

Mobile Monitoring Platform Update and Recent Results



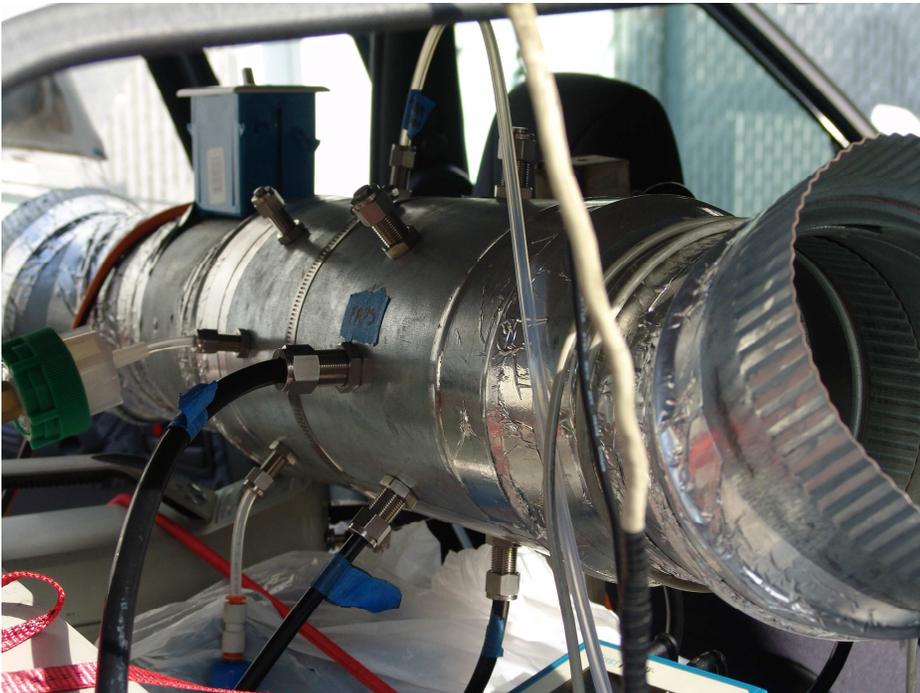
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¹California Air Resources Board, ²University of Southern California, ³University of California, Los Angeles

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.



Results

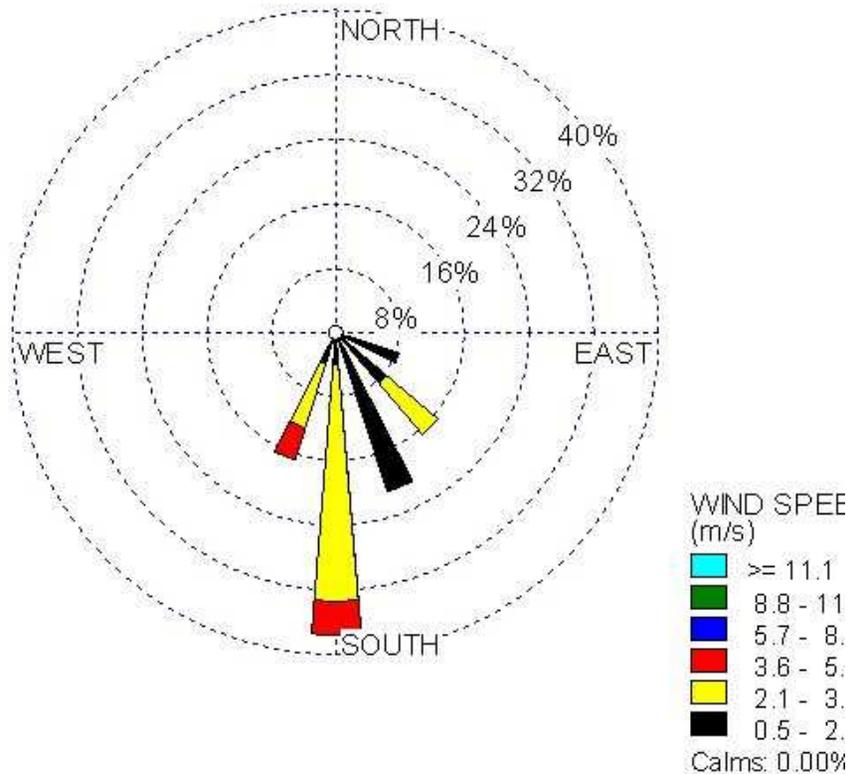
Buffer Zones

Winter and Summer 2007

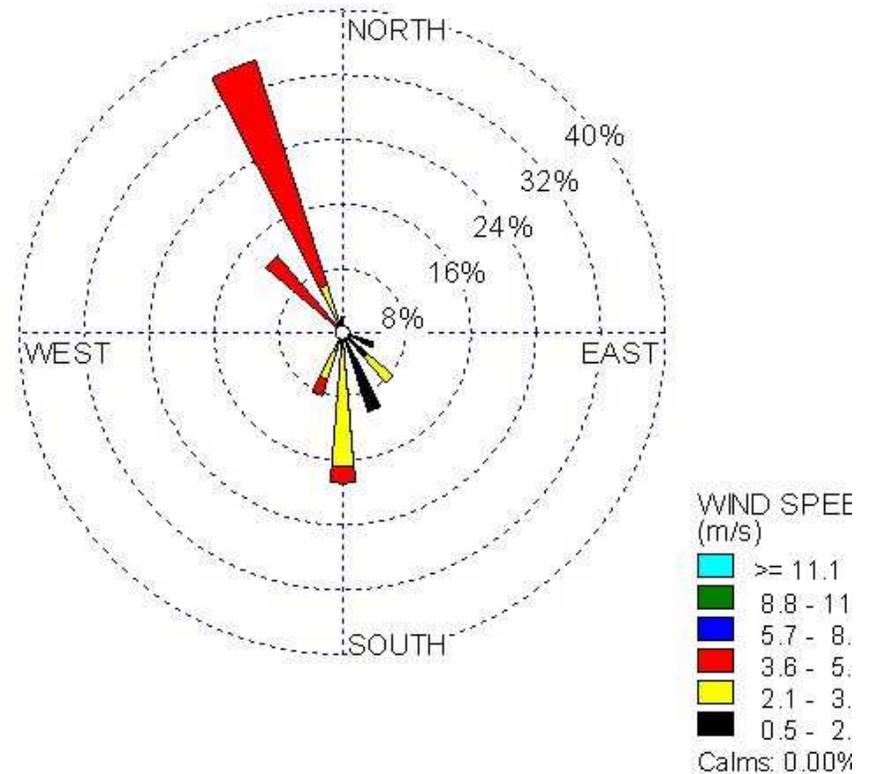
Wind Roses NOAA Site B161

July 17, 2007

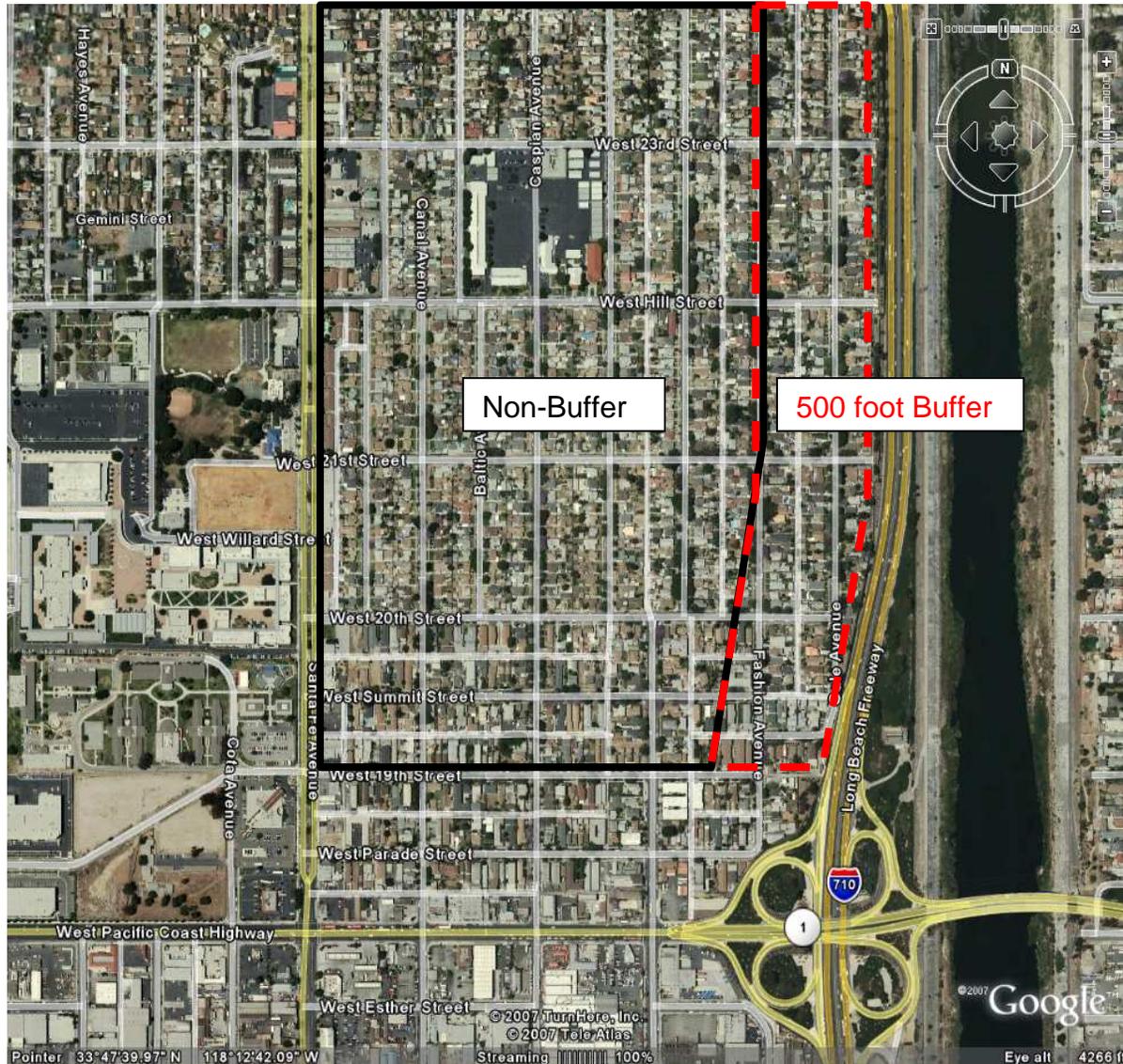
Morning 7:00-10:00



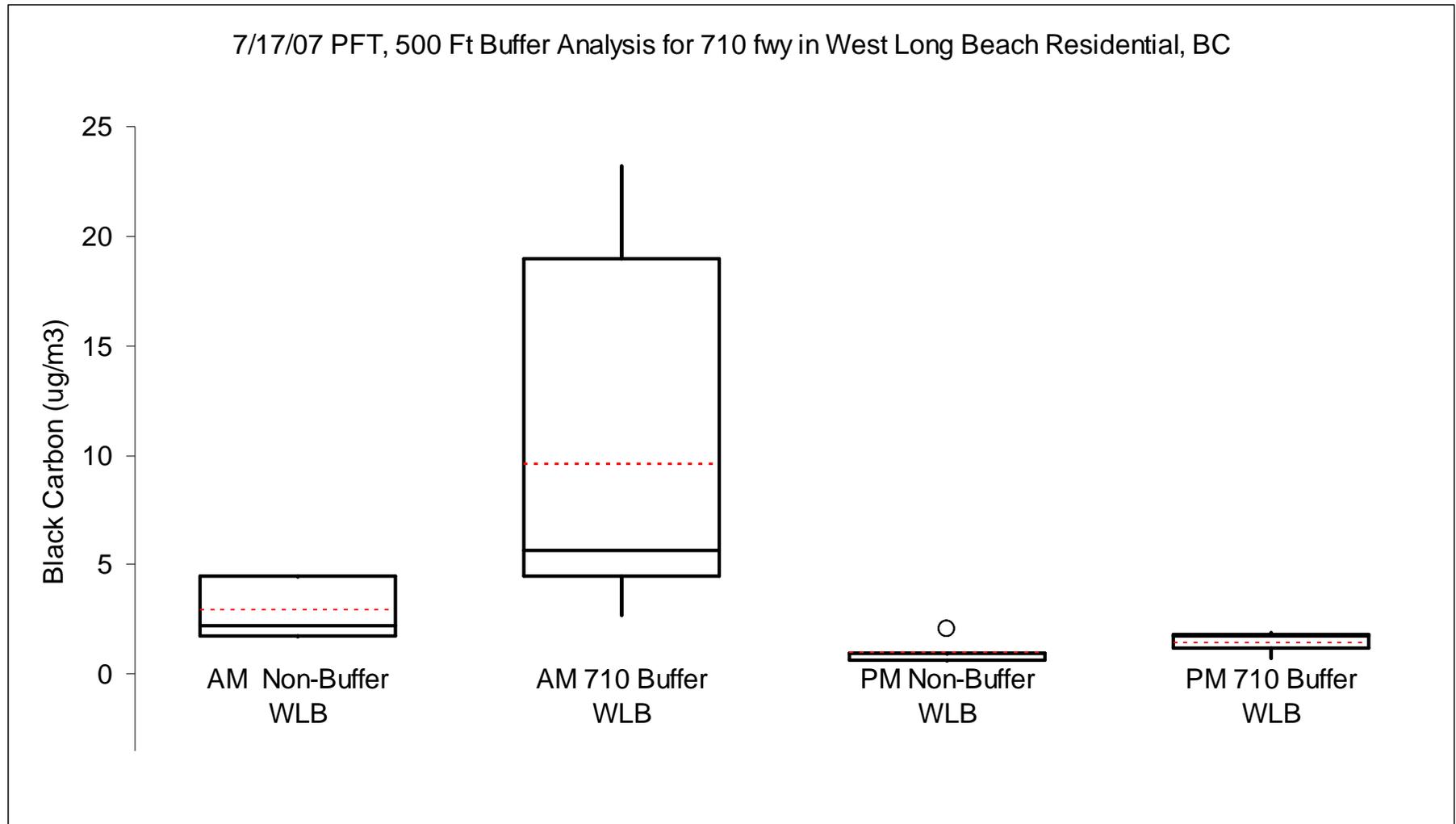
Afternoon 14:00-17:00



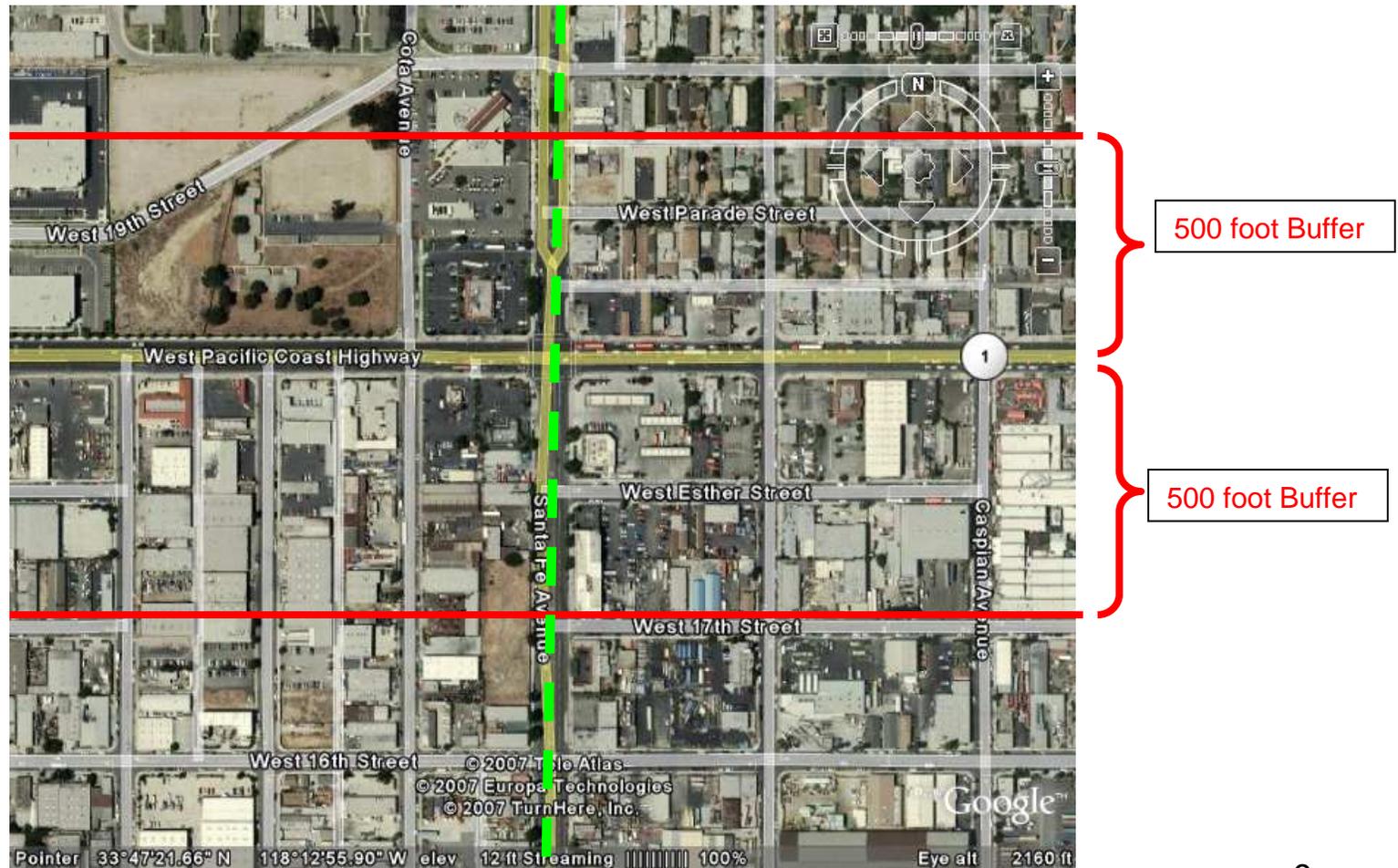
I-710 Buffer Analysis



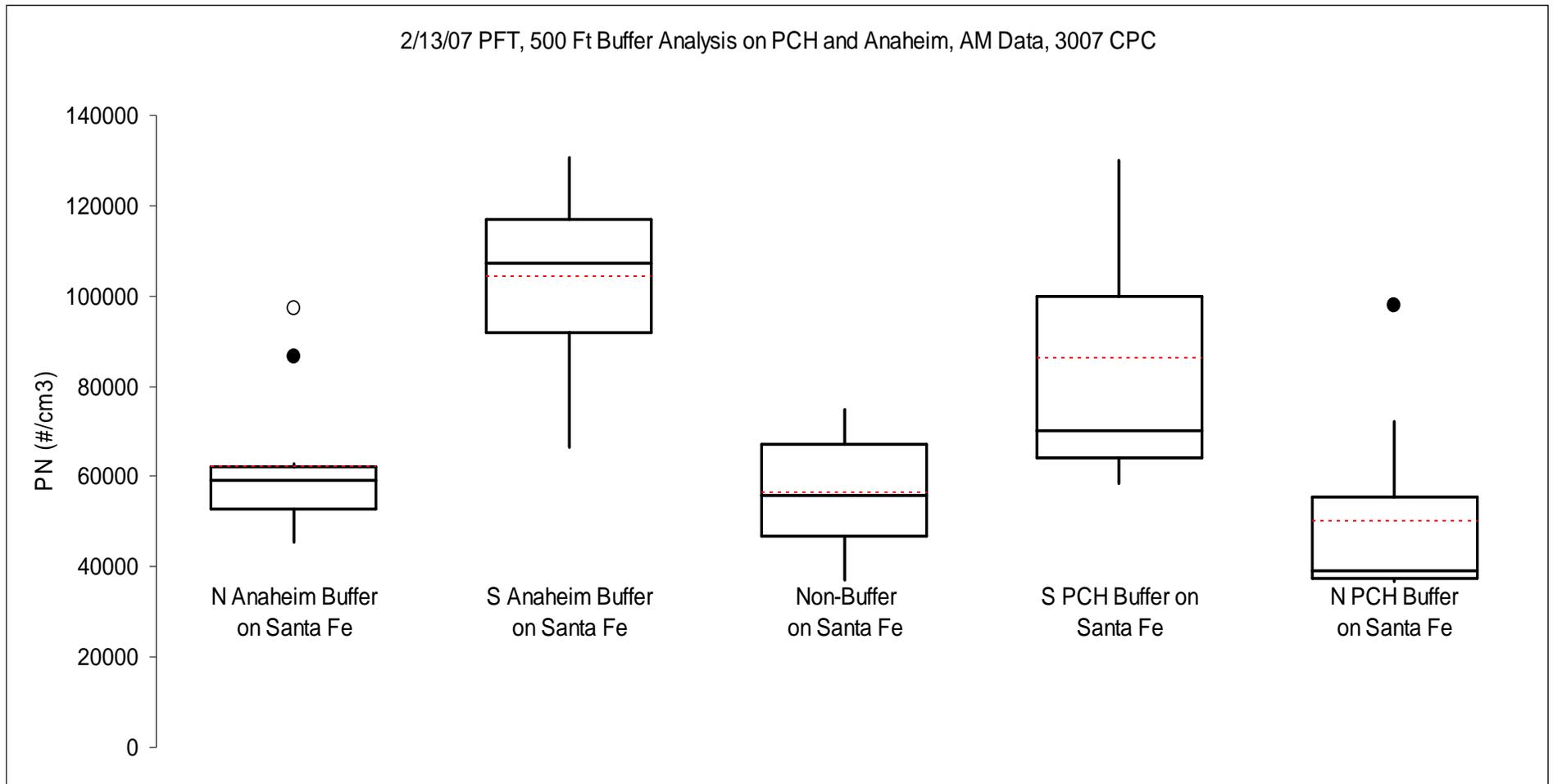
I-710 Buffer Analysis, Black Carbon



North and South Buffers on Pacific Coast Highway (PCH)



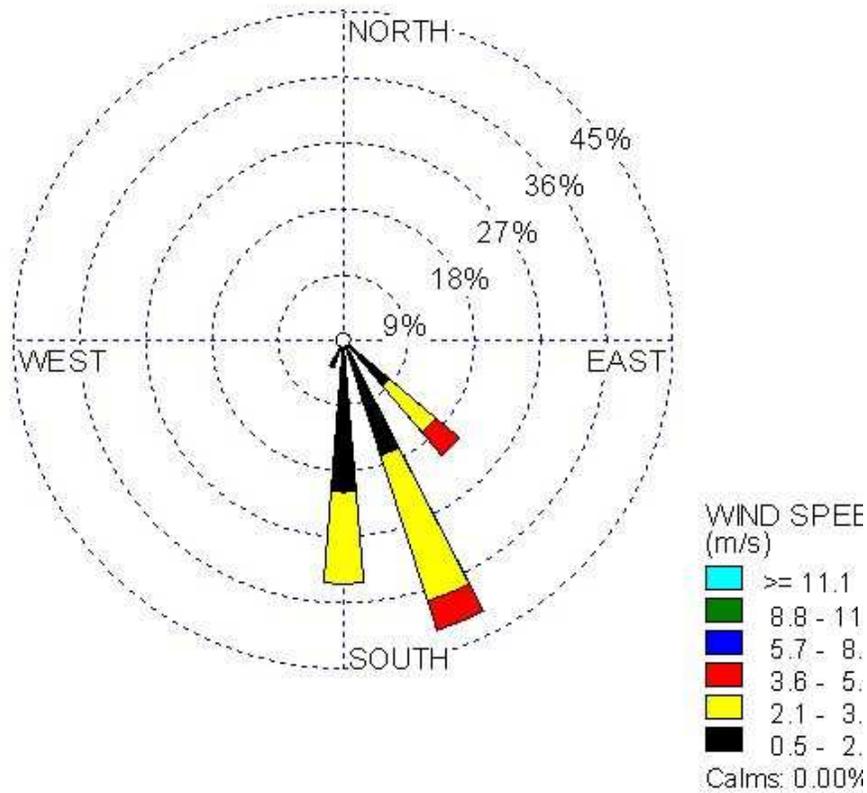
Morning PCH and Anaheim Buffers, Particle Number



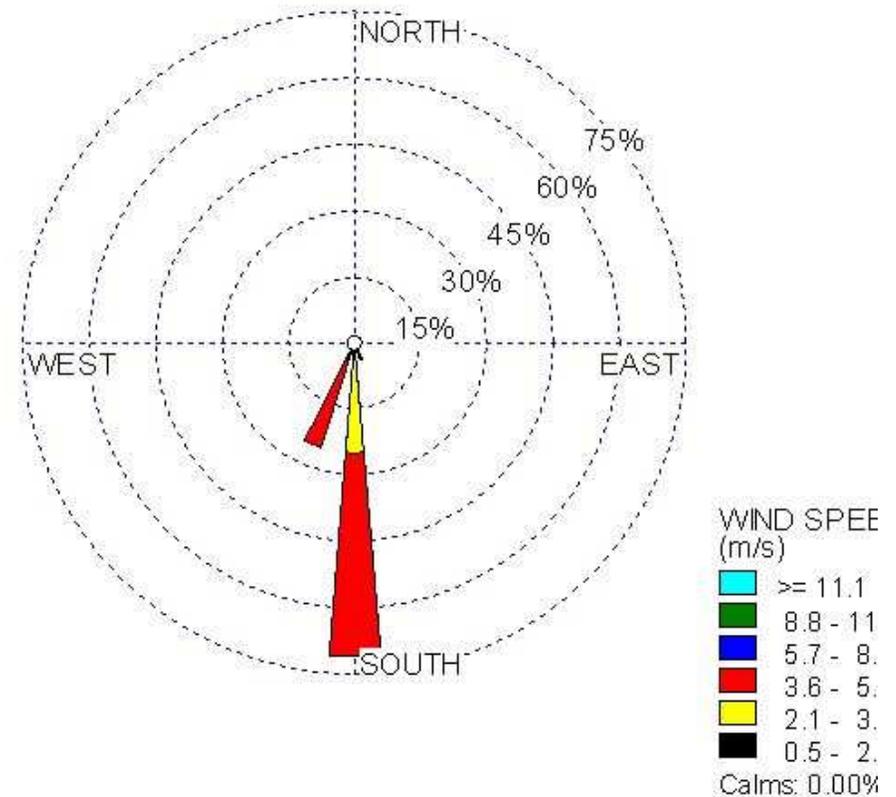
Wind Roses NOAA Site B161

July 31, 2007

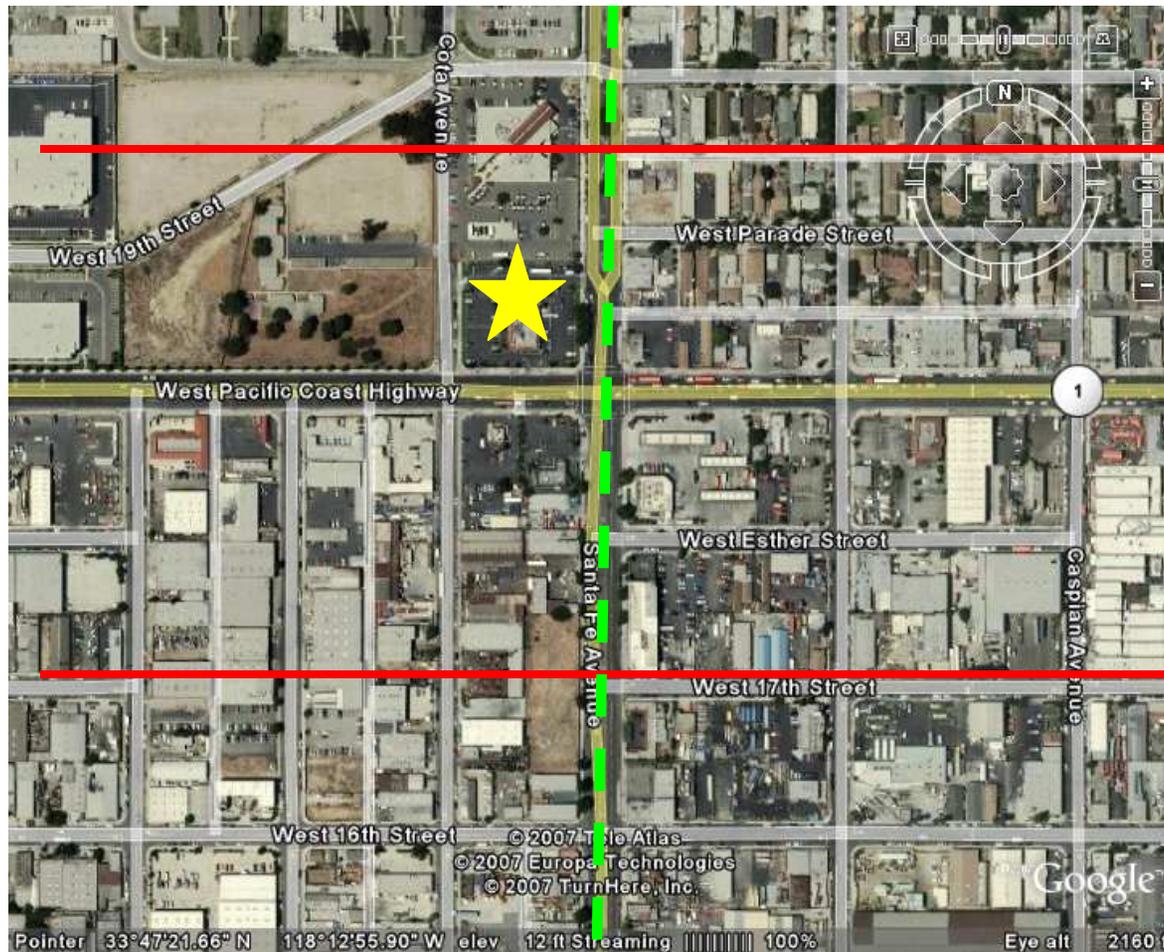
Morning 7:00-10:00



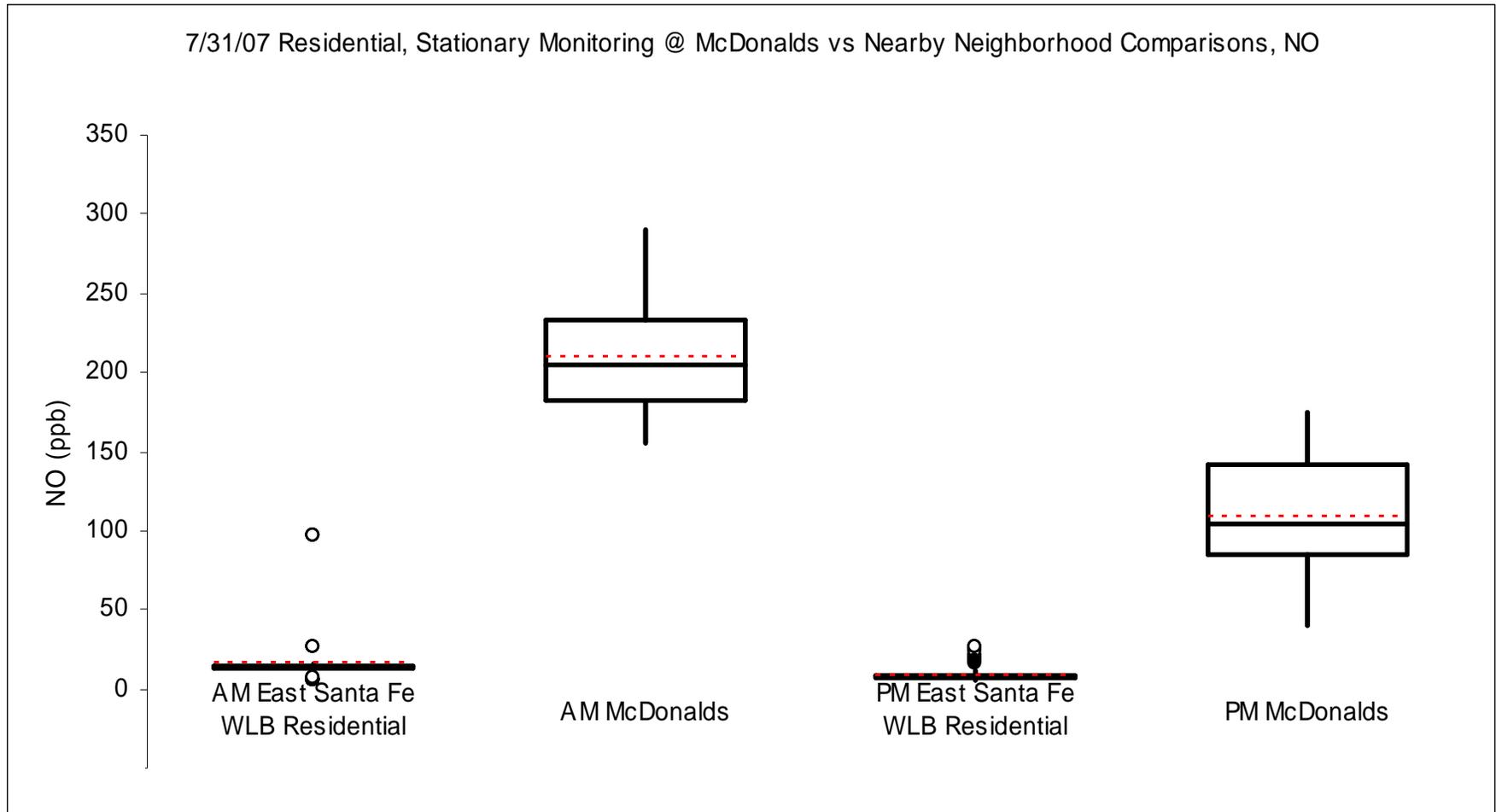
Afternoon 14:00-17:00



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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