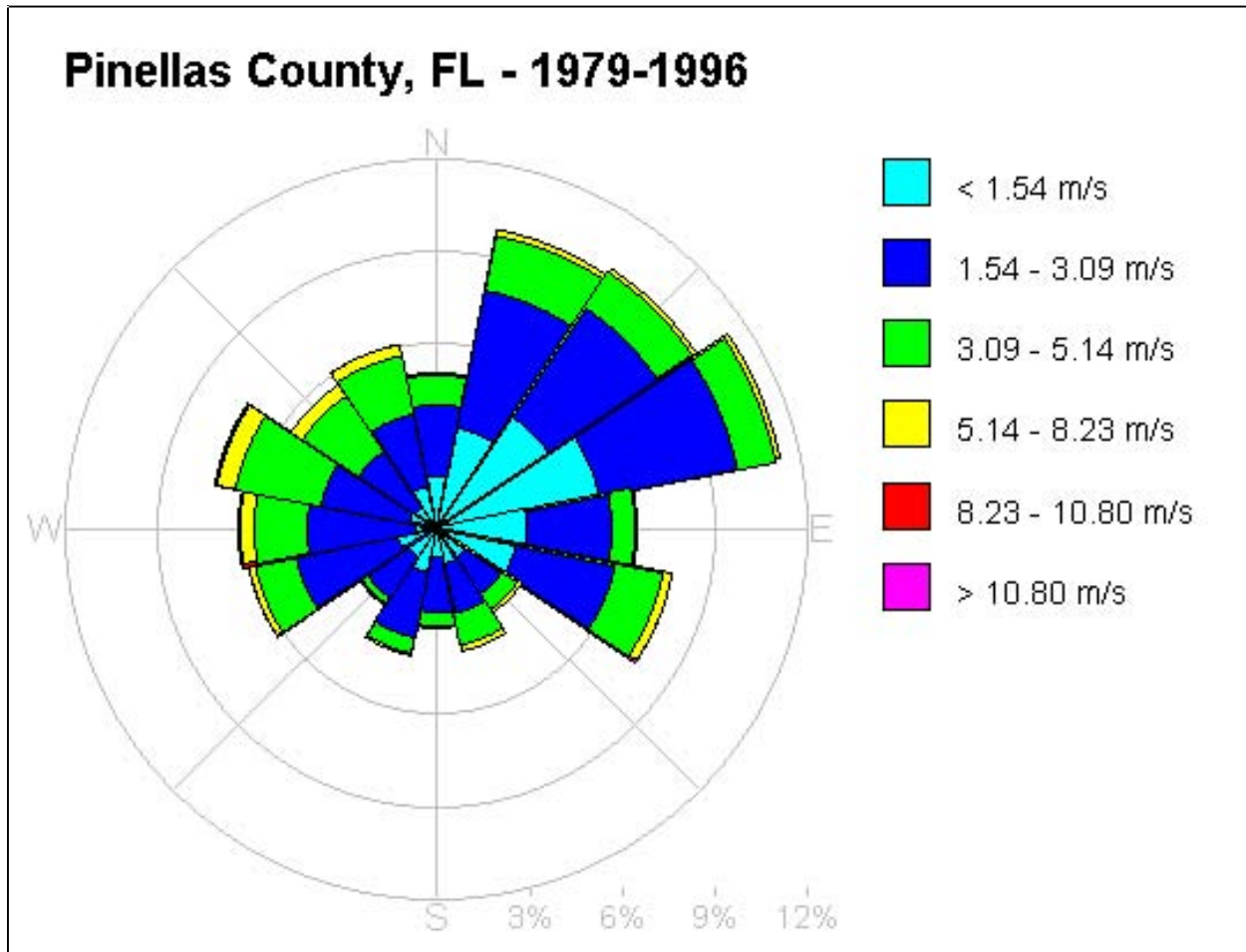
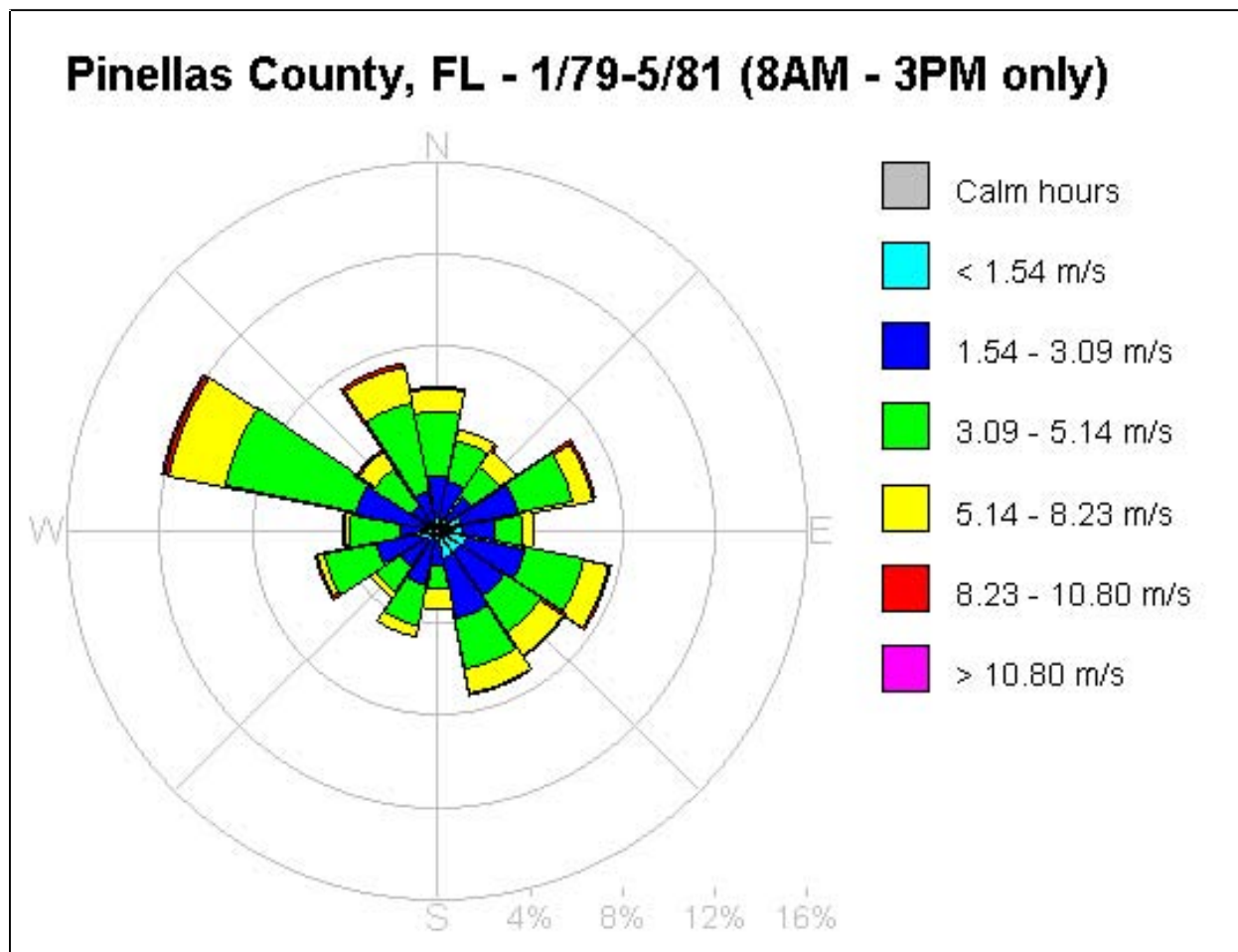


**Figure 9**  
**Wind Rose for PCDEM's Anclote Road Meteorological Station: 1979–1996**



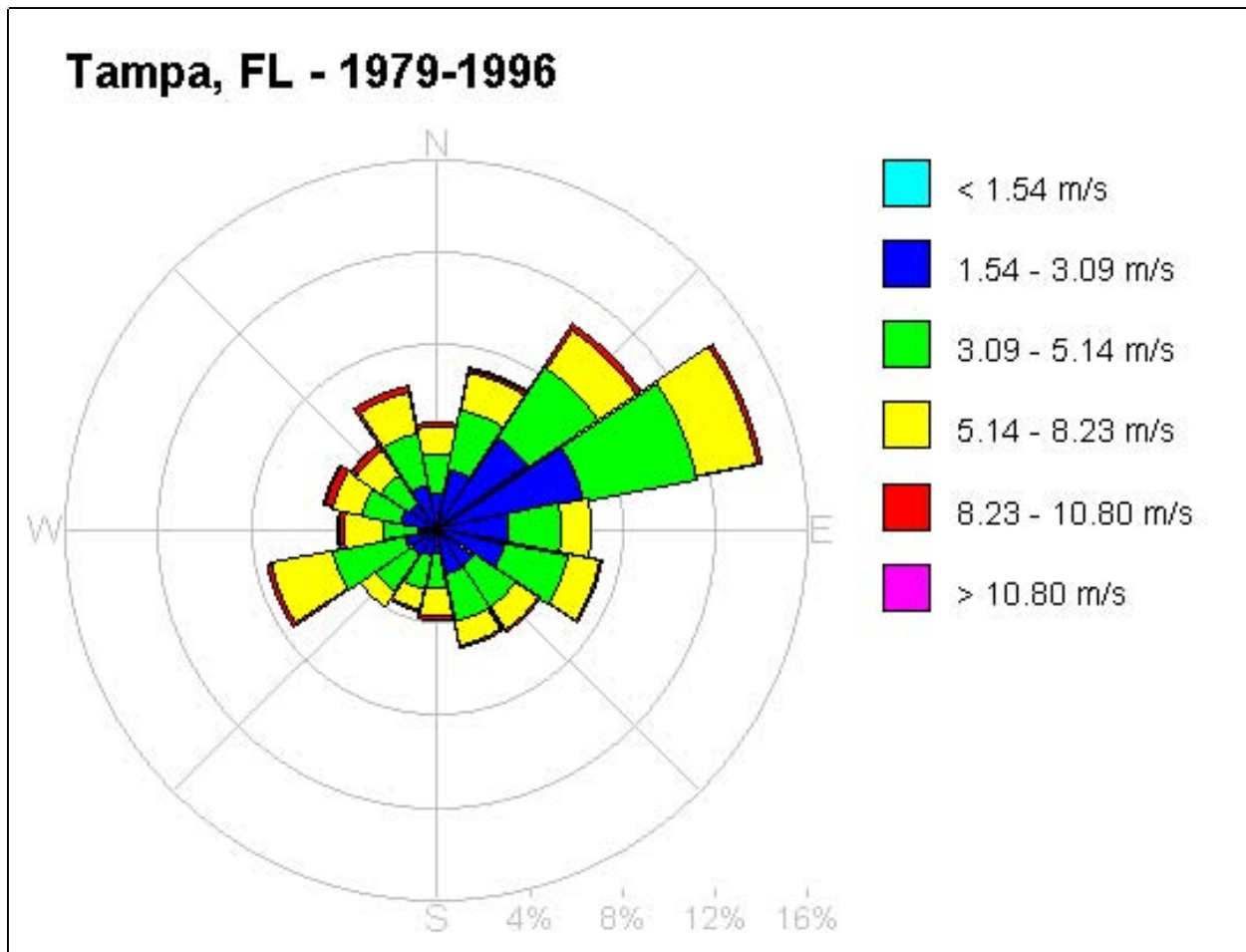
Notes: Data source: PCDEM 2002.  
Bars in the figure indicate the direction *from which* wind was blowing.  
m/s - meters per second

**Figure 10**  
**Wind Rose for PCDEM's Anclote Road Meteorological Station:**  
**January 1979–May 1981, 8:00 AM–3:00 PM**



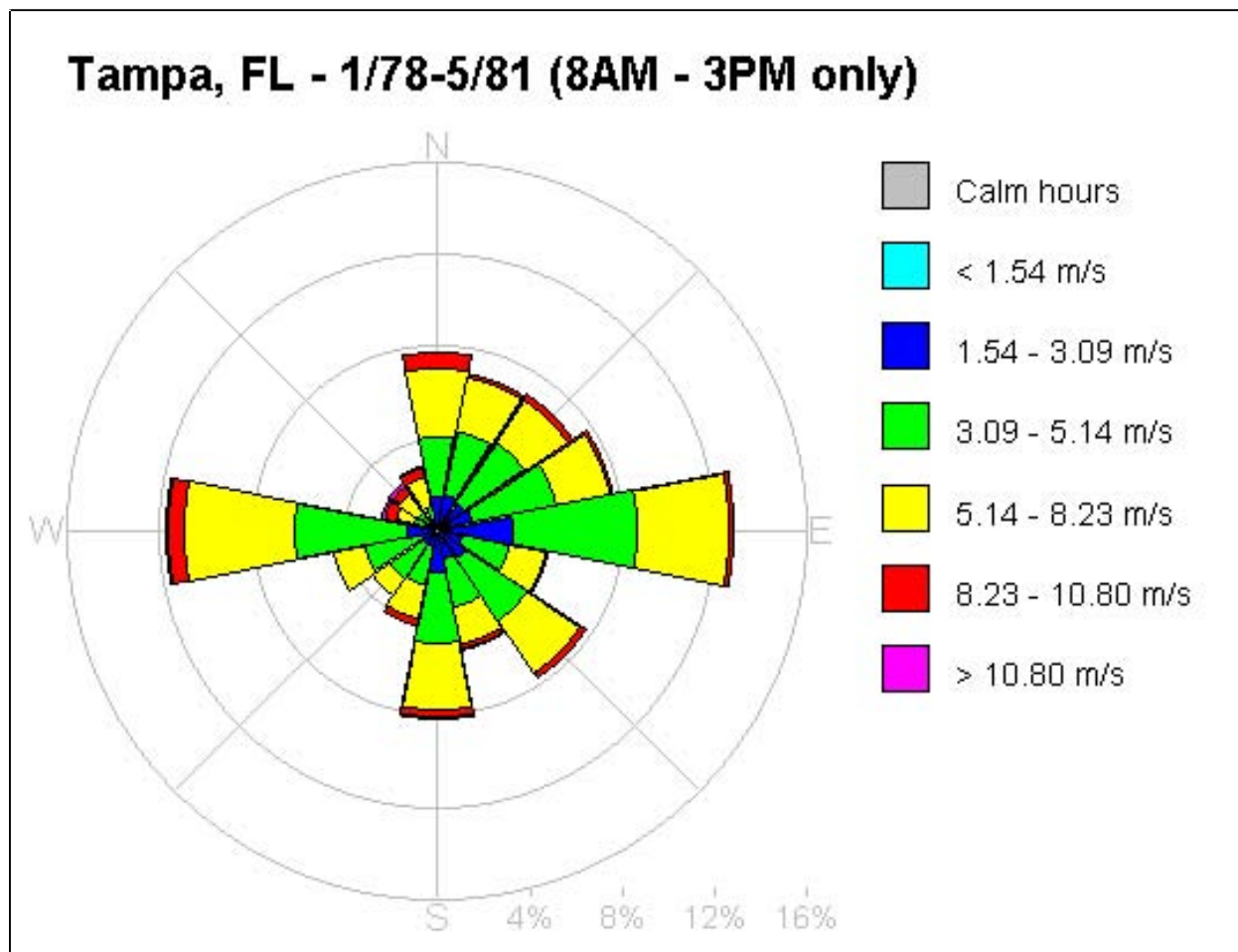
Notes: Data source: PCDEM 2002.  
 Bars in the figure indicate the direction *from which* wind was blowing.  
 Wind rose depicts prevailing wind patterns for the time frame when all three of the following conditions were met: (a) this meteorological station was reporting valid data, (b) Gulfside Elementary School was open, and (c) SCC production processes were still operating.  
 m/s - meters per second

**Figure 11**  
**Wind Rose for Tampa International Airport: 1979–1996**



Notes: Data source: NCDC 2002.  
Bars in the figure indicate the direction *from which* wind was blowing.  
m/s - meters per second

**Figure 12**  
**Wind Rose for Tampa International Airport:**  
**January 1978–May 1981, 8:00 AM–3:00 PM**



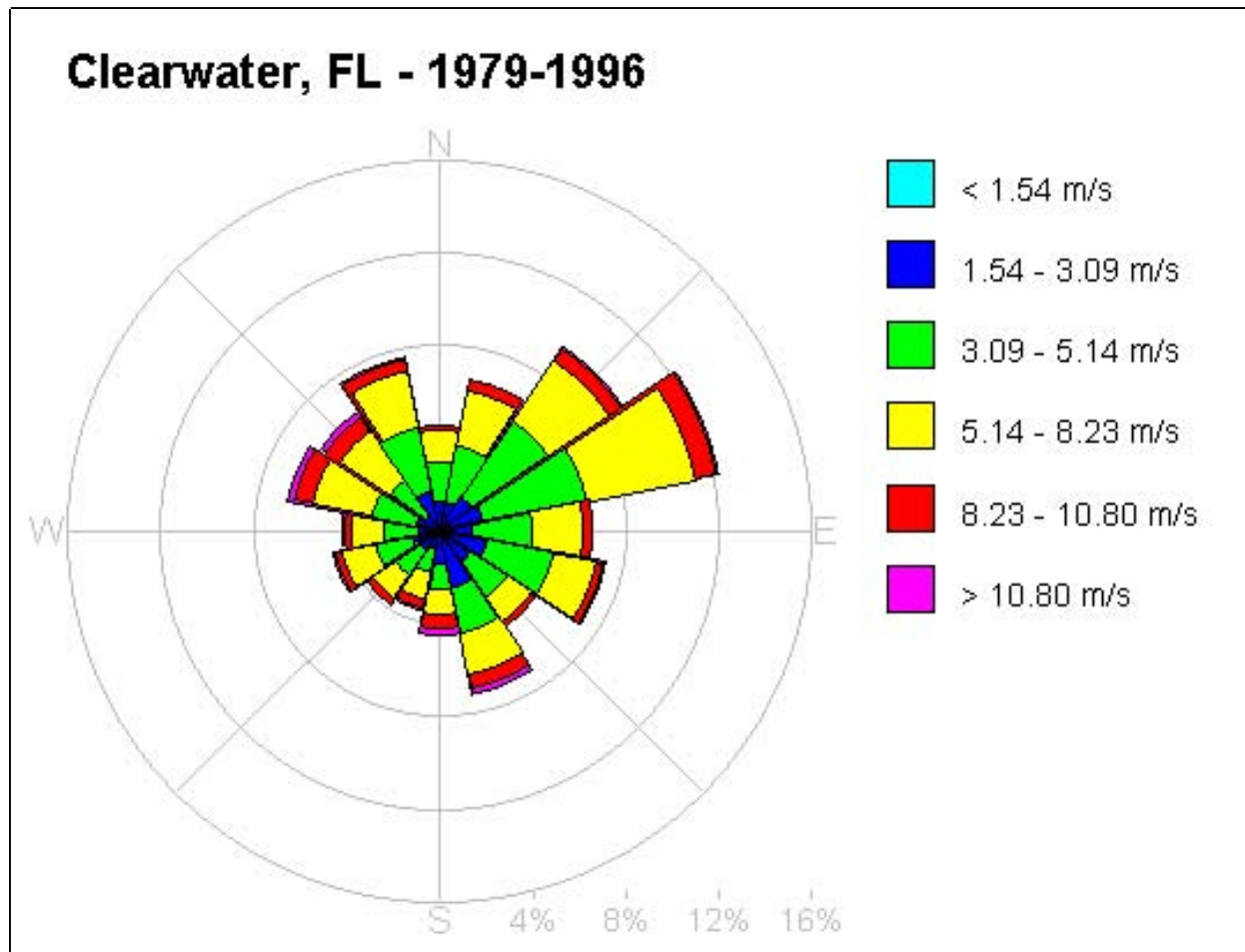
Notes: Data source: NCDC 2002.

Bars in the figure indicate the direction *from which* wind was blowing.

Wind rose depicts prevailing wind patterns for the time frame when all three of the following conditions were met: (a) this meteorological station was reporting valid data, (b) Gulfside Elementary School was open, and (c) SCC production processes were still operating.

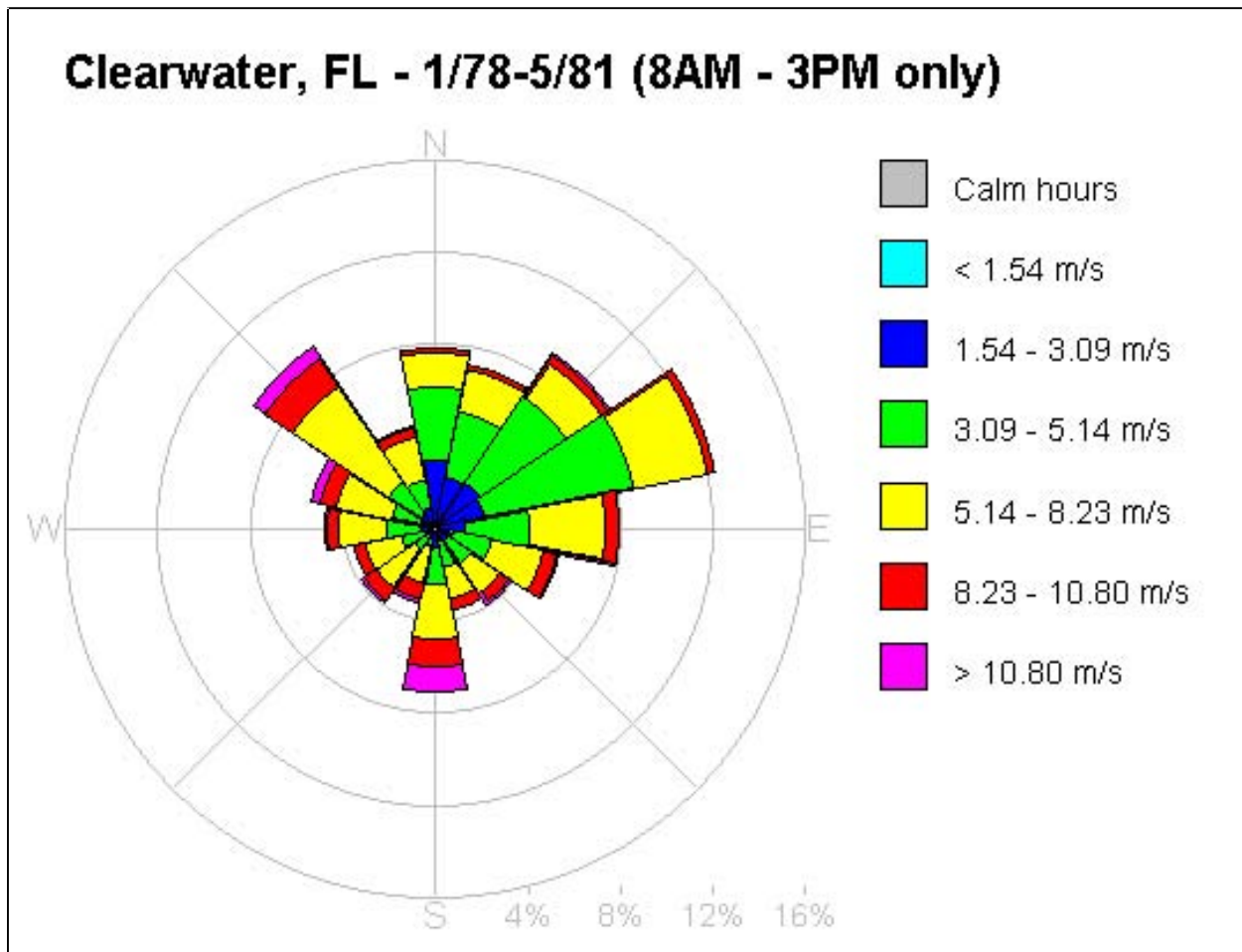
m/s - meters per second

**Figure 13**  
**Wind Rose for St. Petersburg–Clearwater International Airport: 1979–1996**



Notes: Data source: NCDC 2002.  
Bars in the figure indicate the direction *from which* wind was blowing.  
m/s - meters per second

**Figure 14**  
**Wind Rose for St. Petersburg–Clearwater International Airport:**  
**January 1978–May 1981, 8:00 AM–3:00 PM**



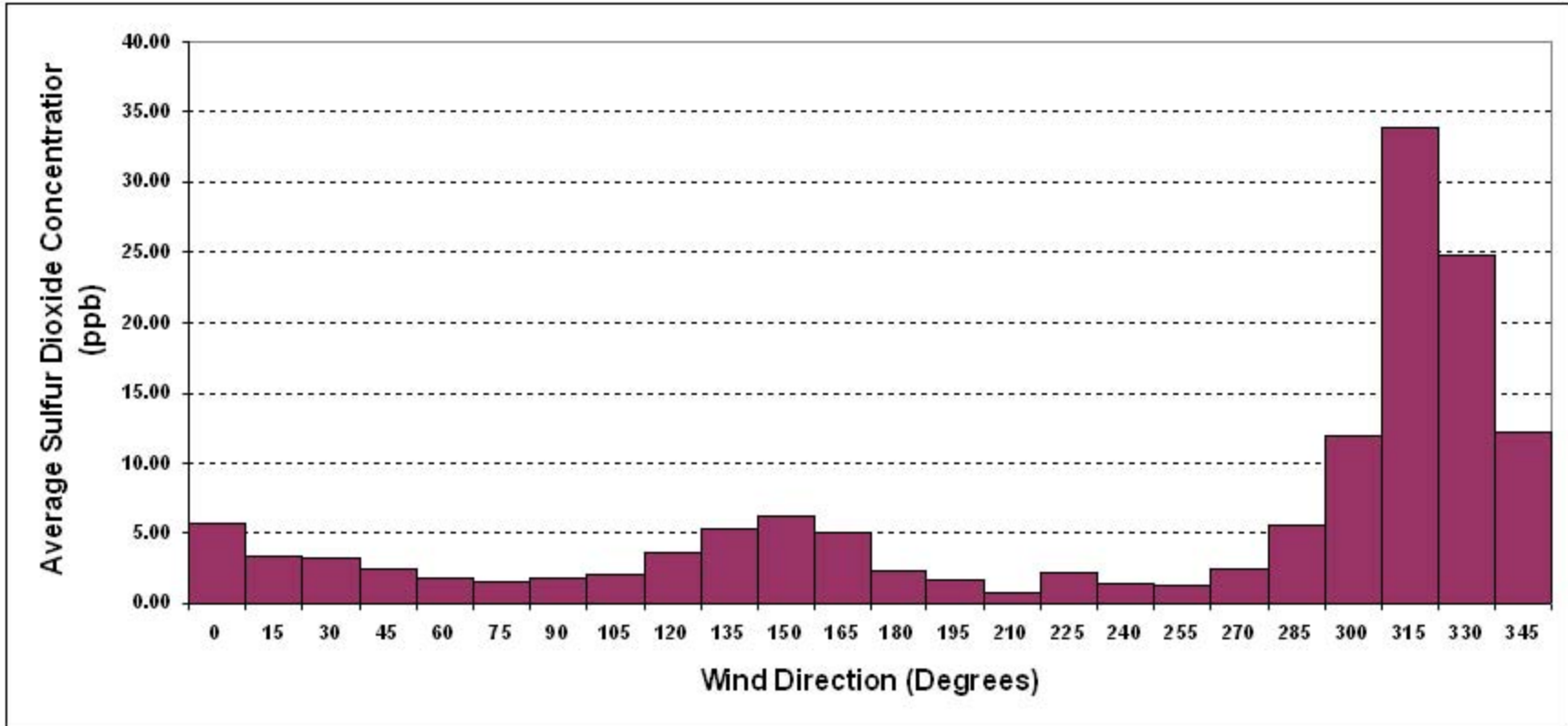
Notes: Data source: NCDC 2002.

Bars in the figure indicate the direction *from which* wind was blowing.

Wind rose depicts prevailing wind patterns for the time frame when all three of the following conditions were met: (a) this meteorological station was reporting valid data, (b) Gulfside Elementary School was open, and (c) SCC production processes were still operating.

m/s - meters per second

**Figure 15**  
**Average Sulfur Dioxide Concentrations at the Anclote Road Monitoring Stations, by Wind Direction:**  
**1979–1981**



Notes: Data sources: PCDEM 2002, EPA 2002.

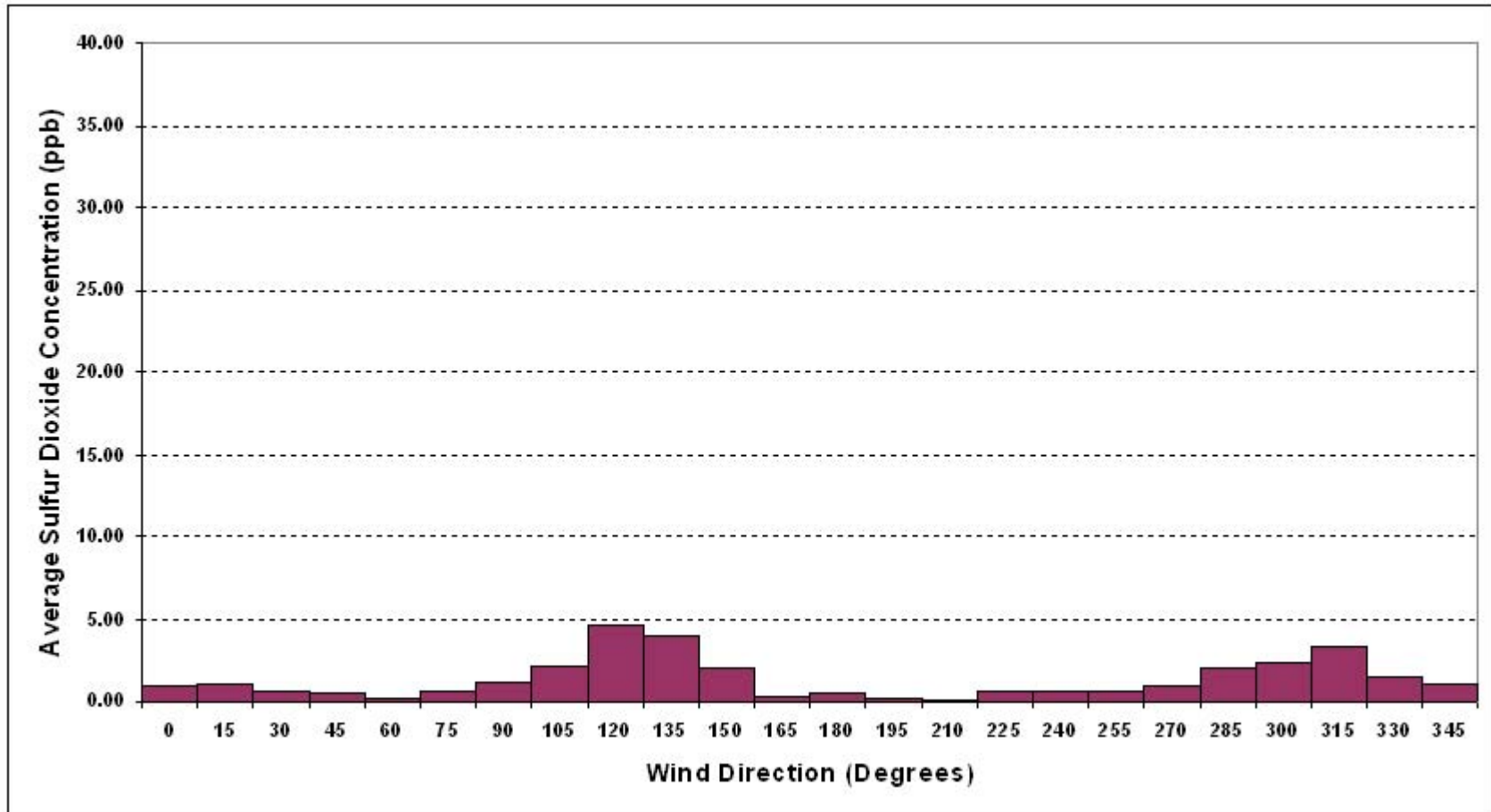
The time frame 1979 to 1981 was selected because it is the only period during which hourly wind direction and sulfur dioxide concentrations were simultaneously measured at the Anclote Road monitoring station while SCC operated. Valid, simultaneous measurements of these parameters were available for 21,848 hours between 1979 and 1981.

Between 1979 and 1981, PCDEM reported wind direction to the nearest 15° interval, with some exceptions. Out of the 21,848 hours of data available, 23 observations (or 0.1%) were reported to the nearest 5° interval. These observations were assigned to the nearest 15° interval for the analysis shown above.

Wind directions between 300° and 360° (or 0°) blew from the SCC facility to the monitoring station. A wind direction of 315° blew from the rotary kiln stack to the monitoring station.

ppb - parts per billion

**Figure 16**  
**Average Sulfur Dioxide Concentrations at the Anclote Road Monitoring Stations, by Wind Direction:**  
**1982–1984**



Notes: Data sources: PCDEM 2002, EPA 2002.

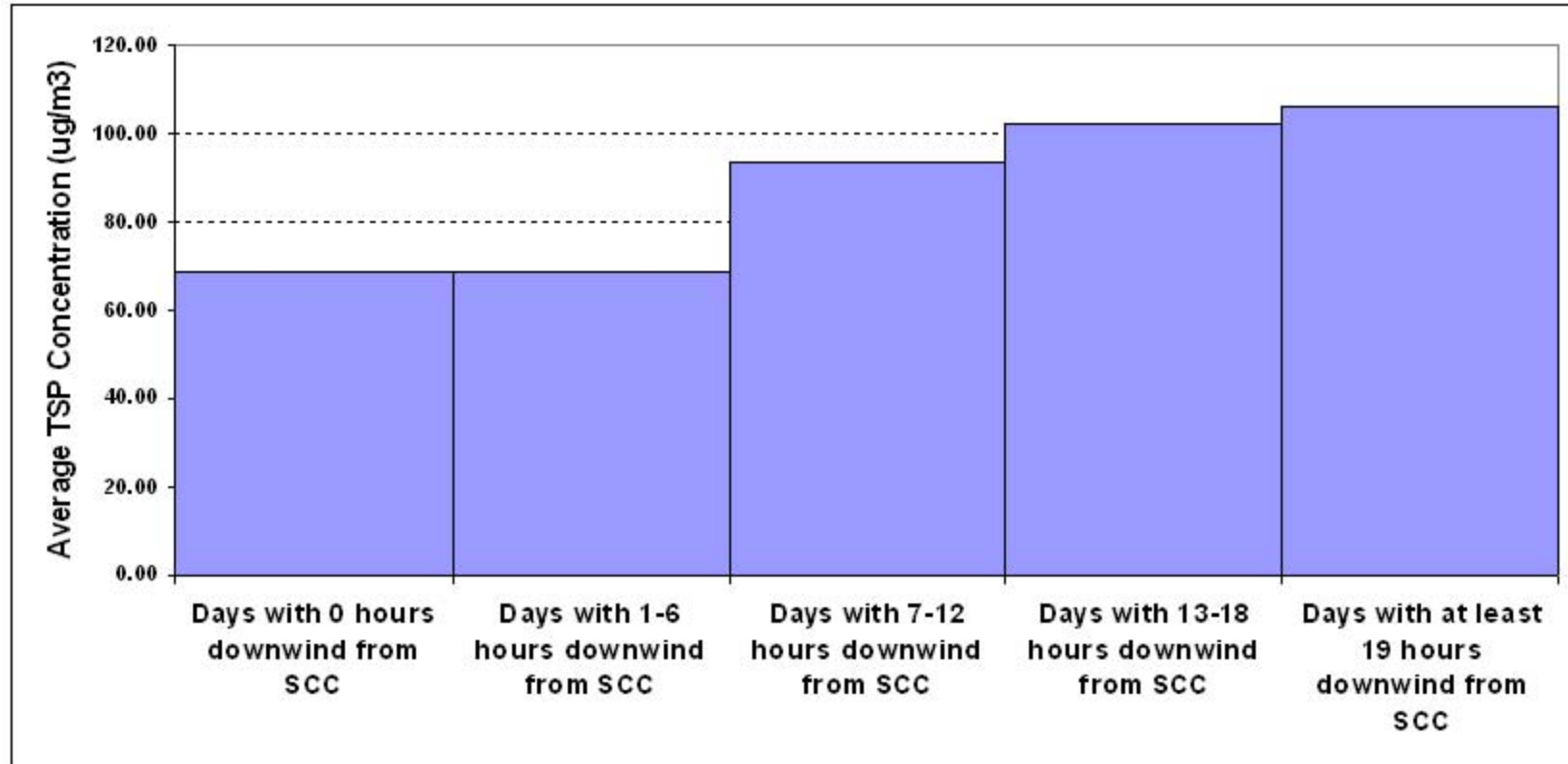
The time frame 1982 to 1984 was selected to evaluate air quality in the years immediately following SCC’s closure. Valid, simultaneous measurements of these parameters were available for 23,484 hours between 1982 and 1984.

Between 1982 and 1984, PCDEM reported wind direction to the nearest 15° interval, with some exceptions. Out of the 23,484 hours of data available, 11 observations (or 0.05%) were reported to the nearest 5° interval. These observations were assigned to the nearest 15° interval for the analysis shown above.

ppb - parts per billion



**Figure 17**  
**Average TSP Concentrations at the Anclote Road Monitoring Station, by Wind Direction: 1979–1981**

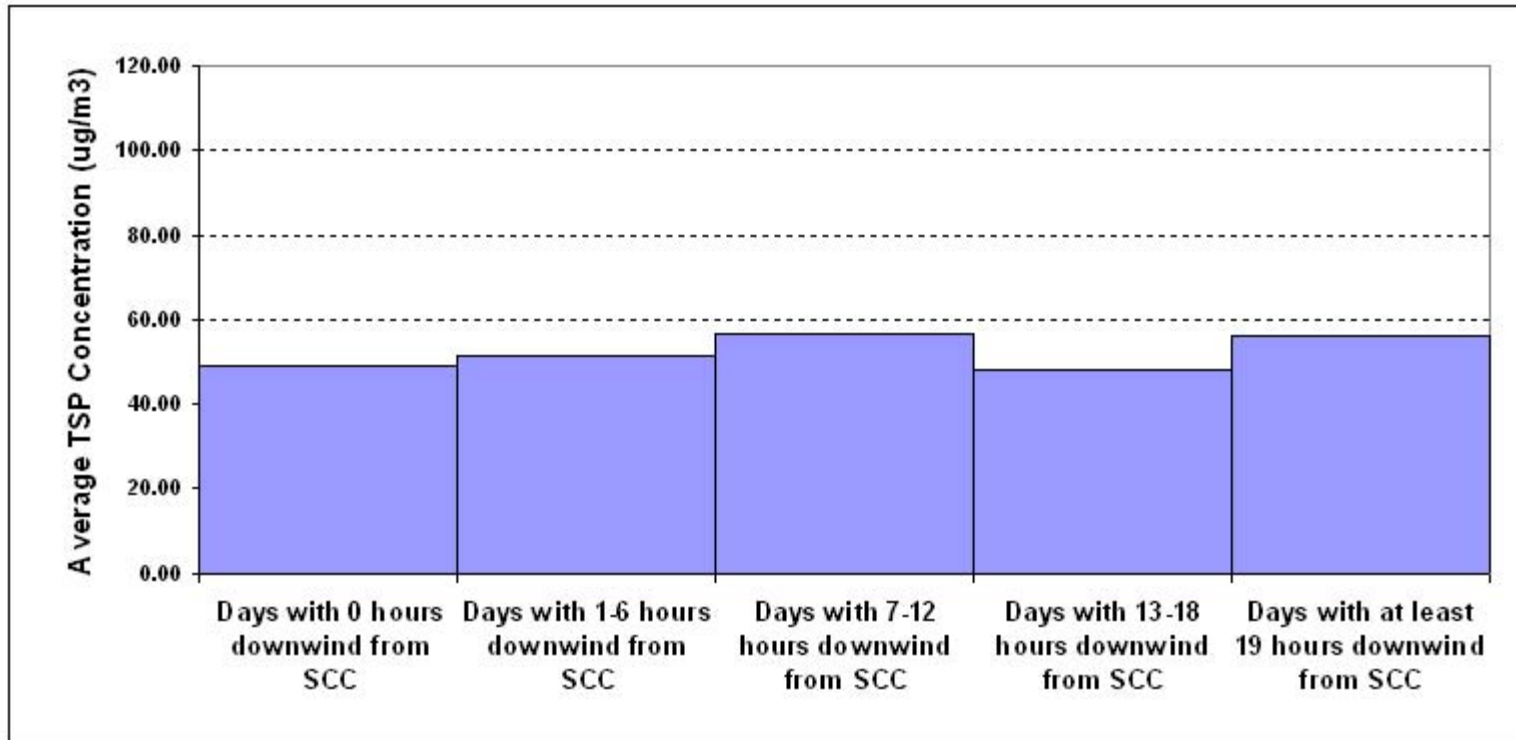


Notes: Data sources: PCDEM 2002, EPA 2002.

An hour “downwind from SCC” was defined as any hour when the wind direction at the Anclote Road station was between 300° and 360° (or 0°). PCDEM collected 170 valid TSP samples between 1979 and 1981; 23 of these samples were not considered in this analysis because more than 4 hours of wind direction data on those days were invalid. The number of remaining samples were distributed among the five categories shown above as follows: 48 samples collected on days with 0 hours downwind from SCC, 55 samples with 1–6 hours downwind from SCC, 26 samples with 7–12 hours downwind from SCC, 11 samples with 13–18 hours downwind from SCC, and 7 samples with at least 19 hours downwind from SCC.

TSP - total suspended particulates  
 ug/m<sup>3</sup> - micrograms per cubic meter  
 SCC - Stauffer Chemical Company

**Figure 18**  
**Average TSP Concentrations at the Anclote Road Monitoring Station, by Wind Direction: 1982–1984**



Notes: Data sources: PCDEM 2002, EPA 2002.

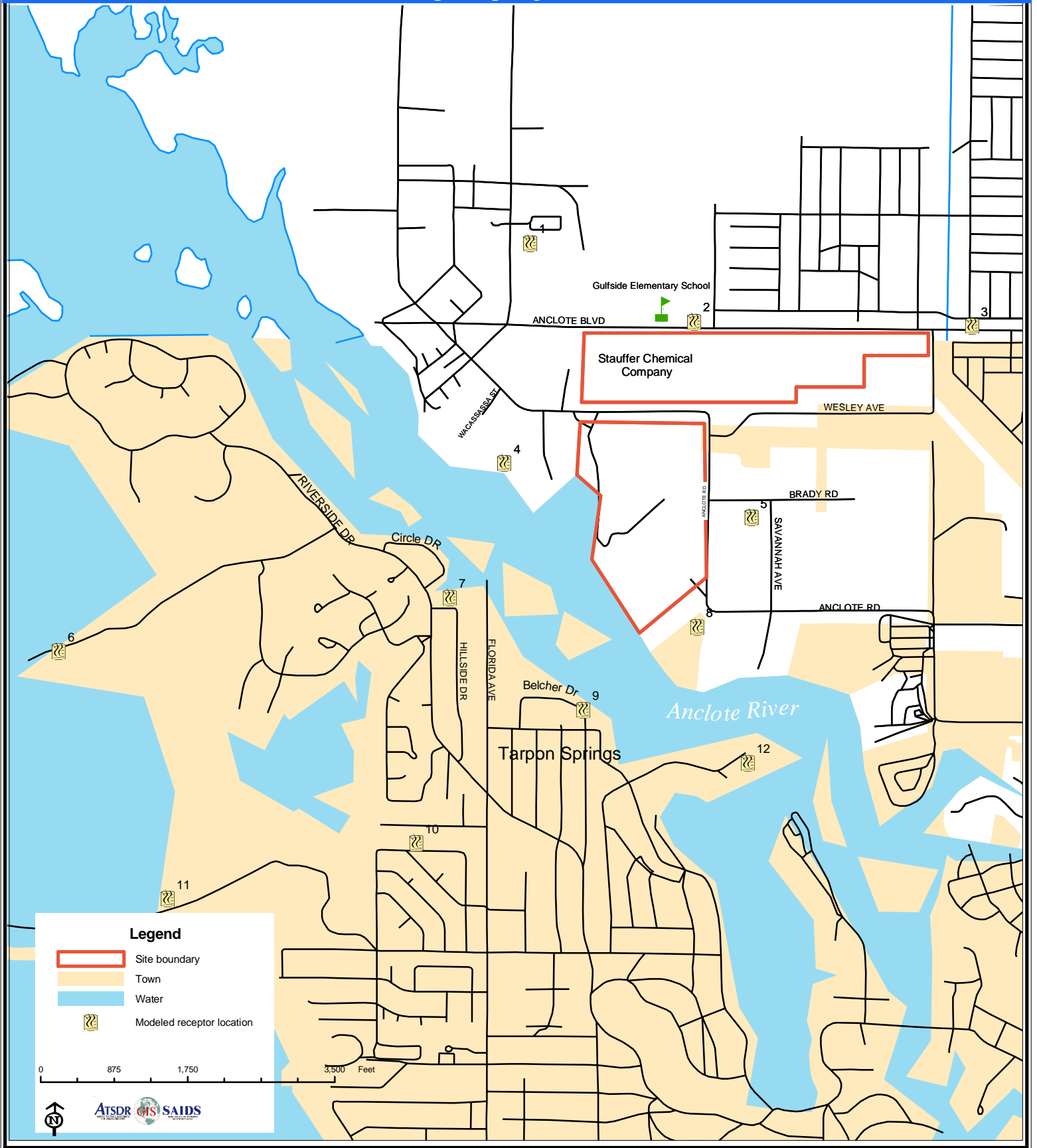
An hour “downwind from SCC” was defined as any hour when the wind direction at the Anclote Road station was between 300° and 360° (or 0°). PCDEM collected 168 valid TSP samples between 1982 and 1984; 14 of these samples were not considered in this analysis because more than 4 hours of wind direction data on those days were invalid. The number of remaining samples were distributed among the five categories shown above as follows: 39 samples collected on days with 0 hours downwind from SCC, 58 samples with 1–6 hours downwind from SCC, 32 samples with 7–12 hours downwind from SCC, 16 samples with 13–18 hours downwind from SCC, and 9 samples with at least 19 hours downwind from SCC.

TSP - total suspended particulates  
 ug/m<sup>3</sup> - micrograms per cubic meter  
 SCC - Stauffer Chemical Company

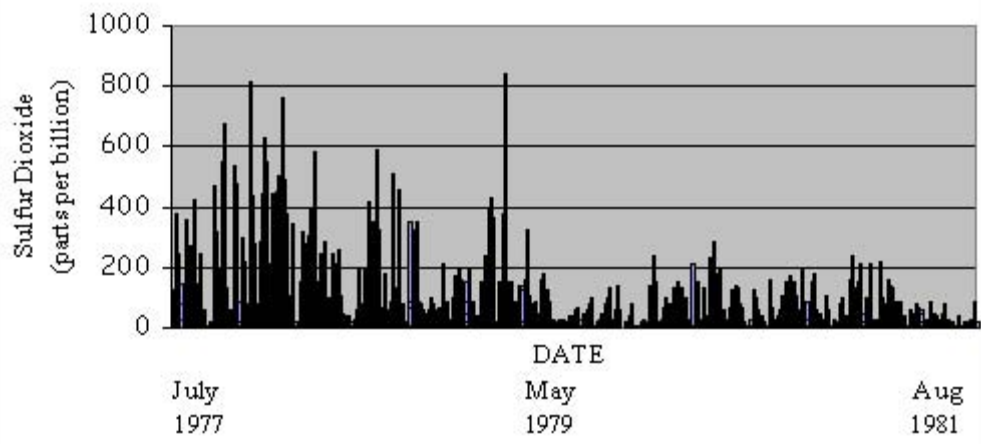
# Agency for Toxic Substances and Disease Registry

## Figure 19. Air modeling receptor locations

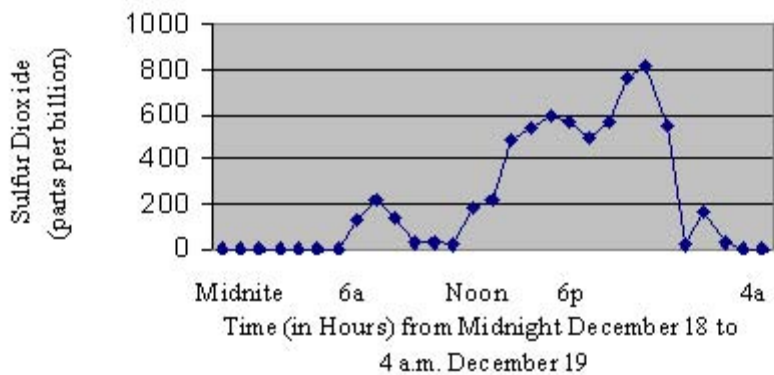
Tarpon Springs, Florida



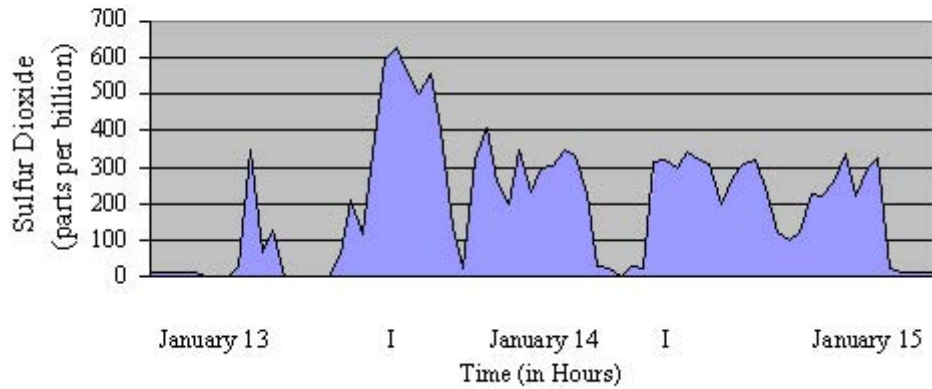
**Figure 20. Hourly Sulfur Dioxide Levels From July 1977 to August 1981**



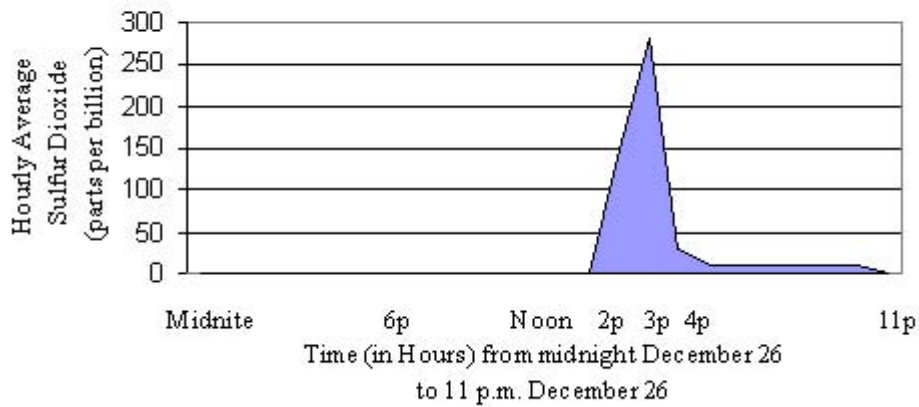
**Figure 21. Hourly Sulfur Dioxide Levels on December 18, 1977**



**Figure 22. Hourly Sulfur Dioxide Levels Over 3 Days  
In January 1978**



**Figure 23. Hourly Sulfur Dioxide Levels on  
December 26, 1977**



# Figure 24. Anclole Road monitoring station showing 1,540 feet radius from kiln

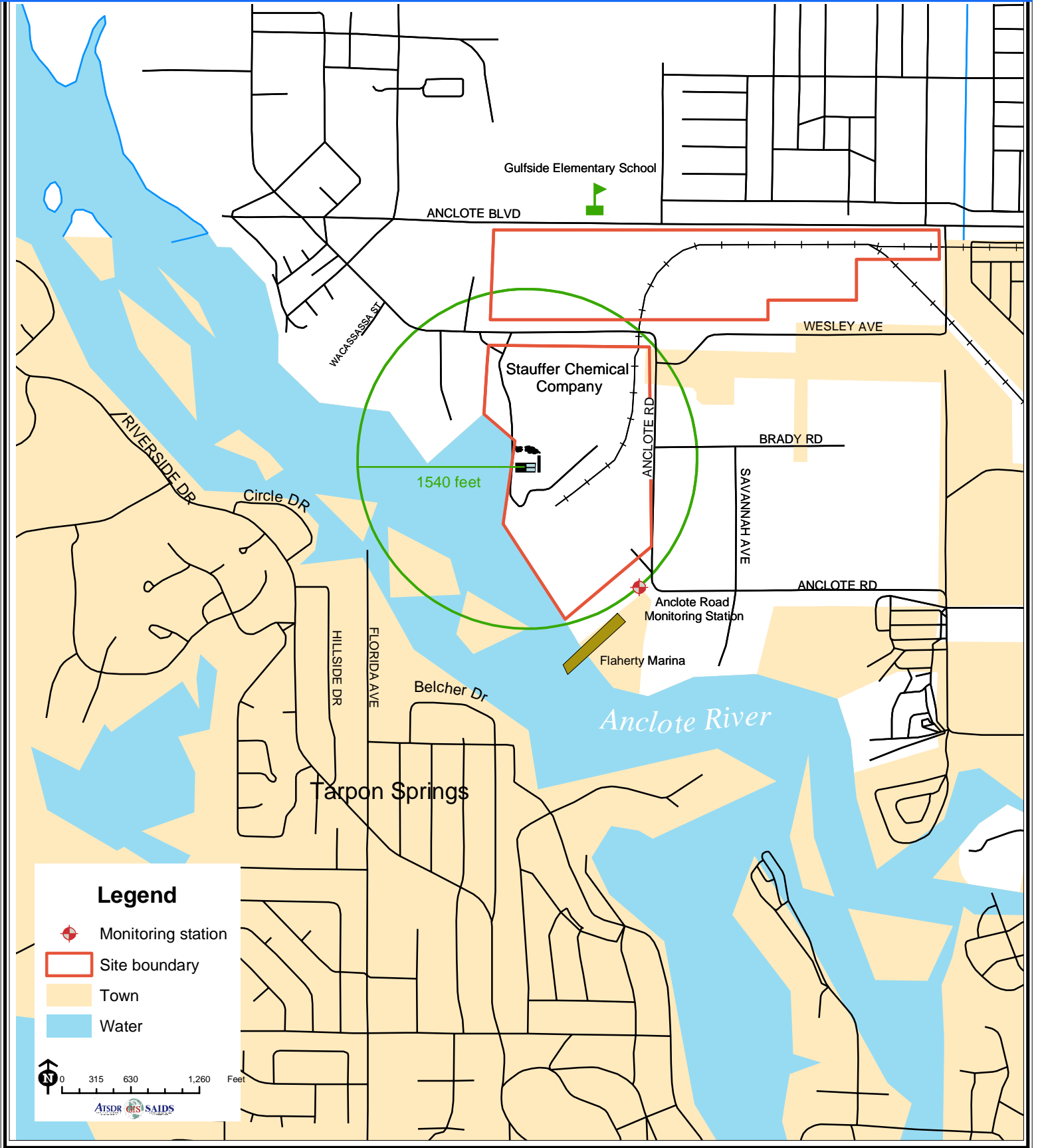


Figure 25. One mile radius 1980 demographic information



Demographics Statistics Source: 1980 US Census Bureau  
 \*Calculated using an area-proportion spatial analysis technique