

Truck Congestion Hot Spot Analysis

Presented to Goods Movement Steering Committee



SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Michael Fischer
Cambridge Systematics, Inc.
September 21, 2010

Preliminary Truck Congestion Hot Spot Analysis

- Resolution of congestion hot spots can be a cost effective approach to addressing significant source of truck delay
- Potential first phase of highway-oriented goods movement strategy
 - Potential for short to medium-term solutions with more immediate impact while we are assessing the longer-term E-W freight corridor

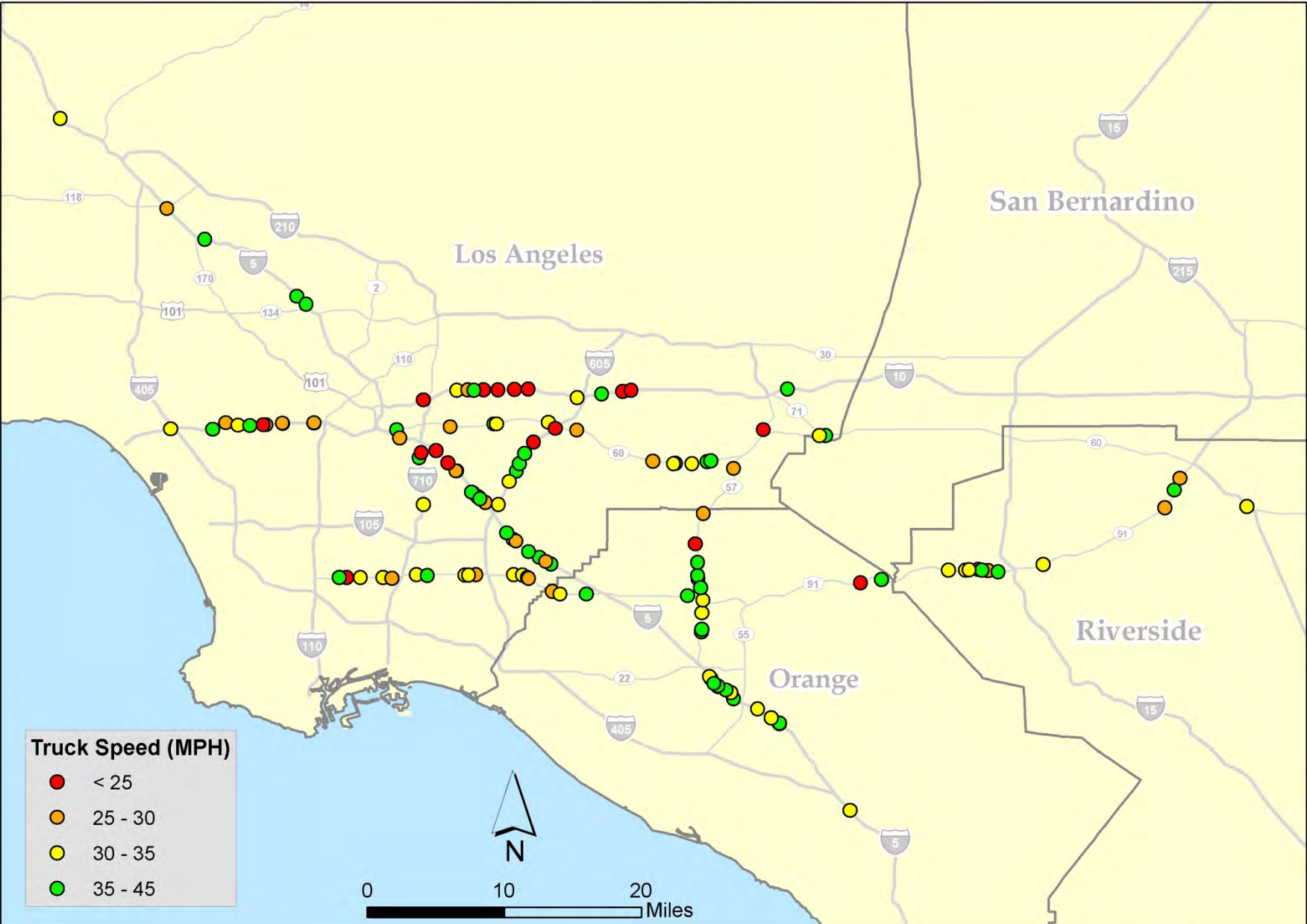
Preliminary Analysis Methodology

- Methodology developed to screen for truck congestion hot spots
- Use Caltrans Performance Monitoring System (PeMS) data to identify location and severity of truck delays by direction (Oct. 2008)
 - Speed and hourly truck traffic distribution
 - Caltrans Truck AADT data used as daily control totals

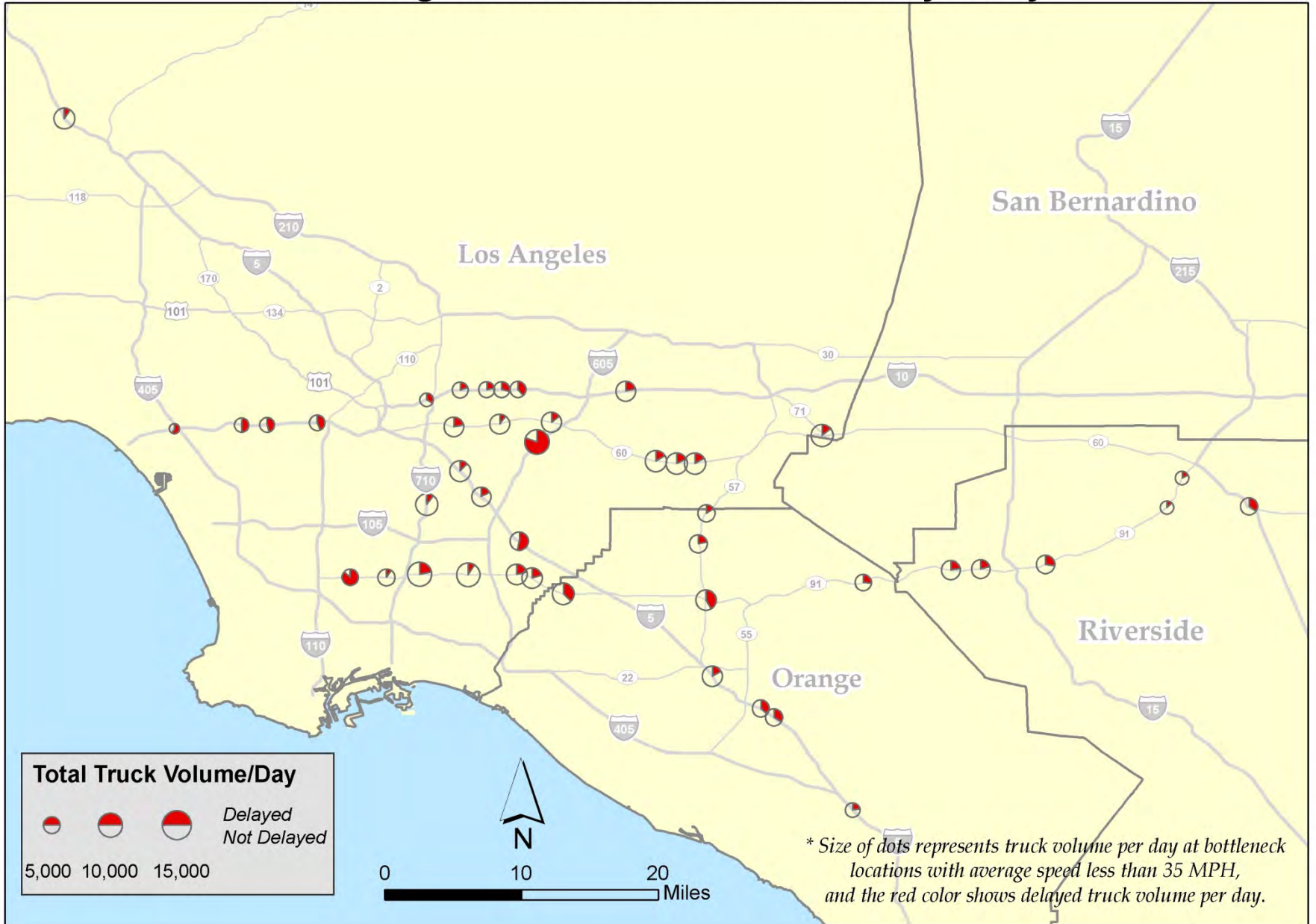
Preliminary Analysis Methodology (cont.)

- Identify hourly average speeds less than 45 mph and truck hours of delay per mile during a typical weekday.
- Compare truck speeds from PeMS with truck GPS data
- Compare to American Transportation Research Institute (ATRI) data
 - Comparisons to Caltrans Corridor System Management Plan (CSMP) data underway

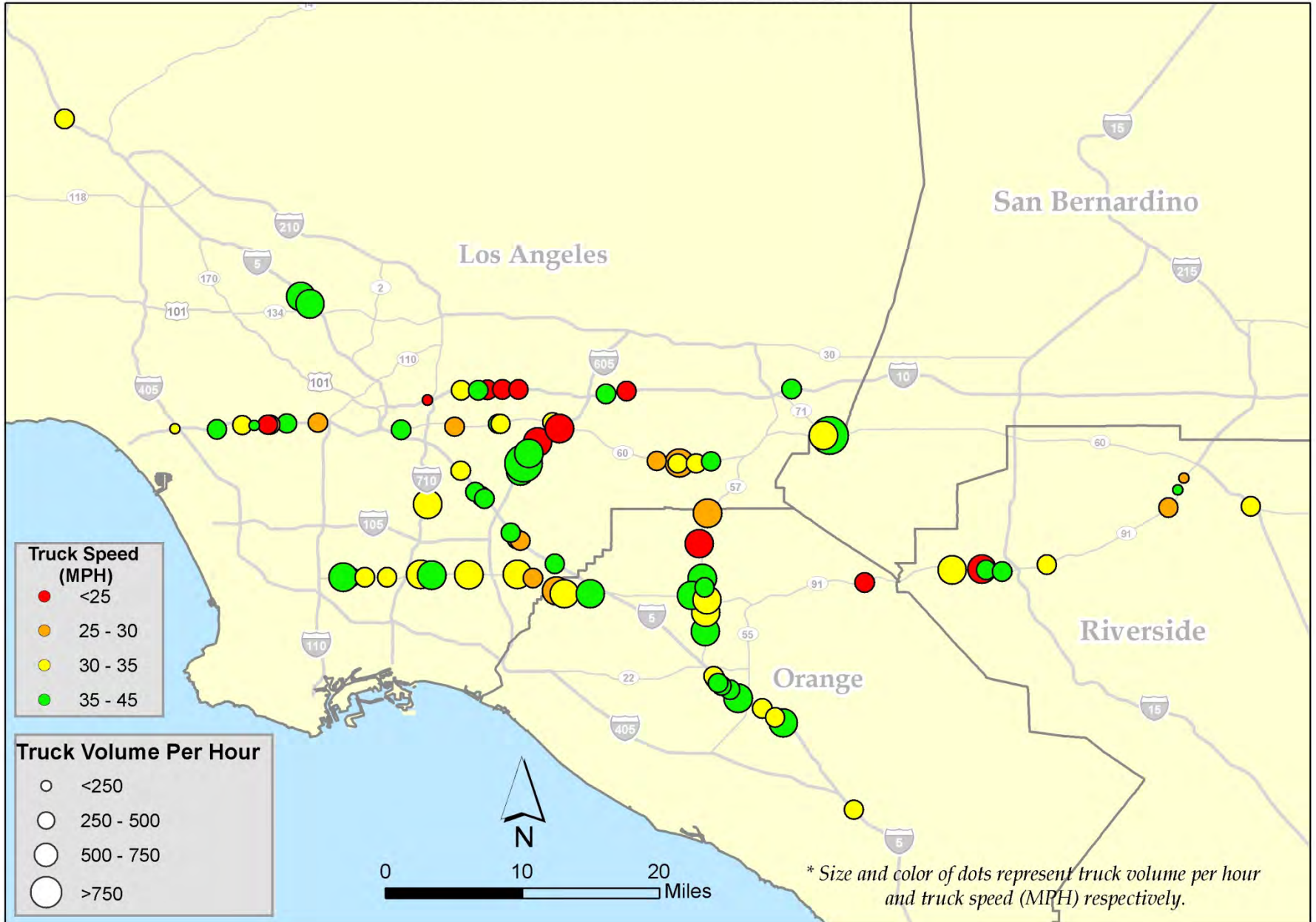
Bottleneck Truck Speed



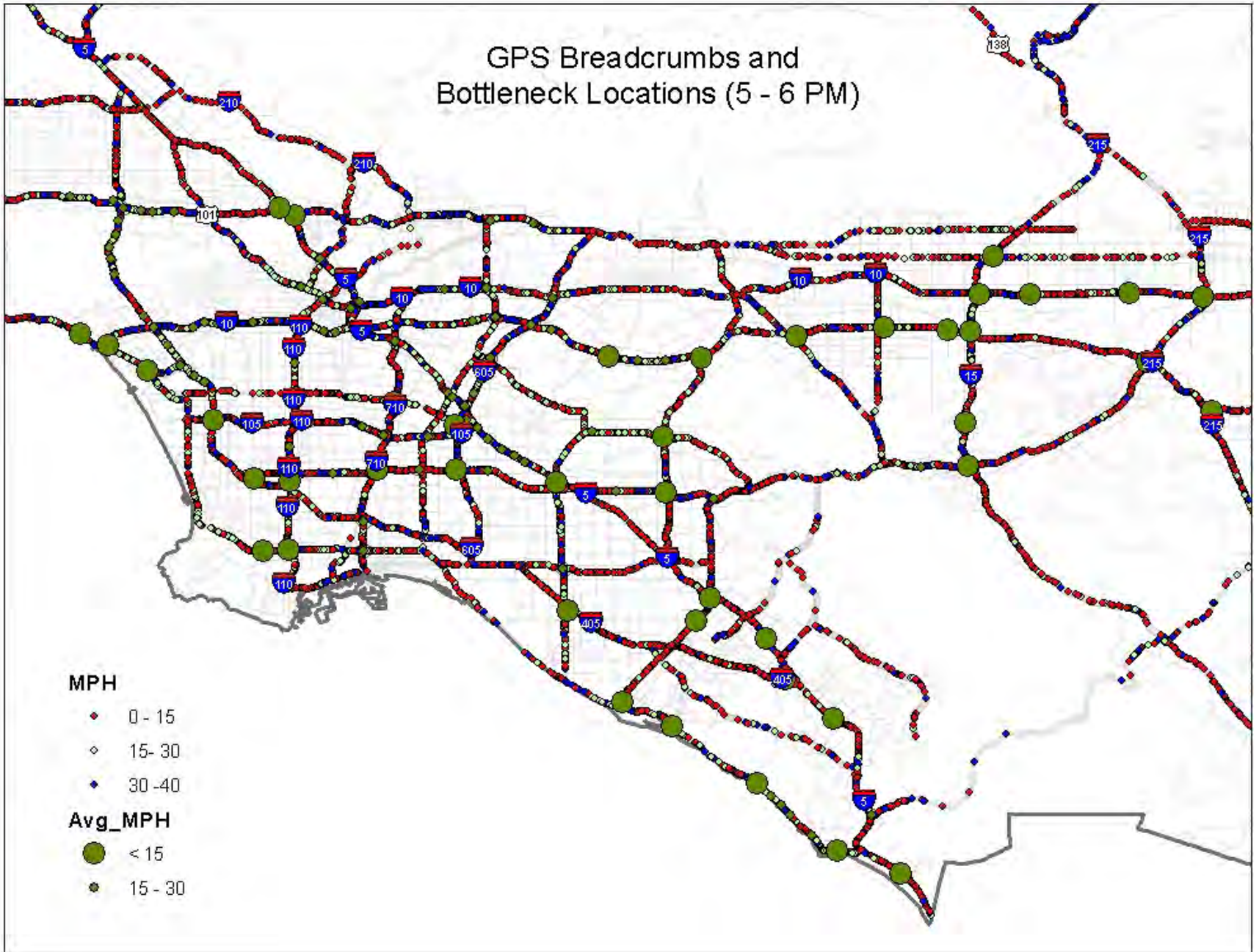
Total Truck Volume and Percentage of Truck Volume Affected by Delay



Bottleneck Truck Speed And Truck Volume Per Hour



GPS Breadcrumbs and Bottleneck Locations (5 - 6 PM)



ATRI's Top Freight Bottlenecks in SCAG Region



Initial Observations

- Several key clusters of congestion hot spots identified
 - Additional comparisons of GPS speed data and PeMS data need to be conducted
- Trucks on a number of high volume truck segments are still able to avoid high congestion periods

Next Steps

- Verify initial findings with Caltrans, CTCs, COGs and affected cities
- Analyze future conditions with model results
- Begin investigation of causes and potential mitigation projects
 - It could be that in several of these localized hot spots, projects either currently in the pipeline or planned could improve conditions
 - In other cases, we may identify other improvements