

# Near-road NO<sub>2</sub> Network Update

Nealson Watkins

Tim Hanley

US EPA - OAR - OAPQS

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# Near-road NO<sub>2</sub> Monitoring

## Network Requirements & Installation Schedule

- Phase 1 - One site in CBSAs having  $\geq 1$  million persons (52 sites) due by January 1, 2014
  - Phase 2 - One site in CBSAs having  $\geq 2.5$  millions persons and any CBSA  $\geq 500,000$  having one or more road segments with  $\geq 250,000$  AADT (23 sites) due by January 1, 2015
  - Phase 3 - One site in CBSAs having  $\geq 500,000$  persons (51 sites) due by January 1, 2015
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- ▶ 34+ sites are confirmed to be operational, and many of the remainder should be running by the end of the summer
  - ▶ Most delays have been linked to gaining site access and getting infrastructure connections (e.g, power, telecom)

# Current Activities

- ▶ OAQPS is working with Regions to track site installation for both phase 1 and phase 2 sites
- ▶ Detailed site information is being compiled for subsequent metadata analysis and network characterization
- ▶ Site metadata indicate that states have done a very good job following the TAD and placing sites in highly desirable locations



Boston, MA



Seattle, WA

# Near-road site Meta-data & AQS

- ▶ Near-road sites are and will receive a lot of attention from the public as data begins to be submitted en masse
- ▶ Metadata will be critical to understanding what the network is characterizing
- ▶ Data users will want to know exact details with respect to:
  1. Distance to the road
  2. Height above ground
  3. Target road characteristics (vehicle counts, fleet mix, congestion)
- ▶ These details will allow case study and network-wide analyses (i.e., pollution gradients, traffic/concentration trends, dispersion modeling, etc.)
- ▶ It is critical that certain meta-data are accurately determined and recorded
- ▶ Note: If NO (Nitric Oxide) is measured, it is required to be reported along with the NO<sub>2</sub> and NO<sub>x</sub> data

Standard Report Criteria Selection (Read Only) AMP390

State Code	County Code	Site Id	Parameter Code	POC	City Code	AQCR Code	UAR Code	CBSA Code	CSA Code	EPA Region Code

**Protocol Criteria**

Pollutant Type	Parameter Code
CRITERIA	42602

**Date Criteria**

Start Date	End Date
YYYY MM DD	YYYY MM DD
2014 01 01	2014 03 31

**Screening Group**

**Monitor Network**: NEAR ROAD

**Monitor Type**: SLAMS

**Agency Role**: POAD

**Agency**

Generate Report

# Key AQS Meta-data Fields from Near Road TAD

(See Pages 77 and 78 of Near Road TAD for details)

AQS Field	Expected Selection for Near Road Stations	Notes
Land Use Type	Mobile	
Location Setting	Urban and City Center	
Tangent Road Name	e.g., I-95	Called "Street Name" in TAD
Road Type	e.g., Freeway	
Traffic Count	e.g., 132550	
Year of Traffic Count	e.g., 2012	
Direction from Site to Road	e.g., WSW	
Source of Traffic Count	e.g., DOT	Let us know if there other traffic count data sets used (besides a DOT)
Monitor Objective	Source Oriented Can also be Highest Concentration and/or Population exposure	Multiple Monitor Objectives can be used
Distance from Monitor to Tangent Road	As near as practible, no greater than 50 meters. (units in meters)	Distance from edge of the nearest traffic lane to probe (at ground level- no trigonometry required).
Dominant Source	Mobile	

# Additional AQS Metadata fields relevant to Near road Sites

AQS Field	Expected Selection for Near Road Stations	Notes
Monitor Type	SLAMS	All required sites are expected as SLAMS
Monitor Network Code	NEAR ROAD	These two fields go together.
Monitor Network Description	Monitors at sites meeting NO2 near road design as per Part 58.	
Measurement Scale	Micro Scale	This is by monitor at the site. i.e., other pollutants can be different
Probe Height	From ground level at probe location	In meters

# Data Analysis Plans

- ▶ 1<sup>st</sup> quarter 2014 data due into AQS by June 30, 2014
- ▶ Some initial case study type data analyses could include:
  - ▶ What are the hourly peaks?
  - ▶ What are the quarterly averages?
  - ▶ To what degree are near-road concentrations at or above 'area-wide' concentrations?
  - ▶ Can we see daily/diurnal trends?
- ▶ Outside entities are also likely to begin data analysis once we begin bringing attention to the network via operational status lists and site metadata summaries
- ▶ A network update and early analyses will be available during the National Ambient Air Monitoring Conference in Atlanta (August 10 - 14, 2014)