



APPENDIX AVAILABLE ON REQUEST

Research Report 156

Concentrations of Air Toxics in Motor Vehicle–Dominated Environments

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Appendix G. Spatial Plots

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Although this document was produced with partial funding by the United States Environmental Protection Agency under Assistance Award CR–83234701 to the Health Effects Institute, it has not been subjected to the Agency's peer and administrative review and therefore may not necessarily reflect the views of the Agency, and no official endorsement by it should be inferred. The contents of this document also have not been reviewed by private party institutions, including those that support the Health Effects Institute; therefore, it may not reflect the views or policies of these parties, and no endorsement by them should be inferred.

This document was reviewed by the HEI Health Review Committee
but did not undergo the HEI scientific editing and production process.

Appendix G. Spatial Plots

The following figures show the 1-minute time-averaged continuous in-cabin exposure measurements plotted on a map of the Los Angeles area freeway system. These spatial plots were prepared using ESRI ArcView GIS software and US Census Bureau Tiger basemaps. Data from both the commuter driving routes and surface street gradient routes are included. The size of the plotted circles is proportional to the measured concentrations as indicated in the legend on each figure. Data from multiple sampling runs are combined for each season, so some overlapping of symbols occurs, but the locations where the highest concentrations were observed is clearly visible. Since data was recorded at regular time intervals, the distance between points gives some indication of the traffic speeds along each freeway leg.

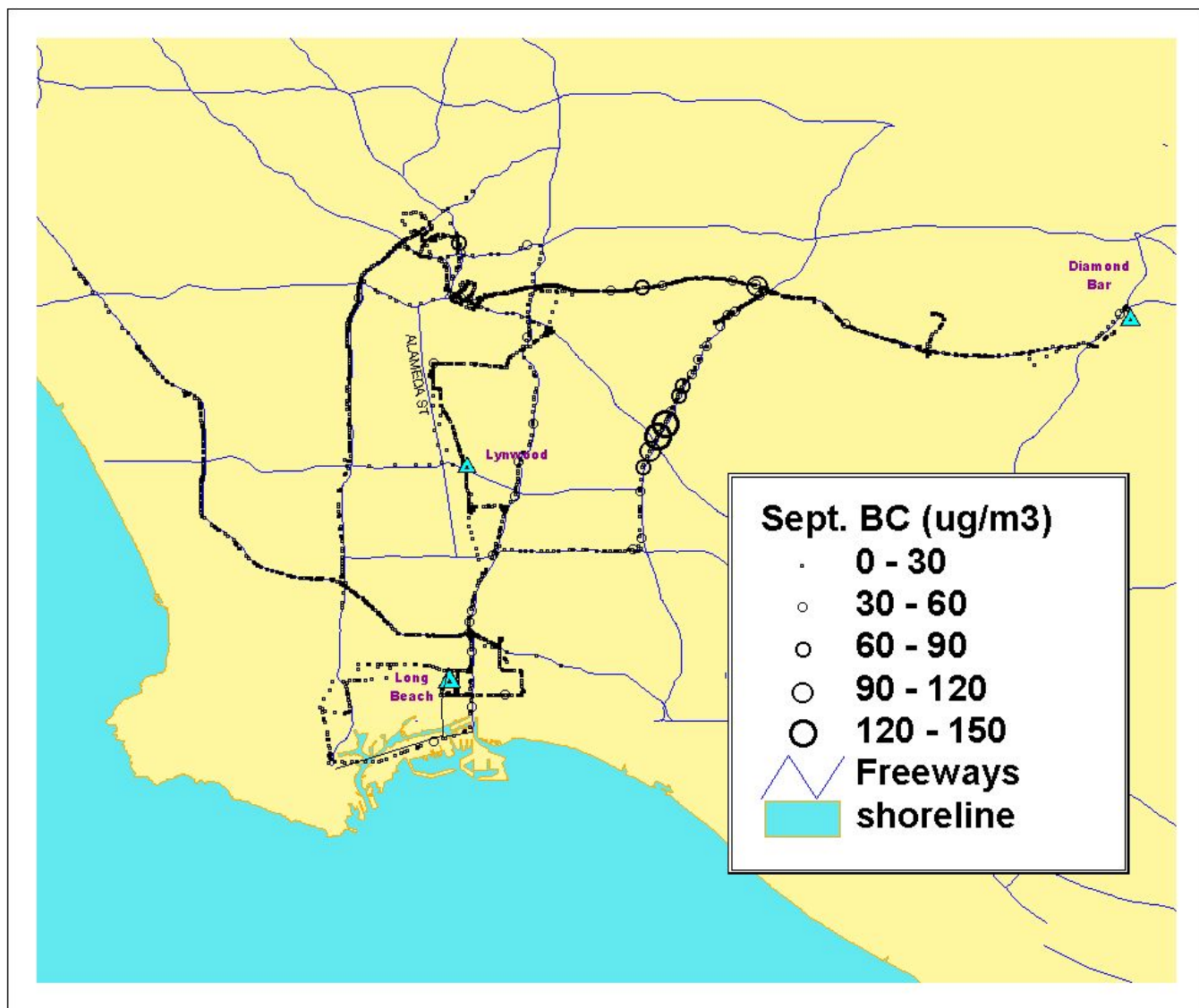


Figure G-1a. Spatial display of all 1-minute on-road black carbon concentrations during the summer field study. Highest concentrations occur at Terminal Island and along truck routes.

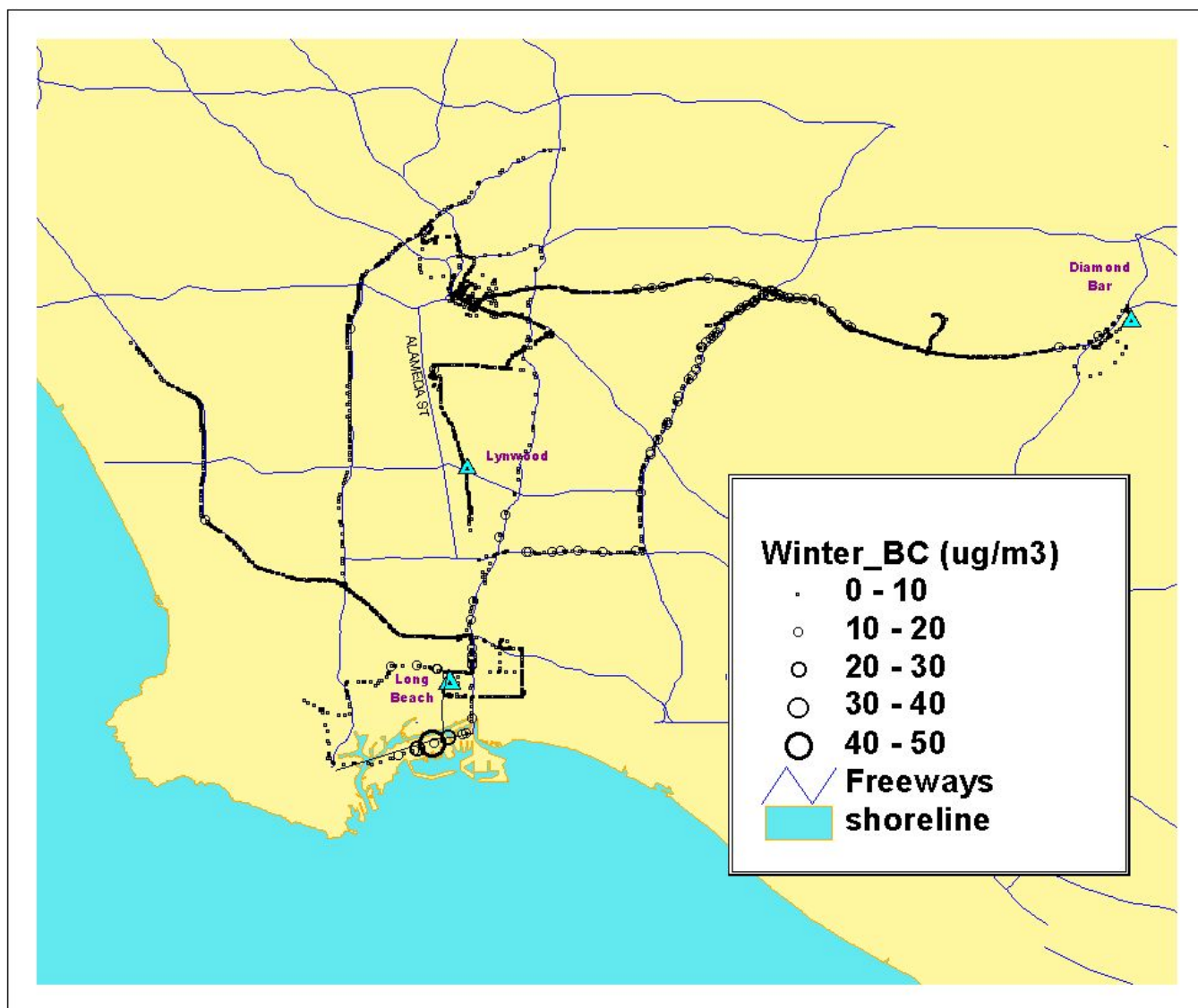


Figure G-1b. Spatial display of all 1-minute on-road black carbon concentrations during the fall field study. Highest concentrations occur at Terminal Island and along truck routes.

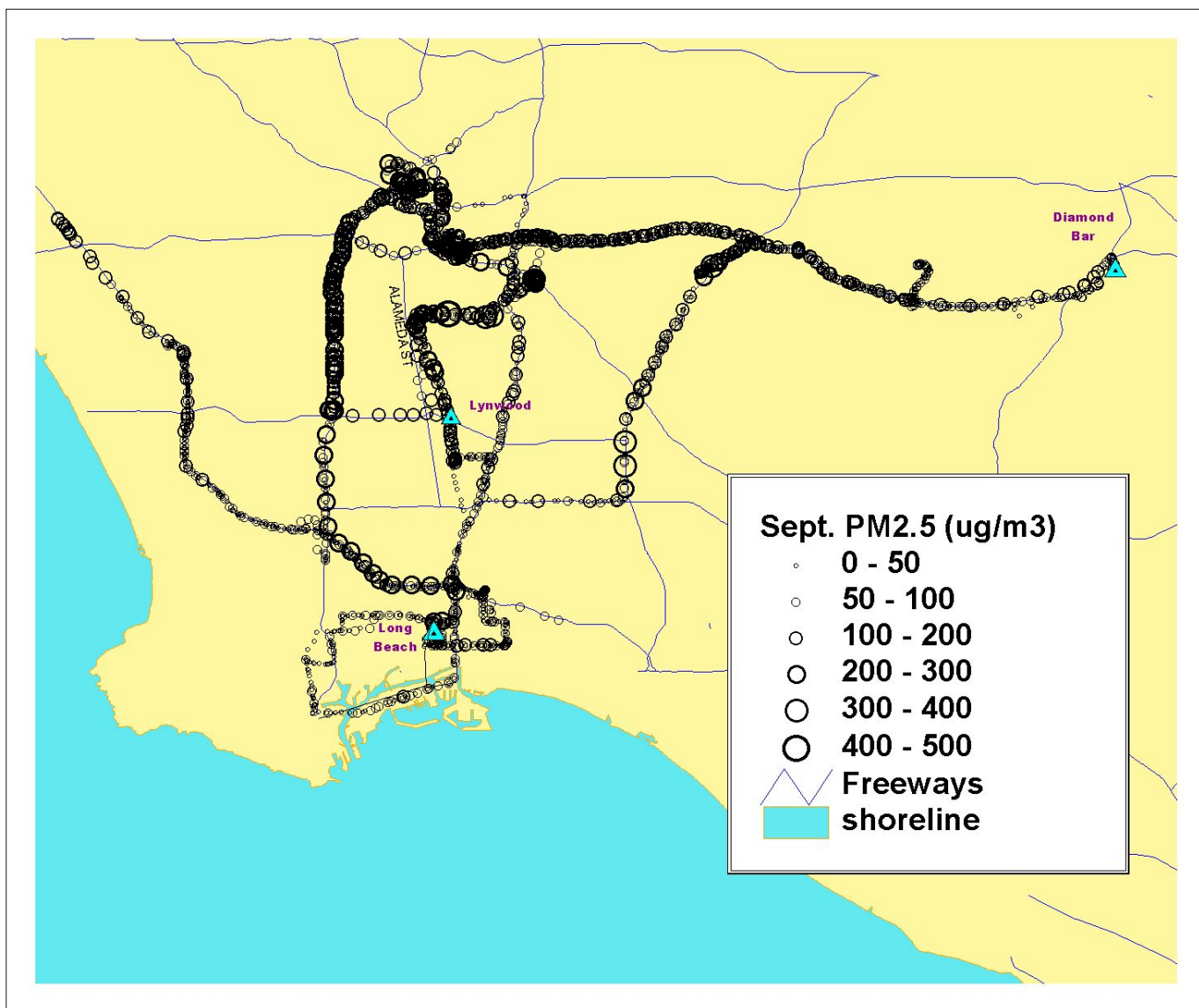


Figure G-2a. Spatial display of all 1-minute on-road PM_{2.5} (uncorrected DustTrak) concentrations during the summer field study. Higher concentrations are more widespread than black carbon.

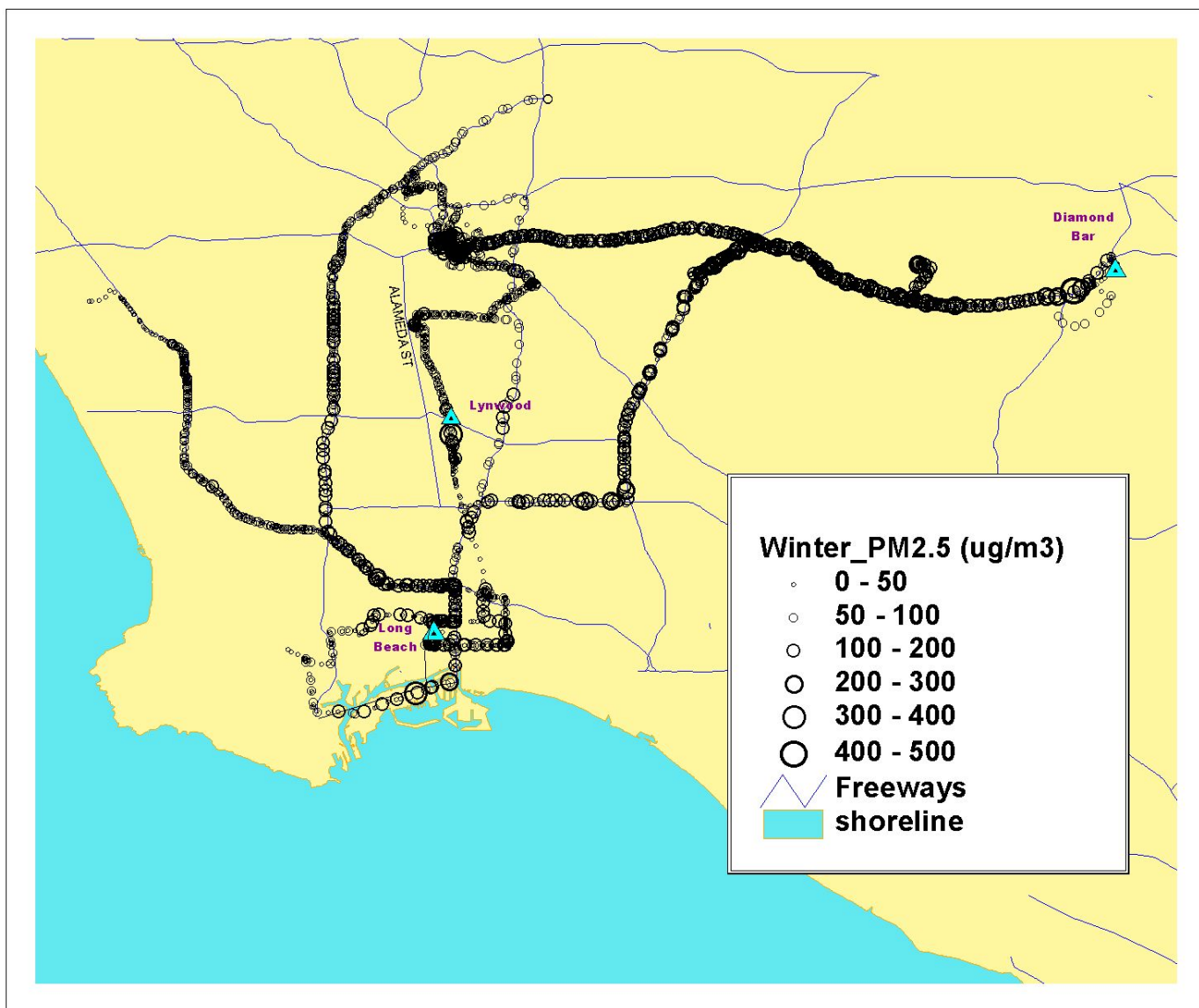


Figure G-2b. Spatial display of all 1-minute on-road PM_{2.5} (uncorrected DustTrak) concentrations during the fall field study. Higher concentrations are more widespread than black carbon.

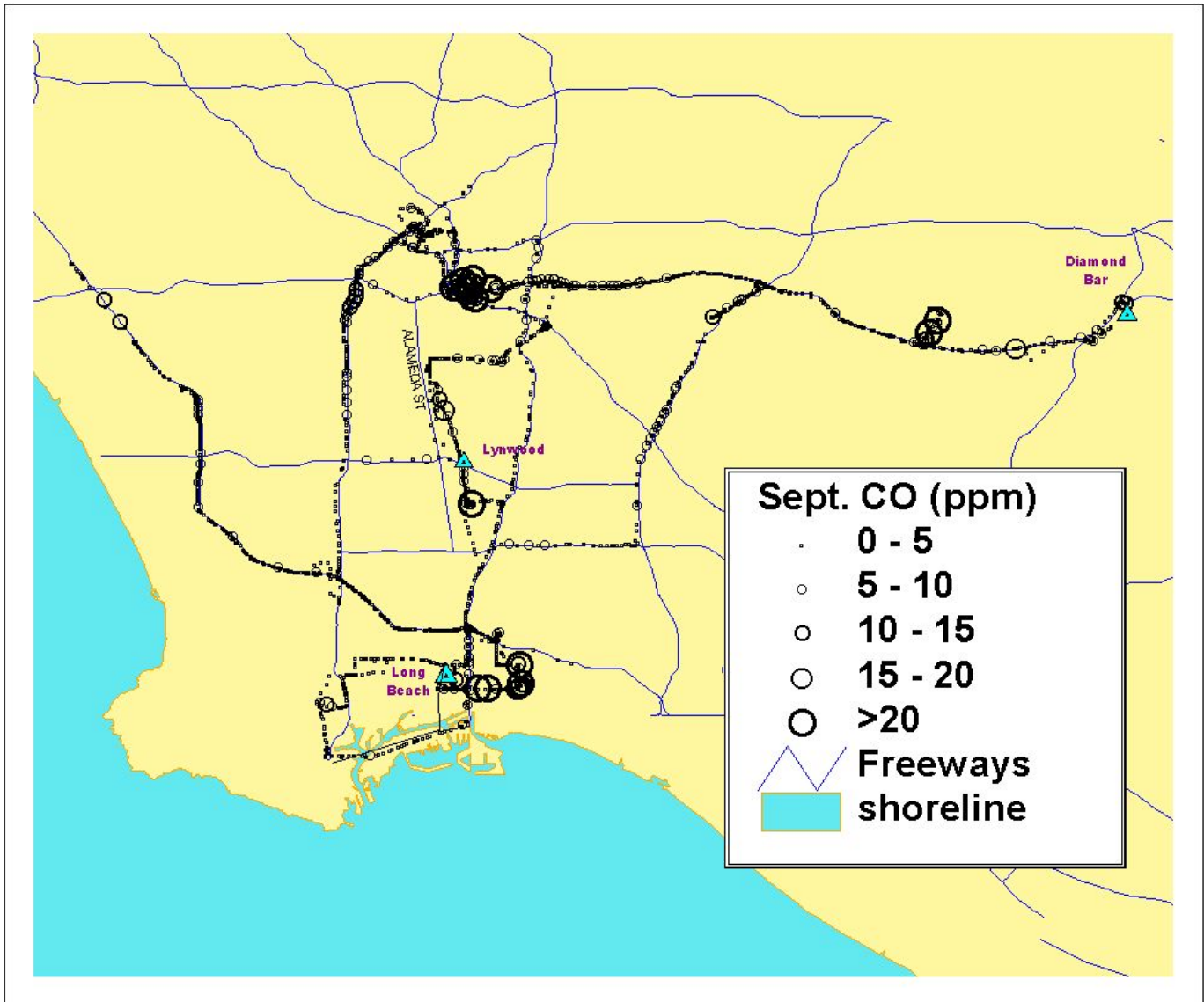


Figure G-3a. Spatial display of all 1-minute on-road carbon monoxide concentrations during the summer field study. Higher concentrations typically occur in congested traffic or at intersections and following high emitting gasoline vehicles.

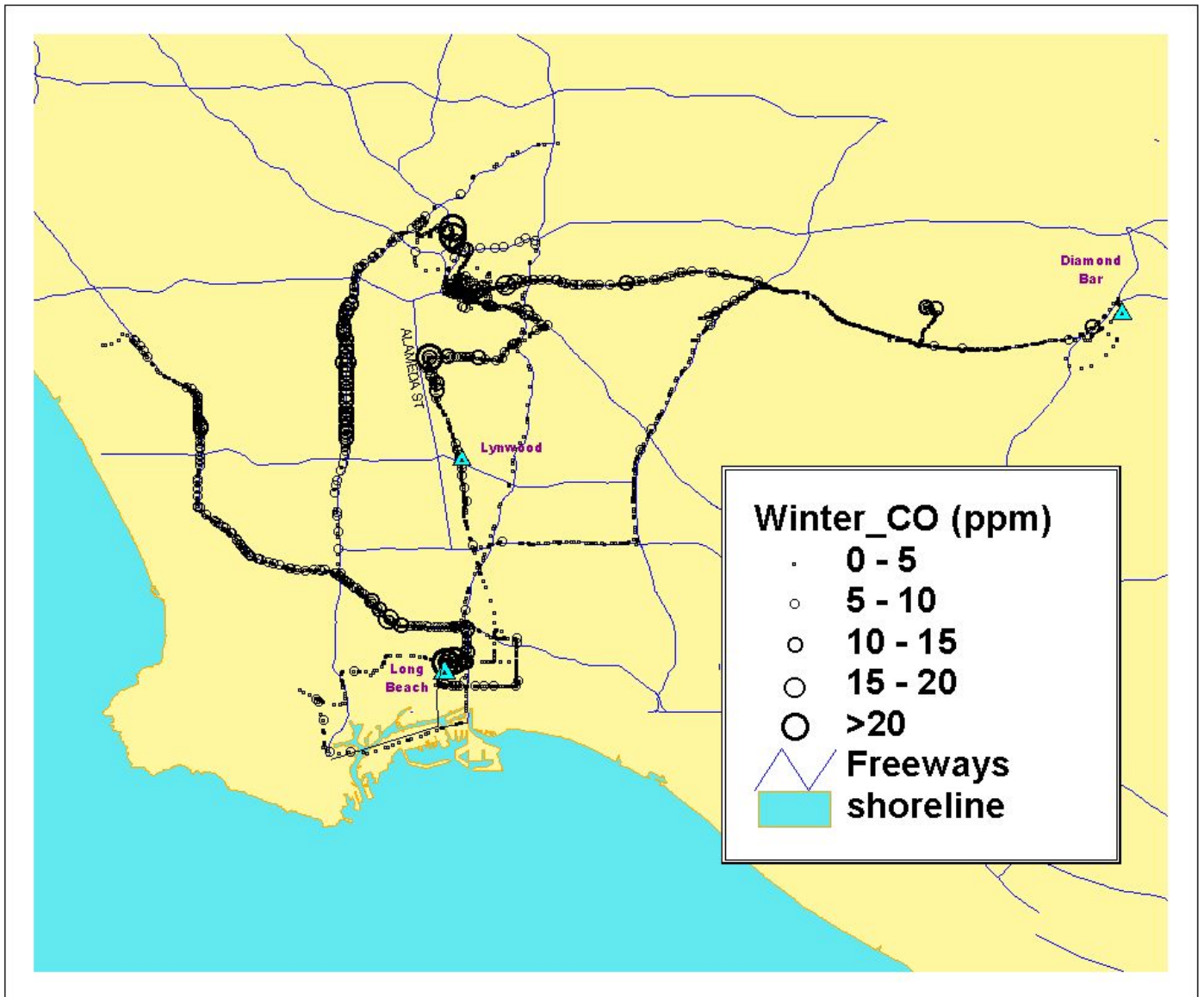


Figure G-3b. Spatial display of all 1-minute on-road carbon monoxide concentrations during the fall field study. Higher concentrations typically occur in congested traffic or at intersections and following high emitting gasoline vehicles.

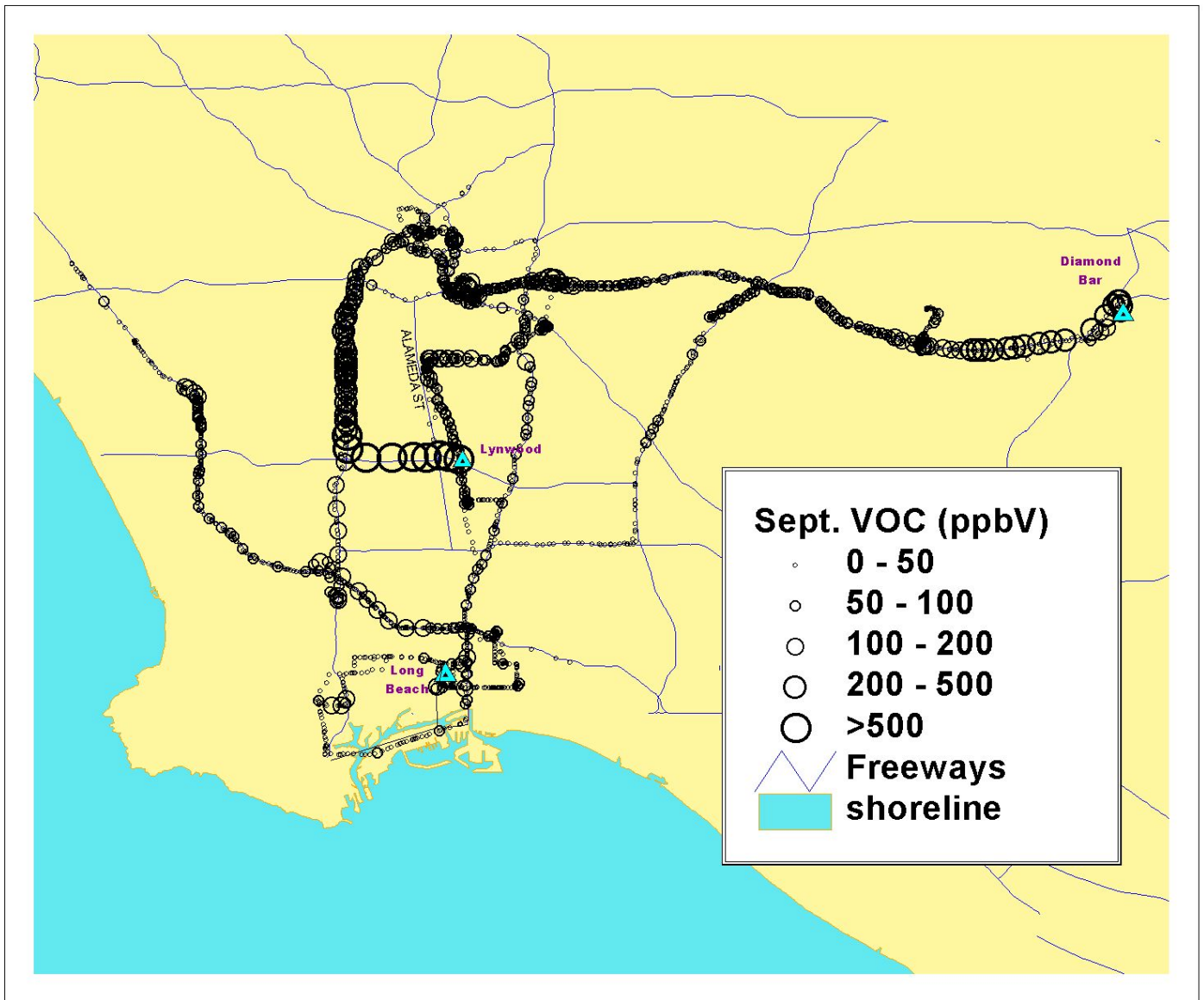


Figure G-4a. Spatial display of all 1-minute on-road VOC (PID) concentrations during the summer field study. Higher concentrations typically occur in congested traffic or at intersections and following high emitting gasoline vehicles.

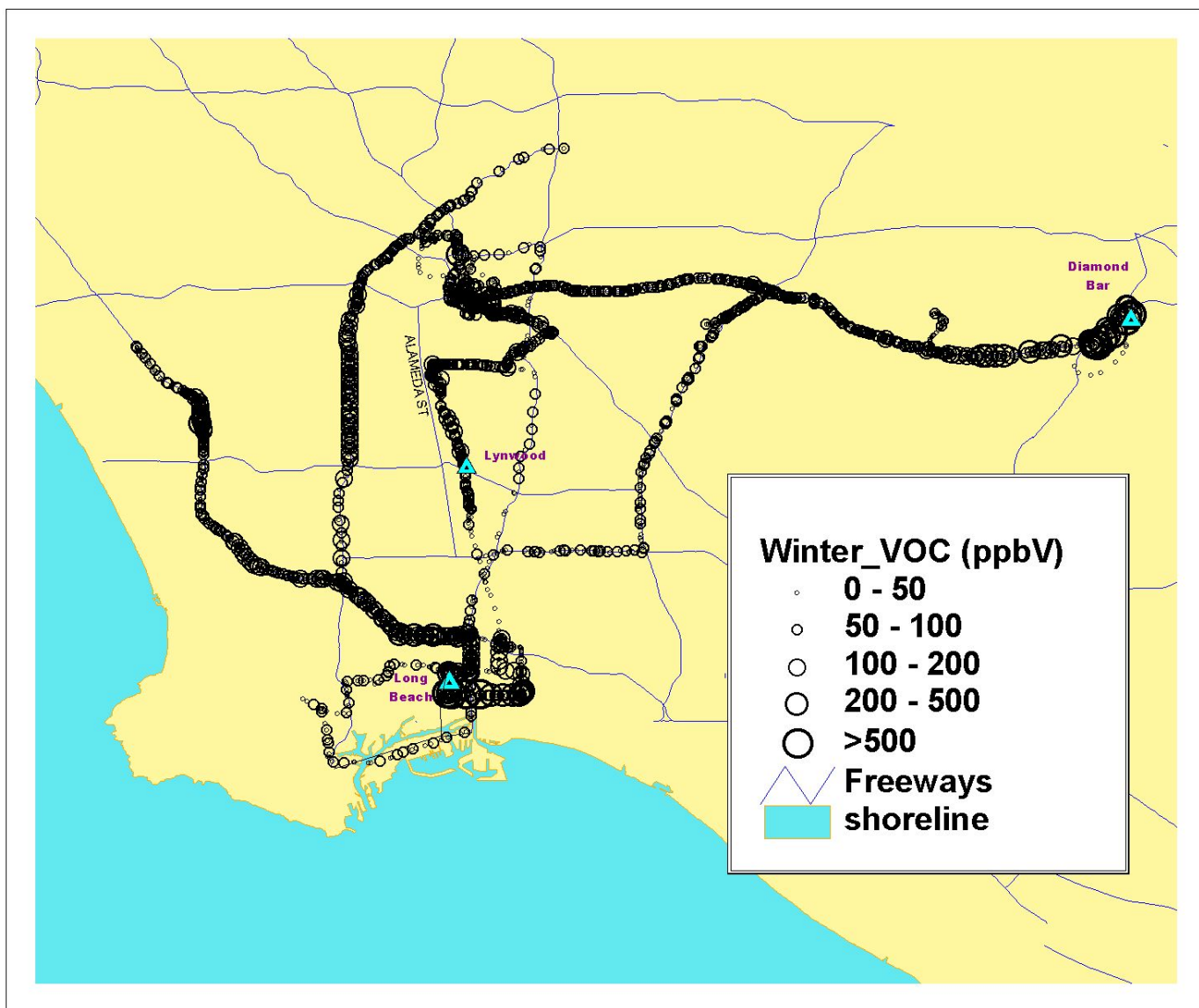


Figure G-4b. Spatial display of all 1-minute on-road VOC (PID) concentrations during the fall field study. Higher concentrations typically occur in congested traffic or at intersections and following high emitting gasoline vehicles.