

Connecticut 2009 Annual Air Monitoring Network Plan



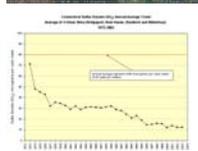
Peter Babich, CTDEP

pete.babich@ct.gov

SIPRAC

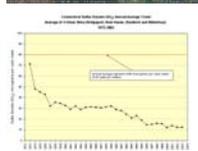
May 14, 2009





New National Air Quality Regulations

- September 27, 2006: EPA amended its national air quality monitoring requirements.
- October 17, 2006: New regulations posted to Federal Register.
- 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 2009 Annual Air Monitoring Network Plan](#) will be posted on ct.gov website for a 30-day period (until June 15th); comments will go to Peter Babich at pete.babich@ct.gov

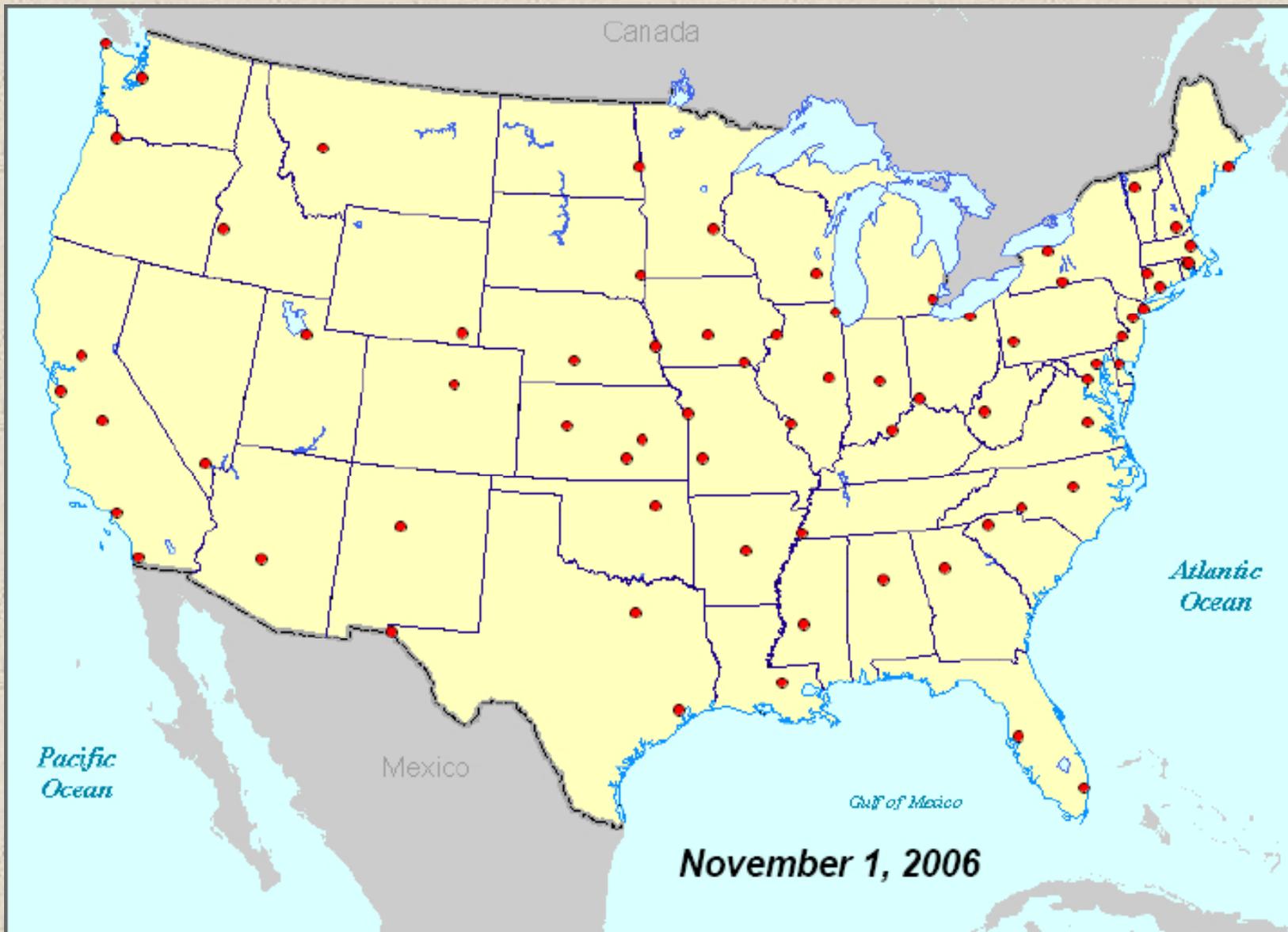


New National Monitoring Requirements NCore Multi-Pollutant Network

- 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.
- Approximately 75 NCore sites to be established nationwide.
- CT slated to have two NCore sites (Criscuolo Park in New Haven and Mohawk Mountain in Cornwall).



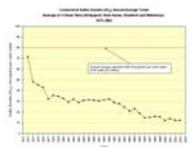
Candidate NCore Site Locations



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Connecticut 2009 Air Monitoring Network

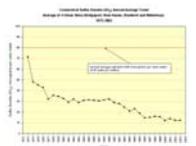
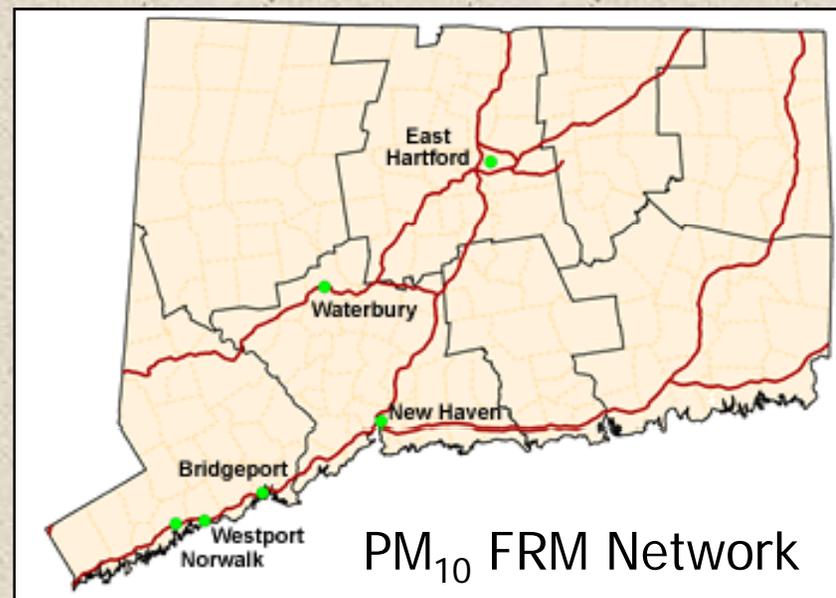
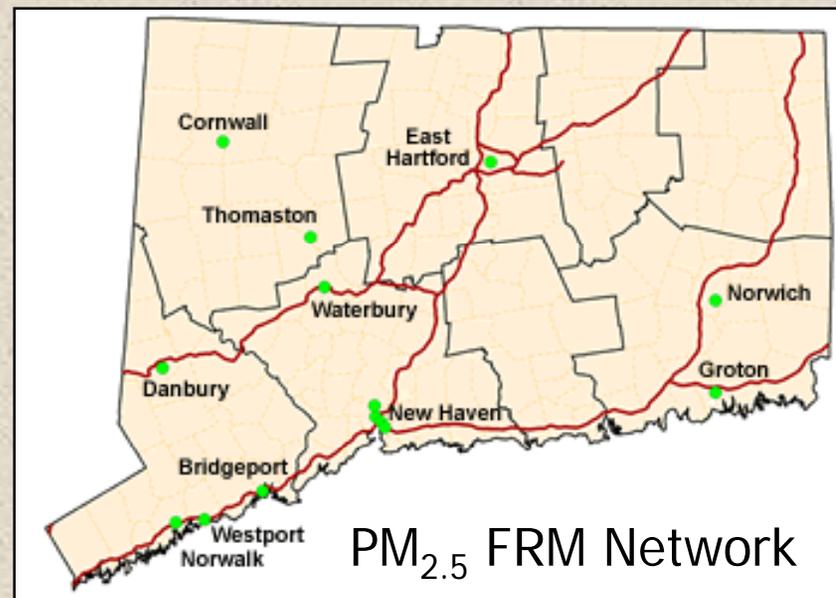




Connecticut 2009 Air Monitoring Network

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.

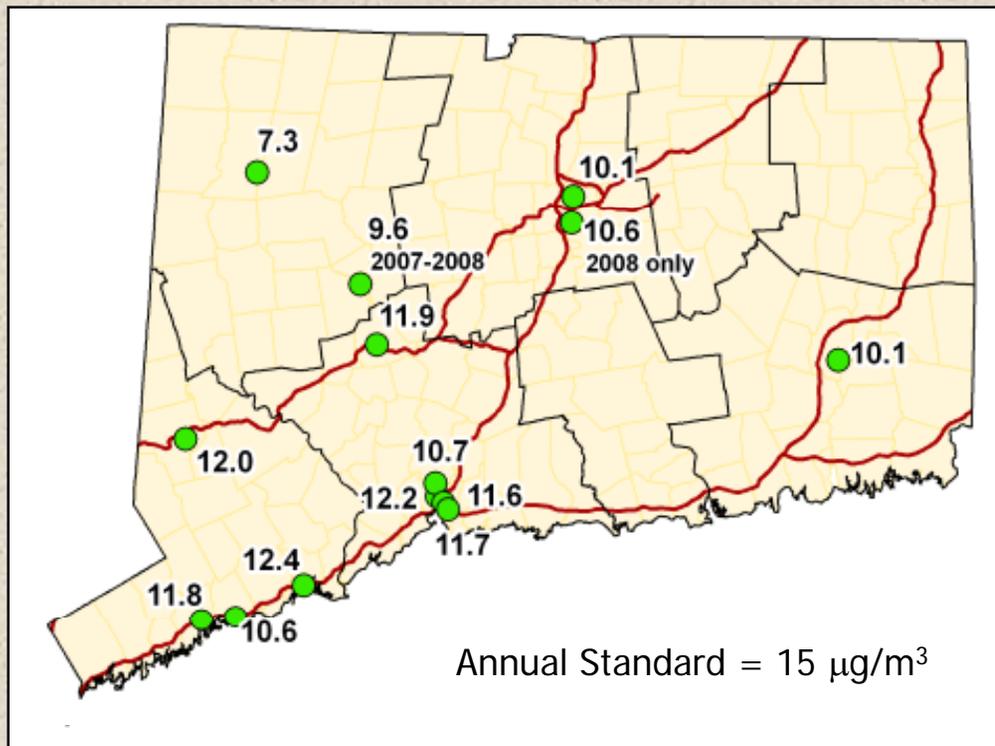


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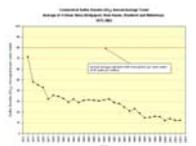


PM_{2.5} Annual Design Value Map 2006-2008

3-year average of the respective annual averages



Site	Design Value (µg/m ³)
Bridgeport	12.4
Danbury	12.0
East Hartford – High St.	10.6
East Hartford – McAuliffe	10.1
New Haven – Ag. Center	10.7
New Haven – Criscuolo	11.7
New Haven – State St.	12.2
New Haven – Woodward	11.6
Norwalk	11.8
Norwich	10.1
Thomaston	9.6
Waterbury	11.9
Westport	10.6

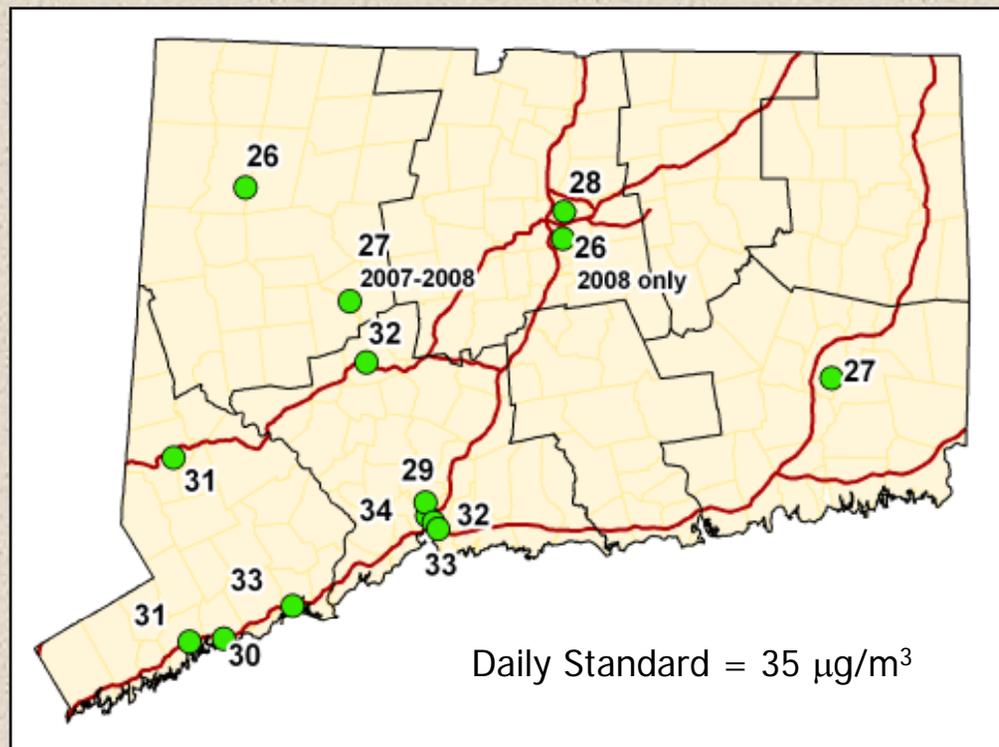


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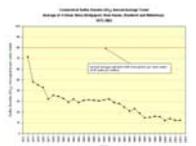


PM_{2.5} Daily Design Value Map 2006-2008

3-year average of the annual 98th percentile values



Site	Design Value (µg/m ³)
Bridgeport	33
Danbury	31
East Hartford – High St.	26
East Hartford – McAuliffe	28
New Haven – Ag. Center	29
New Haven – Criscuolo	33
New Haven – State St.	34
New Haven – Woodward	32
Norwalk	31
Norwich	27
Thomaston	27
Waterbury	32
Westport	30



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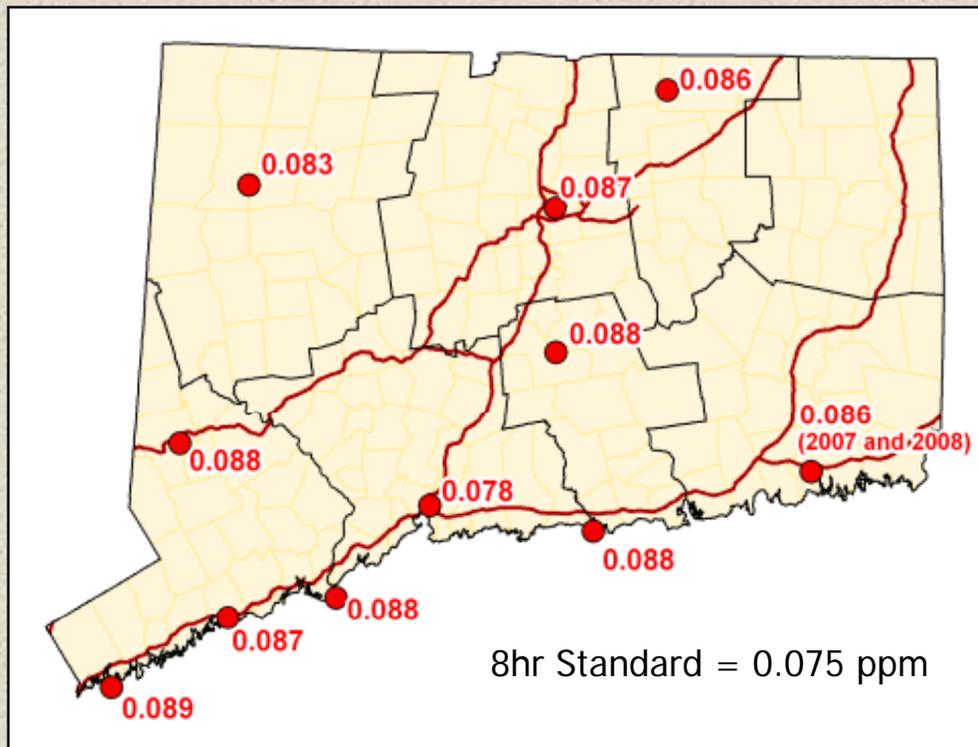


Ozone Design Value Map 2006-2008

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



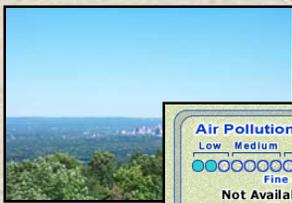
Site	Design Value (ppm)
Cornwall	0.083
Danbury	0.088
East Hartford	0.087
Greenwich	0.089
Groton	0.086
Madison	0.088
Middletown	0.088
New Haven – Criscuolo	0.078
Stafford	0.086
Stratford	0.088
Westport	0.087



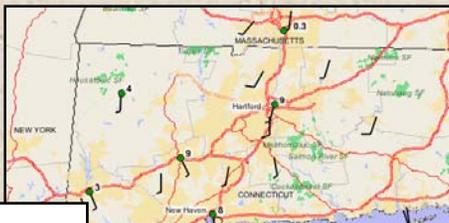
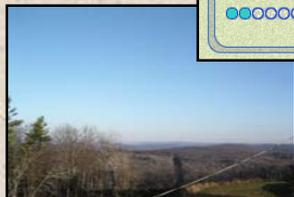
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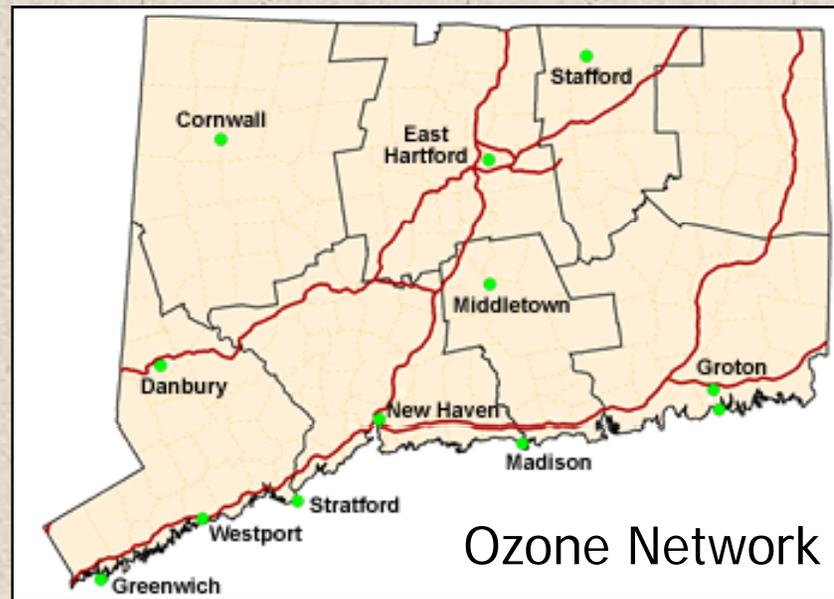
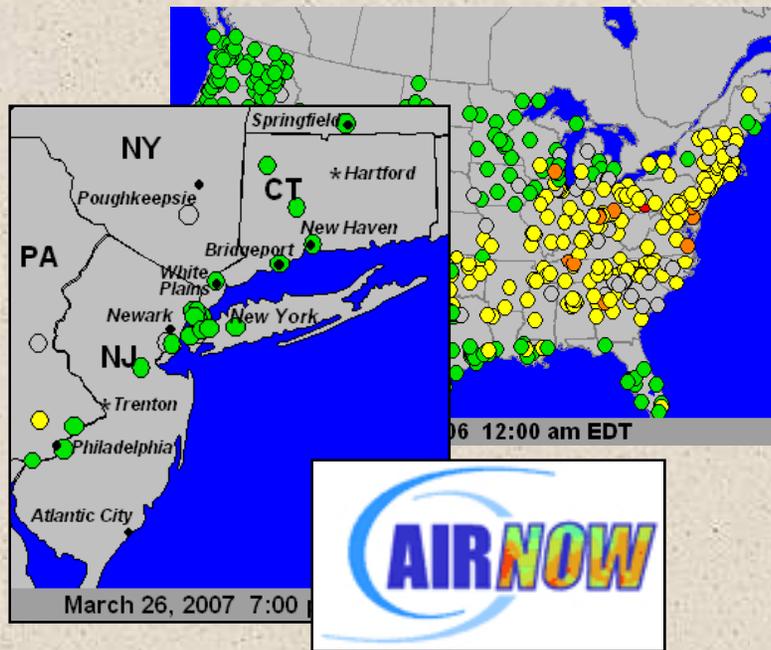
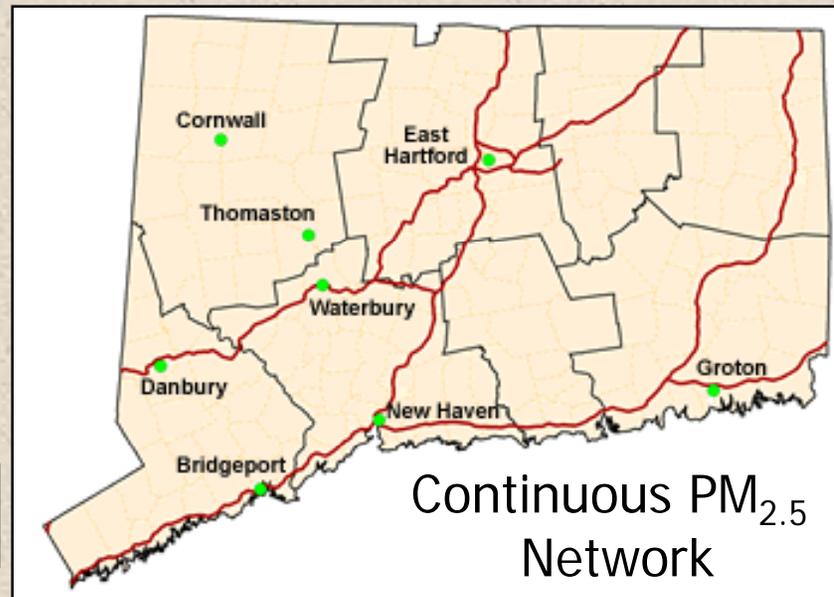


Air Pollution Low Medium High ●●●○○○○○ Fine Particles Not Available ●●●○○○○○ Black Carbon ●●●○○○○○ Ozone	Temp. Current 42° Humidity 67%	Wind Speed 10 mph Direction N	Precip. 1 Hour N/A 24 Hours N/A	About These Data
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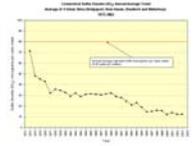
Monday, March 26, 2007

Yesterday's Air Quality	Good
Today's Air Quality	Good to Moderate
Tomorrow's Forecasted Air Quality	Good





Monitoring Site Information Table



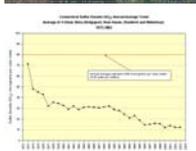
Site Information Table

Town	Site	PM2.5 FRM	PM2.5 FRM colo	PM2.5 FDMS	PM2.5 BAM	PM2.5 Nephelometer	PM-Coarse FDMS	PM10 FRM (lo-vol)	PM10 FRM colo	PM10 BAM	STN	IMPROVE	Continuous OC/EC	Continuous Sulfate	BC/UWC	Ozone	SO2	CO	NOx	NOy	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																XT																
Bridgeport	Roosevelt School	1/3		X				1/6										XT									X						
Cornwall	Mohawk Mountain	1/3		P	X	X	P					X	X	X	X	X	T	PT	P	PT					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				1/6							X	X	XT	XT	X		X	X			X	X	X	X				X	
Greenwich	Point Park															X									X	X	X			X			
Groton	Fort Griswold	P			X											X									P	P	X			P			
Hartford	Brainard Field																							X									
Hartford	Morgan Street Courthouse																	XT															
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																							X	X	X						
Stafford	Shenipsit State Forest																X								X	X	X						
Stratford	Stratford Lighthouse																X																
Thomaston	Waste Water Treatment Plant	1/3		X									X	X	X		T	T	X			X			X	X	X	X	P	X	P		
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	XT	T	X		X				X	X	X	X					X

X=Existing, P =Planned, [Red Box] = 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

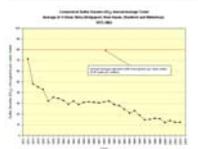


Order of Shutdown of Monitoring Sites Due to Budget Cutting

Monitoring Site	Ozone	PM	PAMS	NCore
Hartford – Brainard Field				
Mansfield – DOT				
Bridgeport – Edison School				
Thomaston – Waste Water Treatment Plant		X		
Stratford – USCG Lighthouse	X			
New Haven – Agricultural Center		X		
Danbury – WCSU	X	X		
New Haven – Woodward Avenue Fire Station		X		
Stafford – Shenipsit State Forest	X			
East Hartford – High Street		X		
Norwalk – Health Department		X		
Hartford – Morgan Street				
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



Monitoring Site Information Page



Town - Site: **New Haven - Criscuolo Park**
 County: **New Haven** Latitude: **41.301170°**
 Address: **1 James Street** Longitude: **-72.902880°**
 AQS 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-Coarse FDMS	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	X	T	T	X	T	X	X	X	X	X	X	X	X	X	X	X	X	X

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

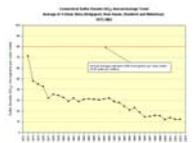
Site Description: The Criscuolo Park site is a neighborhood-scale site located on the western side of the city of New Haven. The site is approximately 0.25 km to the north of the I-95 Quinnipiac River Bridge. The site is approximately 1.0 km to the east of the I-91 and I-95 interchange. Bulk gasoline 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 Criscuolo 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 Criscuolo 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.

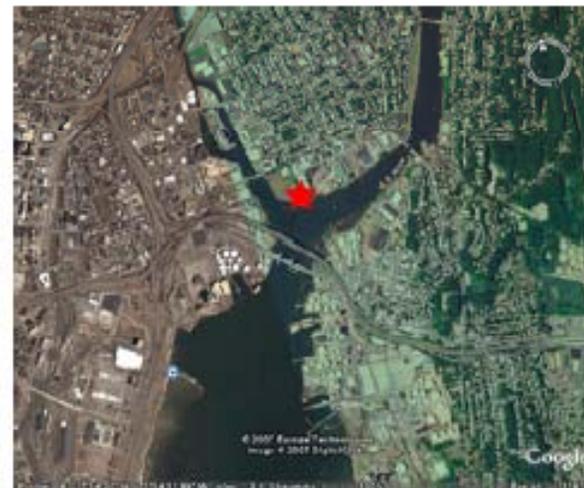
Planned changes through 2010: None



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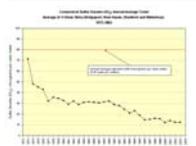
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1/1	1/6	X	X		X	1/6	1/6	X	X		X	X	X	X	T	T	X	T	X		X	X		X	X	X	X	X	X	X

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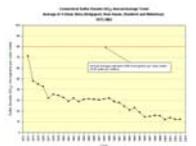


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Planned changes through 2010: None

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Submit comments by June 15, 2009 to:

Peter Babich

By Email: pete.babich@ct.gov

or

By Mail: Peter Babich

CTDEP

9 Windsor Avenue

Windsor, CT 06095