

Connecticut 2010 Annual Air Monitoring Network Plan



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SIPRAC
June 10, 2010





New (2006) National Air Monitoring Regulations

- Annual Air Monitoring Network Plan:
 - Due to EPA Regional Office on July 1st of every year
 - Must go through 30-day public comment period
 - Covers existing network and proposed changes
- Network Assessment every 5 years; first one due 2010; involves more complete assessment with data analysis.
- [Connecticut 2010 Annual Air Monitoring Network Plan](#) will be posted on ct.gov website for a 30-day period (until July 10th); comments will go to Peter Babich at pete.babich@ct.gov





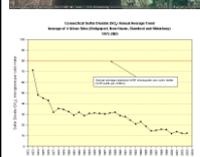
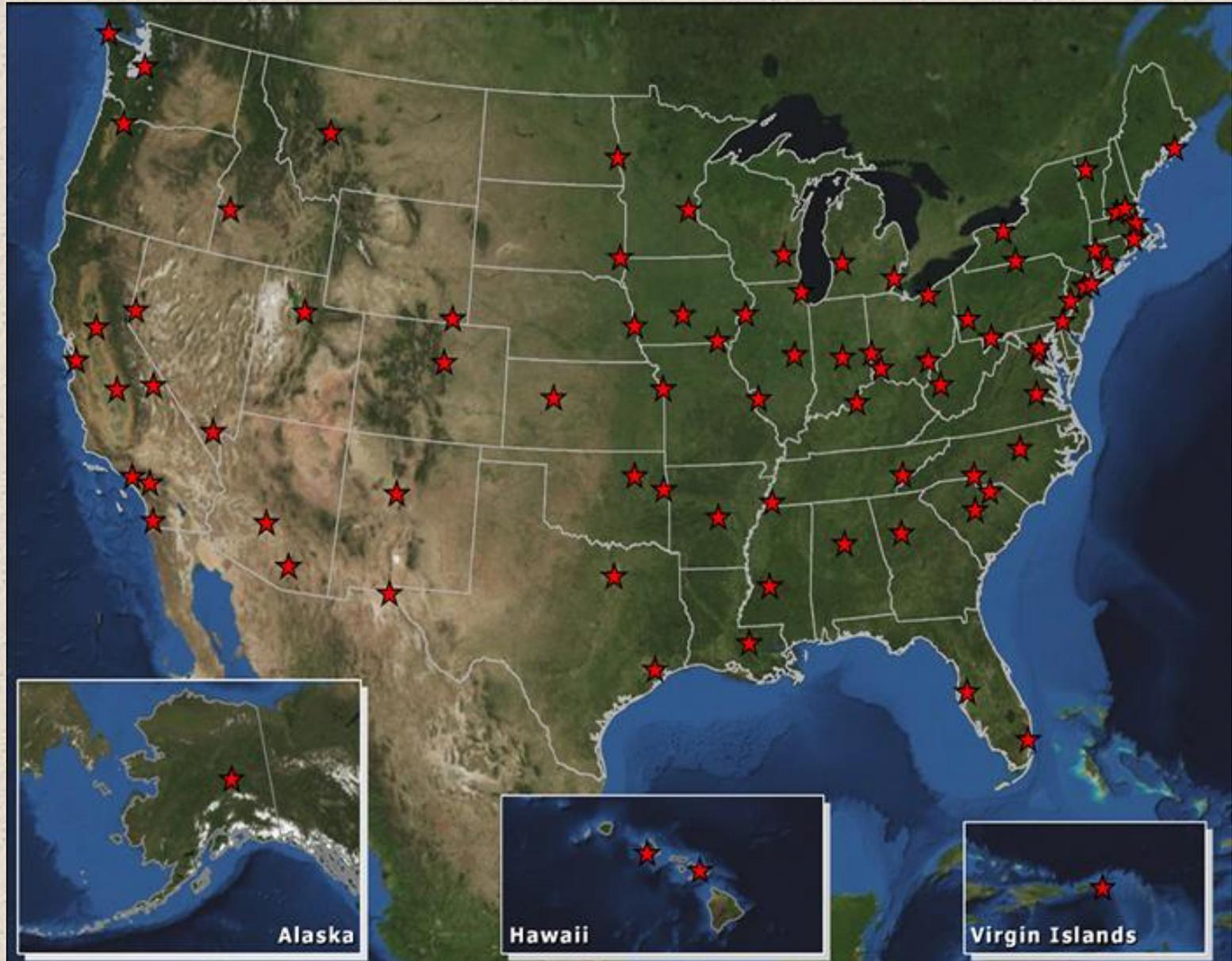
New (2006) National Monitoring Requirements NCore Multi-Pollutant Network

- Collocation of multiple pollutant and supporting measurements to meet many different objectives.
- Robust suite of filter-based samples.
- Emphasis on continuous operating instruments.
- Use of high-sensitivity precursor gas monitors.
- Diversity of representative site locations.
- Leverage with existing multi-pollutant networks.
- 80 NCore sites approved nationwide; required to be online by January 1, 2011.
- CT has two EPA-approved NCore sites (Criscuolo Park in New Haven and Mohawk Mountain in Cornwall).





NCore Site Locations





Current Schedule for Ongoing NAAQS Reviews

MILESTONE	POLLUTANT						
	Lead	NO ₂ Primary	SO ₂ Primary	Ozone Reconsideration	CO	PM	NO ₂ /SO ₂ Secondary
NPR	New schedule being developed	<u>Jun 26, 2009</u>	<u>Nov 16, 2009</u>	Jan 6, 2010	<u>Oct 28, 2010</u>	Nov 2010	<u>July 12, 2011</u>
NFR	<u>Oct 15, 2008</u>	<u>Jan 22, 2010</u>	<u>Jun 2, 2010</u>	Aug 31, 2010	<u>May 13, 2011</u>	July 2011	<u>Mar 20, 2012</u>

NOTE:

Underlined dates indicate court-ordered or settlement agreement deadlines

Next Ozone Review: Proposal in May 2013 and Final in Feb 2014





Connecticut 2010 Air Monitoring Network

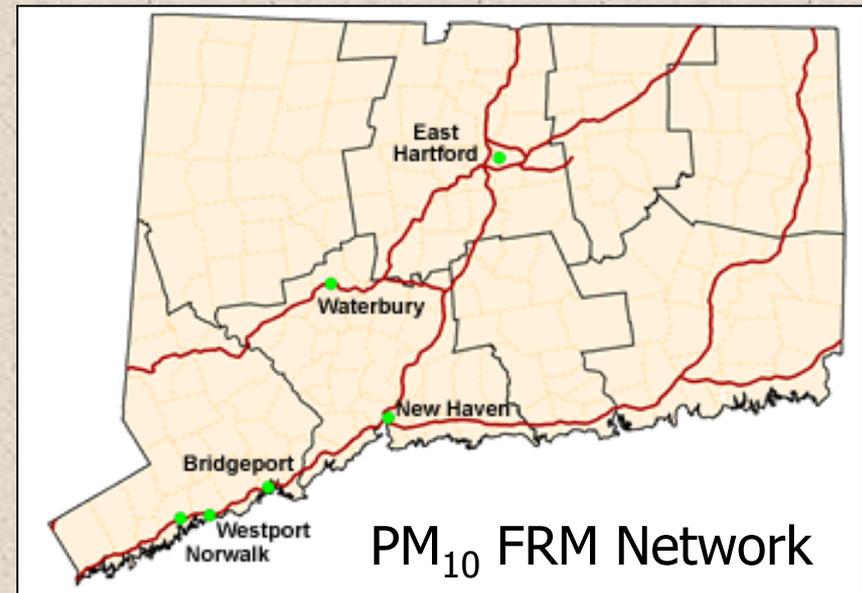
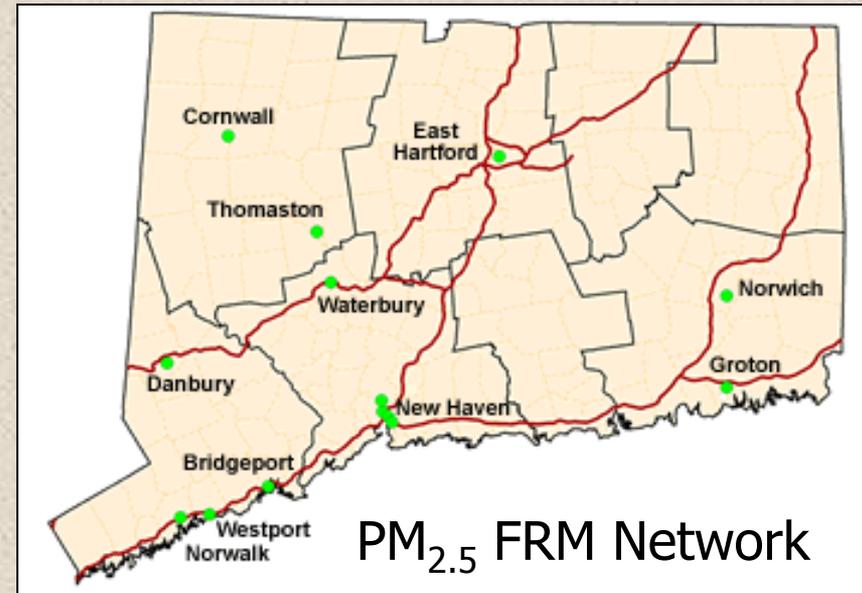




Connecticut 2010 Air Monitoring Network

General Monitoring Objectives

- Compliance Purposes: Determine attainment status for criteria pollutants.
- AQI Reporting: Provide timely and accurate data for Air Quality Index and forecasting.
- Control Strategies: Develop new strategies and assess existing ones.
- Trend Analysis: Assess short-term and long-term pollutant trends.
- SIP Development: Provide data used in modeling to aid in development of State Implementation Plans.
- Characterize Sources: Distinguish between contributions from local sources and the effects of long range transport.
- Support long-term health assessments and model evaluations.

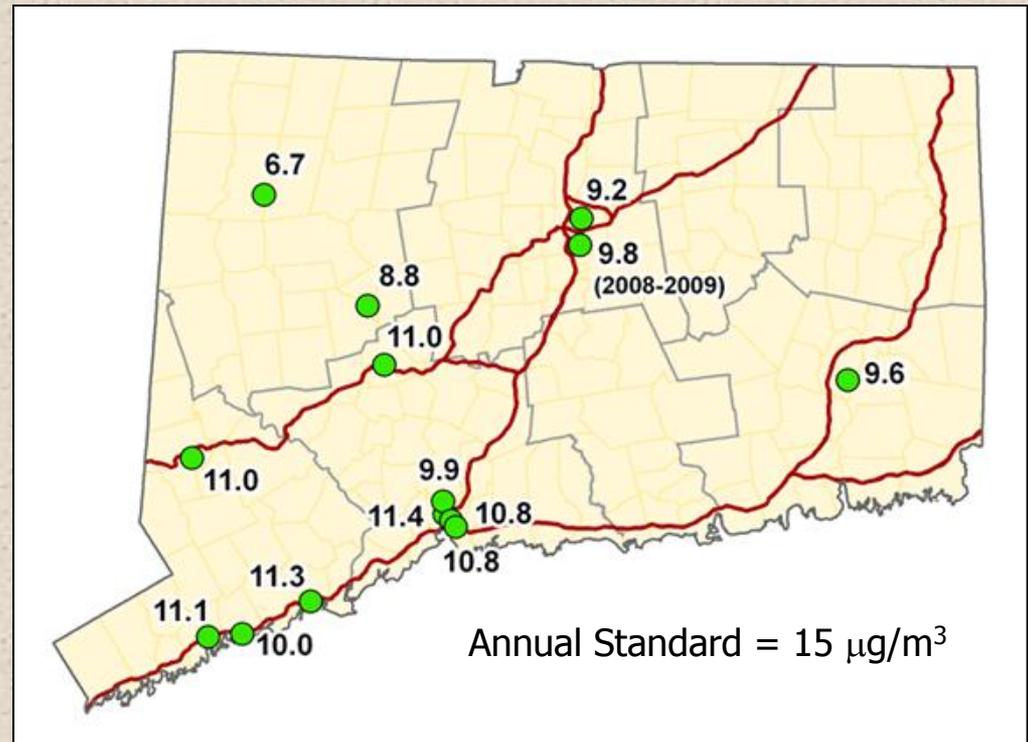




PM_{2.5} Annual Design Value Map 2007-2009

3-year average of the respective annual averages

Site	Design Value ($\mu\text{g}/\text{m}^3$)
Bridgeport	11.3
Danbury	11.0
East Hartford – High St.	9.8
East Hartford – McAuliffe	9.2
New Haven – Ag. Center	9.9
New Haven – Criscuolo	10.8
New Haven – State St.	11.4
New Haven – Woodward	10.8
Norwalk	11.1
Norwich	9.6
Thomaston	8.8
Waterbury	11.0
Westport	10.0

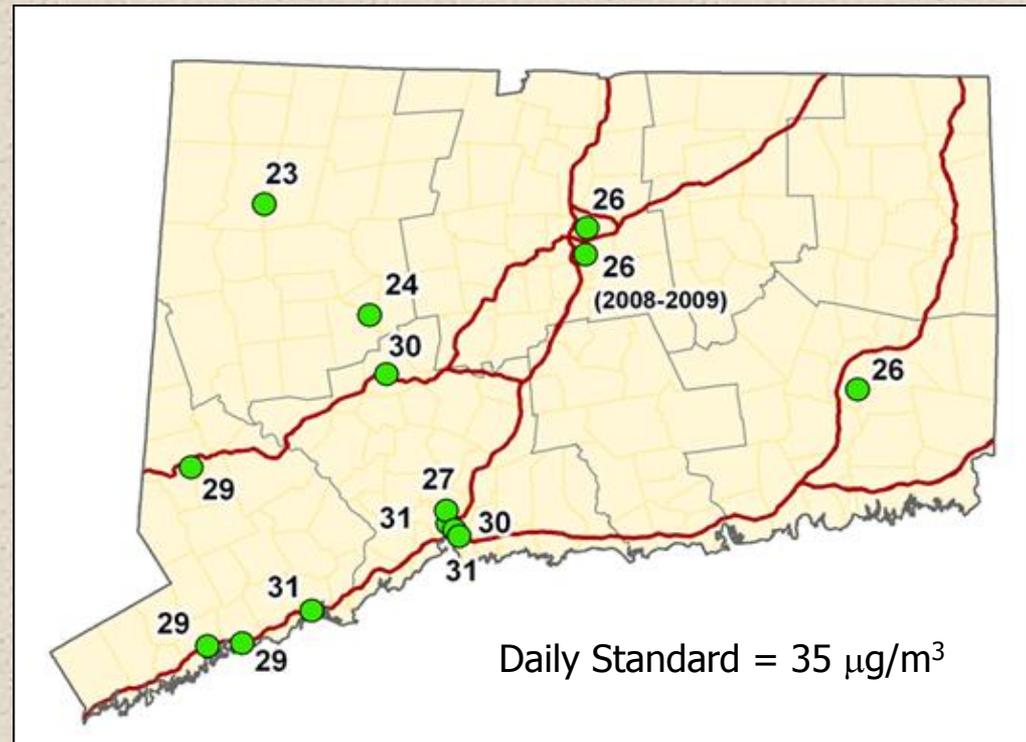




PM_{2.5} Daily Design Value Map 2007-2009

3-year average of the annual 98th percentile values

Site	Design Value ($\mu\text{g}/\text{m}^3$)
Bridgeport	31
Danbury	29
East Hartford – High St.	26
East Hartford – McAuliffe	26
New Haven – Ag. Center	27
New Haven – Criscuolo	31
New Haven – State St.	31
New Haven – Woodward	30
Norwalk	29
Norwich	26
Thomaston	24
Waterbury	30
Westport	29

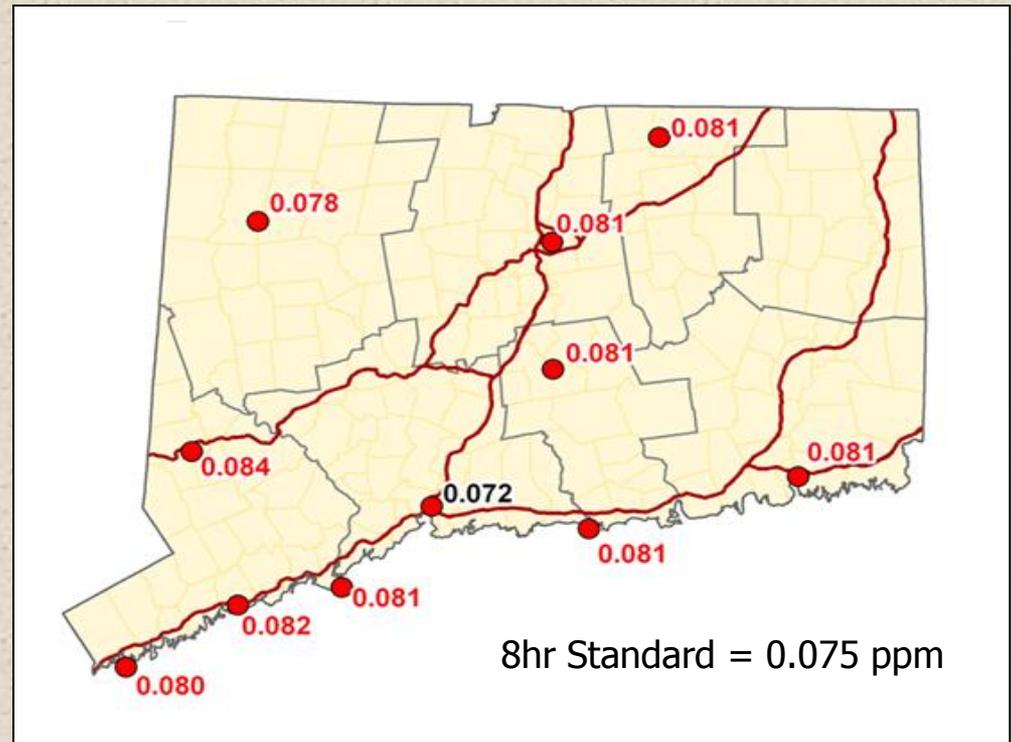




Ozone Design Value Map 2007-2009

3-year average of the annual 4th maximum daily maximum 8-hr ozone averages

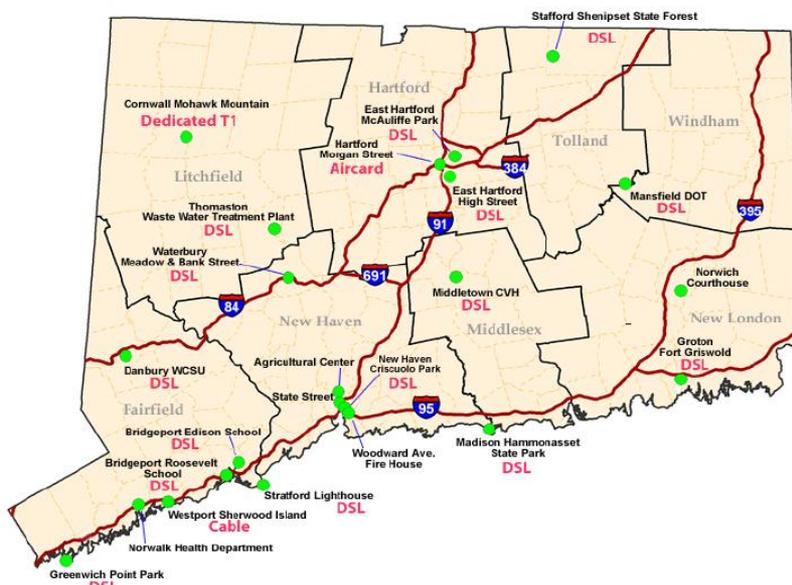
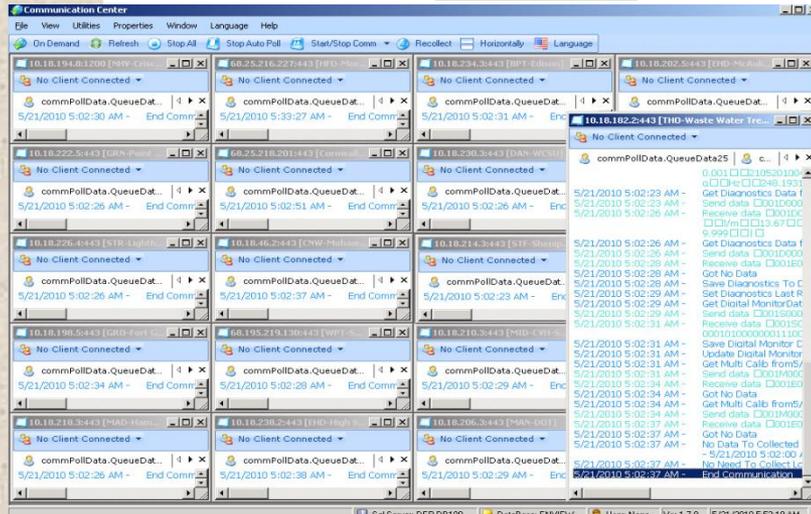
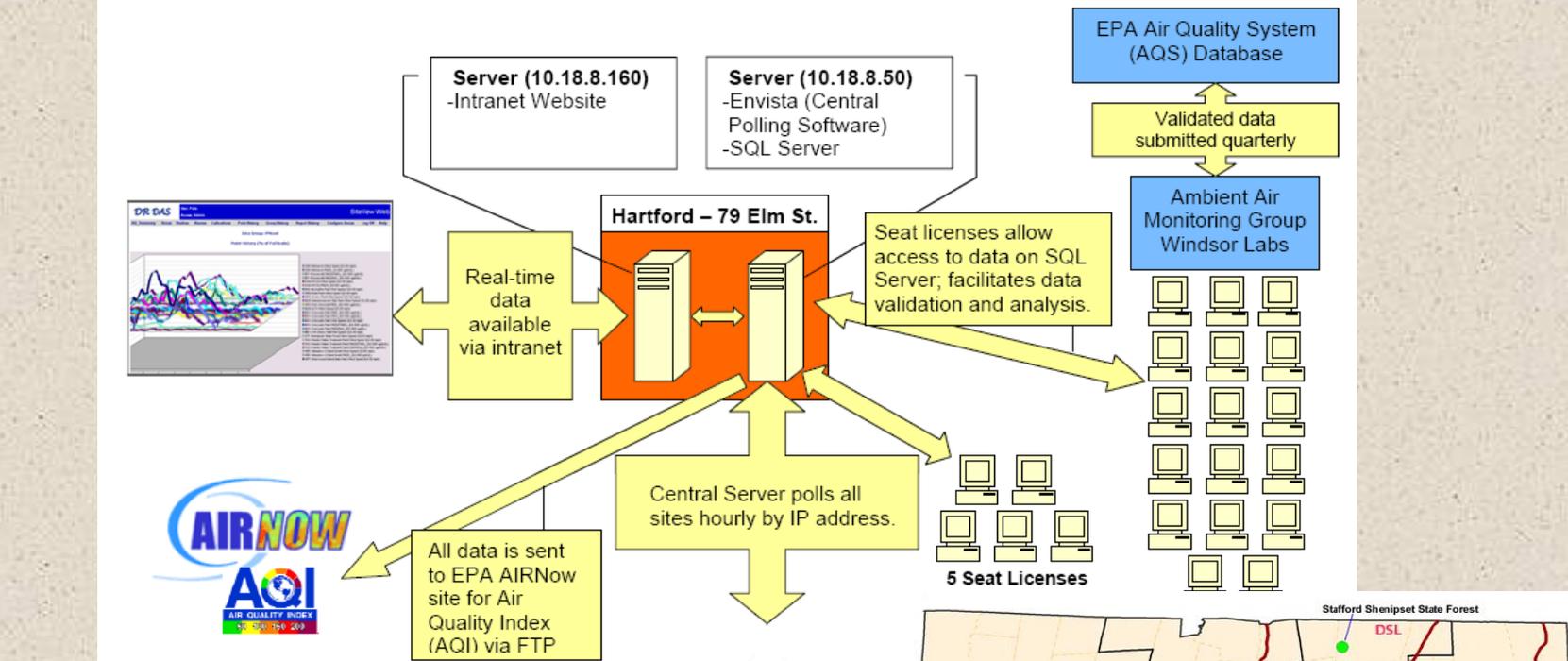
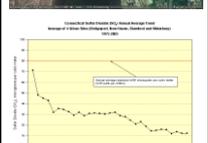
Site	Design Value (ppm)
Cornwall	0.078
Danbury	0.084
East Hartford	0.081
Greenwich	0.080
Groton	0.081
Madison	0.081
Middletown	0.081
New Haven - Criscuolo	0.072
Stafford	0.081
Stratford	0.081
Westport	0.082



Connecticut 2010 Annual Air Monitoring Network Plan



CTDEP Air Monitoring Data Acquisition and Handling Flow Chart





Monitoring Site Information Table

Site Information Table

Town	Site	PM2.5 FRM	PM2.5 FRM colo	PM2.5 FDMS	PM2.5 BAM	PM2.5 Nephelometer	PM-Coarse FDMS	PM10 FRM (10-vol)	PM10 FRM colo	PM10 BAM	STN	IMPROVE	Continuous OC/EC	Continuous Sulfate	BC/UVC	Ozone	SO2	CO	NOx	NOy	Lead (Pb)	VOCs (PAMS)	Carbonyls (PAMS)	Cont. PAH	Mercury	Dioxins	Wind Speed	Wind Direction	Temperature	Dew Point / Rel. Humidity	Rain Fall	Barometric Pressure	Solar Radiation	
Bridgeport	Edison School																																	
Bridgeport	Roosevelt School	1/3		X	P			1/6																										
Cornwall	Mohawk Mountain	1/3		P	X	X	P	P		P		X	X	X	X	X	T	PT	P	PT	P					X	X	X	X	X	X	X	X	
Danbury	Western Connecticut State University	1/3			X											X										X	X	X			X			
East Hartford	High Street	1/3			X																					X	X							
East Hartford	McAuliffe Park	1/1		X	P			1/6							X	X	T	XT	X			X	X			X	X	X	X			X		
Greenwich	Point Park															X										X	X	X			X			
Groton	Fort Griswold				X											X												X						
Hartford	Brainard Field																								X									
Hartford	Morgan Street Courthouse																																	
Madison	Hammonasset State Park															X										X	X	X						
Mansfield	DOT																									X	X	X						
Middletown	Connecticut Valley Hospital															X										X	X	X			X	X		
New Haven	Agricultural Center	1/3																																
New Haven	Criscuolo Park	1/1	1/6	X	X		X	1/6	1/6	X	X		X	X	X	X	T	T	X	T	X	X		X	X	X	X	X	X	X	X	X	X	
New Haven	State Street	1/3																																
New Haven	Woodward Avenue Fire House	1/3																																
Norwalk	Health Department	1/3						1/6																										
Norwich	Norwich Courthouse	1/1																																
Stafford	Shenipsit State Forest															X										X	X	X						
Stratford	Stratford Lighthouse															X												X						
Thomaston	Waste Water Treatment Plant	1/3		X	P								X	X	X		T	T	X				X			X	X	X	X		X			
Waterbury	Meadow & Bank Street	1/3	1/6		X			1/6	1/6																	X	X	X			X			
Westport	Sherwood Island State Park	1/1						1/6								X	T	T	X			X				X	X	X	X				X	

X=Existing, [P] =Planned, [Red] = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day sampling; 1/6=1-in-6 day sampling





Contingency Site Shutdown Plan

Order of Shutdown of Monitoring Sites Due to Budget Cutting

Monitoring Site	Ozone	PM	PAMS	NCore
New Haven – Agricultural Center		X		
New Haven – Woodward Avenue Fire Station		X		
Mansfield – DOT				
Hartford – Brainard Field				
Thomaston – Waste Water Treatment Plant		X		
Hartford – Morgan Street				
Stratford – USCG Lighthouse	X			
Danbury – WCSU	X	X		
Stafford – Shenipsit State Forest	X			
East Hartford – High Street		X		
Norwalk – Health Department		X		
Bridgeport – Edison School				
Bridgeport – Roosevelt School		X		
Waterbury – Bank & Meadow Street		X		
New Haven – State Street		X		
Madison – Hammonasset State Park	X			
Norwich – Courthouse		X		
Middletown – CVH Shew Hall	X			
Groton – Fort Griswold	X			
Greenwich – Greenwich Point Park	X			
Westport – Sherwood Island State Park	X	X	X	
East Hartford – McAuliffe Park	X	X	X	
Cornwall – Mohawk Mountain	X	X		X
New Haven – Criscuolo Park	X	X	X	X

 = Indicates site proposed to be shut down per this Annual Air Monitoring Network Plan





Monitoring Site Information Page

Connecticut 2009 Annual Air Monitoring Network Plan

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Town – Site: **New Haven – Criscoulo Park**
 County: **New Haven** Latitude: **41.301170°**
 Address: **1 James Street** Longitude: **-72.902880°**
 AQ5 Site ID: **09-009-0027** Elevation: **3 m (10 ft)**
 Spatial Scale: **Neighborhood** Year Established: **2004**
 Statistical Area: **CSA (New York-Newark-Bridgeport)**



Pollutant and Meteorological Parameters:

PM _{2.5} FRM	PM _{2.5} FRM colo	PM _{2.5} FDMS	PM _{2.5} BAM	PM _{2.5} nephelometer	PM ₁₀ FRM (lo-vol)	PM ₁₀ FRM colo	PM ₁₀ BAM	STN	IMPROVE	Continuous OC/EC	Continuous Sulfate	BC/UVC	Ozone	SO ₂	CO	NO _x	NO _y	VOCs (PAMS)	Carbonyls (PAMS)	Cont. PAH	Mercury	Dioxins	Wind Speed	Wind Direction	Temperature	Dew Point	Rain Fall	Barometric Pressure	Solar Radiation
1/1	1/6	X	X	X	1/6	1/6	X	X	X	X	X	X	T	T	X	T	X	X	X	X	X	X	X	X	X	X	X	X	X

X=Existing, []=Planned, []=Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Criscoulo Park site is a neighborhood-scale site located on the western side of the city of New Haven. The site is approximately 0.25 km to the north of the I-95 Quinnipiac River Bridge. The site is approximately 1.0 km to the east of the I-91 and I-95 interchange. Bulk gasoline transfer stations are located 0.3 to 2.0 km to the south of the site. Residential neighborhoods are located to the west, north and east of the site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The New Haven Criscoulo Park monitoring site objectives include collecting PM_{2.5} FRM measurements for compliance purposes and continuous PM_{2.5} for AQI reporting and forecasting purposes. A PM_{2.5} collocated FRM sampler is operated at this site to gather precision measurements. PM_{2.5} chemical speciation measurements are collected through the EPA Speciation Trends Network (STN). A PM₁₀ FRM is operated for compliance purposes, as well as to gather PM_{10-2.5} measurements. A PM₁₀ collocated FRM sampler is operated at this site to gather precision measurements. Ozone is measured at the Criscoulo Park site for compliance assessment and AQI and forecasting purposes and PAMS and NO_x monitoring is conducted to obtain measurements of ozone precursors. Trace-CO measurements are being collected to complement the PAMS measurements. Trace-SO₂ monitoring is being conducted to collect PM precursor gas measurements.

Planned changes through 2010: None





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1/1	1/6	X	X		X	1/6	1/6	X	X		X	X	X	X	T	T	X	T	X		X	X		X	X	X	X	X	X	X

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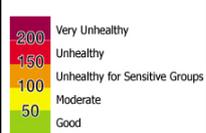
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Planned changes through 2010: None



Submit comments by July 10, 2010 to:

Peter Babich

By Email: pete.babich@ct.gov

or

By Mail: Peter Babich

CTDEP

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Windsor, CT 06095