



# Connecticut Department of Energy and Environmental Protection



# 2013 Air Monitoring Network Plan

May 9, 2013

Randall Semagin

SIPRAC



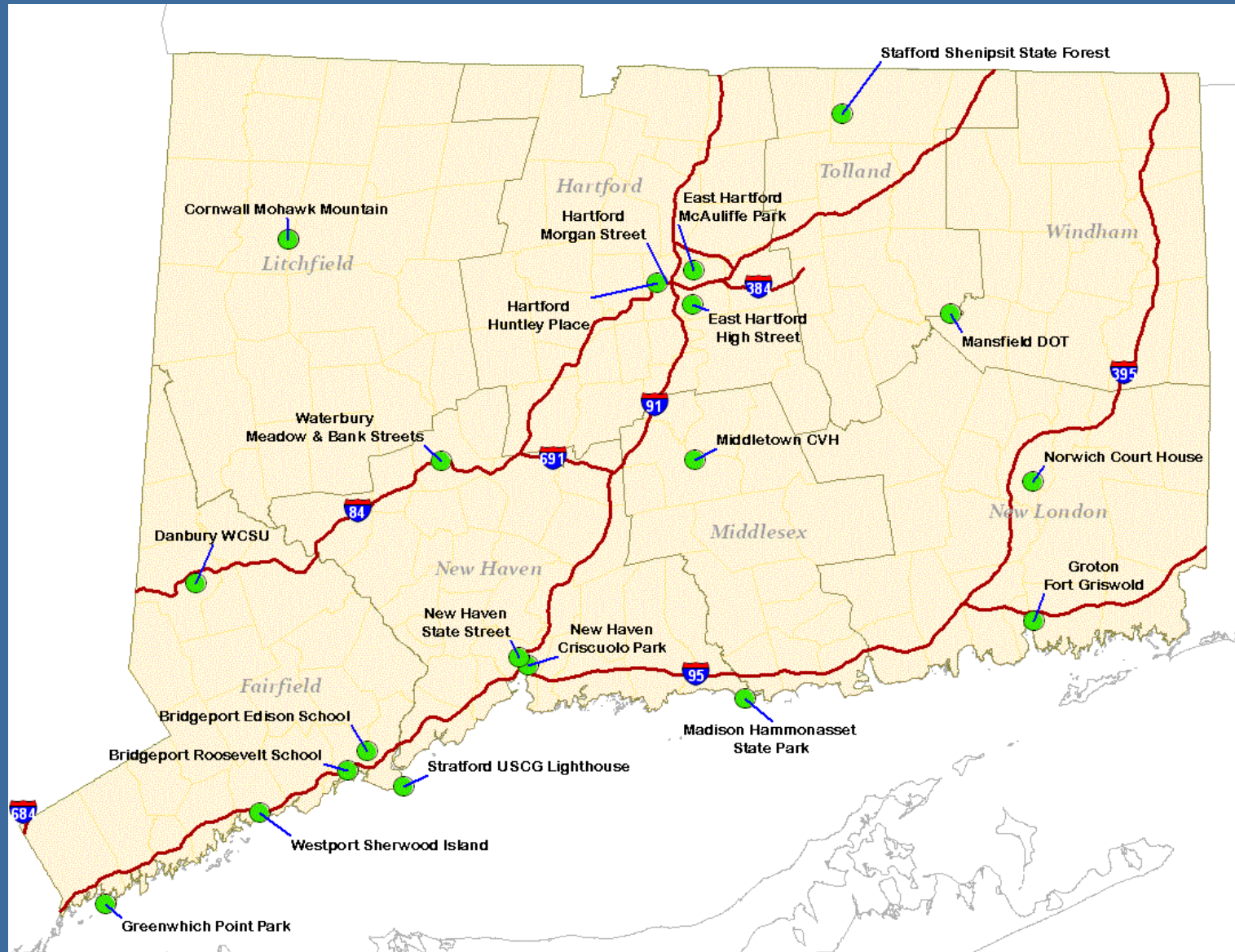
Connecticut Department of Energy and Environmental Protection

# Purpose of Network Plan

- Comply with 40 CFR 58.10
- Describe current air monitoring network configuration
- Propose network changes
- Provide analysis/rationale to demonstrate compliance with new EPA monitoring initiatives

Plan is posted on DEEP website under: [Air/Air Monitoring/Network Design](#)

# DEEP Current Monitoring Network



# DEEP Proposed Network Changes

- Discontinue PM<sub>2.5</sub> sampling at Norwich Court House
- Establish Continuous FEM PM<sub>2.5</sub> sampling at Groton Fort Griswold
- Discontinue SO<sub>2</sub> monitoring at Westport Sherwood Island State Park

# Site Information Table

Town	Site	PM2.5 (FRM)	PM2.5 (FRM, Collocated)	PM2.5 (Continuous)	PM10/PM-Coarse (FRM)	PM10/PM-Coarse (FRM, Collocated)	PM10/PM-Coarse (Continuous)	Lead-PM10	Lead-PM10 (Collocated)	PM Speciation (CSN)	PM Speciation (IMPROVE)	PM2.5 Carbon (OC/EC, Continuous)	PM2.5 Sulfate (Continuous)	PM2.5 Carbon (BC/LVC, Continuous)	Ozone	SO2	CO	NO/NO <sub>2</sub> /NO <sub>x</sub>	NOy	VOCs (PAMS)	Carbonyls (PAMS)	Traffic Count	Wind Speed	Wind Direction	Temperature	Dew Point / Rel. Humidity	Rain Fall	Barometric Pressure	Solar Radiation
Bridgeport	Edison School														X														
Bridgeport	Roosevelt School	1/3		X	1/6											X									X				
Cornwall	Mohawk Mountain	1/3		X	1/3	X				X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X
Danbury	West Conn State Coll.	1/3		X										X									X	X	X	X			
East Hartford	High Street	1/3		X																			X	X					
East Hartford	McAuliffe Park	1/1		X	1/6								X	X	X	X	X			X	X		X	X	X	X			X
Greenwich	Point Park													X									X	X	X		X		
Groton	Fort Griswold			X*										X									P	P	X				
Hartford	Huntley Place			X		X							X			X	X					X	X	X	X			X	
Madison	Hammonasset S.P.												X										X	X	X				
Mansfield	DOT																						X	X					
Middletown	Conn. Valley Hosp.												X										X	X	X		X	X	
New Haven	Crisuolo Park	1/1	1/6	X	1/3	1/6	X	1/6	1/12	X		X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X
New Haven	State Street	1/3																											
Norwich	Norwich Courthouse	1/3																											
Stafford	Shenipsit State Forest													X									X	X	X				
Stratford	Stratford Lighthouse													X											X				
Waterbury	Bank St	1/3	1/6	X																			X	X	X		X		
Westport	Sherwood Island S.P.	1/3												X	X		X			X			X	X	X	X			X

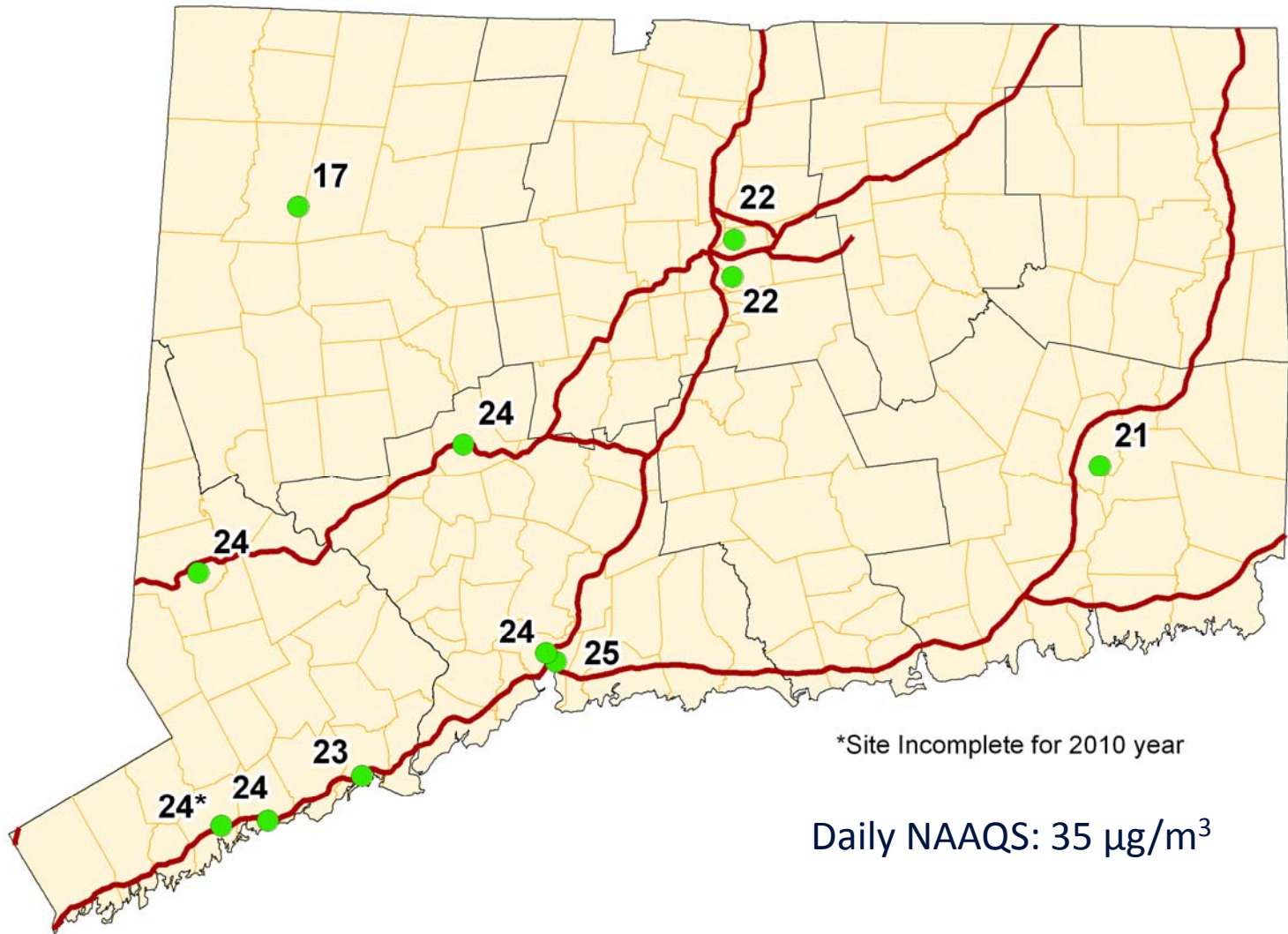
\*Propose to establish FEM PM<sub>2.5</sub> monitoring to replace non-regulatory PM<sub>2.5</sub> monitoring



# Monitoring Network Descriptions

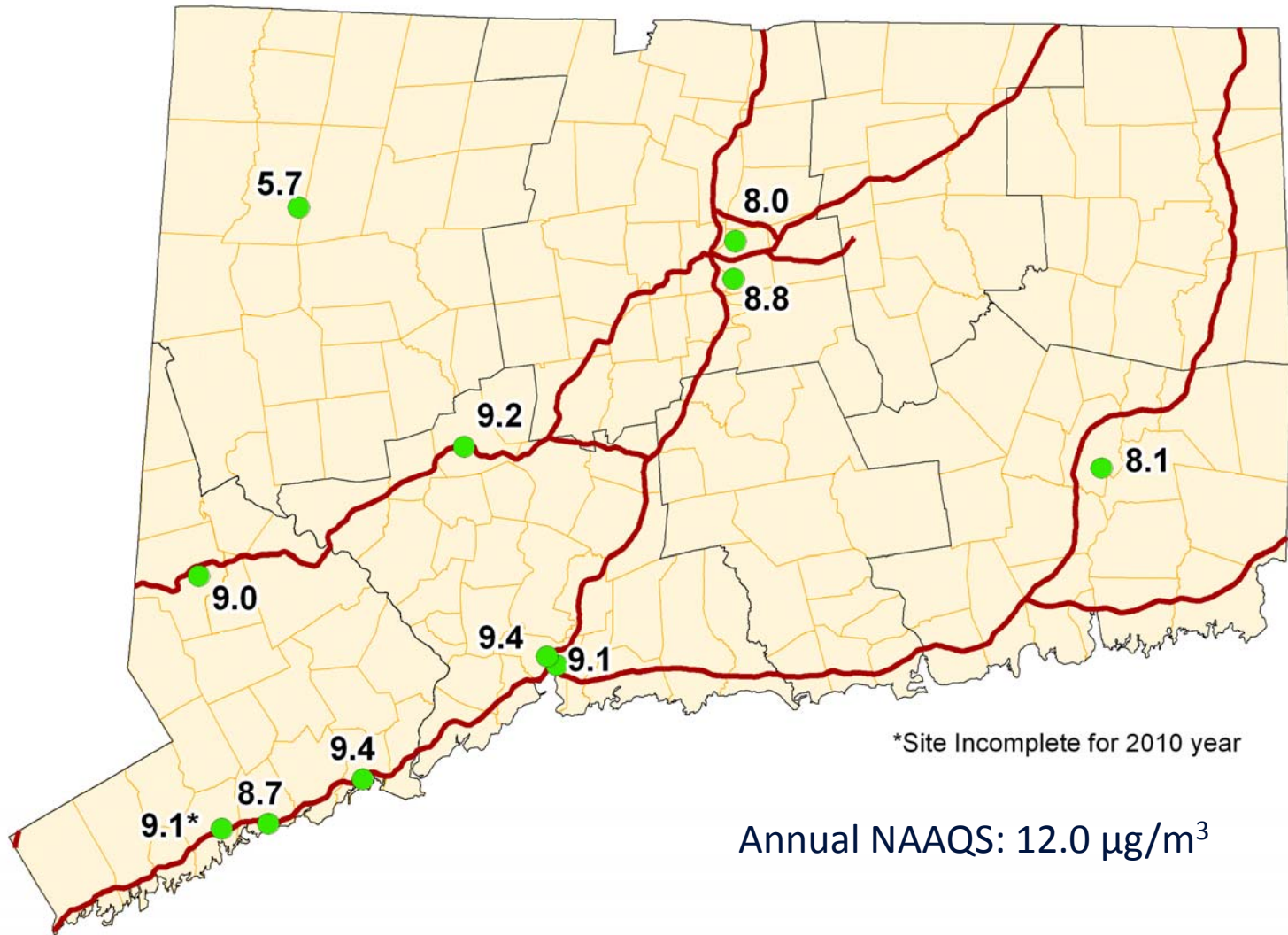
- Extent of Network
- Monitoring methods
- Sampling frequencies
- Discussion and analysis of changes

# 2012 PM<sub>2.5</sub> Daily Design Values

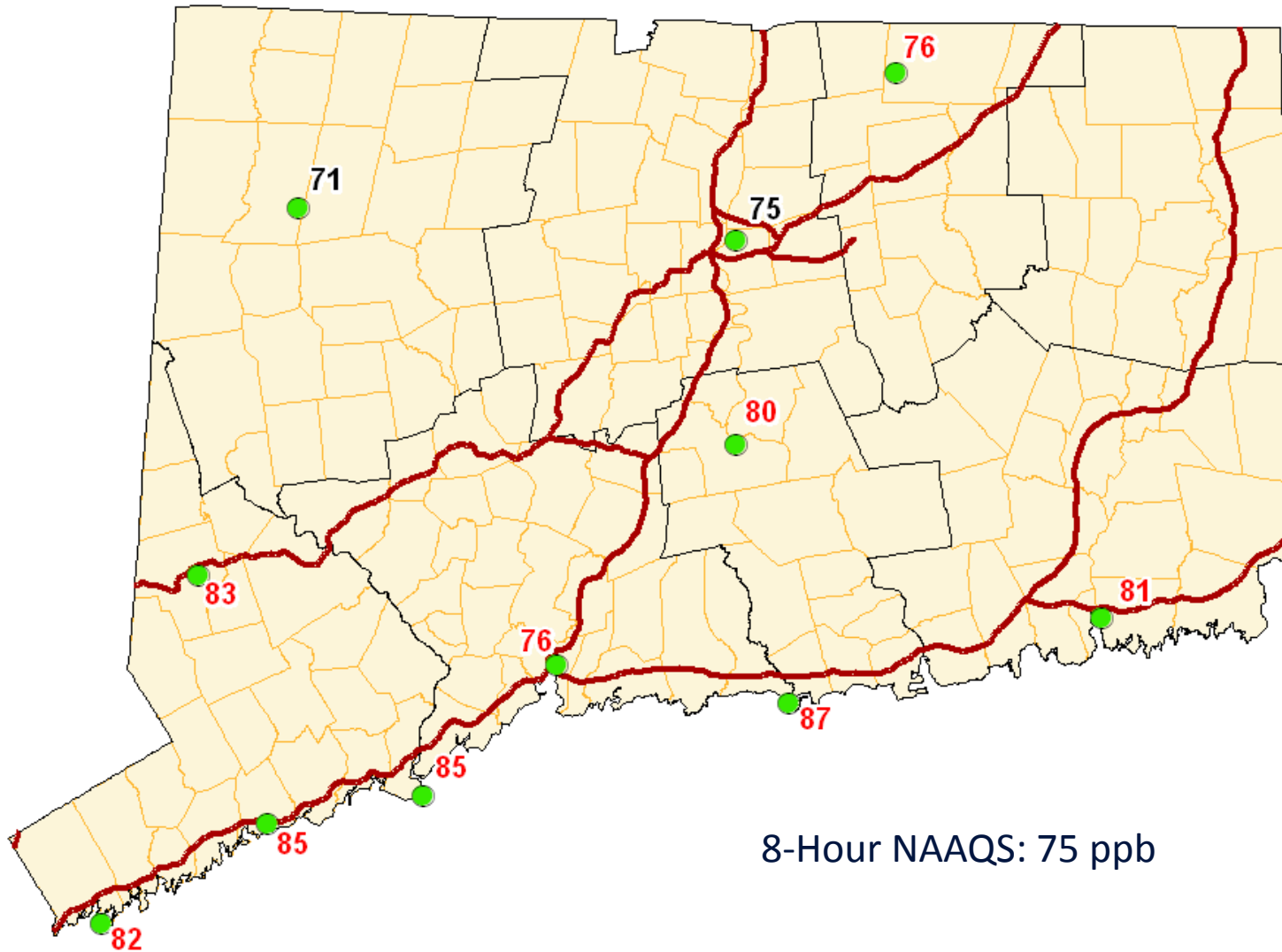




# 2012 PM<sub>2.5</sub> Annual Design Values

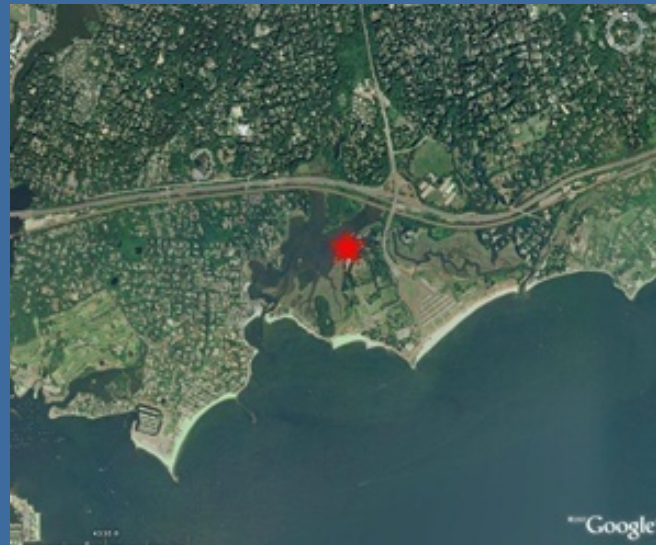
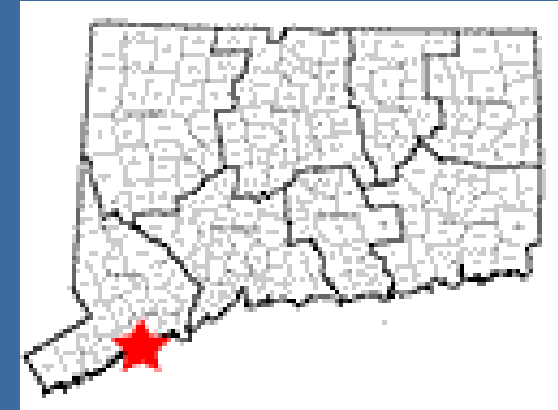


# 2012 Ozone Design Values



# Site Information Section

Town – Site:	<b>Westport – Sherwood Island State Park</b>		
County:	<b>Fairfield</b>	Latitude:	<b>41.11822°</b>
Address:	<b>Sherwood Island SP</b>	Longitude:	<b>-73.33681°</b>
AQS Site ID:	<b>09-001-9003</b>	Elevation:	<b>4 m (13 ft)</b>
Spatial Scale:	<b>Regional</b>	Year Established:	<b>1996</b>
Statistical Area:	<b>CSA (New York-Newark-Bridgeport)</b>		



# Site Information Section (cont.)

PM2.5 FRM	
PM2.5 FRM colo	
PM2.5 BAM	
PM2.5 Nephelometer	
PM2.5/PM10/PM10-C-EDMS	
PM10 FRM (lo-vol)	
PM10 FRM colo	
PM10 BAM	
STN	
IMPROVE	
Continuous OC/EC	
Continuous Sulfate	
BC/UVC	
Ozone	X
SO2	X
CO	
NOx	X
NOy	
Lead (Pb)	
VOCs (PAMS)	X
Carbonyls (PAMS)	
Cont. PAH	
Mercury	
Dioxins	
Wind Speed	X
Wind Direction	X
Temperature	X
Dew Point	X
Rain Fall	
Barometric Pressure	
Solar Radiation	X

**Site Description:** The Westport Sherwood Island State Park site is a regional-scale site located in southwestern Connecticut. This is a coastal site that is approximately 0.5 km to the south of I-95 on the Long Island Sound. This site meets all siting requirements and criteria and has been approved internally by DEEP and independently by EPA Region I.

**Monitoring Objectives:** The Westport Sherwood Island State Park monitoring site is a PAMS and PM2.5 SLAMS site. Objectives include collecting PM<sub>2.5</sub> FRM measurements for compliance purposes. Ozone is measured at the Westport site for compliance assessment and AQI and forecasting purposes and PAMS and NO<sub>x</sub> monitoring is conducted to obtain measurements of ozone precursors.

**Planned changes for 2013-2014:** Discontinuing SO2 monitoring by 1/1/2014.

# Recent/Current Monitoring Network Changes

- Madison ozone site relocated within Hammonasset State Park
- Groton Fort Griswold shelter replaced
- Hartford Huntley Place near-road site operating since April 2013
- East Hartford McAuliffe Park shelter replacement May-June 2013
- Hartford Morgan Street CO site to close June 2013

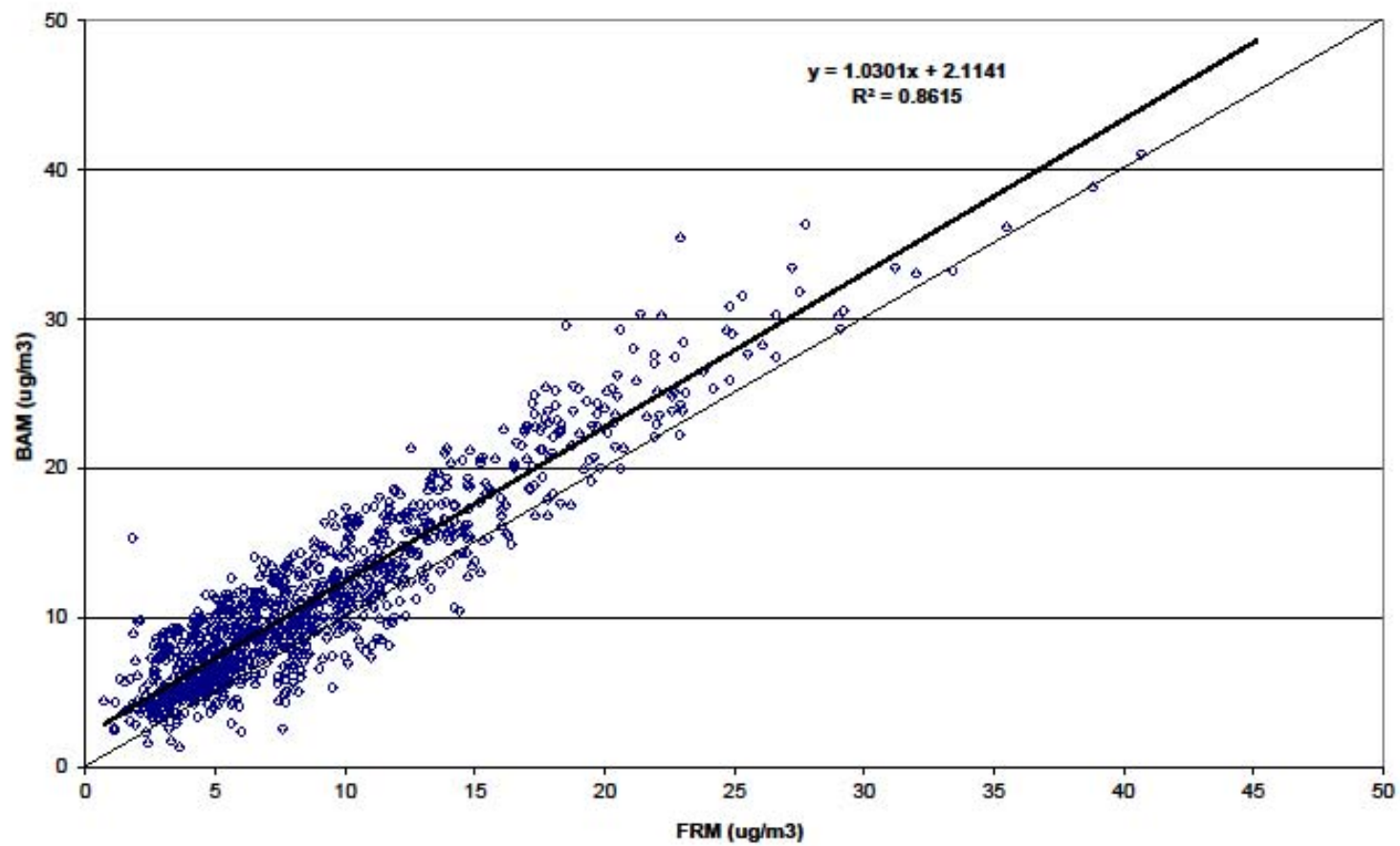


# Ongoing Projects

- Data management network upgrades
- Air quality website has gone live
- Virtual machine network complete
- Air quality education kiosks
- Automatic data retrieval from PM filter samplers
- Assessment and classification of continuous PM2.5 samplers

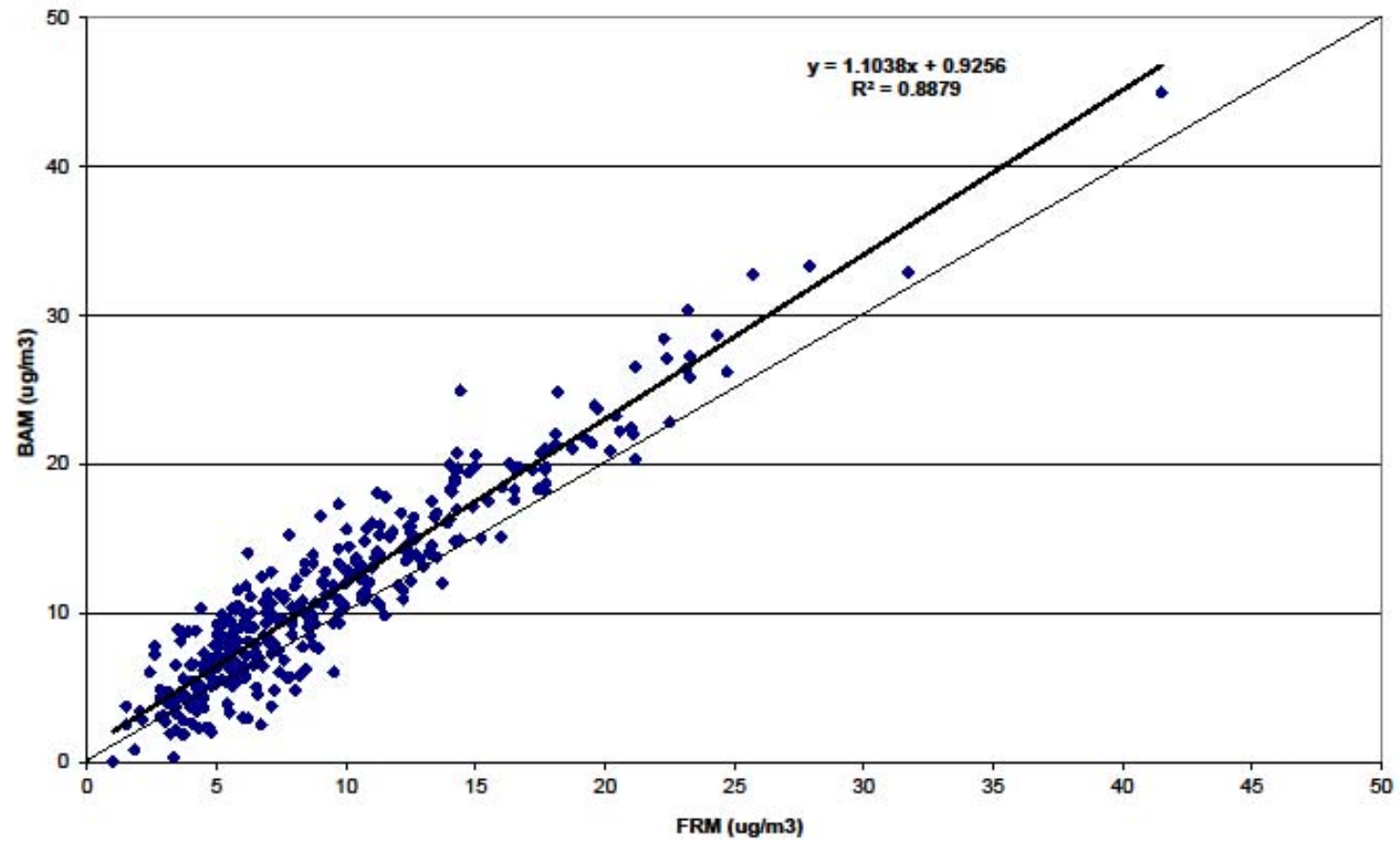
# Continuous PM2.5 Sampler Performance (MetOne BAM 1020)

## New Haven Criscuolo Park

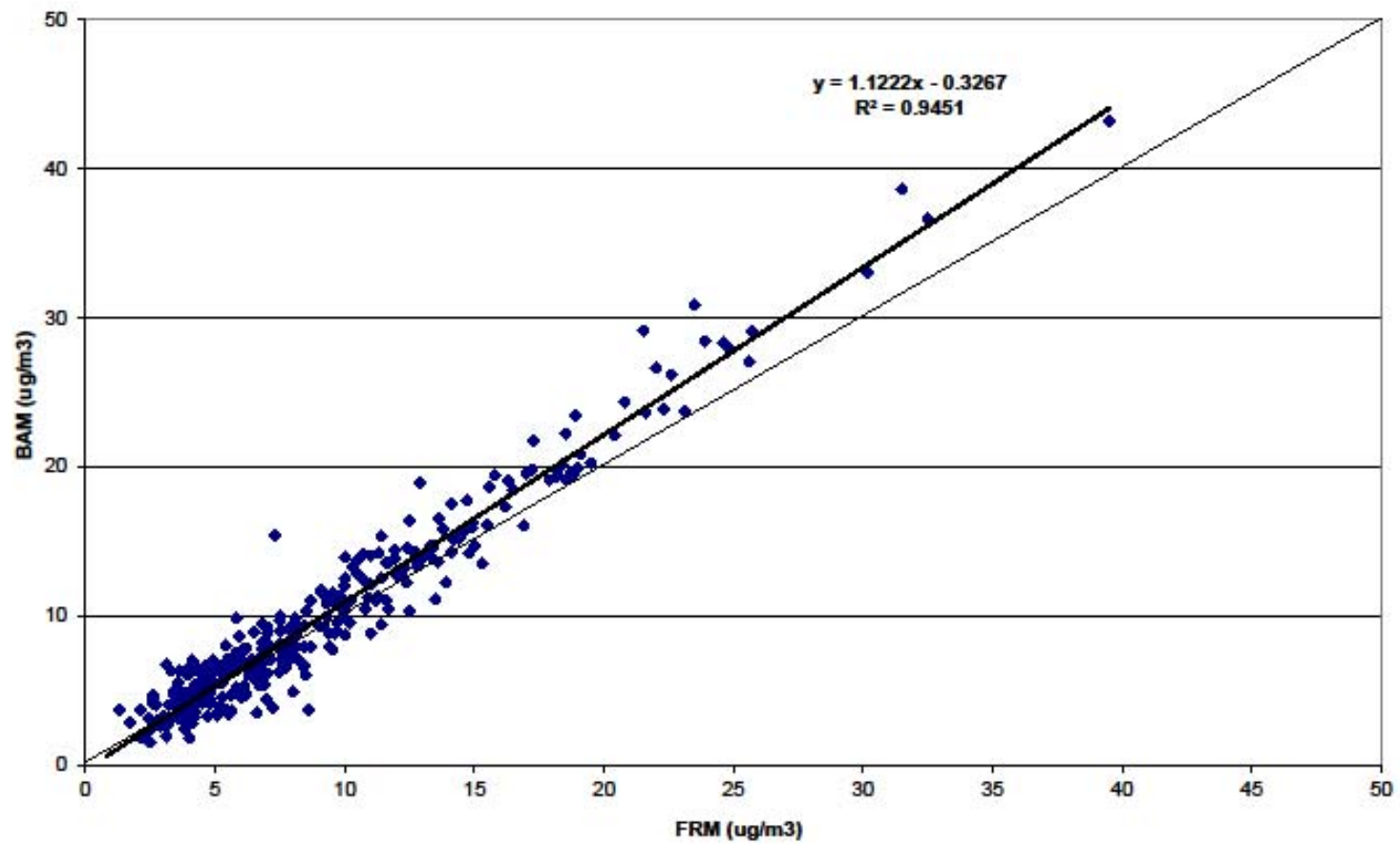




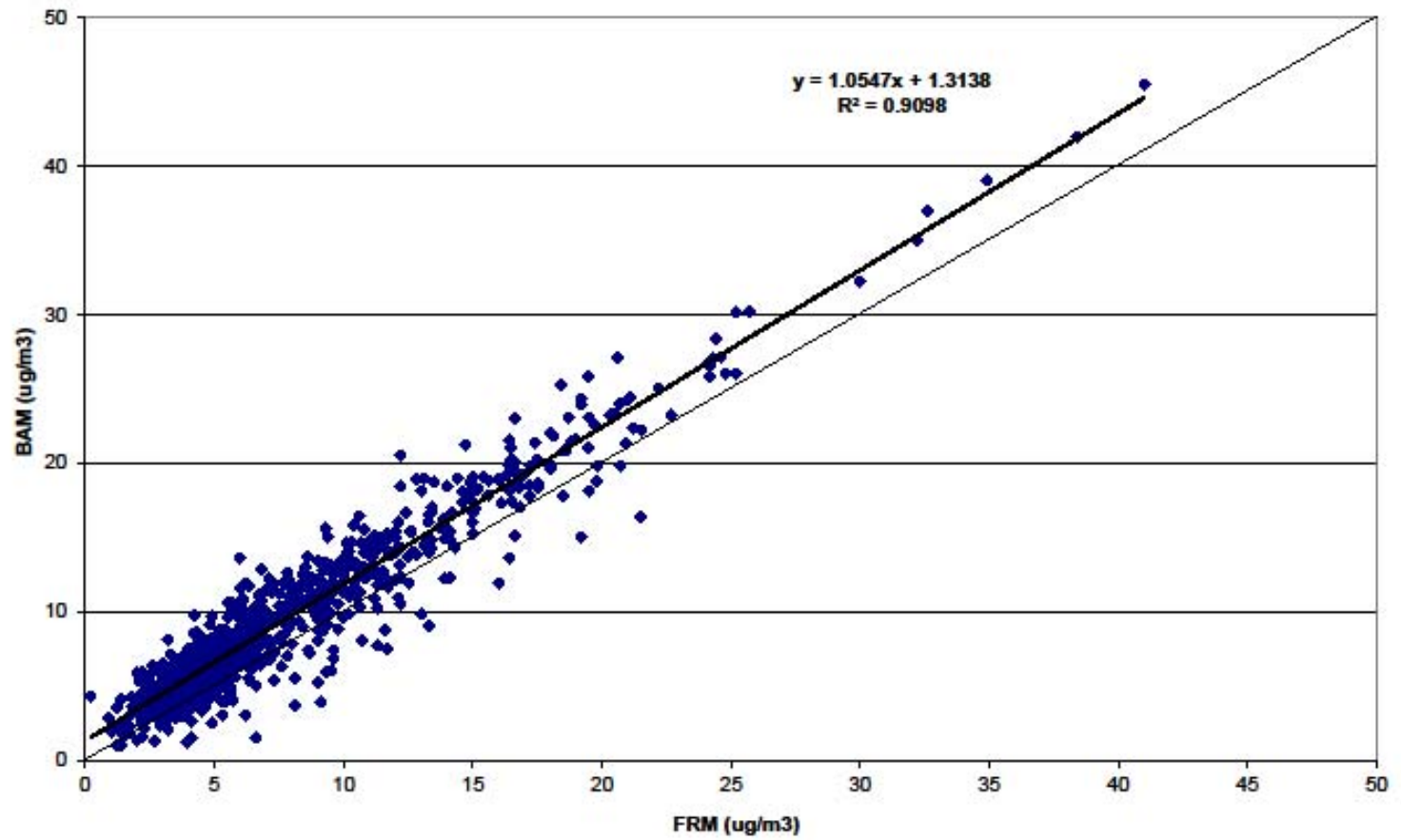
## Waterbury Bank Street



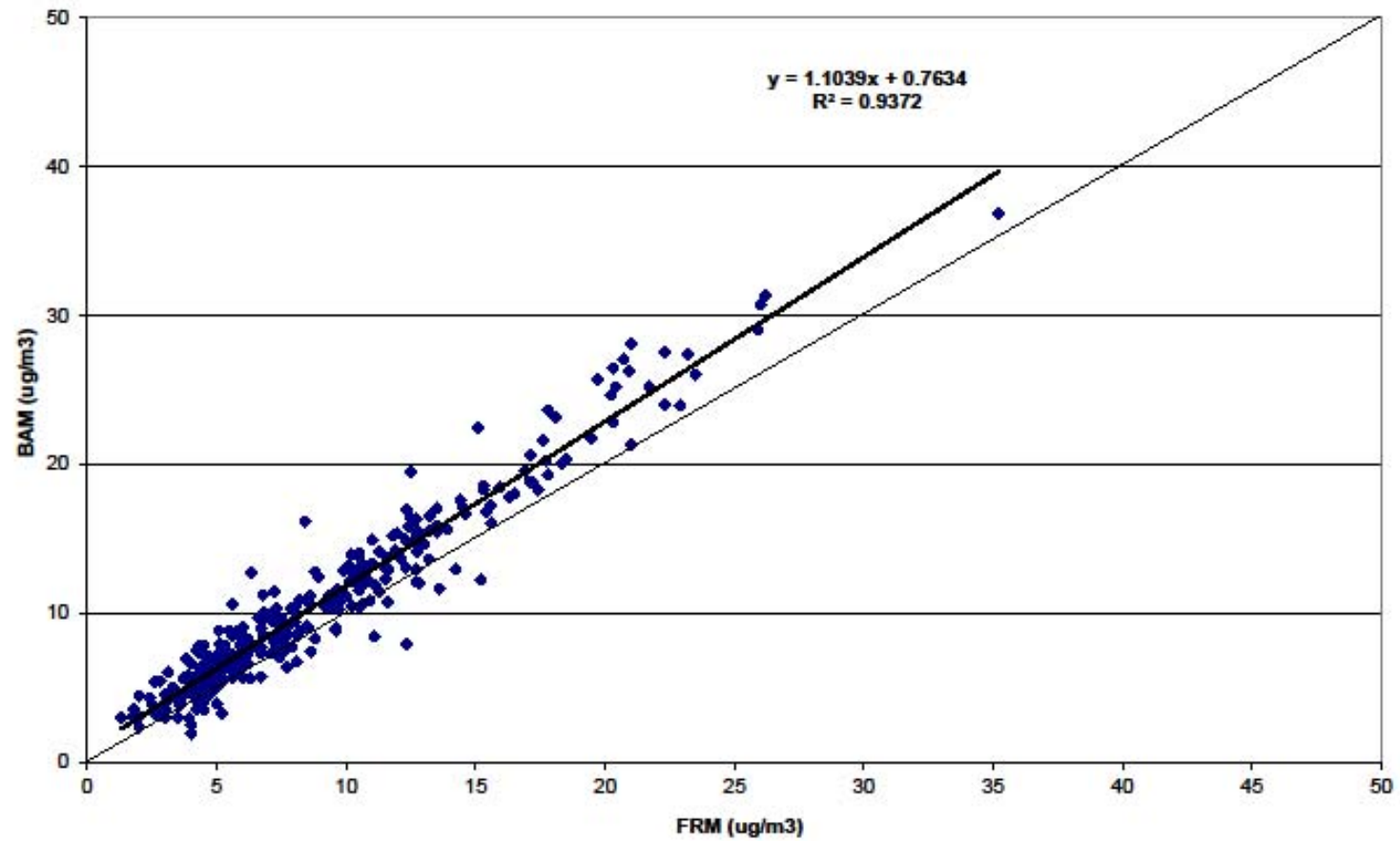
## Danbury WCSU



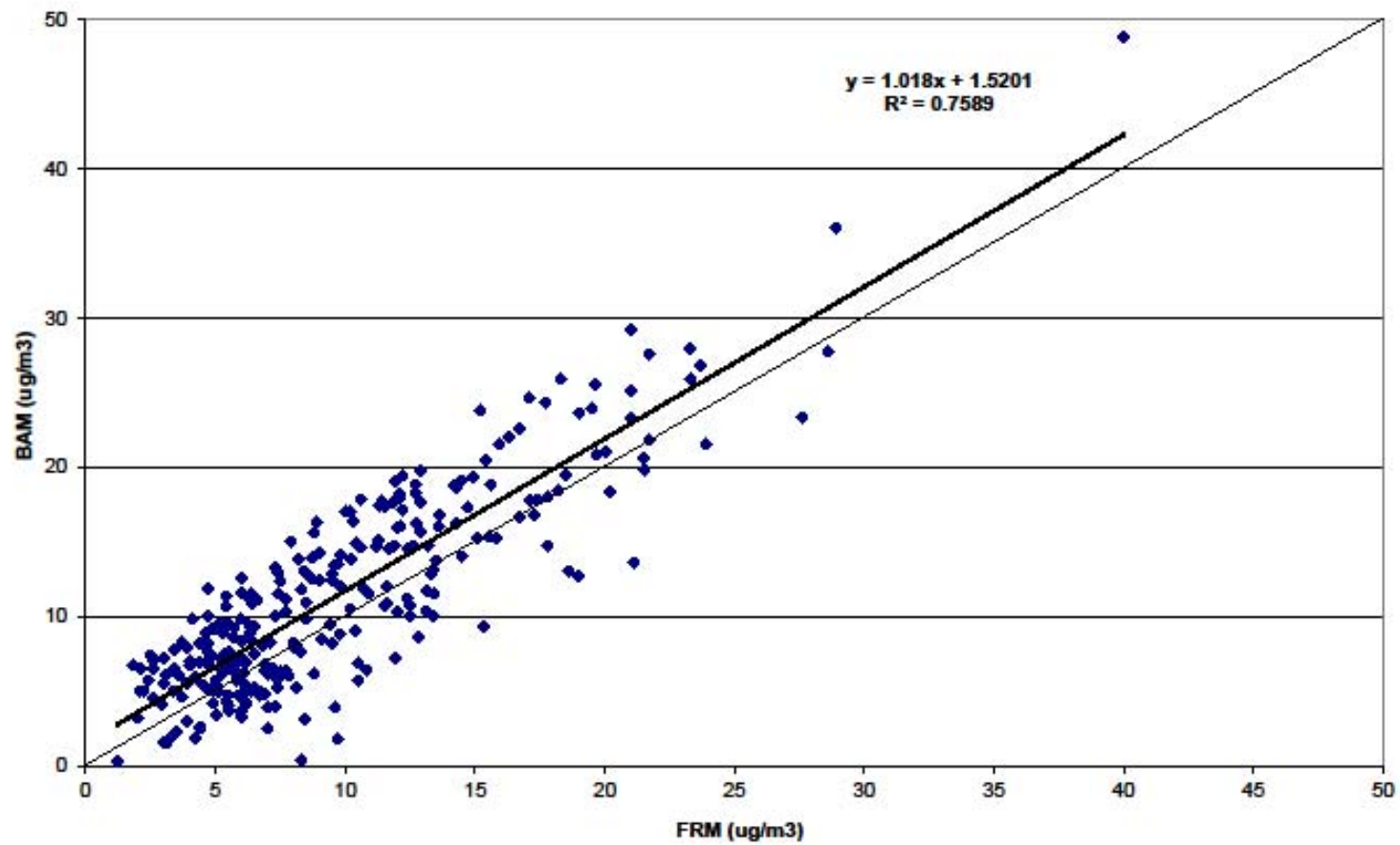
### East Hartford McAuliffe Park



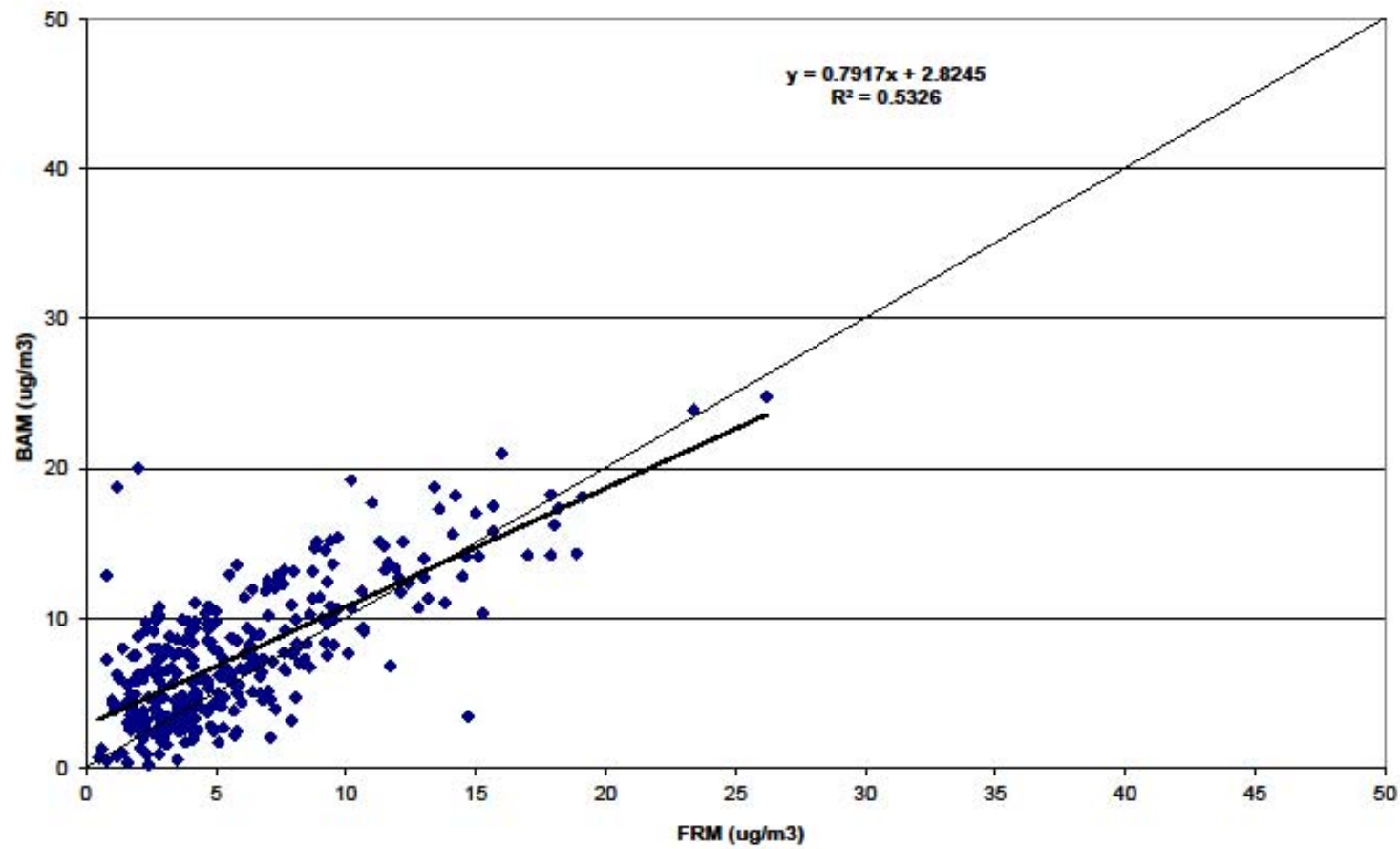
## East Hartford High Street



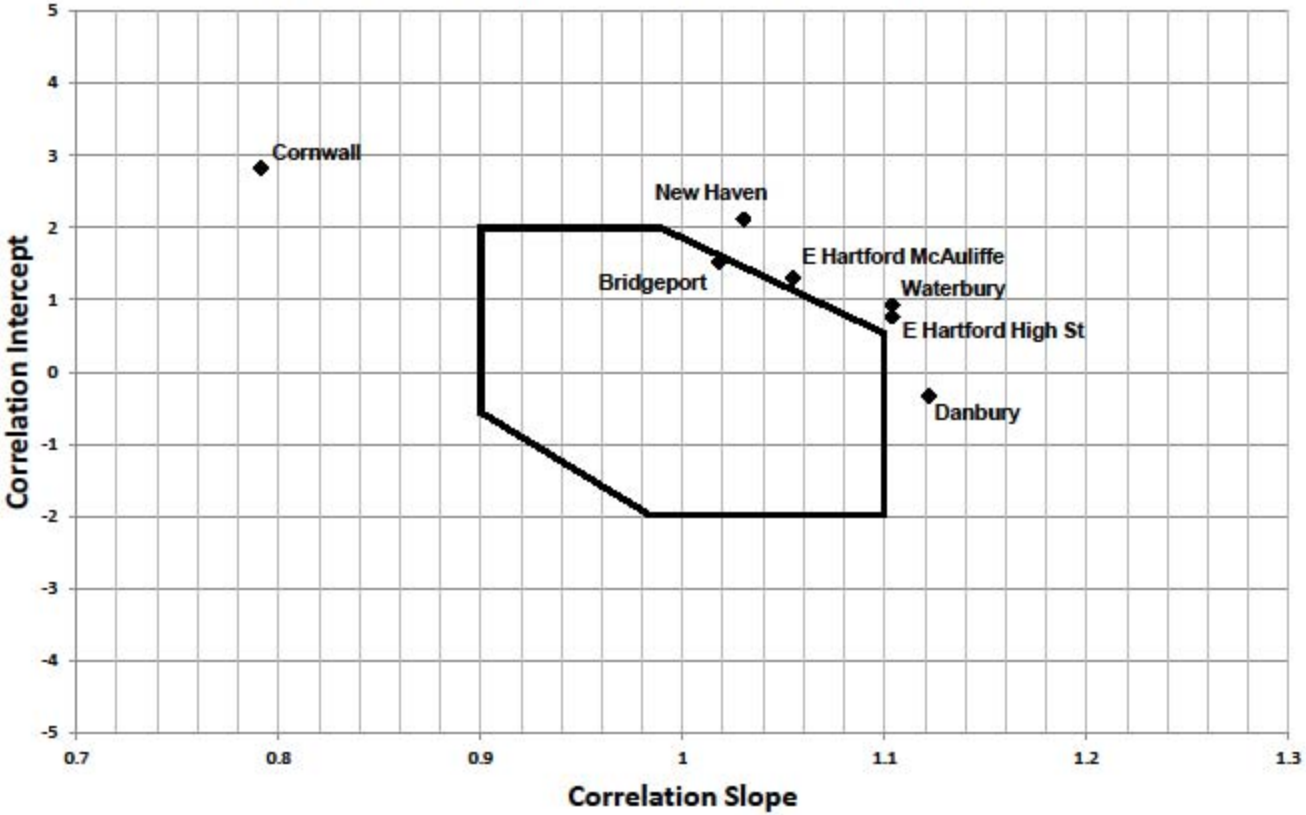
### Bridgeport Roosevelt School



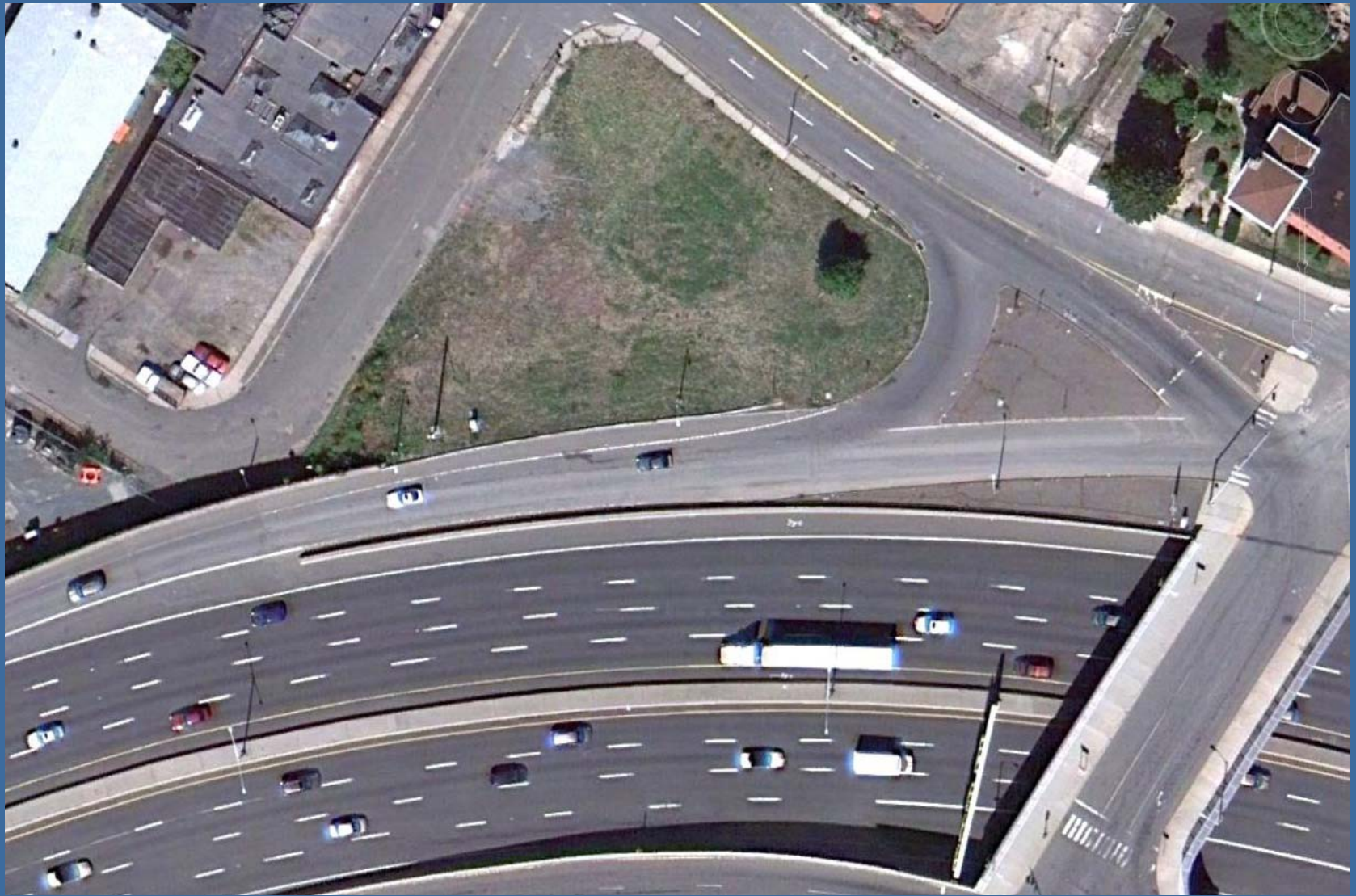
## Cornwall Mohawk Mountain



### MetOne BAM 1020 Comparison with EPA Performance Standards



# Hartford Near-Road Site





# Hartford Near-Road Site



# Hartford Near-Road Site



- Draft Network Plan to be posted on DEEP website this month for public review
- Watch for email announcement
- [http://www.ct.gov/deep/cwp/view.asp?a=2684&Q=321798&deepNav\\_GID=1744](http://www.ct.gov/deep/cwp/view.asp?a=2684&Q=321798&deepNav_GID=1744)
- Submit comments to:  
Randall Semagin  
DEEP/Air Management  
79 Elm St, Hartford, CT 06106  
[randall.semagin@ct.gov](mailto:randall.semagin@ct.gov)