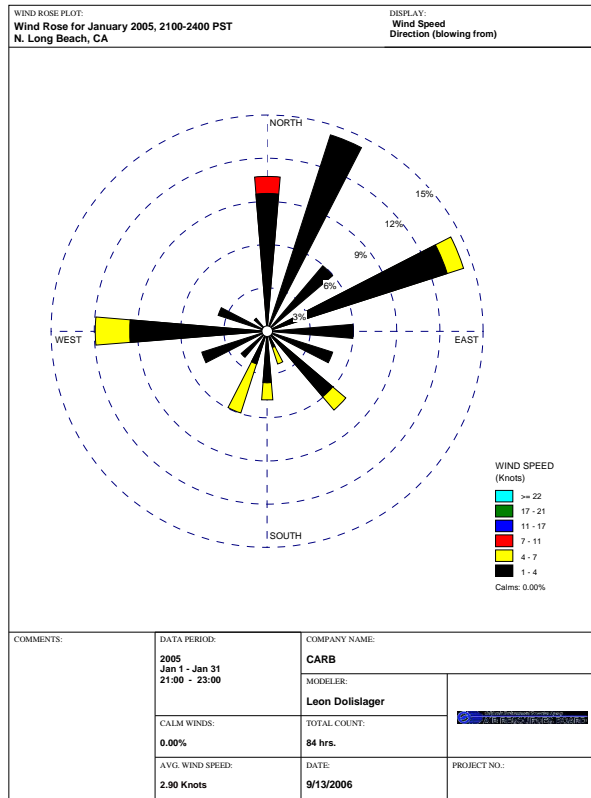
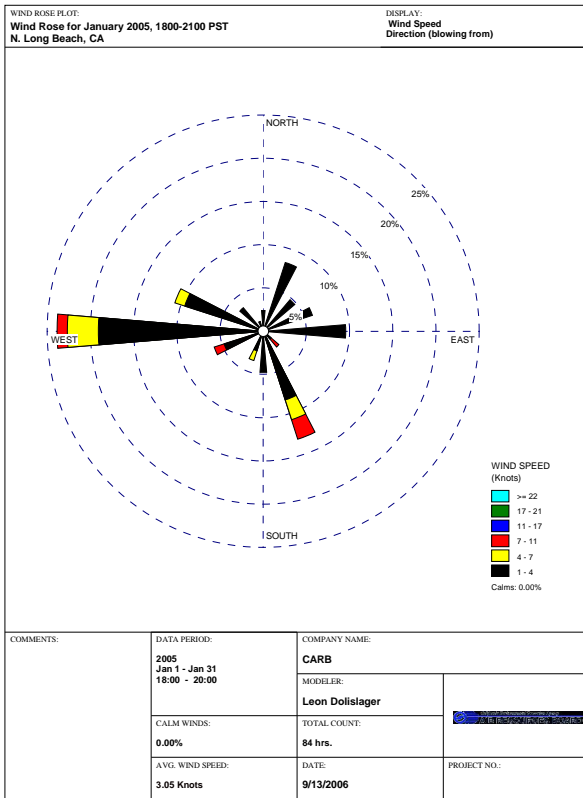
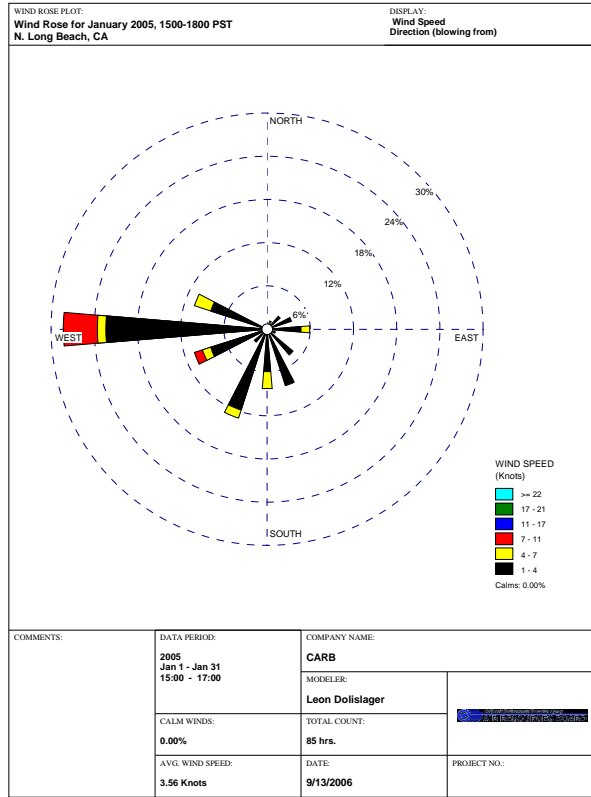
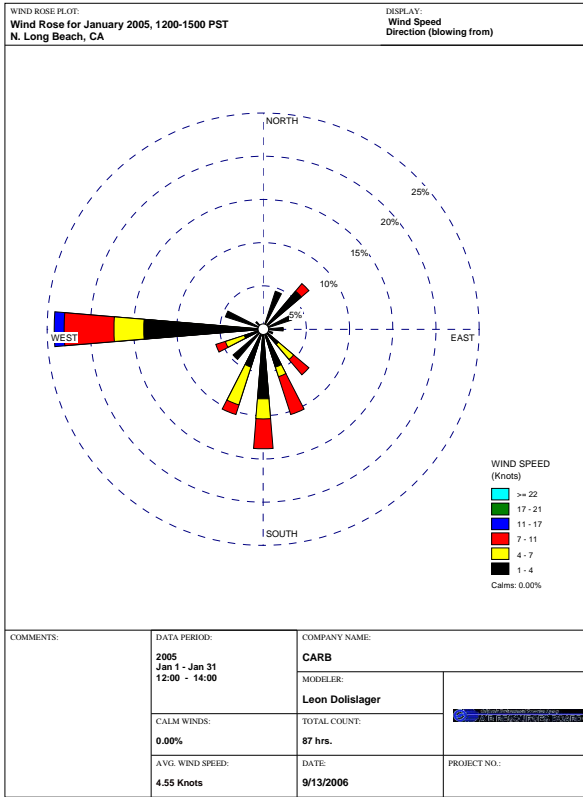


WRPLOT View - Lakes Environmental Software

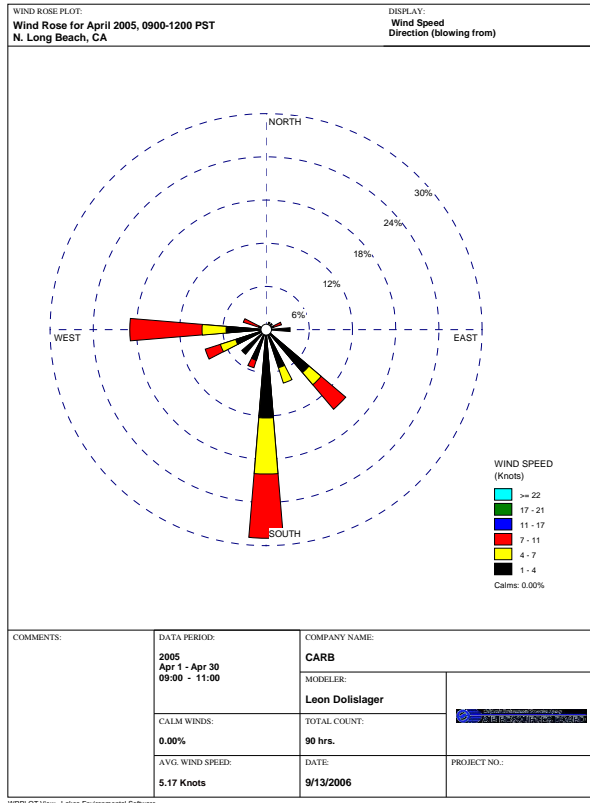
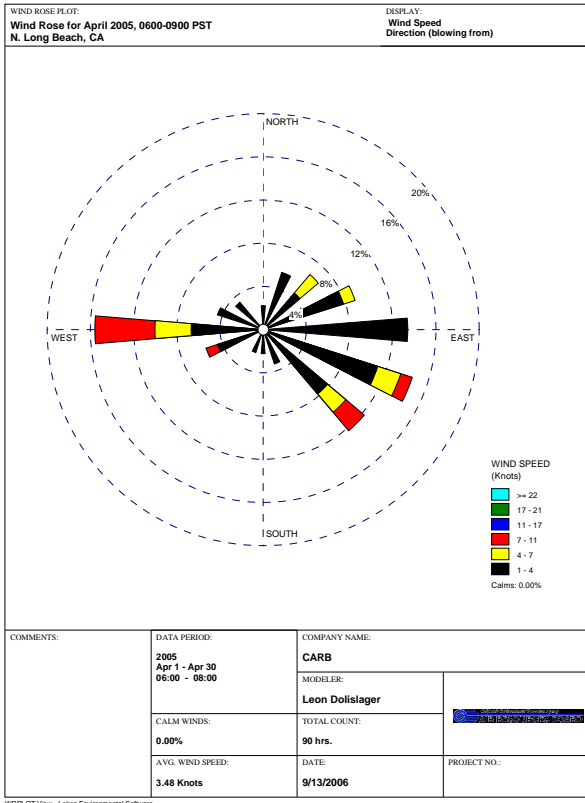
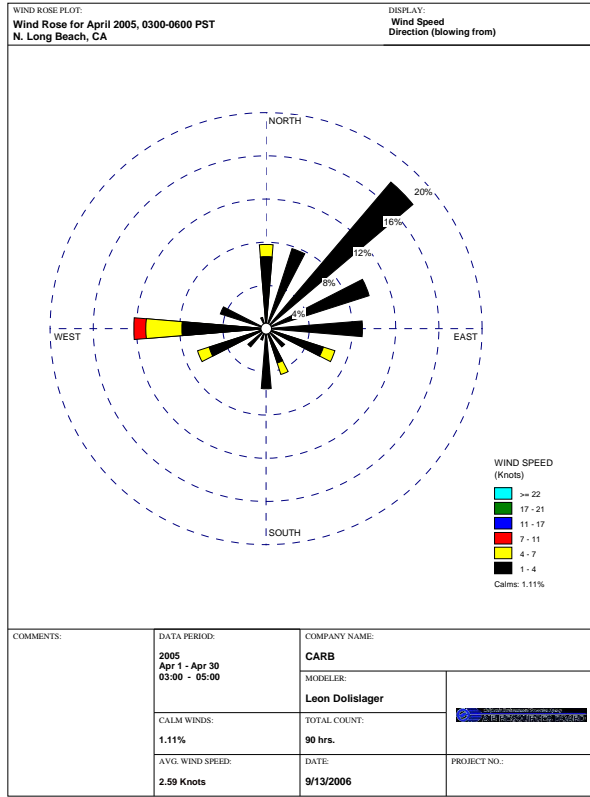
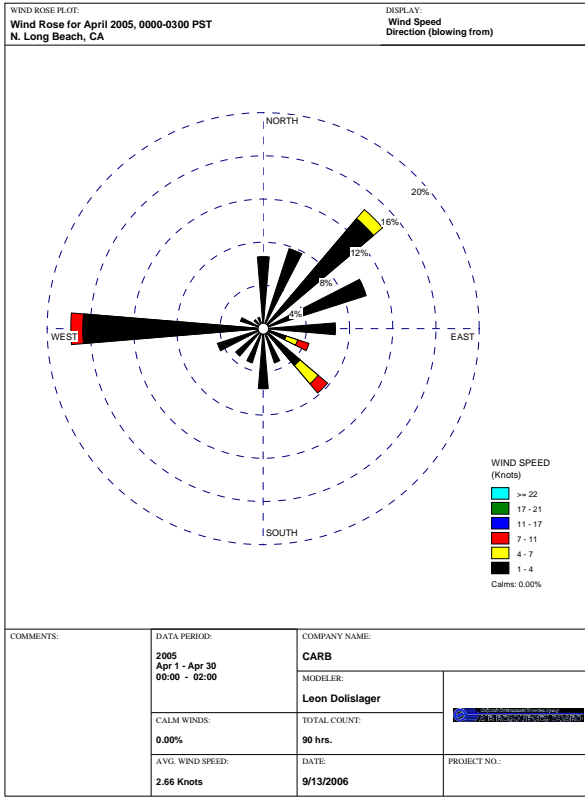


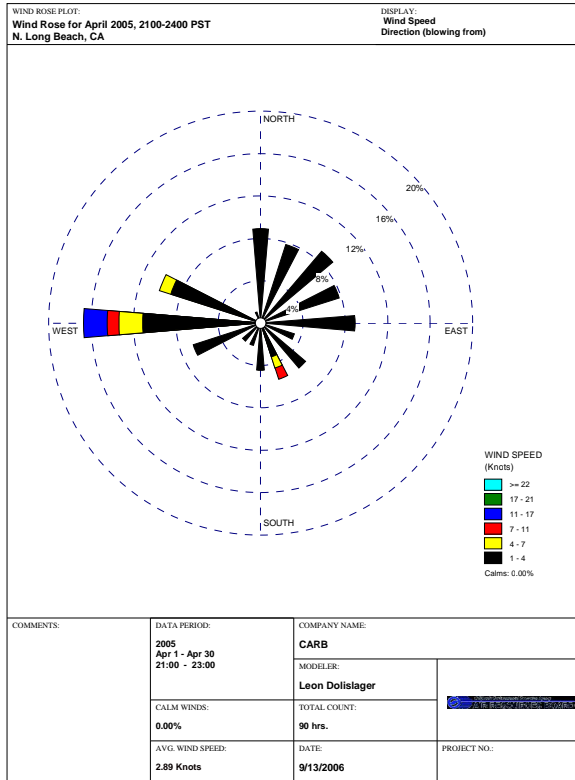
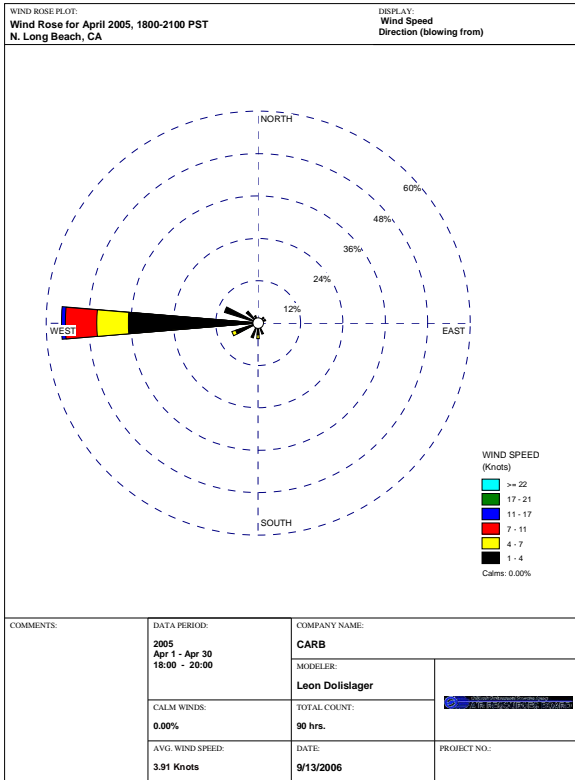
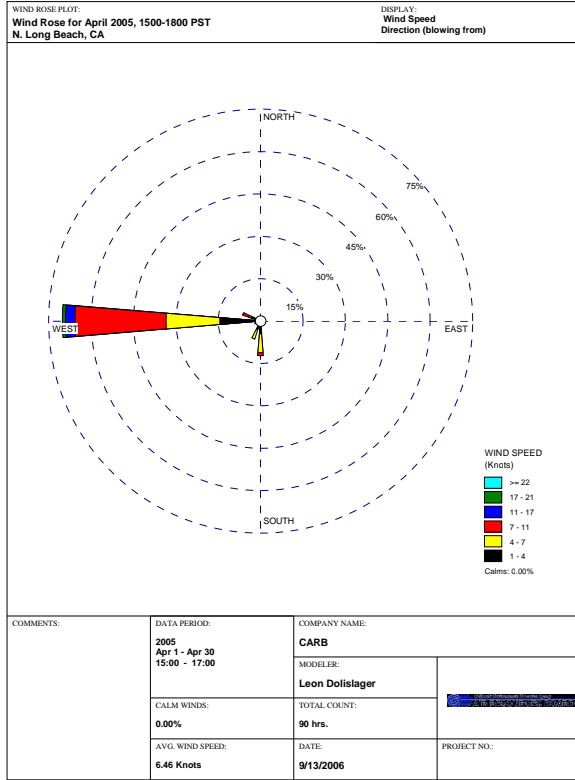
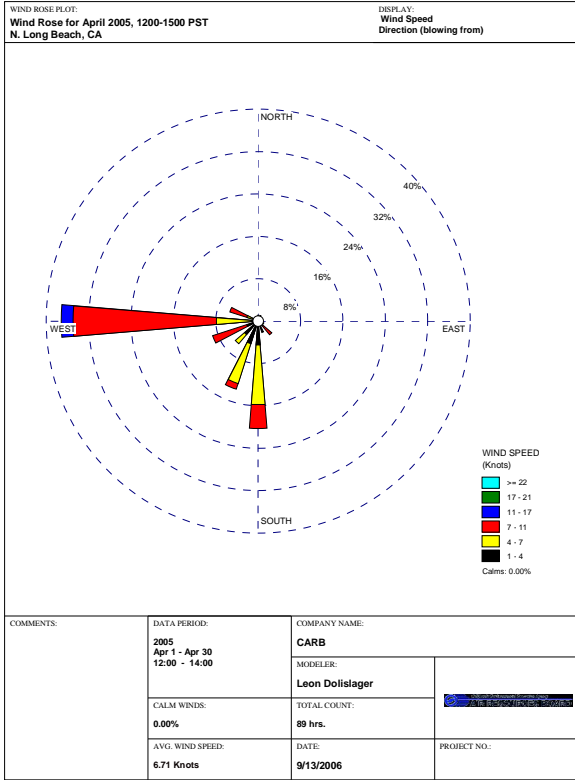
WRPLOT View - Lakes Environmental Software



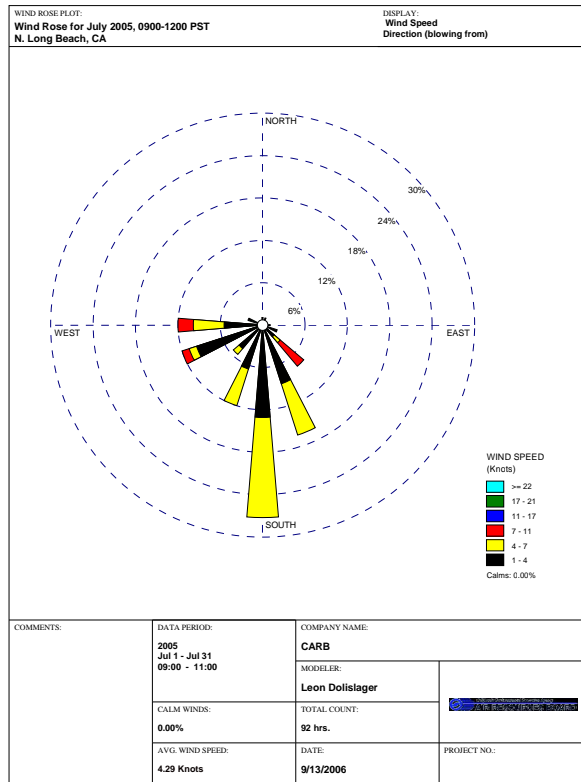
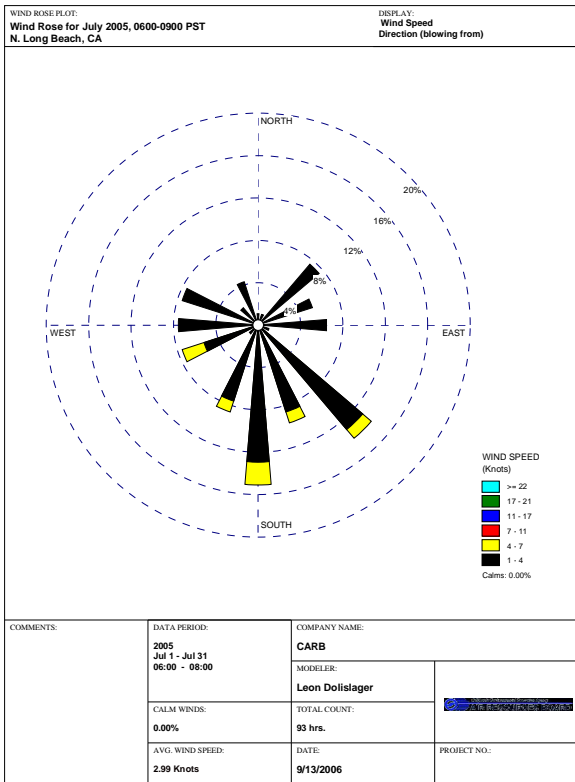
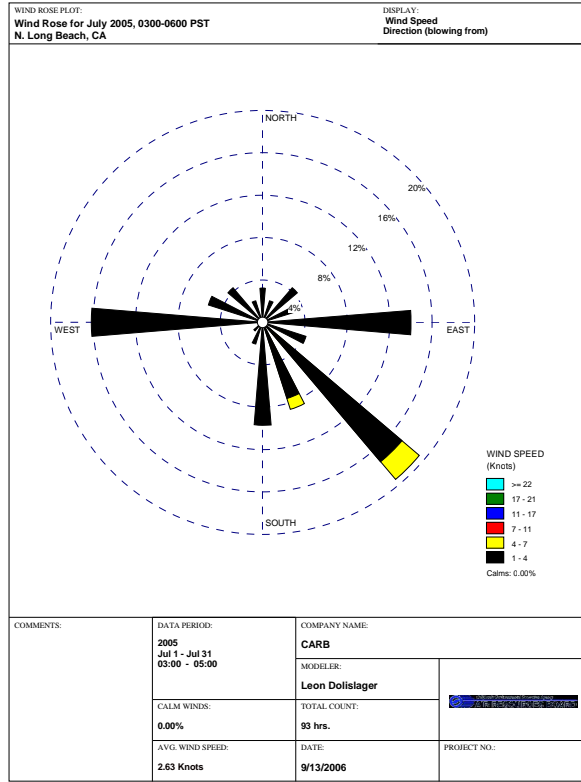
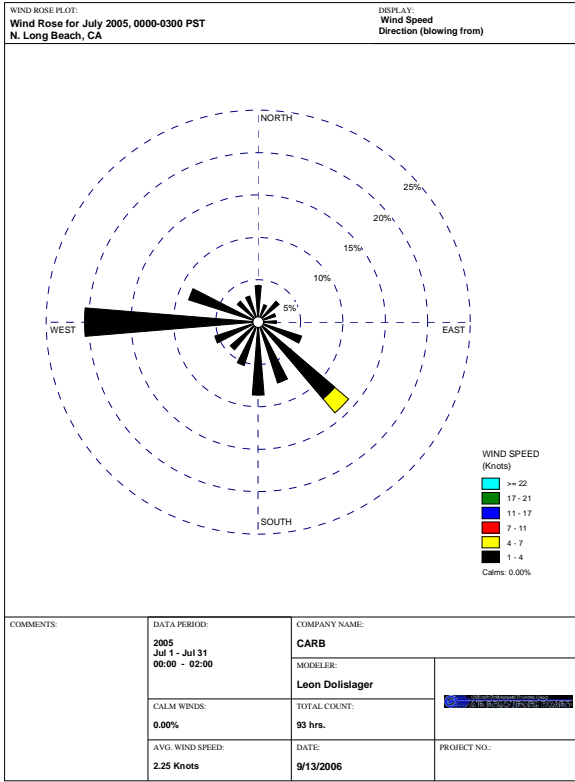


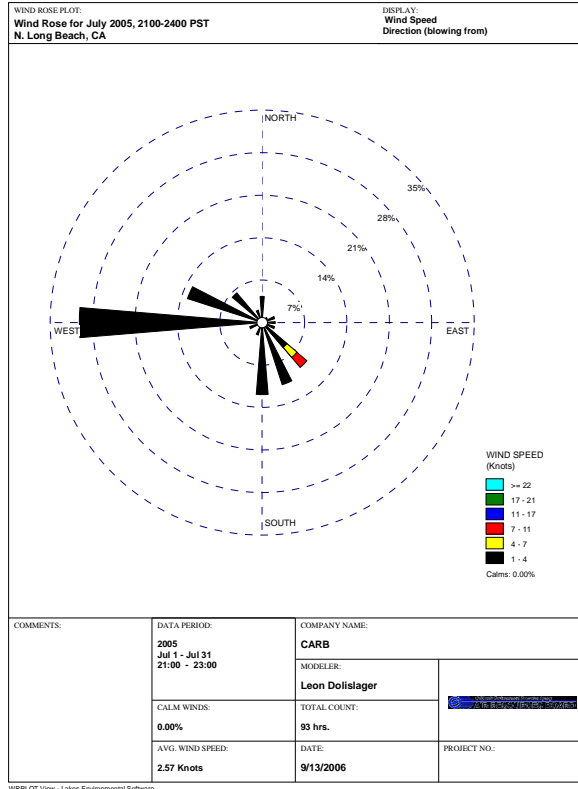
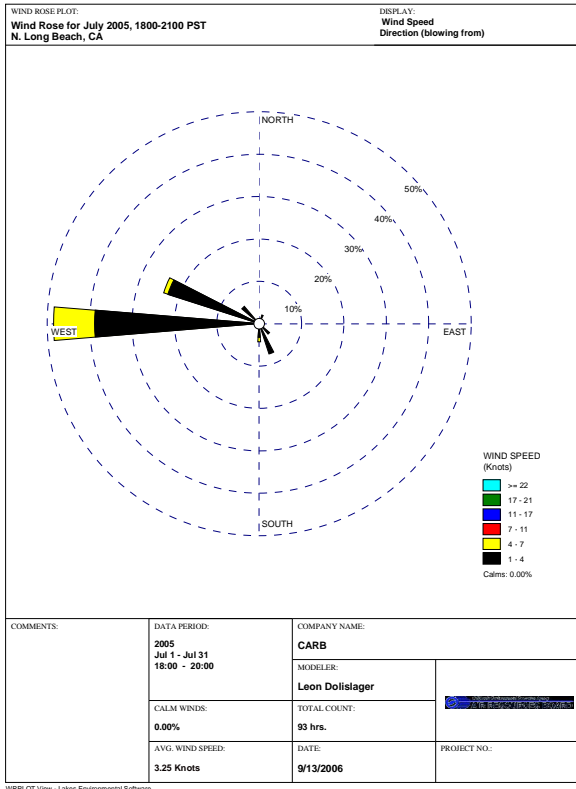
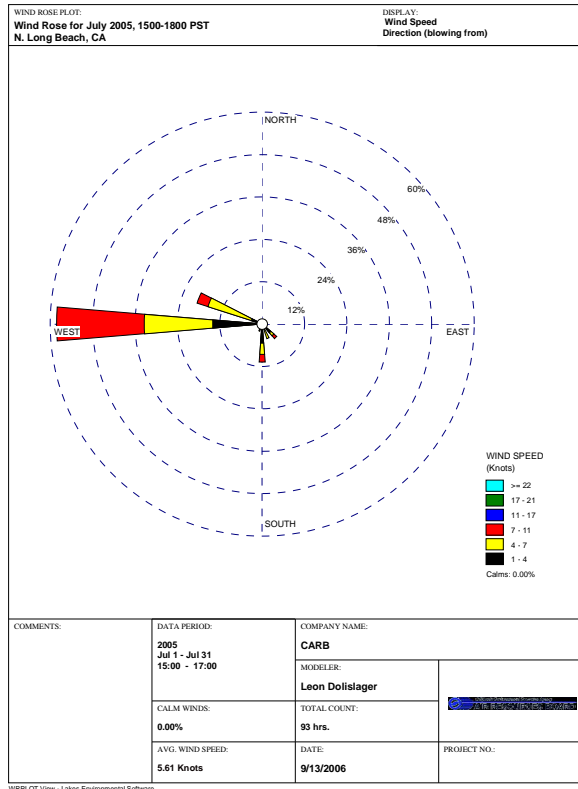
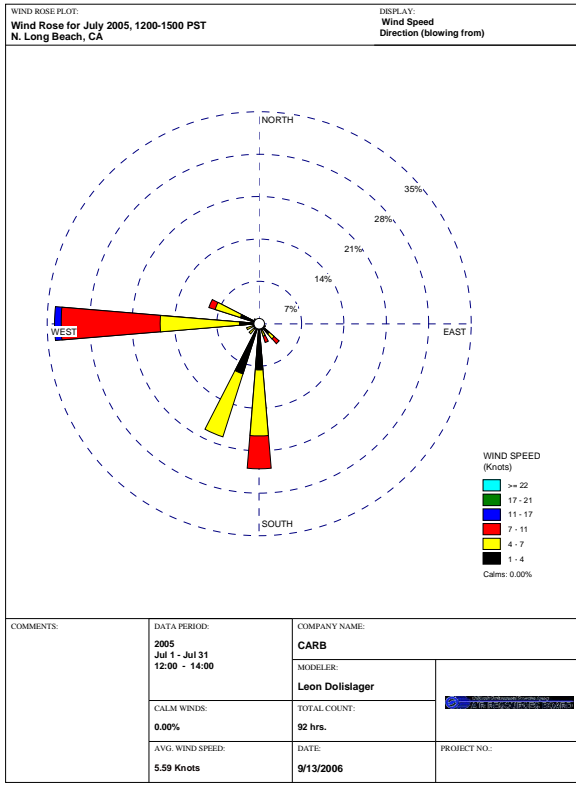
# Spring (April)



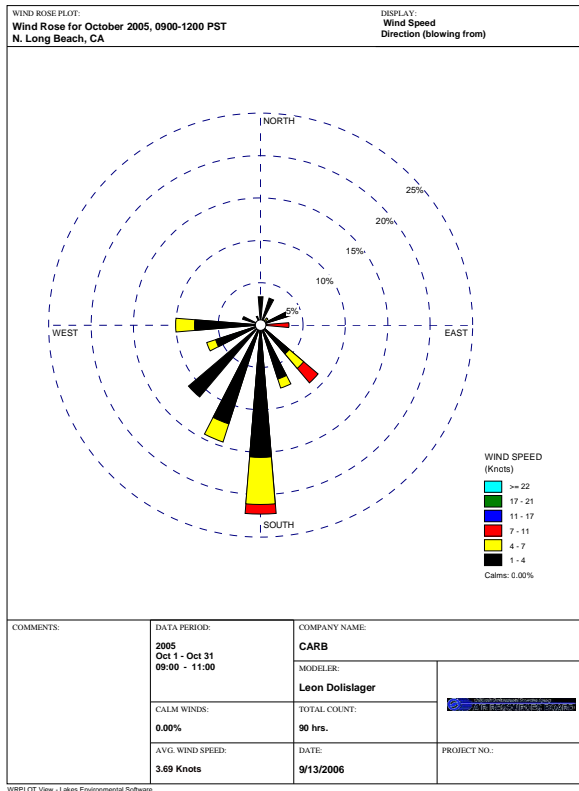
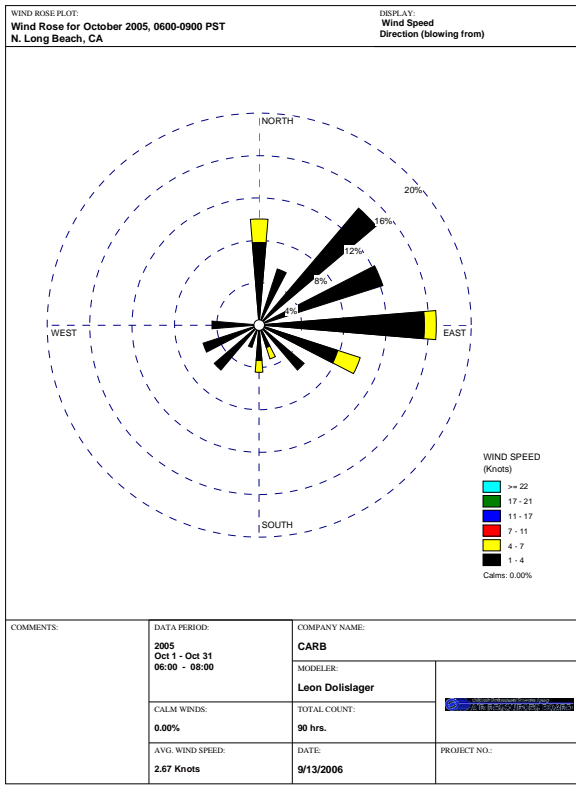
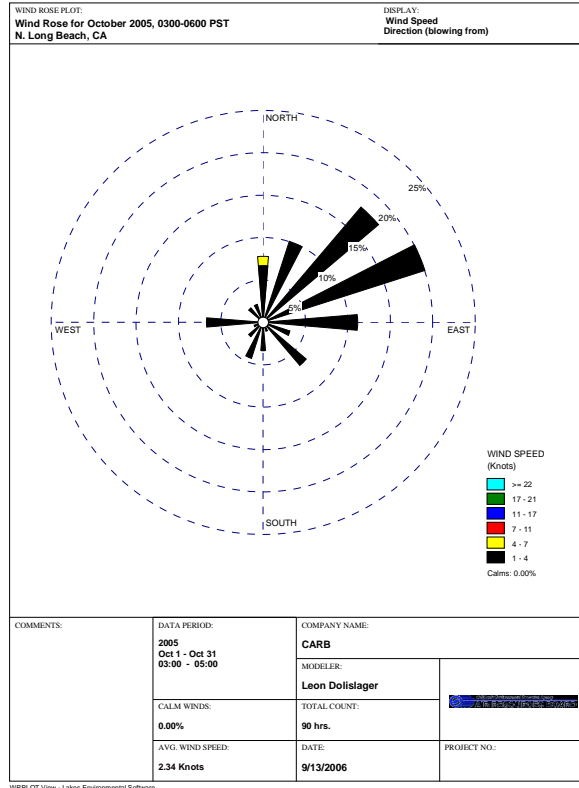
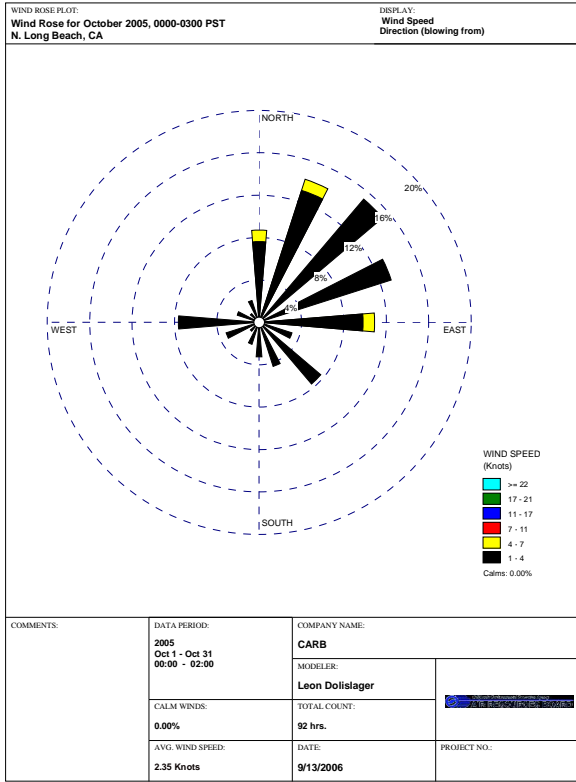


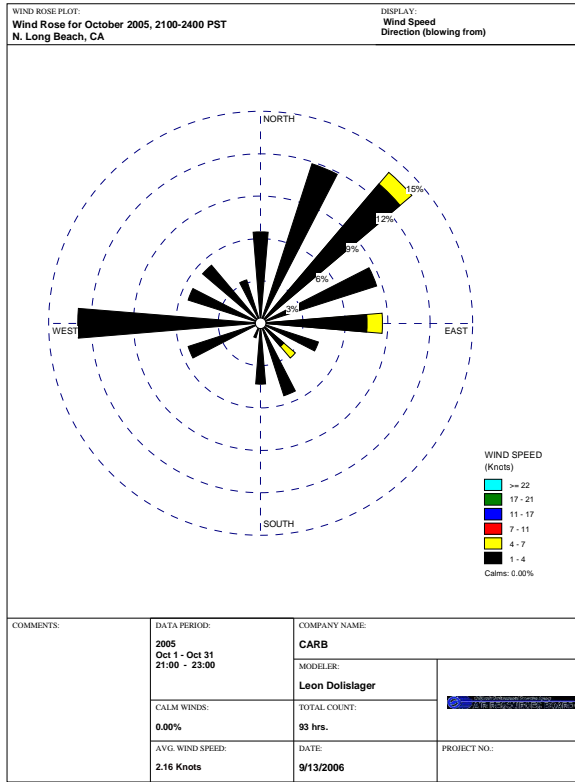
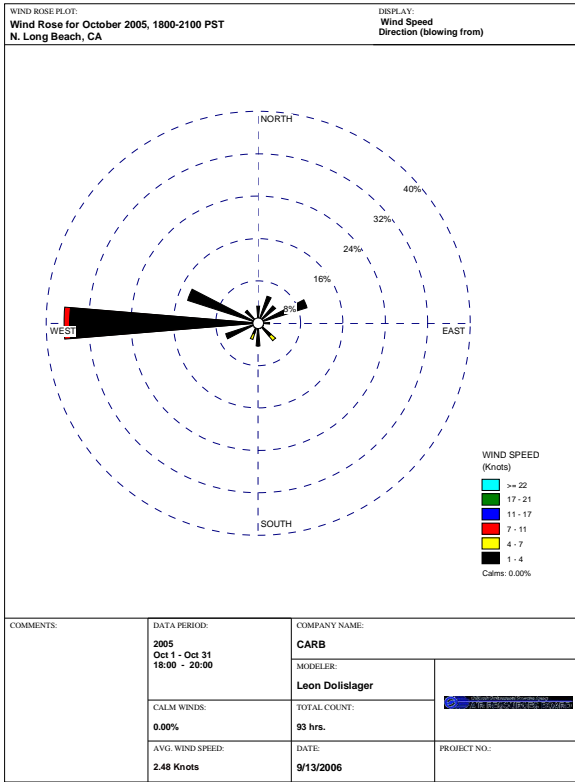
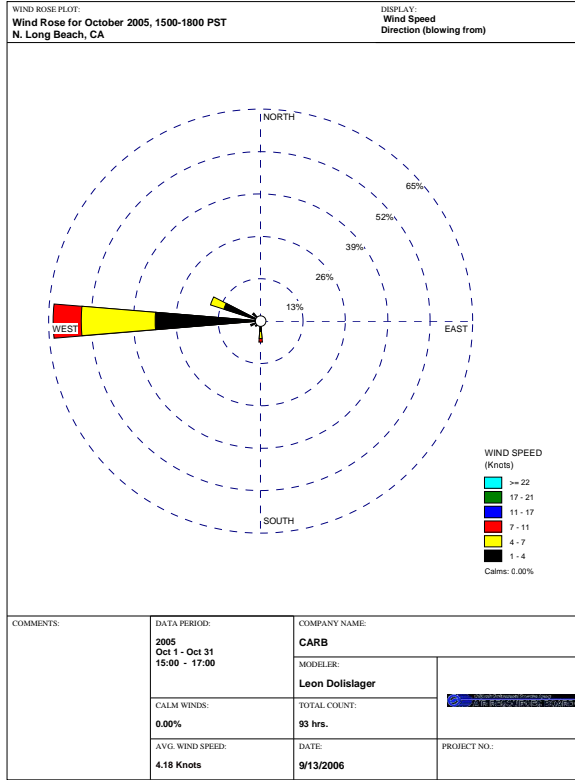
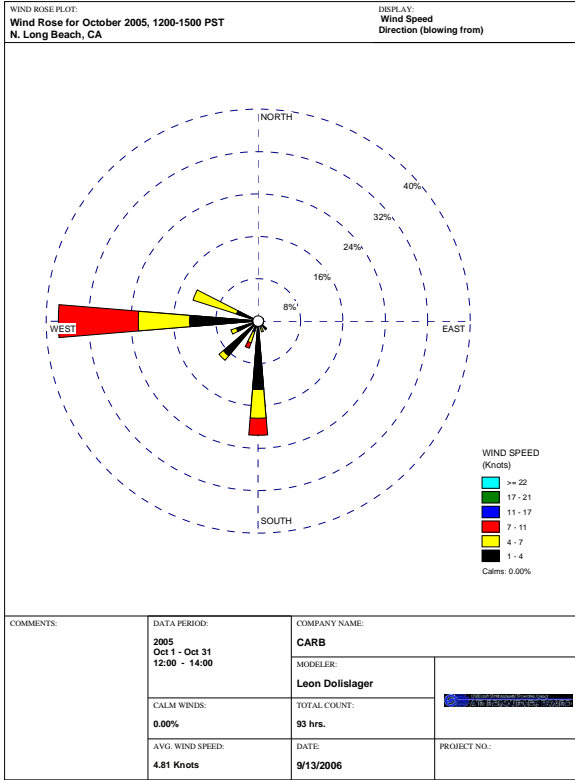
# Summer (July)



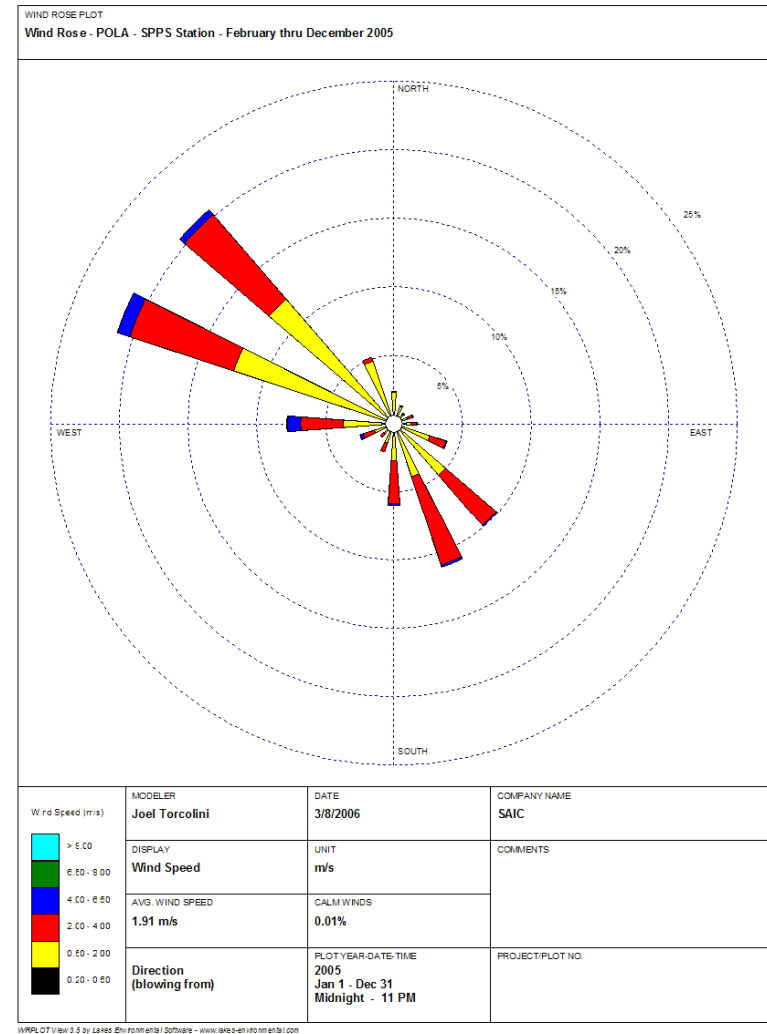
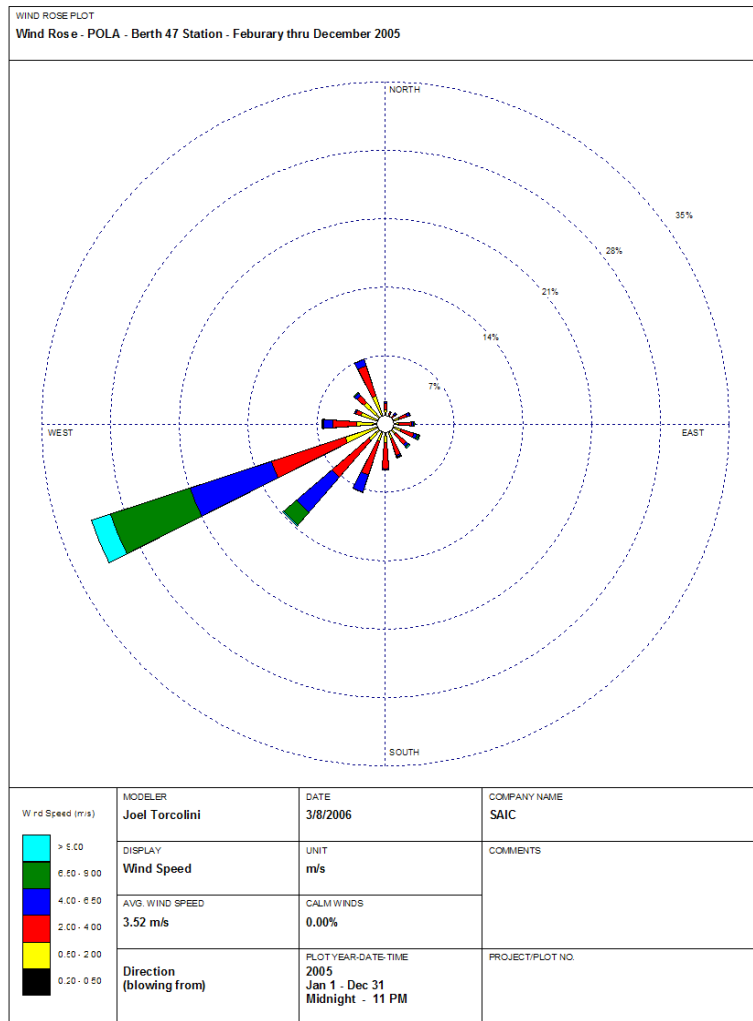


# Fall (October)



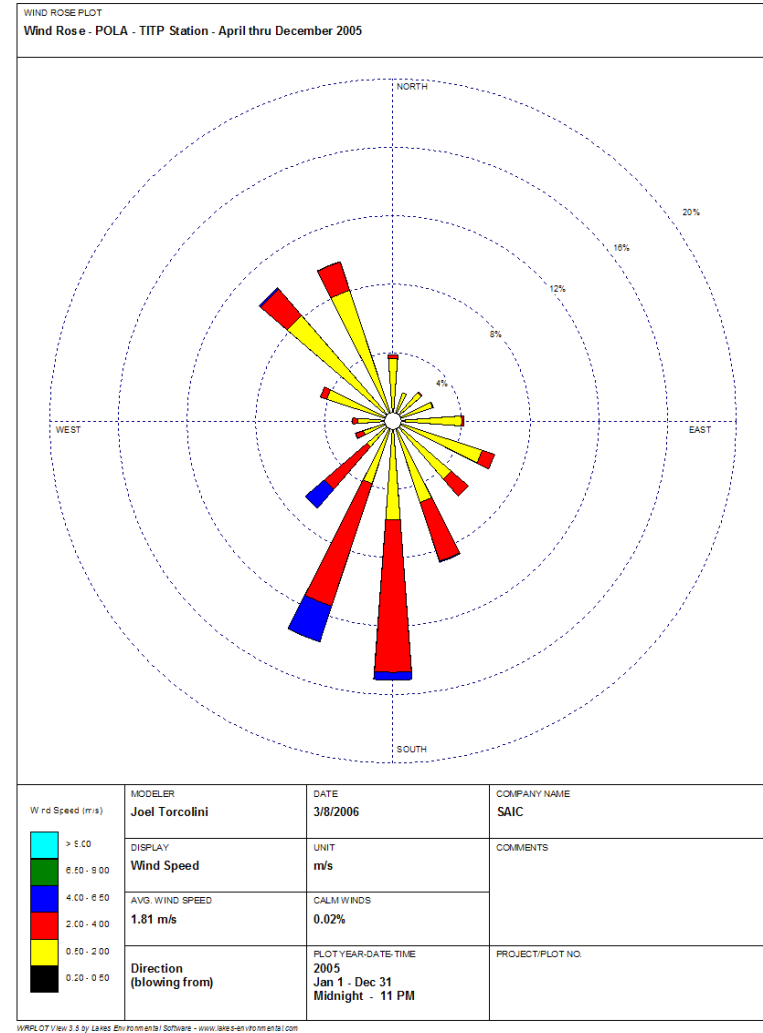
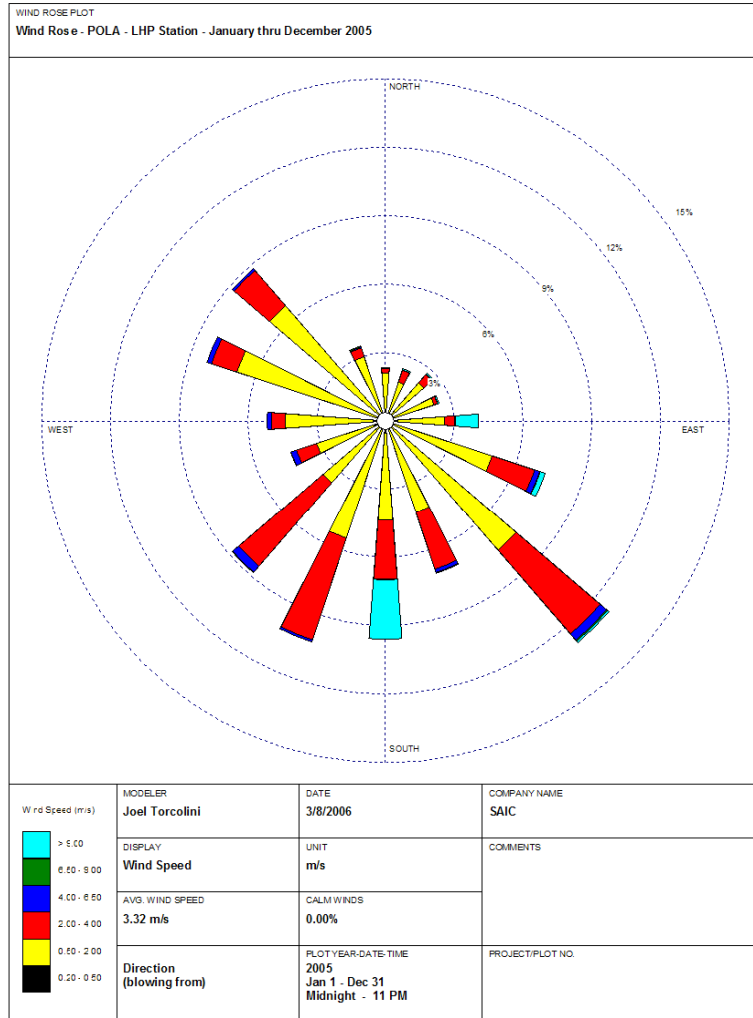


**Annual Summary of Port of Los Angeles Sites – harbor (CBS) and inland (SPPS)**  
 (Coastal Boundary Station - Berth 47, Wilmington Community Station – Saints Peter and Paul School)



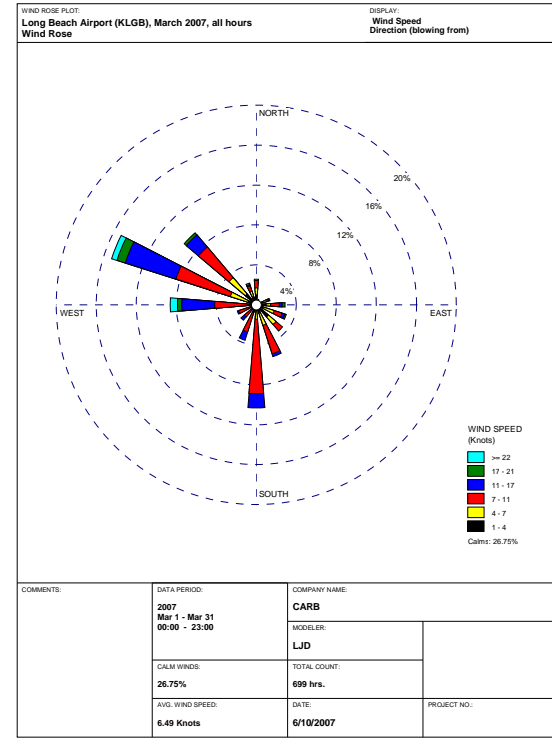
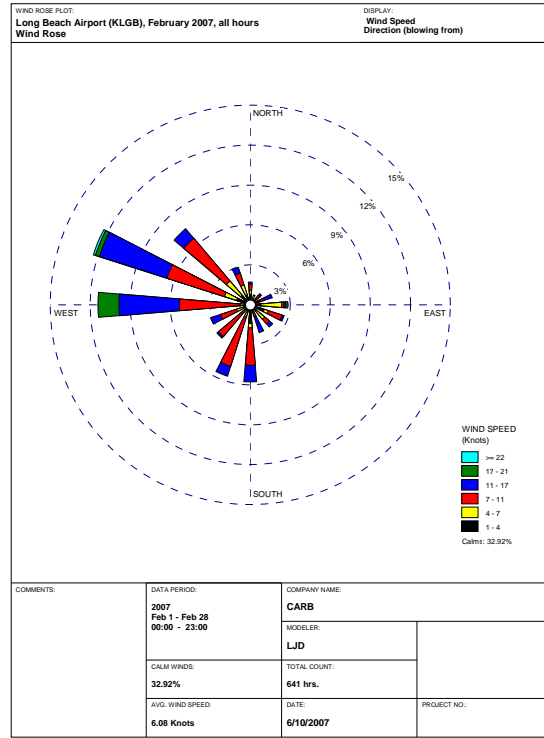
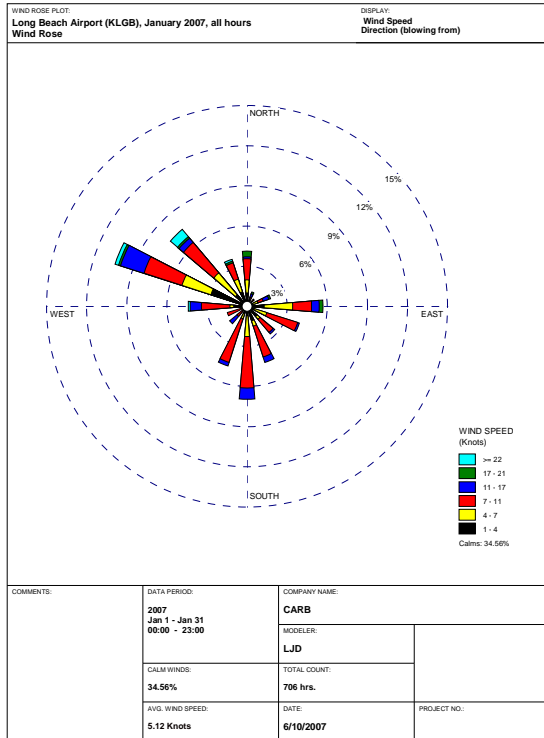


**Annual Summary of Port of Los Angeles Sites – coastal sites (SCS & SDS)**  
 (San Pedro Community Station – Liberty Hills Plaza Building, Source Dominated Station - Terminal Island Treatment Plant)



# Harbor Communities Monitoring Study Data Summaries

## Long Beach Airport (all hours) January, February, March 2007



# North Long Beach (all hours) January, February, March 2007

