Limited Maintenance Plan for Connecticut's Fine Particulate Matter (PM2.5) Maintenance Area

Connecticut Department of Energy and Environmental Protection

Bureau of Air Management

State Implementation Plan Revision

March 2023

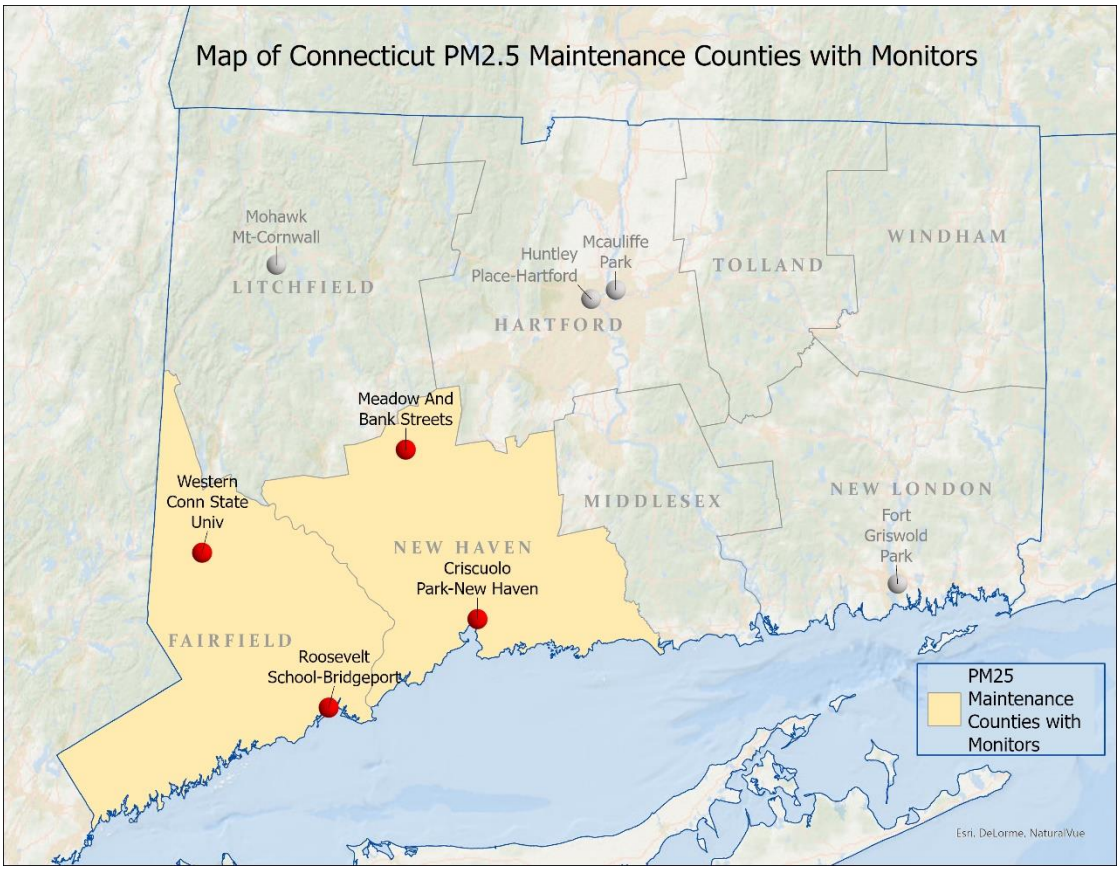
EXECUTIVE SUMMARY

Under sections 175A(a) and (b) of the Clean Air Act (CAA), two 10-year maintenance plans are required for areas that have been redesignated from nonattainment to attainment (i.e., maintenance areas). This document contains the Connecticut Department of Energy and Environmental Protection's (DEEP's) second 10-year plan to assure continued maintenance of the National Ambient Air Quality Standards (NAAQS) for fine particulate matter (PM2.5) in the Connecticut portion of the New York-New Jersey-Connecticut (NY-NJ-CT) maintenance area. New Haven and Fairfield counties comprise the Connecticut portion of the NY-NJ-CT maintenance area.

The first 10-year plan for New Haven and Fairfield counties became effective October 24, 2013[1], and was based on implementation of permanent and enforceable reductions in PM2.5 and precursor emissions as approved in Connecticut's State Implementation Plan (SIP) by EPA in accordance with Section 110 and Part D of the Clean Air Act.

DEEP has collected air quality monitoring data to calculate design values (DVs) at each of the monitors in the Connecticut portion of the NY-NJ-CT maintenance area (Figure E-1). Table E-1 indicates that air quality in New Haven and Fairfield counties remain well below both the annual and 24-hour PM2.5 NAAQS.

Figure E-1. *Map of Connecticut's PM2.5 Monitors highlighting the Maintenance Area.*



[1] See 78 Fed. Reg. 58467 (September 24, 2013)

Table E-1. *Table of Maximum Annual and 24-Hour Design Values in the Connecticut portion of the Maintenance Area (2017-2021).*

Maximum 24-hour and Annual Design Values at Connecticut Maintenance Monitors					
Year	**2017**	**2018**	**2019**	**2020**	**2021**
24-Hour Design Value NAAQS = 35 (µg/m³)	22	21	20	21	22
Annual Design Value NAAQS = 12 (µg/m³)	8.6	8.1	7.6	8.0	8.2

With this second plan, DEEP commits to continue to implement control measures in the existing PM2.5 maintenance SIP and to assure that the area is not likely to violate the 24-hour or annual PM2.5 NAAQS through the end of the second maintenance planning period.

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1. Introduction and Background

1.1 Purpose

This plan demonstrates that the Connecticut counties within the NY-NJ-CT PM2.5 maintenance area will continue to comply with National Ambient Air Quality Standards (NAAQS) for fine particulate (PM2.5). This is the second and final maintenance plan for the area as required by section 175A(b) of the Clean Air Act, prepared following EPA's *"Guidance on the Limited Maintenance Plan Option for Moderate PM2.5 Nonattainment Areas and PM2.5 Maintenance Areas."*[2]

The plan is required only for Fairfield and New Haven counties as part of the NY-NJ-CT PM2.5 maintenance area. Connecticut's six remaining counties are not subject to PM2.5 maintenance plan requirements as they have never been included in nonattainment areas for the PM2.5 NAAQS.

1.2 Particulate Matter Formation and Environmental Effects

Particulate matter in the atmosphere is comprised of a complex mixture of components. Common constituents include: sulfate (SO4); nitrate (NO3); ammonium; elemental carbon; a great variety of organic compounds; and inorganic material, including metals, dust, sea salt, and other trace elements (generally referred to as 'crustal material'). Primary particulate matter is emitted directly into the air as solid or liquid particles and may result from products of combustion, evaporation, or wind entrainment. Secondary particulates form in the atmosphere over time through chemical reactions involving precursor pollutants (e.g., gaseous sulfur dioxide and ammonia reacting to form ammonium sulfate particles). Smaller particles are more likely to remain in the air for prolonged periods and travel large distances.

The health effects associated with exposure to PM2.5, particles with nominal diameters of 2.5 micrometers or less, are significant mainly because these very small particles easily reach into the deepest regions of the lungs. Health effects associated with PM2.5 exposure include:

- premature mortality;
- aggravation of respiratory and cardiovascular disease (as evidenced by increased hospital admissions, emergency room visits, school/work absences, and restricted activity days);
- decreased lung function and difficulty breathing;
- asthma attacks; and
- certain cardiovascular problems such as heart attacks and cardiac arrhythmia.[3,4,5]

Welfare effects include increased haze with degraded visibility and damage to crops and materials from deposition.

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[2] EPA-420-B-22-044, October 2022.
[3] 72 FR 20586, April 25, 2007.
[4] "Air Quality Criteria for Particulate Matter", United States Environmental Protection Agency, Research Triangle Park, North Carolina: National Center for Environmental Assessment — RTP, Office of Research and Development; EPA/600/P–99/002aF and EPA/600/P–99/002bF. October 2004.
[5] "Provisional Assessment of Recent Studies on Health Effects of Particulate Matter Exposure; National Center for Environmental Assessment, Office of Research and Development, U.S. Environmental Protection Agency; Research Triangle Park, NC 27711; EPA/600/R-06/063; July 2006.

The United States Environmental Protection Agency (EPA) sets primary and secondary NAAQS to protect health and welfare, respectively.

1.3 Regulatory Background

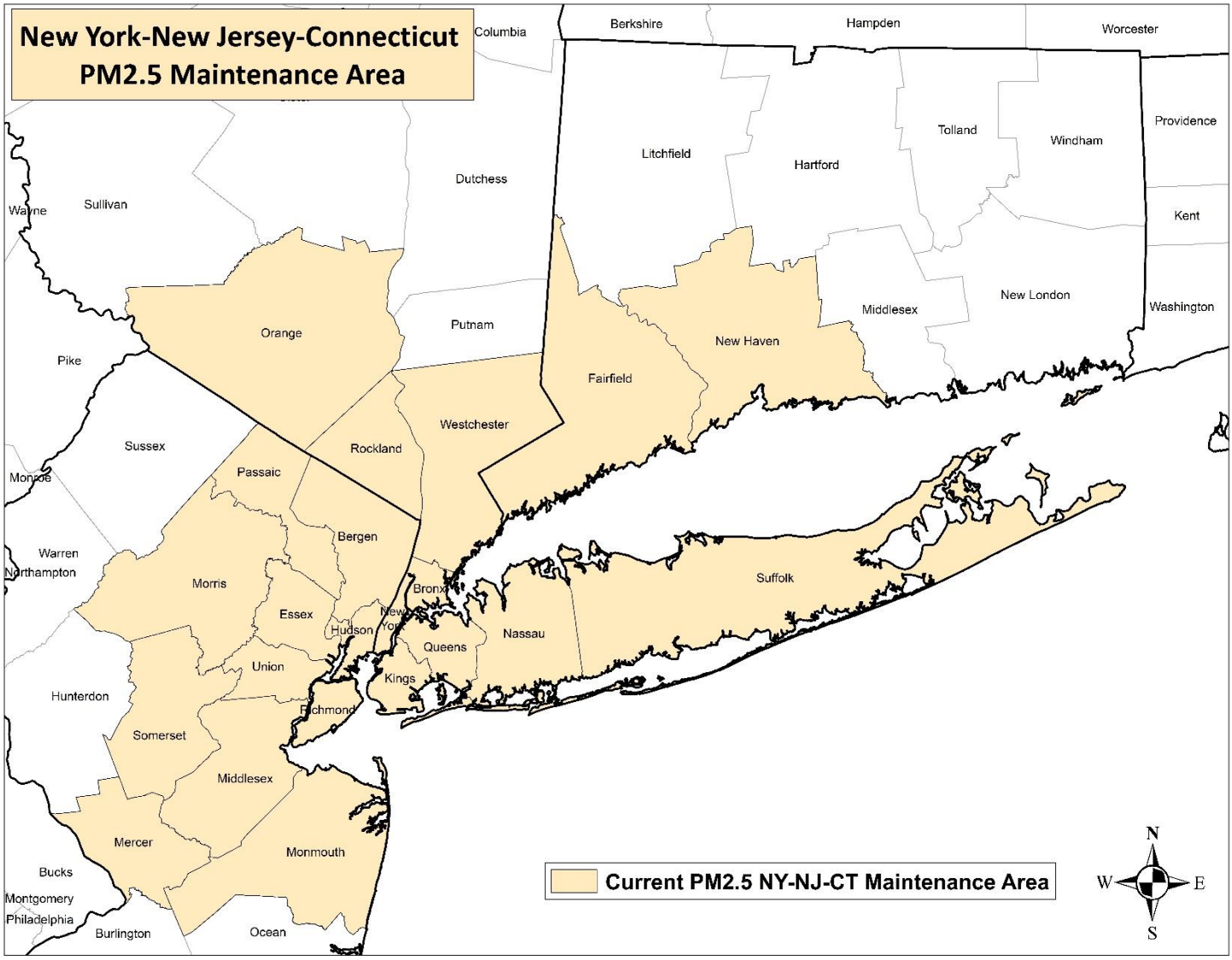
In July of 1997, EPA first promulgated National Ambient Air Quality Standards (NAAQS) for PM2.5. Standards were established for annual and 24-hour averaging periods. Primary and secondary standards for each averaging time were set equivalent.

Compliance with the annual primary and secondary PM2.5 standards at a monitor, or for an area, is met when the design value (DV), calculated from the average of the three most recent annual arithmetic mean concentrations as determined in accordance with 40 CFR 50 Appendix N, is less than or equal to the applicable NAAQS. Compliance with the 24-hour primary and secondary PM2.5 standards at a monitor, or for an area, are met when the DV, calculated from the average of the three most recent yearly 98th percentile of 24-hour concentrations as determined in accordance with 40 CFR 50 Appendix N, is less than or equal to the applicable NAAQS.

The Connecticut Department of Energy and Environmental Protection (DEEP) began ambient air monitoring for PM2.5 in 1999. Based on monitored air quality and transport of PM2.5 precursor emissions into Connecticut[6], New York and New Jersey, EPA established initial PM2.5 nonattainment areas effective April 5, 2005, that included Fairfield and New Haven counties as part of a multi-state nonattainment area for the 1997 PM2.5 NAAQS. This nonattainment area was comprised of the 22 New York, New Jersey and Connecticut counties surrounding New York City as depicted in Figure 1-1.

[6] Recommendation for PM2.5 Designation February 2004, See: Technical Support Document Final Version (ct.gov)

Figure 1-1. *Counties in the NY-NJ-CT PM2.5 Maintenance Area. This area is the former nonattainment areas for the 1997 annual and 2006 24-hour standards.*



Pursuant to Clean Air Act (CAA) sections 108 and 109, EPA promulgated revised 24-hour NAAQS in 2006. On December 14, 2009, this same area was designated nonattainment for the 2006 revision to the 24-hour NAAQS.

In 2012, EPA revised the primary annual standard based on reviews of health studies showing adverse impacts at concentrations lower than the original 1997 NAAQS. In early 2013, EPA finalized its 2012 revisions to the 24-hour primary PM2.5 standard with an effective date of March 18, 2013. The entire State was designated attainment/unclassifiable for this revision to the standard.[7]

Meanwhile, monitoring data showed that the NY-NJ-CT multi-state area had achieved compliance with both the 1997 annual and 2006 24-hour PM2.5 NAAQS since 2009.[8] As a result, DEEP formally submitted a redesignation request and maintenance plan for Connecticut's

[7] 80 FR 2205 Designations for the 2012 Primary Annual PM2.5 NAAQS.
[8] 77 FR 76867 December 31, 2012 Determination of Attainment of the 2006 24-hour NAAQS for the NY-NJ-CT area.

portion of the NY-NJ-CT PM2.5 nonattainment area to EPA.[9] The plan demonstrated that Connecticut's air quality met both the 1997 annual and the 2006 24-hour PM2.5 NAAQS due to a combination of national, regional and local control measures implemented to reduce emissions and presented a maintenance plan to ensure continued attainment of the PM2.5 NAAQS. EPA approved the redesignation to attainment and first 10-year maintenance plan effective October 24, 2013.

The timeline for promulgation of the PM2.5 NAAQS is shown in Table 1-1 along with designation history of the Fairfield/New Haven maintenance area in southwest Connecticut.

Table 1-1. *History of the PM2.5 NAAQS with respect to the Fairfield/New Haven Maintenance Area.*

Promulgation of Standards	Form of Standards			Area Designations	
	Primary / Secondary	Averaging Time	Level[a]		
1997 62 FR 38652 Jul 18, 1997	Primary and Secondary	24 hours	65 µg/m^3	Unclassifiable/Attainment Effective April 5, 2005 [b]	
	Primary and Secondary	Annual	15.0 µg/m^3	Nonattainment Effective April 5, 2005 70 FR 943	Attainment Effective October 24, 2013 78 FR 58467
2006 71 FR 61144 Oct 17, 2006	Primary and Secondary	24 hours	35 µg/m^3	Nonattainment Effective December 14, 2009 74 FR 58687 (while indicating unclassifiable / attainment for the 1997 24-hour standard)	Attainment Effective October 24, 2013 78 FR 58467
2012 78 FR 3085 Jan 15, 2013	Primary	Annual	12.0 µg/m^3	Unclassifiable/Attainment Effective April 15, 2015 80 FR 2205	

Notes:
[a] Compliance with the 24-hour and annual standards is based on three-year averages of the 98th percentile of 24-hour means and annual means, respectively, following procedures in 40 CFR 50 Appendix N.

[b] Original designations in 70 FR 944 made no distinction in designations for averaging times. However, distinctions are reflected in 40 CFR 81.307 and were indicated with designations for the 2006 changes to the 24-hour standards.

[9] https://portal.ct.gov/DEEP/Air/Planning/Particulate-Matter/PM25-Redesignation-Request

2. Limited Maintenance Plan Option

Ten-year maintenance plans are required under CAA section 175A to assure compliance with primary NAAQS for 20 years after an area is redesignated to attainment. The first 10-year maintenance plan is submitted along with the request for redesignation and the second 10-year maintenance plan should be submitted eight years after the redesignation to attainment.

In October 2022, EPA released *"Guidance on the Limited Maintenance Plan Option for Moderate PM2.5 Nonattainment Areas and PM2.5 Maintenance Areas."*[10] Existing PM2.5 maintenance areas can use this option to show that an area is expected to continue to attain the standard for the maintenance period. This option relies on data analyses indicating that there would be a low probability of violating the standard rather than use of more complex emission inventory projections or air quality modeling.

An air agency submitting a limited maintenance plan may rely on existing SIP-approved measures to include an attainment year emissions inventory, provisions for continued operation of the monitoring network, verification of continued attainment, and a contingency plan. A limited maintenance plan does not relieve an area of adherence to CAA requirements for maintenance areas such as general conformity and transportation conformity.

2.1 Design Value Trends

Twenty-four-hour DVs at each of the monitors in the Connecticut portion of the NY-NJ-CT maintenance area are shown in *Figure 2*-1. Annual DVs at each of the monitors in the Connecticut portion of the NY-NJ-CT maintenance area are shown in Figure 2-2. Both figures indicate that air quality in New Haven and Fairfield counties remain well below both the PM2.5 NAAQS.[11]

[10] Guidance on the Limited Maintenance Plan Option for Moderate PM2.5 Nonattainment Areas and PM2.5 Maintenance Areas. United States Environmental Protection Agency, Office of Air Quality Planning and Standards, Washington, DC, EPA-420-B-22-044. October, 2022.

[11] Design values can be found at EPA's website: Design Value Interactive Tool | US EPA

Figure 2-1. *24- Hour Design Value Trends for Connecticut Monitors in the NY-NJ-CT Maintenance Area (2022 Design Values are preliminary).*

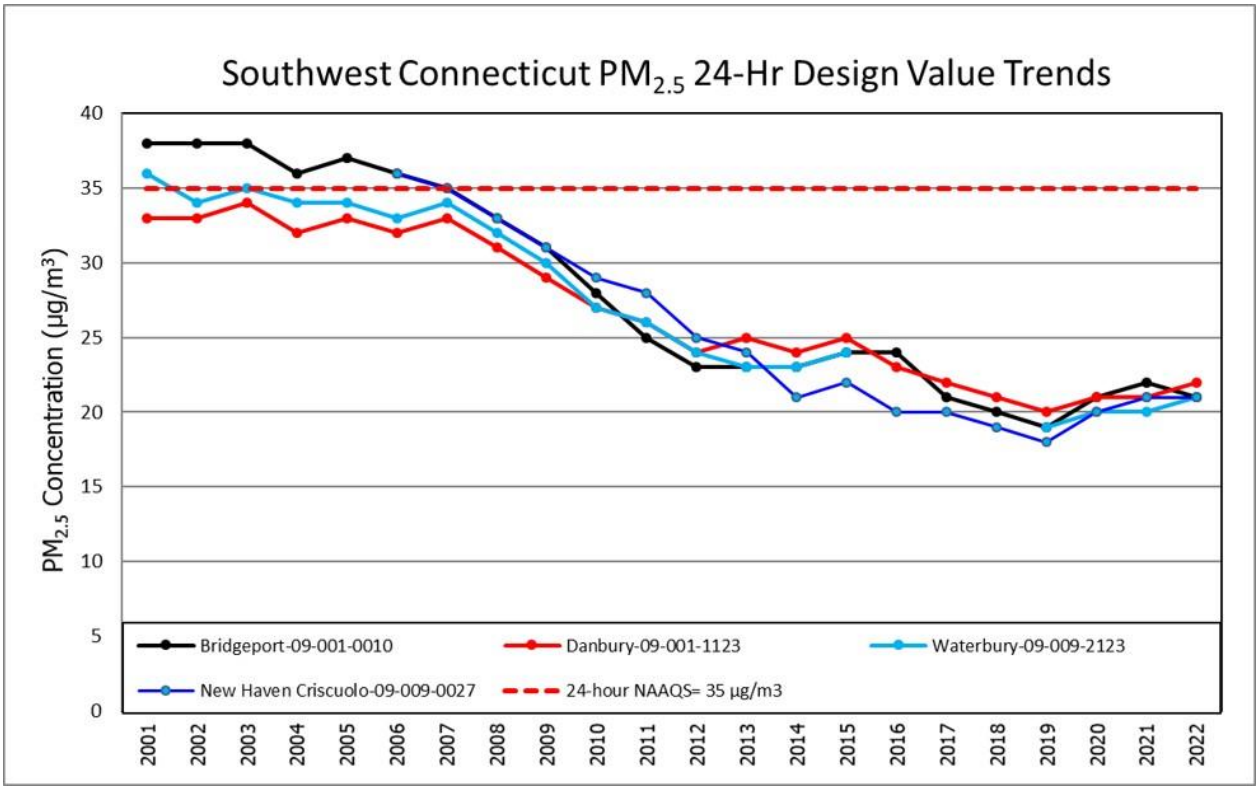
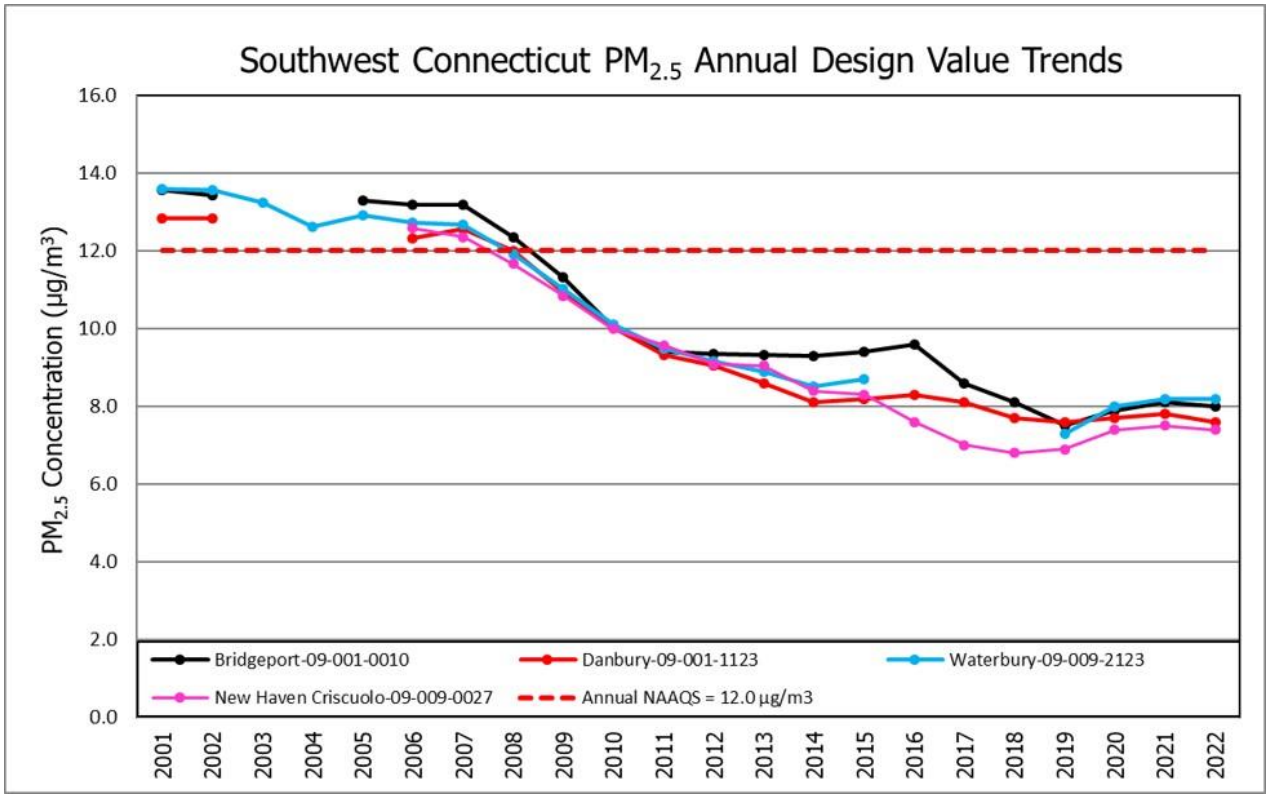


Figure 2-2. *Annual Design Value Trends for Connecticut Monitors in the NY-NJ-CT Maintenance Area (2022 Design Values are preliminary).*



The following table shows the maximum design values over the entire maintenance area from 2017-2021 for both the annual and 24-hour PM2.5 NAAQS.

Table 2-1. *Table of Maximum PM2.5 Design Values for the Entire Maintenance Area for the most recent five years of certified data.*

Year	2017	2018	2019	2020	2021
24-Hour Design Value (µg/m3)	23	21	22	22	22
Annual Design Value (µg/m3)	9.7	9.2	9.1	8.7	9.0

The following charts show the maximum PM2.5 maintenance area design value from each State since 2017. When comparing to the PM2.5 NAAQS, all monitors in the maintenance area continue to be in attainment.

Figure 2-1. *Maximum 24-Hour Design Value for each State within the Maintenance Area (2017-2021).*

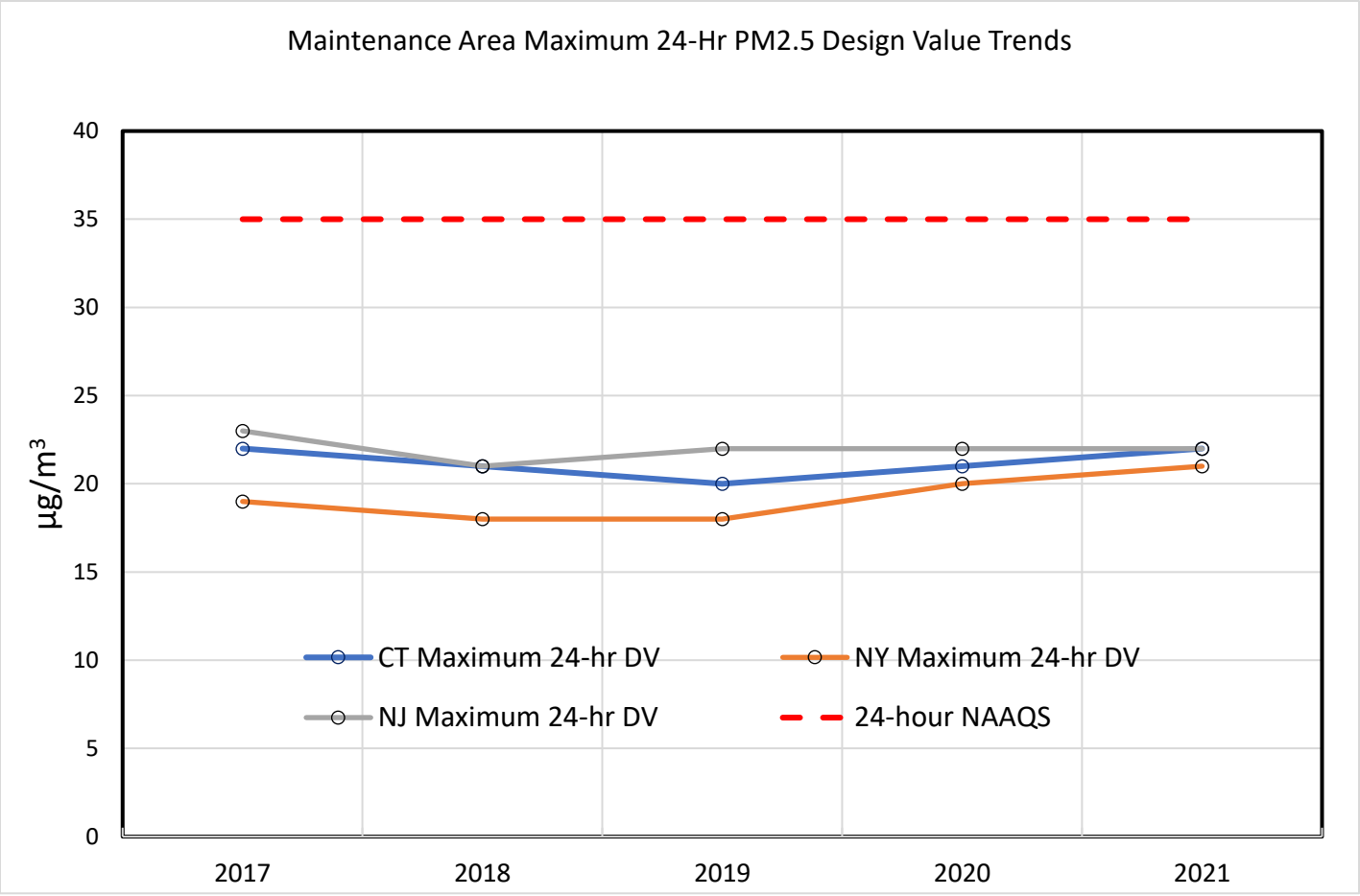
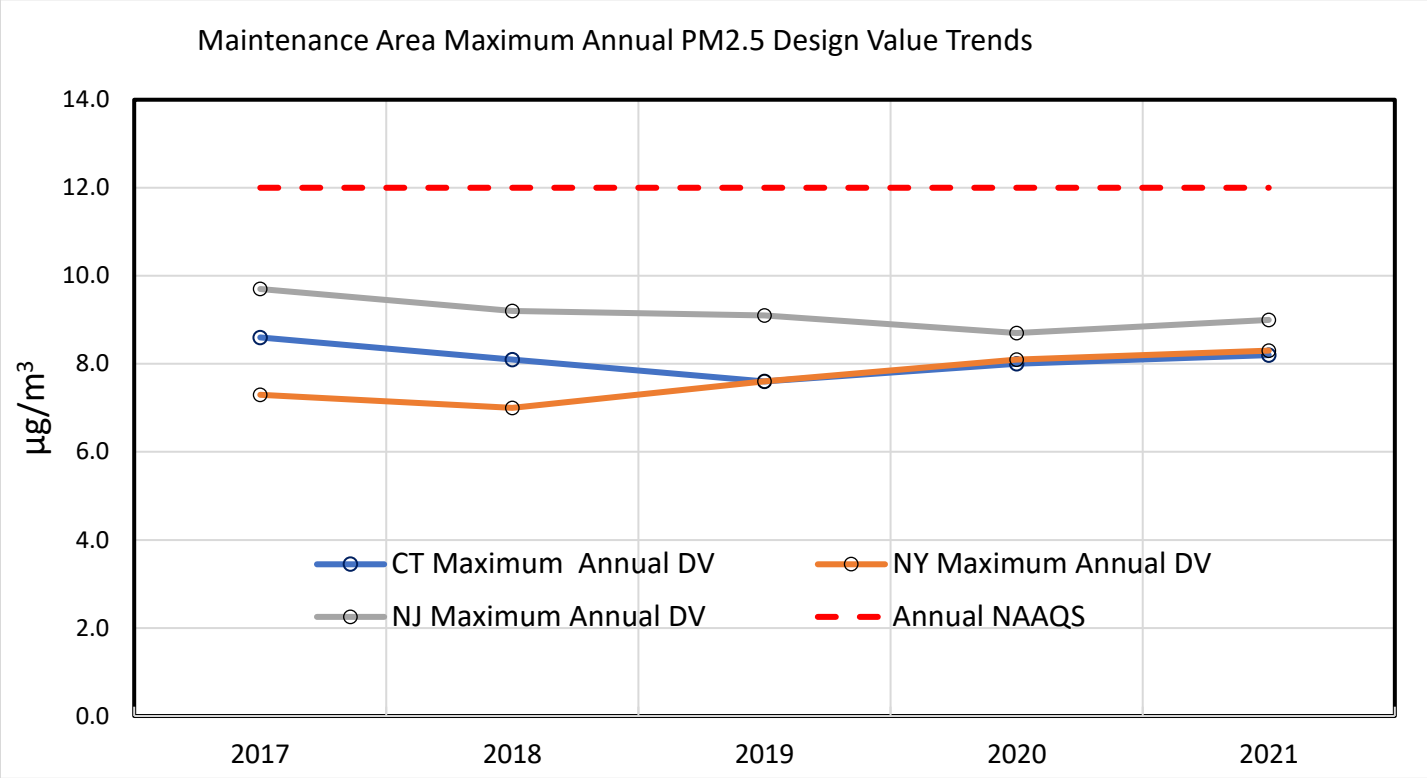


Figure 2-2. *Maximum Annual Design Value for each State within the Maintenance Area (2017-2021).*



Considering the large margin by which Connecticut and other maintenance area monitors demonstrate continuing attainment of the PM2.5 NAAQS, it is unlikely a violation of the NAAQS would occur during the next maintenance period and a limited maintenance plan, relying on ongoing success of the existing approved plan, is appropriate for the area.

2.2 Critical Design Values

To further investigate the likelihood of continued attainment, EPA has developed the critical design value (CDV) as an indicator of future violations of the NAAQS given the current average design value and its variability. EPA's procedure for determining the CDV is described briefly below.

The equation to calculate a CDV is as follows:

$$CDV = NAAQS/(1+t_c*CV)$$

Where:

CDV	=	Critical Design Value
NAAQS	=	National Ambient Air Quality Standard
t_c	=	Critical t-value corresponding to a probability of exceeding the NAAQS in the future and the degree of freedom in the estimate to the coefficient of variation.
CV	=	Coefficient of variation (CV) of the annual design value, calculated as the ratio of the standard deviation (SD) and average (mean) of recent design values.

For these calculations, EPA recommends a minimum of five years of data be used. Five years of design values (seven years of data) were used for three of the four Connecticut monitors. Three years of design values (5 years of data) were used for the Waterbury monitor due to site reconstruction activities resulting in incomplete data for 2016 and invalidating design values for 2016-2018. For New York and New Jersey, only monitors that had at least the most recent three years of design values were used in the calculations. The critical t value was selected such that the probability of a future exceedance is less than ten percent when the average design value is less than the critical design value.

The following tables show the CDV calculations for each individual Connecticut monitor. All monitored 2021 design values are well below the individually calculated CDV for both the 24-hour and annual NAAQS.

Table 2-2. *Data for Calculation of Critical Design Values at Connecticut Maintenance Area Monitors for the 24-Hour NAAQS.*

CT Critical Design Value Calculations for the 24-hour PM2.5 NAAQS				
Site	**Bridgeport**	**Danbury**	**New Haven**	**Waterbury**
NAAQS	35	35	35	35
tc	1.533	1.533	1.533	1.886
SD	1.14	0.71	1.14	0.58
Mean	20.6	21.0	19.6	19.7
CV (SD/Mean)	0.055	0.034	0.058	0.029
CDV	**32.3**	**33.3**	**32.1**	**33.2**

2021 Design value	**22**	**21**	**21**	**20**

Table 2-3. *Data for Calculation of Critical Design Values at Connecticut Maintenance Area Monitors for the Annual NAAQS.*

CT Critical Design Value Calculations for the Annual PM2.5 NAAQS				
Site	**Bridgeport**	**Danbury**	**New Haven**	**Waterbury**
NAAQS	12	12	12	12
tc	1.533	1.533	1.533	1.886
SD	0.40	0.19	0.31	0.47
Mean	8.0	7.8	7.1	7.8
CV (SD/Mean)	0.049	0.025	0.044	0.060
CDV	**11.2**	**11.6**	**11.2**	**10.8**
2021 Design value	**8.1**	**7.8**	**7.5**	**8.2**

The following tables are a summary of the CDV calculations for each State in the maintenance area, using the monitor with the maximum design values in each state for each of the past five years. All 2021 monitored design values fall below these CDVs in each State.

Table 2-4. *Maximum 24-Hour Critical Design Value Data by State for the CT-NY-NJ Maintenance Area.*

State Portion Maintenance Area CDV Calculations for the 24-hour PM2.5 NAAQS			
State	**Connecticut**	**New Jersey**	**New York**
NAAQS	35	35	35
tc	1.533	1.533	1.533
SD	0.84	0.71	1.30
Mean	21.2	22.0	19.2
CV (SD/Mean)	0.039	0.032	0.068
CDV	**33.0**	**33.4**	**31.7**
Highest Monitored 2021 DV	**22**	**22**	**21**

Table 2-5. *Maximum Annual Critical Design Value Data by State for the CT-NY-NJ Maintenance Area.*

State Portion Maintenance Area CDV Calculations for the Annual PM2.5 NAAQS			
State	**Connecticut**	**New Jersey**	**New York**
NAAQS	12	12	12
Tc	1.533	1.533	1.533
SD	0.36	0.36	0.54
Mean	8.1	9.1	7.7
CV (SD/Mean)	0.045	0.040	0.071
CDV	**11.2**	**11.3**	**10.8**

Highest Monitored 2021 DV	**8.2**	**9.0**	**8.3**

It should be noted that while the area was never designated nonattainment for the current (2012) annual standard of 12 µg/m^3, the calculations shown in these tables are based on this current primary annual standard. Using the original annual standard of 15 µg/m^3 for which the area became a maintenance area, less stringent critical design values are calculated for each state of 14.0, 14.1 and 13.7, for Connecticut, New Jersey and New York, respectively.

The following tables contain the CDV calculations for the entire maintenance area, based on the monitor with the maximum design value across the maintenance area for each of the past five years.

Table 2-6. *Data for Calculation of Critical Design Value across the Entire Maintenance Area for the 24-Hour NAAQS.*

Maintenance Area CDV Calculations for the 24-Hour PM2.5 NAAQS	
NAAQS	35
tc	1.533
StDev	0.55
Mean	22.6
CV (SD/Mean)	0.024
CDV	**33.7**
Highest Monitored 2021 DV	**22**

As was done previously, the CDV calculations are based on the current annual standard of 12 µg/m^3. Using the original annual standard of 15 µg/m^3, the critical design value for the maintenance area is 13.6.

Table 2-7. *Data for Calculation of Critical Design Value across the Entire Maintenance Area for the Annual NAAQS.*

Maintenance Area CDV Calculations for the Annual PM2.5 NAAQS	
NAAQS	12
tc	1.533
StDev	0.62
Mean	9.4
CV (SD/Mean)	0.066
CDV	**10.9**
Highest Monitored 2021 DV	**9.0**

Critical design value calculations for all monitors within the tri-state maintenance area are included in Appendix A. Regardless of the monitor or area selected within the maintenance area,

the average design values are always less than the critical design values. Therefore, the probability of exceeding the standards is less than ten percent for locations within the maintenance area.

3. The Maintenance Plan

DEEP submitted a redesignation request and maintenance plan for the Connecticut portion of the NY-NJ-CT area on June 22, 2012. The plan demonstrated that Connecticut's air quality met both the 1997 annual and the 2006 24-hour PM2.5 NAAQS due to a combination of national, regional and local control measures implemented to reduce emissions. Consistent with CAA section 175A(a), the plan provided for maintenance of the NAAQS for at least 10 years after EPA formally approved the redesignation request. The plan has proven effective in maintaining compliance with the PM2.5 NAAQS and will remain in effect throughout the next maintenance period.

3.1 Emissions Trends

An attainment year (2007) inventory was submitted with the original maintenance plan indicating that PM2.5 emissions in Fairfield and New Haven counties were 3,247 and 2,866 tons per year, respectively, and 6,113 total tons per year.[12]

Table 3-1 shows the anthropogenic emissions totals for these two counties as taken from the National Emissions Inventory (NEI) – an EPA compendium of emissions reported every three years.[13] Emissions are shown for primary PM2.5 and precursor species: ammonia (NH3), nitrogen oxides (NOx), sulfur oxides (SOx) and volatile organic compounds (VOC). While there is some fluctuation from the original attainment year inventory, partly due to improvements in emission calculations and methods, the overall trend in emissions of direct particulate and its precursors is downward. This is consistent with the downward trend in monitored data.

Table 3-1*. Emission Trends for the Connecticut Counties in the PM2.5 Maintenance Area as taken from the National Emissions Inventory.*

Connecticut PM2.5 Maintenance Counties NEI Emission Trends (tons/year)				
Pollutant	**2008 emissions**	**2011 emissions**	**2014 emissions**	**2017 emissions**
PM2.5	6,298	7,359	4,753	4,361
NH3	1,380	1,328	1,214	1,485
NOX	44,451	34,479	30,272	22,020
SO2	10,459	7,443	6,279	1,296
VOC	50,764	52,064	52,805	43,518

Table 3-2 and Table 3-3 show similar trends in emissions for the counties in New York and New Jersey that are included in the maintenance area.

[12] See Table 5.6 of PM2.5 TSD post-comment submission to EPA (ct.gov)
[13] https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data

Table 3-2*. Emission Trends for the New York Counties in the PM2.5 Maintenance Area as taken from the National Emissions Inventory.*

New York PM2.5 Maintenance Counties NEI Emission Trends (tons/year)				
Pollutant	**2008 emissions**	**2011 emissions**	**2014 emissions**	**2017 emissions**
PM2.5	26,517	25,922	24,534	22,200
NH3	5,910	5,004	6,857	4,160
NOX	213,670	192,797	160,170	120,689
SO2	63,359	30,691	10,735	5,664
VOC	283,626	223,147	236,645	163,310

Table 3-3. *Emission Trends for the New Jersey Counties in the PM2.5 Maintenance Area as taken from the National Emissions Inventory.*

New Jersey PM2.5 Maintenance Counties NEI Emission Trends (tons/year)				
Pollutant	**2008 emissions**	**2011 emissions**	**2014 emissions**	**2017 emissions**
PM2.5	16,122	15,146	13,657	13,147
NH3	11,636	3,808	9,127	3,419
NOX	158,267	109,444	100,141	88,893
SO2	26,182	8,952	5,772	1,700
VOC	164,238	143,127	129,492	112,829

3.2 Maintenance Demonstration

To show that an area is expected to continue to attain the standard for the 10-year maintenance period, this limited maintenance plan method relies primarily on air quality analyses indicating that there would be a low probability of violating the standard in the future, rather than using air quality modeling or a projection of an area's emissions inventory for a future year. The design value trends and comparison to calculated critical design values from the previous sections satisfy this condition. Thus, maintenance of the PM2.5 NAAQS is reasonably assured for the next 10-year maintenance period.

3.3 Control Plan

Improvements in Connecticut's ambient PM2.5 air quality are due to both state and federal control programs that have reduced emissions regionally. Continued applicability of prevention of significant deterioration requirements, and control measures already contained in the SIP and approved by EPA under Section 110 and Part D of the CAA will remain in place to assure continued maintenance of the PM2.5 NAAQS.

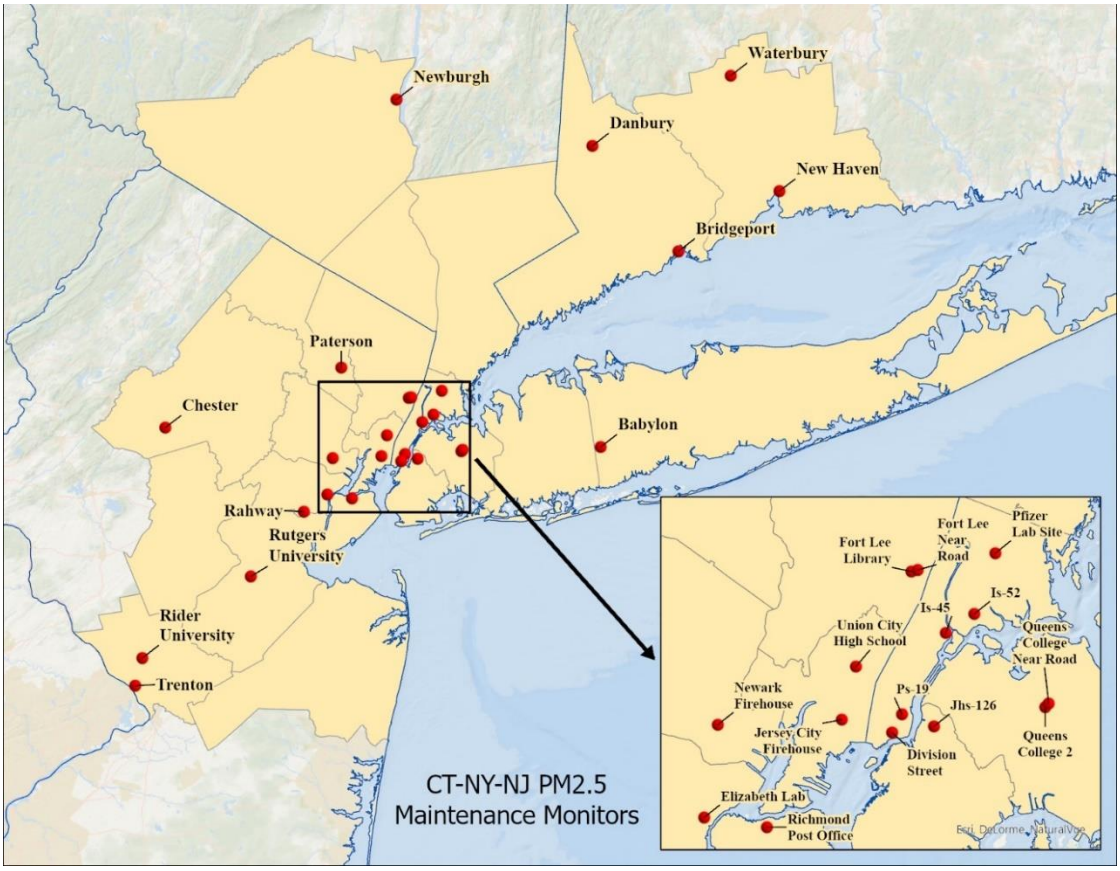
PM2.5 concentrations are strongly affected by PM2.5 secondary components such as sulfates and nitrates that result from precursor emissions of sulfur dioxide and nitrogen oxides. Additional PM2.5 benefits will continue as a result of ongoing state and regional efforts to reduce ozone, regional haze and greenhouse gases emissions. Federal measures, such as the federal motor vehicle control program and the various transport rules also provide ongoing reductions of PM2.5 and its precursor pollutants. In addition, DEEP anticipates initiating a rulemaking in 2023 to seek additional NOx reductions from medium and heavy duty vehicles beginning with the 2027 model year. These measures provide additional assurance that the NY-NJ-CT maintenance area will remain in compliance with the PM2.5 NAAQS.

DEEP is committed to continue to retain, throughout the second 10-year maintenance period, all control measures included in its SIP as approved by EPA for our attainment designation and first maintenance plan.

3.4 Monitoring Network

DEEP maintains a comprehensive network of eight PM2.5 air quality monitors throughout the state with the primary objective of determining compliance with the PM2.5 NAAQS. Four of the monitors are located within the maintenance area. DEEP submits network plans to EPA Region 1 annually to demonstrate that air monitoring operations meet or surpass all applicable federal requirements. Figure 3-1 is a map illustrating the locations of PM2.5 monitors within the NY-NJ-CT maintenance area. DEEP is committed to continue operation of its PM2.5 monitors within the maintenance area under its current network plan and the requirements of 40 CFR 58.

Figure 3-1. *Location of PM2.5 Monitors Operated within the Maintenance Area.*



3.5 Verification of Attainment

As is the case for any maintenance plan, the limited maintenance plan is expected to identify how the air agency intends to track the progress of the maintenance plan. DEEP verifies continued compliance by reviewing monitored data as it becomes available to evaluate any risk of impending NAAQS violations. DVs are recalculated annually at all sites and DEEP will take action to assure DVs remain below the NAAQS.

3.6 Contingency Plan

Section 175A(d) of the Clean Air Act requires the inclusion of contingency provisions that would be implemented by the state to correct any future violation of the NAAQS in areas that had been redesignated as an attainment area. A contingency plan is required to promptly correct any violation of the PM2.5 standard that occurs after approval of the limited maintenance plan. The contingency measures do not have to be fully adopted; however, the contingency plan is considered to be an enforceable part of the SIP and should ensure that the contingency measures are adopted expeditiously once they are triggered.

Connecticut submitted a contingency plan with its first maintenance plan with which it will continue to adhere.[14] Requirements to submit further contingency measures have been

[14] See section 5.4 of PM2.5 TSD post-comment submission to EPA (ct.gov)

suspended as long as the area continues to attain the 2006 PM2.5 NAAQS.[15] As Connecticut continues to attain all PM2.5 NAAQS and as the CAA gives the EPA Administrator discretion with respect to contingency measures, and as the EPA has waived the requirement for Connecticut to submit further contingency measures,[16] there are no outstanding requirements with respect to contingency measures for this second round submittal of a maintenance plan for PM2.5.

4. Summary and Conclusion

DEEP has demonstrated that the CT-NY-NJ PM2.5 maintenance area meets the requirements for a limited maintenance plan. Design values at all monitors within the maintenance area are well below the critical design values indicating that a future violation of the PM2.5 NAAQS is unlikely.

DEEP will retain all previously approved SIP elements related to attainment and maintenance of the PM2.5 NAAQS. Furthermore, DEEP will continue to operate PM2.5 monitors in the Connecticut portion of the maintenance area in accordance with 40 CFR Part 58 and continue to evaluate compliance with the standards and implement previously approved contingency measures if necessary - all to assure continued compliance with the PM2.5 NAAQS.

[15] 40 CFR 52.379 (g) and (h)
[16] Ibid