Mobile Monitoring Platform Update and Recent Results

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HCMS Community Meeting

Wilmington Senior Center

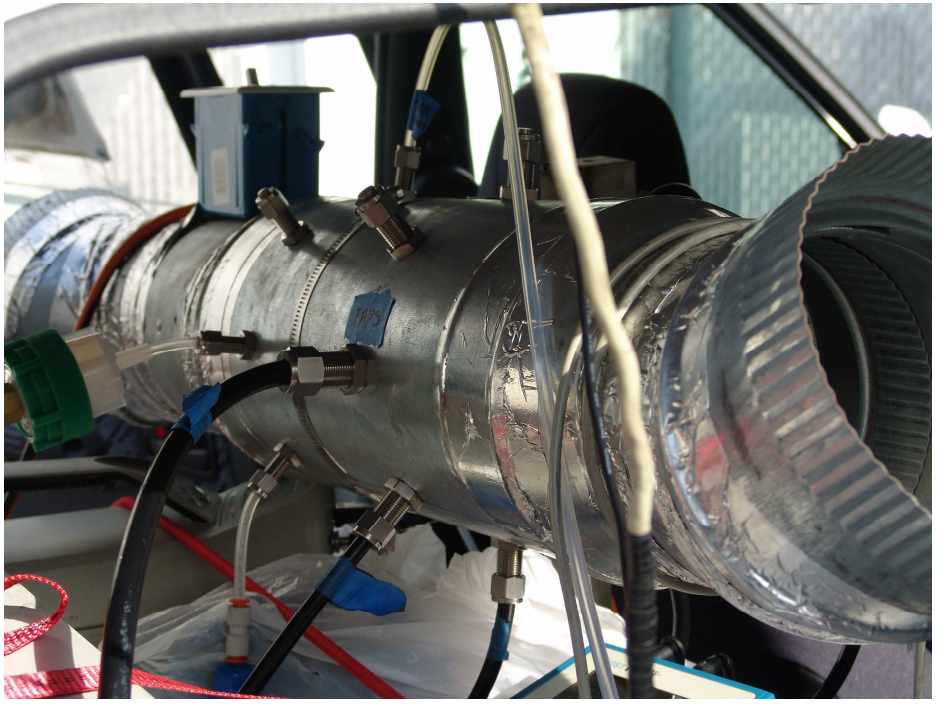
April 17, 2008

Objectives

- Use real-time instruments on a mobile platform to measure pollution concentrations and their gradients with high spatial and temporal resolution to determine:
  - the relative importance of sources to exposure
  - the locations and extent of areas of high pollution impact from local sources and under what conditions they occur.

ATM
Inside
1701
EV
ELECTRIC VEHICLE

Magee Scientific
Aethalometer



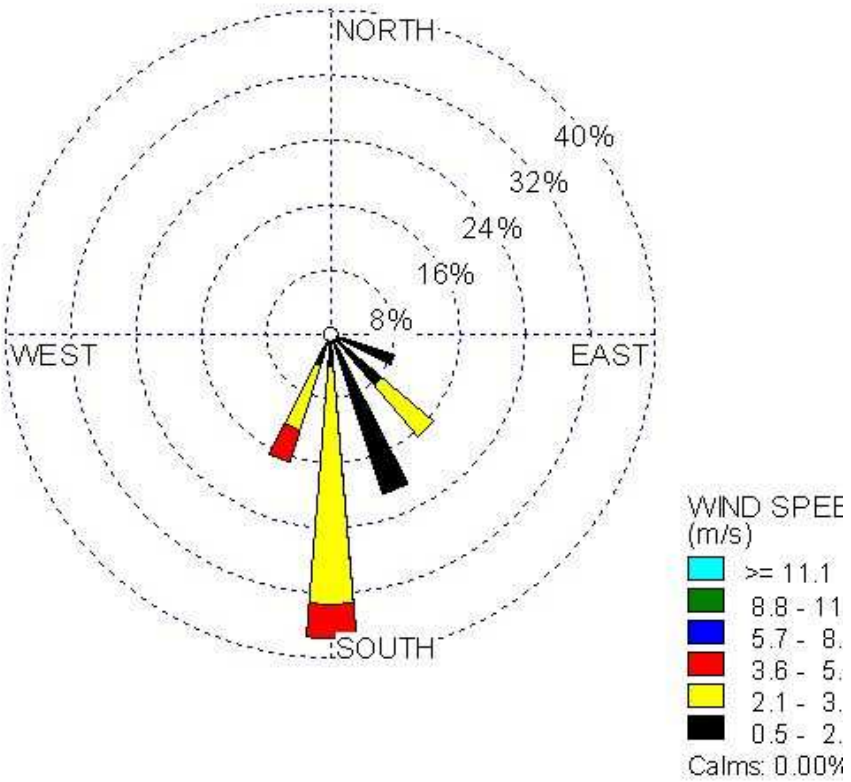
EV
ELECTRIC VEHICLE
5PWN240

Results
Buffer Zones

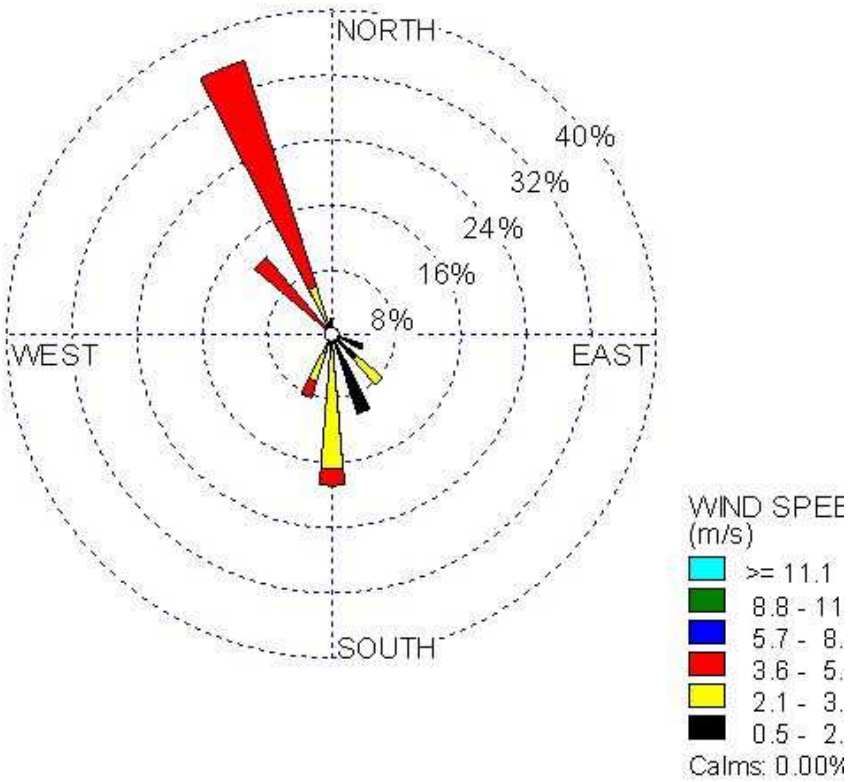
Winter and Summer 2007

Wind Roses NOAA Site B161
July 17, 2007

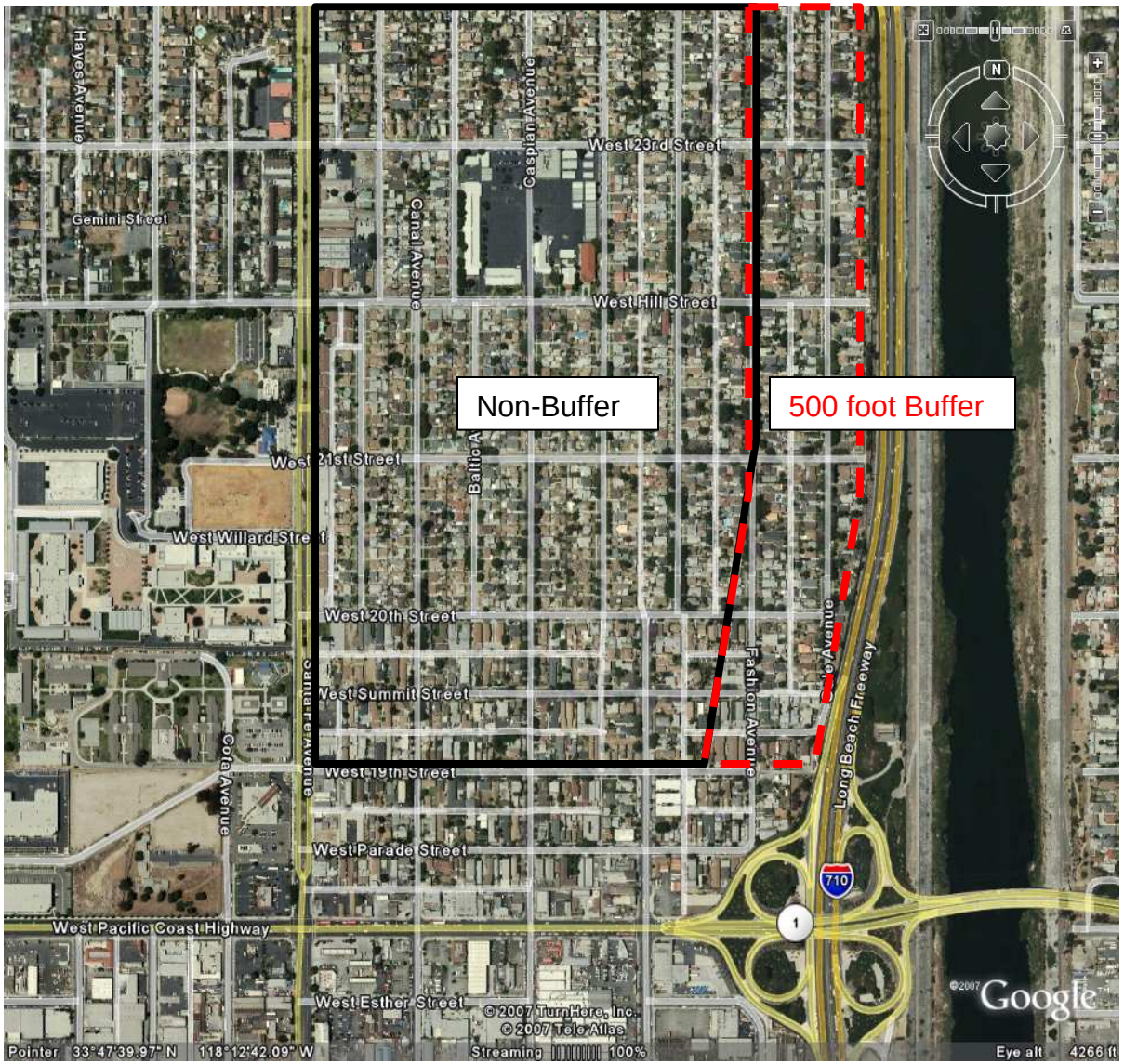
Morning 7:00-10:00



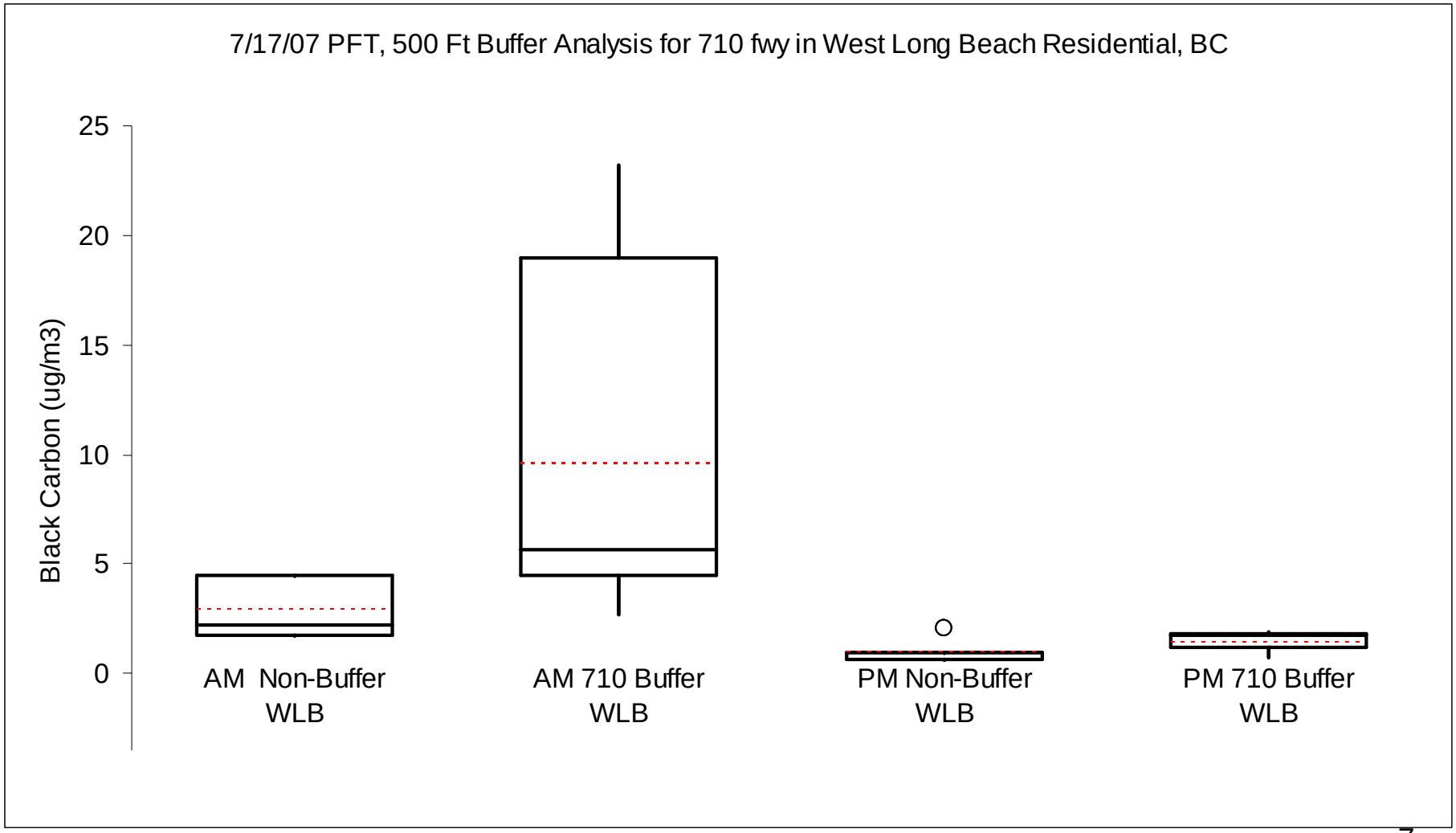
Afternoon 14:00-17:00



I-710 Buffer Analysis

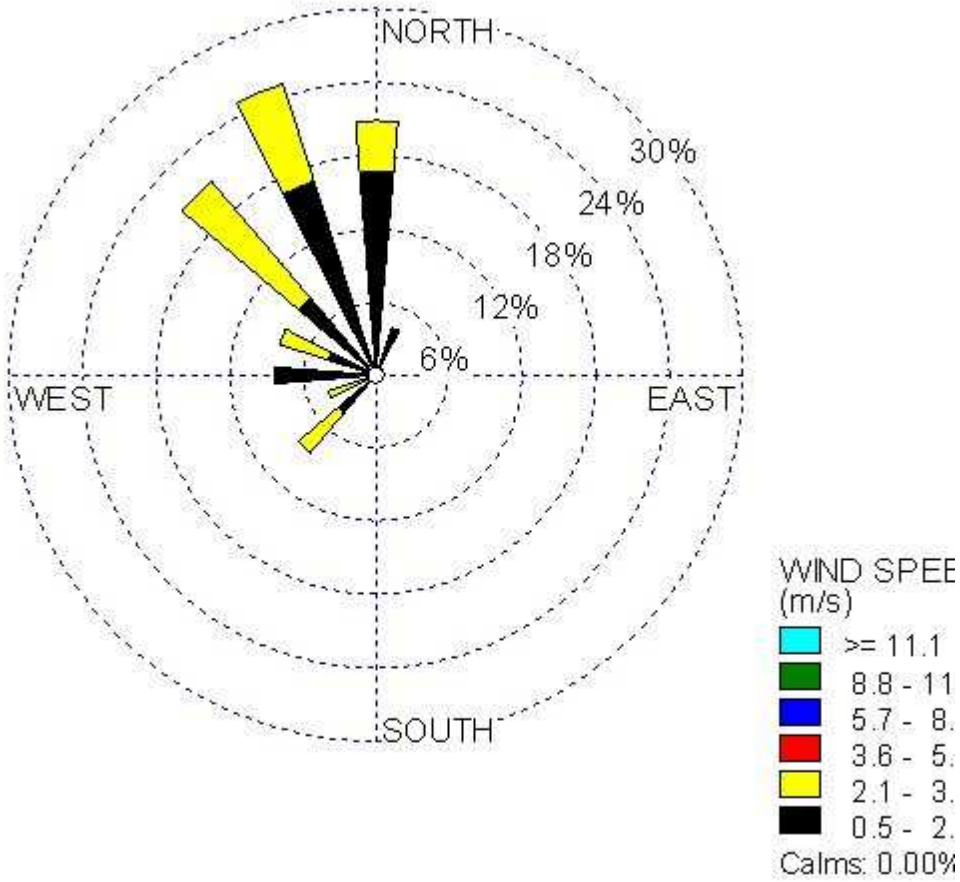


I-710 Buffer Analysis, Black Carbon



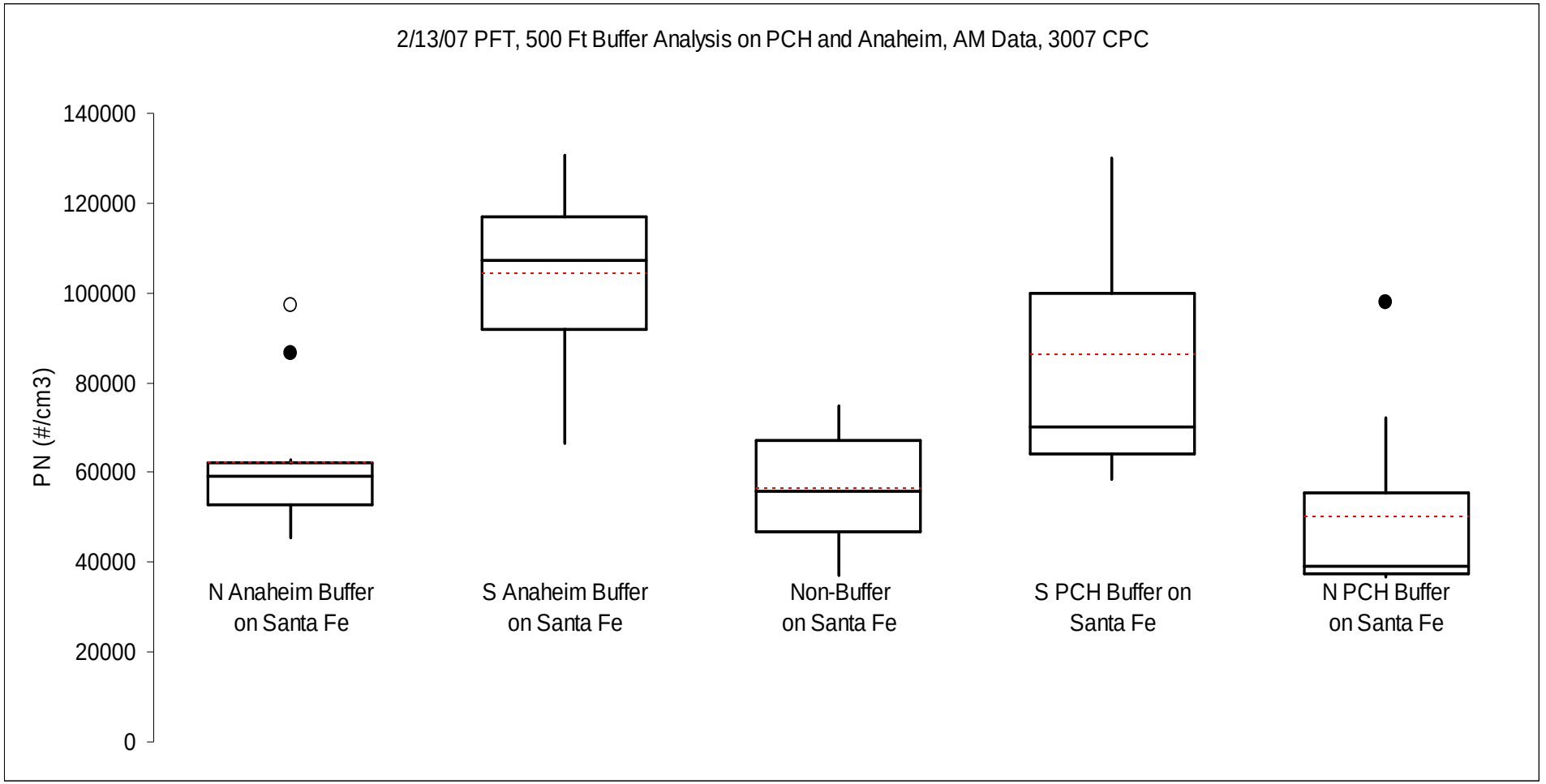
Morning Wind Rose NOAA Site B161 February 13, 2007

Morning 7:00-10:00



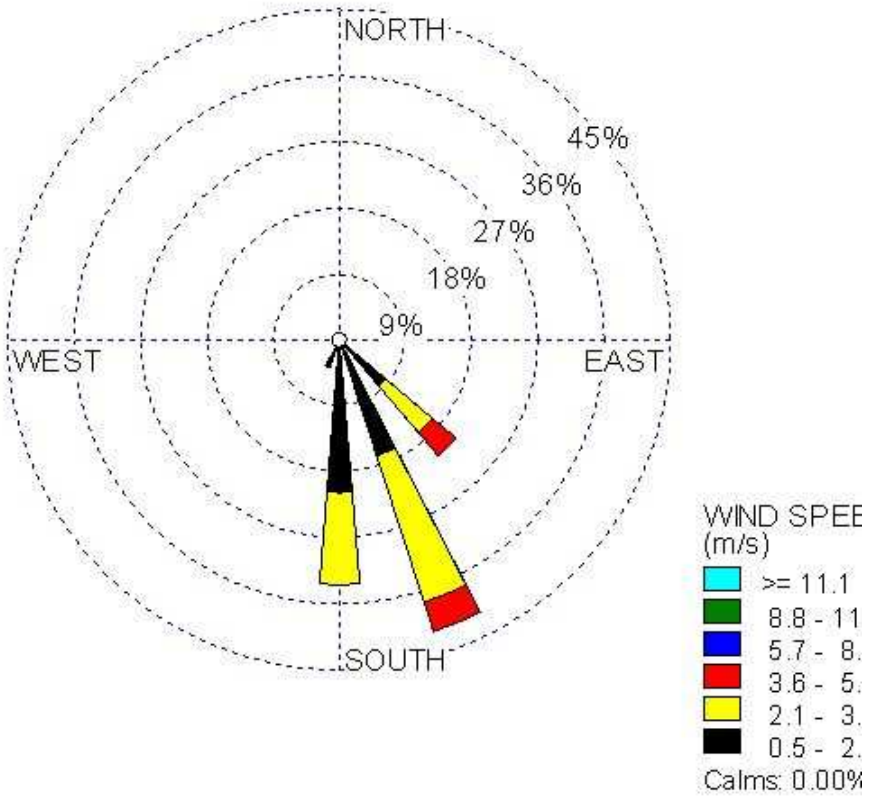
North and South Buffers on Pacific Coast Highway (PCH)

Morning PCH and Anaheim Buffers, Particle Number



Wind Roses NOAA Site B161
July 31, 2007

Morning 7:00-10:00



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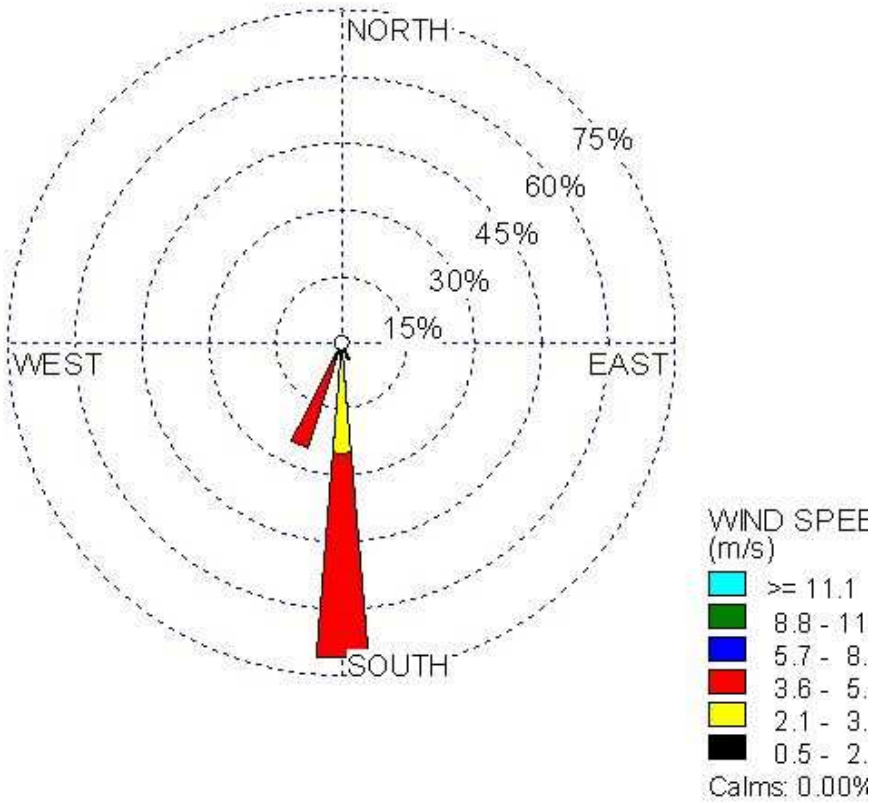

McDonalds Site

“Stationary” Monitoring, NO

Summary and Implications

- Concentrations of black carbon, and NO, as well as particle number, are elevated in buffer areas near heavily traveled roadways
- The presence of heavy-duty diesel trucks and meteorology are important factors determining where and when the highest pollutant impacts occur
- Depending on meteorology, near-roadway exposures can be significant for persons living, working, shopping, or recreating in buffer areas close to heavily trafficked roadways

Acknowledgements

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