

Connecticut 2007 Annual Air Monitoring Network Plan



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SIPRAC
April 12, 2007





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 2007 Annual Air Monitoring Network Plan](#) will be posted on ct.gov website for a 30-day period (until May 15th); comments will go to Patti Downes at patricia.downes@po.state.ct.us





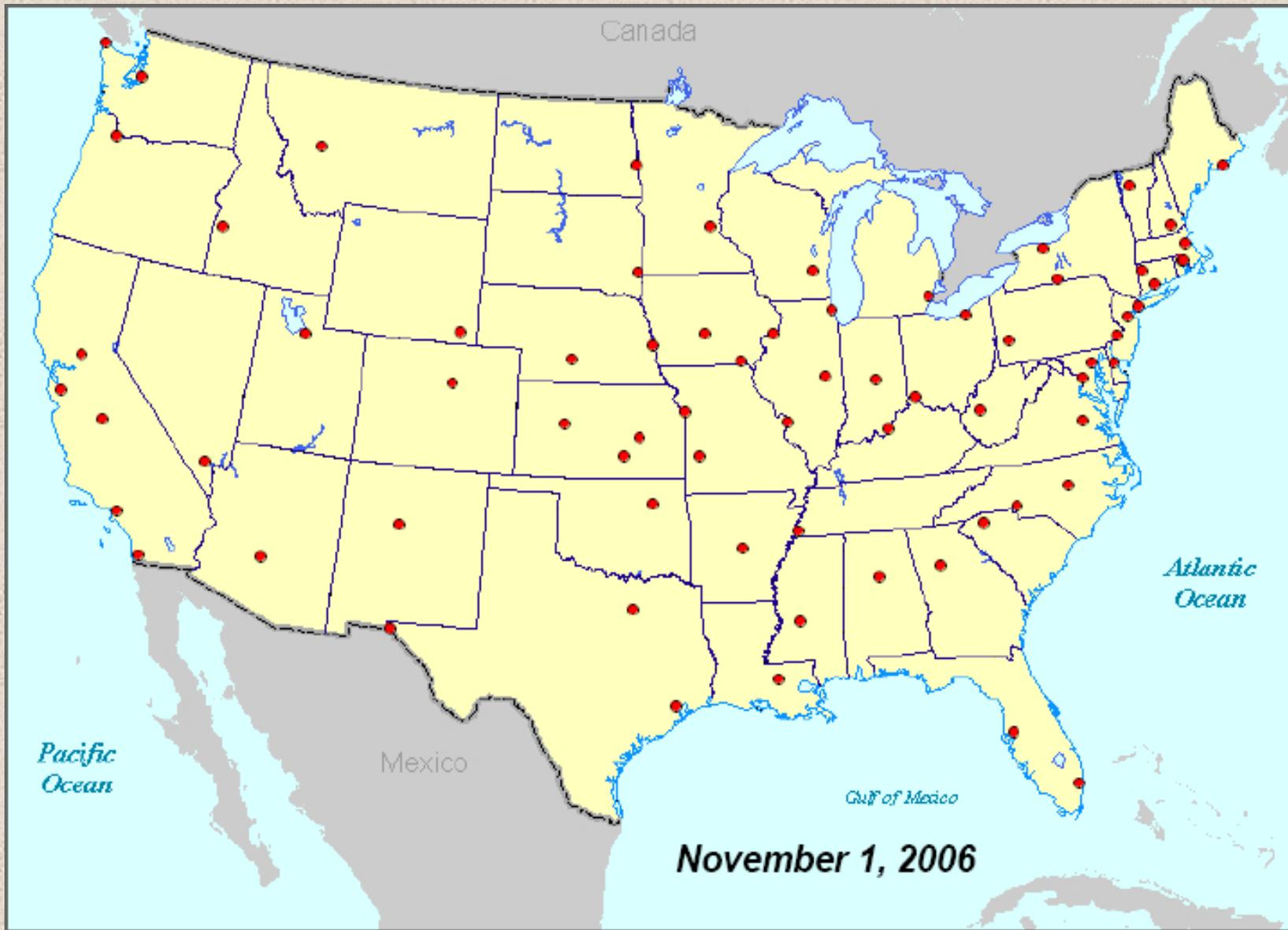
New National Monitoring Requirements NCore Multi-Pollutant Network

- 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).





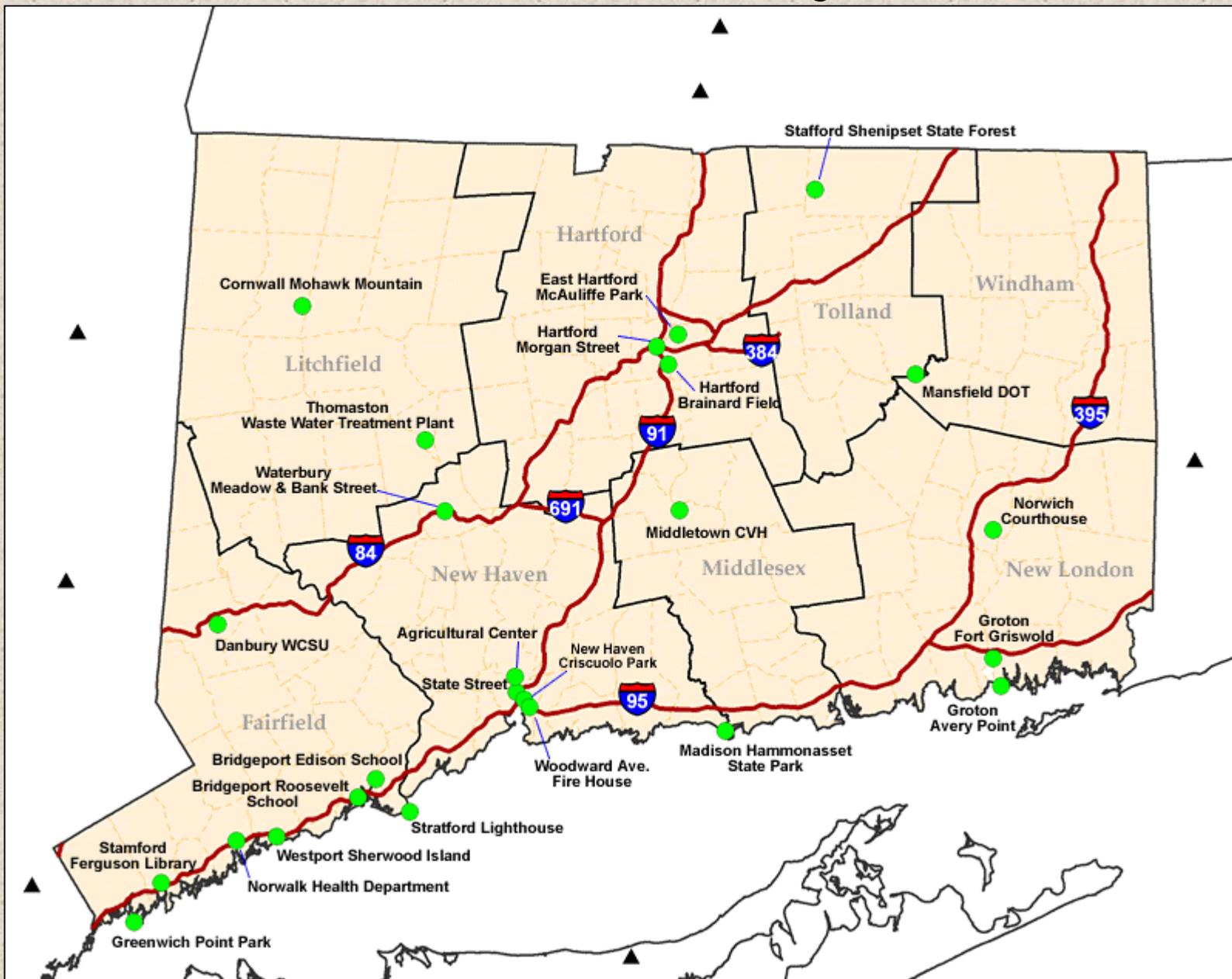
Candidate NCore Site Locations





Connecticut 2007 Air Monitoring Network

Very Unhealthy
200
Unhealthy
150
Unhealthy for Sensitive Groups
100
Moderate
50
Good

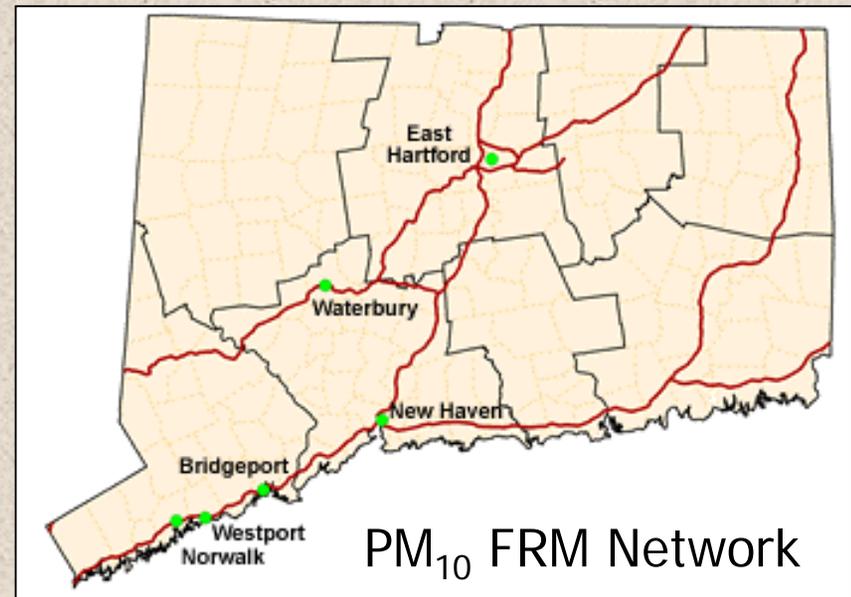
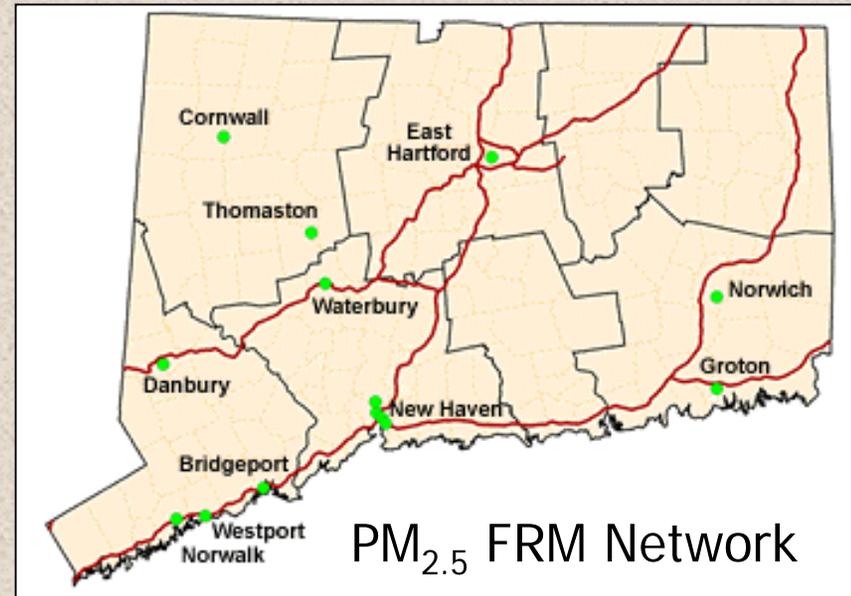




Connecticut 2007 Air Monitoring Network

General Monitoring Objectives

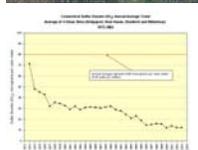
- Compliance Purposes: Determine attainment status for criteria pollutants.
- AQI Reporting: Provide timely and accurate data for Air Quality Index and forecasting.
- Control Strategies: Develop new strategies and assess existing ones.
- Trend Analysis: Assess short-term and long-term pollutant trends.
- 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.



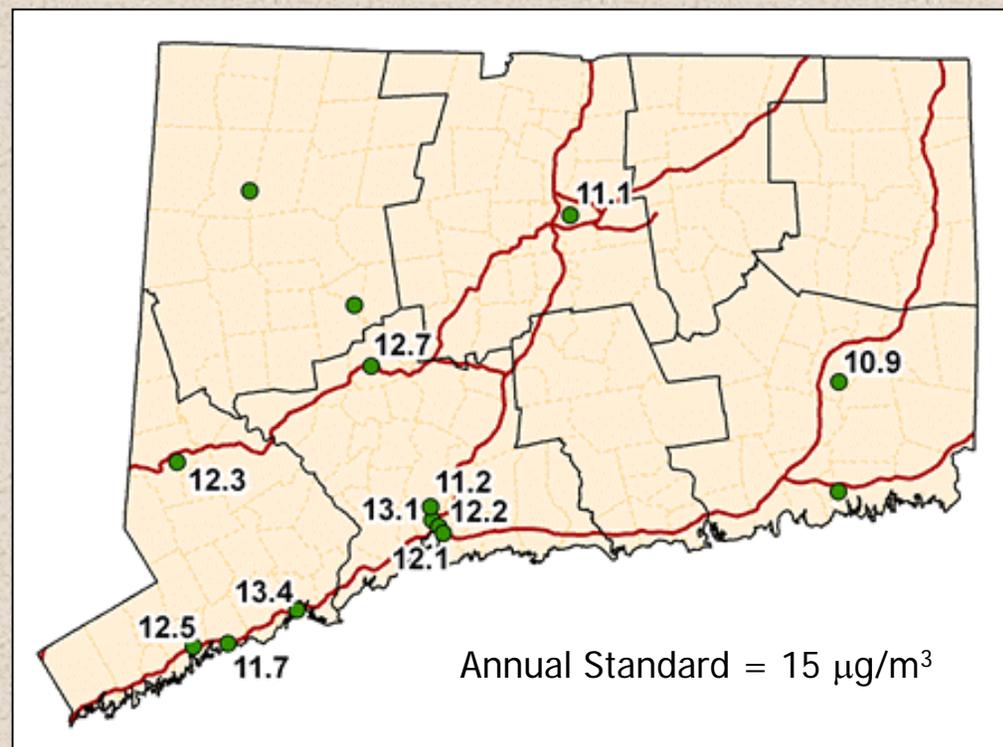


PM_{2.5} Annual Design Value Map 2004-2006

3-year average of the respective annual averages



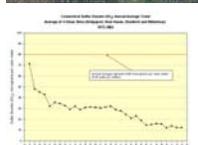
Site	Design Value (µg/m ³)
Bridgeport	13.4
Danbury	12.3
East Hartford	11.1
New Haven – Ag. Center	11.2
New Haven – Criscuolo	12.2
New Haven – State St.	13.1
New Haven – Woodward	12.1
Norwalk	12.5
Norwich	10.9
Waterbury	12.7
Westport	11.7



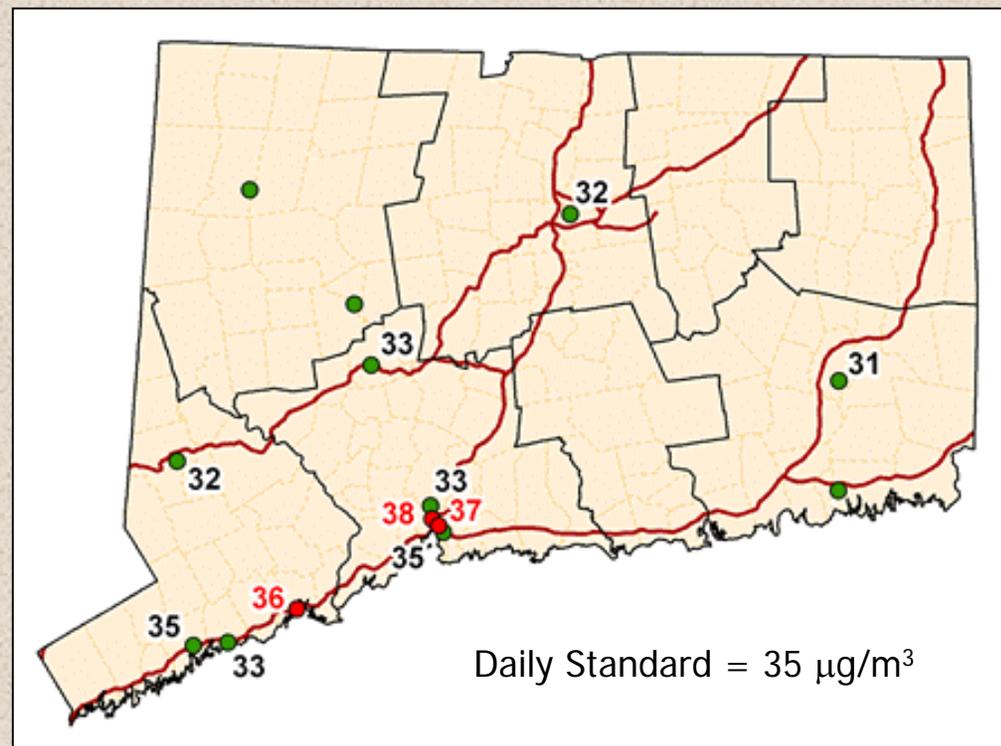


PM_{2.5} Daily Design Value Map 2004-2006

3-year average of the annual 98th percentile values



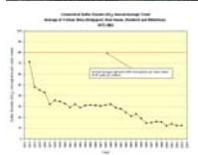
Site	Design Value (µg/m ³)
Bridgeport	36
Danbury	32
East Hartford	32
New Haven – Ag. Center	33
New Haven – Crisculo	37
New Haven – State St.	38
New Haven – Woodward	35
Norwalk	35
Norwich	31
Waterbury	33
Westport	33



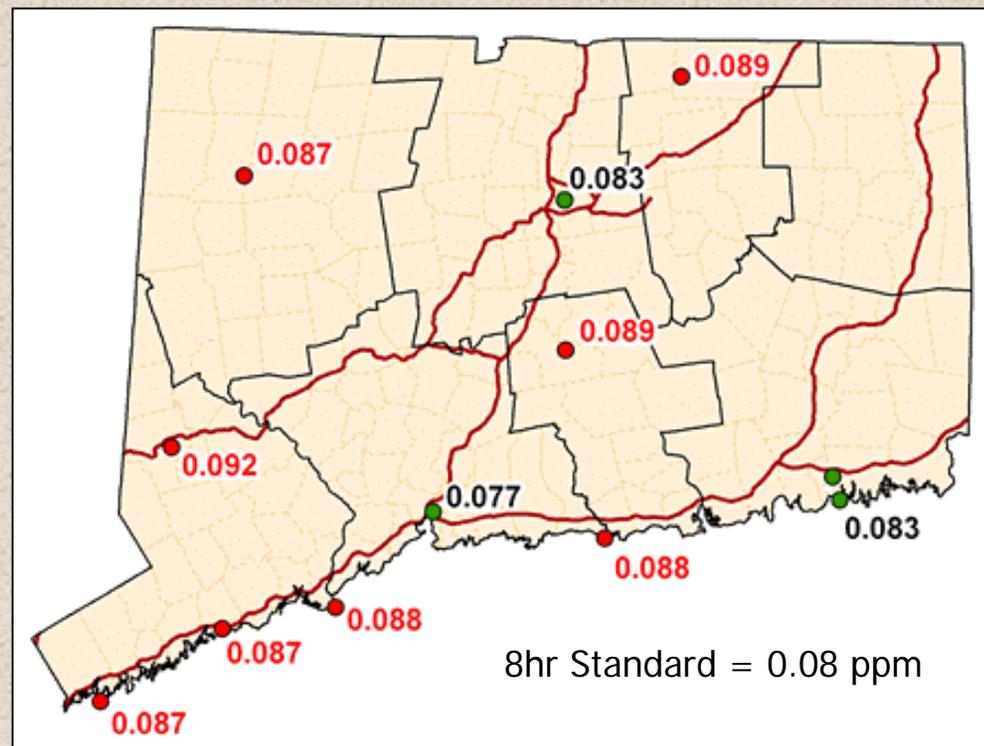


Ozone Design Value Map 2004-2006

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



Site	Design Value (ppm)
Cornwall	0.087
Danbury	0.092
East Hartford	0.083
Greenwich	0.087
Groton	0.083
Madison	0.088
Middletown	0.089
New Haven – Criscuolo	0.077
Stafford	0.089
Stratford	0.088
Westport	0.087





Connecticut 2007 Air Monitoring Network

AQI Legend:

- 200 Very Unhealthy
- 150 Unhealthy
- 100 Unhealthy for Sensitive Groups
- 50 Moderate
- Good

AQI Legend (Bottom):

- 50
- 100
- 150
- 200

Air Pollution

Low	Medium	High
●●●●●	●●●●●	●●●●●
Fine Particles		
Not Available		
Black Carbon		
Ozone		

Temp. Current: 42°

Wind Speed: 10 mph, Direction: N

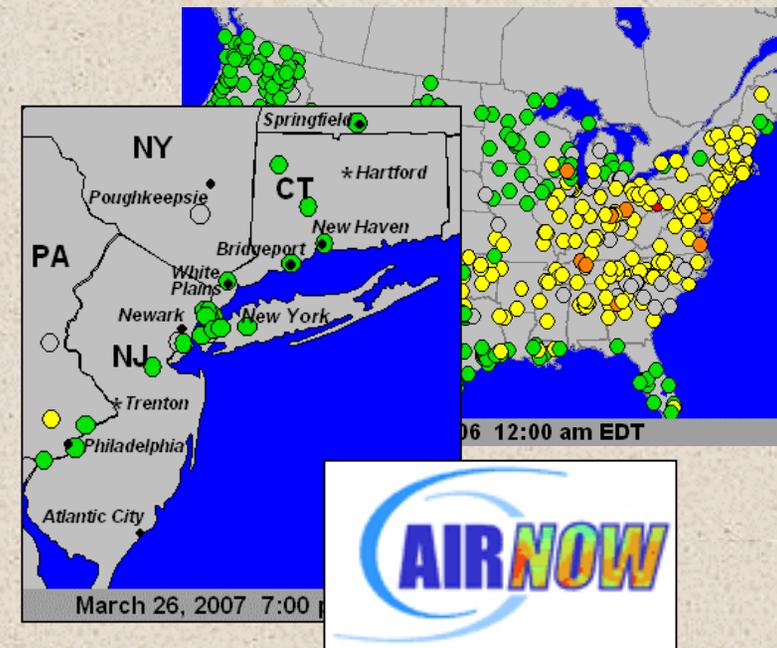
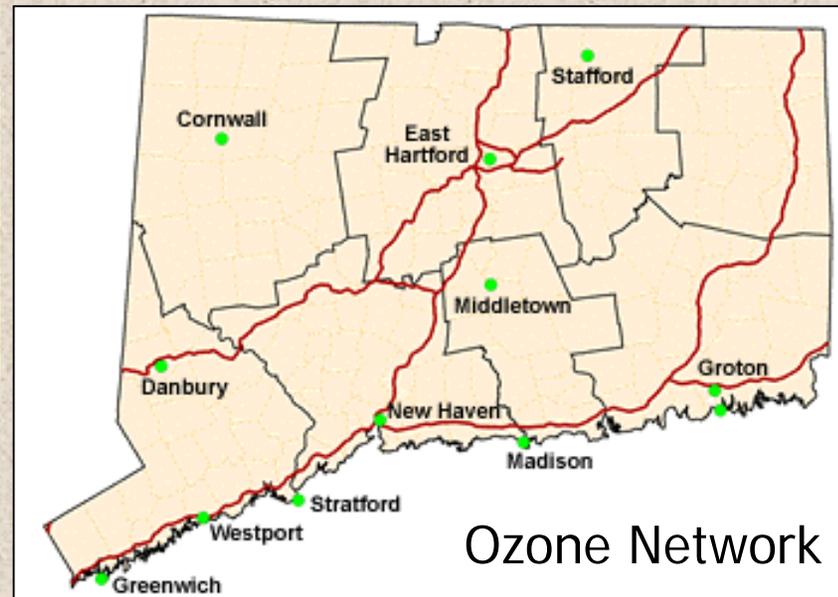
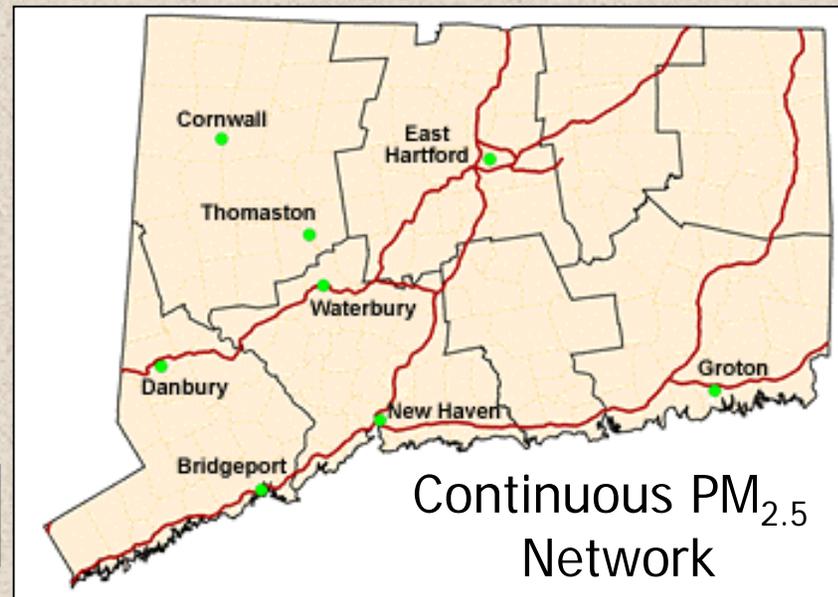
Precip. 1 Hour: N/A, 24 Hours: N/A

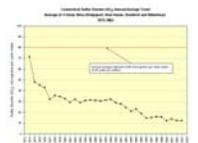
Humidity: 67%

[About These Data](#)

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	PM10 FRM (lo-vol)	PM10 FRM colo	PM10 BAM	STN	IMPROVE	Continuous OC/EC	Continuous Sulfate	BC/UVC	Ozone	SO2	CO	NOx	NOy	VOCs (PAMS)	Carbonyls (PAMS)	Cont. PAH	Dioxins	Wind Speed	Wind Direction	Temperature	Dew Point	Rain Fall	Barometric Pressure	Solar Radiation
Bridgeport	Edison School															X														
Bridgeport	Roosevelt School	1/3		X			1/6																			X				
Cornwall	Mohawk Mountain	1/3			X	X					X	X	X	X	X										X	X	X	X	X	X
Danbury	Western Connecticut State University	1/3			X									X	X	X									X	X	X			
East Hartford	McAuliffe Park	1/1		X			1/6							X	X	X	X	X		X	X				X	X	X	X	X	X
Greenwich	Point Park														X	X									X	X	X			
Groton	Avery Point														X										X	X	X			X
Groton	Fort Griswold	P			P										P										P	P	P			
Hartford	Brainard Field																						X							
Hartford	Morgan Street Courthouse																X													
Madison	Hammonasset State Park														X									X	X	X				
Mansfield	DOT													X										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		1/6		X	X		P	P	X	X	X	X	X	P	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				
Stamford	Ferguson Library																													
Stratford	Stratford Lighthouse														X											X				
Thomaston	Waste Water Treatment Plant	1/3		X								X	X	X		T	T	X			X			X	X	X	X	X	X	X
Waterbury	Meadow & Bank Street	1/3	1/6		X		1/6	1/6								X								X	X	X		X		
Westport	Sherwood Island State Park	1/1					1/6								X	X	T	X		X				X	X	X	X	X	X	X

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



Monitoring Site Information Page



Connecticut 2007 Annual Air Monitoring Network Plan

23

Town - Site: **New Haven - Criscuolo Park**
 County: **New Haven** Longitude: **41.301139°**
 Address: **1 James Street** Latitude: **-71.097111°**
 AQS Site ID: **09-009-0027** Elevation: **3 m (10 ft)**
 Statistical Area: **MSA** Year Established: **2004**
 Spatial Scale: **Neighborhood**



Pollutant and Meteorological Parameters:

PM _{2.5} FRM	PM _{2.5} FRM collocated	PM _{2.5} PMS	PM _{2.5} BAM	PM _{2.5} Regulatory Indicator	PM ₁₀ FRM (Core)	PM ₁₀ FRM collocated	PM ₁₀ BAM	SO ₂	NO ₂	NO _x	CO	O ₃	CO ₂	SO ₂	CO	NO _x	NO _y	VOCs (PAMS)	Carbonyls (PAMS)	Core: PM ₁₀	Core: SO ₂	Wind Speed	Wind Direction	Temperature	Dew Point	Relative Humidity	Solar Radiation	
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

X=Existing, P=Planned, R=Planned to Retire, T=Trace, 1/2=Everyday sampling, 1/2=1-in-3 day, 1/6=1-in-6 day

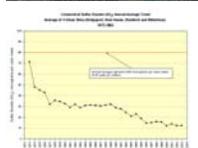
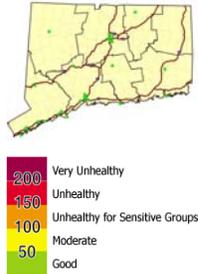
Site Description: The Criscuolo Park site is a neighborhood-scale site located on the western side of the city of New Haven. The site is approximately 0.25 km to the north of the I-95 Quinnipiac River Bridge. The site is approximately 1.0 km to the east of the I-91 and I-95 interchanges. Bulk gasoline transfer stations are located 0.3 to 2.0 km to the south of the site. Residential neighborhoods are prevalent 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 1.

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. 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. This site is also collecting data related to the Evaluation of Wood Smoke Contribution to Particulate Matter in Connecticut project which is funded through the 2005 EPA Local-Scale Air Toxics Ambient Monitoring grant.

Planned changes through 2008: Continuous Sulfate, continuous O₃/EC and trace-NO_y are planned to be deployed at the New Haven Criscuolo Park site in 2008. These parameters are either required or strongly recommended for NCore sites.



Monitoring Site Information Page (top)



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:

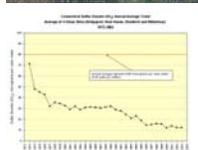
PM2.5 FRM	PM2.5 FRM colo	PM2.5 FDMS	PM2.5 BAM	PM2.5 Nephelometer	PM10 FRM (lo-vol)	PM10 FRM colo	PM10 BAM	STN	IMPROVE	Continuous OC/EC	Continuous Sulfate	BC/UWC	Ozone	SO2	CO	NOx	NOy	VOCs (PAMS)	Carbonyls (PAMS)	Cont. PAH	Dioxins	Wind Speed	Wind Direction	Temperature	Dew Point	Rain Fall	Barometric Pressure	Solar Radiation
1/1	1/6	X	X		1/6		X	X		P	P	X	X	T	T	X	PT	X				X	X	X	X	X	X	X

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





Monitoring Site Information Page (bottom)



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Connecticut 2007 Annual Air Monitoring Network Plan





Submit comments by May 15, 2007 to:

Patti Downes

By Email: patricia.downes@po.state.ct.us

or

By Mail: Patti Downes
CTDEP
79 Elm Street
Hartford, CT 06106

