Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

Enclosure A:
Revision to Connecticut's State Implementation Plan

8-Hour Ozone Attainment Demonstration for the Greater Connecticut Nonattainment Area Technical Support Document

Connecticut Department of Energy and Environmental Protection
January 2017

Executive Summary

This document presents Connecticut's air quality state implementation plan (SIP) revision for attaining the ozone standards established in 2008. With this plan, the Greater Connecticut area will attain the 2008 standard, by the required deadline. This plan contains elements required under section 182(b) of the Clean Air Act (CAA) applicable to the Greater Connecticut nonattainment area which consists of the five counties of Hartford, Litchfield, New London, Tolland and Windham. Additionally, certain elements of the plan are applicable state-wide including the motor vehicle emissions budgets and other control measures which will enhance ozone attainment in the Greater Connecticut area as well as the remaining three counties of the state.
This attainment demonstration includes all of the required elements which are outlined below:

The Conceptual Model. The conceptual model includes an analysis of analyses of air quality trends, local and regional ozone enhancing meteorology and emissions. The analyses show that ozone exceedances generally occur when precursor emissions are transported into the area from emissions rich areas to the south and west on warm sunny days when the meteorology is favorable to ozone formation. While emissions reductions locally and upwind have caused ozone levels to decrease, the downward trend has leveled off in recent years.

Base and Future Year Emissions Inventories. The base year inventory of emissions is 2011. The year was selected because it is a year for which a Periodic Emissions Inventory (PEI) was required to be developed for submittal to EPA and it is near the year when the area was designated nonattainment. Emissions of the ozone precursors for 2011 in the Greater Connecticut Area were determined to be 91.9 tons per day for nitrogen oxides and 106.1 tons per day of volatile organic compounds. Emissions were projected out to the required year of attainment -- 2017. The future emissions were estimated to be 56.4 tons per day for nitrogen oxides and 84.6 tons per day for volatile organic compounds. Emission reductions came mainly from the mobile source sector due to federally mandated engine emission limits.

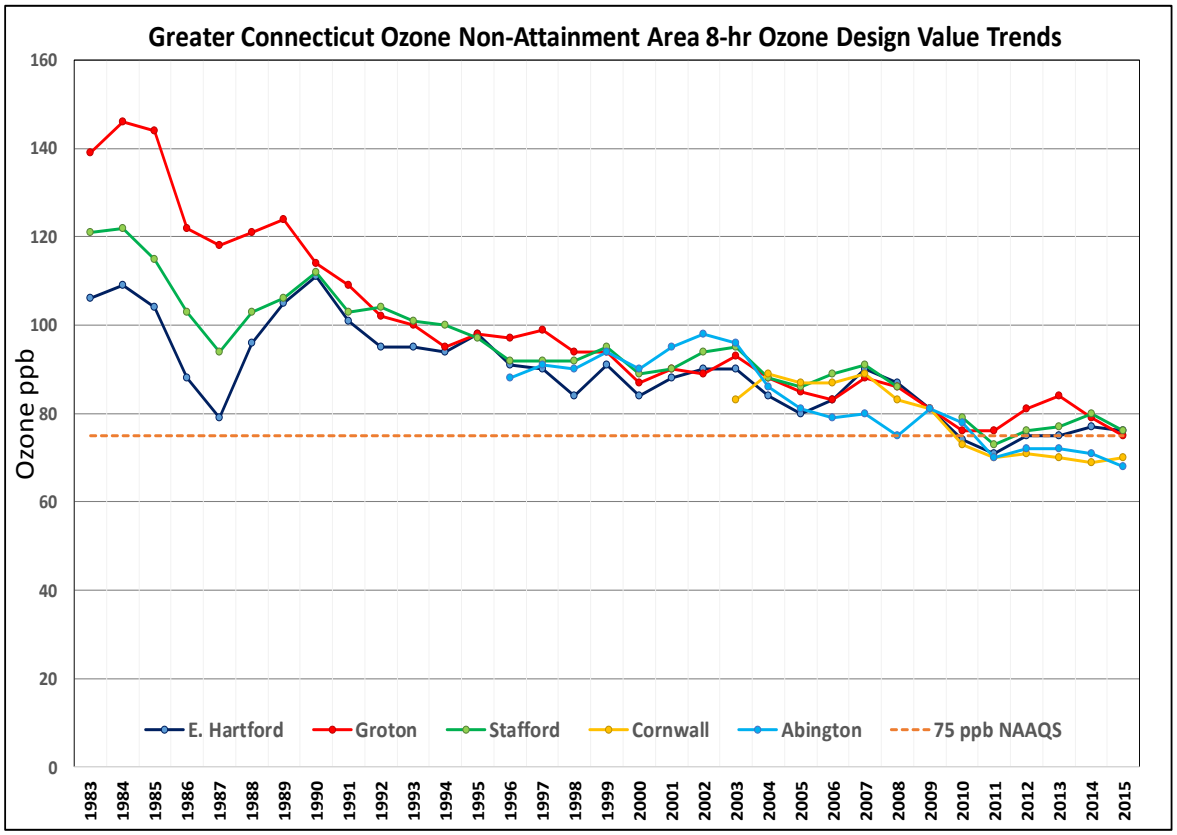
Reasonable Further Progress. Reasonable further progress toward emission reduction goals are required at a rate of three percent per year. This requirement is satisfied, and exceeded, through the mobile source emission reductions required by federal measures.

Analysis of Control Strategies. All control strategies mandated by the CAA are being implemented in the area. State-wide rules are in place which conform to the Control Techniques Guidelines (CTG) and Alternative Control Technologies (ACT) requirements for all source categories which operate within the state. Appropriate rules were adopted beginning in 2011 and Reasonable Available Control Technologies (RACT) and Reasonable Available Control Measures (RACM) were submitted to EPA for approval on July 17, 2014. Additional rules to are being adopted to ensure maintenance and continued improvement in air quality beyond 2017 which include reduction in nitrogen oxide emissions from waste combustors and fuel burning sources as well as reductions in volatile organic compounds from consumer products and industrial coatings. Further reductions result from Connecticut's adoption of the California Low Emissions Vehicle III program.

Motor Vehicle Emissions Budgets. State-wide motor vehicle emissions budgets were established in collaboration with the Department of Transportation. The Greater Connecticut area is budgeted 15.9 tons of volatile organic compounds per day and 22.2 tons of nitrogen oxides per day. The three counties outside of the Greater Connecticut area are budgeted 17.6 tons of volatile organic compounds per day and 24.6 tons of nitrogen oxides per day. Annual transportation improvement plans subject to transportation conformity will adhere to these budgets for 2017 and all-future years, until future budgets are established.

Air Quality Modeling Analyses. Connecticut relied on the results of the EPA's modeling analysis for the Cross-State Air Pollution Rule update to demonstrate that compliance with the 2008 ambient air quality standards for ozone will be met by the end of the 2017 ozone season. Other modeling exercises concur with these results and preliminary monitoring data from 2016 indicate that Greater Connecticut will likely be in attainment with the standard by the attainment deadline.

Contingency Plan. In the event that the area does not meet attainment by the end of the 2017 ozone season, additional reductions beyond the necessary three percent per year are available. These emissions reductions result from federally required emissions limits on the mobile source sector.



The measures adopted and referenced in this plan have resulted in the downward trend in ozone concentrations indicated in the above chart. As indicated by modeling data this trend is likely to continue and lead to attainment.

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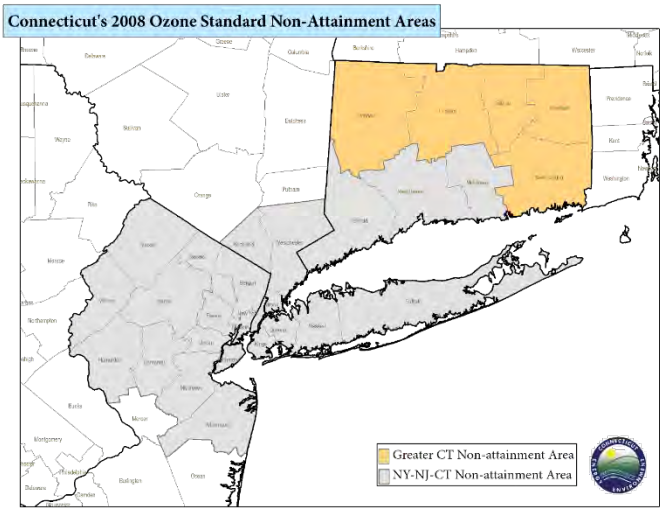
1. Introduction and Background

1.1 Purpose of Document

This document presents the Connecticut Department of Energy and Environmental Protection's (CT DEEP) air quality state implementation plan (SIP) revision for attaining the federal 8-hour National Ambient Air Quality Standard (NAAQS) for ground-level ozone which was revised in 2008. This plan describes the national, regional and local control measures to be implemented to reduce emissions and assesses the likelihood of reaching attainment in the Greater Connecticut nonattainment area (see Figure 1-1) by the July 20, 2018 attainment date deadline. This assessment relies on air quality modeling and other analyses to support its conclusions. A separate plan is being developed for the Southwest Connecticut portion of the greater New York City nonattainment area.

Figure 1-1 *Depiction of Connecticut Nonattainment Areas*



As described in detail in subsequent sections of this document, results of these analyses indicate that due to emission reductions achieved through federal and state control measures, attainment is likely to be achieved by the end of the 2017 ozone season in the five-county Greater Connecticut portion of the State. Because ozone levels in Connecticut are dominated by transport of ozone and its precursors from upwind areas, continued maintenance of the 2008 ozone NAAQS can be assured by securing additional emission reductions from upwind states that contribute significantly to Greater Connecticut.

1.2 Ozone Production and Effect on Health and the Environment

Ozone is a highly reactive gas, each molecule consisting of three oxygen atoms. It is formed naturally at high altitudes (in the stratosphere) in a reaction cycle that begins when ultraviolet solar radiation breaks the oxygen molecule (O2) into two separate oxygen atoms. The free oxygen atoms may then react with either oxygen (O2) to form ozone (O3) or with an ozone molecule to form two oxygen molecules. This reaction cycle beneficially absorbs potentially damaging ultraviolet solar radiation before it reaches the earth's surface. Protection of stratospheric ozone is addressed under Title VI of the Clean Air Act (CAA).

Tropospheric, or ground-level ozone is produced through a combination of atmospheric chemical reactions involving volatile organic compounds (VOCs) and nitrogen oxides (NOx) in the presence of sunlight. These ozone precursors are emitted from many human activities as well as from natural processes. Anthropogenic emissions of VOCs include evaporation and combustion of gasoline and VOC evaporation from consumer products and industrial and commercial solvents. VOCs emitted by vegetation and other biogenic sources in the Greater Connecticut area are estimated to be more than double the anthropogenic VOC emission levels in 2011. Nitrogen oxides are generally formed as a product of high temperature combustion such as in internal combustion engines and utility and industrial boilers. A small quantity of NOx is produced by lightning and emitted by microbial processes in soil. Variability in weather patterns contributes to considerable yearly differences in the magnitude and frequency of high ozone concentrations. Ozone and the pollutants that form ozone are often transported into Connecticut from pollution sources found as far as hundreds of miles upwind.

Ozone, a strong oxidant, damages living tissue and materials. Crop yield has been shown to be reduced and ornamental plants damaged with exposure to ozone. Plastic, rubber and paint become more brittle, paints and dyes fade, and materials generally deteriorate and corrode more readily in the presence of ozone.

The adverse effects of ozone exposure on human health have been well documented in recent decades. Results show that ground-level ozone at concentrations currently experienced in the U.S. can cause several types of short-term health effects. Ozone can irritate the respiratory system, causing wheezing and coughing, can irritate the eyes and nose, and can cause headaches. Ozone can affect lung function, reducing the amount of air that can be inhaled and limiting the maximum rate of respiration, even in otherwise healthy individuals. Exposure to high levels of ozone can also increase the frequency and severity of asthmatic attacks, resulting in more emergency room visits, medication treatments and lost school days. In addition, ozone can enhance people's sensitivity to asthma-triggering allergens such as pollen and dust mites. Other possible short-term effects resulting from exposure to high levels of ozone include aggravation of symptoms in those with chronic lung diseases, such as emphysema, bronchitis and chronic obstructive pulmonary disease (COPD) and increased susceptibility to respiratory infections due to impacts of ozone on the immune system. Studies have also raised the concern that repeated short-term exposure to high levels of ozone could lead to permanent damage to lung function, especially in the developing lungs of children.

1.3 Ozone NAAQS and SIP History

The 1970 Clean Air Act amendments established health and welfare protective limits, or national ambient air quality standards (NAAQS), for a number of air pollutants, including "photochemical oxidants", of which ozone was a key component (see Table 1-1). The 1977Clean Air Act amendments modified the photochemical oxidants standard to focus only on ozone, leading to the establishment in 1979 of a 1-hour average ozone NAAQS of 0.12 parts per million (ppm). The U.S. Environmental Protection Agency (EPA) classified areas as "nonattainment" if monitors in the area measured ozone levels exceeding the NAAQS on more than three days over a 3-year period. Nonattainment areas were required to adopt programs to provide for attainment of the ozone standard no later than 1987. Despite implementation of a variety of emission reduction strategies and significant improvement in measured ozone levels, many areas, including Connecticut, did not attain the standard by the 1987 deadline.

Recognizing the difficulties of attaining the standard and the regional nature of the ozone problem particularly in the northeast, Congress established through the 1990 amendments to the Clean Air Act (CAA), the Ozone Transport Region and the Ozone Transport Commission to help facilitate regional compliance strategies. These amendments also established different classification levels of 1-hour ozone nonattainment, based on the severity of the ozone problem in each area. Areas measuring more severe ozone levels were provided more time to attain but were also required to adopt more stringent control programs. Pursuant to the 1990 amendments, the EPA designated all of Connecticut as nonattainment for the 1-hour NAAQS. The Greater Connecticut area was classified as serious nonattainment with a required attainment date of 1999. Southwest Connecticut was classified as a part of a multi-state severe nonattainment area with portions of New York and New Jersey, with an attainment deadline of 2007. At that time, the Southwest Connecticut portion of the multi-state nonattainment area consisted of most of Fairfield County and a small portion of Litchfield County. The remainder of the state was included in the Greater Connecticut area.

The Department submitted initial attainment demonstrations for both the Southwest Connecticut and Greater Connecticut ozone nonattainment areas on September 16, 1998. The attainment demonstration for Greater Connecticut included a technical analysis showing that overwhelming transport of ozone and ozone precursor emissions from upwind areas precluded compliance by the required 1999 attainment date. Connecticut also requested that the compliance deadline be moved out to 2007. EPA issued final approvals for the 2007 attainment plans and the attainment date extension for Greater Connecticut on January 3, 2001 [66 FR 634].

The Clean Air Act requires EPA to review and revise, as appropriate, established criteria pollutant standards every five years. Prompted by increasing evidence of health effects at lower concentrations over longer exposure periods, EPA promulgated a more stringent ozone health standard in 1997 based on an 8-hour averaging period. The revised NAAQS was established as an 8-hour average of 0.08 ppm. Compliance is determined in an area using the monitor measuring the highest 3-year average of each year's 4th highest daily maximum 8-hour ozone concentration (known as the design value). Due to lawsuits against EPA regarding the revised standards, the nonattainment designations did not become effective until June 15, 2004 [69 FR 23858; April 30, 2004].

For the 1997 standard, Connecticut was designated as nonattainment by EPA based on measured 8-hour ozone values from the 2001-2003 period. Portions of Connecticut were included in two nonattainment areas. Fairfield, New Haven, and Middlesex Counties were included as part of a moderate 8-hour ozone NAAQS nonattainment area, along with the New York and New Jersey counties that make up most of the metropolitan New York Consolidated Statistical Area. The remaining five counties in Connecticut were grouped as a separate moderate nonattainment area, known as the Greater Connecticut 8-hour ozone NAAQS nonattainment area. With these revisions to the ozone standard, Connecticut submitted revised implementation plans in 2008.

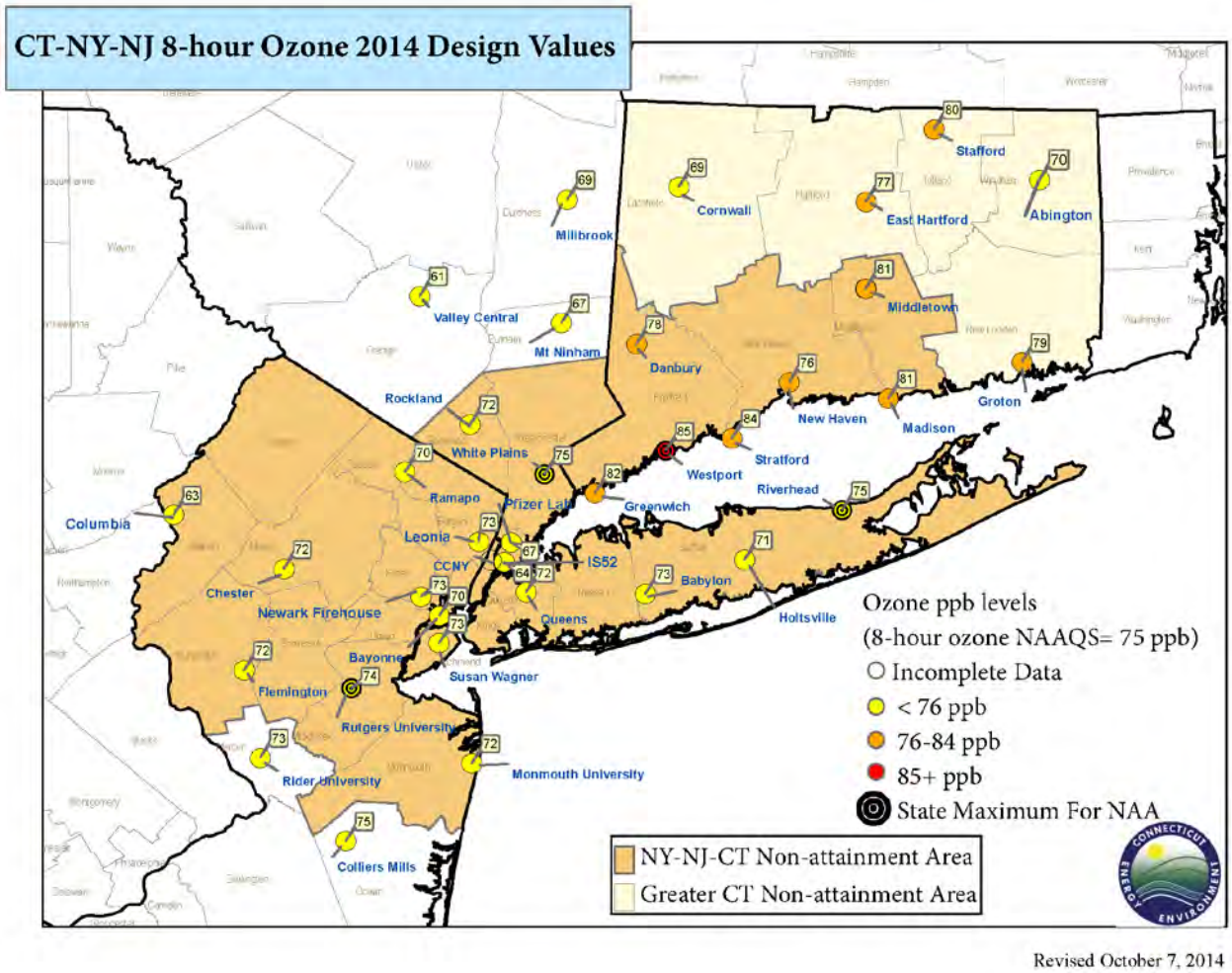
Table 1.1. *History of Ozone NAAQS from 1971 to Present.*

Final Rule/Decision	Primary/Secondary	Indicator	Averaging Time	Level	Form	Status of the Greater Connecticut Area
1971 36 FR 8186 Apr 30, 1971	Primary and Secondary	Total photochemical oxidants	1 hour	0.08 ppm	Not to be exceeded more than one hour per year	Standard Revoked in 1979.
1979 44 FR 8202 Feb 8, 1979	Primary and Secondary	O_3	1 hour	0.12 ppm	Attainment is defined when the expected number of days per calendar year, with maximum hourly average concentration greater than 0.12 ppm, is equal to or less than 1	Standard Replaced with 1997 Standard.
1990 CAA Amendments	Reiterated the 1979 standard. The 1990 CAA Amendments introduced the concept of classifications and varying requirements depending on the severity of the classification. Also recognizes need for multistate efforts and established ozone transport region.					Original Designation: Serious Nonattainment. Measuring Compliance since 2008.
1993 58 FR 13008 Mar 9, 1993	EPA decided that revisions to the standards were not warranted at the time					
1997 62 FR 38856 Jul 18, 1997	Primary and Secondary	O_3	8 hours	0.08 ppm	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years	Original Designation: Moderate Nonattainment. Standard Revoked. Partially revoked July 20, 2013 and fully revoked April 6, 2015. [80 FR 12264] EPA Approval of Attainment Demonstration on January 27, 2014. [78 FR 78272] Measuring compliance since 2009.
2008 73 FR 16483 Mar 27, 2008	Primary and Secondary	O_3	8 hours	0.075 ppm	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years	Original Designation: Marginal Nonattainment. Reclassified to Moderate Nonattainment in 2016. Attainment expected in accordance with this plan by the end of the 2017 ozone season.
2010 & 2011 75 FR 2938 Jan 19, 2010 Proposal	On Sept 2, 2011, President Obama directed EPA to withdraw the proposed reconsideration of the 2008 ozone NAAQS.					
2015 80 FR 65292 Oct 26, 2015	Primary and Secondary	O_3	8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years	Attainment deadlines will be established based on EPA's final designation of nonattainment classifications, which are expected by October 1, 2017.

On March 27, 2008, EPA again revised the ozone standards. Consistent with past revisions, EPA set the primary health standard and secondary welfare standard for ozone at the same level. EPA concluded, based on their review of the scientific evidence at the time, that it was appropriate to revise the primary and secondary standards for ozone from the existing levels of 0.08 ppm to 0.075 ppm. Connecticut was initially designated marginal nonattainment for both the Greater Connecticut region and the Southwest Connecticut portion of the NY-NJ-CT nonattainment area.

Connecticut's nonattainment areas were two of nineteen marginal nonattainment areas nationwide that did not attain by the July 20, 2015 attainment date. When a nonattainment area does not attain the standard by the deadline, the area is either reclassified to the next higher nonattainment classification or, if data warrants, given a one year extension. Eleven marginal nonattainment areas, Greater Connecticut included, were not eligible for the one-year extension. On April 11, 2016, EPA finalized a rule reclassifying Greater Connecticut and the ten other marginal nonattainment areas as moderate based on data from 2012 through 2014 (see Figure 1-2). This reclassification, published in the Federal Register on May 4, 2016 [81 FR 26697], established a new timeline. This new timeline includes a new attainment deadline of July 20, 2018, which requires measured attainment by the end of the 2017 ozone season, and an additional state implementation plan submittal -- this Attainment Demonstration -- due January 1, 2017.

Figure 1-2. ***2014 Design Values***. *Design Values for each of the monitors in the two Connecticut nonattainment areas. Data indicates violations of the standard in both areas and resulted in EPA's decision to reclassify the areas to the next higher classification of Moderate Nonattainment.*



In 2015, EPA once again revised the ozone standard downward -- from 0.075 ppm to 0.070 ppm. While current and proposed implementation measures will assist with progress toward compliance with this newest standard, further plan revisions for the 2015 standard will be addressed as a separate process as required by the CAA and any related EPA rule making.

1.4 Attainment Plan Requirements

Section 172 of the CAA outlines the general nonattainment plan provisions, and CAA section 182 requires additional plan requirements for ozone nonattainment areas based on classification status. Nonattainment areas are classified based on the extent to which the area deviates from the standard in order of increasing severity, as marginal, moderate, serious, severe or extreme. Additionally, if the area is in the Ozone Transport Region (OTR), as Connecticut is, there are additional requirements under CAA section 184. Furthermore, implementation plans from earlier nonattainment designations may be required to remain in place to attain or maintain compliance with the previous standards.

The reclassification from marginal to moderate nonattainment in May of 2016 meant that Connecticut had to fulfill additional plan requirements under the CAA. While CAA section 182(i), which addresses reclassified areas, allows adjustments to the submittal schedules for attainment plan requirements, section 182(i) does not allow for extension to the required attainment date beyond the date for the new classification. CAA sections 182(a) & 182(b) outline the ozone plan requirements of a SIP submission for marginal and moderate areas. The implementation plan requirements specific to the 2008 Ozone NAAQS, adopted on May 21, 2012 [77 FR 30170] and amended March 6, 2015 [80 FR 12264], are codified in 40 CFR 51 Subpart AA.
In addition to prescribing the planning requirements for meeting the 2008 ozone standard, EPA's ozone implementation rules specified the process for transitioning from the 1997 standard to the 2008 standard. The transition included revocation of the 1997 standard, effective April 6, 2015, and EPA's approach to preventing backsliding from existing ozone requirements. Connecticut retains its more stringent requirements that were in effect for previous classifications as "severe" (in essentially Fairfield County) and "serious" (in the remainder of the State) for the 1-hour ozone standard and as "moderate" for the entire state for the 1997 8-hour standard.
When EPA promulgated the 2008 ozone NAAQS, final attainment designations were initially expected to occur in 2010. However, these designations were delayed by EPA's reconsideration process and legal actions filed against EPA. On May 21, 2012 EPA published nonattainment designations and classifications in the Federal Register [77 FR 30088]. Designations were effective July 20, 2012. Both of Connecticut's nonattainment areas were designated as marginal. Marginal areas were required to attain the standard by July 20, 2015 and therefore measure attainment in the 2014 ozone season. Neither of Connecticut's nonattainment areas measured attainment of the 2008 standard by the end of the 2014 ozone season, which resulted in "bump-up" of each area and required that attainment plans meeting requirements for moderate nonattainment areas be submitted by January 1, 2017.
With this and prior submittals, the Greater Connecticut nonattainment area implementation plan fulfills the following requirements:

- Emission offsets from new major sources and modifications for marginal areas are required at a ratio of 1.1 to 1. When Connecticut was reclassified to moderate the ratio was required to be 1.15 to 1. However, because the Greater Connecticut area had, under prior designations, been classified as serious nonattainment, offsets have continued to be required at a more stringent ratio of 1.2 to 1. Because Connecticut is in the OTR, the new source review major source threshold is reduced from the usual 100 tons per year for a moderate area to 50 tons per year for sources emitting VOCs [CAA 184(b)(2)]. Connecticut's rules for obtaining offsets from new and modified sources, as well as other new source review requirements are contained in RCSA 22a-174-3a. Connecticut defines major sources and major modifications in RCSA 22a-174-1, and the thresholds are as at least as stringent as required for moderate nonattainment areas located in the ozone transport region. This stringency is required by EPA's anti-backsliding provisions. Further details demonstrating that Connecticut's SIP adheres to the requirements for nonattainment new source review can be found in Appendix A.

- Basic Inspection and Maintenance (I/M) is required for light-duty motor vehicles. Connecticut continues its more effective enhanced I/M program in place statewide since earlier more stringent nonattainment designations. Connecticut's I/M rules are established in RCSA 22a-174-27 and in CGS 14-164c and regulations adopted thereunder and have been approved into the SIP on December 5, 2008 (see EPA, 73 FR 74019).

- Submittal of an inventory of sources and periodic emissions inventory updates every three years. Connecticut has been submitting periodic emissions inventories every three years since 1990 and continues to do so as we are required under the 2008 ozone NAAQS. Connecticut uses the 2011 inventory year as its base year for modeling and determining reasonable further progress in securing emissions reductions. The point sector of the inventory relies on the actual emissions reported though Connecticut's emissions statement program. Connecticut maintains its emissions statement program as approved in its infrastructure SIP for the 2008 NAAQS (81 FR 35637).

- Transportation conformity budgets are included that are consistent with the attainment plan are required to be established for the RFP year (i.e., 2017) and the attainment year (i.e., 2017).

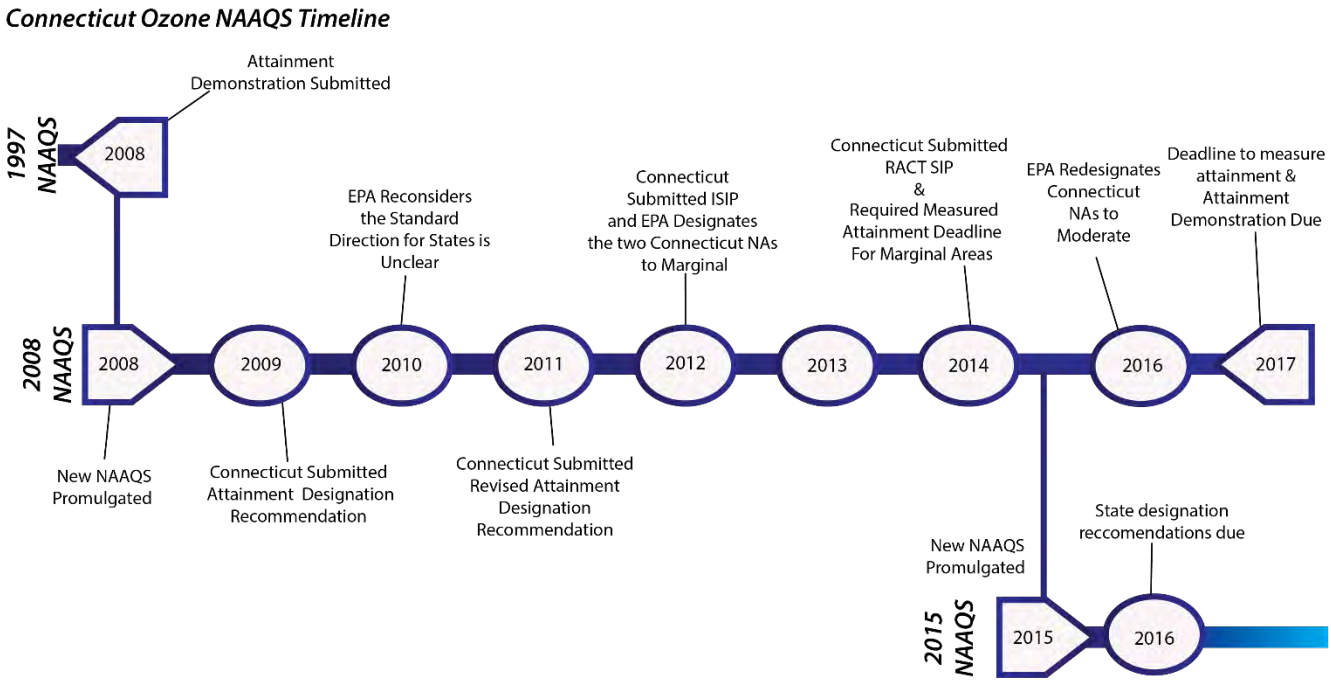
- Plans to implement any necessary Reasonably Available Control Measures (RACM) and Reasonably Available Control Technology (RACT) are included. RACT is required for all EPA-defined control technique guideline (CTG) sources and all other major sources of VOC and NOx. Reasonably available control measures are required for all other sources.

- Reasonable Further Progress (RFP) plans to achieve 15% VOC reduction within 6 years after the baseline year of 2011 (i.e., reductions must occur by 2017). Equivalent NOx reductions can substitute for any portion of the required VOC reductions.

- An attainment demonstration using modeling and other technical analyses described in this report demonstrates that adopted control measures are sufficient to project attainment of the 2008 ozone standard by the end of the 2017 ozone season.

- Contingency measures are planned in the event that implementation of further emission reductions is required upon failure to meet RFP milestones or attainment. This report documents sufficient required contingency measures.

Figure 1-3. *Timeline of significant actions and requirements related to the Greater Connecticut nonattainment area with respect to the 2008 ozone standard revision. EPA decisions and other important documents and benchmarks related to this timeline can be found at the Department's Ozone Planning Web Page: http://www.ct.gov/deep/cwp/view.asp?a=2684&q=322158&deepNav_GID=1619 .*



1.5 Summary of Conclusions

The remainder of this document describes in detail the air quality trends analysis, emission inventories, emission control programs, photochemical modeling, and other weight of evidence evaluations that support the conclusion that the Greater Connecticut Area is expected to achieve full attainment by the end of the 2017 ozone season. Recently adopted control measures and those established under prior implementation plans under more stringent nonattainment designations remain in place and continue to be effective in reducing local ozone precursor emissions. However, despite the extensive measures adopted by Connecticut to reduce ozone precursor emissions, the downward trend in ozone levels has recently slowed as local options for meaningful, cost-effective reductions are largely exhausted. Maintenance of the 2008 NAAQS in Greater Connecticut, and timely compliance with the new 2015 NAAQS, are largely dependent on the need for new actions by upwind states and additional federal measures, including mobile source controls, to reduce ozone and precursor emissions that are transported into the Connecticut.

2. Nature of the Ozone Air Quality Problem in Connecticut and the Northeast

2.1 Introduction

In this section, a conceptual overview of the ozone problem is provided from both a regional and local perspective. The regional perspective provided in Section 2.2 is extracted verbatim from the Executive Summary of "The Nature of the Ozone Air Quality Problem in the Ozone Transport Region: A Conceptual Description," [NESCAUM, October 2006; Revised August 2010] a report developed by Northeast States for Coordinated Air Use Management (NESCAUM). Note that since the last update of the report in 2010, the extent and magnitude of ozone episodes have diminished, nevertheless the conceptual model remains valid for the region. The local perspective provides more recent data and details addressing the local aspects of ozone conducive emissions and meteorology, as recommended in EPA's "Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM2.5, and Regional Haze" [DRAFT, December 2014].

2.2 Regional Conceptual Description of the Ozone Problem

The Ozone Transport Region (OTR) of the eastern United States covers a large area that is home to over 62 million people living in Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and northern Virginia. Each summer, the people who live within the OTR are subject to episodes of poor air quality resulting from ground-level ozone pollution that affects much of the region. During severe ozone events, the scale of the problem can extend beyond the OTR's borders and include over 200,000 square miles across the eastern United States. Contributing to the problem are local sources of air pollution as well as air pollution transported hundreds of miles from distant sources outside the OTR.

To address the ozone problem, the Clean Air Act Amendments require states to develop State Implementation Plans (SIPs) detailing their approaches for reducing ozone pollution. As part of this process, states are urged by the U.S. Environmental Protection Agency (USEPA) to include in their SIPs a conceptual description of the pollution problem in their nonattainment areas. This document provides the conceptual description of the ozone problem in the OTR states, consistent with the USEPA's guidance.

Since the late 1970s, a wealth of information has been collected concerning the regional nature of the OTR's ground-level ozone air quality problem. Scientific studies have uncovered a rich complexity in the interaction of meteorology and topography with ozone formation and transport.

The evolution of severe ozone episodes in the eastern U.S. often begins with the passage of a large high pressure area from the Midwest to the middle or southern Atlantic states, where it assimilates into and becomes an extension of the Atlantic (Bermuda) high pressure system. During its passage east, the air mass accumulates air pollutants emitted by a number of sources in upwind states, including large coal-fired power plants and mobile and area sources. Later, sources within the OTR make their own contributions to the air pollution burden. These expansive weather systems favor the formation of ozone by creating a vast area of clear skies and high temperatures. These two prerequisites for abundant ozone formation are further compounded by a circulation pattern favorable for pollution transport over large distances. In the worst cases, the high pressure systems stall over the eastern United States for days, creating ozone episodes of strong intensity and long duration.

One transport mechanism that can play a key role in moving pollution long distances is the nocturnal low level jet. The jet is a regional scale phenomenon of higher wind speeds a few hundred meters above the ground just above the stable nocturnal boundary layer. The jet has been observed just before or during ozone events. It can convey air pollution several hundreds of miles overnight from the southwest to the northeast, directly in line with the major population centers of the Northeast Corridor stretching from Washington, DC to Boston, Massachusetts. The nocturnal low level jet can extend the entire length of the corridor from Virginia to Maine,

and has been observed as far south as Georgia. It can also act to bring pollutants from different directions compared to the prevailing airflow outside the low level jet. It can thus be a transport mechanism for bringing ozone and other air pollutants into the OTR from outside the region, as well as move locally formed air pollution from one part of the OTR to another.

Other transport mechanisms occur over smaller scales. These include land, sea, mountain, and valley breezes that can selectively affect relatively local areas. For example, sea breezes can differ in wind direction, thereby bringing air masses trapped in a thin layer over the cooler water back onto shore. Such mechanisms play a vital role in drawing ozone-laden air into some areas, such as coastal Maine, that are far removed from major source regions.

With the knowledge of the different transport scales into and within the OTR, a conceptual picture of bad ozone days emerges. After sunset, the ground cools faster than the air above it, creating a nocturnal temperature inversion. This stable boundary layer extends from the ground to only a few hundred meters in altitude. Above this layer, a nocturnal low level jet can form with higher velocity winds relative to the surrounding air. It forms from the fairly abrupt removal of frictional forces induced by the ground that would otherwise slow the wind. Absent this friction, winds at this height are free to accelerate, forming the nocturnal low level jet. Ozone above the stable nocturnal inversion layer is likewise cut off from the ground, and thus it is not subject to removal on surfaces or chemical destruction from low level emissions, the two most important ozone removal processes. Ozone in high concentrations can be entrained in the nocturnal low level jet and transported several hundred kilometers downwind overnight. The next morning as the sun heats the Earth's surface, the nocturnal boundary layer begins to break up, and the ozone transported aloft overnight mixes down to the surface where concentrations rise rapidly, partly from mixing and partly from ozone generated locally. By the afternoon, abundant sunshine combined with warm temperatures promotes additional photochemical production of ozone from local emissions. As a result, ozone concentrations reach their maximum levels through the combined effects of local and transported pollution. This combined air mass will then continue to blow along with the wind, carrying elevated concentrations of ozone to areas farther downwind, causing late afternoon and even overnight ozone peaks.

Ozone moving over water is, like ozone aloft, relatively isolated from destructive forces. This air pollution is also protected from vertical mixing and dilution by a relatively shallow mixing layer that occurs when the water is cooler than the air above it. When ozone is transported into coastal regions by bay, lake, and sea breezes arising from afternoon temperature contrasts between the land and water, it can arrive highly concentrated.

During severe ozone episodes associated with high pressure systems, these multiple transport features are embedded within a large ozone reservoir arriving from source regions to the south and west of the OTR. Thus a severe ozone episode can contain elements of long-range air pollution transport from outside the OTR, including nocturnal low level jets, regional scale transport within the OTR, and local transport along coastal shores due to bay, lake, and sea breezes.

From this conceptual description of ozone formation and transport into and within the OTR, air quality planners need to develop an understanding of what it will take to clean the air in the OTR. There are distinct regional and local components that would best be addressed by implementing national, regional, and local controls, respectively. Observed ozone levels in the elevated reservoir often are close to or exceed 0.060 - 0.070 ppm averaged over 8 hours, which is the range that EPA has proposed for the revised National Ambient Air Quality Standard (NAAQS) for ozone. Given that the regional and national load will continue to play a major role in ozone episodes as the ozone NAAQS is lowered, further strengthening of national rules will be critical in mitigating the ozone problem.

Because weather is always changing, every ozone episode is unique in its specific details. The relative influences of the transport pathways and local emissions vary by hour and day during the course of an ozone

episode and between episodes. The smaller scale weather patterns that affect pollution accumulation and its transport underscore the importance of local (in-state) controls for emissions of nitrogen oxides (NOx) and volatile organic compounds (VOCs), the main precursors of ozone formation in the atmosphere. Larger synoptic scale weather patterns, and pollution patterns associated with them, support the need for NOx controls across the broader eastern United States.

Studies and characterizations of nocturnal low level jets also support the need for local and regional controls on NOx and VOC sources as locally generated and transported pollution can both be entrained in nocturnal low level jets formed during nighttime hours. The presence of land, sea, mountain, and valley breezes indicate that there are diverse aspects of pollution accumulation and transport that are area-specific and will warrant policy responses at the local and regional levels beyond a one-size-fits-all approach. In addition, over the course of a day, ozone can be NOx-sensitive during some hours, and VOC-sensitive during others, indicating temporally varying regional and local influences on ozone formation and transport. This further underscores the need for air quality regulators to adopt a combination of national, regional, and local emission controls to address the problem.

The type of emission controls is important. Regional ozone formation is primarily due to NOx, but VOCs are also important because they influence how efficiently ozone is produced by NOx, particularly within urban centers. While reductions in anthropogenic VOCs will typically have less of an impact on long-range ozone transport, they can be effective in reducing ozone in urban areas where ozone production may be limited by the availability of VOCs. Therefore, a combination of localized VOC reductions with additional regional NOx reductions will help to reduce ozone and precursors in nonattainment areas as well as downwind transport across the entire region. Photochemical air quality modeling is a powerful yet limited planning tool. While it has undergone considerable improvement over the past decade, it is far from perfect in its ability to replicate ozone transport. There can be large uncertainties in various inputs and processes used by the model, such as precursor emissions inventories, meteorology, and atmospheric chemistry, yet the models can provide useful directionally correct guidance. Given the more recent understanding of the myriad complexities of ozone transport events, it is important that decision-makers use a variety of data sources to characterize the problem and assess possible solutions.

The recognition that ground-level ozone in the eastern United States is a regional problem requiring a regional solution marks one of the greatest advances in air quality management in the United States. During the 1990s, air quality planners began developing and implementing coordinated regional and local control strategies for NOx and VOC emissions that went beyond the previous emphasis on urban-only measures. These measures have resulted in significant improvements in air quality across the OTR. Measured NOx emissions and ambient concentrations have dropped between 1997 and 2005, and the frequency and magnitude of ozone exceedances have declined within the OTR. With the National Ambient Air Quality Standards likely continuing to be lowered over time, inter-regional transport will play an even larger role in the future. To maintain the current momentum for improving air quality so that the OTR states can meet their attainment deadlines, there continues to be a need for additional regional NOx reductions coupled with appropriate local NOx and VOC controls.

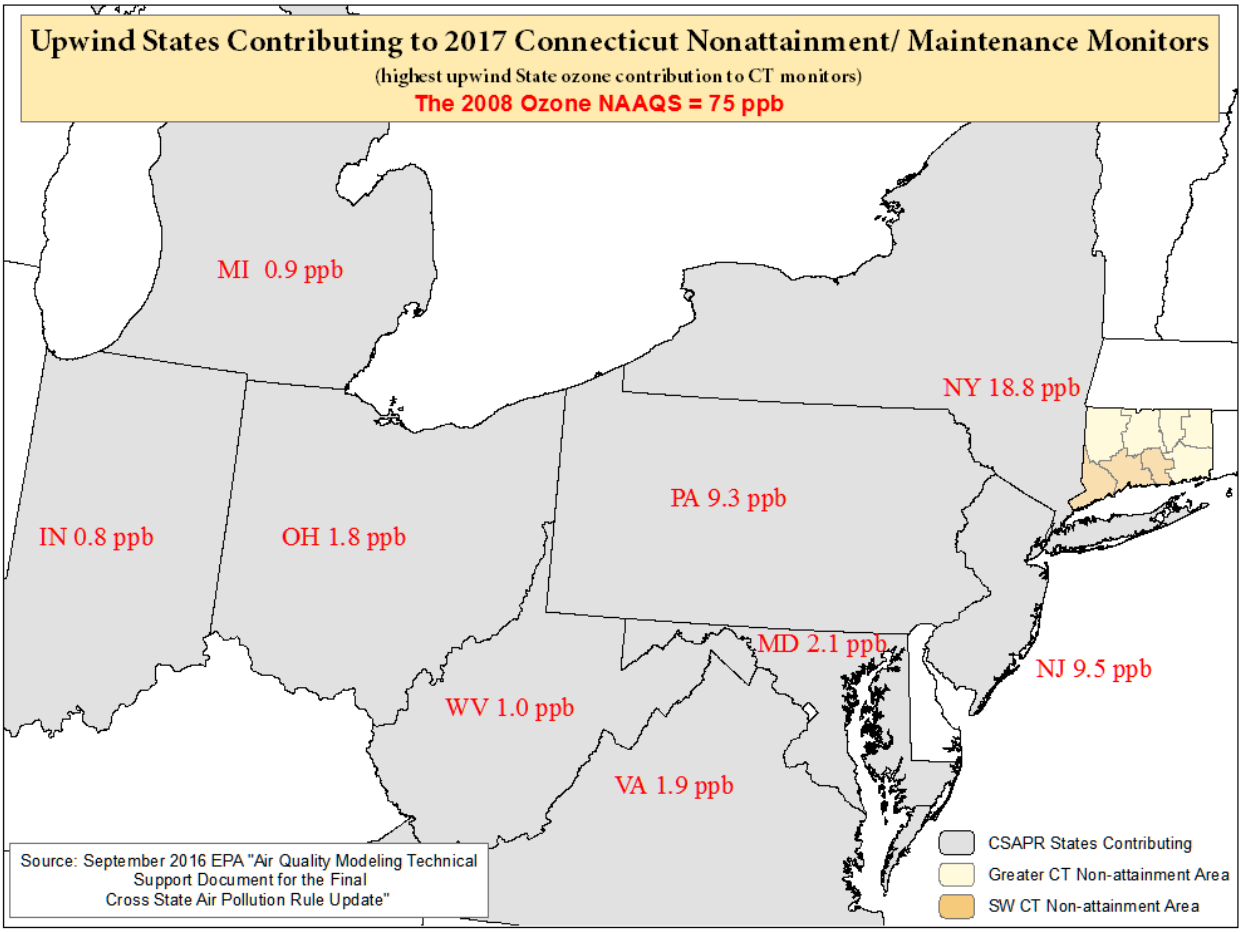
2.3 Regional Emissions

Since the NESCAUM report was written in 2010, control strategies across the region have helped to lessen the severity and extent of ozone episodes. Although ozone levels have decreased in the region, precursor emissions from the region still impact the ability of downwind areas such as Connecticut to reach and maintain attainment.

This continues to be evident in the recent releases of various contribution modeling results, including those conducted by EPA to support the development of the Cross State Air Pollution Rule (CSAPR) and the CSAPR

Update, which was finalized[1] in September 2016. Figure 2-1, based on the final CSAPR Update modeling, shows the 9 upwind states that contribute at least one percent of the standard (i.e. 0.75 ppb) to any Connecticut monitors projected by the modeling to have nonattainment or maintenance concerns in 2017. EPA's modeling indicates that the maximum contribution from Connecticut sources to the same set of monitors is 7.6 ppb (3.9 ppb at Westport, Connecticut's worst-case monitor). This leaves little possibility that emissions reductions from Connecticut sources alone can achieve attainment at the four monitors of concern, which are all located along the Long Island Sound coastline in the Southwest Connecticut portion of the NY/NJ/CT nonattainment area. Further regional level reductions will be required to secure statewide attainment for both the 2008 and 2015 ozone NAAQS.

Figure 2-1. *EPA Modeled Contributions from Upwind States that Significantly Contribute to Nonattainment/Maintenance Concerns in Connecticut*

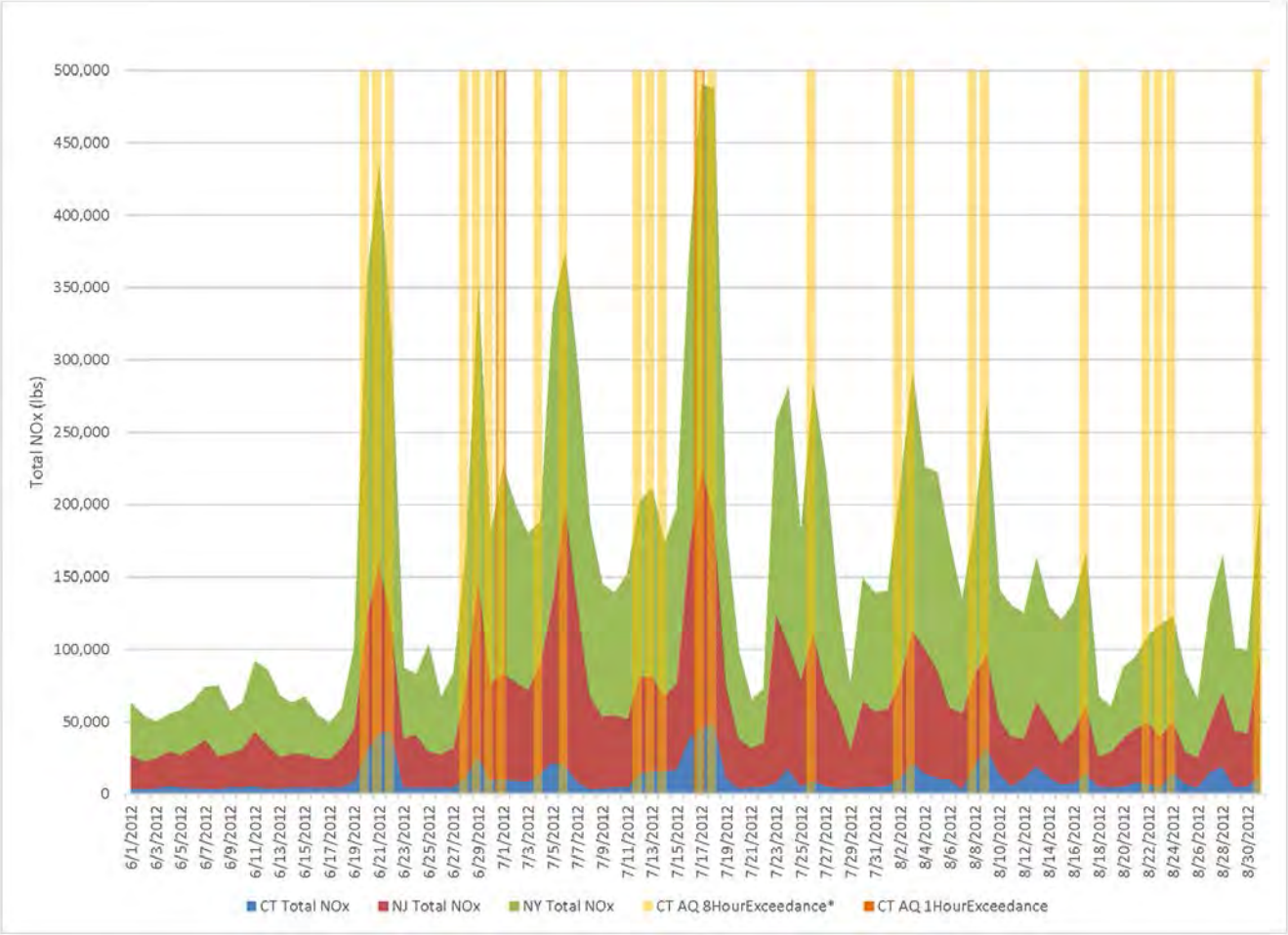


EPA's final CSAPR Update requires ozone season NOx reductions in 22 states, including the 9 states found to significantly contribute to high ozone levels in Connecticut. Although the final rule will assist with lowering ozone levels across the Northeast, EPA acknowledges that it falls short of providing the full remedy required by the "good neighbor" provision of CAA section 110(a)(2)(D)(i)(I). A full transport remedy for the 2008 NAAQS (and the 2015 NAAQS) should require additional cost-effective emission reductions from the EGU sector that are not addressed by the CSAPR Update, as well as reductions from the non-EGU and mobile source sectors.

[1] For details about the final CSAPR Update, and associated modeling conducted by EPA, see: https://www.epa.gov/airmarkets/final-cross-state-air-pollution-rule-update.

For the EGU sector, the CSAPR Update's focus on ozone season budgets does not directly address the need to reduce increased emissions that occur on high energy demand days, which often coincide with high ozone events. Figure 2-2 illustrates this concern, displaying daily EGU NOx emissions during the 2012 ozone season from southern New York, New Jersey and Connecticut as an example that also applies to other states. The emission spikes that occur correlate well with measured ozone exceedance days in Connecticut. EPA's seasonal CSAPR Update budgets do not limit EGU emissions on such days. The required full transport remedy should address this concern by including short-term emission standards or otherwise addressing high short-term NOx emissions related to high energy demand.

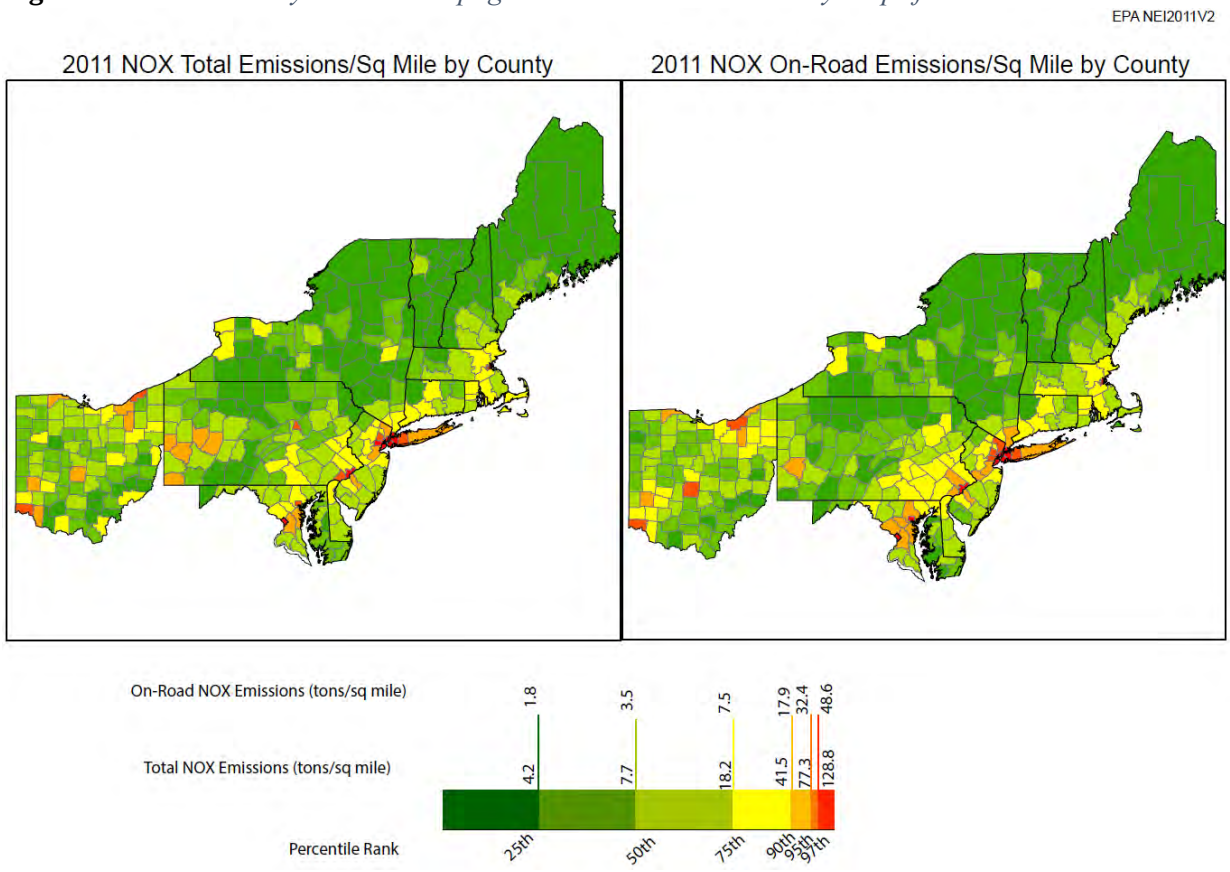
Figure 2-2. *Summer 2012 Daily EGU NOx Emissions (data from EPA's Clean Air Markets Division).*



In addition to securing available cost-effective reductions from stationary sources, the full transport remedy for both the 2008 and 2015 ozone NAAQS will require further reductions from mobile emission sources. Figure 2-3 and 2-4 display county-level NOx and VOC emission density maps (tons/square mile) in the Northeast for 2011, showing both total anthropogenic emissions and emissions from on-road vehicles. On-road vehicles make up a large proportion of total NOx and total VOC emissions, with the highest density of emissions occurring in urban areas. Although EPA has finalized more stringent vehicle engine, evaporative and gasoline fuel standards for light-duty vehicles, with implementation beginning in 2017, standards for heavy-duty vehicles were last revised in 2001, with phase-in completed by 2010. Connecticut and several other state and local agencies recently submitted a joint petition to EPA requesting that more stringent national heavy-duty vehicle standards

be implemented by January 1, 2022[2]. Given the important role that mobile sources play in ozone formation, as well as the slow turnover rate typically seen in the heavy-duty vehicle fleet, it is important for EPA to take swift action to adopt more stringent, cost-effective standards for this source sector. EPA can also secure additional cost-effective reductions from the light-duty fleet by establishing more stringent federal requirements for aftermarket catalytic converters, as has been requested[3] by the OTC states.

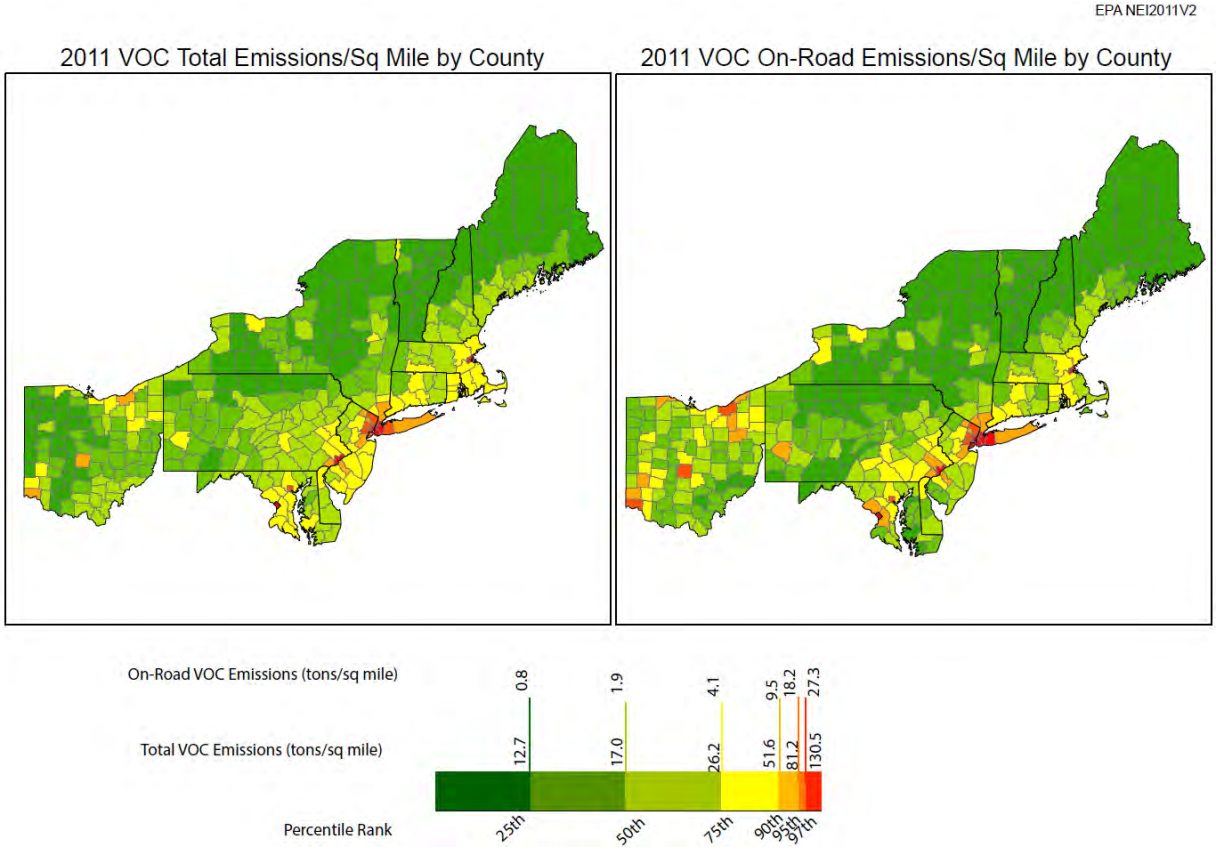
Figure 2-3. *2011 County-level Anthropogenic NOx Emissions Density Maps for Northeast States.*



[2] A concise description of the petition, and other requests made by numerous parties for further action regarding heavy-duty vehicles, can be found in the preamble of EPA's August 16, 2016 final rule establishing a 2nd round of standards to reduce greenhouse gas emissions and improve fuel economy of medium- and heavy-duty vehicles. See: https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-greenhouse-gas-emissions-and-fuel-efficiency.

[3] The OTC formally requested that EPA update its policy on aftermarket catalysts on June 10, 2009, with specific recommendations for program design provided in a follow-up letter dated April 8, 2011.

Figure 2-4. *2011 County-level Anthropogenic VOC Emissions Density Maps for Northeast States.*



2.4 A Connecticut Perspective on the Regional Ozone Problem

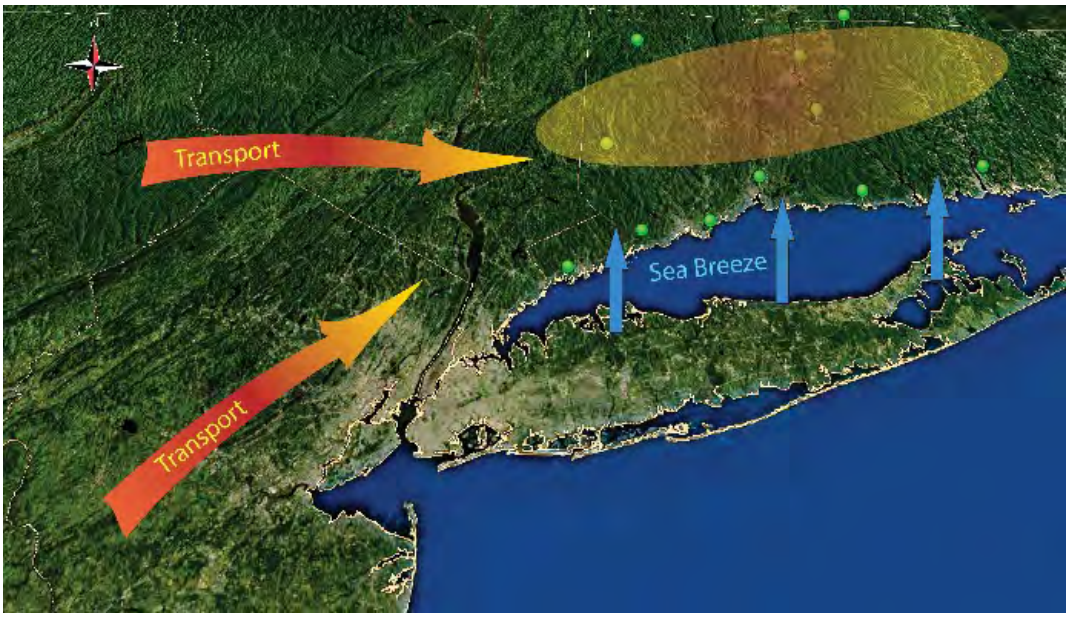
Although all of the states in the OTR are affected to some degree by ozone transport, Connecticut's location in relation to upwind emissions sources and ozone-favorable meteorological regimes makes the state particularly vulnerable to levels of transport that at times exceed the 8-hour ozone NAAQS at Connecticut's upwind border monitors, even before the addition of in-state emissions. Appendix B provides individual case studies of ozone exceedances in Connecticut with descriptions of the meteorological conditions that lead to those exceedances. A general description of meteorological conditions conducive to ozone exceedances in Connecticut is presented below.

Meteorological Regimes Producing High Ozone in Connecticut

Ozone exceedances in Connecticut can be classified into four categories based on spatial patterns of measured ozone and the contributing meteorological conditions. Typically, most exceedances occur on sunny summer days with inland maximum surface temperatures approaching or above 90°F, surface winds from the south and west (favorable for transport of pollutants from the Northeast Megalopolis) and aloft winds from the west-southwest to west-northwest (favorable for transport of pollutants from Midwest power plants).

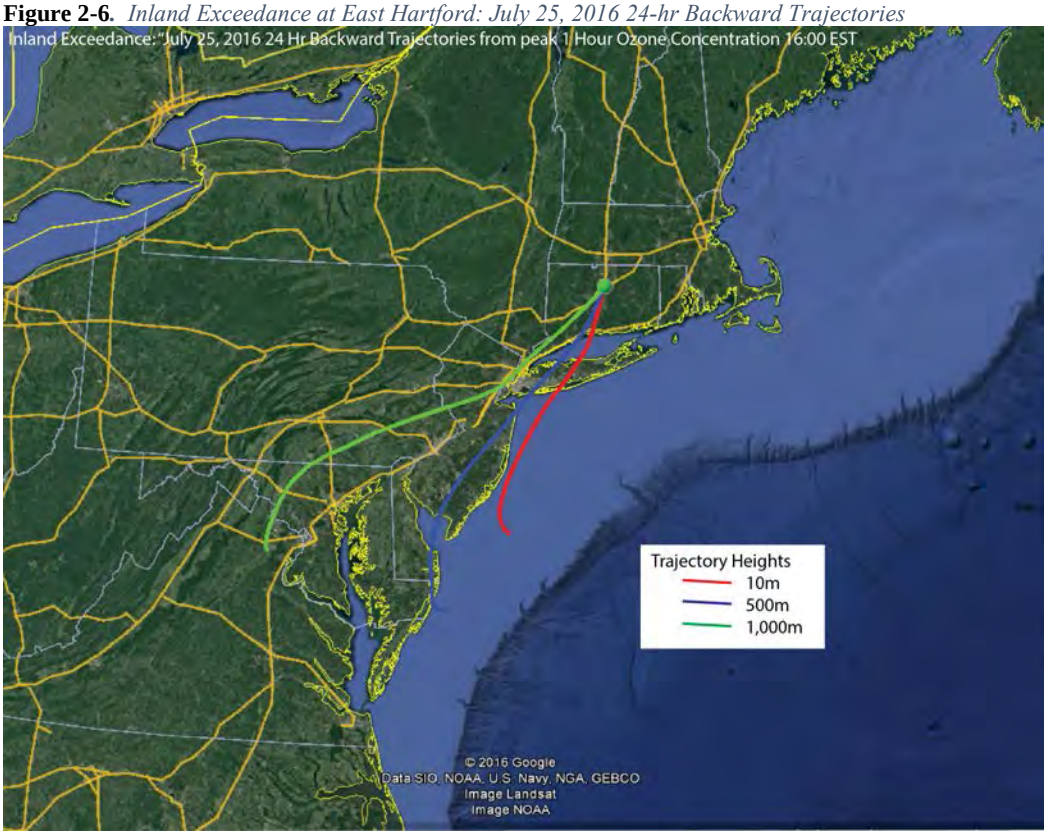
- **Inland-only Exceedances** (Figure 2-5)**:** Ozone is transported aloft from the west and mixed down to the surface as daytime heating occurs. At times, transport from the southwest can also occur overnight at lower levels aloft due to the formation of a nocturnal jet. Strong southerly surface winds during the day bring in clean maritime air from the Atlantic Ocean, resulting in relatively low ozone levels along the coast. The maritime front may not penetrate very far inland, and therefore does not mitigate transported and local pollutants' contribution to inland exceedances.

Figure 2-5. *Depiction of Inland-only Exceedance Meteorological Regime*



A recent example of an inland-only exceedance event occurred on July 25, 2016, as shown in Figure 2-6. Winds at the lowest levels were from the south, keeping coastal sites relatively clean. Mid-level transport from the southwest transported emissions up the I-95 corridor, with additional contributions from Connecticut sources, producing an exceedance of the 2015 NAAQS at East Hartford (72 ppb), with Middletown just below the new NAAQS level at 69 ppb.

Figure 2-6. *Inland Exceedance at East Hartford: July 25, 2016 24-hr Backward Trajectories*



- **Coastal-only Exceedances** (Figure 2-7)**:** Strong westerly surface winds transport dirty air down Long Island Sound from source regions to the west (e.g., New York, New Jersey and beyond). The relatively cool waters of Long Island Sound confine the pollutants in the shallow and stable marine boundary layer. Afternoon heating over coastal land creates a sea breeze with a southerly component, resulting in ozone exceedances along the coast. Inland winds from the west prevent sea breeze penetration and can contribute to the formation of a convergence zone that can further concentrate ozone along the coast.

Figure 2-7. *Depiction of Coastal-only Exceedance Meteorological Regime*

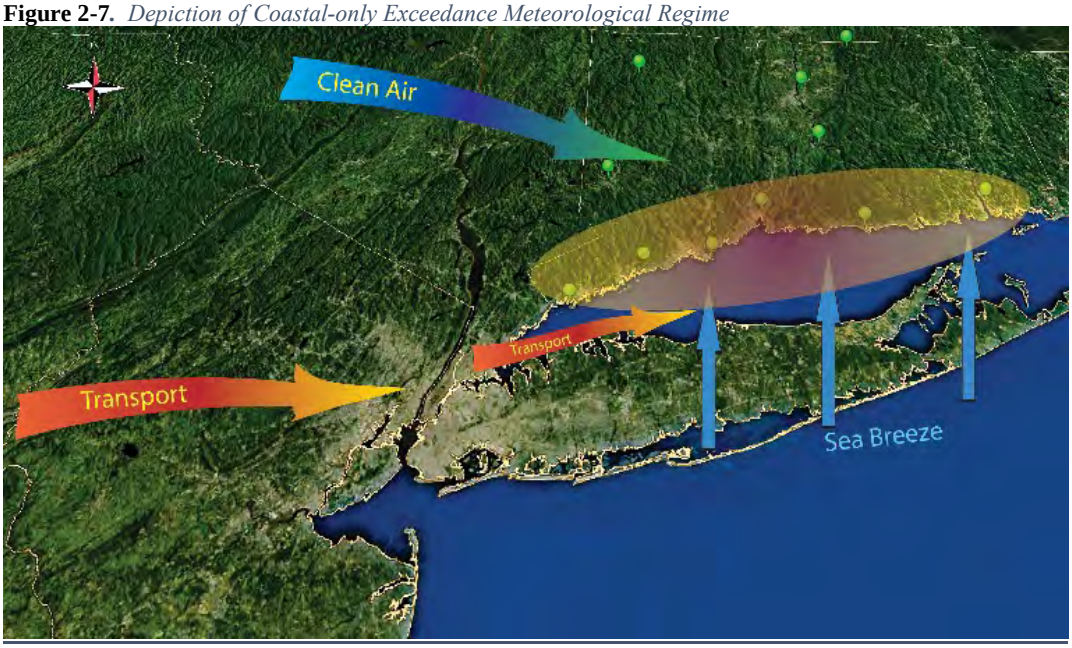
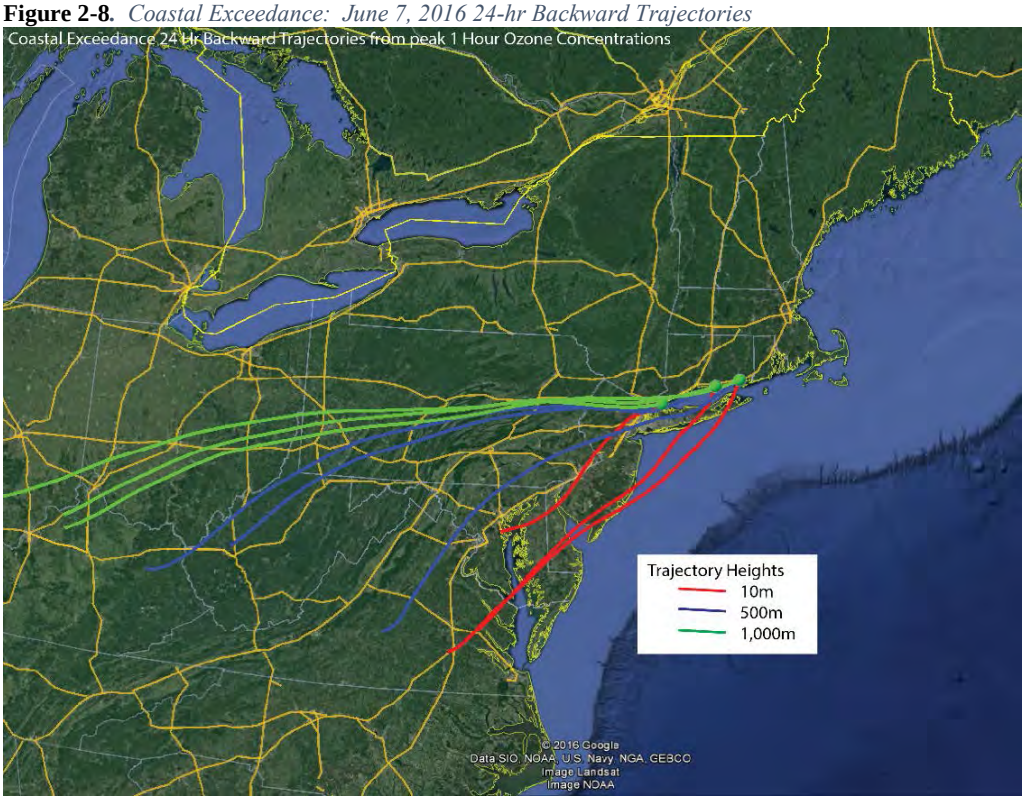


Figure 2-8 provides an example of a coastal-only exceedance. During this June 7, 2016 event, a fast-moving cold front from the southwest transported ozone and precursor emissions over Long Island Sound that were then carried into coastal sites with afternoon sea breezes, resulting in NAAQS exceedances at Greenwich, Westport, Stratford, Madison and Groton.

Figure 2-8. *Coastal Exceedance: June 7, 2016 24-hr Backward Trajectories*



- **Western Boundary-only Exceedances** (Figure 2-9)**:** Southerly maritime surface flow invades the eastern two-thirds of Connecticut, keeping ozone levels in that portion of the state low. The south-southwest urban winds out of New York City result in exceedances along Connecticut's western boundary. Winds aloft are often weak for this scenario.

Figure 2-9: *Depiction of Western Boundary-only Exceedance Meteorological Regime*

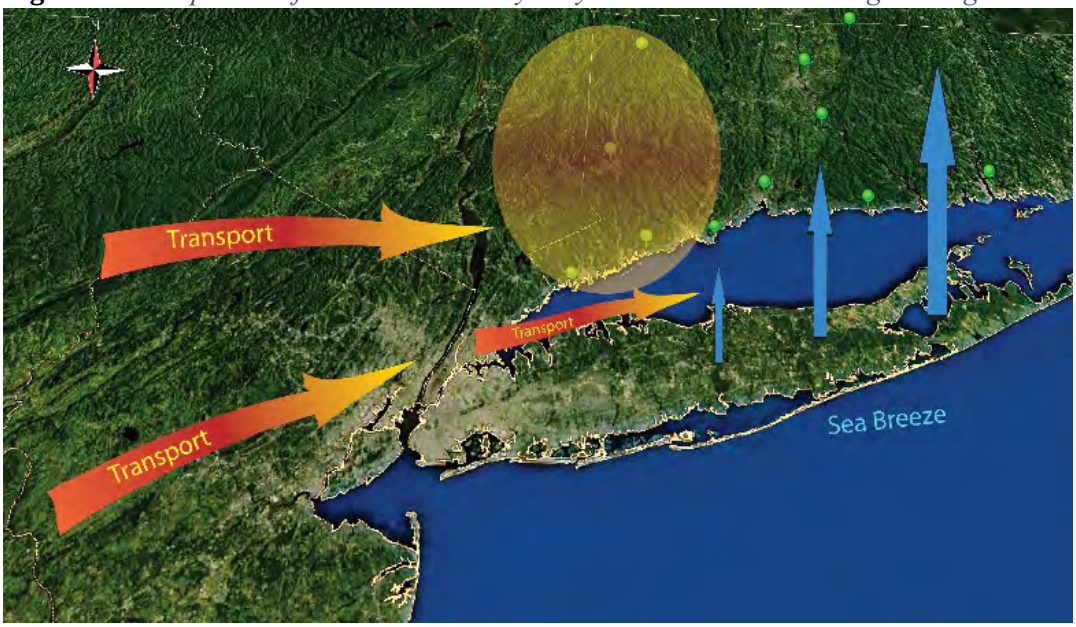
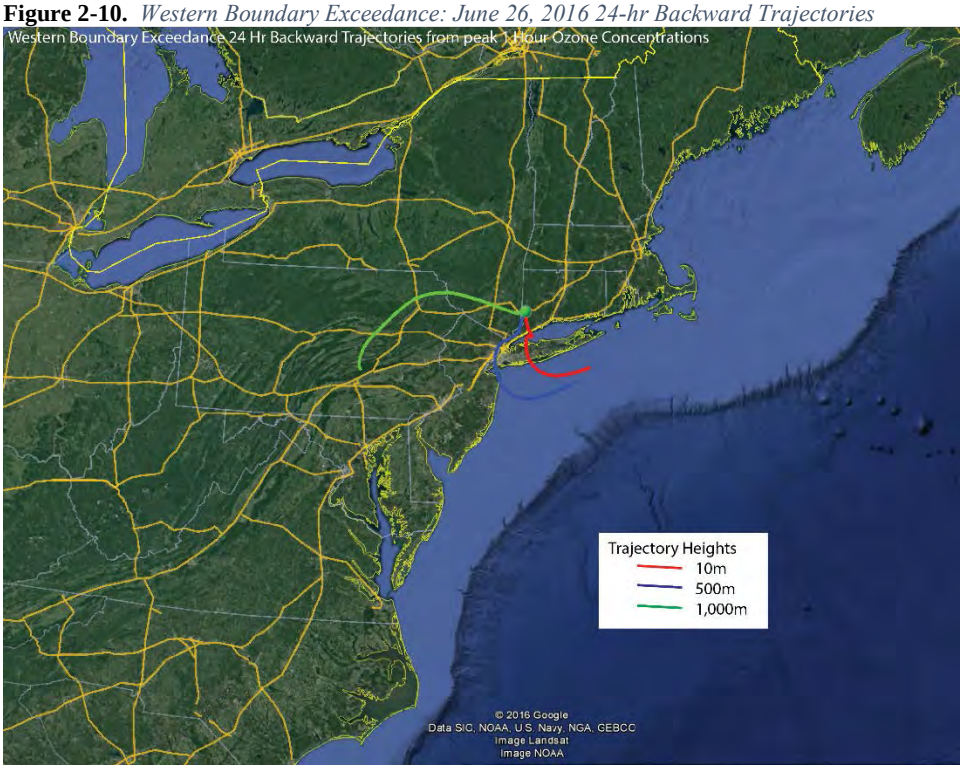


Figure 2-10 provides an example of a western boundary exceedance for June 26, 2016. South-southwesterly flow at low and mid-levels advected emissions from the New York City area into western Connecticut and the Hudson Valley area of New York, resulting in NAAQS exceedances in Danbury, Cornwall, White Plains, Mt. Ninham and Millbrook. Meanwhile, southerly flow drew cleaner maritime air into eastern portions of Connecticut.

Figure 2-10. *Western Boundary Exceedance: June 26, 2016 24-hr Backward Trajectories*



- **Statewide Exceedances** (Figure 2-11)**:** This is the classical worst-case pattern, with flow at the surface in the Northeast up the Interstate-95 corridor, transport at mid-levels also from the southwest via the low level jet and flow at upper levels from the west. All of these flows are from emission-rich upwind areas, serving to transport ozone precursors and previously formed ozone into Connecticut.

Figure 2-11. *Depiction of Statewide Exceedance Meteorological Regime*

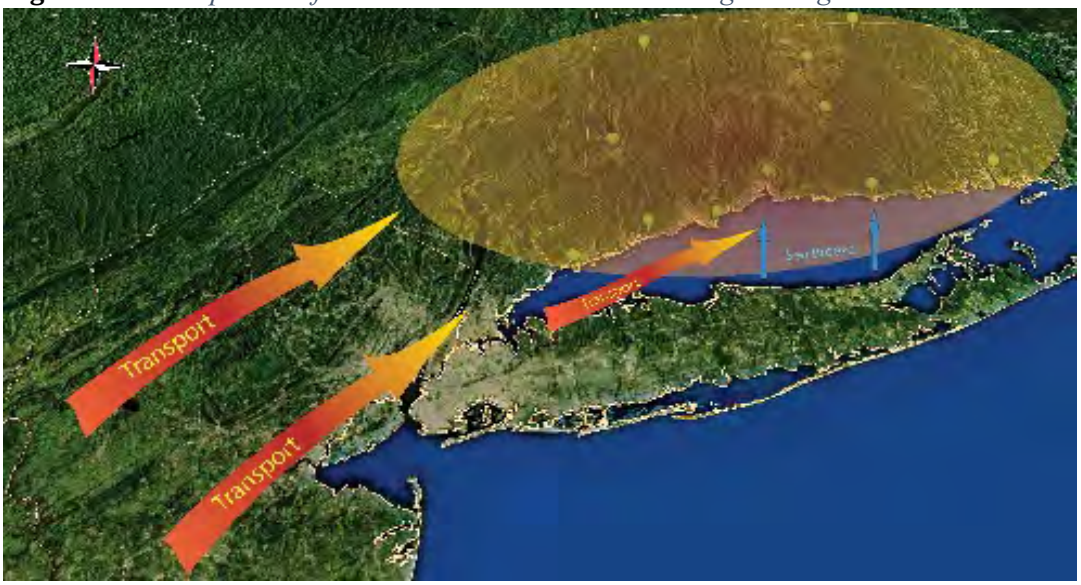
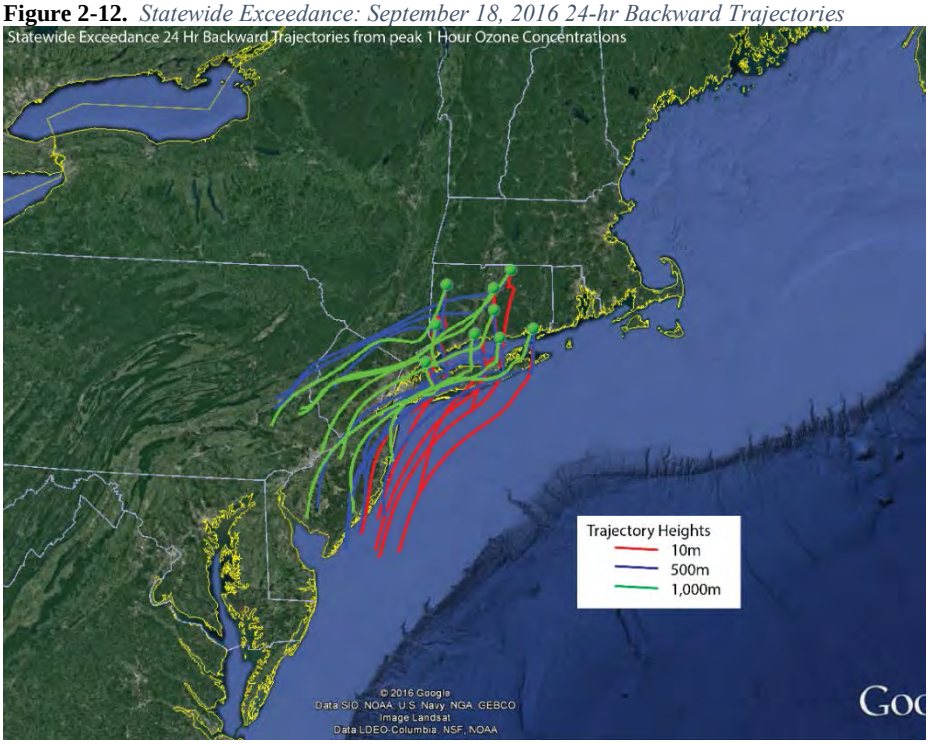


Figure 2-12 provides an example of a statewide exceedance event from September 18, 2015. A persistent high pressure weather pattern trapped pollutants near the surface for several days. Exceedances first occurred on September 15th in the Washington DC area, gradually expanding northward along the I-95 corridor, with exceedance levels occurring on a widespread basis throughout the OTR region on September 17 and 18th (including in Connecticut). Peak 8-hour values in Connecticut occurred along the southwest coastline on September 17th, reaching 96 ppb at Westport. The highest value in Greater Connecticut occurred in East Hartford on September 18th (84 ppb).

Figure 2-12. *Statewide Exceedance: September 18, 2016 24-hr Backward Trajectories*

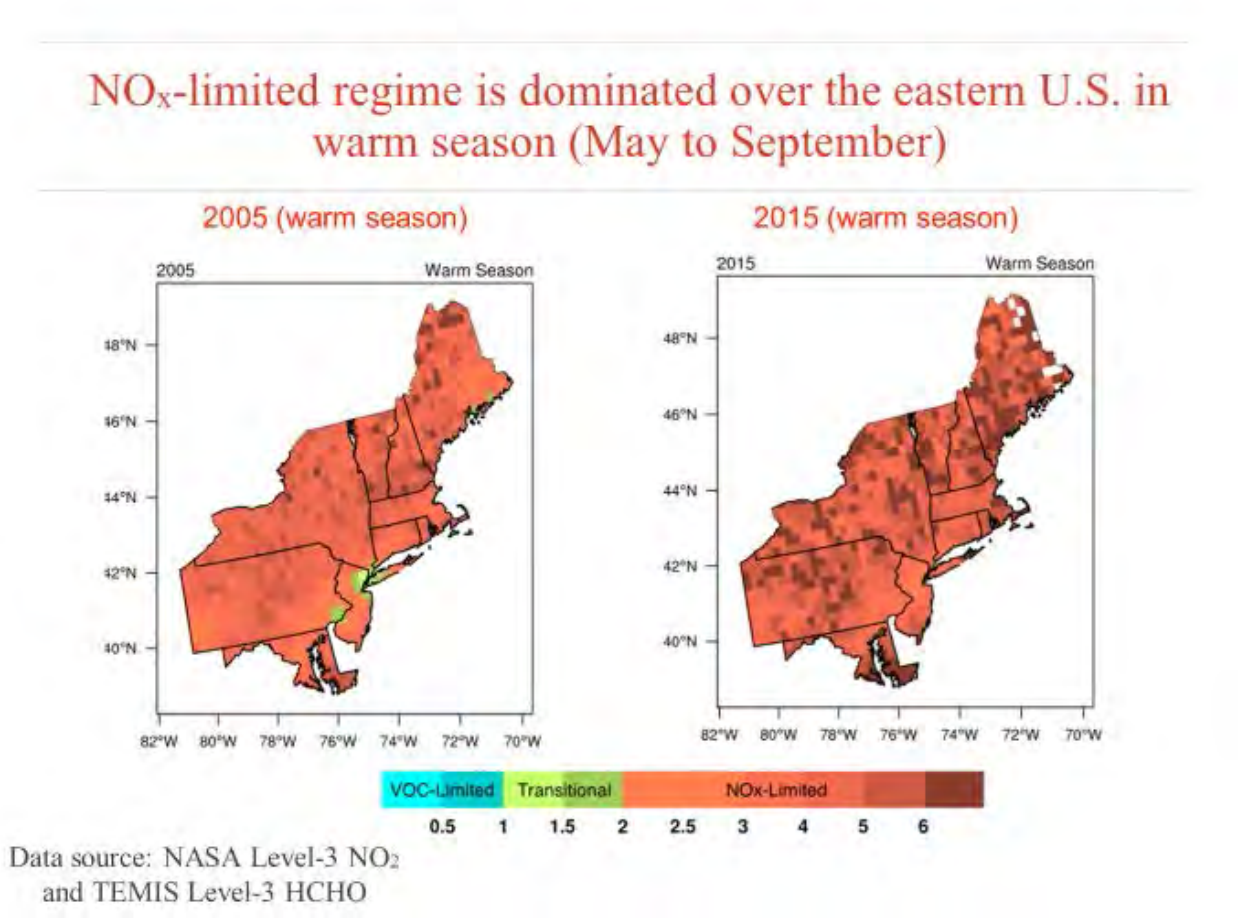


Ozone Chemistry

In addition to understanding the role that meteorological regimes and source emissions play in producing high ozone events, it is also important consider the relative balance of ozone precursors in the air shed. An air shed may be more limited in its ozone forming potential by either NOx or VOC. Chemical reactions are not one directional, there is an ebb and flow of production and destruction in any reaction depending on the availability of the various species involved in a reaction. In other words, control strategies implemented with a focus on a particular pollutant can have a more beneficial effect if ozone reactions in that air shed tend to be limited by that pollutant.

A study conducted by the Lamont-Doherty Earth Observatory at Columbia University[4] makes use of NASA data which measured air column NO_2 and formaldehyde (as a surrogate for VOC) by satellite and correlated the data to ozone episodes in the Northeast. As depicted in Figure 2-13 Jin *et al.'s* findings indicate that on a regional scale, ozone formation in the Northeast tends to be more NOx limited. Therefore, it is appropriate to favor NOx control strategies on a regional basis.

Figure 2-13. *Air column ratio of formaldehyde, as surrogate for VOC, to NO_2 indicate that ozone formation tends to be NOx limited in the northeast region of the United States. (Jin et al.)*



[4] Jin, Xiaomeng, and Arlene Fiore to Kurt Kebschull as Photochemical Modeling Presentation "Analyzing Surface Ozone Sensitivity to Nitrogen Oxide and Volatile Organic Compound Emissions: The View from Space", Department of Earth and Environmental Sciences, Lamont-Doherty Earth Observatory, Columbia University.

2.5 Conclusion

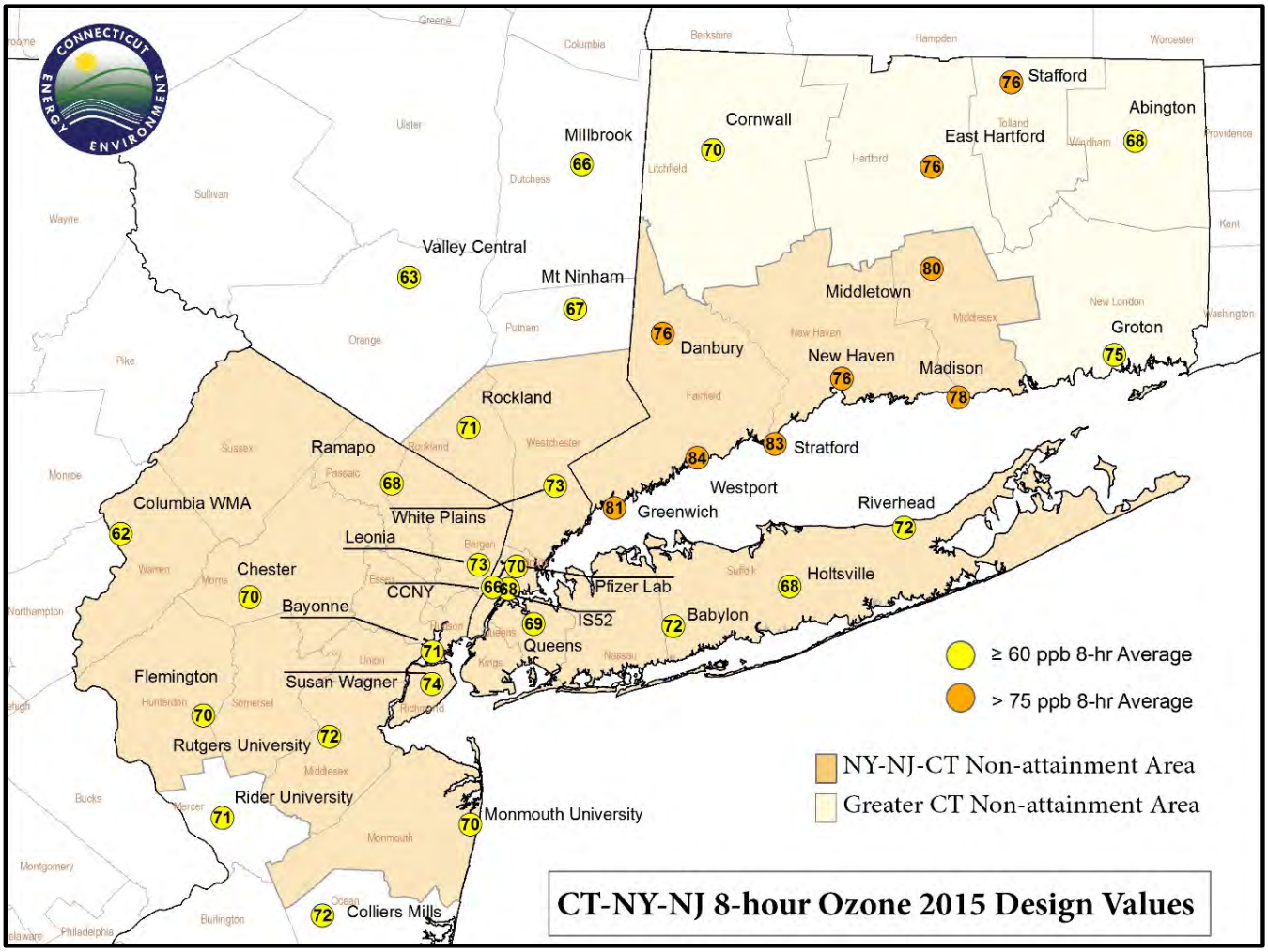
Larger synoptic scale weather patterns, and pollution patterns associated with them, support the need for NOx controls across the broader eastern United States. The presence of land, sea, mountain, and valley breezes indicate that there are unique aspects of pollution accumulation and transport that are area-specific. The smaller scale weather patterns that affect pollution accumulation and its transport underscore the importance of local controls for emissions of NOx and VOC. Studies and characterizations of nocturnal low level jets also support the need for local and regional controls on NOx and VOC sources, as locally generated and transported pollution can both be entrained in nocturnal low level jets formed during nighttime hours.

3. Ozone Air Quality Levels in Connecticut and Recent Trends

The CT DEEP has been monitoring ambient ozone levels throughout the state since the early 1970s. The current network consists of the twelve sites. In addition to ozone monitoring, Connecticut has operated up to four Photochemical Assessment Monitoring Stations (PAMS) since 1994 to collect ambient concentrations of VOCs, carbon monoxide (CO) and NOx.

The form of the 8-hour ozone standard is the three-year average of the fourth highest 8-hour ozone levels for each year. Compliance with the standard is achieved when this "design value" is less than 0.076 parts per million (76 parts per billion). Figure 3-1 shows the 2015 design values and 8-hour ozone nonattainment area boundaries in Connecticut, New York and New Jersey. Many locations throughout Connecticut exceed the level of the standard and therefore continue to be considered nonattainment with respect to the 8-hour ozone NAAQS. Note that 2015 design values in the Greater Connecticut area are all 76 ppb or lower, so that area is very close to measuring NAAQS compliance as of the 2015 ozone season.

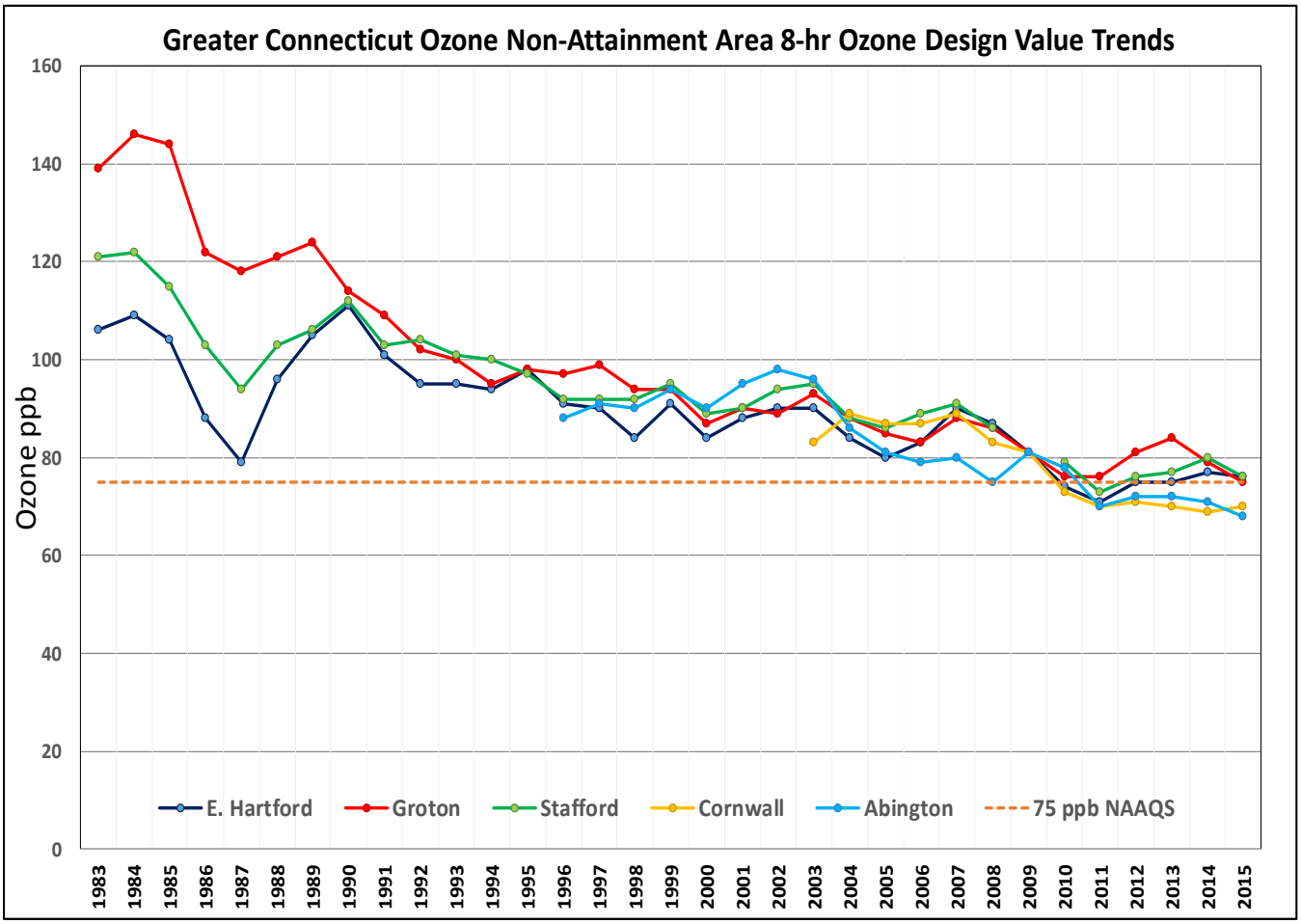
Figure 3-1. *8-hour Ozone Nonattainment Areas in Connecticut, New York and New Jersey with Associated 2015 Design Values*



3.1 Trends in Design Values

The trends in design values for each site in the Greater Connecticut nonattainment area are plotted in Figure 3-2**.** The maximum design values in Greater Connecticut area have decreased by approximately 45% since the mid-1980s, from over 140 ppb in 1983 to 76 ppb in 2015, just above the 75 ppb NAAQS level[5].

Figure 3-2. *Greater Connecticut 8-hour Ozone Design Value Trends*



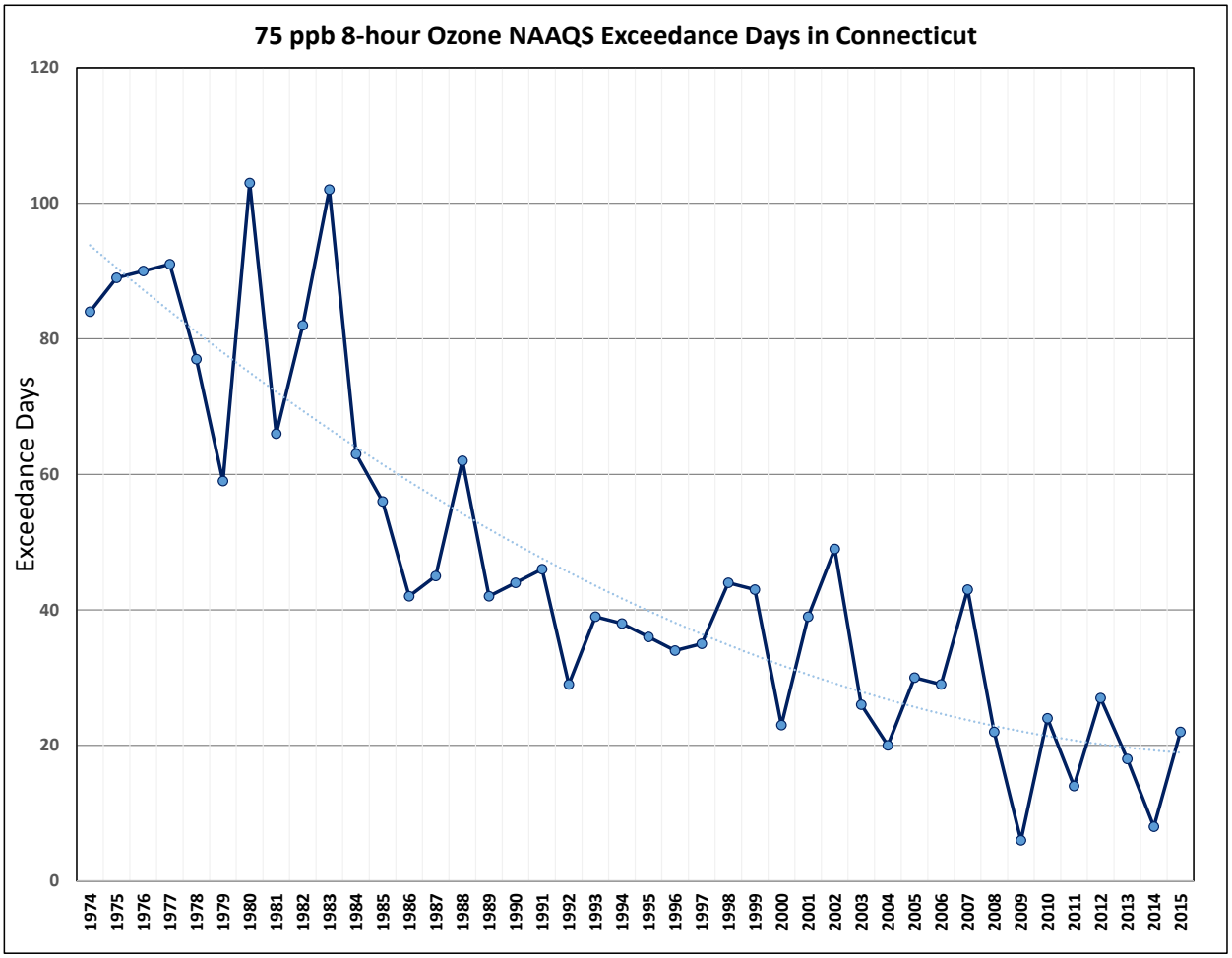
3.2 Trends in Exceedance Days

An exceedance day for the 8-hour ozone NAAQS is defined as a day, measured from midnight to midnight, on which any one or more monitors in the state record a forward 8-hour ozone concentration greater than or equal to 76 ppb. The total number of annual exceedance days measured in Connecticut from 1974 through 2015 is shown in Figure 3-3. The number of Connecticut exceedance days has decreased dramatically from a high of 103 in 1980 to a low of six in 2009, with 21 exceedances days in 2015. Although the long-term trend has been downward, it appears to have leveled off in recent years. Note that, if exceedance day trends were analyzed for just the Greater Connecticut area, the number of days each year would be less than the statewide totals shown in Figure 3-3, but the long-term trend slope would be similar. In 2015, there were 11 days when at least one

[5] Preliminary design values for 2016 indicate that all monitors in Greater Connecticut are in compliance with the 2008 ozone NAAQS.

Greater Connecticut area monitor exceeded the standard. The largest number of exceedance days in 2015 at any single monitor in the Greater Connecticut area was 6, at the Groton site located near the coastline.

Figure 3-3. *Connecticut Statewide 8-hour Ozone Annual Exceedance Day Trends*



3.3 Trends in 8-hour Ozone Percentiles

The trends addressed previously focused on the very highest ozone concentrations measured at Connecticut monitors. Another way of looking at long-term trends is to plot the full distribution of concentrations including the lowest to the highest percentiles measured during the ozone-monitoring season. Figure 3-4 displays distributions since 2006 for the four Greater Connecticut sites (excluding Abington). It shows that the greatest downward trends are for the 98th and 90th percentiles from 2007 to 2015, however there are no clear trends over the last few years. The 50th percentile trend values have shown the least (if any) decline.

Figure 3-4. *Greater CT 8-hour Ozone Percentile Trends*

3.4 Meteorological Influences on Ozone Levels

Ozone is not emitted directly into the atmosphere, but is formed by photochemical reactions between VOCs and NOx in the presence of sunlight. The highest ozone concentrations in Connecticut typically occur on hot summer days, with surface winds from the southwest and winds aloft from the west. The photochemical reactions that produce ozone are enhanced by long summer days and elevated temperatures (which also lead to increased levels of evaporative VOC emissions). In addition, transported ozone and precursor species are enhanced by winds coming from areas with high emissions of stationary and mobile sources along the Interstate-95 corridor at the surface and from Electrical Generation Unit (EGU) power plants from upwind states at elevated levels. Hot summers can result in several extended periods of elevated ozone production, while cooler summers are typically characterized by fewer days of elevated ozone levels.

Meteorological data from Bradley International Airport (Windsor Locks, CT) were used to examine the year-to-year relationship between the frequencies of high ozone and high temperature days in Connecticut. Figure 3-5 shows the trend from 1997 through 2015 of average of statewide daily maximum 8-hour ozone levels binned by daily maximum temperature. It shows that, the highest ozone levels occur on the hottest days (days with maximum temperatures above 90 degrees Fahrenheit) and the trend of high ozone on the hottest days is downward. The trend of ozone on days with high temperatures below 82 degrees is fairly flat.

Figure 3-5. *Connecticut 8-hour Ozone Percentile Trends by Temperature Range*

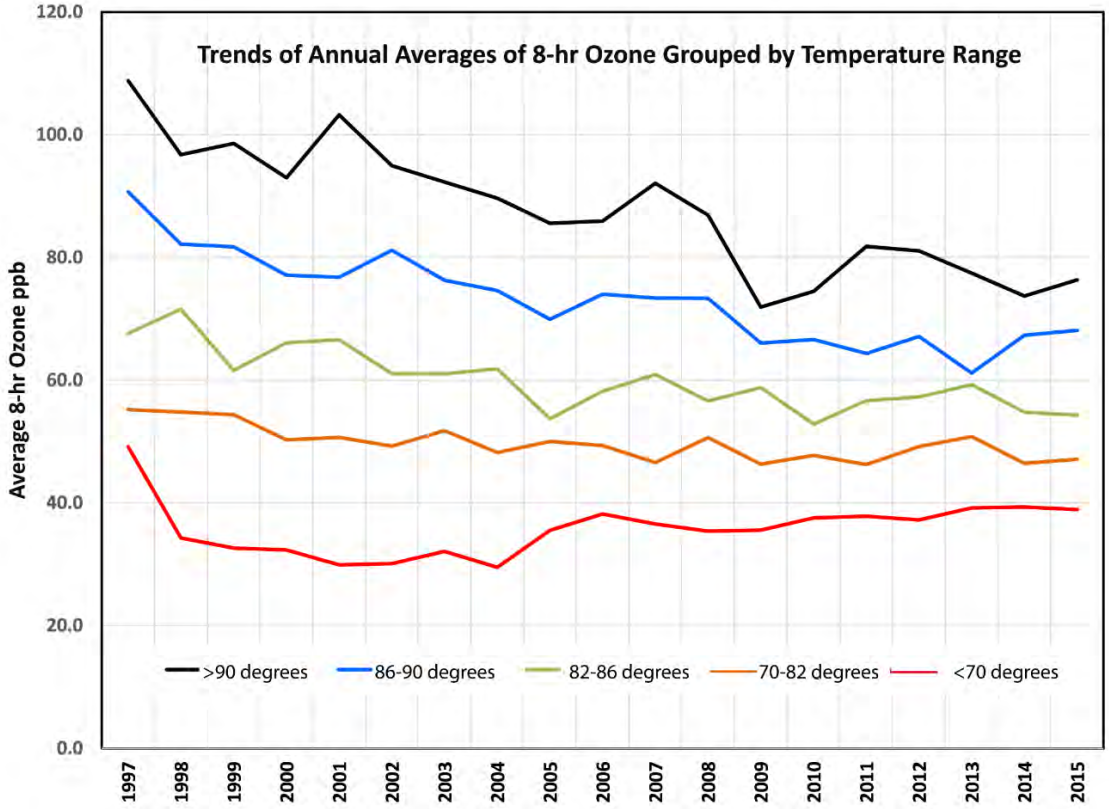


Figure 3-6 is a plot of the number of days with exceedances of the 2008 NAAQS in Connecticut for the period from 1981 through 2015, along with the number of "hot" days -- days with maximum temperatures of 90˚F or above at Bradley International Airport (BDL). Although the number of high ozone days tends to track with the number of hot days, the frequency of high ozone days has decreased over time, even for years with similar numbers of hot days. There was an average of 17 "hot" days over the 35-year period. The group of hottest years (i.e., 1983, 1988, 1991, 2002, 2005 and 2010, all with at least 30 days of ≥ 90˚F temperatures) show a steady improvement in the number of exceedance days (i.e., 102, 62, 46, 49, 30 and 24 exceedance days, respectively) for each of those hottest years.

The decline in ozone exceedances, after adjusting for temperature effects, is depicted in an alternate way in Figure 3-7, which plots the ratio of exceedance days ("unhealthy" days) to the number of "hot" days for each ozone season from 1981 through 2015. The ratios have improved over the period, from values generally near or greater than 3 during most of the 1980's, improving to values generally in the 2 to 4 range through the early 2000's. Since about 2010, the ratios have been hovering around a value of 1, signifying additional improvements in ozone levels when temperature influences are considered.

Figure 3-6. *Statewide Annual 8-hour Ozone Exceedance Days Compared to ≥ 90°F Days*

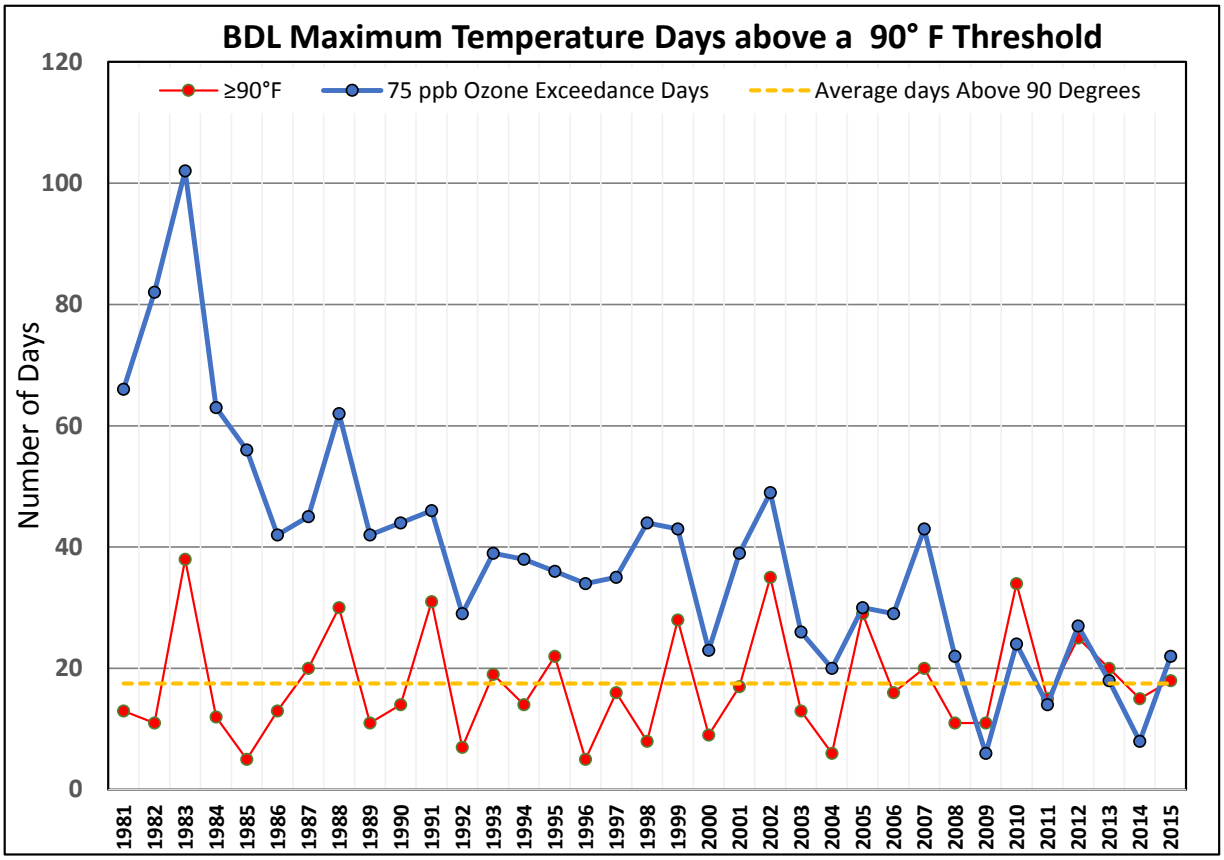
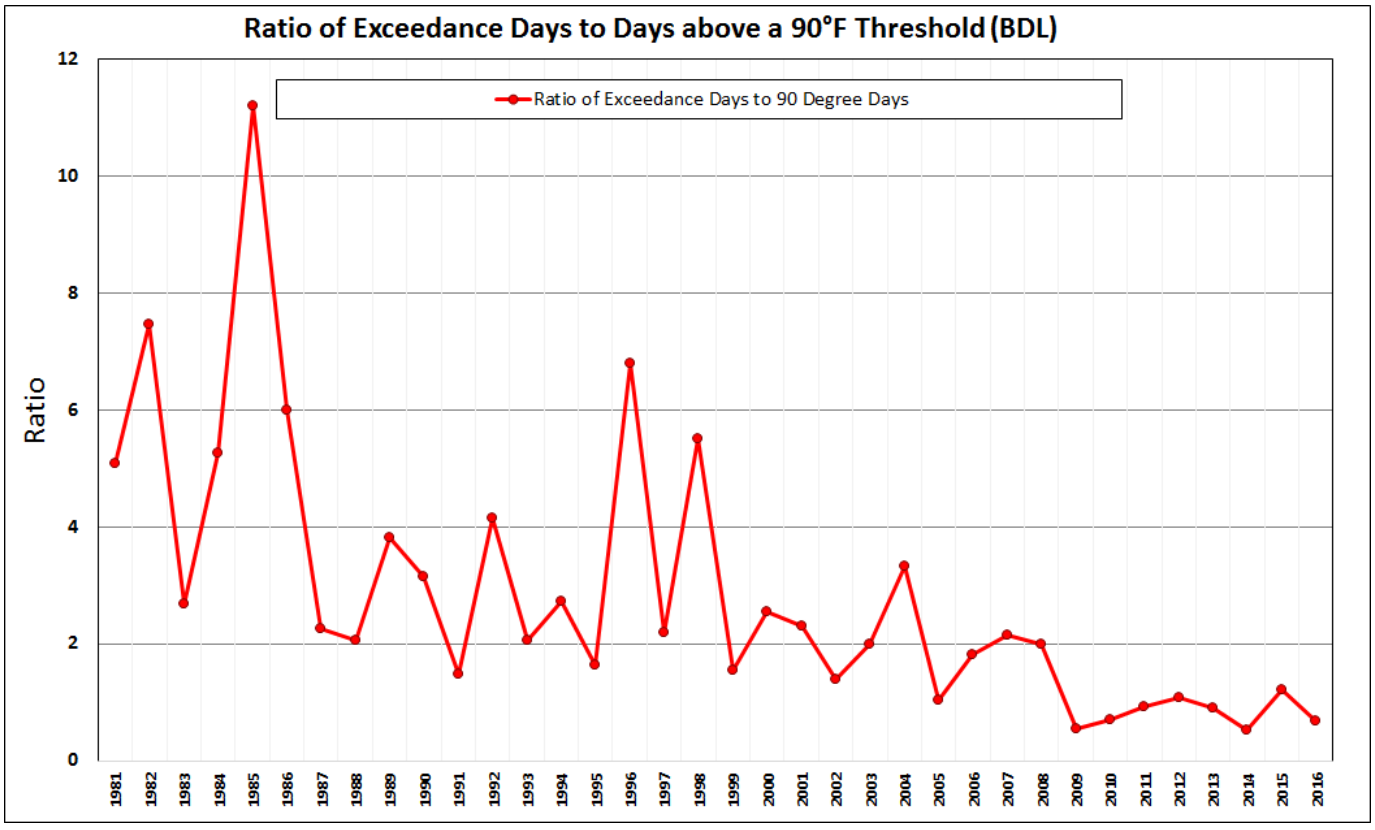


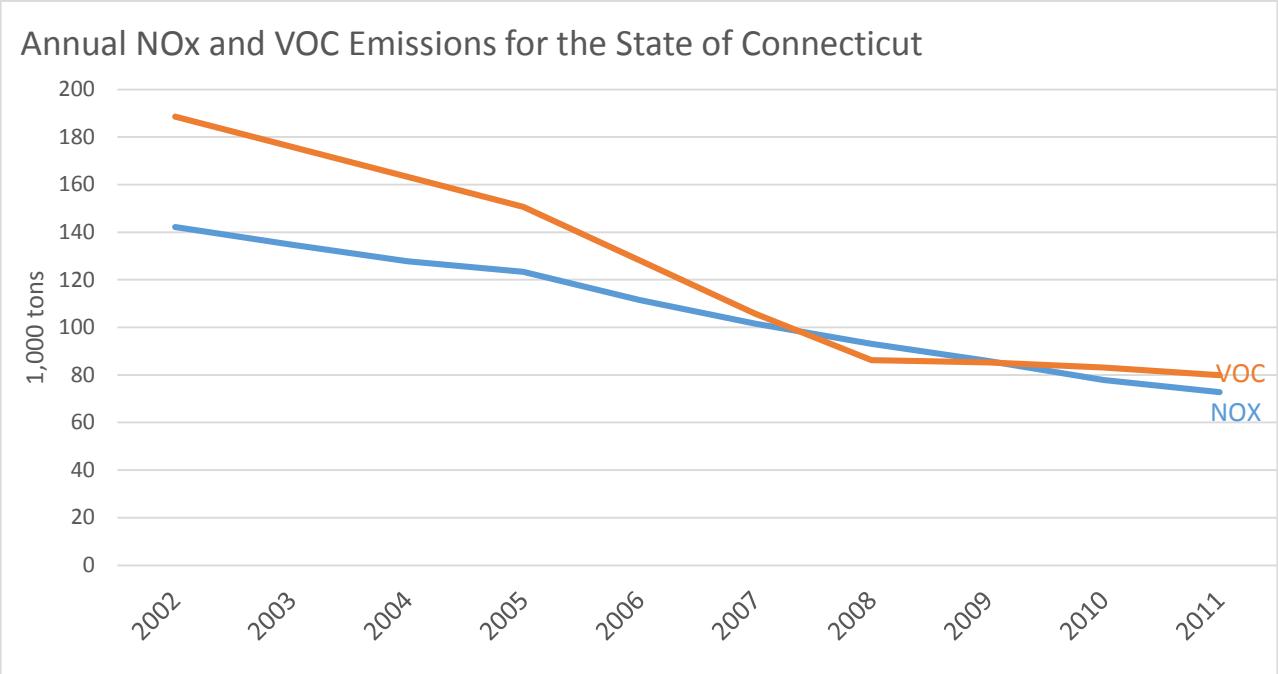
Figure 3-7. *Statewide Ratio of Annual 8-hour Ozone Exceedance Days to Number of ≥ 90°F Days*



3.5 VOC and NOx Trends

Emissions of ozone precursors in Connecticut have significantly declined over the years. Figure 3-8 displays trends in statewide anthropogenic NOx and VOC between 2002 and 2011. Emission reduction programs achieved 49% reduction in NOx and 58% reduction in VOCs over the period.

Figure 3-8. *Connecticut VOC and NOx Annual Emissions Trends*



Source:https://www.epa.gov/air-emissions-inventories/air-pollutant-emissions-trends-data

Dozens of VOC species can be present in the atmosphere, influencing the ozone formation process. Section 182(c)(1) of the CAA directed EPA to promulgate rules (40 CFR 58) that would require states to establish Photochemical Assessment Monitoring Stations (PAMS) as part of their monitoring networks in serious, severe or extreme ozone nonattainment areas. CT DEEP established three PAMS sites during the mid-1990s that are currently operating: Westport (Sherwood Island), New Haven and East Hartford (see Figure 3-1 for locations).

PAMS data collection policy was revised by EPA in 2013 and includes a target list split into two groups – 28 priority and 29 optional VOC compounds. Two of the species, ethane and ethylene could not be quality assured at some of the sites and thus are not included in calculations for total VOCs. See Table 3-1 for a complete list of VOC species used to calculate total VOCs. PAMS Stations must also measure O3, NOx, and surface meteorological parameters on an hourly basis.

The federal objectives of this program include providing a speciated ambient air database that is both representative and useful for ascertaining ambient profiles and distinguishing among various individual VOCs and characteristics of source emission impacts. In furtherance of these objectives, the Northeast States for Coordinated Air Use Management (NESCAUM) contracted with Sonoma Technology, Inc. in 2002 to collect, organize and validate data from 2000 for all the NESCAUM PAMS sites and evaluate control program effectiveness in the NESCAUM region.[6]

[6] The results of this effort may be obtained at: http://www.nescaum.org/projects/regional-pams-assessment/

Table 3-1. *Pollutants monitored at Photochemical Assessment Monitoring Stations (PAMS) Used for Calculating Total VOC Concentrations*

Parameter Code	Parameter Description		Parameter Code	Parameter Description
43202*	Ethane		43250	2,2,4-Trimethylpentane
43203*	Ethylene		43280	1-Butene
43204	Propane		45109	m/p Xylene
43205	Propylene		45201	Benzene
43212	n-Butane		45202	Toluene
43214	Isobutane		45203	Ethylbenzene
43216	trans-2-Butene		45204	o-Xylene
43217	cis-2-Butene		45208	1,2,4-Trimethylbenzene
43220	n-Pentane		45211	o-Ethyltoluene
43221	Isopentane		45212	m-Ethyltoluene
43231	n-Hexane		45213	p-Ethyltoluene
43243	Isoprene		45220	Styrene
* Removed due to quality assurance issues			45225	1,2,3-Trimethylbenzene

Figures 3-9 through 3-11 are plots of the average monthly NOx concentrations from 1996 to 2015 for the East Hartford, Westport and New Haven sites in Connecticut (New Haven moved in 2004). NOx concentrations are at their highest levels in the winter months and lowest in the summer months. The trend in NOx concentrations during the ozone season (May to September) has been downward throughout the period at all sites. This can more readily be seen in Figures 3-12 through 3-14, which show trends for these sites just for the three summer months, when ozone production is at its highest levels.

Figure 3-9. *East Hartford Monthly NOx Trends from 1996-2015*

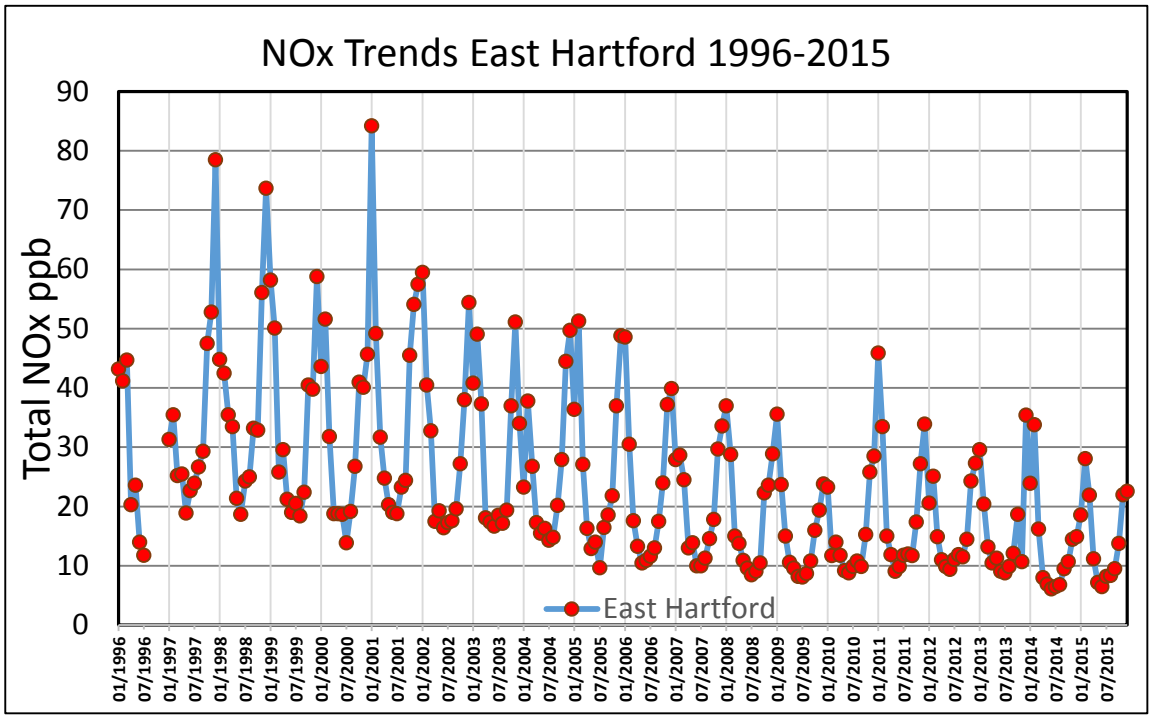


Figure 3-10. *Westport Monthly NOx Trends from 1996-2015*

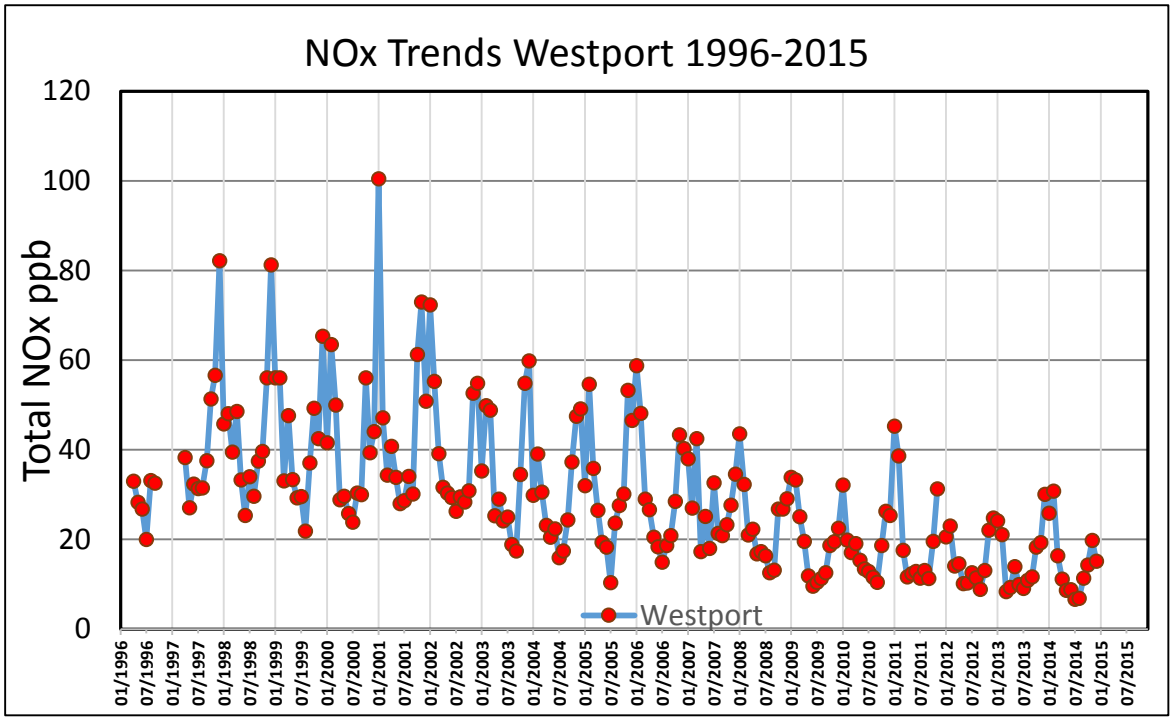


Figure 3-11. *New Haven Monthly NOx Trends from 1996-2015*

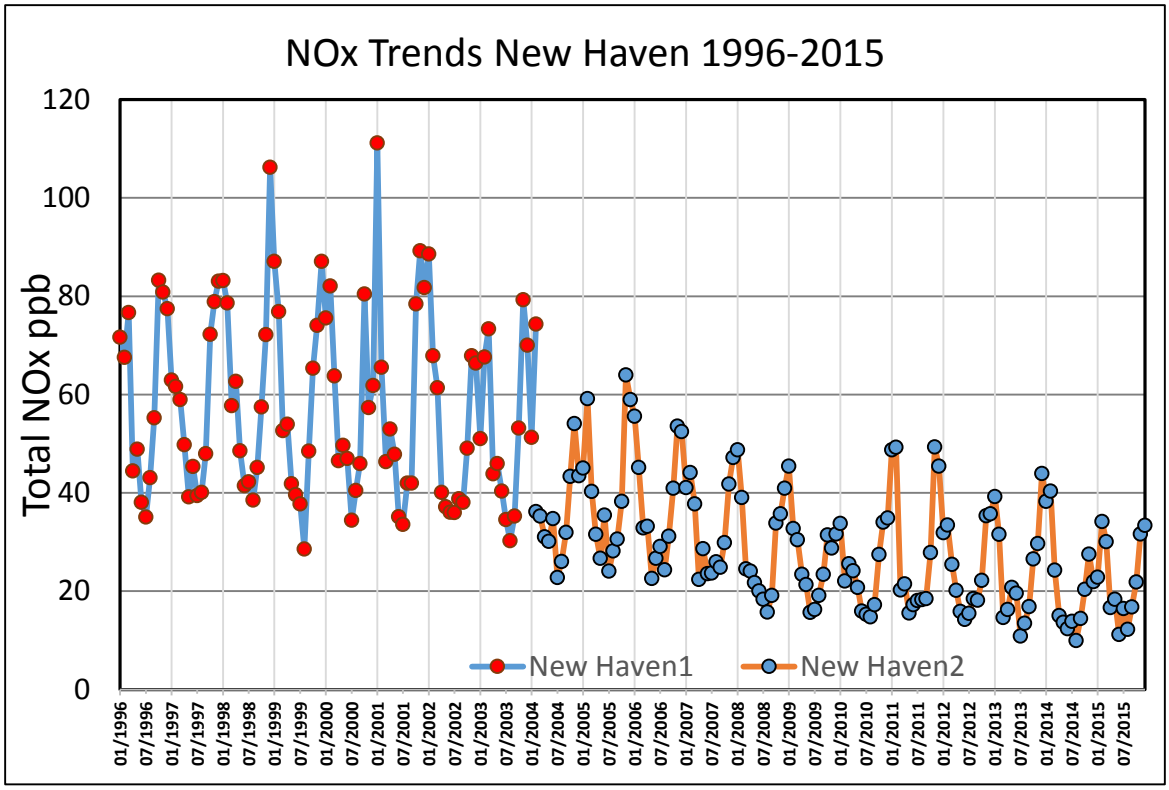


Figure 3-12. *East Hartford Monthly Summer NOx Trends from 1996-2015*

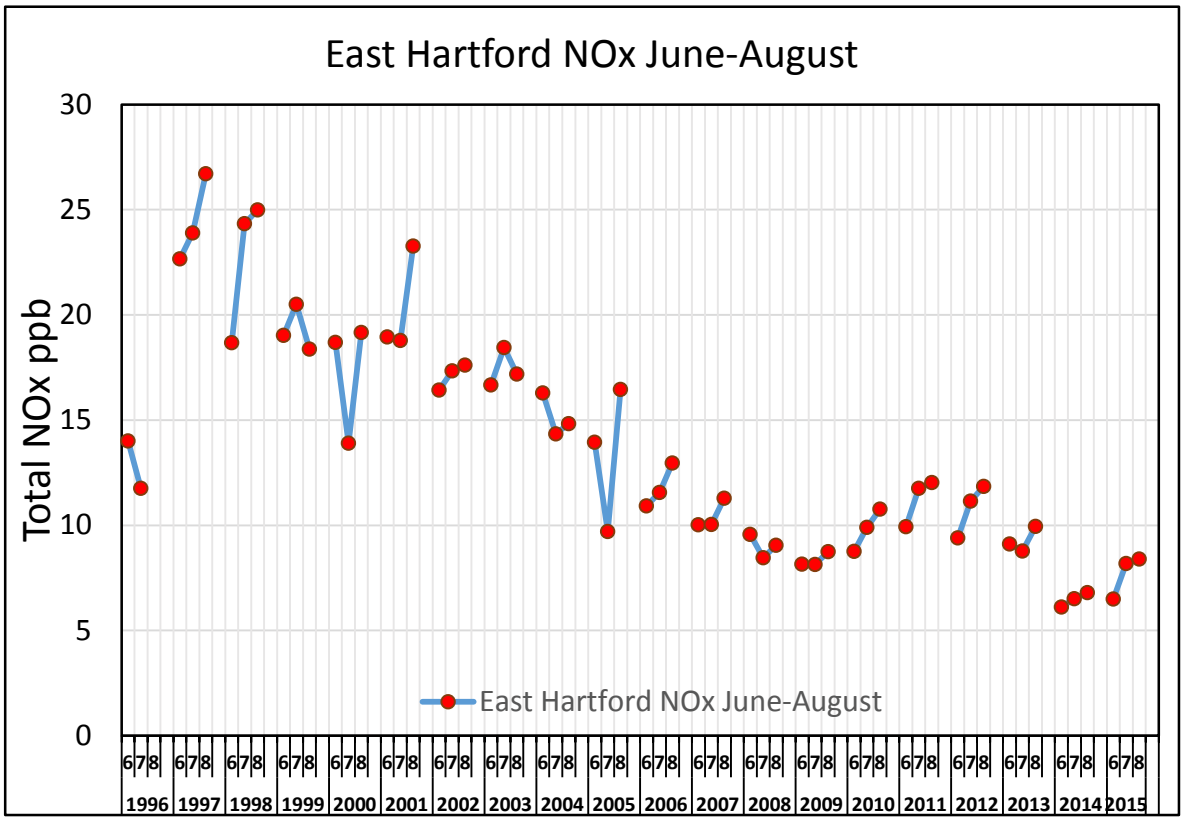


Figure 3-13. *Westport Monthly Summer NOx Trends from 1996-2015*

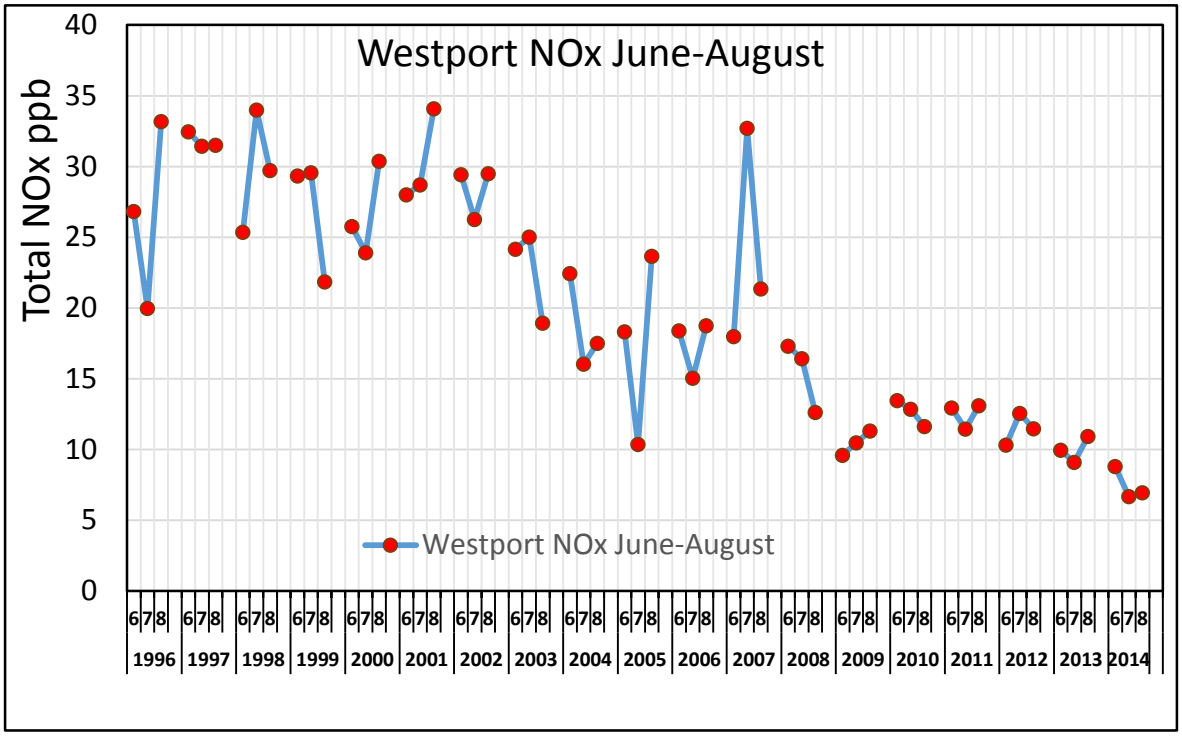
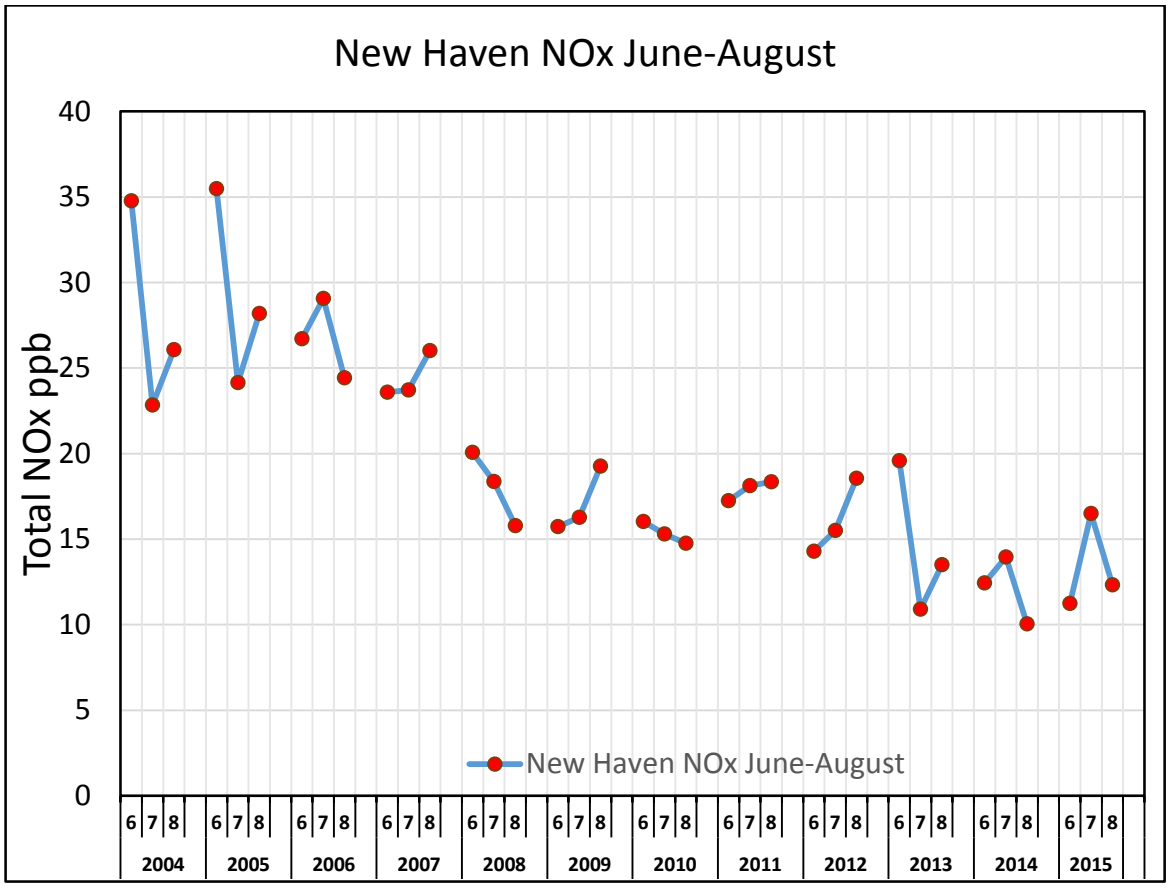


Figure 3-14. *New Haven Monthly Summer NOx Trends from 2004-2015*



Figures 3-15 through 3-17 display the trends in total VOCs measured at three PAMS sites. Over the period of data collection at each site, total VOC concentrations have trended downward; however, the concentrations are variable during each summer period. It should be noted that the New Haven site has consistently measured elevated VOC levels compared to the other two sites, probably due to its proximity to fuel terminals. Figure 3-18 is a Google Earth image of the New Haven monitor that shows the proximity of the bulk gasoline terminals. The facilities are labeled with the 2011 EPA National Emission Inventory (NEI 2011) VOCs that were reported to be emitted. The image indicates why the proximity of the New Haven PAMs site could lead it to have the high monitored VOC levels compared to the other two sites.

Figure 3-15. *East Hartford Total VOC Concentrations Summer Trends*

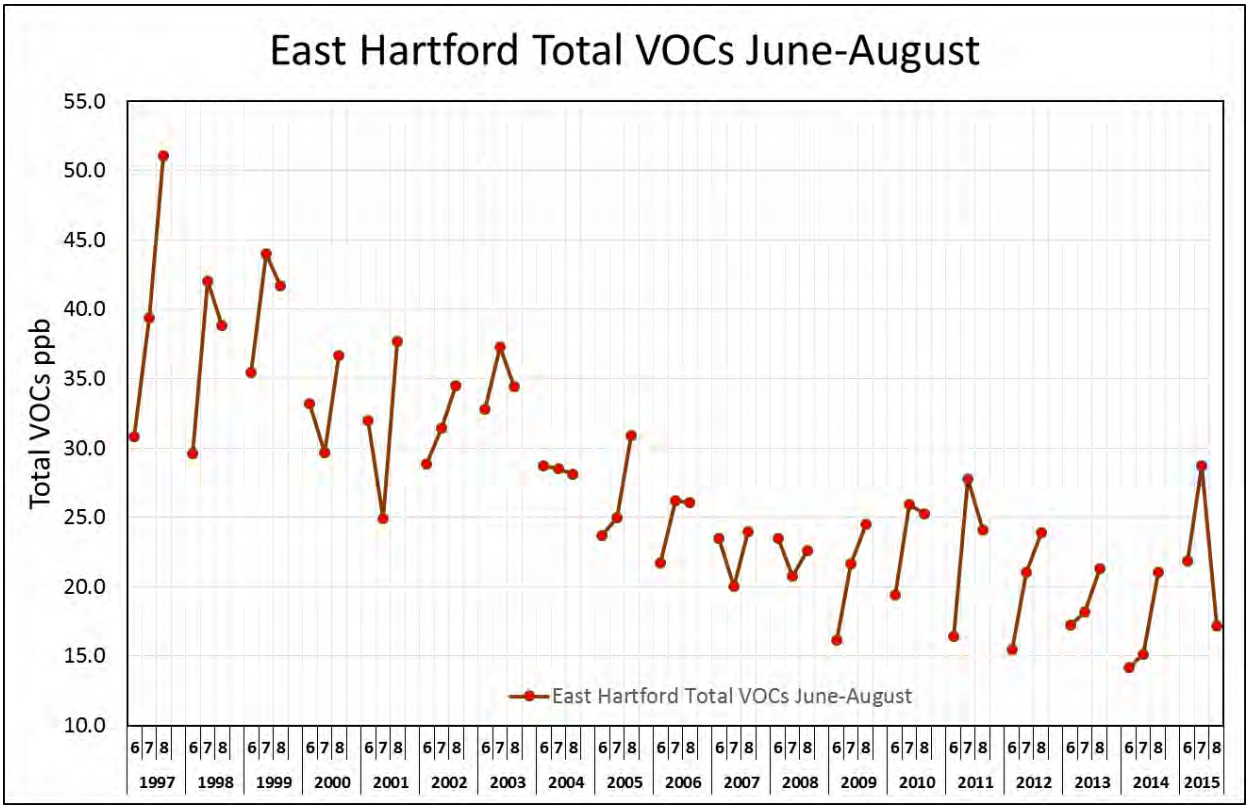


Figure 3-16. *Westport Total VOC Concentrations Summer Trends*

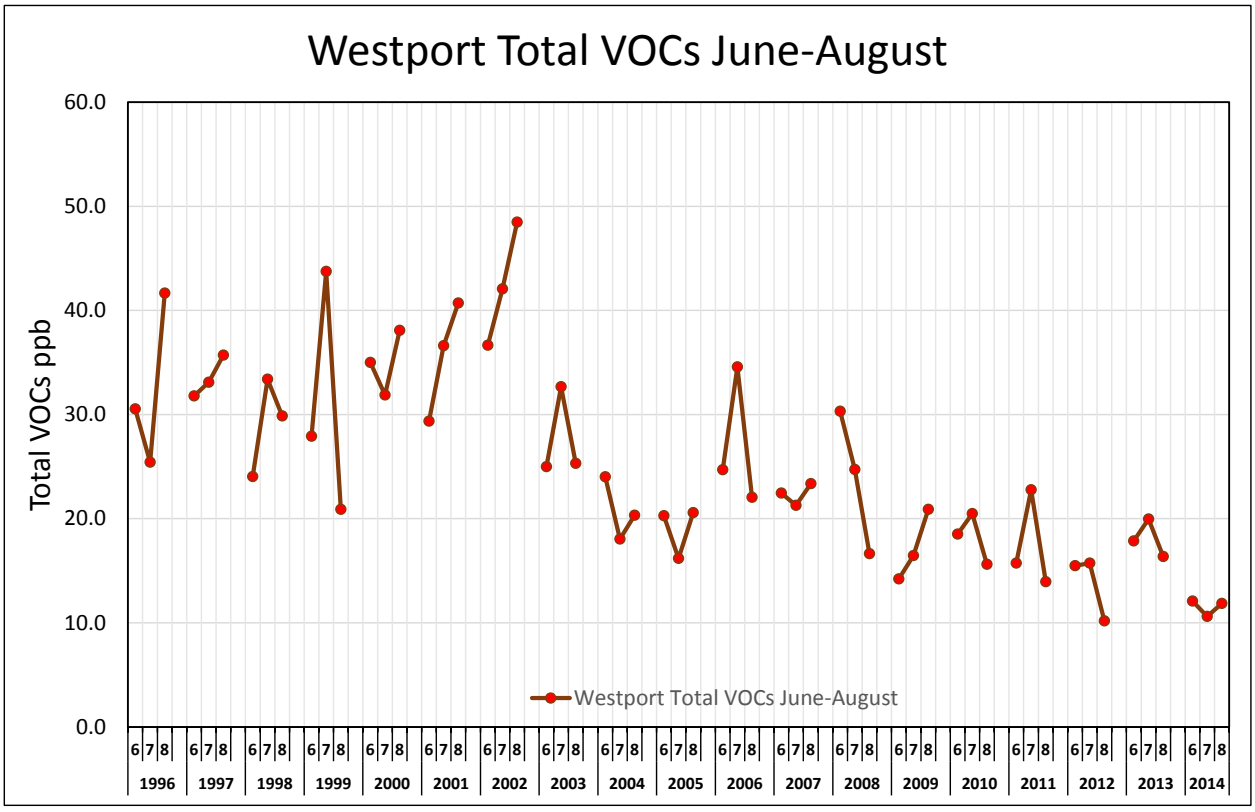


Figure 3-17. *New Haven Total VOC Concentrations Summer Trends*

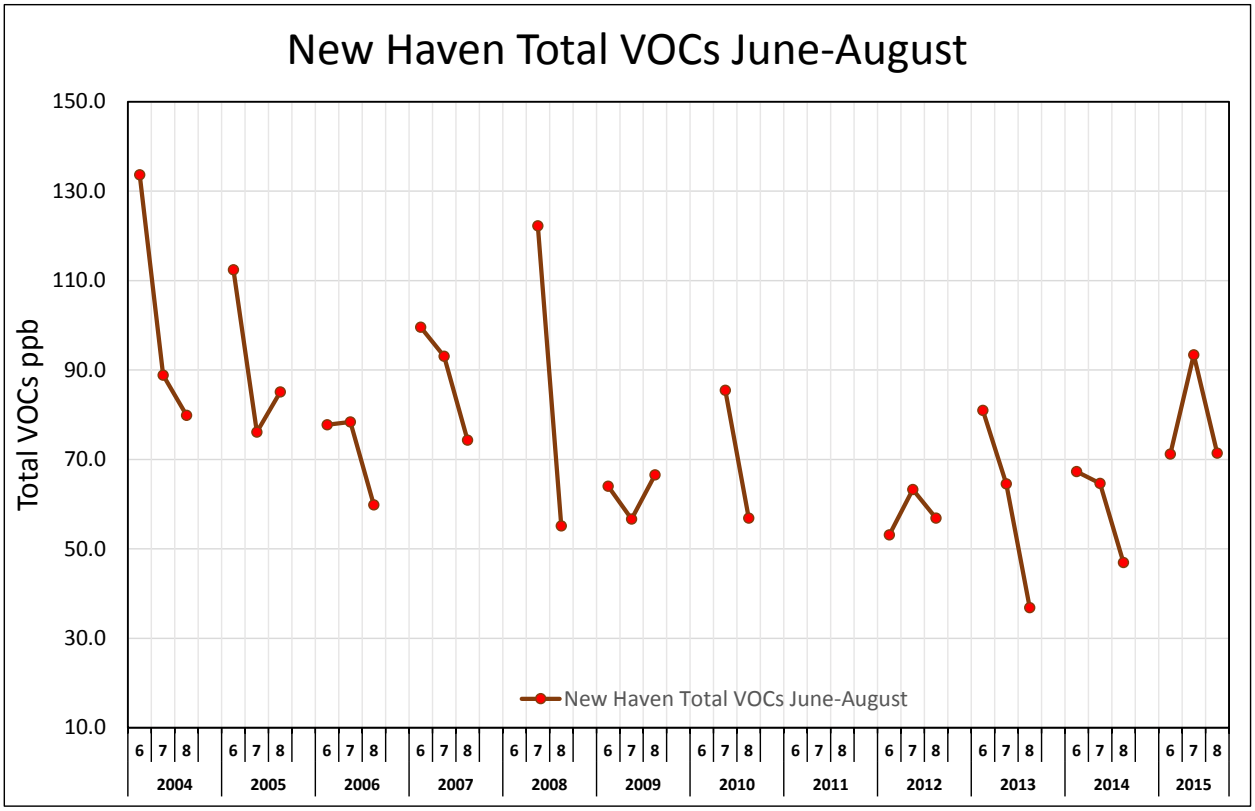


Figure 3-18. *Aerial Photograph of the New Haven Connecticut Monitoring Site*

3.6 Pollutant Wind Roses

Summer season wind rose plots for total VOC, NOx, and ozone were prepared for the East Hartford and Westport sites for 1997 and 2014 and for the New Haven site for 2004 and 2014 (see Figures 3-19 through 3-21 below). Wind rose plots are also provided for ozone, but are determined using just the 12 hour period of noon to midnight during the ozone season. This was done to accentuate the higher ozone concentration frequencies to make it easier to compare the two years. The length of the wind rose petals (colored bars) in each plot indicate the frequency that surface-level winds originated from specific directions and the color bands within each petal indicate the measured pollutant concentrations for that direction.

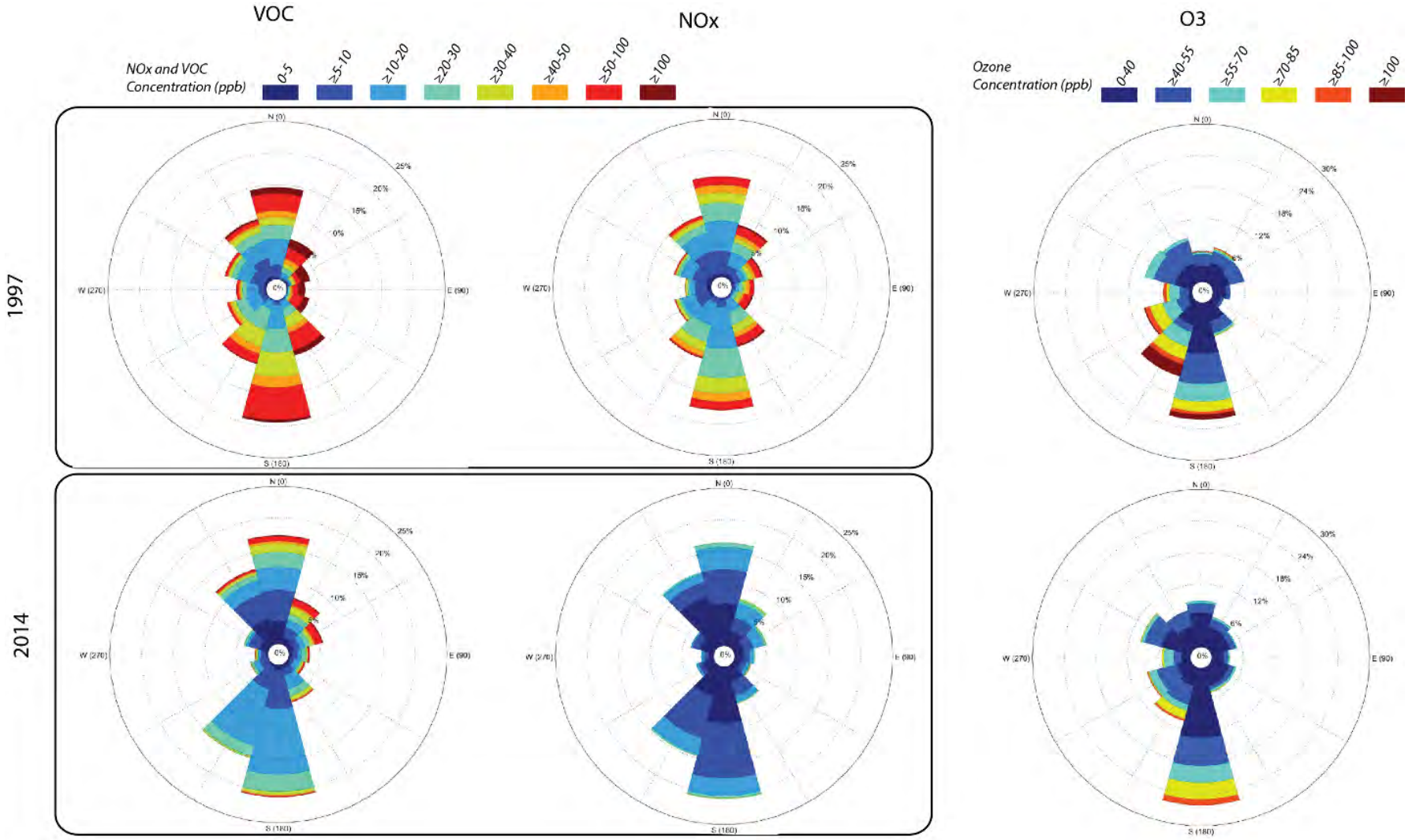
Wind direction patterns at each site are generally similar for the selected years, except that there is a greater frequency of southwest winds relative to south winds at Westport in 2014 than in 1997. Wind frequencies do shift to some extent at all sites around the 30-degree wind direction slices. The New Haven and East Hartford sites show predominant wind directions from the south and north because of the channeling effect of the Connecticut River Valley during the summer, while Westport show a higher frequency of summer season southwest winds, especially in 2014.

The plots indicate that the total VOC levels monitored in East Hartford and Westport are somewhat higher during periods of winds from the northerly direction, while the New Haven monitor shows higher concentrations from a southerly direction, which is not surprising due to the proximity of the bulk gasoline terminals to the south. These southerly VOC contributions at New Haven have decreased since 2004, but they are still larger than the other two sites. The 2014 figures at all sites do indicate a decrease in the highest VOC frequencies over the previous years, an indication that VOC emission control programs are working to reduce ambient concentrations of ozone precursors.

Wind rose plots of NOx concentrations at Westport show the influence of local mobile source NOx emissions, with the highest concentrations occurring when the winds are from the Northwest to Northeast carrying emissions from the area of Interstate 95 to the monitor. Plots for the East Hartford monitor (located further from high traffic areas than the other sites) show a less varying NOx concentration distribution. All three sites show a marked decrease in the highest NOx levels between 1997 (2004 for New Haven) and 2014. By 2014, the East Hartford monitor shows little, if any NOx occurring above 30 ppb for any direction at any hour, while the Westport monitor still shows a small contribution of NOx above 30 ppb from the north/northeast wind directions. New Haven shows a preponderance of high concentrations of NOx from the south during 2004 (likely originating from traffic on Interstate 95), which decreases by 2014. The overall decrease in NOx levels indicate the success of NOx control strategies in reducing ambient concentrations of that ozone precursor.

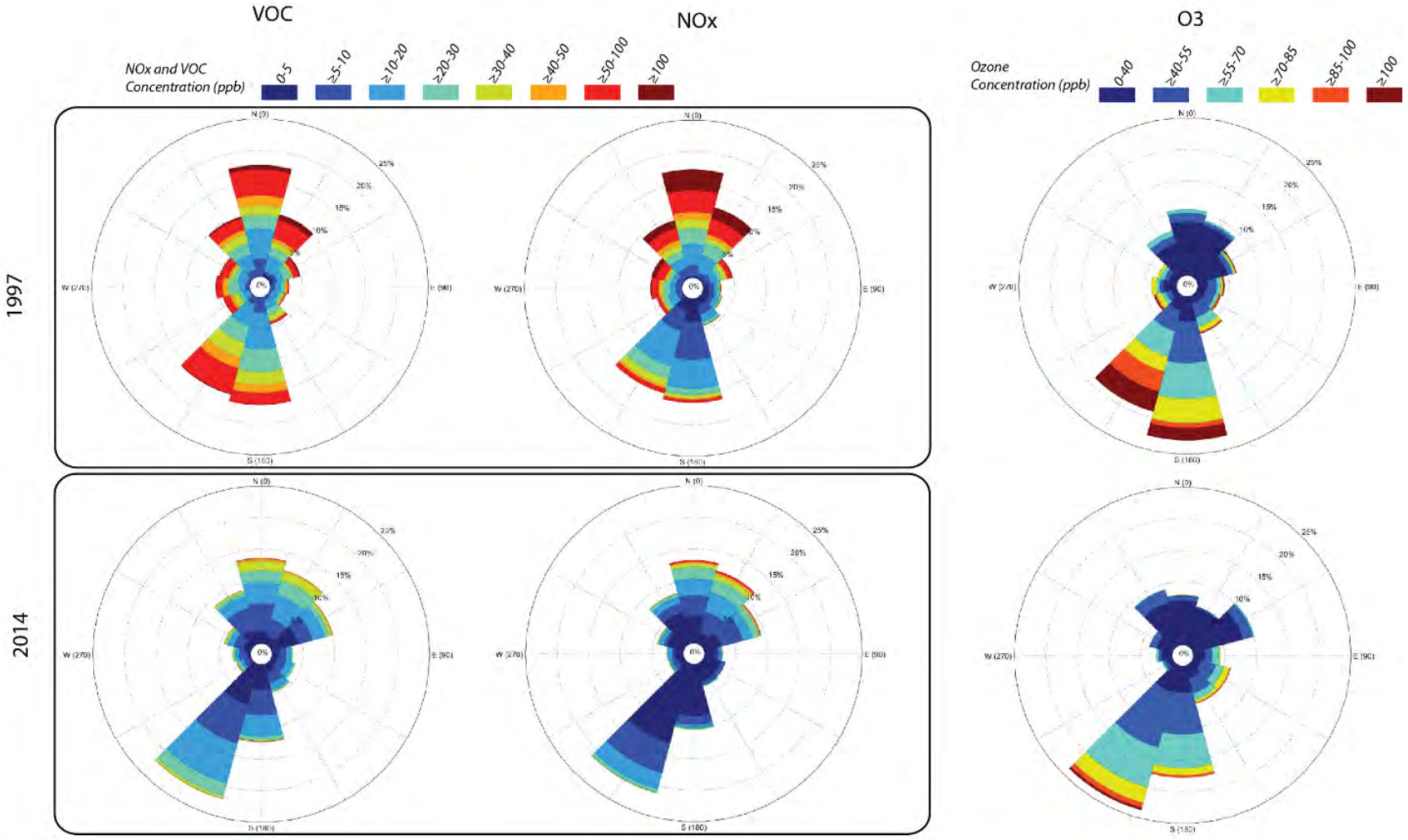
In general, the frequency of elevated ozone (>70ppb) has decreased at each site over the interval between the two years analyzed. In addition, high ozone levels predominately occur when surface winds at these sites are from the south and southwesterly directions. There are virtually no elevated ozone levels observed at any of the sites during periods when wind directions have a northerly component, even though high VOC and NOx concentrations can occur when winds are from a northerly direction. This demonstrates the important role that meteorology plays in producing high ozone events in Connecticut.

Figure 3-19. *1997 and 2014 Pollutant Wind Roses for East Hartford*



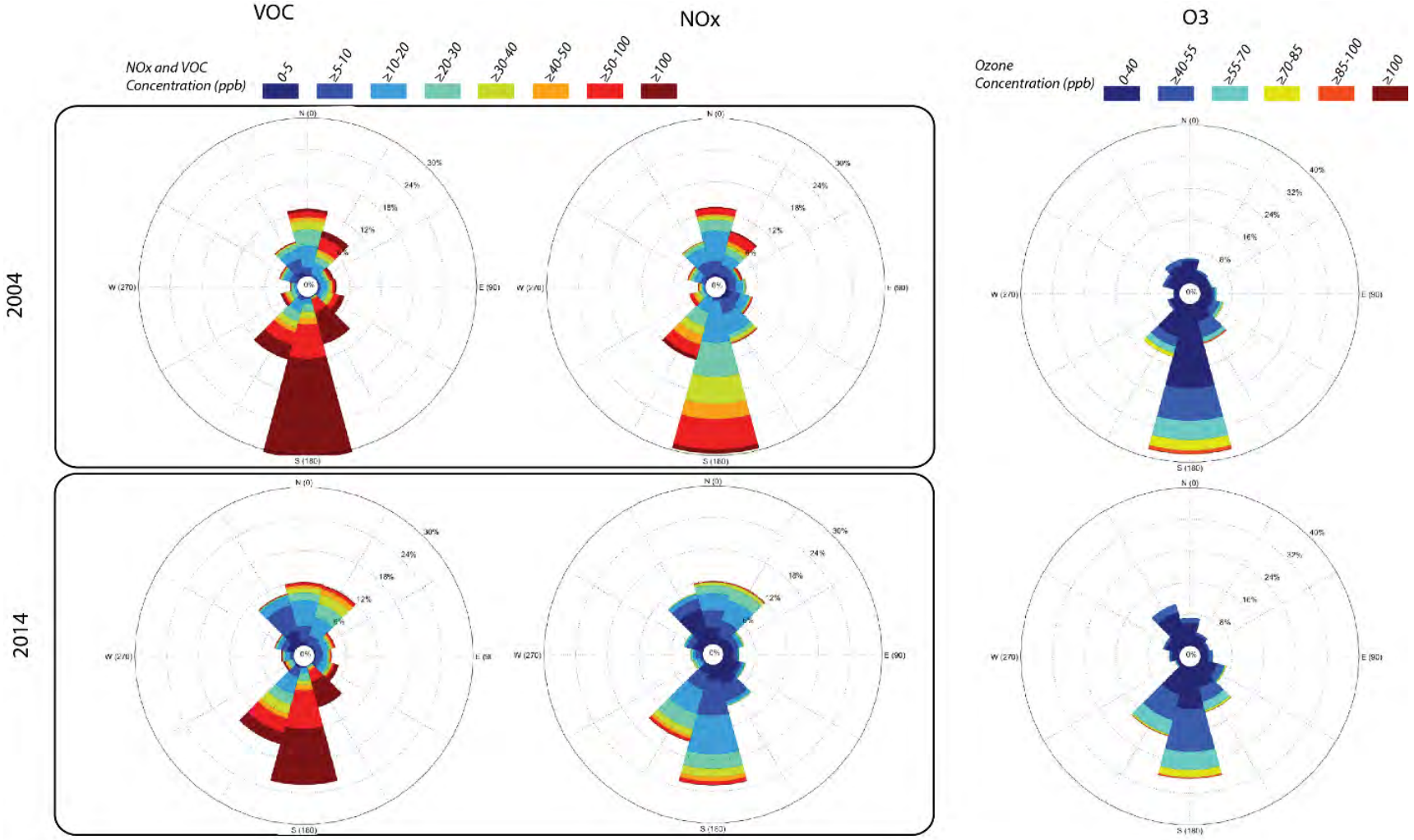
East Hartford CT. Frequency of concentrations and directions of hourly NOX and VOC concetrations through out tJune- August of the year denoted. Frequency of concentrations and direction of houlry ozone concentrations from noon to mid night through out the ozone season of the year denoted.

Figure 3-20. *1997 and 2014 Pollutant Wind Roses for Westport*



Westport, CT. Frequency of concentrations and directions of hourly NOX and VOC concetrations through out June- August of the year denoted. Frequency of concentrations and direction of houlry ozone concentrations from noon to mid night through out the ozone season of the year denoted.

Figure 3-21. *2004 and 2014 Pollutant Wind Roses for New Haven*



New Haven CT. Frequency of concentrations and directions of hourly NOX and VOC concetrations through out tJune- August of the year denoted. Frequency of concentrations and direction of houlry ozone concentrations from noon to mid night through out the ozone season of the year denoted.

4. Base Year and Future Year Emission Estimates

The CT DEEP has adopted, or is currently pursuing adoption of, multiple regulations to reduce in-state emissions of ozone precursors (i.e., VOC and NOx) in the post-2011 period. These in-state measures, along with EPA measures targeted nationally at on-road and non-road emission sources and regionally at electric generating units (EGUs), are projected to provide significant emission reductions through 2017 and beyond that should improve ozone air quality. This section documents the level of emissions in the Greater Connecticut nonattainment area in the baseline year of 2011, provides descriptions of post-2011 control measures, including those relied upon to meet CAA reasonable further progress (RFP) and attainment requirements, and provides estimates of projected 2017 emissions resulting from state and federal measures.

4.1 2011 Base Year Ozone Season Day Inventory

As described more fully in Section 5, the RFP demonstration establishes emission reduction targets that must be met in 2017 to satisfy the requirement that a 15% reduction in any combination of NOx and/or VOC emissions occur relative to the level of emissions in the 2011 base year inventory. CT DEEP developed the 2011 base year inventory using ozone summer day emissions estimates from Connecticut's 2011 periodic emissions inventory (PEI) as the starting point. Appropriate revisions were incorporated to reflect updated emission modeling procedures and inputs and to ensure the inventory is representative of ozone season meteorological conditions that led to the nonattainment designations for Connecticut, as recommended by EPA guidance.[7] Adjustments were also made to ensure that NOx emissions offsets tracked by CT DEEP's Administrative Enforcement group are properly represented in the 2011 Base Year Inventory. Details about these adjustments are provided below.

Connecticut's 2011 Periodic Emissions Inventory

In March of 2015, EPA's implementation rule[8] for the 2008 ozone NAAQS established the requirements for a base year inventory and a periodic inventory every three years thereafter for states to satisfy sections 182(a)(1) and 182(a)(3) of the CAA. The implementation rule also established 2011 as the preferred base year for determining future year RFP compliance and for performing photochemical grid modeling.

The 2011 PEI[9], was submitted in final form to EPA as a SIP revision on March 9, 2016, after completion of the required public review process. The 2011 PEI provides both annual and typical high ozone summer day estimates of actual VOC and NOx emissions for each county in Connecticut, with sources grouped into the following general categories:

- Stationary Point Sources: Industrial or commercial operations classified in 2011 as major sources of VOC or NOx are included by CT DEEP in the point source inventory. Examples include power plants (also referred to as electric generating units or EGUs), municipal waste combustors (MWC), factories, large industrial and commercial boilers and other fuel burning equipment.

- Stationary Area Sources: Emission sources too small to be inventoried individually as stationary point sources are classified as area sources. Examples include small industrial or commercial facilities such

[7] For example, see 80 FR 12290.
[8] "Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements" (the Implementation Rule); 80 FR 12264; March 6, 2015.
[9] The 2011 PEI SIP submittal, with full documentation, is posted on the DEEP website at: http://www.ct.gov/deep/cwp/view.asp?a=2684&Q=432056&deepNav_GID=1619.

as gasoline stations, printing shops, dry cleaners, auto refinishing shops, as well as the use of consumer products.

- On-Road Mobile Sources: Also referred to as highway mobile sources, these include exhaust and evaporative emissions from cars, buses, motorcycles and trucks traveling on state and local roads.

- Non-Road Mobile Sources: Also referred to as off-highway mobile sources, these include exhaust and evaporative emissions from mobile sources that are not generally traveling on state and local roads. Examples include construction equipment such as backhoes and graders, recreational equipment such as all-terrain vehicles and off-road motorcycles, commercial and residential lawn and garden equipment such as lawn mowers and leaf blowers, industrial equipment such as forklifts and sweepers, marine equipment such as commercial and recreational watercraft, aircraft and ground support vehicles, and rail locomotives.

The 2011 PEI contains full documentation of the procedures and data used to develop 2011 emissions estimates for all of Connecticut. Summaries of 2011 PEI ozone season day NOx and VOC emission estimates for the portion of the state which comprises the Greater Connecticut ozone nonattainment area[10] are provided in Table 4-1. The 2011 PEI, after incorporating the modifications described below in Section 4.1.2, will serve as the 2011 Base Year Inventory for determining compliance with ozone RFP obligations.

Table 4-1. *Summary of Greater Connecticut NOx and VOC Emissions from the 2011 Periodic Emissions Inventory**

Source Category	Ozone Season Day NOx (tons/ozone season day)	Ozone Season Day VOC (tons/ozone season day)
Stationary Point	10.0	1.3
Stationary Area	6.2	48.5
On-Road Mobile	55.8	30.3
Non-Road Mobile**	36.1	37.0
Total Anthropogenic	108.1	117.1
Biogenic	1.7	283.7
Total	109.8	400.7

*These estimates of actual 2011 emissions are reproduced directly from CT DEEP's 2011 periodic emissions inventory, which was submitted as a SIP revision to EPA on March 9, 2016. Note that the 2011 PEI refers to the On-Road sources as Highway sources and Non-Road sources as Off-Highway sources. See Section 4.1.2 below for a description of modifications made to the 2011 PEI estimates to ensure the 2011 Base Year Inventory (used for determining reasonable further progress) is based on the most recent emission estimation techniques. The resultant 2011 Base Year Inventory is presented below in Section 4.1.3 (and Table 4-2).
** Non-road mobile emission totals include estimates for the commercial marine, aircraft & airport support equipment, and rail locomotive sectors (MAR), which are summed with estimates determined using EPA's NONROAD model for all other non-road sectors.

[10] The Greater Connecticut nonattainment area includes the following Connecticut counties: Litchfield, Hartford, Tolland, Windham and New London. The remaining Connecticut counties (Fairfield, New Haven and Middlesex) comprise the Southwest Connecticut portion of the NY-NJ-CT nonattainment area, which will be addressed in a separate SIP submission.

Modifications Made to the 2011 PEI Emissions to Establish 2011 Base Year Emissions

Subsequent to the preparation of the 2011 PEI, updated emission estimation techniques and data became available for the on-road and non-road mobile source sectors. Updates include EPA's release of a major revision to the Motor Vehicle Emissions Simulator (MOVES) model that now addresses emissions from both on-road vehicles and most non-road equipment, associated revisions to MOVES inputs that more accurately reflect Connecticut's motor vehicle emission inspection and maintenance (I&M) program, updated traffic data provided by the Connecticut Department of Transportation (CT DOT), and revised meteorological inputs that are more representative of the high ozone events that resulted in Connecticut's nonattainment designation for the 2008 ozone NAAQS. Prompted by these updates, CT DEEP developed improved on-road and non-road emission estimates for the 2011 Base Year Inventory to be used in the RFP demonstration.

In addition, revisions were made to emissions from aircraft and airport support equipment (part of the non-road mobile sector in the 2011 PEI) and to landfill emissions (part of the area source sector in the 2011 PEI) to correct for database summation errors included in the submitted PEI. Finally, CT DEEP elected to substitute EPA's estimates for rail locomotives to replace those contained in the 2011 PEI submittal. Descriptions of these updates is provided below. Documentation of emission estimation procedures for all other source sectors was previously provided to EPA as part of CT DEEP's submittal of the 2011 PEI (see footnote 6).

EPA's MOVES2014a Model

MOVES is a state-of-the-science emission modeling system developed by EPA[11] that allows users to estimate emissions for mobile sources at the national, county, and project level for criteria pollutants, greenhouse gases, and air toxics. Connecticut's 2011 PEI estimates were determined using EPA's MOVES2010b model (for on-road sources) and NONROAD2005 model (for most non-road source sources). In October 2014, EPA released[12] a major new revision to the MOVES modeling system (i.e., MOVES2014) with a subsequent recent minor revision, MOVES2014a, released in December 2015. Some of the primary changes included in MOVES2014a related to on-road emissions include incorporation of the effects of three new federal rules (Tier 3 vehicle emission and fuel standards; Phase 2 light-duty vehicle greenhouse gas emission & fuel economy standards; and Medium/Heavy duty vehicle greenhouse gas emission & fuel economy standards) improvements to evaporative emission calculations, new real world in-use emissions data for heavy-duty vehicles, and new data and updates for default populations and activity. The MOVES2014a model also incorporates EPA's most recent version of the NONROAD model, NONROAD2008, enabling the user to estimate emissions for all non-road categories, except for aircraft/airport support equipment, commercial marine equipment and rail locomotives

EPA requires[13] states to use the latest official version of the MOVES model in new SIPs, unless significant work has already been completed using the previous version of the model prior to the updated release. For that reason, the 2011 Base Year Inventory developed by CT DEEP for this SIP replaces the outdated on-road and non-road emission estimates contained in the 2011 PEI with revised estimates calculated using MOVES2014a and the updated inputs described below.

Minor Revisions to MOVES Inputs for Connecticut's Vehicle I&M Program

Emission estimates in the 2011 PEI, determined using MOVES2010b, did not account for the emission benefits achieved by Connecticut's I/M program for gasoline vehicles with weights between 8,500 and 10,000 pounds.

[11] For a full description of the EPA MOVES model, and its history, see: https://www.epa.gov/moves.
[12] 79 FR 60343; October 7, 2014.
[13] See https://www.epa.gov/moves/moves2014a-latest-version-motor-vehicle-emission-simulator-moves

A more complete I/M input data set was developed for use with the MOVES2014a model to better simulate I&M program benefits for the portion of vehicles in that weight class that are model year 1996 or newer.[14]

Updated CT DOT Traffic Data

The Connecticut DOT regularly revises estimates of current and projected vehicle miles traveled (VMT) and other data as part of its short and long-term planning requirements using their travel demand model. Each major update to VMT estimates is identified by a series number, with a letter added for subsequent minor revisions. At the time the 2011 PEI was being developed by CT DEEP, CTDOT supplied traffic data with a designation of Series 30B. CTDOT subsequently released a revised Series 31 data set, which was used for developing this SIP revision. For comparison purposes, the Series 30B estimate of 2011 statewide summer weekday VMT is 94.6 million miles, while the revised Series 31 estimate for 2011 is 93.7 million miles, a slightly lower value. The revised VMT estimates and related traffic data were used to develop other MOVES2014a inputs, such as speed distributions, vehicle type VMT fractions, and source type populations.[15]

Updated Meteorological Inputs

Ambient temperature is a key factor in estimating emission rates for mobile sources, with substantial effects on most pollutant processes. Relative humidity is also important for estimating NOx emissions from motor vehicles. The 2011 PEI emission estimates were generated with temperature and humidity data representative of high ozone events during the 2000 to 2002 period, associated with designations made by EPA for the 1997 ozone NAAQS. However, EPA's designations for the 2008 ozone NAAQS were based on high ozone days in the 2008 to 2010 period. Therefore, CT DEEP developed revised inputs for the MOVES2014a model using actual meteorological data measured during high ozone events occurring in the summers of 2008, 2009 and 2010. Separate sets of meteorological inputs were developed for the Greater Connecticut nonattainment area (using data from Bradley International Airport in Windsor Locks, CT) and the Connecticut portion of the NY-NJ-CT nonattainment area (using data from Sikorsky Airport in Bridgeport, CT).[16]

Revised Emission Estimates for Non-road Sources

EPA's MOVES2014a model incorporates EPA's most recent release of its NONROAD model, NONROAD2008. The model calculates emissions estimates for all non-road categories, except for commercial marine vessels, aircraft/airport support equipment, and rail locomotives (often collectively referred to as the MAR categories). CT DEEP used MOVES2014a, along with the revised meteorological input data described above, and EPA's improved default fuels data to develop revised emission estimates for the covered non-road categories.[17]

As mentioned above, while preparing this SIP TSD, CT DEEP discovered that a database summation script inadvertently resulted in a large overestimation of ozone summer day emissions from the aircraft/airport support equipment sector in the March 2016 submittal of the 2011 PEI. The CT DEEP has addressed those errors and corrected values are included in the 2011 Base Year Inventory. As documented in Appendix C, the corrections reduce 2011 aircraft/airport support equipment NOx emissions in the Greater Connecticut area from 13.4 tpd to 1.2 tpd and VOC emissions from 2.8 tpd to 0.3 tpd.

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[14] See Appendix C (MOVES2014a Input Summary) for more details regarding this revision, as well as descriptions of all other MOVES2014a inputs used in this analysis.

[15] See Appendix C for more details regarding how traffic-related inputs were developed for MOVES2014a runs. Relevant descriptions of the CT DOT travel demand modeling and other related data are included in the documentation for Connecticut's 2011 PEI (Section 3.2).

[16] See Appendix C for details regarding these revisions.

[17] See Appendix C for additional information regarding inputs used to develop non-road emissions estimates using the MOVES2014a model.

CT DEEP recently concluded that the rail locomotive emission estimates developed for EPA's 2011 National Emissions Inventory (NEIv2)[18] provide a better representation of emissions for Connecticut than those initially included in the 2011 PEI. The NEIv2 estimates for 2011 are somewhat higher than those developed for the PEI and are also consistent with those developed for other states and used in photochemical modeling performed by both OTC and EPA. Emissions for the other MAR sector (commercial marine vessels) were not changed from the values documented in Connecticut's 2011 PEI.

Inclusion of Landfill Area Source Emissions

In Section 4.14 of the 2011 PEI, CT DEEP includes calculations of landfill area source emissions, but does not carry those calculations forward into summary tables elsewhere in the document. Those emissions (about 0.5 tons/summer day in Greater Connecticut) are properly reflected in the 2011 base year estimates presented below.

Inclusion of Stationary Source NOx Emission Offsets

CT DEEP's Administrative Enforcement group evaluates, certifies and tracks requests from sources that desire to retain rights to emission reductions resulting from source shutdowns or enforceable emission reductions that go beyond regulatory requirements. Certified reductions are "banked" and are potentially available for future use as emission offsets by newly permitted sources. CT DEEP has included certified 2011 offsets of 0.7 tons/ozone season day (255 annual tons) for the Greater Connecticut area in the 2011 base year inventory to be used for the RFP demonstration. Although not actually emitted to the atmosphere in 2011, addition of these banked offsets to the 2011 inventory conservatively results in a slightly greater level of required emission reductions in order to meet the 15% RFP reduction target required to be achieved in 2017.

Resulting 2011 Base Year Inventory Used for Reasonable Further Progress Calculations

The adjustments described above were made to the 2011 PEI emission estimates to ensure that the 2011 emissions used for the RFP demonstration reflect the most recent and best available emission estimation methods and inputs. The resulting 2011 Base Year Inventory for NOx and VOC are summarized in Table 4-2. Note that only anthropogenic emissions are included in the 2011 Base Year Inventories because the RFP demonstration process does not consider biogenic emissions. Nevertheless, biogenic emissions dominate the VOC category, contributing 283.7 tons per ozone season day compared to total anthropogenic emissions of 106.1 tons per ozone season day in the Greater Connecticut area. In contrast, biogenic NOx emissions are small compared to anthropogenic NOx emissions, amounting to only 1.7 tons per ozone season day compared to total anthropogenic emissions of 91.9 tons per summer ozone day in the Greater Connecticut area.

Figures 4-1 and 4-2 graphically depict the 2011 base year emission estimates for NOx and VOC emissions, respectively. The largest contributing sectors to anthropogenic NOx emissions are on-road and non-road sources (see Figure 4-1) contributing 55% and 26%, respectively. Stationary point (11%) and area sources (7%) are lesser contributors. For anthropogenic VOC emissions (see Figure 4-2), the largest contributing sectors are stationary area sources (46%), non-road mobile sources (27%) and on-road mobile sources (26%), with stationary point sources contributing only 1%. A more complete source category breakdown of 2011 base year emissions is included in Appendix E.

[18] See EPA's 2011 National Emission Inventory, version 2: Technical Support Document (August 2015), available at: https://www.epa.gov/air-emissions-inventories/2011-nei-technical-support-document.

Table 4-2. *Greater Connecticut 2011 Base Year Emissions Inventory for NOx and VOC* *

Source Category	Ozone Season Day NOx (tons/ozone season day)	Ozone Season Day VOC (tons/ozone season day)
Stationary Point	10.0	1.3
Stationary Area	6.2	48.9
On-Road Mobile	50.5	27.8
Non-Road Mobile**	24.5	28.1
2011 Emission Offset Bank	0.7	0.0
Total Anthropogenic	91.9	106.1

*As described in the text, the 2011 Base Year Inventory is an updated version of Connecticut's 2011 periodic emissions inventory, which was submitted to EPA in March 2016. Updates include incorporation of emission estimates from EPA's most recent version of the MOVES model (MOVES2014a, including the NONROAD model), associated input updates, more recent traffic information provided by CT DOT, modifications to rail locomotive emissions, corrections to aircraft/support equipment and landfill emission summations, and the inclusion of 2011 NOx emission offsets. The resultant 2011 Base Year Inventory is used in the Reasonable Further Progress demonstration described in Section 5.
** Non-Road Mobile emissions include estimates for the commercial marine, aircraft & airport support equipment, and rail locomotive sectors, which are summed with estimates determined using EPA's NONROAD model (as embedded in MOVES2014a) for all other non-road sectors.

Figure 4-1. *2011 Base Year NOx Inventory for Greater Connecticut Area*

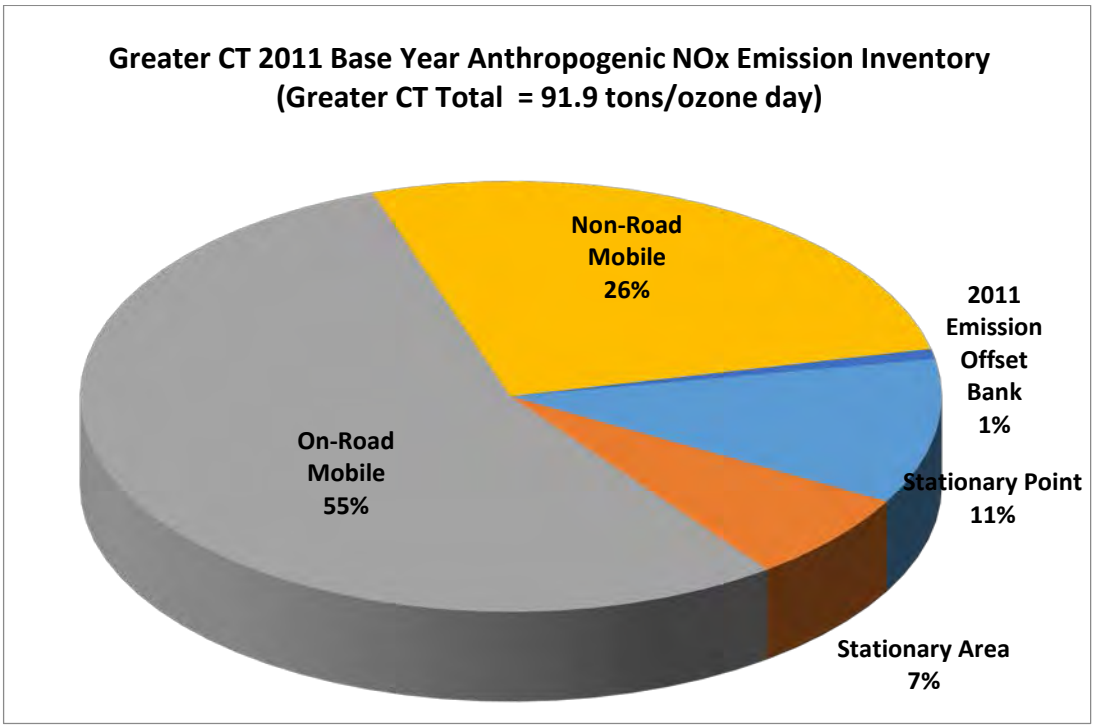
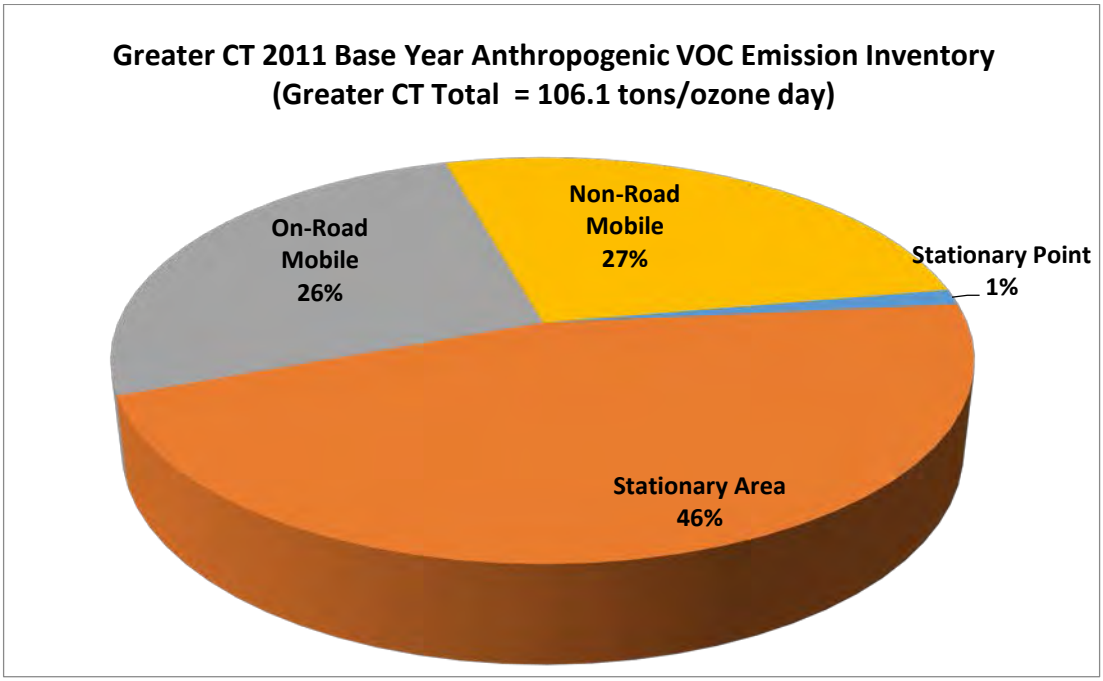


Figure 4-2. *2011 Base Year VOC Inventory for Greater Connecticut Area*



4.2 Control Measures Included in Future Year Projections

CT DEEP has implemented all emission control programs mandated by the 1990 CAA, as well as other measures necessary to meet RFP and RACT/RACM requirements and to demonstrate attainment of the 2008 ozone NAAQS, as expeditiously as practicable, by the July 20, 2018 moderate attainment deadline for the Greater Connecticut area. Unless otherwise noted, measures identified in this section create emissions reductions after the 2011 baseline emissions inventory year and, therefore, are creditable towards RFP and attainment efforts for the 2008 NAAQS. This section identifies the date on which each measure became or is anticipated to become effective in the state, as well as the compliance date on which the measure will begin to create emissions reductions. See Section 4.3 for a summary of projected 2017 emission levels that result from the post-2011 control measures.

Mobile Source and Fuels Control Programs

Numerous federal and state control programs have been implemented over the last four decades to reduce ozone precursor emissions from mobile sources. These programs have established increasingly more stringent emission standards for new on-road vehicles and non-road engines and equipment, with associated changes required to fuel composition, as well as implementation of emission inspection programs to ensure continued compliance by in-use motor vehicles. The gradual replacement of older on-road vehicles and non-road equipment due to purchases of newer models, when coupled with increasingly stringent emission standards, has resulted in continuing reductions in ozone precursor emissions over time. On-road and non-road mobile source control programs are described below, highlighting those yielding emission reductions since the 2011 base year.

Table 4-3 provides a summary of major ozone precursor emission control programs implemented statewide in Connecticut for on-road vehicles that have occurred since the enactment of the 1990 Clean Air Act Amendments. Pre-2011 programs[19] are included in the table because they continue to contribute to post-2011

[19]A more complete description of control programs implemented between 1990 and 2010 is provided in DEEP's "8-Hour Ozone Attainment Demonstration (for the 1997 NAAQS)", submitted to EPA on 2/1/2008.

emission reductions in cases where owners replace older vehicles with more recent model year vehicles subject to tighter emission standards.

Pre-2011 federal programs establishing NOx and VOC emission standards[20] for new cars and light/medium duty trucks include the Tier 1 (phased-in between 1994 and 1996), National Low Emission Vehicle (NLEV, starting in 1998 in Connecticut), and Tier 2 (phased-in between 2004 and 2009) programs. Motorcycle emission standards[21] were phased-in between 2006 and 2010. EPA also promulgated rules establishing heavy duty truck emission standards[22] that began in 2004 and 2007, with phase-in completed in 2010.

[20] 56 FR 25724 & 65 FR 6698
[21] 69 FR 2398
[22] 65 FR 59895 & 66 FR 5001

Table 4-3. *On-Road Mobile Sources Control Strategies*[1]

Control Strategy	Pollutant		Federal Program	State Program	Rule Approval Date[2]	Initial Year of Implementation[3]
	VOC	NOx				
Tier 1 Vehicle Standards	●	●	●		6/5/1991[4]	1994-1996
Reformulated Gasoline – Phases I & II	●	●	●		2/16/1994[5]	1995 & 2000
On-board Refueling Vapor Recovery	●		●		4/6/1994[6]	1997-2005
National Low Emission Vehicle (NLEV) Program	●	●	●		1/7/1998[7]	1998-2003 (in CT)
Tier 2 Motor Vehicle Controls/30ppm Sulfur Gasoline	●	●	●		2/10/2000[8]	2004-2009
Heavy-Duty Diesel Vehicle Controls and Fuels	●	●	●		10/6/2000[9]	2004-2005
CT OBD-II Enhanced I/M Program	●	●		●	12/5/2008[10]	2004
2007 Highway Rule/15ppm Sulfur Diesel Fuel	●	●	●		1/18/2001[11]	2006-2010
Highway Motorcycle Exhaust Emission Standards	●	●	●		1/15/2004[12]	2006-2010
CT Low Emission Vehicle Phase 2 (CT LEV2)	●	●	●	●	3/17/2015[13]	2007
CT Low Emission Vehicle Phase 3 (CT LEV3)	●	●		●	8/1/2013[14]	2015-2025
Tier 3 Vehicle Standards/10ppm Sulfur Gasoline	●	●	●		4/28/2014[15]	2017-2025

[1] All strategies (except RFG & OBD-II Enhanced I/M) result in emission reductions after 2011 due to gradual fleet turnover.
[2] Unless otherwise noted, this is the Federal Register date of either a final federal rule or EPA's approval of a state SIP submittal.
[3] A range of implementation years is listed for some strategies due to phase-in of standards.
[4] 56 FR 25724 6/5/1991.
[5] 59 FR 7716.
[6] 59 FR 16262.
[7] 63 FR 926.
[8] 65 FR 6698.
[9] 65 FR 59896.
[10] 73 FR 74019.
[11] 66 FR 5002.
[12] 69 FR 2398.
[13] 80 FR 13768.
[14] RCSA 22a-174-36c was adopted by CT DEEP on 8/1/2013; submitted to EPA for SIP approval on December 14, 2015.
[15] 81 FR 23414.

Pre-2011 federally-required fuel programs for on-road vehicles include lower volatility reformulated gasoline[23] (Phase 1 RFG in 1995 and Phase 2 RFG in 2000), low sulfur gasoline[24] (30 ppm limit, phased-in starting 2004 as part of the Tier 2 program), and ultra-low sulfur diesel[25]fuel (15 ppm limit, phased-in starting 2006 to coincide with the 2007 new truck standards). The lower sulfur limits were necessary to minimize contamination of catalysts used to achieve greater tailpipe NOx emission reductions. In addition, federal rules required new cars and light/medium duty trucks to be equipped with on-board refueling vapor recovery (ORVR) systems[26] to control refueling emissions. The requirement was phased-in for new vehicles between 1997 and 2006. EPA also established rules[27] in 2000 that require heavy-duty vehicles (HDVs), up to 10,000 lbs gross vehicle weight rating (GVWR), be equipped with ORVR systems. The ORVR systems for HDVs began to be equipped on model year 2004 vehicles and were fully phased in on HDVs by model year 2006.

In addition to these federal programs, Connecticut implemented several in-state programs during the pre-2 011 period. After playing a major role in prompting EPA to promulgate the NLEV program in the late 1990's, Connecticut has continued to require new vehicles sold in the state to meet California's Low Emission Vehicle (LEV) standards, which are more stringent than federal requirements. In December 2004, CT DEEP adopted Regulations of Connecticut State Agencies (RCSA) section 22a-174-36b, which mirrors California's LEV II regulations and includes zero emission vehicle requirements. [28] The Connecticut LEV II regulation applies to model year 2008 through 2014 passenger car and light-duty trucks and model year 2009 through 2014 medium-duty vehicles. The LEV II standards also include a zero emission vehicle (ZEV) provision, as well as greenhouse gas (GHG) emission standards for 2009 through 2016 model year passenger cars, light-duty trucks and medium duty passenger vehicles. The CT LEV II program was approved as a SIP revision by EPA in March 2015. [29]
In the post-2011 period, both Connecticut and EPA have further tightened new passenger vehicle emission standards to secure additional mobile source reductions, as described below.

Connecticut's I/M Program

Section 22a-174-27 of the Regulations of State Agencies (RCSA) and section 14-164c of the Connecticut General Statutes (CGS) codify Connecticut's I/M standards and implementation respectively. Title 40 CFR part 85 requires Connecticut to adopt and implement an I/M program that meets federal basic I/M requirements statewide. Additionally, because Connecticut is in the Ozone Transport Region (OTR) portions of Connecticut's nonattainment areas are required to implement an enhanced I/M program pursuant to CAA 184(b)(1). Connecticut requires the enhanced program statewide, thus exceeding the federal requirements. All elements of the basic program are included in the enhanced program.

Connecticut has required in-use vehicles to undergo periodic emission inspection and maintenance since 1983. The program has been modified over the years to meet CAA-required enhancements and to accommodate technological advancements in new vehicles such as on-board diagnostics (OBD).

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[23] 40 CFR Subpart D
[24] 40 CFR Subpart H
[25] 40 CFR Subpart I
[26] See https://www.epa.gov/ozone-pollution/fact-sheet-final-rule-determining-widespread-use-onboard-refueling-vapor-recovery
On May 16, 2012, EPA completed a finding (77 FR 28772) that ORVR technology was in widespread use, thereby enabling EPA to waive the requirement for affected states to implement Stage II refueling programs at gasoline stations due to the duplicative nature of the two programs. DEEP subsequently repealed its Stage II program on 7/8/2015.
[27] 65 FR 59895.
[28] DEEP also submitted revisions to the LEV II program on 12/22/2005 and 8/4/2009.
[29] 80 FR 13768.

Whereas EPA's I/M requirements only cover gasoline powered vehicles up to 8,500 lbs gross vehicle weight rating (GVWR), Connecticut's I/M program increases the number of vehicles subject to the enhanced standard by testing both gasoline and diesel motor vehicles through 10,000 lbs. GVWR.

EPA has approved revisions to the program in both 2008 and 2015 as being in conformance with requirements of an enhanced I/M program (see 73 FR 74019, 80 FR 13768). The table below demonstrates the basic requirements and the enhanced I/M program requirements.

Table 4-4. *Basic and Enhance I/M Requirements*

Basic I/M Program	Enhanced I/M Program
• Requires onboard diagnostic (OBD) testing on Model Year (MY) 2001 and new vehicles • Requires Idle testing of vehicles MY 2000 and older vehicles.	• Requires OBD testing on MY 1996 and newer vehicles • Requires more comprehensive tailpipe testing of MY 1995 and older vehicles
• Emission Control Device Inspection : None	• Emission Control Device Inspection: Visual inspection for the presence of catalytic converter and other major emission control equipment.

This approved enhanced I/M program will continue to be implemented statewide and remains an important control strategy.

Connecticut's LEV III New Vehicle Emission Standards

Sections 209(a) and (b) of the Clean Air Act prohibits states from adopting motor vehicle emission standards for new vehicles, but also provides a waiver provision allowing the State of California to adopt standards more stringent than federal standards under certain conditions. Notwithstanding the section 209(a) prohibition, CAA section 177 allows other states to adopt vehicle standards that are identical to California standards which have received the section 209(b) waiver.

As noted earlier, Connecticut has long been committed to reducing motor vehicle emissions beyond federal requirements through the state's LEV program. Connecticut General Statutes (CGS) section 22a-174g requires CT DEEP to adopt regulations to remain consistent with California LEV standards, to ensure consistency with CAA section 177. In August 2012, the California Air Resources Board (CARB) finalized major new revisions to the California program[30] and EPA issued the required CAA section 209(b) waiver in December 2012. The CA LEV III revisions include more stringent exhaust and evaporative emission standards for both criteria pollutants and greenhouse gases for new passenger cars, light duty trucks and medium-duty vehicles. CARB estimates the changes will reduce ozone precursor emissions by about 75 percent from 2015 levels when fully implemented in 2025.[31] California, stakeholder states (including Connecticut) and the regulated community worked with EPA during California's rulemaking process to harmonize the standards with federal Tier III requirements and make it easier for the regulated community to meet a national standard.

Subsequent to the updates to the California program, CT DEEP proposed amendments to Connecticut's regulations, officially adopting RCSA 22-174-36c (CT LEV III) on September 1, 2013 to be consistent with the standards specified in the CA LEV III program. RCSA 22-174-36c replaced a temporary emergency regulation that was established in December 2012 to ensure the two-year lead time required by CAA section 177 was satisfied so that the more stringent standards could be in place for 2015 model year vehicles. Connecticut is one of only 12 states that have adopted the California LEV III requirements.

[30] See the CARB webpage: http://www.arb.ca.gov/msprog/levprog/levprog.htm#background.
[31] See the CARB webpage: https://www.arb.ca.gov/msprog/acc/acc.htm

The CT LEV III program establishes more stringent non-methane organic gases (NMOG), NOx, particulate matter (PM) and evaporative emission standards for passenger cars, light duty trucks and medium-duty passenger vehicles beginning with model year 2015. The regulation also includes revised ZEV mandates beginning with model year 2018 and revised greenhouse gas standards beginning with model year 2017. In addition, through incorporation by reference to the California regulations, RCSA 22-174-36c extends full useful life durability requirements from 120,000 miles to 150,000 miles.

Adoption of the California LEV III standards in Connecticut extends vehicle standards out to 2025. The CT LEV III standards provide additional criteria pollutant reduction beyond EPA's Tier 2 and Tier 3 vehicle standards.

Federal Tier 3 Emission Standards and Gasoline Sulfur Requirements

On April 28, 2014, EPA published the final rule establishing the federal Tier 3 vehicle emission and fuel standards. [32] As with the Tier 2 program, Tier 3 was designed considering the vehicle and its fuel as an integrated system. The vehicle standards will reduce both tailpipe and evaporative emissions from passenger cars, light-duty trucks, medium-duty passenger vehicles, and some heavy duty vehicles, resulting in significant reductions in pollutants such as ozone, particulate matter, and air toxics across the country. The Tier 3 standards are intended to harmonize with California's LEV program, thus creating a federal vehicle emissions program that will allow automakers to sell the same vehicles in all 50 states. The standards will be implemented over the same timeframe as the federal greenhouse gas/fuel efficiency standards for light-duty vehicles (promulgated by EPA and the National Highway Safety Administration in 2012), as part of a comprehensive approach toward regulating emissions from motor vehicles.

The Tier 3 standards include new light- and heavy-duty vehicle emission standards for exhaust emissions of NMOG+NOx, PM and evaporative emissions, to be phased in between model years 2017 (2018 for heavier vehicles) through 2025. The final standards are in most cases identical to those of California's LEVIII program. The rule also requires the reduction of gasoline sulfur content from the current 30 parts per million (ppm) average down to a 10 ppm average beginning in 2017. As mentioned earlier, vehicle catalytic converters become significantly less efficient at reducing pollutant emissions when exposed to sulfur. The reduction in average sulfur content of gasoline from the current Tier 2 level of 30 ppm to the Tier 3 level of 10 ppm will optimize catalyst performance with two beneficial effects: 1) Vehicles designed to the Tier 3 tailpipe exhaust standards will be able to meet those standards in-use for the duration of their useful life, and 2) Immediate emission reductions will be realized from all the gasoline-fueled vehicles on the road at the time the new lower sulfur limits are implemented in 2017.

In the Tier 3 rule, EPA cited research studies that examined the effect of various gasoline sulfur levels on Tier 2 vehicles. The results indicated that reducing sulfur levels in gasoline from 30 ppm to10 ppm could result in NOx reductions from Tier 2 vehicles of 12-27% and hydrocarbon reductions of 11-13%. EPA also evaluated the national impact of the Tier 3 program using the MOVES model, finding a 10% reduction in national on-road NOx emissions in 2018 due to the program, with a 35% reduction in 2030. VOC emission reductions were estimated to be 3% in 2018 and 16% in 2030 for the national on-road inventory due to the Tier 3 requirements.

Elsewhere in the Tier 3 rule, EPA estimates that the final phased-in (i.e., 2025 model year) standards for light-duty vehicle, light-duty truck, and medium-duty passenger vehicle tailpipe emissions are an 80 percent reduction in fleet average NMOG+NOx compared to current standards for new vehicles. The fully phased-in Tier 3 heavy-duty vehicle tailpipe emissions standards for NMOG+NOx and PM are on the order of 60 percent lower than current standards for new vehicles. In addition, the fully phased-in evaporative emissions standards represent a 50 percent reduction from current standards. When considered across the in-use fleet, in 2030 when Tier 3

[32] 79 FR 23414. See: https://www.gpo.gov/fdsys/pkg/FR-2014-04-28/pdf/2014-06954.pdf

vehicles will make up the majority of the fleet as well as vehicle miles traveled, EPA estimates that NOx and VOC emissions from on-road vehicles will be reduced by about 21 percent compared to the current in-use fleet.

Non-road engines are used in a variety of applications such as construction equipment, outdoor power equipment, farm equipment, lawn and garden equipment, marine vessels, locomotives, and aircraft. Prior to the mid-1990's, emissions from these engines were largely unregulated. EPA has since issued several rules regulating emissions from new and, in some cases, remanufactured non-road engines.[33] Major non-road emission control measures and fuel programs are summarized in Table 4-5 and accounted for in the emissions inventories used for this attainment demonstration. Pre-2011 programs are included in the table because they continue to contribute to post-2011 emission reductions through fleet turnover as owners replace older equipment with more recent model year equipment subject to tighter emission standards.

Non-Road Compression Ignition (Diesel) Engines

EPA rules have established four tiers of emission standards for new non-road diesel engines. EPA's first non-road regulations were finalized in 1994,[34] when (Tier 1) emission standards were issued for most large, greater than 50 horsepower (hp), land-based non-road compression-ignition (CI, or diesel) engines used in applications such as agricultural and construction equipment, which were phased in between 1996 and 2000.

In 1998, EPA promulgated Tier 1 standards for smaller (< 50 hp) diesel engines, including marine propulsion and auxiliary engines, which required phase-in between 1999 and 2000.[35] At the same time, EPA issued more stringent Tier 2 emission standards for all non-road diesel engine sizes to be phased in from 2001 to 2006 and Tier 3 standards requiring additional reductions from new diesel engines between 50 and 750 hp to be phased in from 2006 to 2008.

EPA finalized Tier 4 rules for non-road diesel in 2004. The rule integrated new diesel engine emission standards with fuel requirements. The emission standards applied to most construction, agricultural, industrial, and airport equipment, and were phased in between 2008 and 2015. The Tier 4 emission standards do not apply to diesel engines used in locomotives and marine vessels.

The rule also established a two phase reduction in diesel fuel sulfur levels, limiting concentrations to 500 ppm in 2007 and 15 ppm in 2010 (2012 for locomotives and marine vessels). The lower diesel sulfur levels minimize damage to emission-control systems used to meet the Tier 4 engine exhaust standards.

Non-Road Spark Ignition (e.g., Gasoline) Engines

EPA rules regulate small (less than 25 hp) non-road spark-ignition (SI) engines (except marine and recreational engines) in two phases. EPA's Phase 1 standards for new small SI engines were issued in 1995.[36] These engines, which usually burn gasoline, are used primarily in lawn and garden equipment. The standards apply to model year 1997 and newer engines.

EPA subsequently issued more stringent Phase 2 emission standards for both small non-handheld engines (e.g., lawn mowers, generator sets, air compressors) and small handheld engines (e.g., leaf blowers, chain saws,

[33] See EPA's non-road engine webpage: https://www.epa.gov/emission-standards-reference-guide/epa-emission-standards-nonroad-engines-and-vehicles. Tables of emission standards by engine type are also posted by EPA at: https://www.epa.gov/emission-standards-reference-guide/nonroad-engines-and-vehicles-emission-standards.
[34] 59 FR 31306.
[35] 63 FR 56968.
[36] 60 FR 34582.

augers) in 1999[37] and 2000,[38] respectively. Phase 2 standards were phased-in from 2001 to 2007 for non-handheld engines and from 2002 to 2007 for handheld engines.

EPA finalized emission standards for new gasoline spark-ignition marine engines in 1996[39] to be phased-in between 1998 and 2006. These engines, typically based on simple two-stroke technology, are used for outboard engines, personal watercraft, and jet boats.

EPA's 2002 rulemaking also included exhaust emission standards for non-road recreational spark-ignition engines and vehicles.[40] These recreational land-based engines are found in snowmobiles, off-highway motorcycles, and all-terrain-vehicles (ATVs). The standards were phased-in between 2006 and 2007, except for snowmobiles, which had until 2009 to comply. In addition, snowmobiles were subject to more stringent standards that became effective in 2010 and 2012. Plastic fuel tanks and rubber hoses available on recreational vehicles are also regulated for permeation, to minimize the fuel lost through the component walls. The permeation standards for fuel tanks and fuel hoses on recreational vehicles were effective in 2008.

Marine Diesel Engines

Marine diesel engines include small auxiliary and propulsion engines, medium-sized propulsion engines on coastal and harbor vessels, and very large propulsion engines on ocean-going vessels. EPA published a final rule in 2002 that included new engine emission standards for recreational marine diesel engines.[41] These are marine diesel engines rated over 37 kW, or >50 hp, which are used in yachts, cruisers, and other types of pleasure craft. The standards were phased-in, beginning in 2006, depending on the size of the engine. By 2009, emission standards were in effect for all recreational, marine diesel engines.

On February 28, 2003, EPA finalized emission standards for exhaust emission from U.S.-flagged vessels with new marine diesel engines rated over 37 kW with displacements over 30 liters per cylinder (also known as Category 3 Marine Diesel Engines).[42] This marks the first time that emissions from very large marine diesel engines have been regulated. These diesel engines are used primarily for propulsion power on ocean-going vessels such as container ships, tankers, bulk carriers, and cruise ships. Most Category 3 marine diesel engines are used for propulsion on vessels engaged in international trade.

Both new and modified marine diesel engines rated above 175 hp must adhere to international standards (i.e., MARPOL convention) if vessel construction or engine modification commences on or after January 1, 2000. U.S.-flagged commercial vessels with new marine diesel engines rated over 37 kW (or >50 hp, with displacements up to 30 liters per cylinder) produced after 2003 (after 2006 for very large engines) were required to comply with EPA standards issued in 1999.[43] In October 2008, the member states of the International Maritime Organization agreed to amend MARPOL Annex VI, adopting new tiers of NOx and fuel sulfur

[37] 64 FR 15208.
[38] 65 FR 24268.
[39] 61 FR 52088.
[40] Ibid.
[41] 67 FR 68242.
[42] 68 FR 9746.
[43] 64 FR 73300.

Table 4-5. *Non-Road Mobile Sources Control Strategies*

Non-Road Engine Category	Date of Final Rule	Implementation Phase-In (MY)
Compression Ignition (diesel) Engines		
Tier 1: Land-Based Diesel Engines > 50 hp	06/17/1994 (59 FR 31306)	1996-2000
Tier 1: Small Diesel Engines < 50 hp	10/23/1998 (63 FR 56968)	1999-2000
Tier 2: Diesel Engines (all sizes)		2001-2006
Tier 3: Diesel Engines 50 - 750 hp		2006-2008
Tier 4: All Diesel Engines (Except locomotive and marine vessels)	06/29/2004 (69 FR 38958)	2008-2015
Spark-Ignition (e.g., gasoline) Engines		
Phase 1: SI Engines < 25 hp (except marine & recreational)	07/03/1995 (60 FR 34582)	1997
Phase 2: Non-Handheld SI Engines < 25 hp	03/30/1999 (64 FR 15208)	2001-2007
Phase 2: Handheld SI < 25 hp	04/25/2000 (65 FR 24268)	2002-2007
Gasoline SI Marine Engines (outboard & personal watercraft)	10/04/1996 (61 FR 52088)	1998-2006
Large Spark-Ignition Engines >19 kW (or >25 hp)	11/08/2002 (67 FR 68242)	2004 & 2007
Recreational Land-Based Spark-Ignition Engines		2006-2012
Marine Diesel Engines The Act to Prevent Pollution from Ships (APPS) implements the provisions of the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI for the United States (33 U.S.C. 1901–1912)	Most recent: 2/19/2015 (80 FR 9078) More info: https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-marine-vessels	US Emission Control Areas in effect: 2012 Aftertreatment NOx controls: 2016
Commercial Marine Diesel Engines[1] (US-flagged vessels)	12/29/1999 (64 FR 73300)	2004-2007
Recreational Marine Diesel Engines >37 kW (or >50 hp)	11/08/2002 (67 FR 68242)	2006-2009
Marine Diesel Engines (US-flagged vessels) >30 liters/cylinder	02/28/2003 (68 FR 9746)	2004
Spark-Ignition Engines/Equipment (marine & land engines)	10/08/2008 (73 FR 59034)	2010-2012
Locomotives New & Remanufactured Locomotives and Locomotive Engines[2]	04/16/1998 (63 FR 18978)	Tier 0: 1973-2001 Tier 1: 2002-2004 Tier 2: 2005 +
Locomotive & Marine Diesel Rule (new & remanufactured)	06/30/2008 (73 FR 37096)	2009-2015
Non-Road Diesel Fuel	06/29/2004 (69 FR 38958)	Phase 1: 2007 Phase 2: 2010 (2012 for Marine & Locomotive)
Aircraft		
Control of Air Pollution From Aircraft and Aircraft Engines 1	05/08/1997 (62 FR 25356)	1997
Control of Air Pollution From Aircraft and Aircraft Engines 2	11/17/2005 (70 FR 69664)	2005
Control of Air Pollution From Aircraft and Aircraft Engines 3	6/8/2012 (77 FR 36342)	2012 & 2014

[1] Only applies to commercial marine diesel engines with displacements under 30 liters per cylinder.

[2] EPA has established three sets of locomotive standards, applied based on the date the locomotive was first manufactured (i.e. during the Tier 0, Tier 1, or Tier 2 periods). The applicable standards take effect when the locomotive or locomotive engine is first manufactured and continue to apply at each periodic remanufacture.

controls. The most stringent of these new emission standards apply to ships operating in designated ECAs, including the newly-designated North American Emission Control Area (ECA), which was officially recognized in 2012. The Tier III standards for NOx, which become effective in 2016 along the US East Coast, are 80 percent lower than Tier I standards.

In 2008, EPA finalized the Marine Diesel Rule creating exhaust emission standards for marine spark-ignition engines (more stringent than those finalized on October 4, 1996[44]) and small land-based non-road spark-ignition engines.[45] The rule also included new evaporative emission standards for equipment and vessels using these engines. The marine spark-ignition engines and vessels affected by these standards, effective starting with the 2010 model year, include outboard engines and personal watercraft, as well as sterndrive and inboard engines. The small non-road spark-ignition engines and equipment affected by these standards, effective starting with the 2011 and 2012 model year, are those rated below 25 hp (19 kW) used in household and commercial applications, including lawn and garden equipment, utility vehicles, generators, and a variety of other construction, farm, and industrial equipment.

Locomotives

States are preempted from adopting standards to control emissions from locomotives. As such, Connecticut depends on EPA to establish standards. EPA established emission standards for new and remanufactured locomotives and locomotive engines in 1998.[46] At that time, three sets of standards were adopted, with applicability of the standards tied to the date a locomotive is first manufactured (i.e., 1973 through 2001, 2002 to 2004, and 2005 and later). In June 2008, EPA finalized additional standards to reduce emissions of PM and NOx from locomotives and marine vehicles.[47] The 2008 rule established short term Tier 3 standards and longer term Tier 4 standards for new locomotives as well as established idling restrictions.

The remanufacturing standards do not apply to the existing fleets of locomotives owned by very small railroads, such as those which comprise the bulk of the fleet in Connecticut. The second part established near term engine-out (Tier 3) emission standards for new locomotives and marine diesel engines, phased-in starting in 2009. The third part of the program entailed setting longer-term (Tier 4) emission standards for newly-built locomotives and marine diesel engines that reflect the application of high-efficiency emission control technology. The Tier 4 emission standards began to be phased-in starting in 2014 for marine diesel engines and 2015 for locomotives (these standards are enabled due to the availability of diesel fuel capped at 15 ppm sulfur content in 2012). All new marine diesel engines with displacements less than 30 liters per cylinder (Category 1 and Category 2 engines greater than 50 hp) vessels are covered in this rulemaking.

Aircraft

States are preempted from adopting standards to control emissions from aircraft. As such, Connecticut depends on EPA to establish standards. Control of air pollution from aircraft and aircraft engines was first regulated by EPA in a 1997 rulemaking.[48] That rule adopted the international aircraft emissions standards of the United Nations International Civil Aviation Organization (ICAO), which had been in place since 1986 and amended in 1993. The rule brought U.S. aircraft standards into alignment with international standards and applied to newly manufactured and newly certified commercial aircraft gas turbine engines with rated thrust greater than 26.7 kilonewtons. ICAO adopted revised standards in 1999 for implementation beginning in 2004. In November of

[44] 61 FR 52088.
[45] 73 FR 59034.
[46] 63 FR 18978.
[47] 73 FR 37096.
[48] 62 FR 25356.

2005, EPA finalized the adoption of the revised ICAO standards, to once again bring U.S. aircraft standards into alignment with international standards.[49]

In June 2012, EPA adopted additional measures to establish Tier 6 and Tier 8 aircraft standards, both designed to further reduce NOx emissions. [50] The Tier 6 standards applied to engines until December 31, 2013, and the Tier 8 standards apply to engines being manufactured since January 1, 2014.

Stationary and Area Source Control Measures

Several existing and proposed federal and state rules will help to reduce ozone precursor emissions from stationary and area sources in Connecticut (and upwind states) in the post-2011 period. These measures will provide assistance with demonstrating RFP and achieving attainment of the 2008 ozone NAAQS in Greater Connecticut by 2017 and/or maintaining attainment in subsequent years.

Table 4-6 summarizes federal stationary and area source measures, along with the effective date of the final rules (or the date of the proposed rule) and the initial date when emission reductions are required. The table also indicates which federal measures are included in Connecticut 2017 emission estimates presented in this TSD.

Some of the federal rules, such as the Cross-State Air Pollution Rule (CSAPR) and the final CSAPR Update, directly limit emissions of NOx during the ozone season in states located upwind of Connecticut. Other rules, such as the Reciprocating Internal Combustion Engine (RICE) National Emission Standards for Hazardous Air Pollutants (NESHAP) rule, the Industrial/Commercial/Institutional (ICI) Boiler Maximum Achievable Control Technology (MACT) rule, and the Mercury and Air Toxics (MATS) rule, may not specifically require limitations on ozone precursor emissions, but are projected by EPA[51] to indirectly reduce ozone precursor emissions in Connecticut and upwind states. Small, indirect reductions are anticipated to occur as a co-benefit of regulation of another pollutant (e.g., by motivating changes in equipment or fuels used, work practices, or increased use of renewable generating capacity).

Table 4-6 also refers to the requirement for a full transport remedy to address the obligations of upwind states that contribute to nonattainment and maintenance issues in Connecticut and other impacted states for the 2008 ozone NAAQS. EPA acknowledges in the CSAPR Update that the proposed rule is only a partial remedy towards fulfilling the responsibilities of upwind states under CAA section 110(a)(2)(D)(i)(I). The upwind states and EPA share the responsibility to fully address the CAA's transport obligations for the 2008 NAAQS, which were statutorily required to be met by March 2011.

CT DEEP recognizes that, despite the overwhelming contribution of interstate pollutant transport to Connecticut's highest monitored ozone levels, emissions from Connecticut sources do contribute to in-state ozone levels[52]. CT DEEP continues to evaluate and adopt control measures that reduce NOx and VOC emissions from Connecticut sources to reduce in-state impacts and to minimize impacts on downwind areas in other states, some of which may include nonattainment areas for the 2015 ozone NAAQS. A description of recent and upcoming state-level stationary and area source control measures is provided below. Many of the

[49] 70 FR 69664.
[50] 77 FR 36342
[51] See: "Technical Support Document (TSD) Preparation of Emissions Inventories for the Version 6.2, 2011 Emissions Modeling Platform"; EPA OAQPS; August 2015.
[52] EPA's July 2015 transport modeling for the proposed CSAPR Update rule indicates that Connecticut sources are responsible for 6% of high ozone levels at the Westport monitor, Connecticut's worst-case ozone monitor which is located along the state's upwind border in the Southwest Connecticut portion of the NY-NJ-CT nonattainment area. For monitors in the Greater Connecticut area, EPA's modeling for 2017 estimates that Connecticut sources contribute between 4% and 14% to high ozone levels.

measures described were identified and developed as part of Connecticut's RACT review[53] for the 2008 ozone NAAQS required by sections 182(a) and (b) and 184(b) of the Clean Air Act (CAA). Additional information regarding the process of identifying control measures suitable for 8-hour ozone NAAQS planning is included in the RACM discussion in Section 6.

Table 4-6. *Federal Stationary and Area Source Measures Expected to Provide Ozone Precursor Emission Reductions*

Federal Control Measure	Affected Ozone Precursor Pollutant(s)	Date of Federal Rule Promulgation	Date when Emission Reductions Begin	Are Ozone Precursor Emission Reductions Included in CT 2017 Projections?
CSAPR*	NOx	7/6/2011 (76 FR 48208) & 12/15/2011 (76 FR 80760)	2015 (Phase 1) 2017 (Phase 2)	No, CT not in rule
Final CSAPR Update**	NOx	Finalized 09/07/2016 (Pre-published rule)	2017	No, CT not in proposed rule
Full Transport Remedy for the 2008 Ozone NAAQS***	NOx	Was due 3/12/2011. Joint responsibility of upwind states and EPA.	Yet to be determined	No, CT found to be non-contributing
RICE NESHAP	NOx, VOC	1/30/2013 (78 FR 6674) amendments to 8/20/2010 rule (75 FR 51570)	2013	Yes
ICI Boiler & Process Heater MACT & Amendments	VOC	11/5/2015 amendments to 3/21/2011 rules (76 FR 15608 and 76 FR 15554)	2014 & 2012+, respectively for the two March 2011 rules.	Yes
Mercury & Air Toxics Standards	NOx	4/25/2016 (81 FR 24420) latest amendment to original 2/16/2012 (77 FR 9304) rule	2015	Yes
Portable Fuel Container Rule (part of HAP rule)	VOC	EPA 2/26/2007 rule (72 FR 8428) enabled CT to revoke equivalent 2007 state rule (RCSA 22a-174-43)	2007-2017 (turnover period)	Yes

* The Cross-State Air Pollution Rule (CSAPR) was promulgated by EPA to address interstate transport for the 1997 and PM2.5 NAAQS and the 2006 PM2.5 NAAQS. Legal challenges delayed implementation of Phase 1 of the rule until 2015, with Phase 2 scheduled for 2017. Although targeted at the 1997 ozone NAAQS, CSAPR-required emission reductions provide progress towards meeting the 2008 ozone NAAQS. Connecticut was not cited by EPA as a significantly contributing state and is therefore not included in the CSAPR program; however, emission reductions required in upwind states were projected by EPA to provide small ozone air quality improvements (0.2 ppb or less) at Connecticut monitors.
** The final CSAPR Update addresses interstate transport from 22 states for the 2008 ozone NAAQS. Connecticut was not cited by EPA as a significantly contributing state and is therefore not included in the CSAPR Update program; however, emission reductions required in upwind states are projected by EPA to provide small ozone air quality improvements (much less than 1 ppb) at key Connecticut monitors. EPA notes that the rule's requirements are limited to achieving the transport-related emission reductions that the Agency judges are achievable by the 2017 ozone season.
*** EPA acknowledges in the proposed CSAPR Update (80 FR 75714 & 75715) that the rule is only a partial remedy towards fulfilling the responsibilities of upwind states under CAA section 110(a)(2)(D)(i)(I) for the 2008 ozone NAAQS. The upwind states and EPA share the responsibility to fully address transport obligations, which were required to be met by March 2011.

During the period from 2006 through 2008, EPA issued a large number of Control Techniques Guidelines (CTGs) and Alternate Control Technique (ACT) documents with recommendations on how to control VOC emissions from a variety of source categories. The CTG/ACTs are intended to assist states with the development of RACT regulations. CT DEEP has revised its regulations to be consistent with the recommendations of all of the CTG/ACTs issued by EPA that are applicable to sources found in Connecticut.

Regulatory revisions for 11 of the CTG/ACTs became effective in 2011 or later, as summarized in Table 4-7. Each of the control measures is listed, along with the date on which the requirement was adopted in Connecticut

[53] See CT DEEP's webpage for the latest update on CT's RACT program: http://www.ct.gov/deep/cwp/view.asp?a=2684&q=546804&deepNav_GID=1619

and the date on which compliance was required so that the control measure began to reduce VOC emissions. The CTG or ACT upon which each control measure is based (or that applies to the same source category as is regulated by the control measure) is also identified. All of the control measures listed in Table 4-7 have been submitted to EPA for approval into the State Implementation Plan (SIP), and all of the measures have been approved into the SIP with the exception of the control measure addressing VOC emissions from the transfer and dispensing of gasoline.

The first seven listed control measures in Table 4-7 were implemented at the beginning of 2011 (i.e., January 1, 2011 effective date). Therefore, associated emission reductions for these measures are reflected in both the 2011 base and 2017 projected inventories presented elsewhere in this section. The 2011 measures are included in this discussion for completeness, because they became effective midway through the 5-year monitoring period (i.e., 2009-2013) used to establish the baseline design values relied upon in the photochemical modeling described in Section 8. In addition, Connecticut implemented these measures prior to many other affected states and feels it is important to highlight that fact in this SIP submittal.

A brief description of the remaining four CTG/ACT measures implemented since 2011 is provided below:

Metal/Plastic Parts and Pleasure Craft Coatings

The VOC emissions from miscellaneous metal product and plastic part and pleasure craft surface coating result from the evaporation of the volatile components of the coatings and cleaning materials used in these operations. Essentially all the VOCs contained in a coating evaporate. Therefore, lowering the VOC content of coatings and improving coating efficiency directly lowers VOC emissions. EPA estimates that decreasing the allowable VOC content for coatings and cleaning materials will reduce VOC emissions from miscellaneous metal and plastic part (including pleasure craft) coatings by about 35%. In analyzing potential reductions, EPA assumed that all facilities will choose to utilize the low-VOC coating materials option because low-VOC coating materials are already widely available at a cost that is not significantly greater than the cost of coating materials with higher VOC contents. Also, the use of add-on controls to reduce emissions from typical spray coating operations is a more costly option.

CT DEEP examined historic in-state inventories and identified about 125 potentially affected facilities with total reported annual statewide VOC emissions of approximately 640 tons. Based on EPA's 35% reduction estimate, the regulation revisions could result in statewide annual reductions as high as 223 tons (0.6 tons/day), with about half the decrease occurring in Greater Connecticut. However, many of the smaller sources are no longer required to report their emissions on a regular basis, so the historic inventory may not accurately quantify current emissions. Additionally, many of these small sources are not subject to the revised regulations because their emissions are below the applicability threshold. Given the uncertainties, CT DEEP elected not to account for any VOC reductions from this measure in the 2017 inventory.

Table 4-7. *Connecticut's CTG/ACT-Based VOC Control Measures Enacted Since 2011 (Note: table is two pages)*

Control Measure	Pollutant	Section of the Regulations of Connecticut State Agencies	Status of Regulation Adoption	Date Applies to Create Emissions Reductions*	CTG or ACT issued for the source category regulated by the control measure
Metal furniture coating	VOC	22a-174-20(p)	4/6/2010	1/1/2011	CTG for Metal Furniture Coatings (2007)
Paper, film and foil coating	VOC	22a-174-20(q)	4/6/2010	1/1/2011	CTG for Paper, Film and Foil Coatings (2007)
Flexible package printing	VOC	22a-174-20(ff)	4/6/2010	1/1/2011	CTG for Flexible Package Printing (2006)
Offset lithographic and letter press printing	VOC	22a-174-20(gg)	4/6/2010	1/1/2011	CTG for Offset Lithographic Printing and Letterpress Printing (2006)
Large appliance coatings	VOC	22a-174-20(hh)	4/6/2010	1/1/2011	CTG for Large Appliance Coatings (2007)
Industrial solvent cleaning	VOC	22a-174-20(ii)	4/6/2010	1/1/2011	CTG for Industrial Cleaning Solvents (2006)
Spray application equipment cleaning	VOC	22a-174-20(jj)	4/6/2010	1/1/2011	State-specific requirements. In the absence of RCSA section 22a-174-20(jj), spray gun cleaning would be addressed via the industrial solvent cleaning requirements (RCSA section 22a-174-20(ii)) adopted pursuant to the CTG for Industrial Cleaning Solvents (2006).
VOC emissions from miscellaneous metal and plastic parts coating	VOC	22a-174-20(s)	10/31/2012	1/1/2013	CTG for Miscellaneous Metal and Plastic Parts Coatings (2008)
VOC emissions from pleasure craft coating	VOC	22a-174-20(kk)	10/31/2012	1/1/2013	CTG for Miscellaneous Metal and Plastic Parts Coatings (2008)
Control of VOC emissions from above-ground storage tanks	VOC	22a-174-20(a)	3/7/2014	6/1/2014	Alternative Control Techniques Document – Volatile Organic Liquid Storage in Floating and Fixed Roof Tanks (1994) Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks (1978) Control of Volatile Organic Emissions from Storage of Petroleum Liquids in Fixed Roof Tanks (1977)
VOC emissions from transfer and dispensing of gasoline	VOC	22a-174-20(a), 22a-174-30a	7/8/2015	7/1/2015 -- CARB-approved P/V vent valves 7/8/2015 -- Annual pressure decay test	Design Criteria for Stage I Vapor Control Systems – Gasoline Service Stations (1975)

***** The first seven listed control measures were implemented at the beginning of 2011 (i.e., January 1, 2011 effective date). Therefore, associated emission reductions for these measures are reflected in both the 2011 base and 2017 projected inventories presented elsewhere in this section. The 2011 measures are included in this discussion for completeness, because they became effective midway through the 5-year monitoring period (i.e., 2009-2013) used to establish the baseline design values relied upon in the photochemical modeling described in Section 8. In addition, Connecticut implemented these measures prior to many other affected states and wants to highlight that fact in this SIP submittal.

Control of VOC emissions from above-ground storage tanks

This control measure regulates aboveground VOC storage tanks to a level at least as stringent as described in the identified CTGs and ACT. However, the adopted measure is more stringent in some respects and applies more broadly because it is based on the 2010 OTC Model Rule for Large Aboveground VOC Storage Tanks and New Jersey's recently adopted large aboveground VOC storage tank requirements (N.J.A.C. 7:27-16.2). This measure has been approved into the SIP. Relatively few storage tanks in Connecticut are affected by this rule; therefore, expected emission reductions are small[54] and are not accounted for in 2017 emission estimates.

VOC emissions from transfer and dispensing of gasoline

This control measure was adopted consistent with EPA's guidance on widespread use of onboard refueling vehicle vapor recovery (ORVR) to discontinue Connecticut's Stage II vapor recovery controls in favor of ORVR while also enhancing Connecticut's Stage I vapor recovery requirements for gasoline dispensing stations. The measure also requires the installation of CARB-approved pressure/vacuum vent valves when existing valves are replaced. CARB P/V valves are of better quality, so failures are reduced, thereby providing greater assurance that intended VOC reductions occur. A full description of the regulatory changes made by Connecticut through this control measure is available at http://www.ct.gov/deep/lib/deep/air/regulations/sip/SIP-FinalSubmittal_GDF-VaporRecovery.pdf. CT DEEP considers these regulatory revisions to be a reinforcement of a requirement for P/V valves that was adopted in 2004, providing greater certainty that intended emission reductions are achieved. Therefore, no additional emission reductions are projected from the revised rule.

In addition to the CTG/ACT measures just described, CT DEEP has completed adoption of, or is in the process of adopting, six additional control measures that will further reduce NOx or VOC emissions from Connecticut stationary and area sources. Table 4-8 identifies the measures, the relevant statute or regulation, the adoption status, and the anticipated effective and compliance dates. Note that emission reductions resulting from these measures are not reflected in emission projections for 2017. Some measures (e.g., Phase 2 of the fuel oil sulfur limits and the NOx limits in RCSA-22a-174-22e and f) will provide emission reductions in the post-2017 period. These are mentioned because they will help to ensure maintenance of the 2008 ozone NAAQS and continued improvements in ozone levels beyond the required attainment year of 2017.

As part of regional haze planning obligations, Connecticut and other northeast states recently revised state statutes and regulations to reduce the level of sulfur allowed in distillate and residual fuel oil to help reduce regional sulfate levels. Studies have found that lower levels of sulfur in distillate oil also result in reductions in NOx emissions from stationary combustion sources. As part of the MARAMA inventory effort[55], states examined the available literature and conservatively estimated that reducing distillate sulfur content from 3000 ppm to 500 ppm (Connecticut's Phase 1 limit starting in July 2014) would result in a 7% reduction in NOx emissions from boilers and process heaters. Reducing distillate sulfur content from 3000 ppm to 15ppm (Connecticut's Phase 2 limit starting in July 2018) was conservatively estimated to produce a 22% reduction in NOx emissions from 2011 levels. The further NOx reductions associated with Phase 2 of Connecticut's program, starting in 2018, will help to improve ozone air quality in 2018 and beyond. As mentioned above, the 2017 emission projections presented in this TSD do not include the NOx reductions expected from this control measure.

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[54] CT DEEP identified 45 tanks (all floating roof) subject to this rule, with estimated statewide total annual VOC emission reductions of less than 30tpy (< 0.1 tons/summer day). DEEP views the rule as regulatory maintenance, and has not included the minor emission reductions in 2017 projections.

[55] "Technical Support Document: Emission Inventory Development for 2011 and 2017 for the Northeastern U.S. (Beta Version)"; MARAMA; June 10 2016. See page 61 for a discussion of NOx emission reductions associated with low-sulfur fuel oil. The MARAMA TSD refers to a Technical Memorandum prepared by NYDEC dated April 15, 2016 for documentation on the level of NOx reductions.

Table 4-8. *Connecticut's Post-2011 Non-CTG Controls for Ozone Precursor Emissions from Stationary and Area Sources**

Control Measure	Pollutant	Section of the Regulations of Connecticut State Agencies or Connecticut General Statutes	Status of Regulation Adoption	Date Requirements Apply to Create Emissions Reductions
Fuel oil sulfur limits for #2 distillate/heating oil and #4/#6 residual oil that indirectly reduce NOx emissions	NOx	22a-174-19, 22a-17419a, 22a-174-19b, CGS 16a-21a	RCSA 22a-174-19, 19a & 19b: Revised 4/15/2014 and submitted as SIP revision 4/22/2014, with subsequent revisions submitted 6/8/2015 & 9/28/2015. CGS 16a-21a: Revised July 2013.	Phase 1: 7/1/2014 Phase 2: 7/1/2018
Reduction in emission limit for mass burn waterwall municipal waste combustors	NOx	22a-174-38	Adoption complete: 8/2/2016.	Revised emission limits become effective 8/2/2017. SIP Revision submitted September 19, 2016.
Control of NOx emissions from fuel-burning equipment at major stationary sources of NOx	NOx	22a-174-22e (one of two regulations proposed to replace current 22a-174-22)	Adoption complete: 12/22/2016.	Phase 1 emission limits: June 1, 2018. Phase 2 emission limits: June 1, 2023. Unless otherwise specified in permit or order, end of compliance options and case-by-case RACT limits: May 1, 2028.
High daily NOx emitting units at non-major sources of NOx	NOx	22a-174-22f (one of two regulations proposed to replace current 22a-174-22)	Adoption complete: 12/22/2016. .	May 1, 2018.
Reduction in VOC content limits for consumer products	VOC	22a-174-40	Public hearing held December 14, 2016. Progress of adoption may be viewed on CT's eRegulations site	Proposed Date: May 1, 2017
Reduction in VOC content limits for architectural and industrial maintenance coatings	VOC	22a-174-41, 22a-174-41a	Public hearing held December 14, 2016. Progress of adoption may be viewed on CT's eRegulations site	Proposed Date: May 1, 2017

***** The 2017 emission projections presented in this TSD do not include emission reductions from any of the measures listed in this table.

Revisions to Connecticut's municipal waste combustor (MWC) regulation were recently finalized in August 2016, with the associated emission limits scheduled to take effect in August 2017. The 2017 emission projections presented later in this section do not include the estimated statewide NOx emission reductions of 658 tons/year (with about 214 tons/year, or about 0.6 tons/summer day in the Greater Connecticut area) associated with the revised MWC rule. Those reductions will help to further improve ozone air quality in 2018 and beyond. Additionally, CT DEEP recently adopted the two measures targeted at major (RCSA 22a-174-22e) and non-major (RCSA 22e-174-22f) NOx sources. Reductions from these two measures will also aide in improving ozone air quality beginning in 2018, specifically June 1, 2018.

The other two measures identified in Table 4-8 have not been adopted, updates to Connecticut's regulations to further reduce emissions from consumer products (RCSA 22a-174-40) and architectural and industrial maintenance (AIM) coatings (RCSA 22a-174-41) have been prepared, proposed for the public notice and on December 14, 2016 a hearing was held. The compliance date for consumer products and AIM may change based on comments received on the proposal. Although it is possible that the updates for the two VOC measures may be in effect in time to produce reductions during the 2017 ozone season, the 2017 emission projections included later in this section do not account for any reductions. All of the outstanding measures will be submitted to EPA for approval after each measure has been adopted.

Many of the control measures mentioned above are identified and further described in the RACT SIP that CT DEEP submitted to EPA in July 2014 for the 2008 ozone NAAQS. Background information concerning the amendment of RCSA section 22a-174-38 concerning municipal waste combustors and the adoption of RCSA sections 22a-174-22e and 22a-174-22f is available on CT DEEP's RACT web page.

4.3 Future Year Emission Projections

EPA's Ozone Implementation Rule for the 2008 NAAQS requires moderate nonattainment areas to demonstrate reasonable further progress (RFP) towards attainment by achieving at least a 15% reduction in ozone precursor emissions between 2011 and 2017. The Implementation Rule requires that ozone season day emissions be used for the RFP demonstration and should represent the conditions that led to a nonattainment designation. CT DEEP has prepared a projected future year ozone season day inventory for 2017 to assess whether the 15% RFP requirement has been satisfied and to also meet the requirement to submit an inventory for the attainment year. Emissions projections were developed from the 2011 Base Year Inventory (see Section 4.1) by using appropriate methods to account for expected changes in activity (i.e., growth) and emission controls during the 2011 through 2017 period for each source category.

The following subsections describe the selection of growth factors for each source category, estimated reductions from the post-2011 controls described in Section 4.2, and the resulting future year emission projections for 2017.

Growth and Control Methodologies Used to Project 2017 Emissions

As described in Section 4.1, the 2011 Base Year Inventory to be used for the RFP demonstration was developed by CT DEEP using ozone season day emissions from Connecticut 2011 Periodic Emissions Inventory (PEI) for the point and area source categories. On-road and most non-road emission estimates for 2011 were updated from the PEI values by using EPA's most recent release of the MOVES emissions model (MOVES2014a), with updated input data. Corrections were also made to inadvertent summation errors found in PEI emissions estimates for aircraft/aircraft support equipment and for landfills. In addition, EPA NEIv2 estimates of rail locomotive emissions were substituted for estimates initially included in the 2011 PEI. See Section 4.1 for a more complete explanation.

Emission projections for 2017 were developed from the 2011 Base Year Inventory by accounting for changes in activity (i.e., growth) and post-2011 controls for the various anthropogenic source categories. Methodologies used for each source sector are described below.

Mobile Sources

The majority of anthropogenic NOx and VOC emissions from Connecticut sources are emitted by on-road and non-road mobile sources, and the greatest level of emissions reductions since 2011 occur from controls required

for these sources. As was previously described in Section 4.1.2, CT DEEP used EPA's latest mobile source emissions model, MOVES2014a, to estimate ozone season day emissions for on-road motor vehicles and for most non-road equipment (all except for commercial marine, aircraft/airport support equipment and rail locomotives – also known as the MAR categories). The CT DEEP ran the MOVES2014a model to develop estimates for both 2011 and 2017.

For on-road estimates, the CT DOT provided county-level projections of various traffic data required by the MOVES2014a model for 2017. CT DOT's Series 31 data set projects that 2017 summer daily vehicle miles traveled (VMT) in the Greater Connecticut area will be 44.7 million miles, 0.3% greater than 2011 VMT levels provided by CT DOT. The MOVES2014a runs for 2017 also include appropriate inputs to reflect Connecticut's LEV III program and EPA's federal Tier 3 vehicle and fuel standards, in addition to all the control programs modeled to estimate 2011 emissions. See Section 4.2 (and Table 4-3) for a full description of modeled emission control programs for on-road vehicles. Model runs for 2017 used the same set of high ozone day meteorological inputs as were used in the runs conducted for 2011. See Appendices B and C for more details regarding on-road vehicle inputs for MOVES2014a.

CT DEEP also used EPA's MOVES2014a model to develop 2017 emission estimates for all non-road equipment, except for the MAR categories. As was described in Section 4.1.2, the MOVES2014a model incorporates EPA's most recent version of the NONROAD model, NONROAD2008, which includes all of the control programs that were described in Section 4.2 (and Table 4-5). With the exception of the recreational pleasure craft category[56], the model was run using the model's default set of equipment population growth projections, which are segregated by market sector and fuel type[57]. Model runs for 2017 used the same set of high ozone day meteorological inputs as were used in the runs conducted for 2011. See Appendices B and C for more details regarding non-road inputs for MOVES2014a.

For the MAR categories, CT DEEP used EPA's emission estimates for 2011 and 2017, consistent with those contained in EPA's 2011 emissions modeling platform.[58] Summer day emissions were calculated using EPA's July estimates for each year, assuming they are evenly distributed throughout the month. EPA's emissions estimates account for the marine, aircraft/support equipment and rail locomotive control programs summarized in Table 4-5.

Area and Non-EGU Point Sources

Growth and control factors needed to project 2017 emissions from the 2011 base year were developed as part of a regional effort coordinated by the Mid-Atlantic Regional Air Management Association (MARAMA). Connecticut and other MARAMA workgroup states provided local data, where applicable, to MARAMA to estimate growth and control expected to occur between 2011 and 2017. MARAMA's contractor compiled the information and used it to project 2017 annual emissions from 2011 levels on a county-level basis[59].

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[56] Along with other Northeast states, Connecticut modified the default pleasure craft equipment population estimates for 2011 and 2017, using data from the National Marine Manufacturers Association. See Appendix C for more information.
[57] EPA documentation for NONROAD2008 is located at: https://www.epa.gov/moves/nonroad-model-nonroad-engines-equipment-and-vehicles Further information on EPA's development of non-road equipment population growth can be found in the technical report "Nonroad Engine Growth Estimates"; EPA420—P-04-008; April 2004; NR-008c; See: http://www.epa.gov/omswww/models/nonrdmdl/nonrdmdl2004/420p04008.pdf.
[58] See EPA's Technical Support Document: Preparation of Emissions Inventories for the Version 6.2, 2011 Emissions Modeling Platform (August 2015), located at: https://www.epa.gov/sites/production/files/2015-10/documents/2011v6_2_2017_2025_emismod_tsd_aug2015.pdf.
[59] Comprehensive documentation and the TSD for MARAMA's 2011 & 2017 Beta inventories is available at: http://www.marama.org/technical-center/emissions-inventory/2011-2017-beta-regional-emissions-inventory.

MARAMA and most participating states (including Connecticut) also provided comments to EPA to assist that agency with the development of 2011 and 2017 modeling inventories used by EPA to prepare the proposed Cross-State Air Pollution Rule (CSAPR) Update. In general, EPA followed the comments by incorporating the growth and control factors developed by the MARAMA workgroup when performing photochemical modeling for the proposed rule. EPA's modeling results for 2017 are presented in Section 8 of this TSD for the Greater Connecticut area.

Growth factors used for the area and non-EGU point sectors were based on a variety of indicators as surrogates for future sector activity including economic, energy, vehicle miles traveled, and demographic parameters. While recognizing that these surrogates may not track exactly with emissions, they are considered to be the "best available" data for projecting emissions for area and non-EGU point sources. Growth indicators were mapped to specific source classification codes. The following paragraphs provide a brief summary for each growth indicator. More complete documentation is contained in Appendix E and in the MARAMA TSD for the 2011 and 2017 beta inventories.

New England region energy projections from the U.S. Energy Information Administration (EIA) 2015 Annual Energy Outlook (AEO)[60] were used as growth indicators for fuel burning sources in area source sectors, including the marketing and distribution of petroleum products. AEO2015 provides regional fuel-use forecasts for various fuel types (e.g., coal, residual oil, distillate oil, natural gas, renewables) by end use sector (e.g., residential, commercial, industrial, transportation, and electric power). For example, AEO projections for New England are summarized in Figures 4-3 and 4-4 for the industrial and commercial sectors, respectively. In one case, residual oil consumption by commercial facilities, AEO projections for positive growth between 2011 and 2017 were judged by CT DEEP and other MARAMA workgroup states to be unrealistic, and were replaced with a no-growth assumption. Note that there is very little use of residual oil by Connecticut commercial facilities, so the impact on emissions is minimal.

CT DEEP obtained 2010 to 2020 statewide employment projections from the Connecticut Department of Labor[61] for each 3- or 4-digit North American Industry Classification System (NAICS) code, representing a variety of industrial, commercial and other employment sectors. Linear interpolation was used to estimate 2017 employment levels. Overall, total employment in Connecticut is projected to increase by 5.8%, but employment in the manufacturing sector, typically among the most emissions intensive sectors, is projected to decline by 1.4% over the same time period.

CT DEEP instructed MARAMA's contractor to use employment projections as the growth surrogate for non-fuel burning area sources. Employment projections were also used as the growth indicator for non-EGU point sources, but a no-growth assumption was used for any sector for which forecasts projected shrinking employment levels between 2011 and 2017. This was done to support the potential use of emission reductions from facility shutdowns to meet new source review emission offset requirements. Known point source closures were included in a separate list of potential NOx offsets, and associated emissions (0.7 tons/day of NOx in Greater Connecticut) were carried forward with the 2011 and 2017 inventories for use in the RFP demonstration described in Section 5.

CT DEEP also instructed MARAMA's contractor to use a no-growth assumption for Connecticut's municipal waste combustor (MWC) units. The MWC units have been operating at, or close to, capacity for a number of years. In addition, Connecticut's Solid Waste Management Plan[62] and Comprehensive Materials Management

[60] US Energy Information Administration Annual Energy Outlook 2015. See: http://www.eia.gov/forecasts/archive/aeo15/. Appendix K to MARAMA's Beta Inventory TSD summarizes the AEO2015 data for New England.
[61] Appendix M to MARAMA's Beta Inventory TSD includes a summary employment file for CT.
[62] Connecticut's 2006 Solid Waste Management Plan is currently being updated, with the latest proposed revision dated 2014. For details, see: http://www.ct.gov/deep/cwp/view.asp?a=2718&q=325482&deepNav_GID=1646%20.

Strategy call for achieving 60 percent diversion of solid waste from disposal by 2024 through reduced waste production, increased recycling and increased waste conversion technologies. Therefore, an assumption of no-growth is likely conservative in regards to future MWC throughput.

Figure 4-3. *AEO 2015 Industrial Energy Consumption Projections for New England*

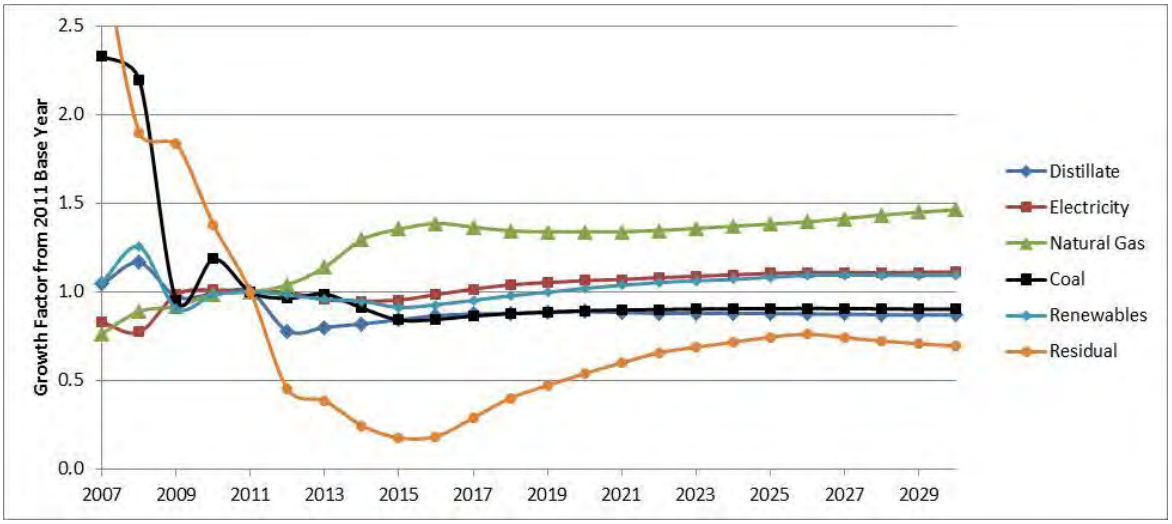
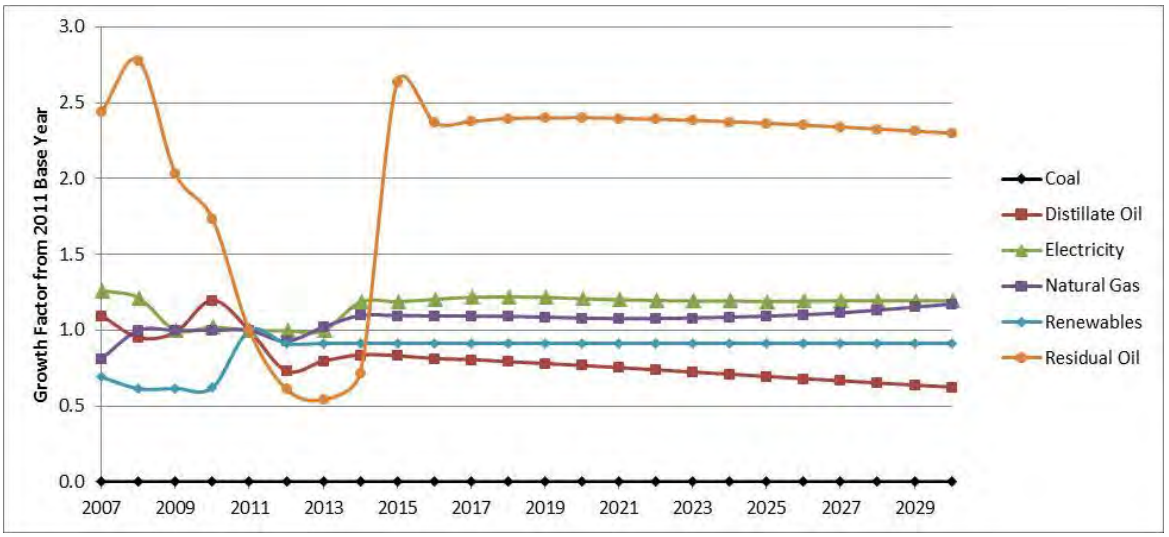


Figure 4-4. *AEO 2015 Commercial Energy Consumption Projections for New England*



Note: These figures are from the MARAMA TSD for the 2011 and 2017 Beta inventories. As noted in the text, AEO projections for positive growth between 2011 and 2017 for residual oil consumption by commercial facilities was judged by CT DEEP and other MARAMA workgroup states to be unrealistic. Growth for that sector was replaced with a no-growth assumption. There is very little use of residual oil in Connecticut by commercial facilities, so the impact on emissions is minimal. See the MARAMA TSD for complete documentation of all growth and control factors used for the point and area source sectors: http://www.marama.org/images/stories/documents/2011-2017_BETA_REI/TSD%20BETA%20Northeast%20Emission%20Inventory%20for%202011%202017%2020160701.pdf

CT DEEP obtained county-level historical population estimates from the US Census Bureau[63] and 2015-2025 population projections from the Connecticut State Data Center.[64] Population in the Greater Connecticut

[63] Historical data for 2000 to 2010 obtained from U.S. Census Bureau. Intercensal Estimates of the Resident Population by County: July 1, 2001 to July 1, 2010. Accessed on November 21, 2013. See: http://www.census.gov/popest/data/intercensal/county/CO-EST00INT-01.html.

[64] Connecticut State Data Center at the University of Connecticut; 2015-2025 Population Projections for Connecticut at State, County, Regional Planning Organization, and Town levels - November 1, 2012 edition. See: http://ctsdc.uconn.edu/2015_2025_projections/.

nonattainment area is projected to grow by 2.2% between 2011 and 2017, from 1,636,040 to 1,671,830 people. The population growth surrogate is used to project future emissions from consumer-oriented area source categories such as the usage of consumer solvent products (e.g., hair sprays/gels, household cleaners).

The 2017 emission projections also use EPA procedures[65] to account for reductions resulting from several federal New Source Performance Standards (NSPS) for oil and gas sources, RICE, Natural Gas Turbines, and Process Heaters. Emission reductions were also incorporated for the federal boiler MACT, RICE MACT and known consent decrees (not applicable to any Connecticut sources).

As was described earlier in Section 4.2 (and Table 4-7), Connecticut implemented seven CTGs effective January 1, 2011. VOC emission reductions resulting from those measures are reflected in both the 2011 and 2017 inventories. Minor emission reductions are projected for the other four CTG/ACT categories described in Section 4.2 In addition, Connecticut has adopted, or is in the process of adopting several additional NOx and VOC measures (see Table 4-8 in Section 4.2), that will not provide enforceable emission reductions prior to the start of the 2017 ozone season. Therefore, those measures have not been incorporated into the 2017 emission projections.

EGU Point Sources

The 2017 MARAMA Beta inventory uses emission estimates for EGU point sources that were developed with the ERTACv2.5 EGU forecasting tool. Development of the tool was a collaborative effort of the Eastern Regional Technical Advisory Committee (ERTAC), made up of representatives from the Northeastern, Mid-Atlantic, Southeastern, and Lake Michigan area states; other member states; industry representatives; and multi-jurisdictional planning organization representatives. The methodology calculates future emissions of NOx and SO_2 based on projections of future generation, the 2011 base year emission rates, and known future year emission controls, fuel switches, retirements, and new units. The future year emissions for other pollutants (CO, NH_3, PM10, PM2.5, and VOC) are calculated using generation projections from the ERTAC tool and a file of emission factors for each unit.

The ERTAC tool uses base year EPA Clean Air Markets Division (CAMD) data and fuel specific growth rates developed primarily from Energy Information Agency (EIA) and National Energy Reliability Corporation (NERC) data to estimate future activity and emissions. The 2017 MARAMA Beta inventory uses EGU estimates calculated with ERTAC v2.5. A complete description of the ERTAC tool and its use for developing 2017 emission projections is included in the MARAMA TSD for the 2011 and 2107 beta inventories. As noted in the MARAMA TSD, state specific input is also incorporated when necessary. CT DEEP provided MARAMA with the state specific inputs, including changes to SO2 emissions for several simple cycle combustion turbines. Connecticut also verified that ERTAC projections accounted for the retirements of: AES Thames Unit A and B, Bridgeport PSEG Unit 2, and Norwalk Units 1, 2 and 10.
CT DEEP used the ERTACv2.5 results to develop unit level ratios of 2017 to 2011 ozone season emission estimates. Those ratios were then applied to the corresponding 2011 PEI unit level summer day emissions to calculate 2017 summer day emission estimates.

Emission Projections for 2017

Greater Connecticut emission estimates for 2011 and projections for 2017 are summarized in Table 4-9 and Figure 4-6 for VOC and Table 4-10 and Figure 4-7 for NOx. The 2017 projections include the effects of the

[65] As documented in Section 4.2.4 of the EPA's 2011 Modeling Platform Version 6.2 TSD (August 2015). See: https://www.epa.gov/sites/production/files/2015-10/documents/2011v6_2_2017_2025_emismod_tsd_aug2015.pdf

control measures described earlier in Section 4, and summarized in Tables 4-3 through 4-7. The control measures that were summarized in Table 4-8 are not reflected in the 2017 projections.

Both VOC and NOx emissions are projected to significantly decrease in Greater Connecticut over the 6-year period from 2011 to 2017. Anthropogenic VOC emissions are projected to decrease by 20%, after accounting for growth. Anthropogenic NOx emission reductions are projected to be even greater, with estimated reductions of 39% between 2011 and 2017, after accounting for growth. The largest reductions are expected in the on-road (43% for VOC and 56% for NOx) and non-road (31% for VOC and 29% for NOx) sectors, as older vehicles and equipment are replaced by newer models.

Table 4-9. *2011 and 2017 Estimated VOC Emissions for Greater Connecticut*

Source Category	2011 Anthropogenic VOC Emissions (tons/ozone season day)	2017 Anthropogenic VOC Emissions (tons/ozone season day)
Stationary Point	1.3	0.9
Stationary Area	48.9	48.3
On-Road Mobile*	27.8	15.9
Non-Road Mobile**	28.1	19.5
Total Anthropogenic VOC	106.1	84.6

Table 4-10. *2011 and 2017 Estimated NOx Emissions for Greater Connecticut*

Source Category	2011 Anthropogenic NOx Emissions (tons/ozone season day)	2017 Anthropogenic NOx Emissions (tons/ozone season day)
Stationary Point	10.0	9.8
Stationary Area	6.2	6.2
On-Road Mobile*	50.5	22.2
Non-Road Mobile**	24.5	17.5
Emission Offset Bank	0.7	0.7
Total Anthropogenic NOx	91.9	56.4

* On-Road Mobile emission projections for 2017 will be used as transportation conformity budgets for the Greater Connecticut nonattainment area. See Section 7 for a description of the transportation conformity process.
** Non-Road Mobile emissions include estimates for the commercial marine, aircraft & airport support equipment, and rail locomotive sectors, which are summed with estimates determined using EPA's NONROAD model (as embedded in MOVES2014a) for all other non-road sectors.

Figure 4-5. *Comparison of 2011 and 2017 VOC Emissions for Greater Connecticut*

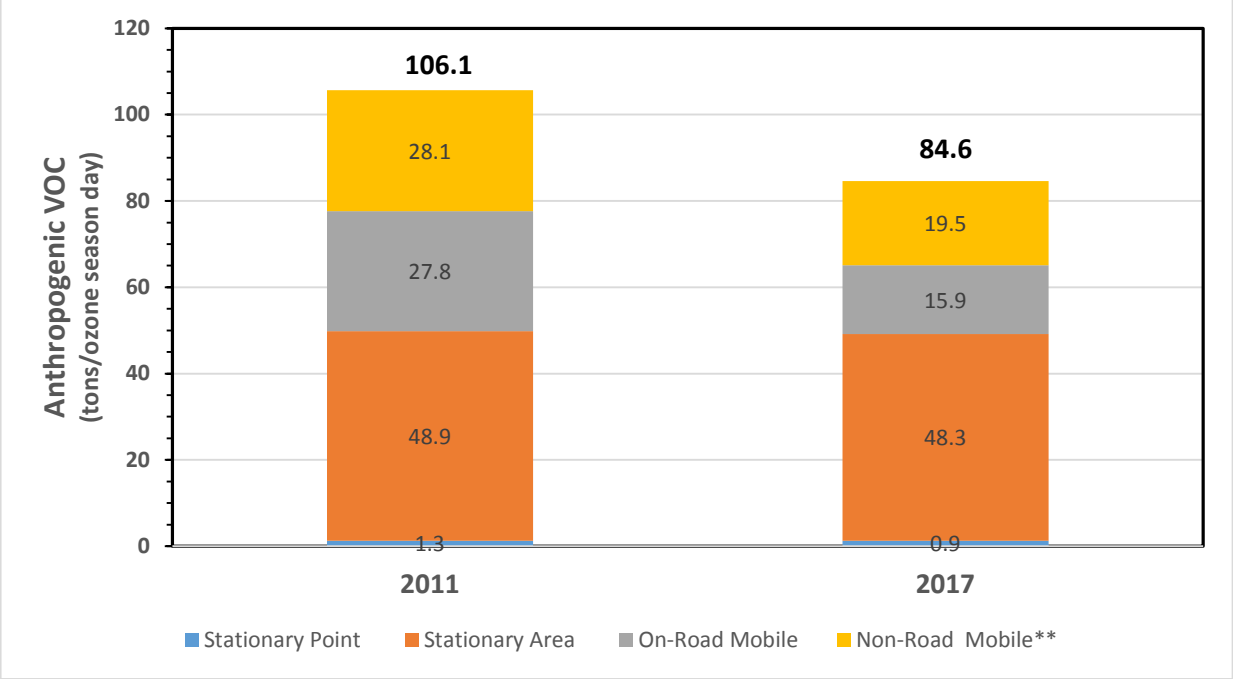
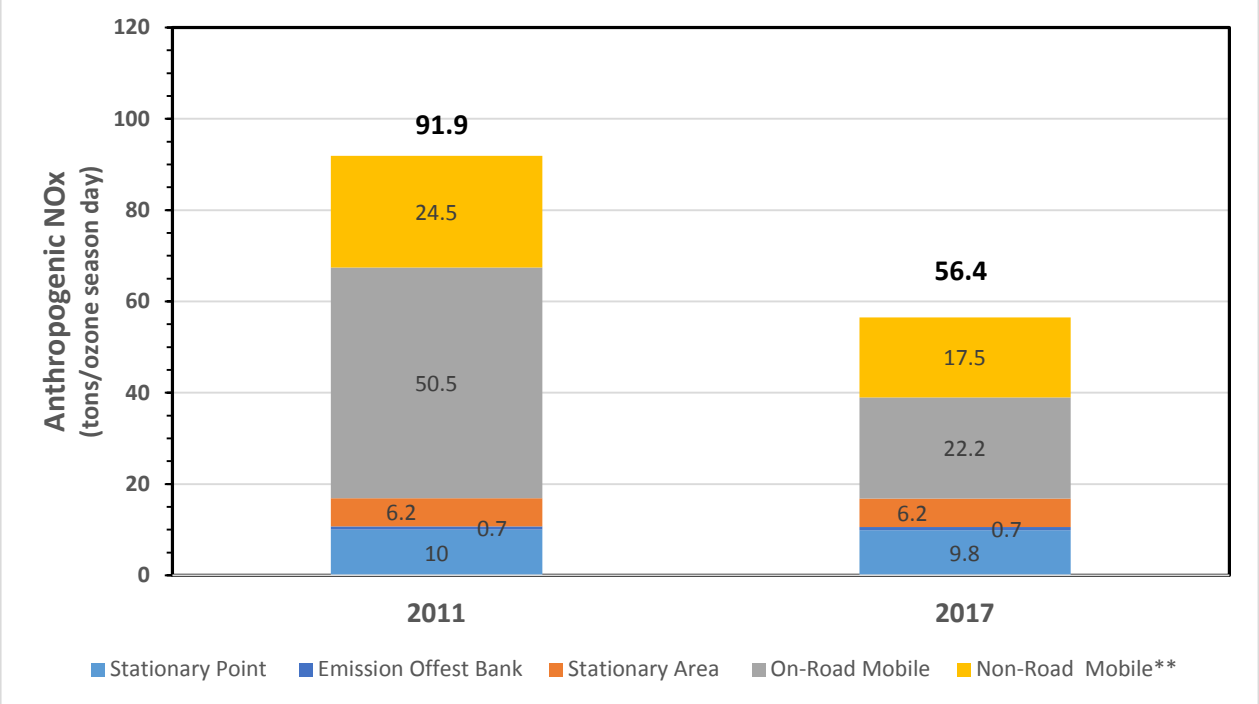


Figure 4-6. *Comparison of 2011 and 2017 NOx Emissions for Greater Connecticut*



5. Reasonable Further Progress

Sections 172(c)(2) and 182(b)(1) of the CAA require non-attainment areas to include a demonstration of Reasonable Further Progress (RFP). The implementation rule for the 2008 standard in 40 CFR 51.1110(a)(2) describes the RFP requirements applicable to the Greater Connecticut nonattainment area. Specifically, as a moderate nonattainment area, Greater Connecticut is required to obtain 15% reduction in ozone precursors within six years after the baseline year. Connecticut's baseline year is 2011, therefore the emission reductions must be achieved by 2017.

In order to demonstrate RFP, a nonattainment area must show that its projected emissions of NOx and VOC will be less than or equal to calculated target levels set for the end of the RFP period. This section describes the methodology and calculations used to establish the 2017 target emission levels for the Greater Connecticut nonattainment area. It also demonstrates that the area will meet RFP requirements because projected NOx and VOC emissions will be significantly less than the calculated target levels.

5.1 Base Year Inventory

The base year inventory for RFP is comprised of all anthropogenic sources of VOC and NOx for a typical high ozone day in 2011. This is identical to the 2011 base year summer day inventory presented in Section 4, which excludes biogenic emissions sources. Table 5-1 presents the high ozone (summer day) emissions for the anthropogenic portion of the Greater Connecticut inventory. This is the starting point for calculation of required target level emissions to show reasonable further progress.

Table 5.1. *Base year RFP Inventory for the Greater Connecticut Nonattainment Area*

Ozone Precursor Pollutant	2011 Base RFP Inventory (TPD)					
	Stationary Point	Stationary Area	On-Road Mobile	Non-Road Mobile	Emission Offset Bank	Total
NOx	10.0	6.2	50.5	24.5	0.7	91.9
VOC	1.3	48.9	27.8	28.1	NA	106.1

5.2 Calculation of Target Levels

EPA's RFP methodology specifies that the required 15% RFP emission reductions can come from any combination of VOC and NOx reductions occurring between the base year (2011) and six years later (2017) for a moderate area. Consistent with past practice, CT DEEP has elected to establish 2017 target levels comprised of 10% NOx reductions and 5% VOC reductions. While both pollutants contribute to ozone formation, the preference for NOx reductions recognizes that Connecticut's ozone problem is NOx limited. Table 5-2 shows the calculation of the Target Levels for the Greater Connecticut 2017 Summer Day Inventory.

Table 5.2. *Determination of 2017 Target Level Emissions to Demonstrate Reasonable Further Progress for the Greater Connecticut Nonattainment Area*

Greater Connecticut Target Level Emission Calculation	NOx (tons/ozone season day)	VOC (tons/ozone season day)
1. Base Year (2011)	91.9	106.1
2. RFP Reductions needed (Base*0.1) for NOx and (Base *0.05) For VOC	9.2	5.3
3. 2017 Target Level (Base-RFP Reductions Needed)	82.7	100.8

5.3 Compliance with RFP Requirements

Compliance with the RFP requirements is met provided that the projected 2017 ozone season day emissions for the Greater Connecticut nonattainment area are less than or equal to the calculated RFP Target Levels. Projected 2017 emissions were developed as described in Section 4. The process involved two steps: 1) revising 2011 summer day emissions estimates from CT DEEP's 2011 PEI to incorporate the most recent versions of EPA's mobile source models, update CT-specific mobile source inputs, include CT DEEP's bank of potential NOx emission offsets, and correct summation errors found in the 2011 PEI; and 2) projecting 2017 ozone season day emissions from the revised 2011 emissions by accounting for expected growth and adopted control programs in each source sector.

As described in Section 4, the growth and control factors used to develop the 2017 summer day inventory for Greater Connecticut are consistent with those developed by CT DEEP and other states as part of a MARAMA-led regional workgroup[66] responsible for creating the 2011 and 2017 OTC modeling inventories. EPA also decided to use essentially the same set of growth/control factors for its 2011eh modeling platform after soliciting comments and collaborating with the states. A prime difference between the MARAMA/OTC and EPA efforts is the use of the ERTAC and IPM models, respectively, to project EGU emissions. CT DEEP's 2017 summer day EGU emissions were calculated consistent with the ERTAC projections. The differences are minor for RFP purposes, since Connecticut EGU sources comprise only 2% of 2011 base year NOx emissions, and projected total 2017 emissions are well below the required RFP target levels.

Table 5-3 compares projected 2017 ozone season day emissions for Greater Connecticut to the required RFP target levels. Both NOx and VOC emission levels in 2017 are projected to be well below the target levels, thus meeting the RFP requirement. Projected NOx emissions in 2017 are 38% less than 2011 emission levels, while the RFP target requires a 10% emission reduction. Similarly, projected VOC emissions in 2017 are 20% less than 2011 emission levels, while the RFP target requires a 5% reduction. The excess emission reductions beyond the RFP requirement (28% excess for NOx and 15% excess for VOC) are available for use to meet CAA contingency measure requirements that are discussed in Section 10.

Table 5.3. *Comparison of 2017 Projected Emissions to the Required RFP Target Levels for Greater Connecticut*

Description	NOx (tons/ozone season day)	VOC (tons/ozone season day)
2017 RFP Emission Target Levels (portion of required 15% precursor reduction)	82.7 (10%)	100.8 (5%)
2017 Projected Emissions (% reduction projected from 2011- 2017)	56.4 (38%)	84.6 (20%)

[66] As described in Section 4, CT DEEP performed new runs of EPA's MOVES2014a model to develop updated in-state summer day estimates of 2011 and 2017 emissions for on-road and non-road sources (except for MAR sources). Emission projections for 2017 for all other source categories were developed consistent with the growth and control factors identified by the MARAMA-led regional workgroup. EPA used essentially the same growth/control factors to develop the 2011/2017eh inventories used in their CAMx modeling, except that EPA used the IPM model to project 2017 EGU emissions, while the MARAMA/OTR states used the ERTAC model.

6. Reasonably Available Control Measures (RACM) Analysis

As previously described in Section 4 of this document, and further analyzed in this section, sources in Connecticut are well-controlled as a result of numerous state and federal measures that have or will soon be implemented to reduce in-state emissions of ozone precursors. CT DEEP has historically pursued in-state emissions reductions and continues to do so in acknowledgement of the importance of actions in individual states in the larger region to better position the Connecticut nonattainment areas to attain both the 2008 and 2015 ozone NAAQS. The reasonably available control measures (RACM) analysis presented here identifies a number of reasonably available control technology (RACT) and other measures that have been adopted recently or are in the process of being adopted to satisfy the 2008 ozone NAAQS. CT DEEP is not aware of any additional candidate measures that can be identified as RACM for the 2008 NAAQS, as atmospheric transport from upwind areas on most high ozone days overwhelms the ability of CT DEEP to significantly advance Connecticut's attainment date solely with in-state control strategies. In addition, EPA's recently finalized bump-up process[67] provided insufficient time to adopt and implement additional RACM candidate measures prior to the 2016 ozone season, which would need to occur to advance the attainment date by one year.

6.1 RACM Requirements

The final rule "Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements" (the Implementation Rule)[68] describes how a state may satisfy the requirement of CAA section 172(c)(1) to implement all RACM that will assist the state to attain the ozone standard as expeditiously as possible. A RACM analysis traditionally includes point, area and mobile sources. The measures that are considered RACM are those readily implemented measures that are economically and technologically feasible and that advance the attainment date or are necessary for RFP for the area. RACM requires an area-specific analysis, in which the State considers the application of RACM for any source of VOCs or NOx within the state borders.

A subset of RACM are the NOx and VOC control measures that implement a RACT level of control on a source or source category. EPA has defined RACT as the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.[69] Unlike other RACM, RACT is limited to VOC sources for which EPA has developed Control Technique Guidelines (CTGs) and to major VOC and NOx non-CTG sources. As the analytical work for implementing the CTGs is readily available, and because the RACT sources are, *a priori*, a significant focus for implementing control strategies, EPA expects requirements limiting emissions from RACT sources to be addressed more immediately than the other control options. Connecticut submitted its RACT state implementation plan (SIP) for the 2008 ozone NAAQS to EPA on July 17, 2014. The 2014 RACT SIP included commitments to adopt additional control measures. Progress in addressing the RACT commitments is described in this section.

[67] A RACM analysis is required for areas classified as moderate or higher nonattainment for ozone. The EPA Administrator signed the notice to reclassify the Greater Connecticut area from marginal to moderate nonattainment on April 11, 2016. The ruling was published on May 4, 2016 and effective on June 3, 2016. To be considered RACM, a measure or group of measures must advance the attainment date by at least one year. For moderate areas, that means achieving compliant design values during the 2016 ozone season; therefore, any additional RACM controls would need to be in place prior to the 2016 ozone season. The timing of the bump-up process makes that practically infeasible.
[68] 80 FR 12264; March 6, 2015.
[69] 44 FR 53762; September 17, 1979.

This section also provides an analysis of whether or not RACM exist for the point, area, off-road and on-road categories (including potential transportation control measures (TCM) for on-road mobile sources).

CT DEEP concludes this section indicating that the identified measures in this section satisfy the RACM obligation for the 2008 ozone NAAQS.

6.2 Summary of CT Reasonably Available Control Technology (RACT) Analysis

Section 182 of the CAA sets forth two separate RACT requirements for ozone non-attainment areas. The first requirement, the RACT "fix-up", calls for the state to correct RACT rules for which EPA identified deficiencies before the CAA was amended in 1990. Connecticut addressed this requirement as part of the attainment SIP submitted for the 1-hour ozone NAAQS, so there are no remaining deficiencies to correct. The second requirement calls for the state to evaluate, update and implement, as necessary, RACT controls on all major VOC and NOx emission sources and on all sources and source categories covered by an EPA-published CTG, the presumptive norm establishing RACT for the covered VOC sources. CT DEEP's RACT review for the 2008 ozone NAAQS was submitted to EPA as a SIP revision on July 17, 2014.[70] Sections II through IV of the July 17, 2014 RACT SIP describe the actions that CT DEEP has taken to address RACT for the 1-hour and 1997 ozone NAAQS, as well as completed and planned actions as a result of the 2008 ozone NAAQS RACT review.

The 2014 RACT SIP identified several source categories for which the RACT level of control required an update, including the NOx limitations for fuel burning sources and municipal waste combustors. This section describes CT DEEP's progress in fulfilling the commitments made to update NOx requirements in the July 17, 2014 RACT SIP. This section also describes the implemented VOC controls for major sources of VOC and CTG sources.

Major Sources of NOx

Major sources of NOx are identified in Table 5 of the July 17, 2014 RACT SIP. Each major source of NOx is subject to either RCSA section 22a-174-38 or RCSA section 22a-174-22. RCSA section 22a-174-38 applies to the state's municipal waste combustors (MWCs), of which there are six facilities, while RCSA section 22a-174-22 applies to every fuel-burning emission unit located in the state. As described in the RACT SIP, CT DEEP has determined that some of the NOx emissions limitations in RCSA sections 22a-174-38 and 22a-174-22 need to be reduced to require a current RACT level of control.

The MWC units at four of the six facilities are of the mass burn waterwall type, and CT DEEP has identified 150 ppmvd NOx as the emission limit resulting from a RACT level of control for this type of MWC unit. This emission limit is lower than the limits currently required of mass burn waterwall units through RCSA section 22a-174-38. CT DEEP adopted this emission limit as an amendment to RCSA section 22a-174-38. The amended regulation, which became effective on August 2, 2016, specifies that affected sources must meet the revised emission limit within one year of the rule's effective date (i.e., by August 2, 2017). CT DEEP estimates that the reduction in the emission limit for the mass burn waterwall MWC units will yield a NOx emission reduction of nearly 2 tons per day.

CT DEEP is also currently pursuing replacement of RCSA section 22a-174-22 with RCSA section 22a-174-22e to update the emissions limits for fuel-burning equipment located at major sources of NOx. The new RACT emission limits, when fully implemented, will be generally consistent with RACT-based emission limits now in place in New York and New Jersey. The new emission limits are phased-in to provide owners and operators

[70] Available on the DEEP website: http://www.ct.gov/deep/cwp/view.asp?a=2684&q=546804&deepNav_GID=1619

with adequate time to plan, budget, hire contractors, and install new control technology or new emission units. Phase 1, as proposed, applies from June 1, 2018 through May 31, 2022, and Phase 2 applies June 1, 2022 forward. With the full implementation of more stringent emissions limits in Phase 2, CT DEEP also proposes to end the state's NOx emission trading program. New RCSA section 22a-174-22e was proposed on May 2, 2016 and the public hearing was held on June 8, 2016.[71] CT DEEP is moving the proposal towards adoption on a schedule to allow for an effective date no later than December 31, 2016, assuming timely approval is received from the Legislative Regulations Review Committee. Upon full implementation, CT DEEP estimates actual NOx emission reductions from the EGUs regulated by RCSA section 22a-174-22e to be about 395 tons per year.[72]

Although these regulatory revisions for NOx sources are considered to be RACT, the implementation of the revised emission limits will not occur in time to advance the attainment date; therefore, they are not identified as RACM measures for the 2008 ozone NAAQS.

Major VOC Sources and CTG Category Sources

Stationary sources of VOC are regulated by RCSA sections 22a-174-20 and 22a-174-32. RCSA section 22a-174-32 explicitly regulates major sources of VOC for the purpose of implementing RACT and allows CT DEEP to conduct individual RACT analyses for sources.

For sources for which a CTG has been published, RACT is considered met if a state imposes controls equivalent to the CTG for that source or source category. CT DEEP has addressed the majority of the CTG source categories and requirements through RCSA sections 22a-174-20 and 22a-174-32. The Stage I vapor recovery category was historically addressed via RCSA section 22a-174-30, which also included Stage II vapor recovery requirements. Following a legislative mandate to decommission the use of Stage II vapor recovery equipment and improve Stage I control compliance by July 2015,[73] CT DEEP repealed RCSA section 22a-174-30 and adopted new section 22a-174-30a with updated Stage I vapor recovery requirements consistent with the legislative mandate. A complete discussion of the programmatic revision and an analysis under CAA sections 110(l) and 184(b)(2) was submitted to EPA on September 14, 2015.[74]

Table 4 of the July 17, 2014 RACT SIP identifies every CTG and the regulatory requirement by which CT DEEP imposes control equivalent to each CTG. Table 5 of the July 17, 2014 RACT SIP includes all of the major sources of VOC in Connecticut. Through the regulations cited in Table 4 of the RACT SIP and CT DEEP's NSR permit program, all major sources of VOC and all CTG sources are regulated to at least a RACT level of control for VOC.

The CT DEEP concludes that the VOC RACT regulations described above collectively satisfy RACM requirements for major sources of VOC and CTG sources.

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[71] Current information on the adoption available on the Connecticut eRegulations site, PR2015- 193, https://eregulations.ct.gov/eRegsPortal/Search/RMRView/PR2015-193

[72] The avoided tons of NOx for the EGU sector is estimated based on the weighted monthly averages of historical operations data during the months of January and July in 2010-2015. The reduction estimates reflect historical actual operations. Reductions in potential emissions would be much higher. Historical emissions show that actual NOx emissions have decreased since 2005. Potential emissions do not equal actuals for these units since actual operations have been erratic, particularly in recent years. For the regulated EGUs overall, actual NOx emissions have decreased since 2005, generally due to a reduction in hours of operation for many of the units with higher emission rates.

[73] CGS section 22a-174e was amended by Public Act 13-120 effective June 18, 2013.

[74] Available on the DEEP website: http://www.ct.gov/deep/lib/deep/air/regulations/sip/SIP-FinalSubmittal_GDF-VaporRecovery.pdf

6.3 RACM Analysis for Other Stationary/Area Sources

The 1990 CAA amendments recognized the significant role of interstate transport of NOx and VOCs in influencing the ability of a downwind state to attain the ozone NAAQS. As part of that recognition, the United States Congress established the Ozone Transport Commission (OTC) to help coordinate control plans for reducing ground-level ozone in the Northeast and Mid-Atlantic states.

As a member of the OTC, Connecticut has worked jointly with the other eleven member states and the District of Columbia to assess the nature and magnitude of the ozone problem in the region, evaluate potential new control approaches and recommend regional control measures to ensure attainment and maintenance of the ozone NAAQS. This regional approach recognizes that all states benefit from coordinated attainment planning efforts to reduce ozone precursors. Connecticut has been an active participant in this regional effort to assess potential attainment measures including RACM/RACT for the 8-hour ozone NAAQS.

To support the submission of attainment plans for the 1997 ozone NAAQS, OTC staff and member states formed several workgroups to identify and evaluate candidate control measures. Initially, the workgroups compiled and reviewed a list of over 1,000 candidate control measures. These control measures were identified through published sources such as EPA's Control Technique Guidelines, STAPPA/ALAPCO "Menu of Options" documents, the AirControlNET database, emission control initiatives in other states including California, state/regional consultations, and stakeholder input. The workgroups developed a preliminary list of approximately fifty candidate control measures to be considered for more detailed analysis with respect to the potential for emissions reductions, cost effectiveness, and ease of implementation. These measures were anticipated to have the potential to be the most effective in reducing ozone air quality levels in the Northeastern and Mid-Atlantic States. The 2007 OTC control measures Technical Support Document summarizes the process used to identify and evaluate candidate control measures and can be found on the OTC Website.[75]

Connecticut adopted a number of those candidate control measures prior to 2011 including:

- VOC content limits for consumer products;
- VOC content limits for architectural and industrial maintenance coatings;
- Restrictions on asphalt in paving operations;
- Pressure-vacuum vent valves; and
- Reduced vapor pressure limitation for solvent cleaning.

More information is available in the RACT SIP submitted for the 1997 ozone NAAQS.

In pursuing the adoption of these measures, Connecticut acknowledged that none of these measures, implemented by Connecticut alone, would be sufficient to advance attainment by one year or more for the 1997 ozone NAAQS. Connecticut chose to adopt these measures jointly with the OTC to develop effective controls on the regional level. In addition, such measures may serve to establish RACT for upwind states newly subject to RACT requirements for the 2008 or 2015 ozone NAAQS.

CT DEEP considers the RACM review developed in coordination with the OTC for the 1997 ozone NAAQS to largely satisfy the RACM requirement for the 2008 ozone NAAQS, given the relatively short passage of time between Connecticut's adoption of 1997 ozone NAAQS RACM prior to 2011 and the 2014 deadline for submission of the RACT SIP for the 2008 ozone NAAQS. In addition, CT DEEP performed a review in 2013-2014 to update the 1997 ozone NAAQS regional RACM review. In this focused review, CT DEEP examined a

[75] See: http://www.otcair.org/document.asp?fview=Report, listed under work products completed in 2007.

number of possible control measures including NOx limitations on asphalt production; VOC limits on lubricants used in metal rolling; VOC limits on polyethylene and polystyrene product manufacturing; and VOC emission limits for industrial laundry facilities. CT DEEP also considered updated OTC model rules for autobody refinishing, consumer products, architectural coatings, above ground storage tanks, and solvent degreasers.

CT DEEP determined it was appropriate to revise NOx emission limits for boilers and heaters used in asphalt production. Major asphalt sources of NOx will be addressed through the adoption of RCSA section 22a-174-22e (described earlier), while asphalt production facilities that are not major for NOx will be addressed through RCSA section 22a-174-22f. Note that RCSA section 22a-174-22f[76] will require the owner of equipment at all non-major sources of NOx to maintain fuel-burning emission units in proper operating condition and track daily emissions during the summer months, when NOx emissions are particularly harmful. If an emission unit exceeds a certain daily level of NOx emissions, the owner must reduce the emissions rate of the unit to the level required by RCSA section 22a-174-22e. These non-major source NOx requirements are being pursued for adoption, but will not secure emission reductions in time to advance the attainment date, so CT DEEP concludes they are not RACM for the 2008 ozone NAAQS.

CT DEEP is also currently pursuing revisions to existing VOC rules for two model rules developed by the OTC: RCSA section 22a-174-40, updating VOC content limits for consumer products, and RCSA section 22a-174-41, updating VOC content limits for architectural, maintenance and industrial coatings. The amendments have not yet been proposed for public hearing and may not secure additional emission reductions prior to the 2017 ozone season; therefore, they are not considered to be RACM measures that could advance the attainment date. However, upon adoption, the amendments will produce additional VOC emission reductions compared with the current regulations and will assist with providing for attainment and maintenance of the 2008 ozone NAAQS and progress towards attaining the 2015 NAAQS.

As described in Table 3 of the July 17, 2014 RACT SIP[77], CT DEEP determined that the remaining OTC control measures for more restrictive limits on solvent degreasing and autobody refinishing would not be pursued in Connecticut at this time due to a limited number of sources, a low level of available emission reductions, and/or small business considerations. Furthermore, many of the sources in these categories are subject to NSR permitting. Since CT DEEP's minor source NSR program also requires the implementation of BACT, permitting of new or modified sources will result in a level of control that is RACT or higher.

In addition to the measures discussed above, NOx reductions are being achieved as an ancillary benefit to regional haze measures adopted in Connecticut to reduce the level of sulfur allowed in distillate and residual fuel oil used by stationary and area sources (including residential). As described in Section 4.2.2, revisions to CGS 16a-21a and RCSA 22a-174-19a and 19b establish more stringent sulfur limits as of July 1, 2014 (Phase 1) and July 1, 2018 (Phase 2). CT DEEP considers the Phase 1 limits to be RACM for the 2008 ozone NAAQS. While the Phase 2 limits are not RACM because they will not advance the attainment date for the 2008 NAAQS, they will help to further reduce ozone levels as SIP planning transitions to achieving compliance with the 2015 ozone NAAQS.

Table 6-1 provides a summary of RACM determinations for the stationary and area source measures adopted, or being pursued for adoption in Connecticut. As mentioned earlier, although CT DEEP intends to implement all these measures statewide, only those that could be implemented prior to the 2016 ozone season are considered to

[76] Information available as part of tracking number PR2015-193 at this location: https://eregulations.ct.gov/eRegsPortal/Search/RMRView/PR2015-193. DEEP is pursuing adoption of RCSA 22a-174-22f in concert with 22a-174-22e, with a targeted adoption date before the end of 2016.
[77] Available at: http://www.ct.gov/deep/cwp/view.asp?a=2684&q=546804&deepNav_GID=1619.

be RACM. Those implemented in 2017 or later are not considered as RACM because they will not advance the attainment date by one year or more.

Table 6-1. *Summary of RACM Determinations for Stationary and Area Source Measures Adopted or Currently in Adoption Process in Connecticut*

Category	Regulation or Statute	Adoption Date	Implementation Date	Considered to be RACM?
Major & CTG Sources (VOC)	RCSA 22a-174-20 CGS 22a-174e RCSA 22a-174-30a RCSA 22a-174-32	4/6/2010, 10/31/2012, 3/7/2014 6/18/2013 (PA 13-120) 7/8/2015 7/8/2015	1/1/2011 & 1/1/2013 6/1/2014 6/18/2013 7/8/2015 7/8/2015	Yes: (11 CTG/AIM categories. See Section 4.2.2.1 and Table 4-7 for more information)
Low Sulfur Distillate & Residual Oil (NOx)	CGS 16a-21a RCSA 22a-174-19a RCSA 22a-174-19b	7/8/2013 (PA 13-298) 4/15/2014 4/15/2014	Phase 1: 7/1/2014 Phase 2: 7/1/2018	Phase 1: Yes Phase 2: No (based on implementation date)
Municipal Waste Combustor (NOx)	RCSA 22a-174-38	8/2/2016	8/2/2017	No (based on implementation date)
Asphalt Production	RCSA 22a-174-22e	Proposed: 5/2/2016 Proposed: 5/2/2016	Phase 1: 6/1/2018 Phase 2: 6/1/2022	No (based on implementation date)
Other Major NOx Sources	RCSA 22a-174-22e	Proposed: 5/2/2016	Phase 1: 6/1/2018 Phase 2: 6/1/2022	No (based on implementation date)
Minor NOx Sources	RCSA 22a-174-22f	Proposed: 5/2/2016	6/1/2018	No (based on implementation date)
Consumer Products	RCSA 22a-174-40	Revisions under development	Goal: CY 2017	No (based on implementation date)
Architectural and Industrial Maintenance Coatings	RCSA 22a-174-41	Revisions under development	Goal: CY 2017	No (based on implementation date)

6.4 RACM Analysis for Mobile Sources

This portion of the RACM analysis evaluates transportation control measures (TCMs) and their contribution to transportation and air quality planning in Connecticut. The statewide transportation planning process in Connecticut includes the identification, evaluation, selection, and implementation of appropriate TCMs. The Connecticut Department of Transportation (CTDOT) produces annual updates to the Statewide Transportation Improvement Program (STIP), documenting projects to be funded under federal transportation programs for a 3-year period.

One of the federal funding sources for the STIP is the Federal Highway Administration's Congestion Mitigation and Air Quality (FHWA CMAQ)[78] Program. Funds are used for projects that reduce emissions from vehicles and non-road equipment, improve traffic congestion, and/or generally reduce emissions to improve air quality. Some examples of projects eligible for FHWA CMAQ funding are:

- Programs for improved public transit;
- Restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high-occupancy vehicles (HOV);
- Employer-based transportation management plans, including incentives;
- Traffic flow improvement programs that achieve emission reductions;
- Fringe and transportation corridor parking facilities serving multiple-occupancy vehicle programs or transit service;
- Programs for the provision of all forms of high-occupancy, shared-ride services;
- Programs to limit portions of road surfaces or certain sections of the metropolitan area to targeting use of non-motorized vehicles or pedestrian use, both as to time and place;
- Public Education and Outreach Activities;
- Idle Reduction;
- Freight/Intermodal;
- Alternative Fuels and Vehicles;
- Programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of cyclists, in both public and private areas;
- Employer-sponsored programs to permit flexible work schedules; and
- Diesel retrofits and emission control technology on non-road diesel equipment or on-road diesel equipment operated on highway construction projects and port-related areas.

CTDOT produces annual FHWA CMAQ reports consisting of details of transportation projects and programs that are considered TCMs and will benefit air quality in Connecticut. The reports provide estimates of emission benefits resulting from the selected projects. Table 6-2 was compiled from CTDOT's annual reports from the period 2011 through 2015 for the most significant FHWA CMAQ projects and programs. A few included projects have construction completion dates in the near future beyond 2015.

[78] For a current description of the FHWA CMAQ program, see: http://www.fhwa.dot.gov/fastact/factsheets/cmaqfs.cfm. In this document, the phrase FHWA CMAQ will be used distinguish it from EPA's photochemical dispersion model, CMAQ (Community Multi-scale Air Quality model), which is referenced elsewhere in this document.

Table 6-2. *Emission Summary Compiled from CT DOT 2011-15 Annual FHWA CMAQ Reports*

State Project Number	Project Description	Geographic Area	Total Emission Benefit (kg/day)		
			VOC	NOx	$PM_{2.5}$
TRAFFIC FLOW IMPROVEMENTS					
0102-0326	FY11 So. Norwalk CBD Signal System (Phase 2)	NY-NJ-CT	0.31	0.29	n/a
0151-0307	FY11 IMS Breakout of 151-273 for I-84, Waterbury to Southington	NY-NJ-CT	2.80	1.37	n/a
0053-0181	CY13 Signal System-Putnam Blvd to Welles Street	Greater CT	0.30	0.30	n/a
0053-0187	F13 Intersection Improvement @ Harris and & House Streets Glastonbury	Greater CT	0.09	0.07	n/a
0056-0312	FY13 Traffic Signal Upgrade	NY-NJ-CT	1.00	0.65	0.00
0063-0690	FY13 Traffic Signal Upgrade @ 14 locations	Greater CT	0.41	0.29	n/a
0092-0666	FY13 Traffic Signal Upgrade @ 15 locations	NY-NJ-CT	0.27	0.18	0.00
0102-0347	FY13 Traffic Signal Upgrade @ 10 locations	NY-NJ-CT	0.25	0.19	0.00
0151-0325	FY13 Traffic Signal Upgrade @ 15 locations	Greater CT	0.18	0.30	n/a
0015-0365	FY 14 Traffic Signal System in five locations in Bridgeport	NY-NJ-CT	0.87	0.38	0.07
0084-0108	FY15 Construct Roundabout at CT111/110	NY-NJ-CT	0.08	0.03	0.00
EXPERIMENTAL PILOT PROGRAM					
0170-3069	FY11 CT Clean Fuels (NY-NJ-CT)	NY-NJ-CT	0.04	1.08	0.02
0170-0370	FY11 CT Clean Fuels (Greater CT)	Greater CT	0.02	0.45	n/a
0170-3100	FY13 CT Clean Fuels (NY-NJ-CT)	NY-NJ-CT	0.04	1.08	0.02
0170-0101	FY13 CT Clean Fuels (Greater CT)	Greater CT	0.02	0.45	n/a
0170-3109	FY14 CT Clean Fuels (NY-NJ-CT)	NY-NJ-CT	0.04	1.08	0.02
0170-3110	FY14 CT Clean Fuels (Greater CT)	Greater CT	0.02	0.45	n/a
0170-3118	FY15 CT Clean Fuels (NY-NJ-CT)	NY-NJ-CT	0.04	1.08	0.02
0170-3119	FY15 CT Clean Fuels (Greater CT)	Greater CT	0.02	0.45	n/a
DEMAND MANAGEMENT					
	FY11 Statewide Trans. Demand Management (NY-NJ-CT)	NY-NJ-CT	25.36	44.14	2.36
0170-3071	FY11 Statewide Trans. Demand Management (Gtr CT)	Greater CT	25.36	44.14	n/a
0170-3072	FY12 Statewide Trans. Demand Management (NY-NJ-CT)	NY-NJ-CT	25.36	44.14	2.36
0170-3093	FY12 Statewide Trans. Demand Management (Gtr CT)	Greater CT	25.36	44.14	n/a
0170-3094	FY13 Statewide Trans. Demand Management (NY-NJ-CT)	NY-NJ-CT	25.36	44.14	2.36
0170-3102	FY13 Statewide Trans. Demand Management (Gtr CT)	Greater CT	25.36	44.14	n/a
0170-3103	FY14 Statewide Trans. Demand Management (NY-NJ-CT)	NY-NJ-CT	25.36	44.14	2.36
0170-3111	FY14 Statewide Trans. Demand Management (Gtr CT)	Greater CT	25.36	44.14	n/a
0170-3112	FY15 Statewide Trans. Demand Management (NY-NJ-CT)	NY-NJ-CT	25.36	44.14	2.36
0170-3120	FY15 Statewide Trans. Demand Management (Gtr CT)	Greater CT	25.36	44.14	n/a
0170-3121					

State Project Number	Project Description	Geographic Area	Total Emission Benefit (kg/day)		
			VOC	NOx	$PM_{2.5}$
	DEMAND MANAGEMENT				
0170-3073	FY11 Telecommuting Partnership (Greater CT)	Greater CT	25.36	44.14	n/a
0170-3074	FY11 Telecommuting Partnership (NY-NJ-CT)	NY-NJ-CT	25.36	44.14	2.36
0170-3095	FY12 Telecommuting Partnership (NY-NJ-CT)	NY-NJ-CT	25.36	44.14	2.36
0170-3096	FY12 Telecommuting Partnership (Greater CT)	Greater CT	25.36	44.14	n/a
0170-3104	FY13 Telecommuting Partnership (NY-NJ-CT)	NY-NJ-CT	25.36	44.14	2.36
0170-3105	FY13 Telecommuting Partnership (Greater CT)	Greater CT	25.36	44.14	n/a
0170-3113	FY14 Telecommuting Partnership (NY-NJ-CT)	NY-NJ-CT	25.36	44.14	2.36
0170-3114	FY14 Telecommuting Partnership (Greater CT)	Greater CT	25.36	44.14	n/a
0170-3122	FY15 Telecommuting Partnership (NY-NJ-CT)	NY-NJ-CT	25.36	44.14	2.36
0170-3123	FY15 Telecommuting Partnership (Greater CT)	Greater CT	25.36	44.14	n/a
TRANSIT					
0171-0305	FY11 CMAQ Busway Transfer to FTA	Greater CT	9.40	19.90	n/a
0170-3108	FY13 Advanced Tech Buses	Greater CT	0.23	1.06	0.08
INCIDENT MANAGEMENT & OTHER TCM's					
0015-0345	FY13 Route 8 Area CCTV (PD)	NY-NJ-CT	7.01	3.43	0.00
0015-0344	FY15 Route 8 Area VMS	NY-NJ-CT	7.01	3.43	0.00
ALTERNATE VEHICLES					
0110-0135	FY13 Purchase 5 Hybrid Muni Vehicles	Greater CT	0.02	0.01	n/a
0103-0264	FY14 Construction of natural gas fueling station in Norwich	Greater CT	0.16	0.19	n/a
	Statewide Total for all projects (kg/day)		536.96	920.58	23.83
	Statewide Total (tons/day)		0.59	1.02	0.026
	Greater Connecticut Area Total (tons/day)		0.29	0.51	0.013

Total emission reductions from these projects are estimated to be 0.3 tons of VOC and 0.5 tons of NOx per ozone season day in the Greater Connecticut area. Approximately half of the emission benefits result from ongoing initiatives to promote increased telecommuting[79] and the recently completed CT*fastrak*[80], Connecticut's first bus rapid transit system. The system includes a dedicated bus-only roadway connecting New Britain and Hartford, with 10 stations along the primary route. Initial CTDOT data[81] indicate that ridership levels in the area served by the CT*fastrak* system doubled compared to levels prior to the March 2015 opening, well ahead of pre-project projections. Both the telecommuting initiatives and the CT*fastrak* system are reflected in the results of CTDOT's travel demand modeling, which is used to develop the transportation conformity emission budgets that are described in Section 7.

Although all of these measures will be implemented by 2017, the combined emission reductions are estimated to reduce overall 2017 ozone precursor emissions in the Greater Connecticut area by less than one percent, and are judged not be RACM because they are not large enough to advance the attainment date by at least one year. In addition to the projects quantified above, CTDOT continues to implement numerous other TCMs to improve traffic flow, manage travel demand, increase transit and commuter rail availability, manage traffic incidents, promote alternative fueled vehicles, encourage ride sharing/telecommuting and educate the public and businesses about available programs. See Appendix F for a full list of near-term TCM projects from CTDOT's most recent STIP.

Section 9 of this document includes descriptions of additional CT DEEP mobile source initiatives that result in ozone precursor emission reductions. Some of these programs, such as the Lawn Equipment Exchange Fund and engine replacements/retrofits using Diesel Emission Reduction Act funding, provide important reductions in localized emissions of NOx, VOC, PM2.5 and air toxics. Other programs such as Smartway® and EVConnecticut, are relatively new initiatives that promise to provide meaningful emission reductions as they are expanded and phased-in over time. CT DEEP has concluded that, collectively, these programs do not produce sufficient emission reductions before 2017 to advance the attainment date, and therefore are not considered to be RACM measures.

Looking beyond 2017, CT DOT plans to begin phasing in a major new commuter rail line in early 2018 along the Interstate-91 corridor, servicing the large urban areas of New Haven, Hartford and Springfield. This "Hartford" commuter line, a key component of the Let'sGoCT! Transportation initiative[82], is a partnership between Connecticut, Massachusetts, Amtrak and the Federal Railroad Administration to make rail travel in the corridor more attractive and competitive. The new service will connect with the existing Metro-North commuter rail and Amtrak Acela high-speed rail programs that serve the Northeast Corridor. As this new commuter line is phased-in, reductions in VMT and traffic-related emissions can be expected along the I-91 corridor, helping to maintain attainment of the 2008 ozone NAAQS and make progress towards attaining the 2015 ozone NAAQS.

[79] See: http://www.hartfordbusiness.com/article/20140303/PRINTEDITION/302279941/ct-targets-commuters.
[80] For more information, see: http://ctfastrak.com/.
[81] See: http://www.courant.com/news/connecticut/hc-ctfastrak-ridership-hartford-0831-20160830-story.html and http://ctmirror.org/2016/08/30/for-malloy-and-transportation-the-campaign-never-ends/.
[82] CT DOT maintains a web-based dashboard to provide updates on progress implementing the Let'sGoCT! Initiative, including the Hartford line. See: http://www.letsgoct.com/RampUpDashboard.html.

7. Transportation Conformity Process and Motor Vehicle Emission Budgets

Transportation conformity serves as a bridge to connect air quality and transportation planning activities. Transportation conformity is required under section 176(c) of the CAA to ensure that highway and transit project activities receiving federal funds are consistent with ("conform to") the purpose and goals of the SIP. Conformity to a SIP is achieved if transportation programs or transit project activities do not cause or contribute to any new air quality violations, do not increase the frequency or severity of violations, and do not delay timely attainment of the relevant NAAQS or any required interim milestone.

Transportation conformity currently applies to areas that are designated nonattainment for the following transportation-related criteria pollutants: ozone (O_3), particulate matter ($PM_{2.5}$ and PM_{10}), carbon monoxide (CO), and nitrogen dioxide (NO_2). Transportation conformity also applies to areas that have been re-designated to attainment after 1990, also known as "maintenance areas".
Transportation conformity requires that certain precursor pollutants be addressed as well. These are pollutants that contribute to the formation of other, usually more harmful, pollutants. The precursor emissions for ozone are NOx and VOCs.

Transportation conformity addresses air pollution from on-road mobile sources such as cars, trucks, motorcycles, and buses. For this reason, transportation conformity budgets are often referred to as motor vehicle emission budgets (MVEB). There are also significant emissions from non-road mobile sources, area sources, and stationary sources that are not addressed by transportation conformity.

The State of Connecticut Department of Transportation (CTDOT) and the metropolitan planning organizations (MPOs) in Connecticut must demonstrate conformity for any transportation plans, transportation improvement programs (TIPs), or any federally supported highway and transit projects.

Conformity determinations are developed by CTDOT in consultation with CT DEEP and EPA. The Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA), agencies of the United States Department of Transportation (US DOT), review the submittals from CTDOT and the Connecticut MPOs and make a conformity determination.

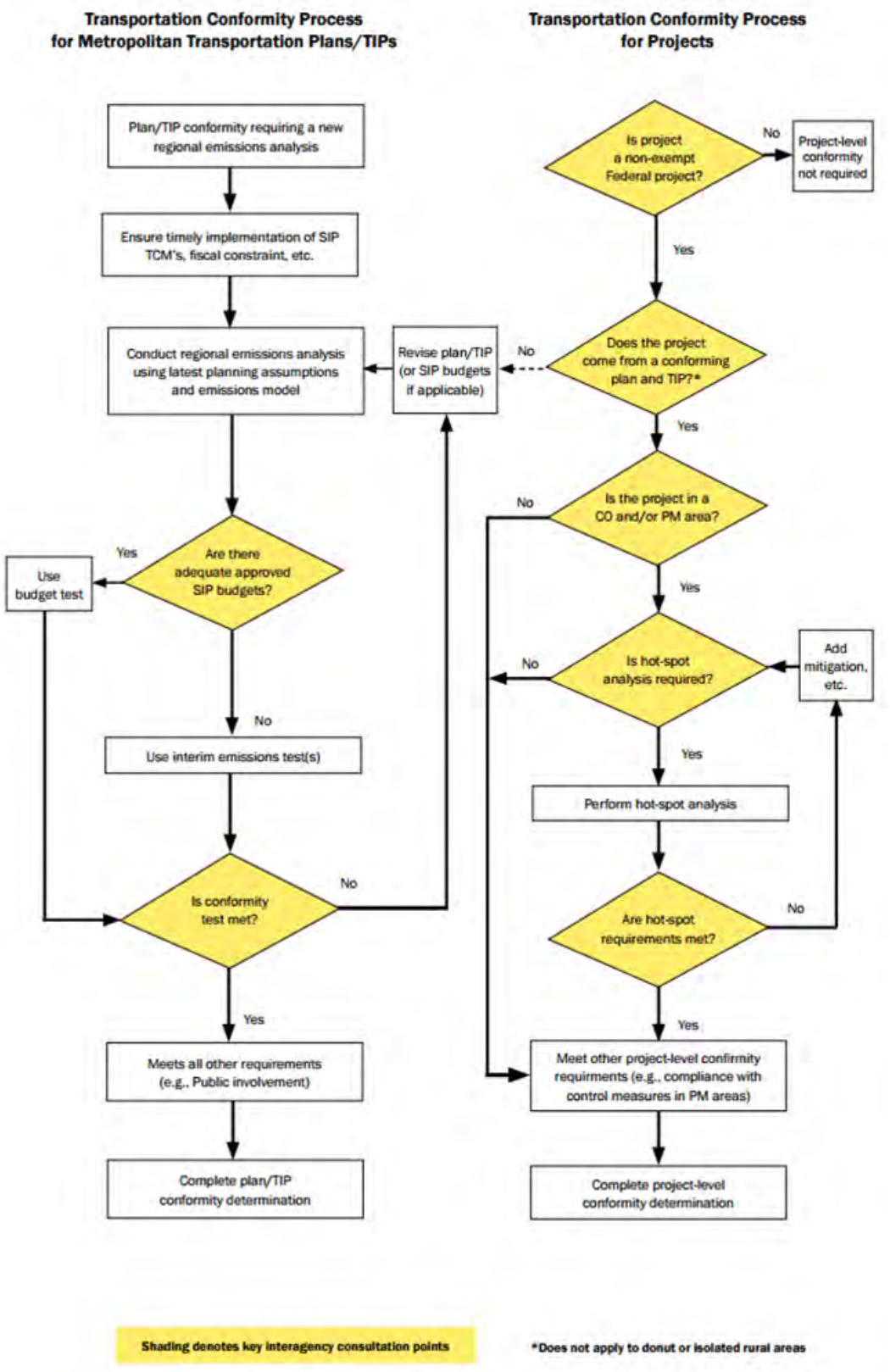
Conformity determinations consist of the following components:

- Regional emissions analysis;
- Transportation modeling requirements;
- Latest planning assumptions and emissions model;
- Timely implementation of transportation control measures (TCMs);
- Interagency consultation;
- Public participation (consistent with USDOT regulations); and
- Fiscal constraint (consistent with USDOT regulations).

The regional emissions analysis is the primary component, which incorporates either a "budget" test for areas or states with approved SIP budgets, or an interim emissions test for areas with no adequate or approved SIP budgets. Budgets are developed using various transportation and emissions models. Local modeling inputs are cooperatively developed by CTDOT and CT DEEP, using EPA recommended methods where applicable. Generally, CTDOT's estimated air emissions from transportation plans and TIPs must not exceed an emissions limit, or budget, established by CT DEEP as part of an attainment or maintenance SIP.

A general flowchart depicting the transportation conformity process and how the elements of a conformity determination interact can be found in Figure 7-1.

Figure 7-1. *General Flowchart of the Transportation Conformity Process*



Source: Transportation Conformity: A Basic Guide for State and Local Officials, Federal Highway Administration

7.1 Transportation Conformity Regulatory History

The federal CAA and federal transportation reauthorization legislation passed in the 1990s established an interrelationship of clean air and transportation planning. In order to receive federal transportation funds, CTDOT and the MPOs in Connecticut must cooperatively work to develop and endorse an Air Quality Conformity Statement, which certifies to the federal government that the Statewide Transportation Improvement Program (STIP), which incorporates all TIPs, conforms to the requirements of the CAA amendments.

On August 15, 1997, the EPA published the Final Conformity Rule.[83] The full text of the rule, which has been updated multiple times since 1997 as various transportation funding bills have been passed, is contained in 40 CFR Part 93 – Determining Conformity of Federal Actions to State or Federal Implementation Plans[84].
The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)[85] revised the CAA conformity SIP requirements in 2005 in order to use state and local resources more efficiently. SAFETEA-LU guided surface transportation policy and funding up until it was due to expire in 2009. Congress extended the provisions nine times until it finally expired on June 30, 2012.

On July 6, 2012, Moving Ahead for Progress in the 21st Century (MAP-21)[86] was signed into law. MAP-21 reauthorized the transportation programs that were previously authorized by SAFETEA-LU. The programs under MAP-21 continued through September 30, 2014 and finally expired, after five short term extensions, on December 4, 2015.

On December 4, 2015, the Fixing America's Surface Transportation (FAST) Act[87] was signed in to law as the first long term transportation funding bill since SAFETEA-LU. The FAST Act authorizes federal highway, transit, safety and rail programs and funding certainty for five years - through September 30, 2020.
CTDOT produces a STIP in accordance with the terms and provisions of the FAST Act, the CAA amendments and all regulations issued pursuant thereto. As part of the STIP development, CTDOT conducts air quality assessments and prepares conformity reports. CT DEEP and EPA reviews the STIP and conformity reports.

7.2 Previous Motor Vehicle Emissions Budgets for the 2008 8-Hour Ozone Standard

On May 21 2012, EPA established designations and classifications[88] for the 2008 ozone NAAQS, which had been previously promulgated on March 12, 2008. EPA designated and classified two separate "marginal" nonattainment areas in the State of Connecticut for the 2008 NAAQS:

- Southwest Connecticut – Includes Fairfield, New Haven and Middlesex counties as part of the NY/NJ/CT non-attainment area; and
- Greater Connecticut – Includes Hartford, Litchfield, New London, Tolland and Windham counties.

The designations for the 2008 ozone NAAQS became effective on July 20, 2012. The previous 1997 eight-hour ozone standards were revoked effective April 6, 2015. A conformity determination for the new 2008 eight-hour ozone standard was required within one year from the effective date of the nonattainment area designations. The deadline to demonstrate conformity was July 20, 2013 and CT DOT's demonstration of conformity was approved by USDOT on July 10, 2013.

[83] 62 FR 43780, August 15, 1997.
[84] 40 CFR Part 93.
[85] Public Law 109-59, August 10, 2005.
[86] Public Law 112-141, July 6, 2012.
[87] Public Law 114-94, December 4, 2015.
[88] 77 FR 30088, May 21, 2012.

The Motor Vehicle Emission Budgets (MVEBs) that were used in this initial conformity demonstration with the 2008 ozone NAAQS were budgets previously established and approved for the 1997 eight-hour ozone standard. The use of these existing MVEBs are allowed pursuant to transportation conformity rules in 40 CFR 93.109[89]. The rule states that a nonattainment area that has approved or adequate MVEBs in an applicable implementation plan or implementation plan submission for another NAAQS for the same pollutant, must use those existing MVEBs in transportation conformity determinations until MVEBs for the current NAAQS are submitted by the state and found adequate or are approved by the EPA.

The approved 1997 ozone standard MVEBs used for the initial conformity determination for both the Greater Connecticut and the Southwest Connecticut portion of the NY-NJ-CT marginal nonattainment areas under the 2008 ozone NAAQS are provided in Table 7.1.

Table 7-1. *Initial Ozone Nonattainment MVEBs for Each of CT's Nonattainment Areas for the 2008 Ozone NAAQS (As previously approved by EPA for the 1997 ozone NAAQS)*

Pollutant	Greater Connecticut MVEB (tons per summer day)		Southwest Connecticut MVEB (tons per summer day)	
	2008	2009	2008	2009
VOC	28.5	26.3	29.7	27.4
NOx	54.3	49.2	60.5	54.6

7.3 Final Motor Vehicle Emissions Budgets for the 2008 8-Hour Ozone Standard

On April 11, 2016, EPA signed[90] a rulemaking that, among other things, reclassified the two "marginal" nonattainment areas in Connecticut to "moderate" for the 2008 ozone NAAQS. The result is the requirement to submit a SIP revision that addresses the moderate nonattainment area requirements, including revised MVEBs that are consistent with the required attainment plan.

As was described in Section 4, this attainment plan includes numerous emission control programs designed to sufficiently reduce ozone precursor emissions in Greater Connecticut to meet CAA RFP requirements and achieve compliance with the 2008 ozone NAAQS by the July 20, 2018 attainment deadline established for moderate areas. Emission control strategies are targeted at all types of emission sources, including on-road sources such as cars and diesel trucks. Projected 2017 emission levels are consistent with achieving RFP and attainment requirements in the Greater Connecticut area.

The on-road portion of the 2017 emission estimates will, upon approval by EPA, become the sole governing MVEBs for the Greater Connecticut area. Table 7-2 displays the 2017 emission budgets for the Greater Connecticut area. Note that, as with previous attainment and maintenance SIPs approved by EPA for Connecticut, the on-road vehicle emission estimates for 2017 include an additional 2% contingency factor to account for uncertainties in future transportation planning, such as changes to modeling procedures that could affect future year emission estimates that must be compared to budgets established with previous model versions. The resulting final budgets are much more stringent than the current budget for the Greater Connecticut nonattainment area.

[89] 40 CFR 93.109(c)(2)(ii)

[90] The rule was subsequently published in the Federal Register on May 4, 2016, with an effective date of June 3, 2016. See: 81 FR 26697.

Table 7-2. *Final Greater Connecticut Nonattainment Area MVEBs for the 2008 Ozone NAAQS*

Pollutant	2017 MVEB (tons per ozone season day)
VOC	15.9
NOx	22.2

As noted previously in this plan, a separate attainment plan is being prepared for the Southwest Connecticut portion of the NY-NJ-CT area. However, CT DEEP is proposing to establish revised 2017 emission budgets for the Southwest Connecticut area as a part of this submittal in an effort to streamline the transportation planning process for CT DOT and the local MPOs and to more quickly establish tighter emission budgets for Southwest Connecticut until the full attainment plan for that area can be completed. Gaining approval of 2017 budgets for both areas will enable CTDOT and the MPOs to use a single set of consistent MOVES2014a inputs for both areas and avoid confusion during the public review process. More importantly, the proposed 2017 budgets for Southwest Connecticut are much more stringent than those currently in place. Gaining quicker approval of the revised budgets will ensure continued progress towards attainment in Southwest Connecticut and help to provide for maintenance of the 2008 NAAQS in Greater Connecticut, which is situated downwind of the Southwest Connecticut counties.

The proposed budgets for Southwest Connecticut, summarized in Table 7-3, were calculated using the same MOVES2014a procedures and inputs documented in Section 4 for Greater Connecticut. Based on the RFP calculations presented in Section 5, CT DEEP expects that these budgets levels will be more than adequate to meet RFP requirements for Southwest Connecticut. Additional revisions to the budgets will be made, as necessary, to be consistent with the attainment plan that is required for Southwest Connecticut.

Table 7-3. *Revised Southwest Connecticut Nonattainment Area MVEBs for the 2008 Ozone NAAQS*

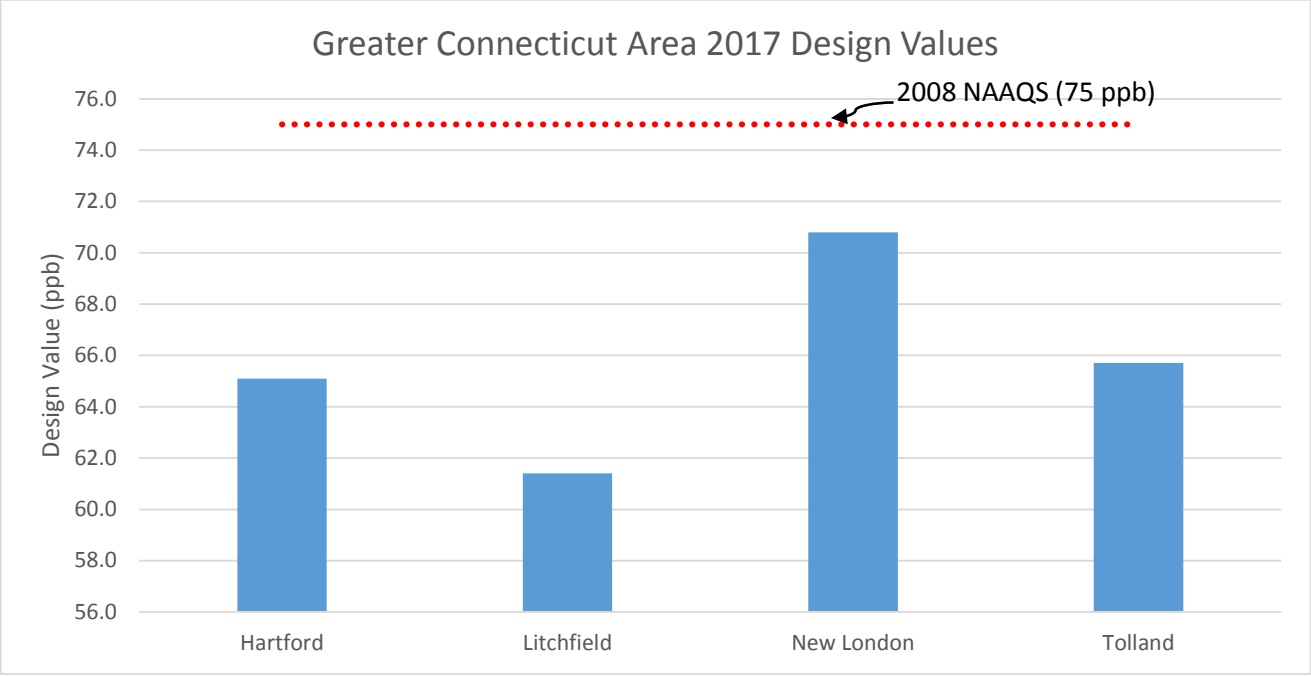
Pollutant	2017 MVEB (tons per ozone season day)
VOC	17.6
NOx	24.6

8. Attainment Demonstration

The objective of the photochemical modeling study is to enable the CT DEEP to analyze the efficacy of various control strategies, and to demonstrate that the measures adopted as part of the implementation plan will result in attainment of the 8-hour ozone standard by the end of the 2017 ozone season. EPA recommends the use of photochemical grid models for evaluating ozone control strategies. These models are complex and require significant time and resources to develop the regional scale inventories and meteorological data that are necessary for the selected episodes and scenarios modeled. Therefore, this attainment demonstration relies primarily upon EPA's contribution modeling study used in support of the final update to the Cross-State Air Pollution Rule.[91]

The study and supporting documentation can be found at EPA's website: https://www.epa.gov/airmarkets/final-cross-state-air-pollution-rule-update. The relevant elements of the modeling are discussed below. The results of the study indicate design values at all monitors in the Greater Connecticut area will be in compliance with the 2008 ozone NAAQS of 75 ppb standard by 2017 (see Figure 8-1). Additional modeling further supports this conclusion and is presented in Section 8.3.

Figure 8-1. *EPA's CSAPR Update Modeling: Projected 2017 Design Values for the Greater Connecticut Area Monitors*



8.1 Description of Modeling Platform and Configuration

Following the recommendations outlined in EPA's *Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze* [DRAFT, Dec. 2014], the model platform and configuration for the regional modeling conducted by EPA are described as they relate to the Greater Connecticut area.

[91] EPA's modeling for the *proposed* CSAPR Update was the only fully documented modeling available at the time the attainment demonstration was proposed for notice. As the CSAPR Update went final we have updated this section accordingly. Additionally, the OTC modeling and documentation has since been finalized and is included as support to this demonstration as well, see Section 8.3 of this document.

Air Quality Model Selection

The selected model for the study was the Comprehensive Air Quality Model with Extensions (CAMx version 6.2). CAMx is a photochemical grid model capable simulating the transport and fate of ozone and its precursors on a regional scale.

Episode/Period Selection

EPA used 2011 for the base year. In selecting this period, EPA completed an extensive analysis of meteorological conditions to assure the modeling exercise simulates a variety of conditions that are generally associated with elevated ozone levels. The EPA concluded that the 2011 summer was overall warmer than normal and typical of ozone-conducive meteorological conditions for the northeast region of the country. In addition to EPA's assessment, the OTC performed an assessment which concluded that the 2011 ozone season was the best candidate for future and current modeling exercises.[92]

Modeling Domain and Grid Resolution

The modeling domain consisted of a rectangular region covering the 48 contiguous states to include portions of Canada and Mexico (see Figure 8-2). The domain was partitioned into 12 kilometer squares each with 25 vertical layers to a total height of up to approximately 17.5 kilometers. Each layer above each square grid contained appropriate hourly meteorology and emissions data. Connecticut's location is this domain is ideally situated to minimize boundary conditions and fully account for transport of ozone and precursors into the state.

Figure 8-2. *Modeling Domain in EPA's Transport Modeling*

[92] *Future Year Modeling Base Year Analysis, Appendix I, Appendix J,* OTC, 2013

Initial and Boundary Conditions

The objective of a photochemical grid model is to estimate the air quality given a set of meteorological and emissions conditions. The winds move pollutants into, out of, and within the domain. The model handles the movement of pollutants within the domain and out of the domain. An estimate of the quantity of pollutants moving into the domain is needed. These are called boundary conditions. Similarly each grid cell throughout the domain needs initial concentration fields.

EPA used GEOS-Chem, a three-dimensional global atmospheric chemistry model, to determine boundary conditions and initial pollutant concentrations for CAMx. The CAMx model was run to simulate an additional ten days for late April to minimize the influence of the initial and boundary conditions on the model results for the period of interest, May 1 through September 30, 2011.

Meteorological Model Selection and Configuration

The meteorological data for air quality modeling of 2011 were derived from running Version 3.4 of the Weather Research Forecasting Model (WRF). The 35 vertical layers output from WRF were collapsed into the 25 vertical layers used in CAMx while maintaining thinner layers near the surface.

Emissions Inventories

EPA developed the base and future year inventories through a collaboration with the regions and states. The National Emissions Inventory (NEI) for 2011 was used for the base year and then grown and/or controlled for 2017 based on known population growth, projected industry demand, economic models, and known control strategies to be implemented by 2017.[93] CAMx requires detailed emissions inventories containing temporally allocated (i.e., hourly) emissions for each grid-cell in the modeling domain for a large number of chemical species that act as primary pollutants and precursors to secondary pollutants. Annual emission inventories for 2011 and 2017 were preprocessed into CAMx-ready, hourly gridded emission inputs using the Sparse Matrix Operator Kernel Emissions (SMOKE) modeling system. The 2011 and 2017 emissions, and associated control strategies, used by EPA in the CAMx modeling are essentially consistent with those described in Section 4 of this document.

Model Performance Evaluation

EPA evaluated model performance by comparing the observed 2011 monitored data with the model predictions. EPA concluded that the overall predictions correlated well with the observations. Data for the northeast indicate a slight over-prediction of maximum daily average 8-hour ozone concentration (MDA8) by the model (see Figure 8-3). The model performance for the Greater Connecticut area averaged over all stations performs well. The greatest bias occurs at the Fort Griswold, Groton receptor in New London county (see Figure 8-4 and Table 8-1), however still adequate and acceptable at 17%.

[93] Preparation of Emissions Inventories for the Version 6.2, 2011 Emissions Modeling Platform (US EPA, 2015a) and 2011 National Emissions Inventory, version 2 (US EPA, 2015b).

Figure 8-3: *Density Scatter Plot of Observed vs. Modeled Maximum Daily Average 8-Hour (MDA8) Ozone Concentrations for the Northeast Portion of the Modeling Domain.*

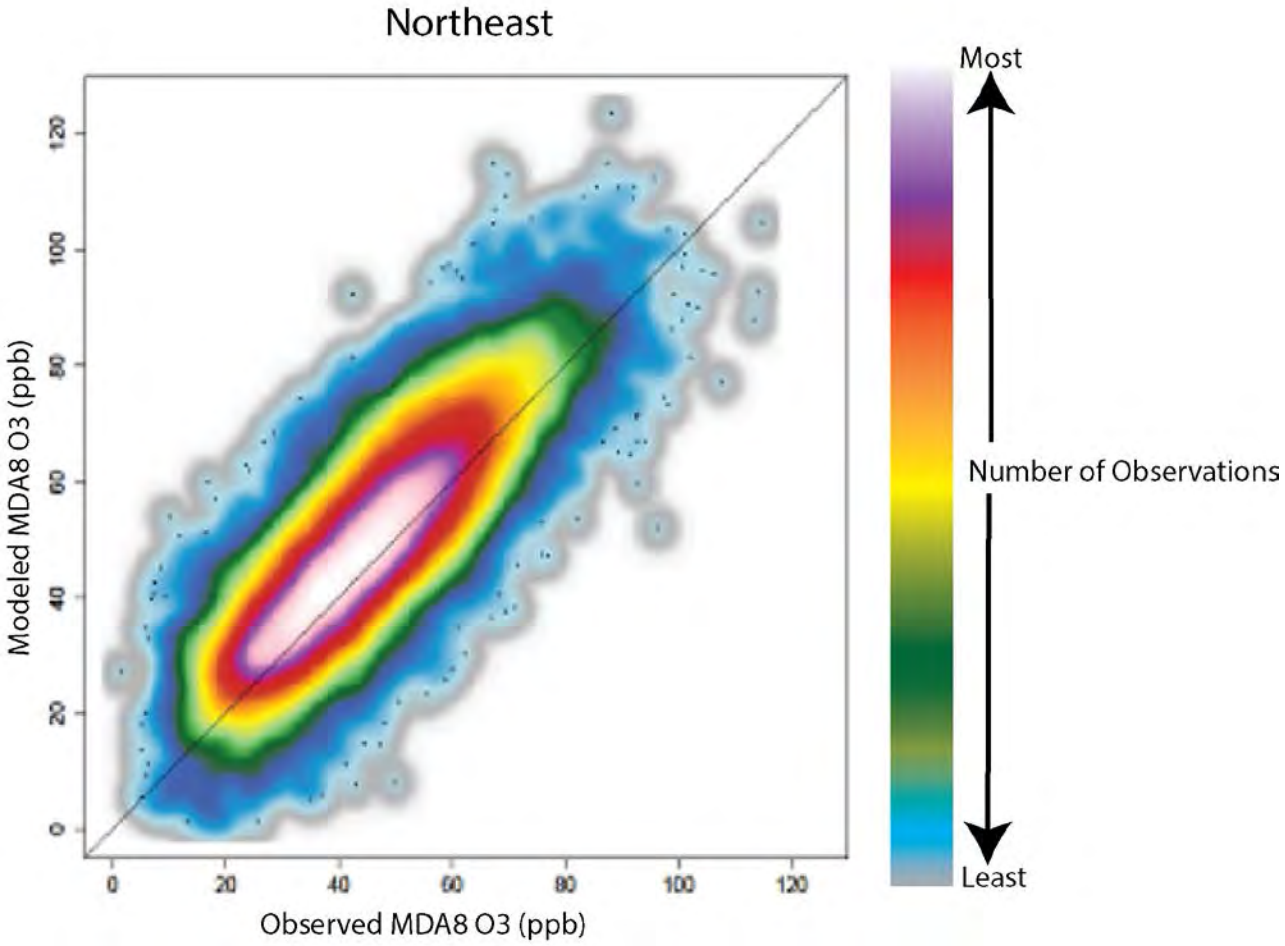


Figure 8-4. *Greater Connecticut Mean Modeled and Observed Ozone Concentration*

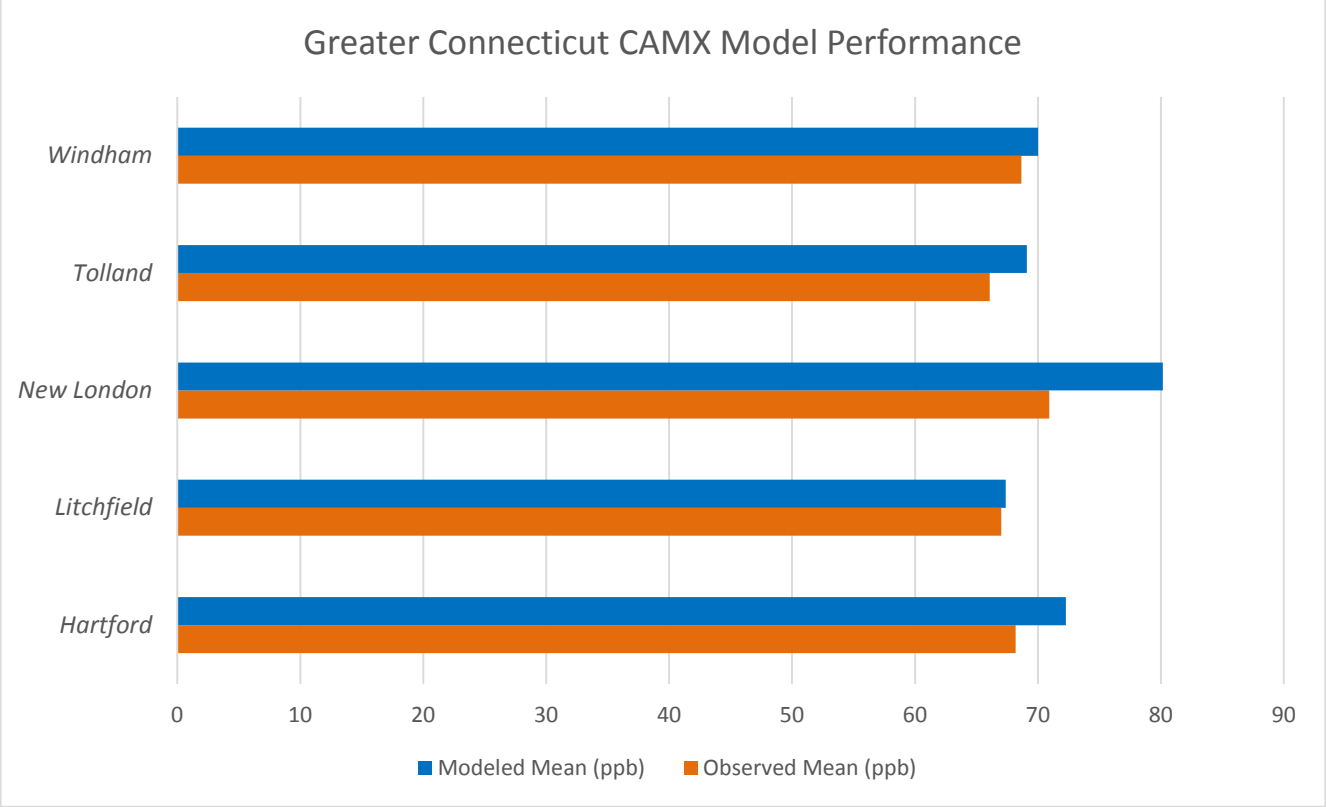


Table 8-5. *Model Performance Statistics for Greater Connecticut Area Receptors*

Receptor, County	Normalized Mean Bias	Normalized Mean Error
East Hartford, Hartford	4.87	12.12
Cornwall, Litchfield	1.95	10.62
Groton, New London	17.07	23.59
Stafford, Tolland	3.54	9.14
Abington, Windham	3.1	15.75

Overall, the modeling system reasonably estimates 8-hour average surface ozone throughout the Greater Connecticut area. This confidence in the modeling results allows for the modeling system to be used to support the development of emissions control scenarios to meet the 8-hour ozone NAAQS.

Modeled Attainment Test (MAT)

Consistent with EPA's guidance[94], CAMx modeled results were applied in a relative sense, assuming that measured values from the baseline period would decrease in proportion to modeled improvements between the baseline and future projection years. EPA applied the "modeled attainment test" (MAT) to each monitor using the following equation:

$(DV_F)_I = (RRF)_I (DV_B)_I$ (MAT Equation)

Where:
$(DV_F)_I$ = the estimated future design value for the year of interest, in ppb
$(DV_B)_I$ = the baseline measured concentration at site I, in ppb
$(RRF)_I$ = the relative response factor determined as the ratio of CAMx modeled results between the future year and the baseline year, calculated near site I

EPA uses a five-year weighted design value using the three design values centered about the base year. The design value for a site is the three-year average of the annual fourth highest daily maximum 8-hour average ozone concentration. The 2011 base year design value is obtained from averaging the design values for the years 2009-2011, 2010-1012 and 2011-2013. The 2017 design value is obtained by applying the appropriate RRF to the five-year weighted design value.

8.2 CAMx Model Projected Attainment

As summarized in Table 8-6, all four monitors located in the Greater Connecticut moderate nonattainment area are projected by the CAMx model to reach attainment of the 75 ppb 8-hour ozone NAAQS by 2017 (attainment is based on the 2017 projected average design value). Even the maximum predicted design values, commonly only evaluated for determining maintenance status, are compliant with the NAAQS. Therefore, the monitors in Greater Connecticut satisfy the modeled attainment test to demonstrate attainment.

Table 8-6. *EPA's CAMx Model Air Quality Results for Greater Connecticut*

Monitor ID	County	Monitor Name	2009-2013 Average Design Value	2009-2013 Maximum Design Value	2017 Projected Average Design Value	2017 Projected Maximum Design Value
90031003	Hartford	East Hartford	73.7	75.0	65.1	66.2
90050005	Litchfield	Cornwall	70.3	71.0	61.4	61.4
90110124	New London	Fort Griswold-Groton	80.3	84.0	70.8	74.1
90131001	Tolland	Stafford	75.3	77.0	65.7	67.1

[94] *Draft Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM2.5, and Regional Haze*, EPA, 2014.

8.3 OTC CMAQ Modeling Results[95]

The OTC also conducted attainment modeling. The OTC modeling results are consistent with EPA's CAMx modeling, in that it also predicts that all of the Greater Connecticut monitors will be in attainment in 2017. The relevant elements of the modeling are discussed below and the full details of the modeling are further documented in the *Technical Support Document for the 2011 Ozone Transport Commission/Mid-Atlantic Northeastern Visibility Union Modeling Platform*.

Air Quality Model Selection

An important difference between the OTC and EPA modeling results is the model selection. The OTC has chosen to use the Community Multi-scale Air Quality Model (CMAQ) version 5.0.2. CMAQ is similar to CAMx in that it is also a photochemical grid model capable of simulating ozone and its precursors on a regional or national scale. The primary differences between the two models are variances in the algorithms for advection, dispersion and deposition and CMAQ has additional meteorological variables that CAMx does not include.

Episode/Period Selection

The OTC and EPA used the same method for base year selection and chose 2011 as most suitable.

Modeling Domain and Grid Resolution

The CMAQ modeling domain was identical to the CAMx domain pictured in Figure 8-2. However, CMAQ did not collapse the 35 vertical layers produced by the meteorological module, WARF therefore had finer resolution up to the 50 mb height (approximately 17.5 km).

Initial and Boundary Conditions

Similar to EPA's CAMx modeling the boundary and initial conditions of the OTC CMAQ runs were established with the GEO-Chem module. OTC provided a 15-day ramp-up period, rather than the 10-day ramp-up period EPA used to initialize its model.

Meteorological Model Selection and Configuration

The meteorological data for air quality modeling of 2011 were derived from running Version 3.4 of the Weather Research Forecasting Model (WRF). The full 35 vertical layers were retained.

Emissions Inventories

The OTC modeling uses the same base and future year (2011 and 2017). The inventories are prepared in a regional collaboration through MARAMA and rely heavily on state input. Therefore, the inventories are essentially the same as CAMx inventories with the exception of the treatment of the EGUs. MARAMA uses the ERTAC tool, described further in Section 4 of the OTC Technical Support Document[96], while EPA uses IPM for EGU projections. These two projection tools vary in their approaches for projecting future electric generation emissions and therefore these two sectors have different emissions for the future year inventory.

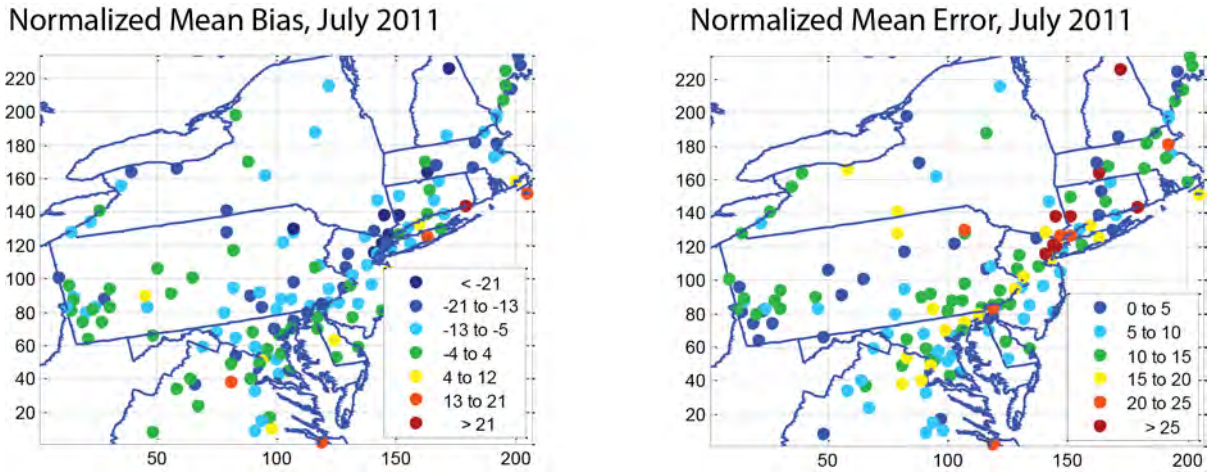
[95] The full modeling results and documentation were not available at the time this plan went to notice. This section is included for informational purposes and to provide the most up to date information available.

[96] *Technical Support Document for the 2011 Ozone Transport Commission/Mid-Atlantic Northeastern Visibility Union Modeling Platform*

Model Performance

The OTC noted good performance with the Greater Connecticut monitors. The worst performance in the Greater Connecticut Area occurred at the New London Coastal monitor. Figure 8-5 displays the normalized mean bias and error for the July period of the modeling.

Figure 8-5. *Normalized Mean Bias and Normalized Mean Error for OTC monitors for the July 2011 modeling results.*



Modeled Projected Attainment

OTC used the same MATS test summarized above in Section 8.1. As detailed below in Table 8-7, each of the receptors (or monitors) in Greater Connecticut are predicted to be below 75 ppb. The OTC also discusses the impact of the use of grid choice with receptors in areas with land and water grids and indicates further study is necessary to understand the model performance at receptors with a land water interface.[98] Regardless of the land/water interface, this modeling indicates attainment for the Greater Connecticut Nonattainment area.

Table 8-6. *OTCS CMAQ Model Air Quality Results for Greater Connecticut*

Site	2011 DV	2017 DV	2017 DV with Land/Water Grid Manipulation
Cornwall	70	62	62
East Hartford	73	66	66
Groton	80	73	72
Stafford	75	67	67

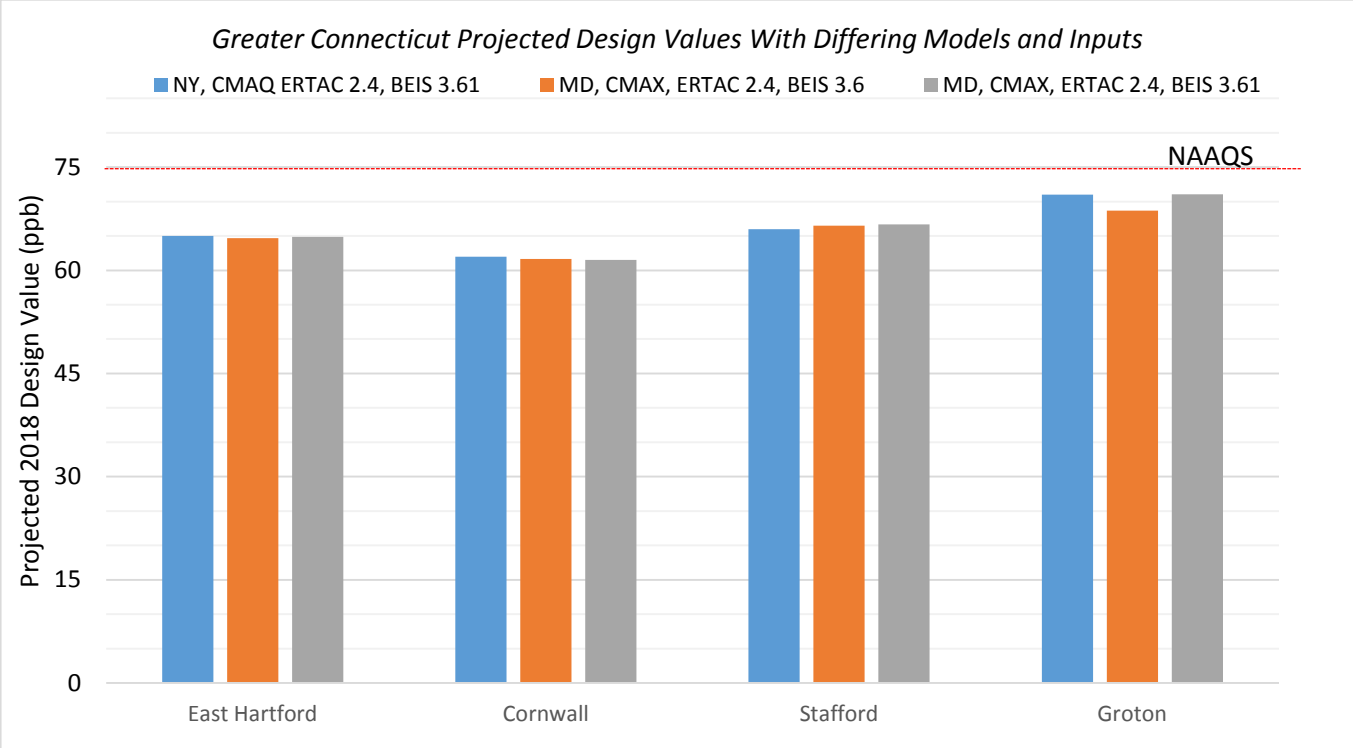
8.4 Corroborating Modeling Results

Air quality modeling is complex, especially when projecting to a future year. Varying inputs such as growth factors, chemistry, and predicted changes in energy dispatch can result in differing conclusions. In addition, there are different model platforms that give varying results. Therefore, CT DEEP has reviewed a variety of recent modeling in and around the attainment year to determine the confidence of the Greater Connecticut area attaining the 2008 standard in 2017 ozone season.

There are currently several ongoing modeling studies evaluating ozone transport and production to support other states' implementation plans. The New York and Maryland modeling centers have provided Connecticut with several screening level analyses for 2018 which can be used to evaluate the likelihood of attainment in the

Greater Connecticut area. The New York study uses a different EPA approved photochemical model, CMAQ, with projected future year utility emissions determined by the ERTAC 2.4 model, biogenic emissions determined with BEIS version 3.61, and anthropogenic emissions based on the MARAMA inventory. Maryland used the CAMx photochemical model to compare performance of an update to the BEIS biogenic emissions model. Figure 8-7 presents the resulting design values determined using these differing modeling approaches. The results are consistent those produced by EPA for 2017 using CAMx, in that the projected average design values are below the NAAQS and of a similar level. Thus, results from the alternative modeling approaches further support the likelihood of attainment for the Greater Connecticut area in 2017.

Figure 8-7. *Screening Modeling Results for Greater Connecticut Area Based on Other Modeling Studies*



9. Weight of Evidence

While the modeling studies support the conclusion that the Greater Connecticut area will reach attainment with the 2008 ozone NAAQS by 2017, there is additional weight of evidence (WOE) to further support that conclusion. Several mobile source strategies and energy efficiency measures, not fully reflected in the inventories and modeling, should help to further reduce ozone concentrations. Additionally, as EPA more fully addresses ozone transport concerns and acts on Connecticut's existing and forthcoming CAA Section 126 petitions to reduce emissions from out-of-state sources, sustained compliance with the 2008 ozone standard in the Greater Connecticut area becomes more likely.

9.1 Mobile Source Initiatives

Connecticut transportation related initiatives have been established which, though not sufficient to advance the attainment date, cumulatively reduce emissions of ozone precursors. These initiatives promote clean alternatives, reduce traffic congestion, encourage carpooling and improve public transportation.
In collaboration with EPA and other states, initiatives like the Diesel Emissions Reduction Act (DERA), Lawn Equipment Exchange Fund (LEEF), SmartWay® and Electric Vehicle (EV) Connecticut help promote the early adoption of clean mobile sources.

Connecticut has made full use of all available State DERA allocations to reduce diesel emissions and improve air quality. The initial allocation made implementation of the 2007 Connecticut Clean School Bus Program possible, installing emission controls on 353 school buses from 24 school districts. In addition, DERA funds have resulted in the retrofit of 188 state trucks and 24 pieces of construction equipment. Two marine engines have been upgraded and four have been replaced with DERA funds. State DERA funds have contributed to the early replacement of 14 vehicles. In addition, FY14 State DERA funds were used to install locomotive idle reduction technology on two switch engines. Using EPA's Diesel Emission Quantifier, the projected annual NOx reductions from these projects are 125 tons/year and the lifetime reductions in NOx from these projects are projected to be over 2,300 tons.

The LEEF program provided funding from 2010 – 2012 to municipalities and school districts for the replacement of older dirtier lawn equipment. While not built into the attainment modeling demonstration the reductions achieved from this program are provide ongoing early reduction of summer day ozone precursor emissions. The program resulted in 71 municipalities and school districts exchanging their equipment.

Connecticut affiliated with EPA's Smartway® program in 2015. While currently this program's emission reductions are not enough to advance attainment, this program builds efficiencies into transportation and shipping in order to reduce emissions. Five Connecticut trucking companies have already partnered with Smartway® reducing their NOx emissions by 6.97 tons per million miles driven.

EVConnecticut is a partnership between the CT DEEP and CTDOT to introduce more electric vehicles into Connecticut. EVConnecticut has helped build the infrastructure for electric vehicles and partnerships to enhance the technology, markets and choices for electric vehicles. Using funds made available from the Regional Green House Gas Initiative (RGGI) and the settlement agreement associated with the merger of Northeast Utilities and NStar, EVConnecticut has initiated a successful program to promote increased ownership of EVs in the state, including:

- the Connecticut Hydrogen and Electric Automobile Purchase Rebate program providing rebates up to $5,000 for the purchase or lease of a new hydrogen or electric vehicle;

- an easily accessible network of over 500 public charging outlets in over 40 cities and towns across the state (see www.ct.gov/deep/evconnecticut for locations such as town halls, train stations, town centers, college campuses, auto dealers and other businesses);
- the DC Fast Charger Pilot Project which placed DC fast chargers at DOT travel plazas along main transportation corridors in the state.

Additionally, Connecticut has joined seven other states in adopting the Zero Emission Vehicle (ZEV) Memorandum of Understanding (MOU).[97] The states have set a target of 3.3 million ZEVs on the road by 2025 -- approximately 25% of projected vehicle sales.

On June 28, 2016 the U.S. government along with other complainant states and EPA entered into a partial consent decree with Volkswagen (VW) to settle litigation brought against VW for the use of defeat devices on diesel vehicles. The consent decree establishes both the "National ZEV Investment Plan" (ZEV Plan) and the "Environmental Mitigation Trust" (Trust). These two elements of the decree are likely to help improve air quality in Connecticut in the near future.

The ZEV Plan, as detailed in Appendix C of the decree, requires VW to provide $1.2 billion to areas of the United States outside of California to promote and advance the use and availability of zero emission vehicles (ZEV). The plan includes: installation of ZEV infrastructure, brand neutral education and public outreach to increase public awareness of ZEVs.

The Trust, as detailed in Appendix D of the decree, requires VW to establish a trust for environmental mitigation programs including: scrappage or repower of certain heavy duty vehicles, buses, freight switching locomotives, ferries, and airport ground support equipment, shore power projects, and installation of ZEV supply equipment. Connecticut was granted $51,635,237.63 in the initial consent decrees for these programs. Connecticut DOT continues to implement a variety of transportation control measures (TCMs) such as telecommuting initiatives, rail and bus transit improvements, and signalization optimization projects. DOT recently completed the first phase of its CT*fastrak* system -- Connecticut's first Bus Rapid Transit system. The system began operation on March 28, 2015 and was designed to reduce congestion on Interstate-84. By March 28, 2016, CT*fastrak* surpassed its first year ridership goal of 11,180 daily passenger trips. CT DOT also plans to begin initial operation of the New Haven-Hartford-Springfield commuter rail program in 2018, providing an alternative transportation option for travellers along the Interstate-91 corridor, with connections to the existing Metro-North and Shoreline East commuter rail lines to New York City and New London, respectively, and to the Amtrak Acela high-speed rail service that serves the Northeast Corridor.

9.2 Energy Efficiency and Renewable Energy

Connecticut has been and continues to be one of the nation's leaders in promoting energy efficiency. In 2015, Connecticut was ranked 6th in the nation by the American Council for an Energy-Efficient Economy (ACEEE) for its policies supporting energy efficiency.[98] Much of the renewable energy and energy efficiency initiatives are inherent to the future year electric generation forecasts that are used in the photochemical modeling described in Section 8. Both the ERTAC and IPM models used for forecasting energy sector emissions incorporate Annual Energy Outlook (AEO) forecasts, which are fed by local ISO's regional information. ISO-New England's energy forecasts include detailed calculations of energy generation avoided due to energy efficiency programs, both on an annual and peak energy demand basis. Figure 9-1, displays the forecasted of annual energy in Connecticut with and without energy efficiency programs. Figure 9-2, displays the summer peak demand with and without energy efficiency programs. While it is complex to evaluate each program's

[97] http://ct.gov/deep/lib/deep/air/zeroemissionvehicle_mou.pdf
[98] http://database.aceee.org/state/connecticut

avoided emissions, the projected cumulative effect on reducing the overall energy demand produces significant emission reductions.[99] Connecticut's Energy Agenda[100] outlines these future initiatives in further detail.

Figure 9-1. *Connecticut's Annual Capacity with and without Energy Efficiency Programs*

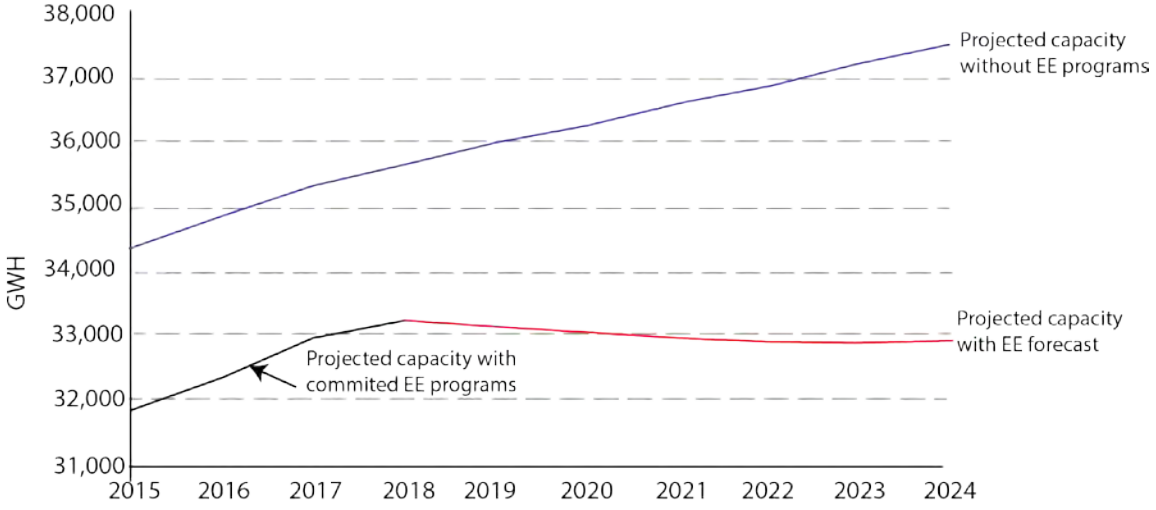
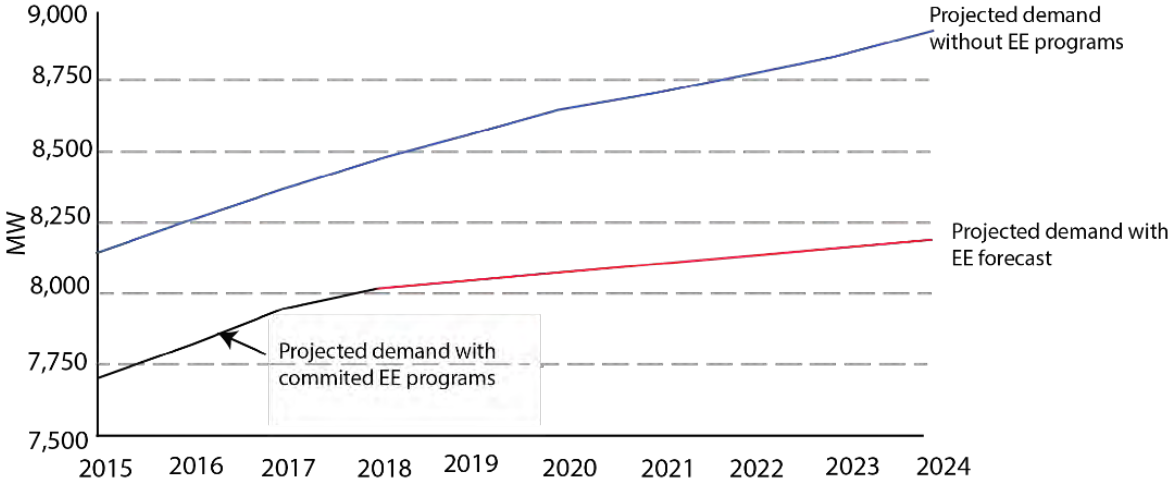


Figure 9-2. *Connecticut's Summer Peak Demand with and without Energy Efficiency Programs (90/10)*



9.3 Recent Ozone Monitoring Data

Recent monitoring data indicate that the Greater Connecticut area is very close to measuring ozone levels that are compliant with the 2008 NAAQS. Table 9-1 summarizes final ozone design values for 2014 and 2015, as well as preliminary design values for 2016. The 2016 data are based on data through September 30, 2016 that have not yet been fully quality-assured and are not certified. As of 2015, only the East Hartford and Stafford sites were in violation of the 2008 NAAQS. Preliminary data for 2016 indicate that all sites may achieve compliant 2016 design values, dependent upon any final QA adjustments.

[99] May 1, 2015 ISO-NE Energy Efficiency Forecast for 2019-2024.
[100] http://www.ct.gov/deep/cwp/view.asp?a=4405&Q=499356&deepNav_GID=2121

Table 9-1. *Recent Ozone Design Values for Greater Connecticut Monitors*

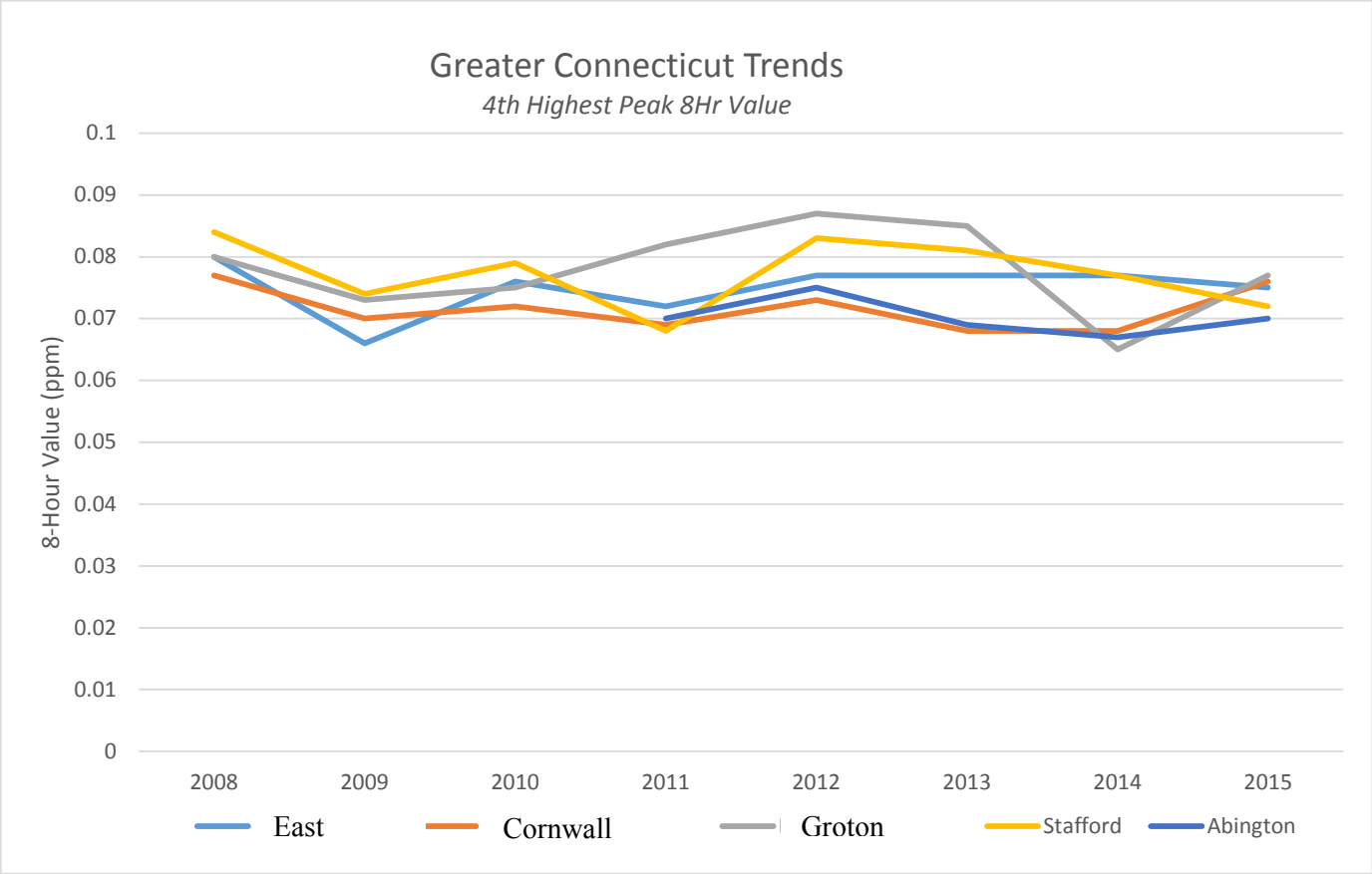
Monitor Site	2014 Design Value (ppb)	2015 Design Value (ppb)	2016 Preliminary Design Value (ppb)
Cornwall	69	70	73
East Hartford	77	76	75
Groton-Fort Griswold	79	75	72
Stafford	80	76	73
Abington	70	68	68

Table 9-2 and Figure 9-3 summarize recent 4th-highest daily 8-hour values measured at the Greater Connecticut monitors (2016 preliminary values are preliminary pending QA procedures). The table also lists the maximum 4th-high value that could occur in 2017 and still produce a 2017 design value that complies with the 2008 NAAQS. Based on the recent history of 4th-high levels, all sites appear to have a reasonable chance to achieve compliant 2017 design values. Cornwall, East Hartford and Groton are at greatest risk to fall short of measured compliance. Additional emission reductions from mobile source fleet turnover and other control strategies (e.g., CSAPR Update, CT's MWC rule) over the next year should help to reduce ozone levels, but 2017 ozone season meteorology will also play a major role in determining timely compliance.

Table 9-2. *4th-High Ozone Values for Greater Connecticut Monitors*

Monitor Site	2011 4th-High Ozone Value (ppb)	2012 4th-High Ozone Value (ppb)	2013 4th-High Ozone Value (ppb)	2014 4th-High Ozone Value (ppb)	2015 4th-High Ozone Value (ppb)	2016 4th-High Ozone Value (ppb)	Max 2017 4th-High Ozone Value That Produces a Compliant 2017 Design Value (ppb)
Cornwall	69	73	68	66	76	78	73
East Hartford	72	77	77	77	75	75	77
Groton-Fort Griswold	82	87	85	65	77	75	75
Stafford	68	83	81	77	72	72	83
Abington	70	75	69	67	70	68	89

Figure 9-3. *Trends of 4th-High Ozone Levels at Greater Connecticut Monitors*



10. Contingency Measures

Section 172(c)(9) of the CAA requires ozone attainment plans to include contingency measures to be implemented should an area fail to achieve the required reductions for Reasonable Further Progress or fail to attain the NAAQS by the deadline. The implementation rule specifies that the contingency measures in each case should provide for an additional 1-year's worth of progress (i.e., 3% reduction in VOC and/or NOx emissions), relative to the base year inventory. These measures must be submitted for approval into the SIP as adopted measures that would take effect without further rulemaking action upon a determination by EPA that an area failed to meet the applicable RFP milestone or failed to attain by the required deadline. EPA allows the use of federal measures that provide ongoing reductions into the future (e.g., motor vehicle and non-road engine standards) to be used meet contingency measure requirements.
CT DEEP has elected to meet both the RFP and failure to attain contingency requirements with NOx emission reductions. Table 10-1 summarizes the calculation of the required contingency measure emission reductions. Based on the total Greater Connecticut NOx emissions of 91.9 tons/ozone season day (from Section 4), each contingency measure must provide at least 2.8 tons/ozone season day of NOx reductions to meet the requirements.

Table 10-1. *Calculation of Necessary NOx Emission Reductions to Satisfy Contingency Measure Requirements for the Greater Connecticut Nonattainment Area*

2011 Base Year Inventory Total NOx Emissions (tons/ozone season day)	3% Contingency Measure Requirement (tons/ozone season day)
91.9	2.8

Details regarding the specific control measures selected to meet the contingency plan requirements for RFP and failure-to-attain are described below.

10.1 RFP Contingency Measure

As indicated above, the RFP contingency plan must identify control measures sufficient to secure an additional 3% reduction in ozone precursor emissions beyond the 15% RFP reduction required to be achieved by 2017 in moderate 8-hour ozone nonattainment areas. The RFP contingency requirement may be met by including in the SIP a demonstration of at least 18% RFP between 2011 and 2017 and specifying which control measures capable of providing the excess reduction are to be used for the contingency plan.

As previously described in Section 5 (see Table 5-3), control programs implemented in the Greater Connecticut nonattainment area are projected to provide 28% surplus of NOx reductions and 15% surplus of VOC reductions compared to the 2017 RFP requirement. Excess reductions of both precursor pollutants far exceed the additional 3% reduction called for by the RFP contingency requirement. As a result, any combination of adopted SIP measures providing a 3% VOC and/or NOx reduction can satisfy the RFP contingency requirement.

Connecticut's RFP contingency plan requirement will be met by using a portion of the projected NOx emission reductions occurring between 2011 and 2017 from federal standards for non-road engines and equipment. Table 10-2 summarizes emissions estimates from non-road equipment determined using EPA's MOVES2014a model,

as was described in Section 4. The modeled NOx reductions of 6.6 tons/ozone season day in 2017 exceed the RFP contingency measure requirement of 2.8 tons/ozone season day; therefore, the requirement is satisfied.

Table 10-2. *RFP Contingency Measure Demonstration for the Greater Connecticut Area*

2011 MOVES2014a* Non-Road NOx Emissions (tons/ozone season day)	2017 MOVES2014a* Non-Road NOx Emissions (tons/ozone season day)	2011 – 2017 Non-Road NOx Reductions (tons/ozone season day)	Required RFP Contingency Reduction (tons/ozone season day)
19.1	12.5	6.6	2.8

* EPA's NONROAD model, which is included within the MOVES2014a model, calculates emissions for all non-road categories, except for commercial marine, aircraft/ground support equipment and rail locomotives.

10.2 Failure to Attain Contingency

The failure-to-attain contingency plan must identify control measures sufficient to secure an additional 3% reduction in ozone precursor emissions should a moderate nonattainment area fail to attain the 8-hour ozone NAAQS by the July 2018 required attainment date. EPA will determine each moderate area's attainment status by early in 2019, using 2017 ozone design values. If EPA determines that an area has failed to attain, the contingency plan would be triggered for implementation beginning with the 2019 ozone season. Therefore, additional emission reductions occurring during the 2017 to 2019 period can be used to meet the failure to attain contingency requirement.

Connecticut's failure-to-attain contingency plan requirement will be met by using a portion of the expected emission reductions occurring from federal and state measures tightening engine and fuel standards for on-road vehicles between 2017 and 2019. As more fully described in Section 4, these adopted programs will continue to provide an increasing level of VOC and NOx emission reductions through 2017 and beyond. Table 10-3 summarizes NOx emission estimates for on-road vehicles, as determined using EPA's MOVES2014a model. Interpolated emission reductions for 2019 are also included, and compared to the 3% contingency requirement. The NOx emission reductions of 3.7 tons/ozone season day exceed the failure-to-attain contingency requirement of 2.8 tons/ozone season day, therefore the requirement is satisfied.

Table 10-3. *Failure-to-Attain Contingency Measure Demonstration for the Greater Connecticut Area*

2017 MOVES2014a On-Road NOx Emissions (tons/ozone season day)	2020 MOVES2014a On-Road NOx Emissions (tons/ozone season day)	2017-2020 On-Road NOx Reductions (tons/ozone season day)	2017-2019 Interpolated On-Road NOx Reductions (tons/ozone season day)	Required Failure-to-Attain Contingency Reduction (tons/ozone season day)
22.6	17.1	5.5	3.7	2.8

Appendix A

Demonstration that Connecticut's Nonattainment New Source Review State Implementation Plan Satisfies the Requirements for Implementation of the 2008 Ozone National Ambient Air Quality Standards.

Connecticut's Nonattainment New Source Review (NNSR) requirements are contained in the Regulations of Connecticut State Agencies (RCSA) sections 22a-174-1 and 22a-174-3a and these sections were last approved by EPA on February 27, 2003 [68 FR 9011]. These sections contain the necessary definitions and general New Source Review requirements. Specific NNSR requirements are contained in subsection (*l*) of RCSA 22a-174-3a.

The following table contains the NNSR requirements for State Implementation Plans (SIP) to be considered satisfactory for the implementation of the 2008 Ozone National Ambient Air Quality Standards (NAAQS). The federal requirements are listed in the left hand column of the table. The right hand column shows how Connecticut satisfies federal requirements.

Currently designated as "moderate" nonattainment for ozone by federal rule for the 2008 ozone standard, Connecticut retains in its SIP its NNSR rules resulting from more stringent classifications of "severe" and "serious" ozone nonattainment associated with earlier ozone standards. These NNSR rules are more stringent than would be required for an area newly designated as nonattainment for ozone with a classification of "moderate". Connecticut has always maintained these more stringent rules to assist in meeting attainment and to satisfy the Clean Air Act anti-backsliding requirements. Connecticut has incorporated these more stringent rules into its SIP and cannot change its SIP without public notice and EPA approval.

Note that, unless otherwise specified, Connecticut's regulations refer to the Code of Federal Regulations (CFR) in effect as of March 15, 2002.

Major Source Thresholds for Ozone -- VOC and NOx.	
40 CFR 51.165(a)(1)(iv)(A) (*1*) Any stationary source of air pollutants that emits, or has the potential to emit, 100 tons per year or more of any regulated NSR pollutant, except that lower emissions thresholds shall apply in areas subject to subpart 2, subpart 3, or subpart 4 of part D, title I of the Act, according to paragraphs (a)(1)(iv)(A)(*1*)(*i*) through (*vi*) of this section. (*i*) 50 tons per year of volatile organic compounds in any serious ozone nonattainment area. (*ii*) 50 tons per year of volatile organic compounds in an area within an ozone transport region, except for any severe or extreme ozone nonattainment area. (*iii*) 25 tons per year of volatile	Connecticut sets the major source thresholds in its definition of "major stationary source" in 22a-174-1(63). (63) "Major stationary source" means "major stationary source" as defined in 40 CFR 51.165(a)(1)(iv), provided that: (A) A stationary source that emits or has the potential to emit twenty-five (25) tons per year of volatile organic compounds or nitrogen oxides as an ozone precursor in any severe ozone nonattainment area is a "major stationary source;" and (B) A stationary source that emits or has the potential to emit fifty (50) tons per year of volatile organic compounds or nitrogen oxides as an ozone precursor in any serious ozone nonattainment area is a "major stationary source." Where the serious and severe nonattainment areas are defined in the SIP as follows:

organic compounds in any severe ozone nonattainment area. (*iv*) 10 tons per year of volatile organic compounds in any extreme ozone nonattainment area. (*2*) For the purposes of applying the requirements of paragraph (a)(8) of this section to stationary sources of nitrogen oxides located in an ozone nonattainment area or in an ozone transport region, any stationary source which emits, or has the potential to emit, 100 tons per year or more of nitrogen oxides emissions, except that the emission thresholds in paragraphs (a)(1)(iv)(A)(*2*)(*i*) through (*vi*) of this section shall apply in areas subject to subpart 2 of part D, title I of the Act. (*i*) 100 tons per year or more of nitrogen oxides in any ozone nonattainment area classified as marginal or moderate. (*ii*) 100 tons per year or more of nitrogen oxides in any ozone nonattainment area classified as a transitional, submarginal, or incomplete or no data area, when such area is located in an ozone transport region. (*iii*) 100 tons per year or more of nitrogen oxides in any area designated under section 107(d) of the Act as attainment or unclassifiable for ozone that is located in an ozone transport region. (*iv*) 50 tons per year or more of nitrogen oxides in any serious nonattainment area for ozone. (*v*) 25 tons per year or more of nitrogen oxides in any severe nonattainment area for ozone. (*vi*) 10 tons per year or more of nitrogen oxides in any extreme nonattainment area for ozone; or	(103) "Serious non-attainment area for ozone" means all towns within the State of Connecticut, except those towns located in the severe non-attainment area for ozone. (104) "Severe non-attainment area for ozone" means the towns of Bethel, Bridgeport, Bridgewater, Brookfield, Danbury, Darien, Easton, Fairfield, Greenwich, Monroe, New Canaan, New Fairfield, New Milford, Newtown, Norwalk, Redding, Ridgefield, Sherman, Stamford, Stratford, Trumbull, Weston, Westport and Wilton. Currently the entire State of Connecticut is designated moderate nonattainment for ozone under the 2008 ozone standard. Under this designation, the federal rules, listed in the column to the left, require that the major source thresholds be set at 100 tons per year for pollutants other than VOC. The VOC threshold must be set at 50 tons per year because we are in the ozone transport region. Connecticut regulations set the major source threshold at 100 tons per year for pollutants other than NOx and VOC because Connecticut is not designated nonattainment for any pollutant other than ozone. The thresholds for NOx and VOC are set at 50 tons per year except in the "severe" area of the state where the thresholds are set at 25 tons per year. These more stringent thresholds were originally set based on nonattainment designations for the 1-hour ozone standard. The State retains the most stringent thresholds applicable to a nonattainment area based on its historic classifications of ozone nonattainment and thus meets the requirements of 40 CFR 51.165(a)(12).
Change Constitutes a Major Source by Itself.	
40CFR51.165(a)(1)(iv)(A)(*3*) Any physical change that would occur at a stationary source not qualifying under paragraphs (a)(1)(iv)(A)(*1*) or (*2*) of this section as a major stationary source, if the change would constitute a major stationary source by itself.	The definition of "major stationary source" in RCSA 22a-174-1(63) (see above) cites the 2002 federal rule at 40 CFR 51.165(a)(1)(iv). The 2002 definition contains language which is functionally identical to the current federal rule. From 40 CFR 51.165(a)(1)(iv) dated 2002: (A) *Major stationary source* means: (*1*) Any stationary source of air pollutants which emits, or has the potential to emit 100 tons per year or more of any pollutant subject to regulation under the Act, or (*2*) Any physical change that would occur at a stationary source not qualifying under paragraph (a)(1)(iv)(A)(*1*) as a major stationary source, if the change would constitute a major stationary source by itself.

<table>
<tr><td></td><td>Connecticut treats as a major source any modification which by itself meets the major source threshold.</td></tr>
<tr><td colspan="2">Significant Net Emissions Increase of NOx is Significant for ozone.</td></tr>
<tr><td>40CFR51.165(a)(1)(v)(E)
For the purpose of applying the requirements of (a)(8) of this section to modifications at major stationary sources of nitrogen oxides located in ozone nonattainment areas or in ozone transport regions, whether or not subject to subpart 2, part D, title I of the Act, any significant net emissions increase of nitrogen oxides is considered significant for ozone.</td><td>Table 3a(k)-1 of RCSA 22a-174-3a sets forth the significance thresholds for determining major modifications. The threshold for NOx, as a precursor for ozone, is included in the table below.

Table 3a(k)-1 Significant Emission Rate Thresholds
<table><tr><th>Air Pollutant</th><th>Emission Levels(Tons per Year)</th></tr><tr><td>***</td><td></td></tr><tr><td>Nitrogen Oxides (as an ozone precursor)</td><td>25</td></tr><tr><td>Nitrogen Oxides ($PM_{2.5}$ precursor)</td><td>40</td></tr><tr><td>Nitrogen Oxides (NOx National Ambient Air Quality Standard)</td><td>40</td></tr><tr><td>***</td><td></td></tr></table>
Connecticut has set the significance threshold for determining a major modification for NOx as an ozone precursor to 25 tons per year. This is the same threshold as is required for VOC in areas designated as serious or severe for ozone nonattainment and therefore meets the requirements of 40 CFR 51.165(a)(12).

This threshold stems from prior nonattainment designations for the 1-hour standard and is more stringent than the 40 tons per year which would be required of an area which had been designated as moderate nonattainment.

Connecticut retains the 25 ton per year threshold for determining a major modification for NOx as an ozone precursor.</td></tr>
<tr><td colspan="2">Any Emission Change of VOC in Extreme Area Triggers Nonattainment NSR.</td></tr>
<tr><td>40CFR51.165(a)(1)(v)(F)
Any physical change in, or change in the method of operation of, a major stationary source of volatile organic compounds that results in any increase in emissions of volatile organic compounds from any discrete operation, emissions unit, or other pollutant emitting activity at the source shall be considered a significant net emissions increase and a major modification for ozone, if the major stationary source is located in an extreme ozone nonattainment area that is subject to subpart 2, part D, title I of the Act.</td><td>Not Applicable.

No areas in Connecticut were ever classified as extreme nonattainment for ozone.</td></tr>
<tr><td colspan="2">Significant Emissions Rates for VOC and NOx as Ozone Precursors</td></tr>
</table>

40CFR51.165(a)(1) (x)(A) *Significant* means, in reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates: **Pollutant Emission Rate** *** Ozone: 40 tpy of volatile organic compounds or NOx *** (B) Notwithstanding the significant emissions rate for ozone in paragraph (a)(1)(x)(A) of this section, significant means, in reference to an emissions increase or a net emissions increase, any increase in actual emissions of volatile organic compounds that would result from any physical change in, or change in the method of operation of, a major stationary source locating in a serious or severe ozone nonattainment area that is subject to subpart 2, part D, title I of the Act, if such emissions increase of volatile organic compounds exceeds 25 tons per year. (C) For the purposes of applying the requirements of paragraph (a)(8) of this section to modifications at major stationary sources of nitrogen oxides located in an ozone nonattainment area or in an ozone transport region, the significant emission rates and other requirements for volatile organic compounds in paragraphs (a)(1)(x)(A), (B), and (E) of this section shall apply to nitrogen oxides emissions. *** (E) Notwithstanding the significant emissions rates for ozone under paragraphs (a)(1)(x)(A) and (B) of this section, any increase in actual emissions of volatile organic compounds from any emissions unit at a major stationary source of volatile organic compounds located in an extreme ozone nonattainment area that is subject to subpart 2, part D, title I of the Act shall be considered a significant net emissions increase. * * * * *	RCSA 22a-174-1(61) refers to the 2002 federal definition of significant at 40CFR51.166(b)(23)(i) and establishes the significance threshold for VOC and NOx at 25 tpy. RCSA 22a-174-1(61) "Major modification" means "major modification" as defined in 40 CFR 51.165(a)(1)(v), provided that, for the purposes of this definition, the term "significant" has the same meaning as in 40 CFR 51.166(b)(23)(i) and: (A) The values for nitrogen oxides as an ozone precursor and volatile organic compounds are each twenty-five (25) tons per year, and (B) Asbestos, beryllium and vinyl chloride are excluded. From the 2002 version of 40CFR51.166(b)(23)(i): *Significant* means, in reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates: POLLUTANT AND EMISSIONS RATE Carbon monoxide:100 tons per year (tpy) Nitrogen oxides: 40 tpy Sulfur dioxide: 40 tpy Particulate matter: 25 tpy of particulate matter emissions. 15 tpy of PM10 emissions. Ozone: 40 tpy of volatile organic compounds Lead: 0.6 tpy *** The threshold to determine if a significant net emission increase of NOx or VOC will trigger a major modification is 25 tons per year for each pollutant. See above for further discussion.
Provisions for Emissions Reduction Credits.	
40CFR51.165(a)(3)(ii)(C) (*1*) Emissions reductions achieved by shutting down an existing emission unit or curtailing production or operating hours may be generally credited for offsets if they meet the	RCSA 22a-174-3a(*l*) (4) and (5) contain the State's requirements for Emission Reduction Credits.

requirements in paragraphs (a)(3)(ii)(C)(*1*)(*i*) through (*ii*) of this section. (*i*) Such reductions are surplus, permanent, quantifiable, and federally enforceable. (*ii*) The shutdown or curtailment occurred after the last day of the base year for the SIP planning process. For purposes of this paragraph, a reviewing authority may choose to consider a prior shutdown or curtailment to have occurred after the last day of the base year if the projected emissions inventory used to develop the attainment demonstration explicitly includes the emissions from such previously shutdown or curtailed emission units. However, in no event may credit be given for shutdowns that occurred before August 7, 1977. (*2*) Emissions reductions achieved by shutting down an existing emissions unit or curtailing production or operating hours and that do not meet the requirements in paragraph (a)(3)(ii)(C)(*1*)(*ii*) of this section may be generally credited only if: (*i*) The shutdown or curtailment occurred on or after the date the construction permit application is filed; or (*ii*) The applicant can establish that the proposed new emissions unit is a replacement for the shutdown or curtailed emissions unit, and the emissions reductions achieved by the shutdown or curtailment met the requirements of paragraph (a)(3)(ii)(C)(*1*)(*i*) of this section.	RCSA 22a-174-3a(*l*)(5) requires that Emission Reduction Credits be real, quantifiable, surplus, permanent and enforceable: (5) The owner or operator of the subject source or modification shall secure certified emission reduction credits before using them. Continuous emission reduction credits shall be secured and retired prior to their use. Emission reduction credits shall be: (A) Created and used in accordance with 40 CFR 51; (B) Real, that is, resulting in a reduction of actual emissions, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions shall be measured, recorded and reported to the commissioner; (C) Quantifiable, based on either stack testing approved by the commissioner in writing, conducted pursuant to an appropriate, reliable, and replicable protocol approved by the commissioner, or continuous emissions monitoring certified by the commissioner. Such quantification shall be in terms of the rate and total mass amount of non-attainment pollutant emission reduction; (D) Surplus, not required by any Connecticut General Statute or regulation adopted thereunder, or mandated by the State Implementation Plan, and not currently relied upon for any attainment plan, any Reasonable Further Progress plan or milestone demonstration; (E) Permanent, in that at the source of the emission reduction, the emission reduction system shall be in place and operating, and an appropriate record keeping system is maintained to collect and record the data required to verify and quantify such emissions reductions; and (F) Enforceable and approved by the commissioner in writing after the submission to the commissioner of documents satisfactory to the commissioner or incorporated into a permit as a restriction on emissions. Further restrictions on creating Emission Reduction Credits are contained in RCSA 22a-174-3a(*l*)(4). (4) Offsetting emission reductions or Emission Reduction Credits. (A) Except as provided in subdivision (8)(B) of this subsection, prior to commencing operation pursuant to a permit issued under this section, the owner or operator of the subject source or modification shall: (i) reduce actual emissions from other stationary sources on such premises, sufficient to offset the allowable emissions increase for each individual non-attainment air pollutant which is the subject of the application, or (ii) obtain certified emission reduction credits in accordance with subdivision (5) of this subsection, which credits are sufficient to offset the allowable emissions increase for each individual non-attainment air pollutant; and (B) The commissioner shall not grant a permit to an owner or operator of the subject source or modification unless the owner or operator demonstrates that internal offset or certified emission reduction credits pursuant to subparagraph (A) of this subdivision: (i) have occurred preceding the submission of such application and prior to the date that the subject source or modification becomes operational and begins to emit any air pollutant. The commissioner may consider a time period beginning no earlier than November 15, 1990, (ii) are not otherwise required by any of the following: the Act; a federally enforceable permit or order; the State Implementation Plan; or the regulations or statutes in effect when such application is filed,

	(iii) will be incorporated into a permit or order of the commissioner and would be federally enforceable, (iv) will create a net air quality benefit in conjunction with the proposed emissions increase. In determining whether such a net air quality benefit would be created, the commissioner may consider emissions on an hourly, daily, seasonal or annual basis. For carbon monoxide or particulate matter (total suspended particulate, $PM_{2.5}$ and PM10), the net air quality benefits shall be determined by the use of atmospheric modeling procedures approved by the commissioner and the Administrator in writing. Upon the request of the commissioner, the owner or operator shall make and submit to the commissioner, a net air quality benefit determination for each air pollutant. Such determination shall include, but not be limited to, all increases and decreases of emissions from stationary sources at any premises providing the offsetting emission reductions, (v) shall be based on the pounds per hour of potential emissions increase from the subject source or modification. The commissioner may consider other more representative periods, including, but not limited to, tons per year or pounds per day, (vi) are identified in an emissions inventory maintained by the commissioner or otherwise approved in writing by the commissioner, (vii) are of the same non-attainment air pollutant of which the owner or operator proposes to increase. Reductions of any exempt volatile organic compound listed in Table 1-3 of section 22a-174-1 of the Regulations of Connecticut State Agencies or those listed in 40 CFR 51.100 shall not be used to offset proposed increases emissions of non-exempt volatile organic compounds, (viii) occurred at either: one or more stationary sources in the same non-attainment area or stationary sources in another non-attainment area if, pursuant to the Act, such area has an equal or higher non-attainment classification than the area in which the proposed activity would take place, and if emissions from such other non-attainment area contribute to a violation of a National Ambient Air Quality Standard in the non-attainment area in which the proposed activity would take place, (ix) for the applicable non-attainment air pollutant, shall be from reductions in actual emissions, and (x) offset actual emissions at a ratio greater than one to one, as determined by the commissioner. In addition, the owner or operator shall offset emission increases of allowable emissions at a ratio, for volatile organic compounds or nitrogen oxides, of at least: 1.3 to 1 in any severe non-attainment area for ozone, and 1.2 to 1 in any serious non-attainment area for ozone. These provisions are applicable to any source which meets the applicability requirements of RCSA 22a-174-3a(*l*). (*l*) **Permit Requirements For Non-attainment Areas** (1) Applicability. In accordance with subsection (a) of this section, the provisions of this subsection shall apply to the owner or operator of: (A) Any new major stationary source that: (i) Is or will be constructed in a designated nonattainment area; and (ii) Is or will be major for the pollutant for which the area is designated as nonattainment; (B) Any major modification that: (i) Occurs at a source that is major for the pollutant for which the area is designated as nonattainment; and (ii) Is or will be major for the pollutant for which the area is designated as nonattainment; or (C) Any new major stationary source or major modification that is located in an attainment area or unclassifiable area, where the allowable emissions of any air pollutant would cause or exacerbate a violation of a National Ambient Air Quality Standard in an adjacent nonattainment area. Allowable emissions of any such air

	pollutant shall be deemed not to cause or contribute to a violation of a National Ambient Air Quality Standard provided that such emissions result in impacts that are less than the levels set forth in Table 3a(i)-1 in subsection (i) of this section. Creation and use of offsets are reviewed to assure they follow the above regulations. Additionally, RCSA 22a-174-3a(*l*)(7) requires that public notice made prior to permit issuance include a statement concerning the proposal to offset the potential emissions increase from the subject source or modification.
Requirements for VOC apply to NOx as Ozone Precursor.	
40CFR51.165(a)(8) The plan shall provide that the requirements of this section applicable to major stationary sources and major modifications of volatile organic compounds shall apply to nitrogen oxides emissions from major stationary sources and major modifications of nitrogen oxides in an ozone transport region or in any ozone nonattainment area, except in ozone nonattainment areas or in portions of an ozone transport region where the Administrator has granted a NOx waiver applying the standards set forth under section 182(f) of the Act and the waiver continues to apply.	In addition to the above, the following definition at RCSA 22a-174-1(78) assures that both VOC and NOx are treated as nonattainment air pollutants with regard to ozone. (78) "Non-attainment air pollutant" means the particular air pollutant for which an area is designated as a non-attainment area, except that volatile organic compounds and nitrogen oxides are non-attainment air pollutants for ozone non-attainment areas.
Offset Ratios for VOC and NOx for Ozone Nonattainment Areas.	
40CFR51.165(9)(ii) The plan shall require that in meeting the emissions offset requirements of paragraph (a)(3) of this section for ozone nonattainment areas that are subject to subpart 2, part D, title I of the Act, the ratio of total actual emissions reductions of VOC to the emissions increase of VOC shall be as follows: (A) In any marginal nonattainment area for ozone—at least 1.1:1; (B) In any moderate nonattainment area for ozone—at least 1.15:1; (C) In any serious nonattainment area for ozone—at least 1.2:1; (D) In any severe nonattainment area for ozone—at least 1.3:1 (except that the ratio may be at least 1.2:1 if the approved plan also requires all existing major sources in such nonattainment area to use BACT for the control of VOC); and (E) In any extreme nonattainment area for ozone—at least 1.5:1 (except that the ratio may be at least 1.2:1 if the approved plan also requires all existing major sources in such nonattainment	RCSA 22a-174-3a(*l*)(4)(B)(x) sets the required offset ratios. (x) offset actual emissions at a ratio greater than one to one, as determined by the commissioner. In addition, the owner or operator shall offset emission increases of allowable emissions at a ratio, for volatile organic compounds or nitrogen oxides, of at least: 1.3 to 1 in any severe non-attainment area for ozone, and 1.2 to 1 in any serious non-attainment area for ozone. Connecticut's current designation under the 2008 ozone standard of moderate nonattainment for ozone in an ozone transport region requires that the offsets for VOC and NOx be set at a ratio of 1.15 to 1. Connecticut retains more stringent offset requirements from prior designations at higher nonattainment classifications under earlier ozone standards and thus meets the requirements of 40 CFR 51.165(a)(12).

area to use BACT for the control of VOC); and (iii) Notwithstanding the requirements of paragraph (a)(9)(ii) of this section for meeting the requirements of paragraph (a)(3) of this section, the ratio of total actual emissions reductions of VOC to the emissions increase of VOC shall be at least 1.15:1 for all areas within an ozone transport region that is subject to subpart 2, part D, title I of the Act, except for serious, severe, and extreme ozone nonattainment areas that are subject to subpart 2, part D, title I of the Act. (iv) The plan shall require that in meeting the emissions offset requirements of paragraph (a)(3) of this section for ozone nonattainment areas that are subject to subpart 1, part D, title I of the Act (but are not subject to subpart 2, part D, title I of the Act, including 8-hour ozone nonattainment areas subject to 40 CFR 51.902(b)), the ratio of total actual emissions reductions of VOC to the emissions increase of VOC shall be at least 1:1.	
Anti-backsliding provision(s), where applicable.	
40 CFR 51.165(a)(12) The plan shall require that in any area designated nonattainment for the 2008 ozone NAAQS and designated nonattainment for the 1997 ozone NAAQS on April 6, 2015 the requirements of this section applicable to major stationary sources and major modifications of ozone shall include the anti-backsliding requirements contained at §51.1105.	As demonstrated above Connecticut retains its NNSR provisions which were in effect under more stringent designations of severe and serious nonattainment for the 1-hour ozone NAAQS which pre-dates the 1997 8-hour NAAQS.

Appendix B

Ozone Exceedance Analyses

The analyses can be found at the following web link:

http://www.ct.gov/deep/cwp/view.asp?a=2684&q=585378&deepNav_GID=1619

Appendix C

2011 Base Year Inventory for RFP:

Revisions Made to 2011 PEI

Appendix C

This appendix provides supplemental information to the discussion in Section 4.1 regarding changes made to CT DEEP's 2011 Periodic Emissions Inventory (PEI). The revisions were made to create an updated 2011 Base Year Inventory for use in the Reasonable Further Progress (RFP) demonstration.

Subsequent to the preparation of the 2011 PEI, updated emission estimation techniques and data became available for the on-road and non-road mobile source sectors. Updates include the use of MOVES2014a, a major revision to EPA's model that now addresses emissions from both on-road vehicles and most non-road equipment, associated revisions to MOVES2014a inputs that more accurately reflect Connecticut's motor vehicle emission inspection and maintenance (I&M) program, updated traffic data provided by the Connecticut Department of Transportation (CT DOT), and revised meteorological inputs that are more representative of the high ozone events that resulted in Connecticut's nonattainment designation for the 2008 ozone NAAQS. In addition, stationary source NOx emission offsets are included in the inventory to ensure they are accounted for in the RFP demonstration. Finally, revisions were made to PEI emissions for aircraft and airport support equipment (part of the non-road mobile sector in the 2011 PEI) and to landfill emissions (part of the area source sector in the 2011 PEI) to correct for database summation errors included in the submitted PEI.

MOVES2014a Input Summary for On-Road Vehicles

For on-road sources, the MOVES2014a (movesdb20151028) model was run in inventory mode with the resulting emissions calculated for each Connecticut county for 2011, 2017 and 2020.

Fuel Formulation and Fuel Supply

The MOVES2014a fuel formulation table defines the properties (such as RVP, sulfur level, ethanol volume, etc.) of each fuel and the fuel supply table identifies the fuel formulations used in a region and each formulation's respective market share.

The MOVES2014a default values for fuel formulation and fuel supply were used because Connecticut does not have a full local fuel property study as recommended in the *MOVES2014a Technical Guidance Document,* Section 4.9.1: "EPA strongly recommends using the default fuel properties for a region unless a full local fuel property study exists."

The change from county level (MOVES2010b) to regional level (MOVES2014a) for these inputs better accounts for fuel production and distribution networks, natural borders, and regional/state/local variations in fuel policy and increases confidence that the default fuels in a particular region represent the actual fuels used in that region.

Fuel Usage Fraction

The fuel usage fraction table allows the user to change the frequency at which E-85 capable on-road vehicles, also known as flex-fuel vehicles, use E-85 fuel versus conventional fuel, when appropriate.

According to the USDOE Alternative Fueling Station Locator[1], there are only three public E-85 stations located in Connecticut: two in New London County and one in Fairfield County. It is safe to conservatively assume that E-85 usage in E-85 passenger vehicles is minimal at this time.

Because of the lack of fueling stations within the state, Connecticut has conservatively assumed that E-85 capable vehicles (SourceBinFuelTypeID=5) are using gasoline (fuelSupplyFuelTypeID=1) 100% of the time and adjusted the default MOVES input appropriately.

AVFT

The AVFT (fuel type and vehicle technology) table allows users to modify the fraction of on-road vehicles capable of using different fuels and technologies in each model year. Specifically, the AVFT table allows users to define the split between diesel, gasoline, E-85, CNG, and electricity, for each vehicle type and model year.

This table should only be modified if local data is available. If local data is used for present years, that information can be assumed for future years. In most cases, the default VMT split between diesel, gasoline, CNG, and E-85 should be used. There is also a special case for transit buses where the input should be adjusted to reflect the usage of CNG transit buses. If there are no CNG buses in the fleet then the input should be adjusted. Because some transit buses in Connecticut are powered by CNG, we did not adjust the input for transit buses.

MOVES2014a default data was used for this input and the same defaults were used for each county.

Source Type Population

Source type (on-road vehicle type) population is used by MOVES to calculate start and evaporative emissions. Start and evaporative emissions depend more on how many vehicles are parked and started than on how many miles they are driven. In MOVES, start and resting evaporative emissions are related to the population of vehicles in an area.

Population counts for a base year of 2011 for all source types were developed from a complete analysis of 2011 Connecticut motor vehicle registration data. The VMT based population estimates for source types 51, 52, 53, 54, 61 and 62 used an approach outlined in *MOVES2014a Technical Guidance Document,* section 4.3 and a national run for all Connecticut counties to obtain a ratio of MOVES default population to VMT by source type. That ratio was multiplied by local county VMT for each source type to obtain an estimate of local population based on local VMT. The registration population data was used when the VMT based estimate was lower than what was actually registered in the state. This accounts for inaccuracies in the VMT based method, for home-based lodging of interstate trucks and for truck populations accumulating lower than expected VMT.

Future year populations were calculated based on a ratio of Connecticut specific base and future year MOVES HPMS Vehicle Type VMT to obtain a growth factor for the HPMS Vehicle Type. Distributions of source Types within an HPMS Vehicle Type were assumed to remain the same as established in the base year. If there was negative VMT growth between the 2011 base year and

[1] See: http://www.afdc.energy.gov/locator/stations/.

2017, the vehicle population counts for 2017 were conservatively set to the 2011 base year values instead of having population counts decrease due to VMT decreases.

Source Type Age Distribution

Source type age distribution input defines the age distribution of the local on-road vehicle fleet which can vary greatly in different areas of the country. MOVES covers a 31-year range of vehicle ages, with vehicles 30 years and older grouped together. MOVES allows the user to specify the fraction of vehicles in each of 30 vehicle ages for each of the 13 source types in the model.

Local data was developed from an analysis of Connecticut's 2011 motor vehicle registration data, which was completed in 2012. As allowed by *MOVES2014a Technical Guidance Document,* Section 4.4, MOVES national default age distributions were used in cases where locally registered vehicle data was not necessarily representative. Table C-1 summarizes where local data was used and where MOVES2014a default data was used:

Table C-1: Use of Local and Default Age Distribution Data

Local Data		**MOVES2014a Default Data**	
11	Motorcycle	51	Refuse Truck
21	Passenger Car	52	Single Unit Short Haul Truck
31	Passenger Truck	53	Single Unit Long Haul Truck
32	Light Commercial Truck	54	Motor Home
41	Intercity Bus	61	Combination Short Haul Truck
42	Transit Bus	62	Combination Long Haul Truck
43	School Bus		

For future years, the Connecticut specific age distribution developed for 2011 was carried over without modification instead of using the new EPA "Age Distribution Projection Tool for MOVES2014". This is allowed by M*OVES2014a Technical Guidance Document,* Section 4.4.

I/M Coverage

This input reflects the characteristics and SIP requirements of Connecticut's Inspection and Maintenance (I/M) program for on-road vehicles. MOVES only calculates I/M program benefits for gasoline vehicles and this discussion is limited to gasoline vehicles.

Connecticut's I/M program has both a grace period (4 years) and an exemption age (25 years). The imcoverage table inputs "begModelYearID" and "endModelYearID" were adjusted to reflect these factors and a plus one is included in both the grace period and exemption age calculations to account for the model year preceding the calendar year. Connecticut's I/M program also specifies an inspection frequency of every two years.

I/M compliance and waiver rates were determined by the values in Connecticut's SIP. The SIP compliance rate is 96% and the waiver rate is 1%. These values were used along with the regulatory class coverage adjustment factors provided in Appendix A of the *MOVES2014a Technical Guidance Document* to calculate a compliance factor for each I/M program type. [Compliance Factor = Compliance Rate * (1 - Waiver Rate) * Reg Class Adj.] Connecticut also tests gasoline vehicles up to 10,000 lbs.

Connecticut's I/M program applies across the state so all counties used the same I/M coverage inputs.

Passenger Cars (sourceTypeID - 21)

For 1995 & Older: Regulatory class adjustment factor is 100% for ASM2525 (Test Standard ID: 24) and gas cap test (Test Standard ID: 41) since all cars in this source type are under 8,500 lbs. [Calculation: (0.96)*(1-0.01)*(1) = 0.9504]

For 1996 & newer: Regulatory class adjustment factor is 100% for OBD testing (Test Standard IDs: 51, 43) since all cars in this source type are under 8,500 lbs. [Calculation: (0.96)*(1-0.01)*(1) = 0.9504]

Passenger Trucks (sourceTypeID - 31)

For 1995 & Older: Regulatory Class Adjustment for ASM2525 (Test Standard ID: 24) is 98% to cover the vehicles in this source type under 8,500 lbs. [Calculation: (0.96)*(1-0.01)*(0.98) = 0.9314]

For 1995 & Older: Because vehicles in this source type over 8,500 lbs get a PCTSI test (Test Standard ID: 12), and MOVES can't assign two test standards to one pollutant/sourcetype group, this part of the I/M program is not covered in these inputs. They could be included if a separate MOVES run was conducted and subtracting the difference. The emissions impact of not including this small portion of the I/M program in the MOVES input is very minimal.

For 1995 & Older: Regulatory Class Adjustment for Gas Cap Test (Test Standard ID: 41) is 100% since all vehicles in this source type up to 10,000 lbs get a gas cap test. [Calculation: (0.96)*(1-0.01)*(1) = 0.9504]

For 1996 & newer: Regulatory Class Adjustment is 100% since all vehicles in this source type up to 10,000 lbs get an OBD test (51, 43). [Calculation: (0.96)*(1-0.01)*(1) = 0.9504]

Light Commercial Trucks (sourceTypeID - 32)

For 1995 & Older: Regulatory Class Adjustment for ASM2525 (Test Standard ID: 24) is 92% to cover the vehicles in this source type under 8,500 lbs. [Calculation: (0.96)*(1-0.01)*(0.92) = 0.8744]

For 1995 & Older: Because vehicles in this source type over 8,500 lbs get a PCTSI test (Test Standard ID: 12), and MOVES can't assign two test standards to one pollutant/sourcetype group, this part of the I/M program is not covered in these inputs. They could be included if a separate MOVES run was conducted and subtracting the difference. The emissions impact of not including this small portion of the I/M program in the MOVES input is very minimal.

For 1995 & Older: Regulatory Class Adjustment for Gas Cap Test (Test Standard ID: 41) is 100% since all vehicles in this source type up to 10,000 lbs get a gas cap test. [Calculation: (0.96)*(1-0.01)*(1) =0 .9504]

For 1996 & newer: Regulatory Class Adjustment is 100% since all vehicles in this source type up to 10,000 lbs get an OBD test (51, 43). [Calculation: (0.96)*(1-0.01)*(1) =0 .9504]

The improved Connecticut specific I/M program input developed for MOVES2014a includes the entire CT gasoline I/M testing program with the exception of 1995 and older passenger and light commercial trucks that are over 8,500 lbs, which weren't included due to limitations of MOVES and the minor impact on emissions. In contrast, previous I/M inputs developed for MOVES2010b did not account for any reductions from gasoline vehicles over 8,500 lbs.

Meteorological Data

Local temperature and humidity data are required inputs for SIP and regional conformity analyses with MOVES. Ambient temperature is a key factor in estimating emission rates for on-road vehicles with substantial effects on most pollutant processes. Relative humidity is also important for estimating NOx emissions from motor vehicles.

Temperature inputs for a typical high ozone day for Connecticut's non-attainment areas were calculated by first determining the ten highest 8-hr ozone concentrations that occurred in the entire state on unique days in the months of June through August during the three year period (2008-2010) preceding the base year (2011). These values were obtained from the Connecticut Department of Environmental Protection Annual Summary Information for Ozone Website as shown in Table C-2:

Table C-2: Ten Highest Ozone Concentrations on Unique Days, 2008-2010

Date	Site	8-hour Ozone Concentration (ppb)
6/10/2008	Greenwich	105
7/19/2008	Madison	105
7/18/2008	Greenwich	102
6/28/2008	Danbury	93
7/16/2010	Danbury	91
6/7/2008	Middletown	91
6/14/2008	Westport	89
7/28/2010	Stafford	87
7/3/2008	Stafford	87
8/17/2009	Westport	85

For each of the ten highest ozone days, Table C-3 lists the maximum and minimum temperatures that occurred each day, as obtained from the National Oceanic and Atmospheric Administration (NOAA) Local Climatological Data Publication Website for Bradley international Airport in Windsor Locks, CT for the greater Hartford ozone non-attainment area and Igor I. Sikorsky Memorial Airport in Bridgeport, CT for the CT portion of the NY-NJ-CT ozone non-attainment area.

Table C-3: Maximum and Minimum Temperatures for Ten Highest Ozone Days

Date	Greater CT Bradley Airport		CT Portion of NY-NJ-CT Sikorsky Airport	
	Max Temp (°F)	Min Temp (°F)	Max Temp (°F)	Min Temp (°F)
6/10/2008	98	69	96	70
7/19/2008	94	67	92	77
7/18/2008	93	65	92	72
6/28/2008	90	65	86	67
7/16/2010	93	70	87	73
6/7/2008	93	60	86	61
6/14/2008	88	58	84	65
7/28/2010	90	62	87	69
7/3/2008	90	63	87	67
8/17/2009	94	69	91	73
AVERAGE	**92.3**	**64.8**	**88.8**	**69.4**

The calculated average maximum and minimum temperatures for each nonattainment area were then input into EPA's Meteorological Data Converter MOBILE6 (XLS) to produce a 24 hour temperature profile for a typical high ozone day in CT for each non-attainment area.

Humidity inputs for a typical high ozone day for Connecticut's non-attainment areas were calculated by first determining the hour by hour humidity profile for each of the ten highest 8-hr ozone days listed in Table C-2. Hour by Hour humidity values were obtained from the National Oceanic and Atmospheric Administration (NOAA) Quality Controlled Local Climatological Data Website for Bradley international Airport in Windsor Locks, CT for the greater Hartford ozone non-attainment area and Igor I. Sikorsky Memorial Airport in Bridgeport, CT for the CT portion of the NY-NJ-CT ozone non-attainment area. An average humidity value was then calculated for each hour of the day to produce a 24-hour humidity profile for a typical high ozone day in CT for each non-attainment area. Results can be found in Tables C-4 and C-5, respectively.

These temperature and humidity profiles were input to MOVES to obtain summer day emission estimates for each Connecticut county and non-attainment area.

Once the motor vehicle budgets are approved, any temperature assumptions used for regional conformity analyses must also be consistent with the temperature assumptions used to establish the motor vehicle emissions budgets in the SIP as required in the transportation conformity rule, 40 CFR §93.122(a)(6).

Table C-4: Hour by Hour Humidity Values for Ten Highest Ozone Days at Bradley Airport

Hour	6/10/08	7/19/08	7/18/08	6/28/08	7/16/10	6/7/08	6/14/08	7/28/10	7/3/08	8/17/09	AVG
1	87	84	81	90	90	93	73	78	76	90	**84.2**
2	87	81	87	87	93	93	75	84	81	93	**86.1**
3	90	87	84	90	90	93	78	90	81	93	**87.6**
4	93	84	84	90	90	93	84	87	81	93	**87.9**
5	93	87	87	90	93	93	87	87	81	93	**89.1**
6	87	84	81	84	90	93	78	84	68	93	**84.2**
7	79	74	71	79	87	93	73	71	61	90	**77.8**
8	69	71	69	71	79	90	68	62	58	79	**71.6**
9	59	69	60	69	72	87	62	58	56	67	**65.9**
10	52	63	57	61	70	76	58	53	47	61	**59.8**
11	46	57	53	57	63	67	56	48	45	57	**54.9**
12	42	50	50	51	57	63	53	46	40	52	**50.4**
13	35	44	47	47	50	59	51	47	36	47	**46.3**
14	33	38	44	45	49	56	48	50	39	35	**43.7**
15	33	37	44	45	56	50	76	47	38	32	**45.8**
16	35	44	44	48	59	50	85	47	43	34	**48.9**
17	40	46	48	61	61	49	76	55	81	37	**55.4**
18	45	48	59	57	65	59	79	61	79	44	**59.6**
19	50	57	60	63	84	61	84	67	81	65	**67.2**
20	53	58	60	67	87	67	87	72	79	74	**70.4**
21	57	67	58	71	87	63	84	77	87	79	**73**
22	64	74	71	74	87	77	87	79	90	79	**78.2**
23	84	76	74	76	85	74	90	82	87	85	**81.3**
24	87	82	76	82	85	82	90	82	84	87	**83.7**

Table C-5: Hour by Hour Humidity Values for Ten Highest Ozone Days at Sikorsky Airport

Hour	6/10/08	7/19/08	7/18/08	6/28/08	7/16/10	6/7/08	6/14/08	7/28/10	7/3/08	8/17/09	AVG
1	76	79	79	81	87	84	76	79	71	85	**79.7**
2	76	79	79	81	90	87	81	76	71	85	**80.5**
3	79	79	76	84	87	87	78	79	68	90	**80.7**
4	81	79	82	84	90	90	81	76	73	90	**82.6**
5	81	85	79	87	90	90	81	76	76	90	**83.5**
6	79	79	76	87	90	93	78	71	71	90	**81.4**
7	69	74	71	84	87	93	78	69	66	87	**77.8**
8	67	69	69	76	85	81	71	67	64	82	**73.1**
9	59	69	67	71	77	81	64	60	62	77	**68.7**
10	57	65	62	67	77	76	58	58	58	79	**65.7**
11	50	57	58	60	67	69	60	55	52	72	**60**
12	44	50	53	53	70	64	53	55	49	63	**55.4**
13	35	52	55	55	72	60	53	57	43	59	**54.1**
14	45	44	47	63	70	58	62	55	46	52	**54.2**
15	42	47	44	67	70	63	65	63	46	52	**55.9**
16	44	54	44	65	68	71	69	65	49	45	**57.4**
17	48	59	44	60	67	59	69	69	53	55	**58.3**
18	48	59	61	62	70	65	62	72	52	65	**61.6**
19	51	67	63	67	77	67	67	74	58	67	**65.8**
20	62	74	70	71	82	69	84	79	64	74	**72.9**
21	62	79	72	76	79	69	84	82	64	77	**74.4**
22	74	79	74	76	79	71	87	82	66	77	**76.5**
23	71	82	79	82	79	71	87	85	74	85	**79.5**
24	79	82	79	87	85	71	82	85	74	85	**80.9**

Hotelling Inputs

The hotelling inputs are used to import total hotelling hours for long-haul combination trucks (source type = 62) by hour of day, day type, month, and vehicle model year.

The hotelling hours input was based off hotelling data developed by EPA for the NEI 2011 version 2. This data was deemed to be more representative than the default hotelling hours in MOVES2014a for Connecticut. MOVES2014a default hotelling hours data was calculated only for rural restricted roadways in each county. In Connecticut, for example, Fairfield County has no rural restricted roads and MOVES2014a defaults would show no hotelling for this county when in fact there is hotelling in this county. The EPA NEI 2011 version 2 values take into account both rural and urban restricted roads to calculate hotelling hours and results in a much more representative hotelling hours input for Connecticut. This is the best available data source for this input at this time.

The hotelling hours input was adjusted for future years by taking the ratio of HPMSVtypeVMT for ID=60 (from NEI 2011 version 2) to the local HPMSVtypeVMT for the future year and adjusting each county's hotelling hours to account for the increases or decreases in VMT.

The hotelling activity distribution input was not changed from MOVES2014a defaults. This input defines the fraction of hotelling hours that are in each of the hotelling modes by model year. The hotelling modes are: Extended Idle, Diesel Auxiliary Power (APU), Battery Power, and Engine-Off.

Vehicle Type VMT

The HPMS Vehicle Type VMT input represents annual vehicle-miles of travel in each Connecticut county for each of the five on-road vehicle types. The vehicle types are consistent with those used in the Highway Performance Monitoring System (HPMS).

The month, day and hour VMT Fraction inputs represent the fraction of total annual VMT that occurs in a given month, the fraction of total monthly VMT that occurs on weekdays (dayID = 5) versus weekends (dayID = 2), and the fraction of total daily VMT that occurs in a given hour, respectively.

These inputs contain a combination of multiple data sources including default VMT mixes, locally collected VMT mixes, and modeled VMT figures developed using CT DOT's PERson FORecasting Model (PERFORM). The VMT mix by HPMS road type and MOVES vehicle type is created utilizing the process outlined below in the Road Type Distribution description. County level VMT totals by HPMS road type are calculated with CT DOT's PERFORM statewide travel demand model. Please note that these VMT totals are based on HPMS VMT factors that have been derived from HPMS VMT figures categorized by Urban Area. Two different sets of HPMS VMT factors were utilized in the PERFORM from 2010 and 2013. The MOVES run for 2011 is factored to 2010 HPMS data while the runs for 2017 and 2020 are factored to 2013 HPMS data. This may cause the 2011 to 2017 annual change to differ from that of the 2017 to 2020 time period as they are not derived from the same base data. The VMT mix, County VMT by road type, and the locally collected fraction of VMT by hour is then input into EPA's MOVES VMT converter to calculate and format County level daily VMT by MOVES vehicle types (HPMSvType) and a VMT fraction by source type, road type, day type, and hour of the day. The daily VMT figures are then input into EPA's MOVES Annual Average Daily

VMT converter, which utilizes PERFORM calculated seasonal VMT factors as well as default weekend day adjustment factors to develop County level annual VMT totals by MOVES vehicle types (HPMSvType).

Average Speed Distribution

This input represents the distribution of vehicle-hours traveled among 16 speed bins and MOVES requires this information for every combination of on-road vehicle source type, road type, and hour of the day. It is also separated seasonally to allow for summer, winter, and annual average adjustment factors.

These inputs are generated starting with CT DOT's PERFORM using average speed by functional classification and the local fraction of VMT by hour of the day. The resultant data sets consist of a matrix of 14 speed bins by hour of the day based on the MOBILE6.2 formatted speed distribution needs. This is then input into EPA's average speed converter to expand the MOBILE6.2 speed bin 14 to MOVES speed bins 14, 15, and 16.

Road Type Distribution

Road type distribution represents the percent of on-road VMT on each of five road types used in MOVES. These road types are off-network, rural restricted access, rural unrestricted access, urban restricted access, and urban unrestricted access. MOVES requires this distribution for each vehicle source type.

This input is created by utilizing a statewide EPA default VMT mix of VMT fraction by the MOVES vehicle types (vType16) and locally collected statewide HPMS vehicle mix containing the fraction of the CT DOT vehicle type counts on each roadway type by functional classification. CT DOT and CT DEEP created a VMT pre-processor that would reconcile the two VMT mixes by properly mapping the 13 CT DOT vehicle types to the 16 MOVES vehicle types. The resultant VMT mix of HPMS road type by MOVES vehicle type fraction is then input into EPA's MOVES VMT converter to calculate and format VMT by source type and road type for input into MOVES.

Ramp Fraction

Ramp fraction indicates the percent of on-road vehicle-hours traveled (VHT) that occurs on ramps for rural restricted access roadways (road type = 2) and urban restricted access roadways (road type = 4).

These inputs are generated starting with CT DOT's PERFROM using forecasted VMT figures by roadway type. The county level expressway and ramp VMT are divided into urban and rural designations and input into a MOVES ramp fraction pre-processor along with average speeds for urban and rural expressways and ramps. This pre-processor is designed by CT DOT to calculate the percentage of urban and rural expressway Vehicle Hours of Travel (VHT) that occurs on ramps within each county.

LEV and NLEV Databases

EPA has provided two databases for MOVES to be used in states other than California that adopted California Low Emission Vehicle (LEV) standards, and states in the Ozone Transport Commission (OTC) that received early implementation of NLEV standards.

The National Low Emission Vehicle (NLEV) Program was the result of an agreement between EPA, Ozone Transport Commission (OTC) states, and the auto manufacturers to introduce new emission standards in the OTC states beginning with the 1999 model year and in the rest of the country beginning with the 2001 model year. The default MOVES database does not include the effects of this early program before the 2001 national implementation. Because Connecticut is an OTC state and adopted the early NLEV program, this database was imported to model the effects of the program in 1999 and 2000 in CT before the national program took effect in 2001.

EPA has also created a separate input database for those states that have adopted the California LEV program regulations. The effects of these LEV standards are not included in the default MOVES emissions database. Because states adopted the LEV standards at different points in time, using the full EPA provided LEV database may not be appropriate. Connecticut implemented the California LEV standards in 2008. As such, the EPA provided database was modified in in accordance with the EPA document *Instructions for Using LEV and NLEV Inputs for MOVES2014* to create a Connecticut specific input.

MOVES2014a Input Summary for Non-Road Equipment

The MOVES2014a model, which incorporates the algorithms of EPA's NONROAD2008 model, was also used to determine non-road emissions for 2011 and 2017 for all but the MAR categories (commercial **M**arine vessels, **A**ircraft/support equipment, and **R**ail locomotives). Connecticut used EPA's[2] 2011 and 2017 emissions estimates for the MAR categories.

Fuel Inputs

Default MOVES2014a fuel inputs were used for the NONROAD2008 runs as the change from county level (MOVES2010b) to regional level (MOVES2014a) for fuel formulation better accounts for fuel production and distribution networks, natural borders, and regional/state/local variations in fuel policy and increase confidence that the default fuels in a particular region represent the actual fuels used in that region.

Meteorological Data

The same Connecticut specific meteorological inputs as described previously in this appendix for the on-road MOVES runs, were also used in the NONROAD2008 runs.

NONROAD2008 Base Files

The only modifications made to the NONROAD2008 base tables via the NONROAD Data Importer was the modification of pleasure craft equipment population in the "nrbaseyearequippopulation" table. The modification is based on the pleasure craft population updates performed at the end of the MARAMA 2007 Inventory Development project.[3]

Connecticut believes that the 2011 and 2017 population inputs are slightly conservative (i.e., overestimated) based on actual registration trends in the state. Connecticut will look into updating these inputs in the future based on Connecticut's actual pleasure craft growth rate.

The pleasure craft population inputs are summarized in Table C-6.

[2] EPA's Version 6.2 modeling platform is documented at: https://www.epa.gov/air-emissions-modeling/2011-version-62-platform.

[3] Technical Support Document for the Development of the 2025 Emission Inventory for PM Nonattainment Counties in the MANE-VU Region Version 3.3 Revision 2.1 Initial report and Revision 1 - January 23, 2012

Table C-6: Pleasure Craft Population Input Summary

sourceTypeID	2011 population	2017 population	2020 population
2113	1455.6	1519.4	1625.7
2114	5429	5666.9	6063.5
2115	8177	8535.3	9132.6
2116	1818.1	1897.8	2030.6
2117	3580.8	3737.7	3999.3
2118	6858.4	7159	7659.9
2119	5320.4	5553.6	5942.2
2120	8898.5	9288.4	9938.4
2121	6044.7	6309.6	6751.1
2122	13522.7	14115.3	15103
2123	12138.8	12670.8	13557.4
2124	7	7.3	7.8
2125	6.4	6.7	7.1
2126	61.9	64.6	69.1
2127	0	0	0
2128	65.7	68.6	73.4
2129	26.8	28	29.9
2130	589.3	615.1	658.2
2131	2179.4	2274.9	2434.1
2132	8072.9	8426.7	9016.4
2133	531.2	554.5	593.3
2134	11.5	12	12.9
2135	9.2	9.6	10.3
2136	5.5	5.7	6.1
2137	55.7	58.2	62.2
2138	2602	2716.1	2906.2
2139	0	0	0
2140	6160.3	6430.3	6880.2
2141	1628	1699.4	1818.3
2142	1054.7	1100.9	1178
2143	34.6	36.1	38.7
2144	162.2	185.2	223.5
2145	79.7	91	109.8
2146	198.7	227	274
2147	228.5	261	315.1
2148	17.4	19.9	24.1
2149	1970.5	2250.5	2717.1
2150	17218.4	19664.8	23742.1
2151	1343.1	1533.9	1852
2152	157.3	179.6	216.8
2153	187.1	213.7	258
2154	14.4	16.4	19.8
2155	98.9	112.9	136.3
2156	8.3	9.5	11.4
2157	27.8	31.8	38.4
2158	17.4	19.9	24.1
2159	85.8	98	118.3

Inclusion of Stationary Source NOx Offset Emission Bank

CT DEEP's Administrative Enforcement group evaluates, certifies and tracks requests from sources that desire to retain rights to emission reductions resulting from source shutdowns or enforceable emission reductions that go beyond regulatory requirements. Certified reductions are "banked" and are potentially available for future use as emission offsets by newly permitted sources. NOx offsets of 0.7 tons/ozone season day (255 annual tons) were included in both the 2011 base year and 2017 projected inventories for the Greater Connecticut area. Note that the 2011 banked offsets were not actually emitted to the atmosphere in 2011, and the full allotment of 2017 banked offsets are unlikely to be emitted into the atmosphere in 2017. Inclusion of the full bank of offsets for both years provides a level of conservatism to the RFP demonstration described in Section 5. Table C-7 provides a summary of the offset bank for both 2011 and 2017 for all of Connecticut. Summer daily values were determined by dividing the annual values by 365.

Table C-7. Banked Stationary Source NOx Offsets Included in the 2011 and 2017 Inventories

Connecticut Emission Reduction Credits "Offset Bank" of NOx Emissions		FIPS	2011 Annual NOx (tpy)	2017 Annual NOx (tpy)
Totals by County:	Fairfield	09001	115	160
	Hartford	09003	0	0
	Litchfield	09005	0	0
	Middlesex	09007	165	0
	New Haven	09009	541	648
	New London	09011	8	8
	Tolland	09013	0	0
	Windham	09015	247	247
Totals by NA Area:	Greater CT		255	255
	SWCT		821	808

Corrections to Aircraft/Support Equipment and Landfill Emissions

While preparing this SIP revision, CT DEEP discovered that a database summation script inadvertently resulted in a large overestimation of ozone summer day emissions from the aircraft/airport support equipment sector in the March 2016 submittal of the 2011 PEI. In addition, in Section 4.14 of the 2011 PEI, CT DEEP describes calculations of landfill area source emissions, but those calculations were not carried forward into summary tables elsewhere in the PEI document. The CT DEEP has included corrected values in the 2011 Base Year Inventory presented in Section 4.1.3 and used for the RFP demonstration. Table C-8 summarizes the corrections for the Greater Connecticut area. More detailed county breakdowns for the whole state are provided in Tables C-9 and C-10.

Table C-8. Corrections to 2011 PEI for Aircraft/Support Equipment and Landfills

	NOx		VOC			
2011 Summer Day (lbs/day)	Original PEI Aircraft/Support	Corrected PEI Aircraft/Support	Original PEI Aircraft/Support	Corrected PEI Aircraft/Support	Original PEI Landfills	Corrected PEI Landfills
Hartford	26,460.54	2,445.15	5064.473	509.13	0	698.0308196
Litchfield	23.54	11.82	51.655	25.97	0	119.3368775
New London	103.51	10.37	269.796	26.75	0	78.54356246
Tolland	37.59	6.75	82.352	14.781	0	24.62388199
Windham	68.54	16.72	149.659	36.619	0	37.06546439
Greater CT Total (lbs/day)	**26,693.73**	**2,490.82**	**5,617.94**	**613.25**	**-**	**957.60**
Greater CT Total (tons/day)	**13.3**	**1.2**	**2.8**	**0.3**	**-**	**0.5**

Table C-9. Details of Corrections to 2011 PEI Emissions for Aircraft/Support Equipment

					Original 2011 PEI Submission						Corrected for 2011 Base Year Inventory for RFP					
County	FAA Location ID	EIS Facility ID	Airport Name	SCC	Annual Emissions (TPY)			Summer Day Emissions (PPD)			Annual Emissions (TPY)			Summer Day Emissions (PPD)		
					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
Fairfield	0CT7	11014011	Bridgeport Hospital Heliport	2275050012	0.011	0.005	0.153	0.038	0.018	0.533	0.011	0.005	0.153	0.038	0.018	0.533
Fairfield	0CT8	11517611	Danbury Hospital Heliport	2275050012	0.011	0.005	0.148	0.014	0.007	0.194	0.011	0.005	0.148	0.014	0.007	0.194
Fairfield	1CT0	11018911	NORDEN SYSTEMS	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Fairfield	1CT0	11018911	NORDEN SYSTEMS	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Fairfield	5CT4	11847111	Norwalk Hospital Heliport	2275050012	0.004	0.002	0.053	0.015	0.007	0.206	0.004	0.002	0.053	0.015	0.007	0.206
Fairfield	5CT8	11193811	Canal Street Heliport	2275050011	0.002	0.002	0.222	0.032	0.014	2.554	0.001	0.001	0.111	0.016	0.007	1.277
Fairfield	5CT8	11193811	Canal Street Heliport	2275050012	0.022	0.01	0.316	0.262	0.124	3.646	0.011	0.005	0.158	0.131	0.062	1.823
Fairfield	9CT1	16101711	THE TOWERS	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Fairfield	9CT1	16101711	THE TOWERS	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Fairfield	BDR	9795811	Igor I. Sikorsky Memorial Airport	2265008005	0	0.011	0.066	0.011	0.034	0.315	0.000	0.001	0.006	0.001	0.003	0.026
Fairfield	BDR	9795811	Igor I. Sikorsky Memorial Airport	2267008005	0	0	0.011	0	0	0.032	0.000	0.000	0.001	0.000	0.000	0.003
Fairfield	BDR	9795811	Igor I. Sikorsky Memorial Airport	2268008005	0	0	0	0	0	0.024	0.000	0.000	0.000	0.000	0.000	0.002
Fairfield	BDR	9795811	Igor I. Sikorsky Memorial Airport	2270008005	0.011	0.033	0.308	0.049	0.152	1.506	0.001	0.003	0.028	0.004	0.013	0.126

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					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
Fairfield	BDR	9795811	Igor I. Sikorsky Memorial Airport	2275001000	1.551	0.176	30.789	7.706	0.858	152.726	0.141	0.016	2.799	0.798	0.089	15.820
Fairfield	BDR	9795811	Igor I. Sikorsky Memorial Airport	2275020000	0.011	0.066	0.121	0.043	0.337	0.611	0.001	0.006	0.011	0.004	0.034	0.061
Fairfield	BDR	9795811	Igor I. Sikorsky Memorial Airport	2275050011	18.656	8.063	1489.818	92.559	39.982	7390.204	1.696	0.733	135.438	11.063	4.779	883.291
Fairfield	BDR	9795811	Igor I. Sikorsky Memorial Airport	2275050012	33.132	15.554	460.251	164.367	77.177	2283.052	3.012	1.414	41.841	16.371	7.687	227.396
Fairfield	BDR	9795811	Igor I. Sikorsky Memorial Airport	2275060011	0.165	0.154	28.138	0.84	0.785	139.556	0.015	0.014	2.558	0.067	0.062	11.120
Fairfield	BDR	9795811	Igor I. Sikorsky Memorial Airport	2275060012	3.619	2.915	13.189	17.926	14.46	65.442	0.329	0.265	1.199	1.428	1.152	5.215
Fairfield	BDR	9795811	Igor I. Sikorsky Memorial Airport	2275070000	0	0.011	0	0	0.035	0.015	0.000	0.001	0.000	0.000	0.003	0.001
Fairfield	CT12	11315111	St Vincent's Medical Center Heliport	2275050012	0.004	0.002	0.057	0.023	0.011	0.325	0.004	0.002	0.057	0.023	0.011	0.325
Fairfield	CT37	12291011	Sikorsky Bridgeport Heliport	2275050011	0.002	0.002	0.222	0.017	0.008	1.398	0.001	0.001	0.111	0.008	0.004	0.651
Fairfield	CT37	12291011	Sikorsky Bridgeport Heliport	2275050012	0.022	0.01	0.316	0.144	0.067	1.996	0.011	0.005	0.158	0.077	0.036	1.067
Fairfield	CT41	11316111	General Electric Co. Heliport	2275050011	0.002	0.002	0.222	0.017	0.008	1.422	0.001	0.001	0.111	0.011	0.005	0.916

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					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
Fairfield	CT41	11316111	General Electric Co. Heliport	2275050012	0.022	0.01	0.316	0.146	0.068	2.029	0.011	0.005	0.158	0.052	0.024	0.722
Fairfield	CT52	12305511	Flying Ridge Airstrip	2275050011	0.009	0.004	0.749	0.102	0.044	8.145	0.009	0.004	0.749	0.102	0.044	8.145
Fairfield	CT89	12307811	ITT	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Fairfield	CT89	12307811	ITT	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Fairfield	CT91	12308011	USSC Heliport	2275050011	0.002	0.002	0.222	0.06	0.026	4.818	0.001	0.001	0.111	0.030	0.013	2.409
Fairfield	CT91	12308011	USSC Heliport	2275050012	0.022	0.01	0.316	0.496	0.232	6.88	0.011	0.005	0.158	0.248	0.116	3.440
Fairfield	DXR	9795711	Danbury Municipal Airport	2265008005	0	0	0.04	0.01	0.02	0.261	0.000	0.000	0.004	0.001	0.002	0.026
Fairfield	DXR	9795711	Danbury Municipal Airport	2267008005	0	0	0	0	0	0.03	0.000	0.000	0.000	0.000	0.000	0.003
Fairfield	DXR	9795711	Danbury Municipal Airport	2268008005	0	0	0	0	0	0.02	0.000	0.000	0.000	0.000	0.000	0.002
Fairfield	DXR	9795711	Danbury Municipal Airport	2270008005	0.01	0.02	0.2	0.04	0.11	1.235	0.001	0.002	0.020	0.004	0.011	0.123
Fairfield	DXR	9795711	Danbury Municipal Airport	2275001000	1.61	0.18	31.93	9.835	1.094	195.034	0.161	0.018	3.193	1.015	0.113	20.128
Fairfield	DXR	9795711	Danbury Municipal Airport	2275020000	0.03	0.09	0.11	0.19	0.572	0.683	0.003	0.009	0.011	0.019	0.057	0.068
Fairfield	DXR	9795711	Danbury Municipal Airport	2275050011	17.36	7.5	1385.83	106.028	45.803	8465.616	1.736	0.750	138.583	10.565	4.564	843.549
Fairfield	DXR	9795711	Danbury Municipal Airport	2275050012	30.82	14.47	428.12	188.281	88.405	2615.277	3.082	1.447	42.812	18.761	8.809	260.597
Fairfield	DXR	9795711	Danbury Municipal Airport	2275060011	0.3	0.28	49.28	1.816	1.686	301.032	0.030	0.028	4.928	0.181	0.168	29.996

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					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
Fairfield	DXR	9795711	Danbury Municipal Airport	2275060012	6.32	4.96	22.83	38.607	30.317	139.487	0.632	0.496	2.283	3.847	3.021	13.899
Fairfield	JSD	12395011	Sikorsky Helipad	2275050012	0.997	0.468	13.853	5.637	2.647	78.3	0.997	0.468	13.853	5.637	2.647	78.300
Hartford	01CT	10937011	BERLIN FAIRGROUNDS	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Hartford	01CT	10937011	BERLIN FAIRGROUNDS	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Hartford	0CT3	11013811	N B G H Heliport	2275050012	0.002	0.001	0.034	0	0	0	0.002	0.001	0.034	0.000	0.000	0.000
Hartford	0CT5	11517511	St. Francis Hospital Heliport	2275050012	0.03	0.014	0.412	0.122	0.057	1.701	0.030	0.014	0.412	0.122	0.057	1.701
Hartford	0CT9	11517711	Hartford Hospital Helipad	2275050012	0.567	0.266	7.882	3.577	1.68	49.69	0.567	0.266	7.882	3.577	1.680	49.690
Hartford	23CT	11949311	Blanchette Heliport	2275050011	0.002	0.002	0.222	0.046	0.02	3.614	0.001	0.001	0.111	0.023	0.010	1.807
Hartford	23CT	11949311	Blanchette Heliport	2275050012	0.022	0.01	0.316	0.372	0.174	5.16	0.011	0.005	0.158	0.186	0.087	2.580
Hartford	4B8	9792611	Robertson Field	2265008005	0	0	0.036	0.009	0.018	0.176	0.000	0.000	0.004	0.001	0.002	0.019
Hartford	4B8	9792611	Robertson Field	2267008005	0	0	0	0	0	0.018	0.000	0.000	0.000	0.000	0.000	0.002
Hartford	4B8	9792611	Robertson Field	2268008005	0	0	0	0	0	0.01	0.000	0.000	0.000	0.000	0.000	0.001
Hartford	4B8	9792611	Robertson Field	2270008005	0.009	0.009	0.153	0.028	0.074	0.85	0.001	0.001	0.017	0.003	0.008	0.092
Hartford	4B8	9792611	Robertson Field	2275001000	0.18	0.018	3.483	0.979	0.111	19.423	0.020	0.002	0.387	0.106	0.012	2.102
Hartford	4B8	9792611	Robertson Field	2275050011	14.022	6.057	1119.708	78.253	33.8	6247.645	1.558	0.673	124.412	10.501	4.536	838.429
Hartford	4B8	9792611	Robertson Field	2275050012	24.903	11.691	345.906	138.951	65.244	1930.07	2.767	1.299	38.434	15.038	7.061	208.882
Hartford	4B8	9792611	Robertson Field	2275060011	0.135	0.126	23.076	0.776	0.721	128.75	0.015	0.014	2.564	0.084	0.078	13.934
Hartford	4B8	9792611	Robertson Field	2275060012	2.979	2.358	10.809	16.614	13.149	60.337	0.331	0.262	1.201	1.798	1.423	6.530

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					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
Hartford	4B9	9792511	Simsbury Tri-Town Airport	2265008005	0	0	0	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000
Hartford	4B9	9792511	Simsbury Tri-Town Airport	2267008005	0	0	0	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000
Hartford	4B9	9792511	Simsbury Tri-Town Airport	2268008005	0	0	0	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000
Hartford	4B9	9792511	Simsbury Tri-Town Airport	2270008005	0	0	0	0	0.008	0	0.000	0.000	0.000	0.000	0.001	0.000
Hartford	4B9	9792511	Simsbury Tri-Town Airport	2275050011	2.752	1.192	219.928	22.16	9.568	1768.968	0.344	0.149	27.491	2.770	1.196	221.121
Hartford	4B9	9792511	Simsbury Tri-Town Airport	2275050012	4.888	2.296	67.944	39.344	18.472	546.488	0.611	0.287	8.493	4.918	2.309	68.311
Hartford	4B9	9792511	Simsbury Tri-Town Airport	2275060011	0.008	0.008	0.92	0.048	0.04	7.416	0.001	0.001	0.115	0.006	0.005	0.927
Hartford	4B9	9792511	Simsbury Tri-Town Airport	2275060012	0.12	0.096	0.432	0.96	0.752	3.496	0.015	0.012	0.054	0.120	0.094	0.437
Hartford	5CT3	11193611	SOUTH GLASTONBURY	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Hartford	5CT3	11193611	SOUTH GLASTONBURY	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Hartford	7B6	11649711	Skylark's Air Park	2275050011	1.824	0.788	145.572	19.82	8.56	1582.296	0.456	0.197	36.393	4.955	2.140	395.574
Hartford	7B6	11649711	Skylark's Air Park	2275050012	3.236	1.52	44.936	35.164	16.512	488.452	0.809	0.380	11.234	8.791	4.128	122.113
Hartford	7B6	11649711	Skylark's Air Park	2275060011	0.004	0.004	0.616	0.04	0.036	6.676	0.001	0.001	0.154	0.010	0.009	1.669
Hartford	7B6	11649711	Skylark's Air Park	2275060012	0.08	0.06	0.284	0.856	0.66	3.068	0.020	0.015	0.071	0.214	0.165	0.767
Hartford	9B8	11285611	Salmon River Airfield	2275050011	0.044	0.018	3.466	0.614	0.264	48.976	0.022	0.009	1.733	0.307	0.132	24.488

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					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
Hartford	9B8	11285611	Salmon River Airfield	2275050012	0.078	0.036	1.07	1.088	0.512	15.118	0.039	0.018	0.535	0.544	0.256	7.559
Hartford	BDL	9792411	Bradley International Airport	2265008005	17.897	54.439	532.598	100.448	305.573	2989.307	1.627	4.949	48.418	9.196	27.975	273.669
Hartford	BDL	9792411	Bradley International Airport	2267008005	1.76	5.346	52.316	9.865	30.016	293.645	0.160	0.486	4.756	0.903	2.748	26.883
Hartford	BDL	9792411	Bradley International Airport	2268008005	1.386	4.224	41.371	7.8	23.737	232.213	0.126	0.384	3.761	0.714	2.173	21.259
Hartford	BDL	9792411	Bradley International Airport	2270008005	85.085	258.863	2532.321	477.569	1452.889	14213.03	7.735	23.533	230.211	43.721	133.011	1301.193
Hartford	BDL	9792411	Bradley International Airport	2275001000	14.168	1.573	280.808	79.509	8.849	1576.078	1.288	0.143	25.528	6.159	0.686	122.090
Hartford	BDL	9792411	Bradley International Airport	2275020000	505.956	4117.157	4123.097	2839.737	23108.18	23141.5	45.996	374.287	374.827	259.976	2115.538	2118.588
Hartford	BDL	9792411	Bradley International Airport	2275050011	4.917	2.123	392.48	27.591	11.917	2202.823	0.447	0.193	35.680	2.817	1.217	224.936
Hartford	BDL	9792411	Bradley International Airport	2275050012	8.778	4.136	121.396	49.252	23.223	681.349	0.798	0.376	11.036	4.336	2.044	59.978
Hartford	BDL	9792411	Bradley International Airport	2275060011	3.201	2.948	523.699	17.937	16.525	2939.368	0.291	0.268	47.609	1.642	1.513	269.097
Hartford	BDL	9792411	Bradley International Airport	2275060012	111.573	83.644	435.424	626.231	469.441	2443.854	10.143	7.604	39.584	57.331	42.977	223.733
Hartford	BDL	9792411	Bradley International Airport	2275070000	11.847	113.674	154.44	66.522	638.005	866.791	1.077	10.334	14.040	6.090	58.409	79.354
Hartford	CT00	11314711	ELECTRO-METHODS INC	2275050011	0.002	0.002	0.222	0.016	0.007	1.277	0.001	0.001	0.111	0.008	0.003	0.626

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					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
Hartford	CT00	11314711	ELECTRO-METHODS INC	2275050012	0.022	0.01	0.316	0.131	0.061	1.824	0.011	0.005	0.158	0.067	0.031	0.929
Hartford	CT02	12289111	Clark Hill Heliport	2275050011	0.002	0.002	0.222	0.039	0.017	3.156	0.001	0.001	0.111	0.009	0.004	0.747
Hartford	CT02	12289111	Clark Hill Heliport	2275050012	0.022	0.01	0.316	0.325	0.152	4.507	0.011	0.005	0.158	0.248	0.116	3.440
Hartford	CT03	12289211	Bristol Hospital Heliport	2275050012	0.004	0.002	0.057	0.038	0.018	0.525	0.004	0.002	0.057	0.038	0.018	0.525
Hartford	CT05	12289311	KAMAN AEROSPACE CORP	2275050011	0.002	0.002	0.222	0.014	0.006	1.108	0.001	0.001	0.111	0.007	0.003	0.554
Hartford	CT05	12289311	KAMAN AEROSPACE CORP	2275050012	0.022	0.01	0.316	0.114	0.054	1.582	0.011	0.005	0.158	0.057	0.027	0.791
Hartford	CT14	11315311	Bancroft Airport	2275050011	0.009	0.004	0.704	0.096	0.041	7.656	0.009	0.004	0.704	0.096	0.041	7.656
Hartford	CT18	12289811	STATE EMERGENCY	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Hartford	CT18	12289811	STATE EMERGENCY	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Hartford	CT19	11315611	Laurie Field	2275050011	0.009	0.004	0.744	0.111	0.048	8.9	0.009	0.004	0.744	0.111	0.048	8.900
Hartford	CT27	12290311	TENNESSEE F	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Hartford	CT27	12290311	TENNESSEE F	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Hartford	CT28	12290411	VETERANS HOME & HOSPITAL	2275050012	0.001	0.001	0.019	0.011	0.005	0.158	0.001	0.001	0.019	0.011	0.005	0.158
Hartford	CT35	12290811	HAMILTON STANDARD	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Hartford	CT35	12290811	HAMILTON STANDARD	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Hartford	CT49	12305211	PLAINVILLE	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Hartford	CT49	12305211	PLAINVILLE	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Hartford	CT50	12305311	MARKS	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Hartford	CT50	12305311	MARKS	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307

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					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
Hartford	CT60	12306211	Ultimate Heliport	2275050011	0.002	0.002	0.222	0.03	0.014	2.41	0.001	0.001	0.111	0.015	0.007	1.205
Hartford	CT60	12306211	Ultimate Heliport	2275050012	0.022	0.01	0.316	0.248	0.116	3.44	0.011	0.005	0.158	0.124	0.058	1.720
Hartford	CT62	12306311	TWIN MANUFACTURING COMPANY	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Hartford	CT62	12306311	TWIN MANUFACTURING COMPANY	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Hartford	CT71	12306511	Otis Elevator Co. Heliport	2275050011	0.002	0.002	0.222	0.012	0.006	0.964	0.001	0.001	0.111	0.006	0.003	0.482
Hartford	CT71	12306511	Otis Elevator Co. Heliport	2275050012	0.022	0.01	0.316	0.1	0.046	1.376	0.011	0.005	0.158	0.050	0.023	0.688
Hartford	CT73	12306611	South Meadows Heliport	2275050011	0.002	0.002	0.222	0.01	0.004	0.868	0.001	0.001	0.111	0.005	0.002	0.434
Hartford	CT73	12306611	South Meadows Heliport	2275050012	0.022	0.01	0.316	0.09	0.042	1.238	0.011	0.005	0.158	0.045	0.021	0.619
Hartford	CT75	12306811	UCONN Med Hurlbrink Heliport	2275050012	0.007	0.003	0.096	0.016	0.008	0.229	0.007	0.003	0.096	0.016	0.008	0.229
Hartford	CT85	12307411	Roberts Farm Airport	2275050011	0.011	0.005	0.905	0.148	0.064	11.8	0.011	0.005	0.905	0.148	0.064	11.800
Hartford	CT87	12307611	BOOTLEGGER'S	2275050011	0	0	0.006	0.001	0	0.05	0.000	0.000	0.006	0.001	0.000	0.050
Hartford	CT88	12307711	Rentschler Heliport	2275050011	0.002	0.002	0.222	0.016	0.008	1.302	0.001	0.001	0.111	0.008	0.004	0.651
Hartford	CT88	12307711	Rentschler Heliport	2275050012	0.022	0.01	0.316	0.134	0.062	1.858	0.011	0.005	0.158	0.067	0.031	0.929
Hartford	CT96	12308511	GREEN ACRES	2275050011	0.009	0.004	0.704	0.044	0.019	3.522	0.009	0.004	0.704	0.044	0.019	3.522

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					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
Hartford	HFD	9792311	Hartford-Brainard Airport	2265008005	0	0	0.027	0.009	0.024	0.216	0.000	0.000	0.003	0.001	0.002	0.019
Hartford	HFD	9792311	Hartford-Brainard Airport	2267008005	0	0	0	0	0	0.022	0.000	0.000	0.000	0.000	0.000	0.002
Hartford	HFD	9792311	Hartford-Brainard Airport	2268008005	0	0	0	0	0	0.015	0.000	0.000	0.000	0.000	0.000	0.001
Hartford	HFD	9792311	Hartford-Brainard Airport	2270008005	0	0.009	0.126	0.037	0.106	1.016	0.000	0.001	0.014	0.003	0.009	0.088
Hartford	HFD	9792311	Hartford-Brainard Airport	2275001000	0.333	0.036	6.579	2.769	0.308	54.855	0.037	0.004	0.731	0.201	0.022	3.975
Hartford	HFD	9792311	Hartford-Brainard Airport	2275050011	14.553	6.282	1161.666	121.248	52.375	9680.551	1.617	0.698	129.074	15.464	6.680	1234.621
Hartford	HFD	9792311	Hartford-Brainard Airport	2275050012	25.839	12.132	358.875	215.304	101.096	2990.609	2.871	1.348	39.875	34.948	16.410	485.432
Hartford	HFD	9792311	Hartford-Brainard Airport	2275060011	0.378	0.297	52.596	3.15	2.495	438.336	0.042	0.033	5.844	0.402	0.318	55.904
Hartford	HFD	9792311	Hartford-Brainard Airport	2275060012	6.75	5.256	24.327	56.25	43.768	202.752	0.750	0.584	2.703	9.131	7.104	32.910
Litchfield	04CT	10946911	Shingle Mill Heliport	2275050011	0.002	0.002	0.222	0.018	0.008	1.446	0.001	0.001	0.111	0.009	0.004	0.723
Litchfield	04CT	10946911	Shingle Mill Heliport	2275050012	0.022	0.01	0.316	0.148	0.07	2.064	0.011	0.005	0.158	0.074	0.035	1.032
Litchfield	05CT	11563311	O AND G	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Litchfield	05CT	11563311	O AND G	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Litchfield	08CT	10958911	Seavair's Landing Airport	2275050011	0	0	0.006	0.001	0	0.069	0.000	0.000	0.006	0.001	0.000	0.069
Litchfield	0CT0	11517211	Sharon Hospital Heliport	2275050012	0.01	0.005	0.134	0.061	0.029	0.845	0.010	0.005	0.134	0.061	0.029	0.845

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					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
Litchfield	11N	10995811	Candlelight Farms Airport	2275050011	0.596	0.258	47.622	9.141	3.948	729.853	0.298	0.129	23.811	4.603	1.988	367.515
Litchfield	11N	10995811	Candlelight Farms Airport	2275050012	1.06	0.498	14.712	16.233	7.622	225.473	0.530	0.249	7.356	8.059	3.784	111.937
Litchfield	33CT	11116611	IRISH HILLS FARMS	2275050011	0	0	0.006	0.001	0	0.05	0.000	0.000	0.006	0.001	0.000	0.050
Litchfield	5CT5	11193711	THOMSON FIELD	2275050011	0	0	0.006	0.001	0	0.05	0.000	0.000	0.006	0.001	0.000	0.050
Litchfield	6Y2	11778911	Candlelight Farms Heliport	2275050011	0.002	0	0.13	0.022	0.01	1.824	0.001	0.000	0.065	0.011	0.005	0.912
Litchfield	6Y2	11778911	Candlelight Farms Heliport	2275050012	0.014	0.006	0.184	0.188	0.088	2.606	0.007	0.003	0.092	0.094	0.044	1.303
Litchfield	CT01	12289011	Whelan Farms Airport	2275050011	0.01	0.005	0.833	0.086	0.037	6.884	0.010	0.005	0.833	0.086	0.037	6.884
Litchfield	CT24	11315811	North Canaan Airport	2275050011	0.232	0.1	18.502	2.518	1.088	201.104	0.116	0.050	9.251	1.259	0.544	100.552
Litchfield	CT24	11315811	North Canaan Airport	2275050012	0.18	0.084	2.49	1.948	0.914	27.066	0.090	0.042	1.245	0.974	0.457	13.533
Litchfield	CT42	11316211	Wings Ago Airstrip	2275050011	0.007	0.003	0.593	0.161	0.07	12.889	0.007	0.003	0.593	0.161	0.070	12.889
Litchfield	CT51	12305411	Docktors Field	2275050011	0.007	0.003	0.553	0.151	0.065	12.018	0.007	0.003	0.553	0.151	0.065	12.018
Litchfield	CT59	12306111	Good Hill Farm	2275050011	0.008	0.004	0.673	0.086	0.037	6.877	0.008	0.004	0.673	0.086	0.037	6.877
Litchfield	CT66	11316711	Long View Landing Airport	2275050011	0.008	0.003	0.633	0.045	0.019	3.578	0.008	0.003	0.633	0.045	0.019	3.578
Litchfield	N09	12469211	NORTHFIELD	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Litchfield	N09	12469211	NORTHFIELD	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Litchfield	N41	12470011	Waterbury-Plymouth Airport	2275050011	0.736	0.318	58.832	6.648	2.872	530.758	0.368	0.159	29.416	3.444	1.488	274.971

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					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
Litchfield	N41	12470011	Waterbury-Plymouth Airport	2275050012	1.528	0.718	21.212	13.778	6.469	191.365	0.764	0.359	10.606	6.640	3.118	92.224
Middlesex	0CT6	11013911	Aetna @ Middletown Heliport	2275050011	0.002	0.002	0.222	0.042	0.018	3.374	0.001	0.001	0.111	0.021	0.009	1.687
Middlesex	0CT6	11013911	Aetna @ Middletown Heliport	2275050012	0.022	0.01	0.316	0.346	0.162	4.816	0.011	0.005	0.158	0.173	0.081	2.408
Middlesex	42B	11146011	Goodspeed Airport & Seaplane Base	2275050011	0.672	0.292	53.724	5.852	2.528	467.156	0.168	0.073	13.431	1.463	0.632	116.789
Middlesex	42B	11146011	Goodspeed Airport & Seaplane Base	2275050012	1.192	0.56	16.584	10.384	4.876	144.208	0.298	0.140	4.146	2.596	1.219	36.052
Middlesex	42B	11146011	Goodspeed Airport & Seaplane Base	2275060011	0	0	0.184	0.008	0.008	1.6	0.000	0.000	0.046	0.002	0.002	0.400
Middlesex	42B	11146011	Goodspeed Airport & Seaplane Base	2275060012	0.024	0.02	0.084	0.204	0.16	0.736	0.006	0.005	0.021	0.051	0.040	0.184
Middlesex	CT11	12289611	Devil's Hopyard Field	2275050011	0.007	0.003	0.588	0.112	0.048	8.943	0.007	0.003	0.588	0.112	0.048	8.943
Middlesex	CT39	12291111	Maplewood Farm Airport	2275050011	0.008	0.003	0.628	0.085	0.037	6.823	0.008	0.003	0.628	0.085	0.037	6.823
Middlesex	CT57	12305911	OLD SAYBROOK	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Middlesex	CT57	12305911	OLD SAYBROOK	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Middlesex	CT58	12306011	PORTLAND	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Middlesex	CT58	12306011	PORTLAND	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Middlesex	CT86	12307511	SANFORD	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Middlesex	CT86	12307511	SANFORD	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Middlesex	CT92	12308111	Bemer Heliport	2275050011	0.002	0.002	0.222	0.06	0.026	4.818	0.001	0.001	0.111	0.030	0.013	2.409

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					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
Middlesex	CT92	12308111	Bemer Heliport	2275050012	0.022	0.01	0.316	0.496	0.232	6.88	0.011	0.005	0.158	0.248	0.116	3.440
Middlesex	CT97	12308611	Middlesex Medical Center Shoreline	2275050012	0.013	0.006	0.177	0.067	0.031	0.924	0.013	0.006	0.177	0.067	0.031	0.924
Middlesex	CT98	12308711	Middlesex Hospital	2275050012	0.01	0.005	0.144	0.09	0.042	1.249	0.010	0.005	0.144	0.090	0.042	1.249
Middlesex	SNC	9790011	Chester	2275050011	0.362	0.156	28.954	2.799	1.209	223.448	0.181	0.078	14.477	1.616	0.698	129.033
Middlesex	SNC	9790011	Chester	2275050012	0.138	0.064	1.916	1.065	0.5	14.782	0.069	0.032	0.958	0.450	0.211	6.246
New Haven	0CT1	11517311	Bristol-Myers Squibb Co. Heliport	2275050011	0.002	0.002	0.222	0.024	0.01	1.88	0.001	0.001	0.111	0.012	0.005	0.940
New Haven	0CT1	11517311	Bristol-Myers Squibb Co. Heliport	2275050012	0.022	0.01	0.316	0.194	0.09	2.684	0.011	0.005	0.158	0.097	0.045	1.342
New Haven	1CT2	11019011	Yale-New Haven Hospital	2275050012	0.085	0.04	1.188	0.446	0.209	6.196	0.085	0.040	1.188	0.446	0.209	6.196
New Haven	1CT3	11019111	St. Mary's Hospital Heliport	2275050012	0.007	0.003	0.091	0.067	0.031	0.93	0.007	0.003	0.091	0.067	0.031	0.930
New Haven	4C3	11160811	Hummingbird Heliport	2275050011	0.002	0	0.108	0.008	0.004	0.656	0.001	0.000	0.054	0.004	0.002	0.328
New Haven	4C3	11160811	Hummingbird Heliport	2275050012	0.012	0.006	0.154	0.068	0.032	0.936	0.006	0.003	0.077	0.034	0.016	0.468
New Haven	5CT1	11847011	RONDO	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
New Haven	5CT1	11847011	RONDO	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
New Haven	CT34	12290711	U.S. Surgical Rooftop Heliport	2275050011	0.002	0.002	0.222	0.06	0.026	4.818	0.001	0.001	0.111	0.030	0.013	2.409
New Haven	CT34	12290711	U.S. Surgical Rooftop Heliport	2275050012	0.022	0.01	0.316	0.496	0.232	6.88	0.011	0.005	0.158	0.248	0.116	3.440

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					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
New Haven	CT40	12291211	BOB THOMAS FORD	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
New Haven	CT40	12291211	BOB THOMAS FORD	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
New Haven	CT45	12305011	TIMEX	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
New Haven	CT45	12305011	TIMEX	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
New Haven	CT46	11316311	MILFORD-ALEXANDER	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
New Haven	CT46	11316311	MILFORD-ALEXANDER	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
New Haven	CT54	12305711	NORTH BRANFORD	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
New Haven	CT54	12305711	NORTH BRANFORD	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
New Haven	CT55	12305811	NORTH HAVEN	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
New Haven	CT55	12305811	NORTH HAVEN	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
New Haven	CT65	11316611	REED'S GAP	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
New Haven	CT65	11316611	REED'S GAP	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
New Haven	CT84	12307311	PARTYKA CHEVROLET	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
New Haven	CT84	12307311	PARTYKA CHEVROLET	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
New Haven	CT95	12308411	Meriden - Wallingford Hospital Heliport	2275050012	0.008	0.004	0.105	0.059	0.028	0.824	0.008	0.004	0.105	0.059	0.028	0.824
New Haven	HVN	9785311	Tweed-New Haven Airport	2265008005	0.22	0.87	6.03	1.402	5.53	38.299	0.022	0.087	0.603	0.144	0.568	3.935

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					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
New Haven	HVN	9785311	Tweed-New Haven Airport	2267008005	0.02	0.09	0.59	0.138	0.545	3.764	0.002	0.009	0.059	0.014	0.056	0.387
New Haven	HVN	9785311	Tweed-New Haven Airport	2268008005	0.02	0.07	0.47	0.108	0.429	2.978	0.002	0.007	0.047	0.011	0.044	0.306
New Haven	HVN	9785311	Tweed-New Haven Airport	2270008005	1.05	4.14	28.69	6.668	26.3	182.09	0.105	0.414	2.869	0.685	2.702	18.708
New Haven	HVN	9785311	Tweed-New Haven Airport	2275001000	1.1	0.12	21.8	6.981	0.779	138.388	0.110	0.012	2.180	0.622	0.069	12.322
New Haven	HVN	9785311	Tweed-New Haven Airport	2275020000	0.14	0.42	0.5	0.877	2.655	3.195	0.014	0.042	0.050	0.106	0.318	0.383
New Haven	HVN	9785311	Tweed-New Haven Airport	2275050011	9.2	3.97	734.22	58.373	25.217	4660.69	0.920	0.397	73.422	5.997	2.591	478.838
New Haven	HVN	9785311	Tweed-New Haven Airport	2275050012	16.34	7.69	226.92	103.74	48.842	1440.456	1.634	0.769	22.692	11.014	5.185	152.925
New Haven	HVN	9785311	Tweed-New Haven Airport	2275060011	0.31	0.29	51.55	1.976	1.838	327.246	0.031	0.029	5.155	0.169	0.157	28.018
New Haven	HVN	9785311	Tweed-New Haven Airport	2275060012	0.2	20.17	58.92	1.284	128.03	374.025	0.020	2.017	5.892	0.110	10.961	32.023
New Haven	MMK	9785211	Meriden-Markham Municpal Airport	2275001000	0.03	0.005	0.635	0.179	0.02	3.548	0.006	0.001	0.127	0.035	0.004	0.688
New Haven	MMK	9785211	Meriden-Markham Municpal Airport	2275050011	2.175	0.94	173.475	12.186	5.264	972.958	0.435	0.188	34.695	2.456	1.061	196.100
New Haven	MMK	9785211	Meriden-Markham Municpal Airport	2275050012	3.86	1.81	53.59	21.638	10.161	300.575	0.772	0.362	10.718	4.361	2.048	60.581

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					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
New Haven	MMK	9785211	Meriden-Markham Municpal Airport	2275060011	0.01	0.01	1.38	0.045	0.044	7.75	0.002	0.002	0.276	0.009	0.009	1.562
New Haven	MMK	9785211	Meriden-Markham Municpal Airport	2275060012	0.175	0.135	0.635	0.992	0.764	3.562	0.035	0.027	0.127	0.200	0.154	0.718
New Haven	OXC	9785011	Waterbury-Oxford Airport	2265008005	0.011	0.022	0.242	0.045	0.126	1.377	0.001	0.002	0.022	0.004	0.012	0.130
New Haven	OXC	9785011	Waterbury-Oxford Airport	2267008005	0	0	0.022	0	0.011	0.137	0.000	0.000	0.002	0.000	0.001	0.013
New Haven	OXC	9785011	Waterbury-Oxford Airport	2268008005	0	0	0.022	0	0.011	0.106	0.000	0.000	0.002	0.000	0.001	0.010
New Haven	OXC	9785011	Waterbury-Oxford Airport	2270008005	0.044	0.099	1.155	0.222	0.584	6.537	0.004	0.009	0.105	0.021	0.055	0.617
New Haven	OXC	9785011	Waterbury-Oxford Airport	2275001000	5.863	0.649	116.27	33.155	3.687	657.165	0.533	0.059	10.570	2.087	0.232	41.360
New Haven	OXC	9785011	Waterbury-Oxford Airport	2275020000	0.055	0.154	0.187	0.286	0.869	1.047	0.005	0.014	0.017	0.027	0.082	0.099
New Haven	OXC	9785011	Waterbury-Oxford Airport	2275050011	12.727	5.5	1015.729	71.905	31.06	5741.046	1.157	0.500	92.339	7.291	3.150	582.134
New Haven	OXC	9785011	Waterbury-Oxford Airport	2275050012	22.594	10.604	313.786	127.685	59.954	1773.572	2.054	0.964	28.526	12.054	5.660	167.435
New Haven	OXC	9785011	Waterbury-Oxford Airport	2275060011	0.407	0.374	67.056	2.288	2.128	379.024	0.037	0.034	6.096	0.224	0.208	37.107
New Haven	OXC	9785011	Waterbury-Oxford Airport	2275060012	8.734	7.117	32.142	49.37	40.22	181.683	0.794	0.647	2.922	4.833	3.938	17.787
New Haven	OXC	9785011	Waterbury-Oxford Airport	2275070000	0	0	0	0	0.011	0.011	0.000	0.000	0.000	0.000	0.001	0.001

					Original 2011 PEI Submission						Corrected for 2011 Base Year Inventory for RFP					
County	FAA Location ID	EIS Facility ID	Airport Name	SCC	Annual Emissions (TPY)			Summer Day Emissions (PPD)			Annual Emissions (TPY)			Summer Day Emissions (PPD)		
					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
New London	14CT	11003211	MPTN Heliport	2275050011	0.002	0.002	0.222	0.016	0.007	1.277	0.001	0.001	0.111	0.008	0.003	0.626
New London	14CT	11003211	MPTN Heliport	2275050012	0.022	0.01	0.316	0.131	0.061	1.824	0.011	0.005	0.158	0.067	0.031	0.929
New London	20CT	11043111	Global Development Facility Heliport	2275050011	0.002	0.002	0.222	0.014	0.006	1.108	0.001	0.001	0.111	0.009	0.004	0.747
New London	20CT	11043111	Global Development Facility Heliport	2275050012	0.022	0.01	0.316	0.114	0.053	1.583	0.011	0.005	0.158	0.037	0.017	0.516
New London	24CT	11962811	BEE FIELD	2275050011	0	0	0.006	0.001	0	0.05	0.000	0.000	0.006	0.001	0.000	0.050
New London	5CT7	11847311	Mile Creek Airport	2275050011	0	0	0.006	0.001	0	0.065	0.000	0.000	0.006	0.001	0.000	0.065
New London	69CT	16081511	THE SHORE	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
New London	69CT	16081511	THE SHORE	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
New London	CT07	11314911	Ski's Landing Area	2275050011	0	0	0.006	0.001	0	0.065	0.000	0.000	0.006	0.001	0.000	0.065
New London	CT08	12289411	GARDNER LAKE	2275050011	0.007	0.003	0.571	0.059	0.026	4.717	0.007	0.003	0.571	0.059	0.026	4.717
New London	CT16	12289711	Fetske Water Strip	2275050011	0	0	0.018	0.005	0.002	0.392	0.000	0.000	0.018	0.005	0.002	0.392
New London	CT32	11315911	Gallup Farm Airport	2275050011	0	0	0.006	0.002	0.001	0.124	0.000	0.000	0.006	0.002	0.001	0.124
New London	CT43	12304811	Spruce Airport	2275050011	0.009	0.004	0.691	0.156	0.067	12.471	0.009	0.004	0.691	0.156	0.067	12.471
New London	CT48	11316411	WYCHWOOD FIELD	2275050011	0.008	0.004	0.651	0.067	0.029	5.379	0.008	0.004	0.651	0.067	0.029	5.379
New London	CT78	11317111	LORD CREEK	2275050011	0.008	0.003	0.611	0.063	0.027	5.048	0.008	0.003	0.611	0.063	0.027	5.048
New London	CT80	12307011	STONINGTON AIRPARK	2275050011	0.008	0.003	0.611	0.063	0.027	5.048	0.008	0.003	0.611	0.063	0.027	5.048

					Original 2011 PEI Submission						Corrected for 2011 Base Year Inventory for RFP					
County	FAA Location ID	EIS Facility ID	Airport Name	SCC	Annual Emissions (TPY)			Summer Day Emissions (PPD)			Annual Emissions (TPY)			Summer Day Emissions (PPD)		
					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
New London	CT93	12308211	Backus Hospital Heliport	2275050012	0.173	0.081	2.409	1.018	0.478	14.138	0.173	0.081	2.409	1.018	0.478	14.138
New London	GON	9810511	Groton-New London Airport	2265008005	0	0	0.033	0.011	0.022	0.246	0.000	0.000	0.003	0.001	0.002	0.023
New London	GON	9810511	Groton-New London Airport	2267008005	0	0	0	0	0	0.022	0.000	0.000	0.000	0.000	0.000	0.002
New London	GON	9810511	Groton-New London Airport	2268008005	0	0	0	0	0	0.021	0.000	0.000	0.000	0.000	0.000	0.002
New London	GON	9810511	Groton-New London Airport	2270008005	0.011	0.022	0.187	0.043	0.128	1.186	0.001	0.002	0.017	0.004	0.012	0.111
New London	GON	9810511	Groton-New London Airport	2275001000	11.792	1.309	233.772	77.145	8.585	1529.231	1.072	0.119	21.252	7.225	0.804	143.221
New London	GON	9810511	Groton-New London Airport	2275020000	0.022	0.044	0.132	0.16	0.278	0.843	0.002	0.004	0.012	0.015	0.026	0.079
New London	GON	9810511	Groton-New London Airport	2275050011	9.405	4.059	750.904	61.523	26.576	4912.008	0.855	0.369	68.264	5.762	2.489	460.037
New London	GON	9810511	Groton-New London Airport	2275050012	16.72	7.865	232.067	109.358	51.422	1518.073	1.520	0.715	21.097	10.242	4.816	142.176
New London	GON	9810511	Groton-New London Airport	2275060011	0.132	0.121	22.495	0.886	0.822	147.145	0.012	0.011	2.045	0.083	0.077	13.781

					Original 2011 PEI Submission						Corrected for 2011 Base Year Inventory for RFP					
County	FAA Location ID	EIS Facility ID	Airport Name	SCC	Annual Emissions (TPY)			Summer Day Emissions (PPD)			Annual Emissions (TPY)			Summer Day Emissions (PPD)		
					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
New London	GON	9810511	Groton-New London Airport	2275060012	2.871	2.255	10.406	18.749	14.767	68.079	0.261	0.205	0.946	1.756	1.383	6.376
New London	GON	9810511	Groton-New London Airport	2275070000	0	0	0.011	0	0.032	0.096	0.000	0.000	0.001	0.000	0.002	0.006
Tolland	02CT	11551811	STRANGERS POINT	2275050011	0.002	0.002	0.222	0.016	0.007	1.277	0.001	0.001	0.111	0.008	0.003	0.626
Tolland	02CT	11551811	STRANGERS POINT	2275050012	0.022	0.01	0.316	0.131	0.061	1.824	0.011	0.005	0.158	0.067	0.031	0.929
Tolland	7B9	11649811	Ellington Airport	2275050011	3.216	1.388	256.8	29.891	12.912	2386.557	0.804	0.347	64.200	5.419	2.341	432.651
Tolland	7B9	11649811	Ellington Airport	2275050012	5.604	2.632	77.84	52.08	24.453	723.389	1.401	0.658	19.460	9.137	4.290	126.910
Tolland	7B9	11649811	Ellington Airport	2275060011	0	0	0.124	0.006	0.006	1.14	0.000	0.000	0.031	0.001	0.001	0.200
Tolland	7B9	11649811	Ellington Airport	2275060012	0.016	0.012	0.056	0.147	0.113	0.525	0.004	0.003	0.014	0.068	0.053	0.246
Tolland	CT09	11315011	Heckler Field	2275050011	0	0	0.006	0.001	0	0.052	0.000	0.000	0.006	0.001	0.000	0.052
Tolland	CT15	11315411	Wysocki Airport	2275050011	0.007	0.003	0.545	0	0	0	0.007	0.003	0.545	0.000	0.000	0.000
Tolland	CT29	12290511	Valley Farms Airport	2275050011	0.007	0.003	0.585	0.08	0.034	6.358	0.007	0.003	0.585	0.080	0.034	6.358
Windham	0CT2	11517411	Windham Community Memorial Hospital Heliport	2275050012	0.021	0.01	0.297	0.121	0.057	1.678	0.021	0.010	0.297	0.121	0.057	1.678
Windham	31CT	16101611	QUIET CORNER	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Windham	31CT	16101611	QUIET CORNER	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Windham	5CT6	11847211	BUELL FARM	2275050011	0.011	0.005	0.898	0.164	0.071	13.08	0.011	0.005	0.898	0.164	0.071	13.080
Windham	64CT	11580211	Woodstock Airport	2275050011	0.015	0.006	1.178	0.128	0.055	10.247	0.015	0.006	1.178	0.128	0.055	10.247

					Original 2011 PEI Submission						Corrected for 2011 Base Year Inventory for RFP					
County	FAA Location ID	EIS Facility ID	Airport Name	SCC	Annual Emissions (TPY)			Summer Day Emissions (PPD)			Annual Emissions (TPY)			Summer Day Emissions (PPD)		
					VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO	VOC	NOX	CO
Windham	C44	11305211	Toutant Airport	2275050011	0.01	0.004	0.866	0.094	0.04	7.53	0.005	0.002	0.433	0.047	0.020	3.765
Windham	C44	11305211	Toutant Airport	2275050012	0.02	0.01	0.268	0.168	0.078	2.326	0.010	0.005	0.134	0.084	0.039	1.163
Windham	CT10	12289511	FLAT ROCK FARM	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Windham	CT10	12289511	FLAT ROCK FARM	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Windham	CT13	11315211	YANKEE AIRSTRIP	2275050011	0.007	0.003	0.537	0.056	0.024	4.44	0.007	0.003	0.537	0.056	0.024	4.440
Windham	CT68	12306411	WAUREGAN	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Windham	CT68	12306411	WAUREGAN	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Windham	CT70	11316911	WILSONVILLE	2275050011	0.002	0.002	0.222	0.022	0.01	1.832	0.001	0.001	0.111	0.011	0.005	0.916
Windham	CT70	11316911	WILSONVILLE	2275050012	0.022	0.01	0.316	0.188	0.088	2.614	0.011	0.005	0.158	0.094	0.044	1.307
Windham	CT74	12306711	Westford Airstrip	2275050011	0.007	0.003	0.578	0.157	0.068	12.555	0.007	0.003	0.578	0.157	0.068	12.555
Windham	IJD	9808111	Windham Airport	2275001000	0.045	0.005	0.845	0.258	0.028	5.136	0.009	0.001	0.169	0.046	0.005	0.917
Windham	IJD	9808111	Windham Airport	2275050011	2.705	1.17	215.92	16.463	7.112	1314.303	0.541	0.234	43.184	4.703	2.032	375.515
Windham	IJD	9808111	Windham Airport	2275050012	4.8	2.255	66.705	29.232	13.726	406.028	0.960	0.451	13.341	5.220	2.451	72.505
Windham	IJD	9808111	Windham Airport	2275060011	0	0	0.37	0.012	0.012	2.245	0.000	0.000	0.074	0.002	0.002	0.401
Windham	IJD	9808111	Windham Airport	2275060012	0.045	0.035	0.17	0.286	0.223	1.031	0.009	0.007	0.034	0.051	0.040	0.184
Windham	LZD	9808211	Danielson	2275050011	2.384	1.032	190.488	36.308	15.684	2898.712	1.059	0.497	14.712	16.118	7.568	223.874
Windham	LZD	9808211	Danielson	2275050012	4.236	1.988	58.848	64.472	30.272	895.496	0.001	0.001	0.111	0.010	0.009	1.682
Windham	LZD	9808211	Danielson	2275060011	0.004	0.004	0.444	0.04	0.036	6.728	0.014	0.011	0.051	0.215	0.166	0.773
Windham	LZD	9808211	Danielson	2275060012	0.056	0.044	0.204	0.86	0.664	3.092	0.596	0.258	47.622	9.077	3.921	724.678

Table C-10. Statewide County-Level Corrections to 2011 PEI Emissions for Landfills

2011 Summer Day (lbs/day)		VOC	
County	SCC	Original PEI	Corrected PEI
Litchfield	2620030000	0	119.34
Hartford	2620030000	0	698.03
New London	2620030000	0	78.54
Tolland	2620030000	0	24.62
Windham	2620030000	0	37.07
Fairfield	2620030000	0	180.37
Middlesex	2620030000	0	17.79
New Haven	2620030000	0	150.60

Appendix D

MOVES INPUT Files

The files can be found at the following web link:

http://www.ct.gov/deep/cwp/view.asp?a=2684&q=585816&deepNav_GID=1619

Appendix E

Detailed Source Category Listings

of 2011 and 2017 Estimated Emissions

MOVES2014a On-Road Ozone Season Day Emission Estimates for 2011 and 2017

2011 - NOx Daily Emissions by Source Type and County (tons/ozone season day)

		Fairfield	Hartford	Litchfield	Middlesex	New Haven	New London	Tolland	Windham	State
SourceType	**Name**	**9001**	**9003**	**9005**	**9007**	**9009**	**9011**	**9013**	**9015**	**Grand Total**
11	Motorcycle	0.06694	0.07587	0.03169	0.01777	0.06356	0.03605	0.02219	0.01851	0.33259
21	Passenger Car	6.90976	7.75456	1.32962	1.55385	6.99917	2.54004	1.28894	0.89502	29.27096
31	Passenger Truck	7.89622	7.82819	1.74573	1.91751	7.08256	3.05516	1.60422	1.15528	32.28487
32	Light Commercial Truck	3.18527	3.17949	0.73873	0.78948	2.89011	1.23537	0.66601	0.48322	13.16767
41	Intercity Bus	0.12960	0.15087	0.01570	0.02145	0.13029	0.05602	0.02348	0.01652	0.54392
42	Transit Bus	0.03756	0.04342	0.00403	0.00622	0.03779	0.01592	0.00656	0.00462	0.15612
43	School Bus	0.04614	0.04968	0.00693	0.01758	0.05150	0.01979	0.01432	0.00768	0.21361
51	Refuse Truck	0.05410	0.07305	0.00783	0.01528	0.06270	0.02696	0.01774	0.01094	0.26858
52	Single Unit Short Haul	0.67021	0.75596	0.10334	0.16179	0.68809	0.27256	0.14608	0.09718	2.89522
53	Single Unit Long Haul	0.06112	0.06817	0.00902	0.01453	0.06256	0.02456	0.01286	0.00861	0.26144
54	Motor Home	0.02068	0.02032	0.00195	0.00512	0.02145	0.00978	0.00532	0.00209	0.08672
61	Combination Short Haul	1.40783	1.69919	0.21680	0.38345	1.60201	0.59389	0.28681	0.21252	6.40250
62	Combination Long Haul	4.64079	5.18480	0.51160	1.18720	4.87358	2.07008	1.23891	0.68196	20.38893
Grand Total		**25.12621**	**26.88357**	**4.72298**	**6.09122**	**24.56539**	**9.95618**	**5.33343**	**3.59415**	**106.27313**

	Statewide		Greater CT		SW CT	
2011 NOX	**tpd**	**% of Total**	**tpd**	**% of Total**	tpd	**% of Total**
Motorcycles (11)	0.333	**0.3%**	0.184	**0.4%**	0.148	**0.3%**
Light Duty (21,31,32)	74.723	**70.3%**	35.500	**70.3%**	39.224	**70.3%**
Heavy Duty (40s, 50s, 60s)	31.217	**29.4%**	14.806	**29.3%**	16.411	**29.4%**
Total OnRoad Emissions	106.273	**100.0%**	50.490	**100.0%**	55.783	**100.0%**

2011 - VOC Daily Emissions by Source Type and County (tons/ozone season day)

		Fairfield	Hartford	Litchfield	Middlesex	New Haven	New London	Tolland	Windham	State
SourceType	**Name**	**9001**	**9003**	**9005**	**9007**	**9009**	**9011**	**9013**	**9015**	**Grand Total**
11	Motorcycle	0.39477	0.46220	0.16658	0.10913	0.40685	0.19709	0.12621	0.10973	1.97257
21	Passenger Car	6.72293	7.14339	1.45298	1.36255	6.41955	2.19909	1.15739	0.85614	27.31402
31	Passenger Truck	4.83802	4.47336	1.18473	1.04138	4.06832	1.62960	0.89138	0.68254	18.80933
32	Light Commercial Truck	1.81705	1.69889	0.46594	0.40443	1.55204	0.61798	0.34585	0.26664	7.16883
41	Intercity Bus	0.00904	0.00971	0.00113	0.00136	0.00867	0.00354	0.00149	0.00106	0.03600
42	Transit Bus	0.00318	0.00347	0.00036	0.00048	0.00308	0.00125	0.00052	0.00037	0.01271
43	School Bus	0.00868	0.00886	0.00155	0.00287	0.00916	0.00346	0.00242	0.00141	0.03841
51	Refuse Truck	0.00367	0.00465	0.00058	0.00095	0.00407	0.00166	0.00110	0.00070	0.01737
52	Single Unit Short Haul	0.15916	0.18091	0.03518	0.03702	0.16092	0.06054	0.03221	0.02457	0.69052
53	Single Unit Long Haul	0.01368	0.01494	0.00260	0.00312	0.01374	0.00521	0.00274	0.00196	0.05799
54	Motor Home	0.01031	0.01096	0.00179	0.00243	0.01048	0.00452	0.00240	0.00123	0.04413
61	Combination Short Haul	0.08235	0.09230	0.01284	0.02051	0.08979	0.03159	0.01534	0.01153	0.35626
62	Combination Long Haul	0.54532	0.59760	0.04284	0.14210	0.58384	0.23480	0.14870	0.07957	2.37476
Grand Total		**14.60816**	**14.70124**	**3.36911**	**3.12834**	**13.33051**	**4.99033**	**2.72774**	**2.03747**	**58.89291**

	Statewide		Greater CT		SW CT	
2011 VOC	**tpd**	**% of Total**	**tpd**	**% of Total**	tpd	**% of Total**
Motorcycles (11)	1.973	**3.3%**	1.062	**3.8%**	0.911	**2.9%**
Light Duty (21,31,32)	53.292	**90.5%**	25.066	**90.1%**	28.226	**90.9%**
Heavy Duty (40s, 50s, 60s)	3.628	**6.2%**	1.698	**6.1%**	1.930	**6.2%**
Total OnRoad Emissions	58.893	**100.0%**	27.826	**100.0%**	31.067	**100.0%**

2017 - NOx Daily Emissions by Source Type and County (tons/ozone season day)

		Fairfield	Hartford	Litchfield	Middlesex	New Haven	New London	Tolland	Windham	State
SourceType	**Name**	**9001**	**9003**	**9005**	**9007**	**9009**	**9011**	**9013**	**9015**	**Grand Total**
11	Motorcycle	0.06141	0.07053	0.02895	0.01661	0.05922	0.03334	0.02126	0.01711	0.30843
21	Passenger Car	2.91601	3.26645	0.58757	0.65200	2.99942	1.05738	0.55155	0.38486	12.41523
31	Passenger Truck	2.97792	2.94886	0.68278	0.71858	2.71567	1.13525	0.61223	0.44174	12.23304
32	Light Commercial Truck	1.25150	1.25218	0.30219	0.30946	1.15703	0.48111	0.26635	0.19335	5.21317
41	Intercity Bus	0.05683	0.06625	0.00700	0.00934	0.05863	0.02437	0.01047	0.00727	0.24016
42	Transit Bus	0.01489	0.01730	0.00162	0.00247	0.01546	0.00630	0.00266	0.00184	0.06254
43	School Bus	0.01846	0.01995	0.00282	0.00705	0.02131	0.00793	0.00589	0.00310	0.08651
51	Refuse Truck	0.02544	0.03452	0.00372	0.00718	0.03036	0.01265	0.00854	0.00518	0.12759
52	Single Unit Short Haul	0.31202	0.35691	0.05102	0.07594	0.33197	0.12771	0.07005	0.04628	1.37191
53	Single Unit Long Haul	0.03614	0.04053	0.00541	0.00863	0.03831	0.01465	0.00789	0.00513	0.15669
54	Motor Home	0.01126	0.01112	0.00110	0.00278	0.01201	0.00530	0.00295	0.00115	0.04767
61	Combination Short Haul	0.66528	0.80706	0.10360	0.18119	0.77908	0.27995	0.13864	0.10115	3.05595
62	Combination Long Haul	2.36910	2.67656	0.22385	0.62050	2.60205	1.05406	0.66669	0.35594	10.56876
Grand Total		**10.71626**	**11.56821**	**2.00162**	**2.61173**	**10.82052**	**4.24002**	**2.36517**	**1.56410**	**45.88763**

	Statewide		Greater CT		SW CT	
2017 NOx	**tpd**	**% of Total**	**tpd**	**% of Total**	tpd	**% of Total**
Motorcycles (11)	0.308	**0.7%**	0.171	**0.8%**	0.137	**0.6%**
Light Duty (21,31,32)	29.861	**65.1%**	14.164	**65.2%**	15.698	**65.0%**
Heavy Duty (40s, 50s, 60s)	15.718	**34.3%**	7.404	**34.1%**	8.314	**34.4%**
Total OnRoad Emissions	45.888	**100.0%**	21.739	**100.0%**	24.149	**100.0%**

Note: As has been done in previous SIPs, transportation conformity budgets for 2017 were established by increasing emissions by 2% above those shown in these tables in recognition of uncertainties related to future changes to traffic and emission modeling procedures. See Section 7.

2017 - VOC Daily Emissions by Source Type and County (tons/ozone season day)

		Fairfield	Hartford	Litchfield	Middlesex	New Haven	New London	Tolland	Windham	State
SourceType	**Name**	**9001**	**9003**	**9005**	**9007**	**9009**	**9011**	**9013**	**9015**	**Grand Total**
11	Motorcycle	0.33184	0.40511	0.14516	0.09593	0.35313	0.17358	0.11436	0.09666	1.71577
21	Passenger Car	3.95321	4.21360	0.88854	0.80285	3.84218	1.29325	0.69756	0.51558	16.20676
31	Passenger Truck	2.37166	2.20439	0.60613	0.51191	2.03124	0.79958	0.44799	0.34329	9.31618
32	Light Commercial Truck	0.89701	0.84402	0.24057	0.20062	0.78117	0.30586	0.17529	0.13530	3.57984
41	Intercity Bus	0.00343	0.00375	0.00044	0.00052	0.00341	0.00136	0.00058	0.00041	0.01391
42	Transit Bus	0.00119	0.00131	0.00014	0.00018	0.00119	0.00047	0.00020	0.00014	0.00481
43	School Bus	0.00225	0.00244	0.00045	0.00073	0.00245	0.00094	0.00064	0.00040	0.01029
51	Refuse Truck	0.00161	0.00207	0.00026	0.00042	0.00187	0.00074	0.00050	0.00031	0.00778
52	Single Unit Short Haul	0.07589	0.08972	0.01879	0.01805	0.07999	0.02932	0.01576	0.01240	0.33993
53	Single Unit Long Haul	0.00645	0.00713	0.00121	0.00149	0.00675	0.00253	0.00136	0.00093	0.02787
54	Motor Home	0.00614	0.00666	0.00112	0.00147	0.00646	0.00272	0.00146	0.00076	0.02679
61	Combination Short Haul	0.04004	0.04565	0.00642	0.01001	0.04534	0.01553	0.00772	0.00571	0.17642
62	Combination Long Haul	0.30073	0.33537	0.02027	0.08053	0.33682	0.13056	0.08646	0.04509	1.33583
Grand Total		**7.99144**	**8.16122**	**1.92951**	**1.72471**	**7.49200**	**2.75642**	**1.54989**	**1.15699**	**32.76217**

	Statewide		Greater CT		SW CT	
2017 VOC	**tpd**	**% of Total**	**tpd**	**% of Total**	tpd	**% of Total**
Motorcycles (11)	1.716	**5.2%**	0.935	**6.0%**	0.781	**4.5%**
Light Duty (21,31,32)	29.103	**88.8%**	13.711	**88.2%**	15.392	**89.4%**
Heavy Duty (40s, 50s, 60s)	1.944	**5.9%**	0.908	**5.8%**	1.035	**6.0%**
Total OnRoad Emissions	32.762	**100.0%**	15.554	**100.0%**	17.208	**100.0%**

Note: As has been done in previous SIPs, transportation conformity budgets for 2017 were established by increasing emissions by 2% above those shown in these tables in recognition of uncertainties related to future changes to traffic and emission modeling procedures. See Section 7.

2011 - NOx Daily Statewide Emissions by Source Type and Fuel Type (tons/ozone season day)

SourceType	Name	Gasoline	Diesel	CNG	Grand Total
11	Motorcycle	0.3326			0.3326
21	Passenger Car	28.9876	0.2833		29.2710
31	Passenger Truck	30.7526	1.5323		32.2849
32	Light Commercial Truck	11.3536	1.8140		13.1677
41	Intercity Bus		0.5439		0.5439
42	Transit Bus	0.0008	0.1415	0.0139	0.1561
43	School Bus	0.0047	0.2089		0.2136
51	Refuse Truck	0.0061	0.2624		0.2686
52	Single Unit Short Haul	0.6723	2.2230		2.8952
53	Single Unit Long Haul	0.0424	0.2190		0.2614
54	Motor Home	0.0502	0.0365		0.0867
61	Combination Short Haul	0.0022	6.4003		6.4025
62	Combination Long Haul		20.3889		20.3889
Grand Total		**72.2052**	**34.0541**	**0.0139**	**106.2731**
		68%	**32%**	**0.01%**	

	Statewide		
2011 NOX	**Gasoline**	**Diesel**	**CNG**
Motorcycles (11)	0.333	0.000	0.000
Light Duty (21,31,32)	71.094	3.630	0.000
Heavy Duty (40s, 50s, 60s)	0.779	30.424	0.014
Total OnRoad Emissions	72.205	34.054	0.014

2011 - VOC Daily Statewide Emissions by Source Type and Fuel Type (tons/ozone season day)

SourceType	Name	Gasoline	Diesel	CNG	Grand Total
11	Motorcycle	1.9726			1.9726
21	Passenger Car	26.9203	0.3937		27.3140
31	Passenger Truck	18.4308	0.3785		18.8093
32	Light Commercial Truck	6.7060	0.4629		7.1688
41	Intercity Bus		0.0360		0.0360
42	Transit Bus	0.0004	0.0106	0.0018	0.0127
43	School Bus	0.0049	0.0335		0.0384
51	Refuse Truck	0.0024	0.0150		0.0174
52	Single Unit Short Haul	0.3667	0.3238		0.6905
53	Single Unit Long Haul	0.0216	0.0364		0.0580
54	Motor Home	0.0387	0.0054		0.0441
61	Combination Short Haul	0.0016	0.3547		0.3563
62	Combination Long Haul		2.3748		2.3748
Grand Total		**54.4658**	**4.4253**	**0.0018**	**58.8929**
		92%	**8%**	**0.00%**	

	Statewide		
2011 VOC	**Gasoline**	**Diesel**	**CNG**
Motorcycles (11)	1.973	0.000	0.000
Light Duty (21,31,32)	52.057	1.235	0.000
Heavy Duty (40s, 50s, 60s)	0.436	3.190	0.002
Total OnRoad Emissions	54.466	4.425	0.002

2017 - NOx Daily Statewide Emissions by Source Type and Fuel Type (tons/ozone season day)

SourceType	Name	Gasoline	Diesel	CNG	Grand Total
11	Motorcycle	0.3084			0.3084
21	Passenger Car	12.3196	0.0956		12.4152
31	Passenger Truck	11.3297	0.9033		12.2330
32	Light Commercial Truck	4.3667	0.8465		5.2132
41	Intercity Bus		0.2402		0.2402
42	Transit Bus	0.0003	0.0551	0.0071	0.0625
43	School Bus	0.0012	0.0853		0.0865
51	Refuse Truck	0.0011	0.1265		0.1276
52	Single Unit Short Haul	0.2577	1.1143		1.3719
53	Single Unit Long Haul	0.0095	0.1472		0.1567
54	Motor Home	0.0228	0.0248		0.0477
61	Combination Short Haul	0.0003	3.0557		3.0559
62	Combination Long Haul		10.5688		10.5688
Grand Total		**28.6172**	**17.2633**	**0.0071**	**45.8876**
		62%	**38%**	**0.02%**	

	Statewide		
2017 NOX	**Gasoline**	**Diesel**	**CNG**
Motorcycles (11)	0.308	0.000	0.000
Light Duty (21,31,32)	28.016	1.845	0.000
Heavy Duty (40s, 50s, 60s)	0.293	15.418	0.007
Total OnRoad Emissions	28.617	17.263	0.007

Note: As has been done in previous SIPs, transportation conformity budgets for 2017 were established by increasing emissions by 2% above those shown in these tables in recognition of uncertainties related to future changes to traffic and emission modeling procedures. See Section 7.

2017 - VOC Daily Statewide Emissions by Source Type and Fuel Type (tons/ozone season day)

SourceType	Name	Gasoline	Diesel	CNG	Grand Total
11	Motorcycle	1.7158			1.7158
21	Passenger Car	16.1436	0.0631		16.2068
31	Passenger Truck	9.1697	0.1465		9.3162
32	Light Commercial Truck	3.4156	0.1642		3.5798
41	Intercity Bus		0.0139		0.0139
42	Transit Bus	0.0002	0.0040	0.0006	0.0048
43	School Bus	0.0014	0.0089		0.0103
51	Refuse Truck	0.0006	0.0072		0.0078
52	Single Unit Short Haul	0.2026	0.1373		0.3399
53	Single Unit Long Haul	0.0072	0.0207		0.0279
54	Motor Home	0.0236	0.0032		0.0268
61	Combination Short Haul	0.0002	0.1762		0.1764
62	Combination Long Haul		1.3358		1.3358
Grand Total		**30.6805**	**2.0810**	**0.0006**	**32.7622**
		94%	**6%**	**0.00%**	

	Statewide		
2017 VOC	**Gasoline**	**Diesel**	**CNG**
Motorcycles (11)	1.716	0.000	0.000
Light Duty (21,31,32)	28.729	0.374	0.000
Heavy Duty (40s, 50s, 60s)	0.236	1.707	0.001
Total OnRoad Emissions	30.681	2.081	0.001

Note: As has been done in previous SIPs, transportation conformity budgets for 2017 were established by increasing emissions by 2% above those shown in these tables in recognition of uncertainties related to future changes to traffic and emission modeling procedures. See Section 7.

MOVES2014a Non-Road Ozone Summer Day Emission Estimates for 2011 and 2017

(does not include emissions from MAR: commercial marine vessels, aircraft & ground support equipment, or rail locomotives)

NONROAD Model Emissions Summary (2011, 2017)

Emissions from MOVES2014a (NONROAD2008);
Includes Refueling Emissions

2011

Pollutants		2011 Emission Quantities (Tons/Day)										
		NY/NJ/CT Non-Attainment Area				Greater CT Non-Attainment Area						Statewide
ID	Name	Fairfield	Middlesex	New Haven	***Subtotal***	Hartford	Litchfield	New London	Tolland	Windham	***Subtotal***	
3	NOx	12.7	2.4	9.6	**24.7**	9.4	2.5	3.8	1.5	1.8	**19.1**	**43.8**
87	VOC	15.5	4.0	9.9	**29.3**	9.5	6.1	6.9	1.9	3.3	**27.7**	**57.0**

2017

Pollutants		2017 Emission Quantities (Tons/Day)										
		NY/NJ/CT Non-Attainment Area				Greater CT Non-Attainment Area						Statewide
ID	Name	Fairfield	Middlesex	New Haven	***Subtotal***	Hartford	Litchfield	New London	Tolland	Windham	***Subtotal***	
3	NOx	8.4	1.7	6.4	**16.5**	5.9	1.7	2.7	1.0	1.2	**12.5**	**29.0**
87	VOC	11.3	2.7	6.7	**20.7**	6.8	4.2	4.5	1.3	2.3	**19.0**	**39.7**

NONROAD Emissions Summary by Source Category (2011, 2017

MOVES2014a (NONROAD2008); Includes Refueling

2011 VOC Emissions (Ton/day)

	NY/NJ/CT Non-Attainment Area				Greater CT Non-Attainment Area						
Category	**FF**	**MS**	**NH**	**Subtotal**	**HF**	**LF**	**NL**	**TL**	**WH**	**Subtotal**	**Statewide**
Agricultural Equipment	0.003	0.005	0.008	**0.016**	0.017	0.026	0.015	0.011	0.018	**0.087**	**0.103**
Airport Ground Support Equipment	0.000	0.000	0.000	**0.000**	0.011	0.000	0.000	0.000	0.000	**0.011**	**0.011**
Commercial Equipment	1.546	0.232	1.216	**2.994**	1.348	0.245	0.211	0.087	0.095	**1.985**	**4.979**
Construction and Mining Equipment	0.754	0.138	0.600	**1.493**	0.544	0.103	0.272	0.121	0.147	**1.189**	**2.681**
Industrial Equipment	0.451	0.096	0.390	**0.937**	0.510	0.113	0.109	0.034	0.052	**0.817**	**1.754**
Lawn and Garden Equipment	9.161	0.995	4.520	**14.676**	5.632	1.495	1.010	0.621	0.502	**9.261**	**23.937**
Logging Equipment	0.000	0.007	0.005	**0.012**	0.002	0.009	0.006	0.006	0.008	**0.030**	**0.042**
Pleasure Craft	2.950	1.448	2.510	**6.909**	1.016	1.667	2.885	0.469	0.599	**6.636**	**13.545**
Railroad Equipment	0.007	0.001	0.006	**0.014**	0.006	0.001	0.002	0.001	0.001	**0.012**	**0.025**
Recreational Equipment	0.611	1.091	0.594	**2.296**	0.442	2.437	2.382	0.562	1.830	**7.653**	**9.949**
Grand Total	**15.482**	**4.014**	**9.850**	**29.346**	**9.528**	**6.098**	**6.891**	**1.912**	**3.252**	**27.681**	**57.028**

2011 NOx Emissions (Ton/day)

	NY/NJ/CT Non-Attainment Area				Greater CT Non-Attainment Area						
Category	**FF**	**MS**	**NH**	**Subtotal**	**HF**	**LF**	**NL**	**TL**	**WH**	**Subtotal**	**Grand Total**
Agricultural Equipment	0.027	0.046	0.072	**0.145**	0.157	0.235	0.137	0.101	0.159	**0.790**	**0.935**
Airport Ground Support Equipment	0.000	0.000	0.000	**0.001**	0.124	0.000	0.000	0.000	0.000	**0.124**	**0.125**
Commercial Equipment	1.329	0.200	1.046	**2.575**	1.128	0.205	0.177	0.072	0.079	**1.661**	**4.236**
Construction and Mining Equipment	5.273	0.967	4.198	**10.437**	3.794	0.721	1.898	0.844	1.027	**8.284**	**18.721**
Industrial Equipment	2.321	0.490	2.023	**4.834**	2.592	0.574	0.568	0.189	0.268	**4.191**	**9.025**
Lawn and Garden Equipment	2.570	0.246	1.084	**3.900**	1.393	0.385	0.195	0.138	0.110	**2.221**	**6.121**
Logging Equipment	0.000	0.010	0.007	**0.017**	0.002	0.013	0.008	0.009	0.011	**0.042**	**0.059**
Pleasure Craft	1.055	0.424	1.142	**2.622**	0.180	0.296	0.759	0.083	0.106	**1.425**	**4.047**
Railroad Equipment	0.030	0.005	0.028	**0.064**	0.029	0.006	0.009	0.005	0.004	**0.053**	**0.118**
Recreational Equipment	0.045	0.044	0.039	**0.128**	0.040	0.094	0.093	0.026	0.071	**0.323**	**0.451**
Grand Total	**12.652**	**2.430**	**9.640**	**24.722**	**9.440**	**2.530**	**3.844**	**1.467**	**1.835**	**19.116**	**43.837**

2017 VOC Emissions (Ton/day)

	NY/NJ/CT Non-Attainment Area				Greater CT Non-Attainment Area						
Category	**FF**	**MS**	**NH**	**Subtotal**	**HF**	**LF**	**NL**	**TL**	**WH**	**Subtotal**	**Grand Total**
Agricultural Equipment	0.002	0.004	0.006	**0.012**	0.013	0.019	0.011	0.008	0.013	**0.064**	**0.075**
Airport Ground Support Equipment	0.000	0.000	0.000	**0.000**	0.008	0.000	0.000	0.000	0.000	**0.008**	**0.008**
Commercial Equipment	1.059	0.159	0.833	**2.051**	0.930	0.169	0.146	0.060	0.066	**1.370**	**3.421**
Construction and Mining Equipment	0.580	0.106	0.462	**1.148**	0.419	0.080	0.209	0.093	0.113	**0.914**	**2.062**
Industrial Equipment	0.158	0.033	0.137	**0.328**	0.177	0.039	0.038	0.013	0.018	**0.285**	**0.614**
Lawn and Garden Equipment	7.290	0.750	3.365	**11.404**	4.287	1.157	0.704	0.454	0.365	**6.968**	**18.372**
Logging Equipment	0.000	0.007	0.005	**0.012**	0.002	0.010	0.006	0.006	0.008	**0.031**	**0.044**
Pleasure Craft	1.711	0.833	1.475	**4.018**	0.580	0.952	1.667	0.268	0.342	**3.808**	**7.827**
Railroad Equipment	0.005	0.001	0.004	**0.010**	0.005	0.001	0.001	0.001	0.001	**0.008**	**0.018**
Recreational Equipment	0.451	0.789	0.436	**1.675**	0.331	1.772	1.730	0.409	1.329	**5.571**	**7.247**
Grand Total	**11.255**	**2.681**	**6.722**	**20.659**	**6.750**	**4.199**	**4.513**	**1.312**	**2.254**	**19.028**	**39.687**

2017 NOx Emissions (Ton/day)

	NY/NJ/CT Non-Attainment Area				Greater CT Non-Attainment Area						
Category	**FF**	**MS**	**NH**	**Subtotal**	**HF**	**LF**	**NL**	**TL**	**WH**	**Subtotal**	**Grand Total**
Agricultural Equipment	0.020	0.033	0.052	**0.105**	0.114	0.171	0.100	0.074	0.116	**0.575**	**0.681**
Airport Ground Support Equipment	0.000	0.000	0.000	**0.000**	0.077	0.000	0.000	0.000	0.000	**0.077**	**0.078**
Commercial Equipment	1.028	0.154	0.809	**1.992**	0.872	0.159	0.137	0.056	0.061	**1.285**	**3.277**
Construction and Mining Equipment	3.269	0.599	2.603	**6.471**	2.352	0.447	1.176	0.523	0.637	**5.136**	**11.606**
Industrial Equipment	1.124	0.233	0.988	**2.345**	1.235	0.273	0.282	0.102	0.131	**2.023**	**4.367**
Lawn and Garden Equipment	1.919	0.180	0.792	**2.892**	1.025	0.285	0.138	0.100	0.079	**1.628**	**4.520**
Logging Equipment	0.000	0.003	0.002	**0.006**	0.001	0.005	0.003	0.003	0.004	**0.015**	**0.021**
Pleasure Craft	1.025	0.418	1.094	**2.536**	0.186	0.305	0.753	0.086	0.110	**1.439**	**3.975**
Railroad Equipment	0.024	0.004	0.022	**0.050**	0.023	0.005	0.007	0.004	0.003	**0.042**	**0.092**
Recreational Equipment	0.039	0.042	0.035	**0.116**	0.035	0.090	0.089	0.024	0.068	**0.305**	**0.421**
Grand Total	**8.449**	**1.667**	**6.398**	**16.513**	**5.921**	**1.739**	**2.685**	**0.972**	**1.209**	**12.525**	**29.038**

Version 2016_05_04

Area Source Growth Factors for Connecticut

Base Year 2011
Future Year 2017

FIPS	SCC	SCC SHORT NAME	Growth_Code	Base Year Raw Data	Future Year Raw Data	Growth Factor Future/Base	Low-End Cap	High-End Cap	"Capped" Growth Factor	SRA Comments
09000	2102001000	Stationary Fuel Comb /Industrial /Anthracite Coal /Total: All Boiler Types	AEO2015_NE_IND_COAL	0.00221	0.00191	0.8643	0.00	100.00	0.8643	
09000	2102002000	Stationary Fuel Comb /Industrial /Bituminous/Subbituminous Coal /Total: All Boiler T	AEO2015_NE_IND_COAL	0.00221	0.00191	0.8643	0.00	100.00	0.8643	
09000	2102004000	Stationary Fuel Comb /Industrial /Distillate Oil /Total: Boilers and IC Engines	AEO2015_NE_IND_DISTILLATE	0.02376	0.020786	0.8748	0.00	100.00	0.8748	
09000	2102004001	Stationary Fuel Comb /Industrial /Distillate Oil /All Boilers	AEO2015_NE_IND_DISTILLATE	0.02376	0.020786	0.8748	0.00	100.00	0.8748	
09000	2102004002	Stationary Fuel Comb /Industrial /Distillate Oil /IC Engines	AEO2015_NE_IND_DISTILLATE	0.02376	0.020786	0.8748	0.00	100.00	0.8748	
09000	2102005000	Stationary Fuel Comb /Industrial /Residual Oil /Total: All Boiler Types	AEO2015_NE_IND_RESIDUAL	0.01044	0.003011	0.2884	0.00	100.00	0.2884	
09000	2102006000	Stationary Fuel Comb /Industrial /Natural Gas /Total: Boilers and IC Engines	AEO2015_NE_IND_NATGAS	0.11762	0.1607	1.3663	0.00	100.00	1.3663	
09000	2102007000	Stationary Fuel Comb /Industrial /Liquified Petroleum Gas /Total: All Boiler Types	AEO2015_NE_IND_LPG	0.006	0.006477	1.0795	0.00	100.00	1.0795	
09000	2102008000	Stationary Fuel Comb /Industrial /Wood /Total: All Boiler Types	AEO2015_NE_IND_RENEWABLE	0.082423	0.07844	0.9517	0.00	100.00	0.9517	
09000	2102011000	Stationary Fuel Comb /Industrial /Kerosene /Total: All Boiler Types	AEO2015_NE_IND_DISTILLATE	0.02376	0.020786	0.8748	0.00	100.00	0.8748	
09000	2103001000	Stationary Fuel Comb /Commercial/Institutional /Anthracite Coal /Total: All Boiler Ty	AEO2015_NE_COM_COAL	0	0	1.0000	0.00	100.00	1.0000	
09000	2103002000	Stationary Fuel Comb /Commercial/Institutional /Bituminous/Subbituminous Coal /T	AEO2015_NE_COM_COAL	0	0	1.0000	0.00	100.00	1.0000	
09000	2103004000	Stationary Fuel Comb /Commercial/Institutional /Distillate Oil /Total: Boilers and IC I	AEO2015_NE_COM_DISTILLATE	0.06026	0.048664	0.8076	0.00	100.00	0.8076	
09000	2103004001	Stationary Fuel Comb /Commercial/Institutional /Distillate Oil /Boilers	AEO2015_NE_COM_DISTILLATE	0.06026	0.048664	0.8076	0.00	100.00	0.8076	
09000	2103004002	Stationary Fuel Comb /Commercial/Institutional /Distillate Oil /IC Engines	AEO2015_NE_COM_DISTILLATE	0.06026	0.048664	0.8076	0.00	100.00	0.8076	
09000	2103005000	Stationary Fuel Comb /Commercial/Institutional /Residual Oil /Total: All Boiler Types	AEO2015_NE_IND_RESIDUAL	0.01044	0.003011	0.2884	0.00	100.00	0.2884	
09000	2103006000	Stationary Fuel Comb /Commercial/Institutional /Natural Gas /Total: Boilers and IC I	AEO2015_NE_COM_NATGAS	0.15915	0.174111	1.0940	0.00	100.00	1.0940	
09000	2103007000	Stationary Fuel Comb /Commercial/Institutional /Liquified Petroleum Gas /Total: All	AEO2015_NE_COM_PROPANE	0.0197	0.02201	1.1173	0.00	100.00	1.1173	
09000	2103008000	Stationary Fuel Comb /Commercial/Institutional /Wood /Total: All Boiler Types	AEO2015_NE_COM_RENEWABLE	0.00857	0.00783	0.9137	0.00	100.00	0.9137	
09000	2103011000	Stationary Fuel Comb /Commercial/Institutional /Kerosene /Total: All Combustor Ty	AEO2015_NE_COM_DISTILLATE	0.06026	0.048664	0.8076	0.00	100.00	0.8076	
09000	2104001000	Stationary Fuel Comb /Residential /Anthracite Coal /Total: All Combustor Types	AEO2015_NE_RES_COAL	0	0	1.0000	0.00	100.00	1.0000	
09000	2104002000	Stationary Fuel Comb /Residential /Bituminous/Subbituminous Coal /Total: All Com	AEO2015_NE_RES_COAL	0	0	1.0000	0.00	100.00	1.0000	
09000	2104004000	Stationary Fuel Comb /Residential /Distillate Oil /Total: All Combustor Types	AEO2015_NE_RES_DISTILLATE	0.21658	0.168329	0.7772	0.00	100.00	0.7772	
09000	2104006000	Stationary Fuel Comb /Residential /Natural Gas /Total: All Combustor Types	AEO2015_NE_RES_NATGAS	0.20806	0.221492	1.0646	0.00	100.00	1.0646	
09000	2104006010	Stationary Fuel Comb /Residential /Natural Gas /Residential Furnaces	AEO2015_NE_RES_NATGAS	0.20806	0.221492	1.0646	0.00	100.00	1.0646	
09000	2104007000	Stationary Fuel Comb /Residential /Liquified Petroleum Gas /Total: All Combustor T	AEO2015_NE_RES_PROPANE	0.03433	0.028639	0.8342	0.00	100.00	0.8342	
09000	2104011000	Stationary Fuel Comb /Residential /Kerosene /Total: All Heater Types	AEO2015_NE_RES_KEROSENE	0.00397	0.001748	0.4403	0.00	100.00	0.4403	
09000	2302050000	Food & Kindred Products /Bakery Products /Total	EMP_09_NAICS=311	7194.7	6994.9	0.9722	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2302070000	Food & Kindred Products /Fermentation/Beverages /Total	EMP_09_NAICS=312	882.1	876.7	0.9939	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2302070001	Food & Kindred Products /Fermentation/Beverages /Breweries	EMP_09_NAICS=312	882.1	876.7	0.9939	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2302070005	Food & Kindred Products /Fermentation/Beverages /Wineries	EMP_09_NAICS=312	882.1	876.7	0.9939	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2302070010	Food & Kindred Products /Fermentation/Beverages /Distilleries	EMP_09_NAICS=312	882.1	876.7	0.9939	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2311010000	Construction: SIC 15 - 17 /Residential /Total	EMP_09_NAICS=236	10179.3	11549.1	1.1346	1.00	1.25	1.1346	Limit employment growth between 1.0 to 1.25
09000	2311020000	Construction: SIC 15 - 17 /Industrial/Commercial/Institutional /Total	EMP_09_NAICS=236	10179.3	11549.1	1.1346	1.00	1.25	1.1346	Limit employment growth between 1.0 to 1.25
09000	2311030000	Construction: SIC 15 - 17 /Road Construction /Total	EMP_09_NAICS=237	5361.1	5657.7	1.0514	1.00	1.25	1.0514	Limit employment growth between 1.0 to 1.25
09000	2325000000	Mining &Quarrying /All Processes /Total	EMP_09_NAICS=212	1	1	1.0000	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2325020000	Mining &Quarrying /Crushed & Broken Stone /Total	EMP_09_NAICS=212	1	1	1.0000	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2325030000	Mining &Quarrying /Sand & Gravel /Total	EMP_09_NAICS=212	1	1	1.0000	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2399010000	Industrial Refrigeration /Refrigerant Losses /All Processes	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2401005000	Surface Coating /Auto Refinishing /Total: All Solvent Types	EMP_09_NAICS=811	13458.6	14158.2	1.0520	1.00	1.25	1.0520	Limit employment growth between 1.0 to 1.25
09000	2401005500	Surface Coating /Auto Refinishing /Surface Preparation Solvents	EMP_09_NAICS=811	13458.6	14158.2	1.0520	1.00	1.25	1.0520	Limit employment growth between 1.0 to 1.25
09000	2401005600	Surface Coating /Auto Refinishing /Primers	EMP_09_NAICS=811	13458.6	14158.2	1.0520	1.00	1.25	1.0520	Limit employment growth between 1.0 to 1.25
09000	2401005700	Surface Coating /Auto Refinishing /Top Coats	EMP_09_NAICS=811	13458.6	14158.2	1.0520	1.00	1.25	1.0520	Limit employment growth between 1.0 to 1.25
09000	2401005800	Surface Coating /Auto Refinishing /Clean-up Solvents	EMP_09_NAICS=811	13458.6	14158.2	1.0520	1.00	1.25	1.0520	Limit employment growth between 1.0 to 1.25
09000	2401008000	Surface Coating /Traffic Markings /Total: All Solvent Types	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2401015000	Surface Coating /Factory Finished Wood /Total: All Solvent Types	EMP_09_NAICS=321	964.2	1121.4	1.1630	1.00	1.25	1.1630	Limit employment growth between 1.0 to 1.25
09000	2401020000	Surface Coating /Wood Furniture /Total: All Solvent Types	EMP_09_NAICS=337	2607.8	2768.6	1.0617	1.00	1.25	1.0617	Limit employment growth between 1.0 to 1.25
09000	2401025000	Surface Coating /Metal Furniture /Total: All Solvent Types	EMP_09_NAICS=337	2607.8	2768.6	1.0617	1.00	1.25	1.0617	Limit employment growth between 1.0 to 1.25
09000	2401030000	Surface Coating /Paper /Total: All Solvent Types	EMP_09_NAICS=322	3703.3	3531.1	0.9535	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2401040000	Surface Coating /Metal Cans /Total: All Solvent Types	EMP_09_NAICS=332	27974.5	27353.5	0.9778	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2401045000	Surface Coating /Metal Coils /Total: All Solvent Types	EMP_09_NAICS=332	27974.5	27353.5	0.9778	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2401050000	Surface Coating /Misc Finished Metals /Total: All Solvent Types	EMP_09_NAICS=332	27974.5	27353.5	0.9778	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2401055000	Surface Coating /Machinery & Equipment /Total: All Solvent Types	EMP_09_NAICS=333	15017.9	14609.3	0.9728	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2401060000	Surface Coating /Large Appliances /Total: All Solvent Types	EMP_09_NAICS=335	9757.7	9593.9	0.9832	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2401065000	Surface Coating /Electronic & Other Electrical /Total: All Solvent Types	EMP_09_NAICS=334	13074.1	12090.7	0.9248	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2401070000	Surface Coating /Motor Vehicles /Total: All Solvent Types	EMP_09_NAICS=336	42112.7	41756.9	0.9916	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2401075000	Surface Coating /Aircraft /Total: All Solvent Types	EMP_09_NAICS=336	42112.7	41756.9	0.9916	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25

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Area Source Growth Factors for Connecticut

Base Year: 2011
Future Year: 2017

FIPS	SCC	SCC SHORT NAME	Growth_Code	Base Year Raw Data	Future Year Raw Data	Growth Factor Future/Base	Low-End Cap	High-End Cap	"Capped" Growth Factor	SRA Comments
09000	2401080000	Surface Coating /Marine /Total: All Solvent Types	EMP_09_NAICS=336	42112.7	41756.9	0.9916	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2401085000	Surface Coating /Railroad /Total: All Solvent Types	EMP_09_NAICS=336	42112.7	41756.9	0.9916	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2401090000	Surface Coating /Misc Manufacturing /Total: All Solvent Types	EMP_09_NAICS=339	9880.6	9950.2	1.0070	1.00	1.25	1.0070	Limit employment growth between 1.0 to 1.25
09000	2415000000	Degreasing /All Processes/All Industries /Total: All Solvent Types	EMP_09_NAICS=31-33_441_811	69456.6	71638.2	1.0314	1.00	1.25	1.0314	Limit employment growth between 1.0 to 1.25
09000	2415100000	Degreasing /All Industries: Open Top Degreasing /Total: All Solvent Types	EMP_09_NAICS=31-33_441_811	69456.6	71638.2	1.0314	1.00	1.25	1.0314	Limit employment growth between 1.0 to 1.25
09000	2415130000	Degreasing /Electronic & Other Elec: Open Top Degreasing /Total: All Solvent Type	EMP_09_NAICS=334	13074.1	12090.7	0.9248	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2415300000	Degreasing /All Industries: Cold Cleaning /Total: All Solvent Types	EMP_09_NAICS=31-33_441_811	69456.6	71638.2	1.0314	1.00	1.25	1.0314	Limit employment growth between 1.0 to 1.25
09000	2415360000	Degreasing /Auto Repair Services: Cold Cleaning /Total: All Solvent Types	EMP_09_NAICS=811	13458.6	14158.2	1.0520	1.00	1.25	1.0520	Limit employment growth between 1.0 to 1.25
09000	2420000000	Dry Cleaning /All Processes /Total: All Solvent Types	EMP_09_NAICS=812	18510.5	19179.5	1.0361	1.00	1.25	1.0361	Limit employment growth between 1.0 to 1.25
09000	2420010000	Dry Cleaning /Commercial/Industrial Cleaners /Total: All Solvent Types	EMP_09_NAICS=812	18510.5	19179.5	1.0361	1.00	1.25	1.0361	Limit employment growth between 1.0 to 1.25
09000	2420010370	Dry Cleaning /Commercial/Industrial Cleaners /Special Naphthas	EMP_09_NAICS=812	18510.5	19179.5	1.0361	1.00	1.25	1.0361	Limit employment growth between 1.0 to 1.25
09000	2461020000	Misc Non-Industrial: Commercial /Asphalt Application: All Processes /Total: All Solv	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2461021000	Misc Non-Industrial: Commercial /Cutback Asphalt /Total: All Solvent Types	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2461022000	Misc Non-Industrial: Commercial /Emulsified Asphalt /Total: All Solvent Types	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2461023000	Misc Non-Industrial: Commercial /Asphalt Roofing /Total: All Solvent Types	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2501050030	Petrol & Petrol Product Storage /Bulk Terminals: All Evaporative Losses /Crude Oil	AEO2015_NE_TRANS_RESIDUAL	0.00537	0.002469	0.4598	0.00	100.00	0.4598	
09000	2501050060	Petrol & Petrol Product Storage /Bulk Terminals: All Evaporative Losses /Residual (	AEO2015_NE_TRANS_RESIDUAL	0.00537	0.002469	0.4598	0.00	100.00	0.4598	
09000	2501050090	Petrol & Petrol Product Storage /Bulk Terminals: All Evaporative Losses /Distillate (	AEO2015_NE_TRANS_DIESEL	0.1674	0.199696	1.1941	0.00	100.00	1.1941	
09000	2501050120	Petrol & Petrol Product Storage /Bulk Terminals: All Evaporative Losses /Gasoline	AEO2015_NE_TRANS_GASOLINE	0.76791	0.727139	0.9469	0.00	100.00	0.9469	EPA has national adjustment factors for VOC for gasoline distribution
09000	2501050150	Petrol & Petrol Product Storage /Bulk Terminals: All Evaporative Losses /Jet Naphth	AEO2015_NE_TRANS_JETFUEL	0.066493	0.060578	0.9110	0.00	100.00	0.9110	
09000	2501050180	Petrol & Petrol Product Storage /Bulk Terminals: All Evaporative Losses /Kerosene	AEO2015_NE_TRANS_DIESEL	0.1674	0.199696	1.1941	0.00	100.00	1.1941	
09000	2501055120	Petrol & Petrol Product Storage /Bulk Plants: All Evaporative Losses /Gasoline	AEO2015_NE_TRANS_GASOLINE	0.76791	0.727139	0.9469	0.00	100.00	0.9469	EPA has national adjustment factors for VOC for gasoline distribution
09000	2501060100	Gasoline Service Stations /Stage 2: Total	AEO2015_NE_TRANS_GASOLINE	0.76791	0.727139	0.9469	0.00	100.00	0.9469	EPA has national adjustment factors for VOC for gasoline distribution
09000	2501060101	Gasoline Service Stations /Stage 2: Displacement Loss/Uncontrolled	AEO2015_NE_TRANS_GASOLINE	0.76791	0.727139	0.9469	0.00	100.00	0.9469	EPA has national adjustment factors for VOC for gasoline distribution
09000	2501060102	Gasoline Service Stations /Stage 2: Displacement Loss/Controlled	AEO2015_NE_TRANS_GASOLINE	0.76791	0.727139	0.9469	0.00	100.00	0.9469	EPA has national adjustment factors for VOC for gasoline distribution
09000	2501060103	Gasoline Service Stations /Stage 2: Spillage	AEO2015_NE_TRANS_GASOLINE	0.76791	0.727139	0.9469	0.00	100.00	0.9469	EPA has national adjustment factors for VOC for gasoline distribution
09000	2501070100	Diesel Service Stations /Stage 2: Total	AEO2015_NE_TRANS_DIESEL	0.1674	0.199696	1.1941	0.00	100.00	1.1941	
09000	2501080050	Petrol & Petrol Product Storage /Airports : Aviation Gasoline /Stage 1: Total	AEO2015_NE_TRANS_AVGAS	0.006732	0.006642	0.9866	0.00	100.00	0.9866	
09000	2501080100	Petrol & Petrol Product Storage /Airports : Aviation Gasoline /Stage 2: Total	AEO2015_NE_TRANS_AVGAS	0.006732	0.006642	0.9866	0.00	100.00	0.9866	
09000	2501080201	Petrol & Petrol Product Storage /Airports : Aviation Gasoline /Stage 2: Total	AEO2015_NE_TRANS_AVGAS	0.006732	0.006642	0.9866	0.00	100.00	0.9866	
09000	2501995060	Petrol & Petrol Product Storage /All Storage Types: Working Loss /Residual Oil	AEO2015_NE_TRANS_RESIDUAL	0.00537	0.002469	0.4598	0.00	100.00	0.4598	
09000	2501995090	Petrol & Petrol Product Storage /All Storage Types: Working Loss /Distillate Oil	AEO2015_NE_TRANS_RESIDUAL	0.00537	0.002469	0.4598	0.00	100.00	0.4598	
09000	2501995120	Petrol & Petrol Product Storage /All Storage Types: Working Loss /Gasoline	AEO2015_NE_TRANS_GASOLINE	0.76791	0.727139	0.9469	0.00	100.00	0.9469	EPA has national adjustment factors for VOC for gasoline distribution
09000	2501995150	Petrol & Petrol Product Storage /All Storage Types: Working Loss /Jet Naphtha	AEO2015_NE_TRANS_JETFUEL	0.066493	0.060578	0.9110	0.00	100.00	0.9110	
09000	2501995180	Petrol & Petrol Product Storage /All Storage Types: Working Loss /Kerosene	AEO2015_NE_TRANS_DIESEL	0.1674	0.199696	1.1941	0.00	100.00	1.1941	
09000	2505020030	Petrol & Petrol Product Transport /Marine Vessel /Crude Oil	AEO2015_NE_TRANS_RESIDUAL	0.00537	0.002469	0.4598	0.00	100.00	0.4598	
09000	2505020060	Petrol & Petrol Product Transport /Marine Vessel /Residual Oil	AEO2015_NE_TRANS_RESIDUAL	0.00537	0.002469	0.4598	0.00	100.00	0.4598	
09000	2505020090	Petrol & Petrol Product Transport /Marine Vessel /Distillate Oil	AEO2015_NE_TRANS_DIESEL	0.1674	0.199696	1.1941	0.00	100.00	1.1941	
09000	2505020120	Petrol & Petrol Product Transport /Marine Vessel /Gasoline	AEO2015_NE_TRANS_GASOLINE	0.76791	0.727139	0.9469	0.00	100.00	0.9469	EPA has national adjustment factors for VOC for gasoline distribution
09000	2505020150	Petrol & Petrol Product Transport /Marine Vessel /Jet Naphtha	AEO2015_NE_TRANS_JETFUEL	0.066493	0.060578	0.9110	0.00	100.00	0.9110	
09000	2505020180	Petrol & Petrol Product Transport /Marine Vessel /Kerosene	AEO2015_NE_TRANS_DIESEL	0.1674	0.199696	1.1941	0.00	100.00	1.1941	
09000	2505030120	Petrol & Petrol Product Transport /Truck /Gasoline	AEO2015_NE_TRANS_GASOLINE	0.76791	0.727139	0.9469	0.00	100.00	0.9469	EPA has national adjustment factors for VOC for gasoline distribution
09000	2505040120	Petrol & Petrol Product Transport /Pipeline /Gasoline	AEO2015_NE_TRANS_GASOLINE	0.76791	0.727139	0.9469	0.00	100.00	0.9469	EPA has national adjustment factors for VOC for gasoline distribution
09000	2601000000	On-site Incineration /All Categories /Total	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2601010000	On-site Incineration /Industrial /Total	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2601020000	On-site Incineration /Commercial/Institutional /Total	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2601030000	On-site Incineration /Residential/Total	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2610000100	Open Burning /All Categories /Yard Waste - Leaf Species Unspecified	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2610000400	Open Burning /All Categories /Yard Waste - Brush Species Unspecified	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2610000500	Open Burning /All Categories /Land Clearing Debris (use 28-10-005-000 for Loggin	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2610030000	Open Burning /Residential /Household Waste (use 26-10-000-xxx for Yard Wastes)	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2610040400	Open Burning /Municipal (from residences, parks,other for central burn) /Yard Was	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2620000000	Landfills /All Categories /Total	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2620030000	Landfills /Municipal /Total	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2630010000	Wastewater Treatment /Industrial /Total Processed	EMP_09_NAICS=31-33	165176	162842	0.9859	1.00	1.25	1.0000	Limit employment growth between 1.0 to 1.25
09000	2660000000	Leaking Underground Storage Tanks /Leaking Underground Storage Tanks /Total: /	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2660001000	Composting /100% Biosolids (e.g., sewage sludge, manure, mixtures of these matl	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	

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Area Source Growth Factors for Connecticut

Base Year 2011
Future Year 2017

FIPS	SCC	SCC SHORT NAME	Growth_Code	Base Year Raw Data	Future Year Raw Data	Growth Factor Future/Base	Low-End Cap	High-End Cap	"Capped" Growth Factor	SRA Comments
09000	2680002000	Composting /Mixed Waste (e.g., a 50:50 mixture of biosolids and green wastes) /All	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2680003000	Composting /100% Green Waste (e.g., residential or municipal yard wastes) /All Pro	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2701200000	Biogenic - Vegetation - Total	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2701220000	Biogenic - Vegetation/Agriculture - Total	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2806010000	Domestic Animals Waste Emissions /Cats /Total	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2806015000	Domestic Animals Waste Emissions /Dogs /Total	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09000	2810003000	Cigarette Smoke /Total	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2810010000	Human Perspiration and Respiration /Total	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2810030000	Structure Fires /Unspecified	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2810035000	Firefighting Training /Total	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2810040000	Aircraft/Rocket Engine Firing & Testing /Total	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2810050000	Motor Vehicle Fires /Unspecified	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09000	2810060200	Cremation /Animals	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09000	2830000000	Catastrophic/Accidental Releases /All Catastrophic/Accidential Releases /Total	NOGROWTH	1	1	1.0000	0.00	100.00	1.0000	
09001	2302002100	Food & Kindred Products /Commercial Cooking - Charbroiling /Conveyorized Charb	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2302002200	Food & Kindred Products /Commercial Cooking - Charbroiling /Under-fired Charbroi	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2302003000	Food & Kindred Products /Commercial Cooking - Frying /Deep Fat Fying	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2302003100	Food & Kindred Products /Commercial Cooking - Frying /Flat Griddle Frying	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2302003200	Food & Kindred Products /Commercial Cooking - Frying /Clamshell Griddle Frying	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2401001000	Surface Coating /Architectural Coatings /Total: All Solvent Types	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2401002000	Surface Coating /Architectural Coatings - Solvent-based /Total: All Solvent Types	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2401003000	Surface Coating /Architectural Coatings - Water-based /Total: All Solvent Types	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2401100000	Surface Coating /Industrial Maintenance Coatings /Total: All Solvent Types	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2401200000	Surface Coating /Other Special Purpose Coatings /Total: All Solvent Types	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2425000000	Graphic Arts /All Processes /Total: All Solvent Types	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2425010000	Graphic Arts /Lithography /Total: All Solvent Types	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2425020000	Graphic Arts /Letterpress /Total: All Solvent Types	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2425030000	Graphic Arts /Rotogravure /Total: All Solvent Types	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2425040000	Graphic Arts /Flexography /Total: All Solvent Types	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2440020000	Misc Industrial /Adhesive (Industrial) Application /Total: All Solvent Types	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2460000000	Misc Non-Indus: Consumer & Comm /All Processes /Total: All Solvent Types	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2460100000	Misc Non-Indus: Consumer & Comm /All Personal Care Products /Total: All Solvent	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2460200000	Misc Non-Indus: Consumer & Comm /All Household Products /Total: All Solvent Ty	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2460400000	Misc Non-Indus: Consumer & Comm /All Auto Aftermarket Products /Total: All Solv	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2460500000	Misc Non-Indus: Consumer & Comm /All Coatings & Related Products /Total: All So	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2460600000	Misc Non-Indus: Consumer & Comm /All Adhesives & Sealants /Total: All Solvent T	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2460800000	Misc Non-Indus: Consumer & Comm /All FIFRA Related Products /Total: All Solven	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2460900000	Misc Non-Indus: Consumer & Comm /Misc Products (Not Otherwise Covered) /Tota	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2461800000	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Total: All So	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2461800001	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Surface App	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2461800002	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Soil Incorpo	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2461870999	Misc Non-Industrial: Commercial /Pesticide Application: Non-Agricultural /Not Elsew	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2465800000	Misc Non-Indus: Consumer /Pesticide Application /Total: All Solvent Types	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2630020000	Wastewater Treatment /Public Owned /Total Processed	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2640000000	TSDFs /All TSDF Types /Total: All Processes	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2810025000	Charcoal Grilling - Residential /Total	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09001	2810050100	Cremation /Humans	POP_09001	921446.6	937303	1.0172	0.00	100.00	1.0172	
09003	2302002100	Food & Kindred Products /Commercial Cooking - Charbroiling /Conveyorized Charb	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2302002200	Food & Kindred Products /Commercial Cooking - Charbroiling /Under-fired Charbroi	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2302003000	Food & Kindred Products /Commercial Cooking - Frying /Deep Fat Fying	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2302003100	Food & Kindred Products /Commercial Cooking - Frying /Flat Griddle Frying	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2302003200	Food & Kindred Products /Commercial Cooking - Frying /Clamshell Griddle Frying	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2401001000	Surface Coating /Architectural Coatings /Total: All Solvent Types	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2401002000	Surface Coating /Architectural Coatings - Solvent-based /Total: All Solvent Types	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2401003000	Surface Coating /Architectural Coatings - Water-based /Total: All Solvent Types	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2401100000	Surface Coating /Industrial Maintenance Coatings /Total: All Solvent Types	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2401200000	Surface Coating /Other Special Purpose Coatings /Total: All Solvent Types	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	

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Area Source Growth Factors for Connecticut

Base Year: 2011
Future Year: 2017

FIPS	SCC	SCC SHORT NAME	Growth_Code	Base Year Raw Data	Future Year Raw Data	Growth Factor Future/Base	Low-End Cap	High-End Cap	"Capped" Growth Factor	SRA Comments
09003	2425000000	Graphic Arts /All Processes /Total: All Solvent Types	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2425010000	Graphic Arts /Lithography /Total: All Solvent Types	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2425020000	Graphic Arts /Letterpress /Total: All Solvent Types	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2425030000	Graphic Arts /Rotogravure /Total: All Solvent Types	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2425040000	Graphic Arts /Flexography /Total: All Solvent Types	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2440020000	Misc Industrial /Adhesive (Industrial) Application /Total: All Solvent Types	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2460000000	Misc Non-Indus: Consumer & Comm /All Processes /Total: All Solvent Types	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2460100000	Misc Non-Indus: Consumer & Comm /All Personal Care Products /Total: All Solvent	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2460200000	Misc Non-Indus: Consumer & Comm /All Household Products /Total: All Solvent Ty	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2460400000	Misc Non-Indus: Consumer & Comm /All Auto Aftermarket Products /Total: All Solv	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2460500000	Misc Non-Indus: Consumer & Comm /All Coatings & Related Products /Total: All Sc	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2460600000	Misc Non-Indus: Consumer & Comm /All Adhesives & Sealants /Total: All Solvent T	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2460800000	Misc Non-Indus: Consumer & Comm /All FIFRA Related Products /Total: All Solven	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2460900000	Misc Non-Indus: Consumer & Comm /Misc Products (Not Otherwise Covered) /Tota	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2461800000	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Total: All So	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2461800001	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Surface App	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2461800002	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Soil Incorpor	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2461870999	Misc Non-Industrial: Commercial /Pesticide Application: Non-Agricultural /Not Elsew	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2465800000	Misc Non-Indus: Consumer /Pesticide Application /Total: All Solvent Types	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2630020000	Wastewater Treatment /Public Owned /Total Processed	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2640000000	TSDFs /All TSDF Types /Total: All Processes	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2810025000	Charcoal Grilling - Residential /Total	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09003	2810050100	Cremation /Humans	POP_09003	897767.2	916751.2	1.0211	0.00	100.00	1.0211	
09005	2302002100	Food & Kindred Products /Commercial Cooking - Charbroiling /Conveyorized Charb	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2302002200	Food & Kindred Products /Commercial Cooking - Charbroiling /Under-fired Charbroi	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2302003000	Food & Kindred Products /Commercial Cooking - Frying /Deep Fat Fying	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2302003100	Food & Kindred Products /Commercial Cooking - Frying /Flat Griddle Frying	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2302003200	Food & Kindred Products /Commercial Cooking - Frying /Clamshell Griddle Frying	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2401001000	Surface Coating /Architectural Coatings /Total: All Solvent Types	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2401002000	Surface Coating /Architectural Coatings - Solvent-based /Total: All Solvent Types	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2401003000	Surface Coating /Architectural Coatings - Water-based /Total: All Solvent Types	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2401100000	Surface Coating /Industrial Maintenance Coatings /Total: All Solvent Types	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2401200000	Surface Coating /Other Special Purpose Coatings /Total: All Solvent Types	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2425000000	Graphic Arts /All Processes /Total: All Solvent Types	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2425010000	Graphic Arts /Lithography /Total: All Solvent Types	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2425020000	Graphic Arts /Letterpress /Total: All Solvent Types	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2425030000	Graphic Arts /Rotogravure /Total: All Solvent Types	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2425040000	Graphic Arts /Flexography /Total: All Solvent Types	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2440020000	Misc Industrial /Adhesive (Industrial) Application /Total: All Solvent Types	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2460000000	Misc Non-Indus: Consumer & Comm /All Processes /Total: All Solvent Types	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2460100000	Misc Non-Indus: Consumer & Comm /All Personal Care Products /Total: All Solvent	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2460200000	Misc Non-Indus: Consumer & Comm /All Household Products /Total: All Solvent Ty	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2460400000	Misc Non-Indus: Consumer & Comm /All Auto Aftermarket Products /Total: All Solv	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2460500000	Misc Non-Indus: Consumer & Comm /All Coatings & Related Products /Total: All Sc	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2460600000	Misc Non-Indus: Consumer & Comm /All Adhesives & Sealants /Total: All Solvent T	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2460800000	Misc Non-Indus: Consumer & Comm /All FIFRA Related Products /Total: All Solven	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2460900000	Misc Non-Indus: Consumer & Comm /Misc Products (Not Otherwise Covered) /Tota	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2461800000	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Total: All So	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2461800001	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Surface App	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2461800002	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Soil Incorpor	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2461870999	Misc Non-Industrial: Commercial /Pesticide Application: Non-Agricultural /Not Elsew	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2465800000	Misc Non-Indus: Consumer /Pesticide Application /Total: All Solvent Types	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2630020000	Wastewater Treatment /Public Owned /Total Processed	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2640000000	TSDFs /All TSDF Types /Total: All Processes	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2810025000	Charcoal Grilling - Residential /Total	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09005	2810050100	Cremation /Humans	POP_09005	190309.6	192559.2	1.0118	0.00	100.00	1.0118	
09007	2302002100	Food & Kindred Products /Commercial Cooking - Charbroiling /Conveyorized Charb	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	

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Area Source Growth Factors for Connecticut

Base Year 2011
Future Year 2017

FIPS	SCC	SCC SHORT NAME	Growth_Code	Base Year Raw Data	Future Year Raw Data	Growth Factor Future/Base	Low-End Cap	High-End Cap	"Capped" Growth Factor	SRA Comments
09007	2302002200	Food & Kindred Products /Commercial Cooking - Charbroiling /Under-fired Charbroi	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2302003000	Food & Kindred Products /Commercial Cooking - Frying /Deep Fat Fying	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2302003100	Food & Kindred Products /Commercial Cooking - Frying /Flat Griddle Frying	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2302003200	Food & Kindred Products /Commercial Cooking - Frying /Clamshell Griddle Frying	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2401001000	Surface Coating /Architectural Coatings /Total: All Solvent Types	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2401002000	Surface Coating /Architectural Coatings - Solvent-based /Total: All Solvent Types	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2401003000	Surface Coating /Architectural Coatings - Water-based /Total: All Solvent Types	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2401100000	Surface Coating /Industrial Maintenance Coatings /Total: All Solvent Types	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2401200000	Surface Coating /Other Special Purpose Coatings /Total: All Solvent Types	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2425000000	Graphic Arts /All Processes /Total: All Solvent Types	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2425010000	Graphic Arts /Lithography /Total: All Solvent Types	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2425020000	Graphic Arts /Letterpress /Total: All Solvent Types	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2425030000	Graphic Arts /Rotogravure /Total: All Solvent Types	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2425040000	Graphic Arts /Flexography /Total: All Solvent Types	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2440020000	Misc Industrial /Adhesive (Industrial) Application /Total: All Solvent Types	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2460000000	Misc Non-Indus: Consumer & Comm /All Processes /Total: All Solvent Types	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2460100000	Misc Non-Indus: Consumer & Comm /All Personal Care Products /Total: All Solvent	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2460200000	Misc Non-Indus: Consumer & Comm /All Household Products /Total: All Solvent Ty	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2460400000	Misc Non-Indus: Consumer & Comm /All Auto Aftermarket Products /Total: All Solv	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2460500000	Misc Non-Indus: Consumer & Comm /All Coatings & Related Products /Total: All So	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2460600000	Misc Non-Indus: Consumer & Comm /All Adhesives & Sealants /Total: All Solvent T	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2460800000	Misc Non-Indus: Consumer & Comm /All FIFRA Related Products /Total: All Solven	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2460900000	Misc Non-Indus: Consumer & Comm /Misc Products (Not Otherwise Covered) /Tota	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2461800000	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Total: All So	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2461800001	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Surface App	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2461800002	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Soil Incorpo	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2461870999	Misc Non-Industrial: Commercial /Pesticide Application: Non-Agricultural /Not Elsew	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2465800000	Misc Non-Indus: Consumer /Pesticide Application /Total: All Solvent Types	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2630020000	Wastewater Treatment /Public Owned /Total Processed	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2640000000	TSDFs /All TSDF Types /Total: All Processes	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2810025000	Charcoal Grilling - Residential /Total	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09007	2810060100	Cremation /Humans	POP_09007	166324.2	169507	1.0191	0.00	100.00	1.0191	
09009	2302002100	Food & Kindred Products /Commercial Cooking - Charbroiling /Conveyorized Charb	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2302002200	Food & Kindred Products /Commercial Cooking - Charbroiling /Under-fired Charbroi	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2302003000	Food & Kindred Products /Commercial Cooking - Frying /Deep Fat Fying	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2302003100	Food & Kindred Products /Commercial Cooking - Frying /Flat Griddle Frying	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2302003200	Food & Kindred Products /Commercial Cooking - Frying /Clamshell Griddle Frying	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2401001000	Surface Coating /Architectural Coatings /Total: All Solvent Types	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2401002000	Surface Coating /Architectural Coatings - Solvent-based /Total: All Solvent Types	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2401003000	Surface Coating /Architectural Coatings - Water-based /Total: All Solvent Types	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2401100000	Surface Coating /Industrial Maintenance Coatings /Total: All Solvent Types	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2401200000	Surface Coating /Other Special Purpose Coatings /Total: All Solvent Types	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2425000000	Graphic Arts /All Processes /Total: All Solvent Types	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2425010000	Graphic Arts /Lithography /Total: All Solvent Types	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2425020000	Graphic Arts /Letterpress /Total: All Solvent Types	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2425030000	Graphic Arts /Rotogravure /Total: All Solvent Types	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2425040000	Graphic Arts /Flexography /Total: All Solvent Types	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2440020000	Misc Industrial /Adhesive (Industrial) Application /Total: All Solvent Types	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2460000000	Misc Non-Indus: Consumer & Comm /All Processes /Total: All Solvent Types	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2460100000	Misc Non-Indus: Consumer & Comm /All Personal Care Products /Total: All Solvent	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2460200000	Misc Non-Indus: Consumer & Comm /All Household Products /Total: All Solvent Ty	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2460400000	Misc Non-Indus: Consumer & Comm /All Auto Aftermarket Products /Total: All Solv	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2460500000	Misc Non-Indus: Consumer & Comm /All Coatings & Related Products /Total: All So	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2460600000	Misc Non-Indus: Consumer & Comm /All Adhesives & Sealants /Total: All Solvent T	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2460800000	Misc Non-Indus: Consumer & Comm /All FIFRA Related Products /Total: All Solven	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2460900000	Misc Non-Indus: Consumer & Comm /Misc Products (Not Otherwise Covered) /Tota	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2461800000	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Total: All So	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	

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Area Source Growth Factors for Connecticut

Base Year 2011
Future Year 2017

FIPS	SCC	SCC SHORT NAME	Growth_Code	Base Year Raw Data	Future Year Raw Data	Growth Factor Future/Base	Low-End Cap	High-End Cap	"Capped" Growth Factor	SRA Comments
09009	2461800001	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Surface App	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2461800002	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Soil Incorpo	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2461870999	Misc Non-Industrial: Commercial /Pesticide Application: Non-Agricultural /Not Elsew	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2465800000	Misc Non-Indus: Consumer /Pesticide Application /Total: All Solvent Types	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2630020000	Wastewater Treatment /Public Owned /Total Processed	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2640000000	TSDFs /All TSDF Types /Total: All Processes	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2810025000	Charcoal Grilling - Residential /Total	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09009	2810060100	Cremation /Humans	POP_09009	866666	888230	1.0249	0.00	100.00	1.0249	
09011	2302002100	Food & Kindred Products /Commercial Cooking - Charbroiling /Conveyorized Charb	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2302002200	Food & Kindred Products /Commercial Cooking - Charbroiling /Under-fired Charbroi	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2302003000	Food & Kindred Products /Commercial Cooking - Frying /Deep Fat Fying	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2302003100	Food & Kindred Products /Commercial Cooking - Frying /Flat Griddle Frying	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2302003200	Food & Kindred Products /Commercial Cooking - Frying /Clamshell Griddle Frying	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2401001000	Surface Coating /Architectural Coatings /Total: All Solvent Types	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2401002000	Surface Coating /Architectural Coatings - Solvent-based /Total: All Solvent Types	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2401003000	Surface Coating /Architectural Coatings - Water-based /Total: All Solvent Types	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2401100000	Surface Coating /Industrial Maintenance Coatings /Total: All Solvent Types	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2401200000	Surface Coating /Other Special Purpose Coatings /Total: All Solvent Types	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2425000000	Graphic Arts /All Processes /Total: All Solvent Types	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2425010000	Graphic Arts /Lithography /Total: All Solvent Types	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2425020000	Graphic Arts /Letterpress /Total: All Solvent Types	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2425030000	Graphic Arts /Rotogravure /Total: All Solvent Types	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2425040000	Graphic Arts /Flexography /Total: All Solvent Types	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2440020000	Misc Industrial /Adhesive (Industrial) Application /Total: All Solvent Types	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2460000000	Misc Non-Indus: Consumer & Comm /All Processes /Total: All Solvent Types	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2460100000	Misc Non-Indus: Consumer & Comm /All Personal Care Products /Total: All Solvent	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2460200000	Misc Non-Indus: Consumer & Comm /All Household Products /Total: All Solvent Ty	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2460400000	Misc Non-Indus: Consumer & Comm /All Auto Aftermarket Products /Total: All Solv	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2460500000	Misc Non-Indus: Consumer & Comm /All Coatings & Related Products /Total: All Sc	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2460600000	Misc Non-Indus: Consumer & Comm /All Adhesives & Sealants /Total: All Solvent T	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2460800000	Misc Non-Indus: Consumer & Comm /All FIFRA Related Products /Total: All Solven	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2460900000	Misc Non-Indus: Consumer & Comm /Misc Products (Not Otherwise Covered) /Tota	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2461800000	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Total: All So	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2461800001	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Surface App	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2461800002	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Soil Incorpo	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2461870999	Misc Non-Industrial: Commercial /Pesticide Application: Non-Agricultural /Not Elsew	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2465800000	Misc Non-Indus: Consumer /Pesticide Application /Total: All Solvent Types	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2630020000	Wastewater Treatment /Public Owned /Total Processed	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2640000000	TSDFs /All TSDF Types /Total: All Processes	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2810025000	Charcoal Grilling - Residential /Total	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09011	2810060100	Cremation /Humans	POP_09011	275195	281319	1.0223	0.00	100.00	1.0223	
09013	2302002100	Food & Kindred Products /Commercial Cooking - Charbroiling /Conveyorized Charb	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2302002200	Food & Kindred Products /Commercial Cooking - Charbroiling /Under-fired Charbroi	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2302003000	Food & Kindred Products /Commercial Cooking - Frying /Deep Fat Fying	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2302003100	Food & Kindred Products /Commercial Cooking - Frying /Flat Griddle Frying	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2302003200	Food & Kindred Products /Commercial Cooking - Frying /Clamshell Griddle Frying	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2401001000	Surface Coating /Architectural Coatings /Total: All Solvent Types	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2401002000	Surface Coating /Architectural Coatings - Solvent-based /Total: All Solvent Types	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2401003000	Surface Coating /Architectural Coatings - Water-based /Total: All Solvent Types	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2401100000	Surface Coating /Industrial Maintenance Coatings /Total: All Solvent Types	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2401200000	Surface Coating /Other Special Purpose Coatings /Total: All Solvent Types	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2425000000	Graphic Arts /All Processes /Total: All Solvent Types	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2425010000	Graphic Arts /Lithography /Total: All Solvent Types	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2425020000	Graphic Arts /Letterpress /Total: All Solvent Types	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2425030000	Graphic Arts /Rotogravure /Total: All Solvent Types	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2425040000	Graphic Arts /Flexography /Total: All Solvent Types	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2440020000	Misc Industrial /Adhesive (Industrial) Application /Total: All Solvent Types	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	

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Area Source Growth Factors for Connecticut

Base Year: 2011
Future Year: 2017

FIPS	SCC	SCC SHORT NAME	Growth_Code	Base Year Raw Data	Future Year Raw Data	Growth Factor Future/Base	Low-End Cap	High-End Cap	"Capped" Growth Factor	SRA Comments
09013	2460000000	Misc Non-Indus: Consumer & Comm /All Processes /Total: All Solvent Types	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2460100000	Misc Non-Indus: Consumer & Comm /All Personal Care Products /Total: All Solvent	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2460200000	Misc Non-Indus: Consumer & Comm /All Household Products /Total: All Solvent Ty	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2460400000	Misc Non-Indus: Consumer & Comm /All Auto Aftermarket Products /Total: All Solv	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2460500000	Misc Non-Indus: Consumer & Comm /All Coatings & Related Products /Total: All So	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2460600000	Misc Non-Indus: Consumer & Comm /All Adhesives & Sealants /Total: All Solvent T	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2460800000	Misc Non-Indus: Consumer & Comm /All FIFRA Related Products /Total: All Solven	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2460900000	Misc Non-Indus: Consumer & Comm /Misc Products (Not Otherwise Covered) /Tota	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2461800000	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Total: All So	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2461800001	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Surface App	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2461800002	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Soil Incorpo	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2461870999	Misc Non-Industrial: Commercial /Pesticide Application: Non-Agricultural /Not Elsew	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2465800000	Misc Non-Indus: Consumer /Pesticide Application /Total: All Solvent Types	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2630020000	Wastewater Treatment /Public Owned /Total Processed	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2640000000	TSDFs /All TSDF Types /Total: All Processes	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2810025000	Charcoal Grilling - Residential /Total	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09013	2810060100	Cremation /Humans	POP_09013	153409.6	156996.8	1.0234	0.00	100.00	1.0234	
09015	2302002100	Food & Kindred Products /Commercial Cooking - Charbroiling /Conveyorized Charb	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2302002200	Food & Kindred Products /Commercial Cooking - Charbroiling /Under-fired Charbroi	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2302003000	Food & Kindred Products /Commercial Cooking - Frying /Deep Fat Fying	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2302003100	Food & Kindred Products /Commercial Cooking - Frying /Flat Griddle Frying	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2302003200	Food & Kindred Products /Commercial Cooking - Frying /Clamshell Griddle Frying	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2401001000	Surface Coating /Architectural Coatings /Total: All Solvent Types	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2401002000	Surface Coating /Architectural Coatings - Solvent-based /Total: All Solvent Types	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2401003000	Surface Coating /Architectural Coatings - Water-based /Total: All Solvent Types	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2401100000	Surface Coating /Industrial Maintenance Coatings /Total: All Solvent Types	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2401200000	Surface Coating /Other Special Purpose Coatings /Total: All Solvent Types	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2425000000	Graphic Arts /All Processes /Total: All Solvent Types	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2425010000	Graphic Arts /Lithography /Total: All Solvent Types	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2425020000	Graphic Arts /Letterpress /Total: All Solvent Types	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2425030000	Graphic Arts /Rotogravure /Total: All Solvent Types	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2425040000	Graphic Arts /Flexography /Total: All Solvent Types	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2440020000	Misc Industrial /Adhesive (Industrial) Application /Total: All Solvent Types	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2460000000	Misc Non-Indus: Consumer & Comm /All Processes /Total: All Solvent Types	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2460100000	Misc Non-Indus: Consumer & Comm /All Personal Care Products /Total: All Solvent	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2460200000	Misc Non-Indus: Consumer & Comm /All Household Products /Total: All Solvent Ty	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2460400000	Misc Non-Indus: Consumer & Comm /All Auto Aftermarket Products /Total: All Solv	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2460500000	Misc Non-Indus: Consumer & Comm /All Coatings & Related Products /Total: All So	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2460600000	Misc Non-Indus: Consumer & Comm /All Adhesives & Sealants /Total: All Solvent T	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2460800000	Misc Non-Indus: Consumer & Comm /All FIFRA Related Products /Total: All Solven	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2460900000	Misc Non-Indus: Consumer & Comm /Misc Products (Not Otherwise Covered) /Tota	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2461800000	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Total: All So	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2461800001	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Surface App	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2461800002	Misc Non-Industrial: Commercial /Pesticide Application: All Processes /Soil Incorpo	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2461870999	Misc Non-Industrial: Commercial /Pesticide Application: Non-Agricultural /Not Elsew	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2465800000	Misc Non-Indus: Consumer /Pesticide Application /Total: All Solvent Types	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2630020000	Wastewater Treatment /Public Owned /Total Processed	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2640000000	TSDFs /All TSDF Types /Total: All Processes	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2810025000	Charcoal Grilling - Residential /Total	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	
09015	2810060100	Cremation /Humans	POP_09015	119358.8	124203.6	1.0406	0.00	100.00	1.0406	

Comparison of CT 2011 & 2017 Inventories to EPA's NEIv2 "eh" Inventories and to RFP Target Levels

Sources:

1.EPA 2011 and 2017 eh
compiled from : "2017eh_county_monthly_report.xls" and "2011_county_monthly_report"
found at : ftp://ftp.epa.gov/EmisInventory/2011v6/v2platform/reports/
2. State of Connecticut PEI 2011

Purpose: To evaluate if the emissions reductions projected to occur between 2011 and 2017 in the Greater Connecticut Area are sufficent to meet RFP requirements.

Methods:

1. PEI daily by scc emissions were summed for each sector presented on tab 2. SCCs were assigned to, and thereby summed for sectors, according to EPA's data category for each SCC.
2a. Where growth and control was not adjusted from EPA's eh modeling platform a ratio of EPA 2011 /2017 emissions for that sector was applied to the 2011 PEI sum to grow and control PEI daily emissions to 2017.
2b. Where better data has since been obtained growth and control factors have been noted.
3. We then compared the "expected future year" emissions to the RFP targets. DEEP chose to achieve the RFP through 15% with a 10% NOX and 5% VOC reduction.

EPA "eh" Inventory for Greater CT			nonpoint agfire	beis beis	nonpoint c1c2rail	c3marine c3marine	nonpoint nonpt	nonroad nonroad	onroad onroad	point pt_oilgas	point ptegu	point MWC*	point ptnonipm	fires Perscribed	fires ptwildfire3D	nonpoint rwc	Anthropogenic Total
NOX	2011	May (tons)	0	42.1489	107.8240339	22.45353662	437.759621	445.1081	1382.694866	1.72239394	116.8216215		77.23174704	0	4.448042521	3.940820276	
		June (tons)	0.33192348	45.4947	104.3458393	21.98179203	140.4688383	591.6566695	1378.037656	1.62653335	251.4567789		79.1625251	0	0.254427737	1.069202757	
		July (tons)	0	53.4053	107.8240339	23.49793542	144.0241221	586.2823878	1419.953722	1.68075113	391.2033171		81.76851881	0	0.198853347	1.322763843	
		August (tons)	0.27874894	48.5741	107.8240339	23.75891722	145.1994425	588.3162923	1443.519968	1.68075113	264.8327038		81.80208385	0	0.083549287	1.060367305	
		September (tons)	0.45336457	40.2643	104.3458393	23.75891722	386.9676419	459.0396991	1316.536125	1.6291717	322.7725096		78.44499203	0	0.051300756	1.515564039	
		Average Summer Day (tons/day)	0.00695449	1.72275161	3.478194643	0.757997917	4.645939422	18.91233509	45.80495877	0.05421778	7.794965951	4.82449589	2.637694155	0	0.006414624	0.042669801	88.9604239
	2017	May (tons)	0	42.1489	92.10900731	23.33790074	427.3173115	292.5625856	695.0110463	1.50255257	28.8456657		77.93634409	0	4.448042521	4.25596917	
		June (tons)	0.33192348	45.4947	89.13774901	22.84774418	140.8185313	410.7081659	707.6205441	1.41875245	42.67823787		79.99632483	0	0.254427737	1.1354771	
		July (tons)	0	53.4053	92.10900731	24.42348319	144.3715369	414.7610124	712.8292705	1.46604419	60.96873045		82.62619769	0	0.198853347	1.404775248	
		August (tons)	0.27874894	48.5741	92.10900731	24.69476091	145.5613918	407.7980864	723.8237251	1.46604419	46.00694616		82.66378475	0	0.083549287	1.126115941	
		September (tons)	0.45336457	40.2643	89.13774901	22.32237107	378.2043601	300.2592232	657.7795087	1.42137406	52.81994103		79.2793431	0	0.051300756	1.614925965	
		Average Summer Day (tons/day)	0.00695449	1.72275161	2.9712583	0.787854297	4.65714635	13.3793875	22.9944926	0.04729175	1.96673324		2.665361216	0	0.006414624	0.045315331	54.34629096
		% Difference	0.0%	0.0%	-14.6%	3.9%	0.2%	-29.3%	-49.8%	-12.8%	-74.8%	-100.0%	1.0%	0.0%	0.0%	6.2%	-38.91%
VOC	2011	May (tons)	0	4762.89792	3.120571328	0.809068272	1251.38067	636.579273	749.0715529	0.40614635	7.356234506		29.66967697	0	44.66201414	46.81045718	
		June (tons)	0.47622811	7734.9708	3.019907736	0.792076589	1223.730354	1046.250521	731.2263539	0.39001101	8.563663531		29.72981167	0	3.124711057	11.10955549	
		July (tons)	0	12605.8254	3.120571328	0.8467015	1264.564192	1171.24173	778.1796702	0.40301138	10.29538209		30.71483931	0	2.352628846	11.73288271	
		August (tons)	0.39994147	8299.69339	3.120571328	0.856108952	1264.529405	1053.790297	763.7509637	0.40301138	9.445668745		30.72077537	0	0.930078209	10.08007011	
		September (tons)	0.67642653	4813.44995	3.019907736	0.773865309	1227.017265	640.6445995	713.8392666	0.39017017	8.886374885		29.3881797	0	0.562644257	16.28160893	
		Average Summer Day (tons/day)	0.01014769	406.63953	0.100663591	0.027312952	40.7923933	37.78199127	25.10257001	0.01300037	0.269329039	0.06278006	0.990801268	0	0.075891253	0.378480087	105.5294696
	2017	May (tons)	0	4762.89792	2.747478519	1.053617619	1241.516176	433.467441	461.8712709	0.40609407	2.259791344		30.21898874	0	44.66201414	46.43558646	
		June (tons)	0.47622811	7734.9708	2.658850179	1.031488616	1209.193949	692.3380252	455.4377078	0.38996101	3.072846972		30.28624173	0	3.124711057	11.79722163	
		July (tons)	0	12605.8254	2.747478519	1.102626587	1249.449443	764.7056225	484.4773154	0.40295971	4.376906816		31.28897028	0	2.352628846	12.46032474	
		August (tons)	0.39994147	8299.69339	2.747478519	1.11487712	1249.503686	696.4179763	471.9996678	0.40295971	3.806058632		31.29574078	0	0.930078209	10.70502599	
		September (tons)	0.67642653	4813.44995	2.658850179	1.0077746	1218.766601	435.8900328	440.6384152	0.39011895	3.685573549		29.9445004	0	0.562644257	17.03313889	
		Average Summer Day (tons/day)	0.01014769	406.63953	0.088628339	0.0355686	40.30482075	24.6679233	15.6283005	0.0129987	0.141190542		1.009321622	0	0.075891253	0.401945959	82.36362606
		% Difference	0.0%	0.0%	-12.0%	30.2%	-1.2%	-34.7%	-37.7%	0.0%	-47.6%	-100.0%	1.9%	0.0%	0.0%	6.2%	-21.95%

Greater Connecticuts 2011 PEI & 2017 Target Values			nonpoint agfire	beis beis	nonpoint c1c2rail	nonpoint C3marine	nonpoint Landfills	Nonpoint Stage II	nonpoint nonpt	nonroad NONROAD	onroad onroad	point pt_oilgas	point ptegu	point mwc	point ptnonipm	point mobile	fires Perscribed	fires ptwildfire3D	nonpoint rwc	Offset Bank	Total
NOX	2011	Average Summer Day**	0.000000		3.478195	0.704500	0.000000	0.000000	6.156000	19.115751	50.490306	0.136495	1.980242	5.162510	2.688695	1.245412	0.000000	0.007757	0.015470	0.700000	91.873575
	2017	**Expected Value With EPA Growth and Control**	0.000000		2.971258	0.732249		0.000000	6.170850	13.523292	25.346578	0.119058	0.499631	0.000000	2.716897	1.258475	0.000000	0.007757	0.016429		53.354718
	2017	**Expected Value with Connecticut Growth and Control Revisions****	0.000000		2.971258	0.732249		0.000000	6.170850	12.500000	22.173905	0.119058	1.8466	5.162510	2.716897	1.258475		0.007757	0.016429	0.700000	56.368232
		Target Value																			82.686218
VOC	2011	Average Summer Day**	0		0.119212042	0.025385357	0.48	0.750338341	47.56798906	27.6812191	27.825893	0.016644159	0.355339406	0.07404489	0.830868139	0.306625	0	0.0826468	0.112453024		106.146011
	2017	**Expected Value With EPA Growth and Control**	0.0000		0.1050	0.0331		N/A	46.9994	18.0731	17.3238	0.0166	0.1863	0.0000	0.8464	0.3124	0.0000	0.0826	0.1194		84.015444
	2017	**Expected Value with Connecticut Growth and Control Revisions****			0.1050	0.0331	0.4800	0.7503	46.9994	19.0000	15.8651	0.0166	0.0074	0.0740	0.8464	0.3124			0.1194		84.100760
		Target Value																			100.838711

Sectors below are compiled of SCC's as Connecticut would categorize them						
Greater CT	2011 Base RFP Inventory					
	Stationary F	Stationary Area	On Road	Non Road	Offsets	Total
NOX	10.0	6.2	50.5	24.5	0.7	91.9
VOC	1.3	48.9	27.8	28.1		106.1

Sectors below are compiled of SCC's as Connecticut would categorize them						
Greater CT	2017 Base RFP Inventory					
	Stationary F	Stationary Area	On Road	Non Road	Offsets	Total
NOX	9.8	6.187279	22.2	17.4620	0.7	56.4
VOC	0.9	48.3	15.9	19.5		84.6

Notes:
*MWC total was derived by summing the SCC for the MWCs in greater Connecticut (and ReEnergy Sterling) from EPA's report "ftp://ftp.epa.gov/EmisInventory/2011v6/v2platform/reports/2011eh_2017eh_ptegu_unit_comparison.xlsx" and dividing by 365 since MWC in CT typically operate consistently through out the year. This total for the greater CT area was also subtracted from the EGU total presented in the "eh" tables at the top of this page.

**Some revisions to the PEI were needed for RFP. Railroad emissions were replaced with EPA values, Summer day airport emissions were corrected, Landfill emissions accidently omited were added and Mobile sources were updated with MOVES 2014a. These are noted in detail in appendix B.

***Connecticut used the EPA growth and control for area sources as they were contistent with MARAMA/Connecticut approach having accepted the submitted comments to the inventory (see elsewhere in appendix C for detailed area factors). For EGU sector ERTAC was used rather than IPM for growth and control, with the exception of MWCs. Connecticut flatlined MWC growth and controls will be applied too late for the 2017 ozone season. On Road and Non-Road growth and control was updated to reflect 2014a inputs described in appendix B.

Appendix F

Connecticut Department of Transportation

2015 Statewide Transportation Improvement Program Project List

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
10	125	0042-0319		X6	TRAIL	EAST HARTFORD	CONSTRUCTION OF HOCKANUM RIVER PARK TRAIL - PHASE 3	CON	2017	701	475	0	226
10	125	0165-0468		X7	CT-20 AT CT-75	WINDSOR LOCKS	REALIGN CT 20 OFF-RAMP TO CT 75	ROW	2017	50	50	0	0
									2017 Total	751	525	0	226
10	125	0165-0468		X7	CT-20 AT CT-75	WINDSOR LOCKS	REALIGN CT 20 OFF-RAMP TO CT 75	CON	2018	425	425	0	0
									2018 Total	425	425	0	0
05	129	0110-0132		X6	FALL MOUNTAIN WATER ROAD	PLYMOUTH	RECONSTRUCT A 780' SECTION	ROW	2015	50	50	0	0
04	129	0143-0189		X6		TORRINGTON	MAIN ST GATEWAY IMPROVEMENTS AT CENTER BRIDGE	PE	2015	25	25	0	0
									2015 Total	75	75	0	0
03	129	0143-0189		X6		TORRINGTON	MAIN ST GATEWAY IMPROVEMENTS AT CENTER BRIDGE	CON	2016	312	200	0	112
									2016 Total	312	200	0	112
05	129	0110-0132		X6	FALL MOUNTAIN WATER ROAD	PLYMOUTH	RECONSTRUCT A 780' SECTION	CON	2017	760	360	0	400
01	129	0135-0301		X6	ATLANTIC STREET	STAMFORD	ATLANTIC ST RR BRIDGE OVERPASS	CON	2017	245	245	0	0
									2017 Total	1,005	605	0	400
08	330	0092-0674	0092-TMP1	X6	HARBOR	NEW HAVEN	PARCEL G AND H - HARBOR ACCESS - PHASE 2	CON	2015	775	775	0	0
									2015 Total	775	775	0	0
78	5337	0300-0149		X6	NHL-ML	VARIOUS	NHL - POSITIVE TRAIN CONTROL (INCLUDING WATERBURY BRANCH)	ALL	2015	28,000	22,400	5,600	0
78	5337	0300-XXXX		X6	NHL-ML	VARIOUS	NEW HAVEN LINE TRACK PROGRAM	CON	2015	15,000	12,000	3,000	0
78	5337	0300-XXXX		X6	NHL-ML	VARIOUS	NHL - SIGNAL SYSTEM REPLACEMENT	CON	2015	35,000	28,000	7,000	0
									2015 Total	78,000	62,400	15,600	0
78	5337	0300-0149		X6	NHL-ML	VARIOUS	NHL - POSITIVE TRAIN CONTROL (INCLUDING WATERBURY BRANCH)	ALL	2016	35,000	28,000	7,000	0
78	5337	0300-XXXX		X6	NHL-ML	VARIOUS	NEW HAVEN LINE TRACK PROGRAM	CON	2016	15,000	12,000	3,000	0
10	5337	0400-XXXX		X6	CTTRANSIT	VARIOUS	REHAB CTTRANSIT HARTFORD FACILITY & PARK & RIDE LOTS FY 16	ALL	2016	1,562	1,250	312	0
									2016 Total	51,562	41,250	10,312	0
78	5337	0300-0149		X6	NHL-ML	VARIOUS	NHL - POSITIVE TRAIN CONTROL (INCLUDING WATERBURY BRANCH)	ALL	2017	42,000	33,600	8,400	0
78	5337	0300-XXXX		X6	NHL-ML	VARIOUS	NEW HAVEN LINE TRACK PROGRAM	CON	2017	25,000	20,000	5,000	0
01	5337	0301-0040		X6	NHL-ML	WESTPORT/STAMFORD	NHL-ML CONSTRUCT WALK, SAGA, EAST AVE, OSBORNE AVE BRIDGES	CON	2017	40,000	32,000	8,000	0
01	5337	0301-0040		X6	NHL-ML	WESTPORT/STAMFORD	NHL-ML CONSTRUCT WALK, SAGA, EAST AVE, OSBORNE AVE BRIDGES	CON	2017	100,000	80,000	20,000	0
									2017 Total	207,000	165,600	41,400	0
78	5337	0300-0149		X6	NHL-ML	VARIOUS	NHL - POSITIVE TRAIN CONTROL (INCLUDING WATERBURY BRANCH)	ALL	2018	42,000	33,600	8,400	0
78	5337	0300-XXXX		X6	NHL-ML	VARIOUS	NEW HAVEN LINE TRACK PROGRAM	CON	2018	25,000	20,000	5,000	0
01	5337	0301-0040		X6	NHL-ML	WESTPORT/STAMFORD	NHL-ML CONSTRUCT WALK, SAGA, EAST AVE, OSBORNE AVE BRIDGES	CON	2018	120,000	96,000	24,000	0
01	5337	0301-0040		X6	NHL-ML	WESTPORT/STAMFORD	NHL-ML CONSTRUCT WALK, SAGA, EAST AVE, OSBORNE AVE BRIDGES	CON	2018	104,260	104,000	260	0
01	5337	0301-0181	0301-0176	X6	NHL - ML	NORWALK	NHL-ML - INTERLOCKING AT CP 243	CON	2018	5,000	4,000	1,000	0
									2018 Total	296,260	257,600	38,660	0
70	5307C	0170-TXXX		X6	VARIOUS	STATEWIDE	TRANSIT CAPITAL PLANNING FY 15	OTH	2015	400	320	80	0
07	5307C	0410-0078		X6	GBTA	BRIDGEPORT	GBTA - REPLACEMENT OF 24 PARATRANSIT VEHICLES	OTH	2015	2,389	1,911	478	0
79	5307C	0400-XXXX		X6	CTTRANSIT	VARIOUS	CTTRANSIT SYSTEMWIDE ADMIN CAPT/SCV REPLACEMENT FY 15	OTH	2015	1,000	800	200	0
79	5307C	0400-XXXX		X6	CTTRANSIT	VARIOUS	CTTRANSIT SYSTEMWIDE BUS REPLACEMENTS FY 15	ACQ	2015	36,000	28,800	7,200	0
07	5307C	0410-XXXX		X6	GBTA	BRIDGEPORT	GBTA - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 15	OTH	2015	655	524	131	0
01	5307C	0412-XXXX		X6	NORWALK TD	NORWALK	NORWALK TD-REPLACE PARATRANSIT VEHICLES - FY 2015	ACQ	2015	810	648	162	0
01	5307C	0412-0144		X6	NORWALK TD	NORWAL	NORWALK TD - FACILITY IMPROVEMENTS/REPAIRS (SGR) FY 15	CON	2015	150	120	30	0
01	5307C	0412-0144	0412-XXXX	X6	NORWALK TD	NORWALK	NORWALK TD- ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 15	OTH	2015	1,402	1,122	280	0
01	5307C	0412-XXXX		X6	NORWALK	NORWALK	NORWALK TD-REPLACE 19 2003 35-FT & 1 2003 40-FT BUSES FY 15	ACQ	2015	10,247	8,197	2,049	0
13	5307C	0414-0061		X6	SEAT	NORWICH	SEAT - REPLACE 5 PARATRANSIT VEHS FY 15	OTH	2015	336	269	67	0
13	5307C	0414-0061		X6	SEAT	NORWICH	SEAT - REPLACE 3 SUPPORT VEHS FY 15	OTH	2015	120	96	24	0
13	5307C	0414-0061		X6	SEAT	NORWICH	SEAT - REPLACE BUS WASH & UPGRADE FUELING SYSTEM FY 15	OTH	2015	461	368	92	0
13	5307C	0414-0061		X6	SEAT	NORWICH	SEAT - BUS ENGINE OVERHAUL FY 15	OTH	2015	138	110	28	0
13	5307C	0414-0061		X6	SEAT	NORWICH	SEAT - ADMINISTRATIVE CAPITAL/MISC SUPPORT EQUIPMENT FY 15	OTH	2015	201	161	40	0
02	5307C	0416-XXXX		X6	HART	DANBURY	HART - ADMIN CAPITAL/SUPPORT &SCV PROGRAM FY 15	OTH	2015	130	104	26	0
02	5307C	0416-XXXX		X6	HART	DANBURY	HART-REPLACE PARATRANSIT VEHICLES	ACQ	2015	370	296	74	0
02	5307C	0416-XXXX		X6	HART	DANBURY	HART-REPLACEMENT BUSES FY 15	ACQ	2015	2,250	1,800	450	0
11	5307C	0422-0043		X6	MIDDLETOWN TD	MIDDLETOWN	MAT- REPLACEMENT BUSES FY 15	OTH	2015	1,300	1,040	260	0
11	5307C	0422-0056		X6	MIDDLETOWN TD	MIDDLETOWN	MAT - ADMINISTRATIVE CAPITAL/MISC. SUPPORT FFY '15	OTH	2015	200	160	40	0
08	5307C	0424-0026	0424-AXXX	X6	MILFORD TD	MILFORD	MILFORD TD - BUS REPLACEMENTS FY 15	ACQ	2015	1,350	1,080	270	0
08	5307C	0424-0072		X6		MILFORD	PROVIDE FUNDING FOR THE NECESSARY FACILITY IMPROVEMENTS AND REPAIRS.	ALL	2015	50	40	10	0
08	5307C	0424-AXXX		X6	MILFORD TD	MILFORD	MILFORD TD- ADMIN CAPITAL/SUPPORT EQUIP & SCV FY 15	OTH	2015	225	180	45	0
10	5307C	0426-0056	0426-XXXX	X6	GHTD	HARTFORD	GHTD-NEW PARATRANSIT FACILITY	CON	2015	20,000	16,000	4,000	0
10	5307C	0426-0066		X6	GHTD	HARTFORD	GHTD - UNION STATION MASTER TRANSPORTATION PLAN DEVELOPMENT - FY 15	OTH	2015	250	200	50	0
10	5307C	0426-0066	0426-XXXX	X6	GHTD	HARTFORD	GHTD - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 15	OTH	2015	200	160	40	0
10	5307C	0426-XXXX		X6	GHTD	HARTFORD	GHTD-NEW PARATRANSIT FACILITY - FY 15	CON	2015	5,000	4,000	1,000	0
08	5307C	0427-AXXX		X6	GNH TD	NEW HAVEN	GNHTD - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 15	OTH	2015	665	532	133	0
08	5307C	0427-PXXXX		X6	GNHTD	NEW HAVEN	GNHTD - REPLACE PARATRANSIT VEHICLES - FY 15	ACQ	2015	1,185	948	237	0
05	5307C	0430-XXXX		X6	CTTRANSIT	WATERBURY	CDOT/WATERBURY - WATERBURY BUS MAINTENANCE FACILITY FY 15	CON	2015	35,000	28,000	7,000	0
									2015 Total	122,483	97,987	24,496	0
06	5307C	0036-0186		X6	NVCOG/VALLEY TD	DERBY	NVCOG/VTD-FACILITY EXPANSION AND REHABILITATION FFY '16 ADDITIONAL FUNDING	CON	2016	3,000	2,400	600	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
06	5307C	0036-0200		X6	NVCOG/VALLEY TD	DERBY	NVCOG/VTD -REPLACE 14 PARATRANSIT VEHICLES FFY '16	ACQ	2016	1,200	960	240	0
70	5307C	0170-TXXX		X6	VARIOUS	STATEWIDE	TRANSIT CAPITAL PLANNING	OTH	2016	400	320	80	0
78	5307C	0300-XXXX		X6	NHL-ML	VARIOUS	NHL TRACK PROGRAM FY 16	CON	2016	15,000	12,000	3,000	0
79	5307C	0400-XXXX		X6	CTTRANSIT	VARIOUS	CTTRANSIT SYSTEMWIDE ADMIN CAPT/SCV REPLACEMENT	OTH	2016	800	640	160	0
79	5307C	0400-XXXX		X6	CTTRANSIT	VARIOUS	CTTRANSIT SYSTEMWIDE BUS REPLACEMENTS	ACQ	2016	45,000	36,000	9,000	0
07	5307C	0410-0079	0410-XXXX	X6	GBTA	BRIDGEPORT	GBTA - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 16	OTH	2016	552	442	110	0
07	5307C	0410-0082	0410-XXXX	X6	GBTA	BRIDGEPORT	GBTA - INTERMODAL CENTER IMPROVEMENT	ALL	2016	150	120	30	0
07	5307C	0410-0079	0410-XXXX	X6	GBTA	BRIDGEPORT	GBTA - BUS ADMIN MAINTENANCE FACILITY FY 16	ALL	2016	4,840	3,872	968	0
07	5307C	0410-0083		X6	GBTA	BRIDGEPORT	GBTA-MINI BUS HUB ON TRUMBULL AVE-FY 16	ALL	2016	60	48	12	0
01	5307C	0412-0149		X6	NORWALK	NORWALK	NORWALK TD- FACILITY IMPROVEMENTS/REPAIRS (SGR) FY2016	CON	2016	400	320	80	0
01	5307C	0412-0149	0412-0144	X6	NORWALK	NORWALK	NORWALK TD- ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 16	OTH	2016	200	160	40	0
01	5307C	0412-0149	0412-XXXX	X6	NORWALK	NORWALK	NORWALK TD - REPLACEMENT BUSES FY 16	ACQ	2016	1,300	1,040	260	0
01	5307C	0412-0149		X6	NORWALK	NORWALK	NORWALK TD- AVL/GPS ADD'L FUNDING FY2016	OTH	2016	800	640	160	0
13	5307C	0414-0062		X6	SEAT	NORWICH	SEAT-ENGINE REBUILDINGS FY16	OTH	2016	250	200	50	0
13	5307C	0414-TXXX		X6	SEAT	NORWICH	SEAT - REPLACEMENT BUSES FY 16	ACQ	2016	1,320	1,056	264	0
02	5307C	0416-XXXX		X6	HART	DANBURY	HART - ADMIN CAPITAL/SUPPORT &SCV PROGRAM FY 16	OTH	2016	160	128	32	0
02	5307C	0416-XXXX		X6	HART	DANBURY	HART-REPLACE PARATRANSIT VEHICLES	ACQ	2016	432	346	86	0
11	5307C	0422-0043		X6	MIDDLETOWN TD	MIDDLETOWN	MAT- ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 16	OTH	2016	250	200	50	0
11	5307C	0422-0059		X6	MIDDLETOWN TD	MIDDLETOWN	MAT - FACILITY IMPROVEMENTS GARAGE AND TERMINAL FY 16	ALL	2016	650	520	130	0
08	5307C	0424-AXXX		X6	MILFORD TD	MILFORD	MILFORD TD- ADMIN CAPITAL/SUPPORT EQUIP & SCV FY 16	OTH	2016	400	320	80	0
08	5307C	0424-PXXX		X6	MILFORD TD	MILFORD	MILFORD TD-REPLACE PARATRANSIT VEHILCES - FY 16	ACQ	2016	205	164	41	0
10	5307C	0426-XXXX		X6	GHTD	HARTFORD	GHTD - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 16	OTH	2016	300	240	60	0
10	5307C	0426-0070	0426-XXXX	X6	GHTD	HARTFORD	GHTD - UNION STATION REPAIRS/IMPROVEMENTS - FY16	CON	2016	1,225	980	245	0
10	5307C	0426-XXXX		X6	GHTD	HARTFORD	GHTD-NEW PARATRANSIT FACILITY - FY 16	ALL	2016	2,300	1,840	460	0
10	5307C	0426-0070	0426-XXXX	X6	GHTD	HARTFORD	GHTD - PARATRANSIT VEHICLE REPLACEMENT PROGRAM FY 16	ACQ	2016	1,285	1,028	257	0
08	5307C	0427-0045	0427-NFXX	X6	GNHTD	NEW HAVEN	GNHTD - NEW ADMIN MAINTENANCE FACILITY	ALL	2016	9,200	7,360	1,840	0
08	5307C	0427-0063	0427-AXXX	X6	GNHTD	NEW HAVEN	GNHTD - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 16	OTH	2016	924	739	185	0
08	5307C	0427-0063	0427-PXXXX	X6	GNHTD	NEW HAVEN	GNHTD - REPLACE PARATRANSIT VEHICLES - FY 16	ACQ	2016	1,800	1,440	360	0
05	5307C	0430-XXXX		X6	CTTRANSIT	WATERBURY	CT TRANSIT/WATERBURY-REPLACE PARATRANSIT VEHICLES - FY 16	ACQ	2016	1,600	1,280	320	0
3,4	5307C	0472-XXXX		X6	NWCT TD	TORRINGTON	NWCT TD - NEW BUS MAINTENANCE FACILITY	ALL	2016	16,730	13,384	3,346	0
									2016 Total	112,733	90,186	22,547	0
70	5307C	0170-TXXX		X6	VARIOUS	STATEWIDE	TRANSIT CAPITAL PLANNING	OTH	2017	400	320	80	0
78	5307C	0300-XXXX		X6	NHL-ML	VARIOUS	NHL TRACK PROGRAM FY 17	CON	2017	5,000	4,000	1,000	0
79	5307C	0400-XXXX		X6	CTTRANSIT	VARIOUS	CTTRANSIT SYSTEMWIDE ADMIN CAPT/SCV REPLACEMENT	OTH	2017	1,500	1,200	300	0
79	5307C	0400-XXXX		X6	CTTRANSIT	VARIOUS	CTTRANSIT SYSTEMWIDE BUS REPLACEMENTS	ACQ	2017	30,000	24,000	6,000	0
07	5307C	0410-0049		X6	GBTA	BRIDGEPORT	GBTA - PARATRANSIT VEHICLE REPLACEMENT PROGRAM FY 17	OTH	2017	2,040	1,632	408	0
07	5307C	0410-XXXX		X6	GBTA	BRIDGEPORT	GBTA - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 17	OTH	2017	590	472	118	0
01	5307C	0412-0144	0412-XXXX	X6	NORWALK TD	NORWALK	NORWALK TD- ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 17	OTH	2017	430	344	86	0
01	5307C	0412-XXXX		X6	NORWALK TD	NORWALK	NORWALK TD-FACILITY IMPROVEMENTS	CON	2017	500	400	100	0
13	5307C	0414-TXXX		X6	SEAT	NORWICH	SEAT - FACILITY IMPROVEMENTS	OTH	2017	250	200	50	0
13	5307C	0414-XXXX		X6	SEAT	NORWICH	SEAT - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 17	OTH	2017	595	476	119	0
02	5307C	0416-XXXX		X6	HART	DANBURY	HART - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 17	OTH	2017	130	104	26	0
11	5307C	0422-0043		X6	MIDDLETOWN TD	MIDDLETOWN	MAT- FACILITY IMPROVEMENTS-TERMINAL	ALL	2017	500	400	100	0
08	5307C	0424-AXXX		X6	MILFORD TD	MILFORD	MILFORD TD- ADMIN CAPITAL/SUPPORT EQUIP & SCV FY 17	OTH	2017	275	220	55	0
08	5307C	0424-NFXX	0424-AXXX	X6	MILFORD TD	MILFORD	MILFORD TD-FACILITY IMPROVEMENTS	CON	2017	100	80	20	0
10	5307C	0426-XXXX		X6	GHTD	HARTFORD	GHTD - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 17	OTH	2017	500	400	100	0
10	5307C	0426-XXXX		X6	GHTD	HARTFORD	GHTD-UNION STATION REPAIRS/IMPROVEMENTS - FY 17	CON	2017	700	560	140	0
10	5307C	0426-XXXX		X6	GHTD	HARTFORD	GHTD - PARATRANSIT VEHICLE REPLACEMENT PROGRAM FY 17	ACQ	2017	2,964	2,371	593	0
08	5307C	0427-AXXX		X6	GNH TD	NEW HAVEN	GNHTD - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 17	OTH	2017	200	160	40	0
08	5307C	0427-PXXXX		X6	GNHTD	NEW HAVEN	GNHTD - REPLACE PARATRANSIT VEHICLES - FY 17	ACQ	2017	1,200	960	240	0
									2017 Total	47,874	38,299	9,575	0
70	5307C	0170-TXXX		X6	VARIOUS	STATEWIDE	TRANSIT CAPITAL PLANNING	OTH	2018	450	360	90	0
01	5307C	0301-0180	0301-XXXX	X6	NHL - ML	NORWALK	NHL-ML - DANBURY DOCK YARD IMPROVEMENTS	CON	2018	5,000	4,000	1,000	0
79	5307C	0400-XXXX		X6	CTTRANSIT	VARIOUS	CTTRANSIT SYSTEMWIDE ADMIN CAPT/SCV REPLACEMENT	OTH	2018	800	640	160	0
07	5307C	0410-XXXX		X6	GBTA	BRIDGEPORT	GBTA - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 18	OTH	2018	500	400	100	0
01	5307C	0412-0144	0412-XXXX	X6	NORWALK TD	NORWALK	NORWALK TD- ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 18	OTH	2018	245	196	49	0
01	5307C	0412-XXXX		X6	NORWALK TD	NORWALK	NORWALK TD-REPLACE PARATRANSIT VEHICLES - FY 2018	ACQ	2018	885	708	177	0
13	5307C	0414-TXXX		X6	SEAT	NORWICH	SEAT - REPLACEMENT BUSES	OTH	2018	4,775	3,820	955	0
02	5307C	0416-XXXX		X6	HART	DANBURY	HART - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 18	OTH	2018	130	104	26	0
02	5307C	0416-XXXX		X6	HART	DANBURY	HART-REPLACE PARATRANSIT VEHICLES	ACQ	2018	633	506	127	0
11	5307C	0422-0043		X6	MIDDLETOWN TD	MIDDLETOWN	MAT- ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 18	OTH	2018	100	80	20	0
11	5307C	0422-0043		X6	MIDDLETOWN TD	MIDDLETOWN	MAT- FACILITY IMPROVEMENTS-TERMINAL	OTH	2018	500	400	100	0
08	5307C	0424-AXXX		X6	MILFORD TD	MILFORD	MILFORD TD- ADMIN CAPITAL/SUPPORT EQUIP & SCV FY 18	OTH	2018	340	272	68	0
08	5307C	0424-PXXX		X6	MILFORD TD	MILFORD	MILFORD TD-REPLACE PARATRANSIT VEHILCES	ACQ	2018	420	336	84	0
10	5307C	0426-XXXX		X6	GHTD	HARTFORD	GHTD - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 18	OTH	2018	300	240	60	0
10	5307C	0426-XXXX		X6	GHTD	HARTFORD	GHTD-UNION STATION REPAIRS/IMPROVEMENTS - FY 18	CON	2018	1,000	800	200	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
10	5307C	0426-XXXX		X6	GHTD	HARTFORD	GHTD - PARATRANSIT VEHICLE REPLACEMENT PROGRAM FY 18	ACQ	2018	3,002	2,402	600	0
08	5307C	0427-AXXX		X6	GNH TD	NEW HAVEN	GNHTD - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 18	OTH	2018	200	160	40	0
08	5307C	0427-PXXXX		X6	GNHTD	NEW HAVEN	GNHTD - REPLACE PARATRANSIT VEHICLES - FY 18	ACQ	2018	1,220	976	244	0
05	5307C	0430-XXXX		X6	CTTRANSIT	WATERBURY	CT TRANSIT/WATERBURY-REPLACE PARATRANSIT VEHICLES - FY 18	ACQ	2018	1,700	1,360	340	0
									2018 Total	22,200	17,760	4,440	0
08	5307C	0427-0045	0427-NFXX	X6	GNHTD	NEW HAVEN	GNHTD - NEW ADMIN MAINTENANCE FACILITY - FY 2019	ALL	FYI	23,000	18,400	4,600	0
									FYI Total	23,000	18,400	4,600	0
10	5307O	0017-0180		X6	CCRPA	NEW BRITAIN	NEW BRITAIN - ADA OPERATING	OTH	2015	1,429	0	1,429	0
70	5307O	0170-XXXX		X6	VARIOUS	STATEWIDE	MUNICIPAL GRANT PROGRAM - FY 2015	OTH	2015	5,000	0	5,000	0
08	5307O	0400-0001	0402-XXXX	X6	CTTRANSIT	NEW HAVEN	CONNECTICUT TRANSIT - NEW HAVEN - FY2015	OTH	2015	26,759	0	26,759	0
10	5307O	0401-XXXX		X6	CTTRANSIT	HARTFORD	CONNECTICUT TRANSIT - HARTFORD - FY2015	OTH	2015	47,395	0	47,395	0
01	5307O	0403-XXXX		X6	CTTRANSIT	STAMFORD	CONNECTICUT TRANSIT - STAMFORD - FY2015	OTH	2015	9,731	0	9,731	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - SHELTON FLYER COMMUTER OPERATING - FY2015	OTH	2015	78	0	78	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - ROUTE 110 LOCAL OPERATING - FY2015	OTH	2015	221	0	221	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - COASTAL LINK OPERATING - FY2015	OTH	2015	244	0	244	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - ADA OPERATING - FY2015	OTH	2015	2,402	0	2,402	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - FIXED ROUTE - FY2015	OTH	2015	10,313	0	10,313	0
01	5307O	0412-0118		X6	NORWALK TD	NORWALK	NORWALK TD - FIXED ROUTE - FY2015	OTH	2015	5,111	0	5,111	0
01	5307O	0412-0119		X6	NORWALK TD	WESTPORT	NORWALK TD - WESTPORT - FIXED ROUTE - FY2015	OTH	2015	588	0	588	0
01	5307O	0412-0122		X6	NORWALK TD	NORWALK	NORWALK TD - NORWALK - ADA OPERATING - FY2015	OTH	2015	888	0	888	0
01	5307O	0412-0123		X6	NORWALK TD	STAMFORD	NORWALK TD - STAMFORD - ADA OPERATING - FY2015	OTH	2015	2,668	0	2,668	0
01	5307O	0412-0124		X6	NORWALK TD	VARIOUS	NORWALK TD - COASTAL LINK OPERATING - FY2015	OTH	2015	126	0	126	0
01	5307O	0412-0124		X6	NORWALK TD	WESTPORT	NORWALK TD - WESTPORT ADA OPERATING - FY2015	OTH	2015	178	0	178	0
01	5307O	0412-0124		X6	NORWALK TD	NORWALK	NORWALK TD - ROUTE 7 LINK NORWALK-DANBURY OPERATING - FY2015	OTH	2015	220	0	220	0
01	5307O	0412-0124		X6	NORWALK TD	GREENWICH	NORWALK TD - GREENWICH COMMUTER SHUTTLE OPERATING - FY2015	OTH	2015	316	0	316	0
01	5307O	0412-0124		X6	NORWALK TD	NORWALK	NORWALK TD - NORWALK COMMUTER SHUTTLE OPERATING - FY2015	OTH	2015	695	0	695	0
13	5307O	0414-0054		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - FIXED ROUTE - FY2015	OTH	2015	2,912	0	2,912	0
13	5307O	0414-0055		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - ADA OPERATING - FY2015	OTH	2015	159	0	159	0
13	5307O	0414-0055		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - MYSTIC-PAWCATUCK OPERATING - FY2015	OTH	2015	178	0	178	0
13	5307O	0414-0055		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - JEWETT CITY OPERATING - FY2015	OTH	2015	201	0	201	0
02	5307O	0416-0056		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - FIXED ROUTE - FY2015	OTH	2015	2,173	0	2,173	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - SOUTHEAST, NY SHUTTLE OPERATING - FY2015	OTH	2015	155	0	155	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - ROUTE 7 LINK DANBURY-NORWALK OPERATING - FY2015	OTH	2015	197	0	197	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - KATONAH SHUTTLE OPERATING - FY2015	OTH	2015	340	0	340	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - ADA PARATRANSIT OPERATING - FY2015	OTH	2015	372	0	372	0
02	5307O	0416-0058		X6	HOUSATONIC AREA TRANSIT	DANBURY	HART - OPERATING FY 2015	OTH	2015	985	493	0	493
06	5307O	0420-0040		X6	VALLEY TD	DERBY	VALLEY TD - DIAL-A-RIDE - FY2015	OTH	2015	714	0	714	0
06	5307O	0420-0041		X6	VALLEY TD	DERBY	VALLEY TD - ADA OPERATING - FY2015	OTH	2015	269	0	269	0
11	5307O	0422-0051		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - FIXED ROUTE - FY2015	OTH	2015	1,093	0	1,093	0
11	5307O	0422-0052		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - ADA OPERATING - FY2015	OTH	2015	204	0	204	0
11	5307O	0422-0053		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - DIAL-A-RIDE - FY2015	OTH	2015	112	0	112	0
08	5307O	0424-0058		X6	MILFORD TD	MILFORD	MILFORD TD - FIXED ROUTE - FY2015	OTH	2015	676	0	676	0
08	5307O	0424-0059		X6	MILFORD TD	MILFORD	MILFORD TD - ADA OPERATING - FY2015	OTH	2015	278	0	278	0
08	5307O	0424-0060		X6	MILFORD TD	MILFORD	MILFORD TD - DIAL-A-RIDE - FY2015	OTH	2015	39	0	39	0
08	5307O	0424-0061		X6	MILFORD TD	MILFORD	MILFORD TD - WHEELER COMMUTER SHUTTLE OPERATING - FY2015	OTH	2015	90	0	90	0
08	5307O	0424-0062		X6	MILFORD TD	MILFORD	MILFORD TD - COASTAL LINK OPERATING - FY2015	OTH	2015	130	0	130	0
10	5307O	0426-XXXX		X6	GHTD	HARTFORD	GHTD - DIAL-A-RIDE - FY 2015	OTH	2015	360	0	360	0
10	5307O	0426-XXXX		X6	GHTD	HARTFORD	GHTD - ADA OPERATING - FY 2015	OTH	2015	11,845	0	11,845	0
08	5307O	0427-0047	0427-XXXX	X6	GNHTD	NEW HAVEN	GNHTD - ADA OPERATING - FY 2015	OTH	2015	6,386	0	6,386	0
08	5307O	0427-0048	0427-XXXX	X6	GNHTD	NEW HAVEN	GNHTD - DIAL-A-RIDE - FY 2015	OTH	2015	143	0	143	0
05	5307O	0431-XXXX		X6	WATERBURY	WATERBURY	WATERBURY DIAL-A-RDIE - FY2015	OTH	2015	683	0	683	0
05	5307O	0431-XXXX		X6	WATERBURY	WATERBURY	WATERBURY - ADA OPERATING - FY2015	OTH	2015	1,814	0	1,814	0
05	5307O	0431-XXXX		X6	WATERBURY	WATERBURY	WATERBURY - FIXED ROUTE - FY2015	OTH	2015	4,205	0	4,205	0
08	5307O	0432-0007	0432-XXXX	X6	MERIDEN	MERIDEN	MERIDEN/WALLINGFORD ADA OPERATING - FY2015	OTH	2015	652	0	652	0
08	5307O	0432-0009	0432-XXXX	X6	MERIDEN	MERIDEN	MERIDEN - FIXED ROUTE - FY2015 MERIDEN BUS SERVICE OPERATIONS	OTH	2015	809	0	809	0
08	5307O	0433-0145	0433-XXXX	X6	WALLINGFORD	WALLINGFORD	WALLINGFORD - FIXED ROUTE -NETCO-FY2015	OTH	2015	180	0	180	0
10	5307O	0441-XXXX		X6	NEW BRITAIN	NEW BRITAIN	NEW BRITAIN - FIXED ROUTE - FY2015	OTH	2015	1,980	0	1,980	0
05	5307O	0442-XXXX		X6	BRISTOL	BRISTOL	BRISTOL LOCAL - FY2015	OTH	2015	298	0	298	0
5,10	5307O	0444-XXXX		X6	SOUTHINGTON COMMUTER FY2015	SOUTHINGTON/CHESIRE	SOUTHINGTON/CHESIRE	OTH	2015	86	0	86	0
05	5307O	0450-XXXX		X6	BRISTOL	BRISTOL	BRISTOL COMMUTER - FY2015	OTH	2015	217	0	217	0
80,10	5307O	0452-XXXX		X6	OLD SAYBROOK	OSB/NH/HTFD	OLD SAYBROOK/NH/HARTFORD COMMUTER - FY2015	OTH	2015	810	0	810	0
04	5307O	0460-XXXX		X6	TORRINGTON	TORRINGTON	WINSTED COMMUTER - FY2016	OTH	2016	295	0	295	0
13	5307O	0461-XXXX		X6	WILLIMANTIC	WILLIMANTIC	WILLIMANTIC COMMUTER FY2015	OTH	2015	378	0	378	0
10	5307O	0462-XXXX		X6	VERNON	VERNON	VERNON COMMUTER - FY2015	OTH	2015	152	0	152	0
08	5307O	0463-0008	0463-XXXX	X6	MERIDEN TD	MERIDEN	MERIDEN TD COMMUTER - FY2015	OTH	2015	209	0	209	0
									2015 Total	157,139	493	156,154	493

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
10	5307O	0017-0180		X6	CCRPA	NEW BRITAIN	NEW BRITAIN - ADA OPERATING	OTH	2016	1,479	0	1,479	0
70	5307O	0170-XXXX		X6	VARIOUS	STATEWIDE	MUNICIPAL GRANT PROGRAM - FY 2016	OTH	2016	5,000	0	5,000	0
08	5307O	0400-0001	0402-XXXX	X6	CTTRANSIT	NEW HAVEN	CONNECTICUT TRANSIT - NEW HAVEN - FY2016	OTH	2016	27,696	0	27,696	0
10	5307O	0401-XXXX		X6	CTTRANSIT	HARTFORD	CONNECTICUT TRANSIT - HARTFORD - FY2016	OTH	2016	49,054	0	49,054	0
01	5307O	0403-XXXX		X6	CTTRANSIT	STAMFORD	CONNECTICUT TRANSIT - STAMFORD - FY2016	OTH	2016	10,072	0	10,072	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - SHELTON FLYER COMMUTER OPERATING - FY2016	OTH	2016	81	0	81	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - ROUTE 110 LOCAL OPERATING - FY2016	OTH	2016	227	0	227	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - COASTAL LINK OPERATING - FY2016	OTH	2016	251	0	251	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - ADA OPERATING - FY2016	OTH	2016	2,474	0	2,474	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - FIXED ROUTE - FY2016	OTH	2016	10,623	0	10,623	0
01	5307O	0412-0118		X6	NORWALK TD	NORWALK	NORWALK TD - FIXED ROUTE - FY2016	OTH	2016	5,265	0	5,265	0
01	5307O	0412-0119		X6	NORWALK TD	WESTPORT	NORWALK TD - WESTPORT - FIXED ROUTE - FY2016	OTH	2016	606	0	606	0
01	5307O	0412-0122		X6	NORWALK TD	NORWALK	NORWALK TD - NORWALK - ADA OPERATING - FY2016	OTH	2016	915	0	915	0
01	5307O	0412-0123		X6	NORWALK TD	STAMFORD	NORWALK TD - STAMFORD - ADA OPERATING - FY2016	OTH	2016	2,748	0	2,748	0
01	5307O	0412-0124		X6	NORWALK TD	VARIOUS	NORWALK TD - COASTAL LINK OPERATING - FY2016	OTH	2016	130	0	130	0
01	5307O	0412-0124		X6	NORWALK TD	WESTPORT	NORWALK TD - WESTPORT ADA OPERATING - FY2016	OTH	2016	183	0	183	0
01	5307O	0412-0124		X6	NORWALK TD	NORWALK	NORWALK TD - ROUTE 7 LINK NORWALK-DANBURY OPERATING - FY2016	OTH	2016	227	0	227	0
01	5307O	0412-0124		X6	NORWALK TD	GREENWICH	NORWALK TD - GREENWICH COMMUTER SHUTTLE OPERATING - FY2016	OTH	2016	325	0	325	0
01	5307O	0412-0124		X6	NORWALK TD	NORWALK	NORWALK TD - NORWALK COMMUTER SHUTTLE OPERATING - FY2016	OTH	2016	716	0	716	0
13	5307O	0414-0054		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - FIXED ROUTE - FY2016	OTH	2016	2,999	0	2,999	0
13	5307O	0414-0055		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - ADA OPERATING - FY2016	OTH	2016	164	0	164	0
13	5307O	0414-0055		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - MYSTIC-PAWCATUCK OPERATING - FY2016	OTH	2016	183	0	183	0
13	5307O	0414-0055		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - JEWETT CITY OPERATING - FY2016	OTH	2016	208	0	208	0
02	5307O	0416-0056		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - FIXED ROUTE - FY2016	OTH	2016	2,238	0	2,238	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - SOUTHEAST, NY SHUTTLE OPERATING - FY2016	OTH	2016	159	0	159	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - ROUTE 7 LINK DANBURY-NORWALK OPERATING - FY2016	OTH	2016	203	0	203	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - KATONAH SHUTTLE OPERATING - FY2016	OTH	2016	350	0	350	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - ADA PARATRANSIT OPERATING - FY2016	OTH	2016	384	0	384	0
02	5307O	0416-0058		X6	HOUSATONIC AREA TRANSIT	DANBURY	HART - OPERATING FY 2016	OTH	2016	985	493	0	493
06	5307O	0420-0040		X6	VALLEY TD	DERBY	VALLEY TD - DIAL-A-RIDE - FY2016	OTH	2016	735	0	735	0
06	5307O	0420-0041		X6	VALLEY TD	DERBY	VALLEY TD - ADA OPERATING - FY2016	OTH	2016	277	0	277	0
11	5307O	0422-0051		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - FIXED ROUTE - FY2016	OTH	2016	1,125	0	1,125	0
11	5307O	0422-0052		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - ADA OPERATING - FY2016	OTH	2016	210	0	210	0
11	5307O	0422-0053		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - DIAL-A-RIDE - FY2016	OTH	2016	112	0	112	0
08	5307O	0424-0058		X6	MILFORD TD	MILFORD	MILFORD TD - FIXED ROUTE - FY2016	OTH	2016	696	0	696	0
08	5307O	0424-0059		X6	MILFORD TD	MILFORD	MILFORD TD - ADA OPERATING - FY2016	OTH	2016	286	0	286	0
08	5307O	0424-0060		X6	MILFORD TD	MILFORD	MILFORD TD - DIAL-A-RIDE - FY2016	OTH	2016	39	0	39	0
08	5307O	0424-0061		X6	MILFORD TD	MILFORD	MILFORD TD - WHEELER COMMUTER SHUTTLE OPERATING - FY2016	OTH	2016	92	0	92	0
08	5307O	0424-0062		X6	MILFORD TD	MILFORD	MILFORD TD - COASTAL LINK OPERATING - FY2016	OTH	2016	134	0	134	0
10	5307O	0426-XXXX		X6	GHTD	HARTFORD	GHTD - ADA OPERATING - FY 2016	OTH	2016	12,200	0	12,200	0
10	5307O	0426-XXXX		X6	GHTD	HARTFORD	GHTD - DIAL-A-RIDE - FY 2016	OTH	2016	360	0	360	0
08	5307O	0427-0047	0427-XXXX	X6	GNHTD	NEW HAVEN	GNHTD - ADA OPERATING - FY 2016	OTH	2016	294	0	294	0
08	5307O	0427-0048	0427-XXXX	X6	GNHTD	NEW HAVEN	GNHTD - DIAL-A-RIDE - FY 2016	OTH	2016	145	0	145	0
05	5307O	0431-XXXX		X6	WATERBURY	WATERBURY	WATERBURY DIAL-A-RDIE - FY2016	OTH	2016	707	0	707	0
05	5307O	0431-XXXX		X6	WATERBURY	WATERBURY	WATERBURY - ADA OPERATING - FY2016	OTH	2016	1,877	0	1,877	0
05	5307O	0431-XXXX		X6	WATERBURY	WATERBURY	WATERBURY - FIXED ROUTE - FY2016	OTH	2016	4,352	0	4,352	0
08	5307O	0432-0007	0432-XXXX	X6	MERIDEN	MERIDEN	MERIDEN/WALLINGFORD ADA OPERATING - FY2016	OTH	2016	675	0	675	0
08	5307O	0432-0009	0432-XXXX	X6	MERIDEN	MERIDEN	MERIDEN - FIXED ROUTE - FY2016 MERIDEN BUS SERVICE OPERATIONS	OTH	2016	837	0	837	0
08	5307O	0433-0145	0433-XXXX	X6	WALLINGFORD	WALLINGFORD	WALLINGFORD - FIXED ROUTE -NETCO- FY2016	OTH	2016	186	0	186	0
10	5307O	0441-XXXX		X6	NEW BRITAIN	NEW BRITAIN	NEW BRITAIN - FIXED ROUTE - FY2016	OTH	2016	2,049	0	2,049	0
05	5307O	0442-XXXX		X6	BRISTOL	BRISTOL	BRISTOL LOCAL - FY2016	OTH	2016	308	0	308	0
5,10	5307O	0444-XXXX		X6	SOUTHINGTON COMMUTER FY2016	SOUTHINGTON/CHESIRE	SOUTHINGTON/CHESIRE	OTH	2016	89	0	89	0
05	5307O	0450-XXXX		X6	BRISTOL	BRISTOL	BRISTOL COMMUTER - FY2016	OTH	2016	225	0	225	0
80,10	5307O	0452-XXXX		X6	OLD SAYBROOK	OSB/NH/HTFD	OLD SAYBROOK/NH/HARTFORD COMMUTER - FY2016	OTH	2016	838	0	838	0
04	5307O	0460-XXXX		X6	TORRINGTON	TORRINGTON	WINSTED COMMUTER - FY2016	OTH	2016	295	0	295	0
13	5307O	0461-XXXX		X6	WILLIMANTIC	WILLIMANTIC	WILLIMANTIC COMMUTER FY2016	OTH	2016	391	0	391	0
10	5307O	0462-XXXX		X6	VERNON	VERNON	VERNON COMMUTER - FY2016	OTH	2016	157	0	157	0
08	5307O	0463-0008	0463-XXXX	X6	MERIDEN TD	MERIDEN	MERIDEN TD COMMUTER - FY2016	OTH	2016	216	0	216	0
									2016 Total	155,853	493	154,868	493
10	5307O	0017-0180		X6	CCRPA	NEW BRITAIN	NEW BRITAIN - ADA OPERATING	OTH	2017	1,531	0	1,531	0
70	5307O	0170-XXXX		X6	VARIOUS	STATEWIDE	MUNICIPAL GRANT PROGRAM - FY 2017	OTH	2017	5,000	0	5,000	0
08	5307O	0400-0001	0402-XXXX	X6	CTTRANSIT	NEW HAVEN	CONNECTICUT TRANSIT - NEW HAVEN - FY2017	OTH	2017	28,665	0	28,665	0
10	5307O	0401-XXXX		X6	CTTRANSIT	HARTFORD	CONNECTICUT TRANSIT - HARTFORD - FY2017	OTH	2017	50,771	0	50,771	0
01	5307O	0403-XXXX		X6	CTTRANSIT	STAMFORD	CONNECTICUT TRANSIT - STAMFORD - FY2017	OTH	2017	10,424	0	10,424	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - SHELTON FLYER COMMUTER OPERATING - FY2017	OTH	2017	83	0	83	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - ROUTE 110 LOCAL OPERATING - FY2017	OTH	2017	234	0	234	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - COASTAL LINK OPERATING - FY2017	OTH	2017	259	0	259	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - ADA OPERATING - FY2017	OTH	2017	2,548	0	2,548	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - FIXED ROUTE - FY2017	OTH	2017	10,941	0	10,941	0
01	5307O	0412-0118		X6	NORWALK TD	NORWALK	NORWALK TD - FIXED ROUTE - FY2017	OTH	2017	5,423	0	5,423	0
01	5307O	0412-0119		X6	NORWALK TD	WESTPORT	NORWALK TD - WESTPORT - FIXED ROUTE - FY2017	OTH	2017	624	0	624	0
01	5307O	0412-0122		X6	NORWALK TD	NORWALK	NORWALK TD - NORWALK - ADA OPERATING - FY2017	OTH	2017	942	0	942	0
01	5307O	0412-0123		X6	NORWALK TD	STAMFORD	NORWALK TD - STAMFORD - ADA OPERATING - FY2017	OTH	2017	2,831	0	2,831	0
01	5307O	0412-0124		X6	NORWALK TD	VARIOUS	NORWALK TD - COASTAL LINK OPERATING - FY2017	OTH	2017	134	0	134	0
01	5307O	0412-0124		X6	NORWALK TD	WESTPORT	NORWALK TD - WESTPORT ADA OPERATING - FY2017	OTH	2017	189	0	189	0
01	5307O	0412-0124		X6	NORWALK TD	NORWALK	NORWALK TD - ROUTE 7 LINK NORWALK-DANBURY OPERATING - FY2017	OTH	2017	234	0	234	0
01	5307O	0412-0124		X6	NORWALK TD	GREENWICH	NORWALK TD - GREENWICH COMMUTER SHUTTLE OPERATING - FY2017	OTH	2017	335	0	335	0
01	5307O	0412-0124		X6	NORWALK TD	NORWALK	NORWALK TD - NORWALK COMMUTER SHUTTLE OPERATING - FY2017	OTH	2017	737	0	737	0
13	5307O	0414-0054		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - FIXED ROUTE - FY2017	OTH	2017	3,089	0	3,089	0
13	5307O	0414-0055		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - ADA OPERATING - FY2017	OTH	2017	169	0	169	0
13	5307O	0414-0055		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - MYSTIC-PAWCATUCK OPERATING - FY2017	OTH	2017	189	0	189	0
13	5307O	0414-0055		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - JEWETT CITY OPERATING - FY2017	OTH	2017	214	0	214	0
02	5307O	0416-0056		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - FIXED ROUTE - FY2017	OTH	2017	2,305	0	2,305	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - SOUTHEAST, NY SHUTTLE OPERATING - FY2017	OTH	2017	164	0	164	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - ROUTE 7 LINK DANBURY-NORWALK OPERATING - FY2017	OTH	2017	209	0	209	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - KATONAH SHUTTLE OPERATING - FY2017	OTH	2017	361	0	361	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - ADA PARATRANSIT OPERATING - FY2017	OTH	2017	395	0	395	0
02	5307O	0416-0058		X6	HOUSATONIC AREA TRANSIT	DANBURY	HART - OPERATING FY 2017	OTH	2017	985	493	0	493
06	5307O	0420-0040		X6	VALLEY TD	DERBY	VALLEY TD - DIAL-A-RIDE - FY2017	OTH	2017	757	0	757	0
06	5307O	0420-0041		X6	VALLEY TD	DERBY	VALLEY TD - ADA OPERATING - FY2017	OTH	2017	285	0	285	0
11	5307O	0422-0051		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - FIXED ROUTE - FY2017	OTH	2017	1,159	0	1,159	0
11	5307O	0422-0052		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - ADA OPERATING - FY2017	OTH	2017	216	0	216	0
11	5307O	0422-0053		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - DIAL-A-RIDE - FY2017	OTH	2017	112	0	112	0
08	5307O	0424-0058		X6	MILFORD TD	MILFORD	MILFORD TD - FIXED ROUTE - FY2017	OTH	2017	717	0	717	0
08	5307O	0424-0059		X6	MILFORD TD	MILFORD	MILFORD TD - ADA OPERATING - FY2017	OTH	2017	294	0	294	0
08	5307O	0424-0060		X6	MILFORD TD	MILFORD	MILFORD TD - DIAL-A-RIDE - FY2017	OTH	2017	39	0	39	0
08	5307O	0424-0061		X6	MILFORD TD	MILFORD	MILFORD TD - WHEELER COMMUTER SHUTTLE OPERATING - FY2017	OTH	2017	95	0	95	0
08	5307O	0424-0062		X6	MILFORD TD	MILFORD	MILFORD TD - COASTAL LINK OPERATING - FY2017	OTH	2017	138	0	138	0
10	5307O	0426-XXXX		X6	GHTD	HARTFORD	GHTD - ADA OPERATING - FY 2017	OTH	2017	12,566	0	12,566	0
10	5307O	0426-XXXX		X6	GHTD	HARTFORD	GHTD - DIAL-A-RIDE - FY 2017	OTH	2017	360	0	360	0
08	5307O	0427-0047	0427-XXXX	X6	GNHTD	NEW HAVEN	GNHTD - ADA OPERATING - FY 2017	OTH	2017	303	0	303	0
08	5307O	0427-0048	0427-XXXX	X6	GNHTD	NEW HAVEN	GNHTD - DIAL-A-RIDE - FY 2017	OTH	2017	148	0	148	0
05	5307O	0431-XXXX		X6	WATERBURY	WATERBURY	WATERBURY DIAL-A-RDIE - FY2017	OTH	2017	732	0	732	0
05	5307O	0431-XXXX		X6	WATERBURY	WATERBURY	WATERBURY - ADA OPERATING - FY2017	OTH	2017	1,943	0	1,943	0
05	5307O	0431-XXXX		X6	WATERBURY	WATERBURY	WATERBURY - FIXED ROUTE - FY2017	OTH	2017	4,504	0	4,504	0
08	5307O	0432-0007	0432-XXXX	X6	MERIDEN	MERIDEN	MERIDEN/WALLINGFORD ADA OPERATING - FY2017	OTH	2017	699	0	699	0
08	5307O	0432-0009	0432-XXXX	X6	MERIDEN	MERIDEN	MERIDEN - FIXED ROUTE - FY2017 MERIDEN BUS SERVICE OPERATIONS	OTH	2017	866	0	866	0
08	5307O	0433-0145	0433-XXXX	X6	WALLINGFORD	WALLINGFORD	WALLINGFORD - FIXED ROUTE - NETCO-FY2017	OTH	2017	193	0	193	0
10	5307O	0441-XXXX		X6	NEW BRITAIN	NEW BRITAIN	NEW BRITAIN - FIXED ROUTE - FY2017	OTH	2017	2,121	0	2,121	0
05	5307O	0442-XXXX		X6	BRISTOL	BRISTOL	BRISTOL LOCAL - FY2017	OTH	2017	319	0	319	0
5,10	5307O	0444-XXXX		X6	SOUTHINGTON COMMUTER FY2017	SOUTHINGTON/CHESIRE	SOUTHINGTON/CHESIRE	OTH	2017	92	0	92	0
05	5307O	0450-XXXX		X6	BRISTOL	BRISTOL	BRISTOL COMMUTER - FY2017	OTH	2017	233	0	233	0
80,10	5307O	0452-XXXX		X6	OLD SAYBROOK	OSB/NH/HTFD	OLD SAYBROOK/NH/HARTFORD COMMUTER - FY2017	OTH	2017	868	0	868	0
04	5307O	0460-XXXX		X6	TORRINGTON	TORRINGTON	WINSTED COMMUTER - FY2017	OTH	2017	305	0	305	0
13	5307O	0461-XXXX		X6	WILLIMANTIC	WILLIMANTIC	WILLIMANTIC COMMUTER FY2017	OTH	2017	405	0	405	0
10	5307O	0462-XXXX		X6	VERNON	VERNON	VERNON COMMUTER - FY2017	OTH	2017	163	0	163	0
08	5307O	0463-0008	0463-XXXX	X6	MERIDEN TD	MERIDEN	MERIDEN TD COMMUTER - FY2017	OTH	2017	224	0	224	0
									2017 Total	160,839	493	159,854	493
10	5307O	0017-0180		X6	CCRPA	NEW BRITAIN	NEW BRITAIN - ADA OPERATING	OTH	2018	1,584	0	1,584	0
70	5307O	0170-XXXX		X6	VARIOUS	STATEWIDE	MUNICIPAL GRANT PROGRAM - FY 2018	OTH	2018	5,000	0	5,000	0
08	5307O	0400-0001	0402-XXXX	X6	CTTRANSIT	NEW HAVEN	CONNECTICUT TRANSIT - NEW HAVEN - FY2018	OTH	2018	29,668	0	29,668	0
10	5307O	0401-XXXX		X6	CTTRANSIT	HARTFORD	CONNECTICUT TRANSIT - HARTFORD - FY2018	OTH	2018	52,548	0	52,548	0
01	5307O	0403-XXXX		X6	CTTRANSIT	STAMFORD	CONNECTICUT TRANSIT - STAMFORD - FY2018	OTH	2018	10,789	0	10,789	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - SHELTON FLYER COMMUTER OPERATING - FY2018	OTH	2018	85	0	85	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - ROUTE 110 LOCAL OPERATING - FY2018	OTH	2018	241	0	241	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - COASTAL LINK OPERATING - FY2018	OTH	2018	266	0	266	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - ADA OPERATING - FY2018	OTH	2018	2,624	0	2,624	0
07	5307O	0410-XXXX		X6	GR BRIDGEPORT TA	BRIDGEPORT	GREATER BRIDGEPORT TA - FIXED ROUTE - FY2018	OTH	2018	11,270	0	11,270	0
01	5307O	0412-0118		X6	NORWALK TD	NORWALK	NORWALK TD - FIXED ROUTE - FY2018	OTH	2018	5,585	0	5,585	0
01	5307O	0412-0119		X6	NORWALK TD	WESTPORT	NORWALK TD - WESTPORT - FIXED ROUTE - FY2018	OTH	2018	642	0	642	0
01	5307O	0412-0122		X6	NORWALK TD	NORWALK	NORWALK TD - NORWALK - ADA OPERATING - FY2018	OTH	2018	971	0	971	0
01	5307O	0412-0123		X6	NORWALK TD	STAMFORD	NORWALK TD - STAMFORD - ADA OPERATING - FY2018	OTH	2018	2,916	0	2,916	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
01	5307O	0412-0124		X6	NORWALK TD	VARIOUS	NORWALK TD - COASTAL LINK OPERATING - FY2018	OTH	2018	138	0	138	0
01	5307O	0412-0124		X6	NORWALK TD	WESTPORT	NORWALK TD - WESTPORT ADA OPERATING - FY2018	OTH	2018	195	0	195	0
01	5307O	0412-0124		X6	NORWALK TD	NORWALK	NORWALK TD - ROUTE 7 LINK NORWALK-DANBURY OPERATING - FY2018	OTH	2018	241	0	241	0
01	5307O	0412-0124		X6	NORWALK TD	GREENWICH	NORWALK TD - GREENWICH COMMUTER SHUTTLE OPERATING - FY2018	OTH	2018	345	0	345	0
01	5307O	0412-0124		X6	NORWALK TD	NORWALK	NORWALK TD - NORWALK COMMUTER SHUTTLE OPERATING - FY2018	OTH	2018	760	0	760	0
13	5307O	0414-0054		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - FIXED ROUTE - FY2018	OTH	2018	3,182	0	3,182	0
13	5307O	0414-0055		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - ADA OPERATING - FY2018	OTH	2018	174	0	174	0
13	5307O	0414-0055		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - MYSTIC-PAWCATUCK OPERATING - FY2018	OTH	2018	195	0	195	0
13	5307O	0414-0055		X6	SOUTHEAST AREA TD	NORWICH	SOUTHEAST AREA TD - JEWETT CITY OPERATING - FY2018	OTH	2018	220	0	220	0
02	5307O	0416-0056		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - FIXED ROUTE - FY2018	OTH	2018	2,375	0	2,375	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - SOUTHEAST, NY SHUTTLE OPERATING - FY2018	OTH	2018	169	0	169	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - ROUTE 7 LINK DANBURY-NORWALK OPERATING - FY2018	OTH	2018	215	0	215	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - KATONAH SHUTTLE OPERATING - FY2018	OTH	2018	372	0	372	0
02	5307O	0416-0057		X6	HOUSATONIC AREA TD	DANBURY	HOUSATONIC AREA REGIONAL TD - ADA PARATRANSIT OPERATING - FY2018	OTH	2018	407	0	407	0
02	5307O	0416-0058		X6	HOUSATONIC AREA TRANSIT	DANBURY	HART - OPERATING FY 2018	OTH	2018	985	493	0	493
06	5307O	0420-0040		X6	VALLEY TD	DERBY	VALLEY TD - DIAL-A-RIDE - FY2018	OTH	2018	780	0	780	0
06	5307O	0420-0041		X6	VALLEY TD	DERBY	VALLEY TD - ADA OPERATING - FY2018	OTH	2018	293	0	293	0
11	5307O	0422-0051		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - FIXED ROUTE - FY2018	OTH	2018	1,194	0	1,194	0
11	5307O	0422-0052		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - ADA OPERATING - FY2018	OTH	2018	222	0	222	0
11	5307O	0422-0053		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - DIAL-A-RIDE - FY2018	OTH	2018	112	0	112	0
08	5307O	0424-0058		X6	MILFORD TD	MILFORD	MILFORD TD - FIXED ROUTE - FY2018	OTH	2018	738	0	738	0
08	5307O	0424-0059		X6	MILFORD TD	MILFORD	MILFORD TD - ADA OPERATING - FY2018	OTH	2018	303	0	303	0
08	5307O	0424-0060		X6	MILFORD TD	MILFORD	MILFORD TD - DIAL-A-RIDE - FY2018	OTH	2018	39	0	39	0
08	5307O	0424-0061		X6	MILFORD TD	MILFORD	MILFORD TD - WHEELER COMMUTER SHUTTLE OPERATING - FY2018	OTH	2018	98	0	98	0
08	5307O	0424-0062		X6	MILFORD TD	MILFORD	MILFORD TD - COASTAL LINK OPERATING - FY2018	OTH	2018	142	0	142	0
10	5307O	0426-XXXX		X6	GHTD	HARTFORD	GHTD - ADA OPERATING - FY 2018	OTH	2018	12,943	0	12,943	0
10	5307O	0426-XXXX		X6	GHTD	HARTFORD	GHTD - DIAL-A-RIDE - FY 2018	OTH	2018	360	0	360	0
08	5307O	0427-0047	0427-XXXX	X6	GNHTD	NEW HAVEN	GNHTD - ADA OPERATING - FY 2018	OTH	2018	312	0	312	0
08	5307O	0427-0048	0427-XXXX	X6	GNHTD	NEW HAVEN	GNHTD - DIAL-A-RIDE - FY 2018	OTH	2018	150	0	150	0
05	5307O	0431-XXXX		X6	WATERBURY	WATERBURY	WATERBURY DIAL-A-RDIE - FY2018	OTH	2018	758	0	758	0
05	5307O	0431-XXXX		X6	WATERBURY	WATERBURY	WATERBURY - ADA OPERATING - FY2018	OTH	2018	2,011	0	2,011	0
05	5307O	0431-XXXX		X6	WATERBURY	WATERBURY	WATERBURY - FIXED ROUTE - FY2018	OTH	2018	4,662	0	4,662	0
08	5307O	0432-0007	0432-XXXX	X6	MERIDEN	MERIDEN	MERIDEN/WALLINGFORD ADA OPERATING - FY2018	OTH	2018	723	0	723	0
08	5307O	0432-0009	0432-XXXX	X6	MERIDEN	MERIDEN	MERIDEN - FIXED ROUTE - FY2018 MERIDEN BUS SERVICE OPERATIONS	OTH	2018	897	0	897	0
08	5307O	0433-0145	0433-XXXX	X6	WALLINGFORD	WALLINGFORD	WALLINGFORD - FIXED ROUTE -NETCO- FY2018	OTH	2018	200	0	200	0
10	5307O	0441-XXXX		X6	NEW BRITAIN	NEW BRITAIN	NEW BRITAIN - FIXED ROUTE - FY2018	OTH	2018	2,195	0	2,195	0
05	5307O	0442-XXXX		X6	BRISTOL	BRISTOL	BRISTOL LOCAL - FY2018	OTH	2018	330	0	330	0
5,10	5307O	0444-XXXX		X6	SOUTHINGTON COMMUTER FY2018	SOUTHINGTON/CHESIRE	SOUTHINGTON/CHESIRE	OTH	2018	95	0	95	0
05	5307O	0450-XXXX		X6	BRISTOL	BRISTOL	BRISTOL COMMUTER - FY2018	OTH	2018	241	0	241	0
80,10	5307O	0452-XXXX		X6	OLD SAYBROOK	OSB/NH/HTFD	OLD SAYBROOK/NH/HARTFORD COMMUTER - FY2017	OTH	2018	898	0	898	0
04	5307O	0460-XXXX		X6	TORRINGTON	TORRINGTON	WINSTED COMMUTER - FY2018	OTH	2018	316	0	316	0
13	5307O	0461-XXXX		X6	WILLIMANTIC	WILLIMANTIC	WILLIMANTIC COMMUTER FY2018	OTH	2018	419	0	419	0
10	5307O	0462-XXXX		X6	VERNON	VERNON	VERNON COMMUTER - FY2018	OTH	2018	169	0	169	0
08	5307O	0463-0008	0463-XXXX	X6	MERIDEN TD	MERIDEN	MERIDEN TD COMMUTER - FY2018	OTH	2018	232	0	232	0
									2018 Total	165,992	493	165,007	493
78	5307P	0300-0149		X6	NHL-ML	VARIOUS	NHL - POSITIVE TRAIN CONTROL	PE	2015	12,000	9,600	2,400	0
08	5307P	0301-0070		X6	NHL-ML	NEW HAVEN	NHL CATENARY REPLACEMENT SECTION C1B INCLUDING BRIDGES	CON	2015	55,000	44,000	11,000	0
77	5307P	0301-0077	0301-T111	X6	NHL-ML	VARIOUS	NEW HAVEN LINE TRACK PROGRAM.	CON	2015	20,000	16,000	4,000	0
10	5307P	0401-T023		X6	CT-HTFD	HARTFORD	CTTRANSIT FACILITY IMPROVEMENTS	ALL	2015	8,000	6,400	1,600	0
07	5307P	0410-0077	0410-0049	X6	GBTA	BRIDGEPORT	GBTA - REPLACE 25 2003 35-FT & 15 2003 40-FT BUSES FY 15	OTH	2015	12,300	9,840	2,460	0
07	5307P	0410-0078		X6	GBTA	BRIDGEPORT	GBTA-710 WATER STREET BUS STATION REPAIRS	CON	2015	150	120	30	0
07	5307P	0410-0070	0410-TXXX	X6	GBTA	BRIDGEPORT	GBT MAINTENANCE & ADMINISTRATION FACILITY EXPANSION	ALL	2015	4,693	3,754	939	0
08	5307P	0427-0056		X6	GNHTD	NEW HAVEN	GNHTD - FACILITY RENOVATIONS - SHERMAN AVE	CON	2015	200	160	40	0
08	5307P	0427-0045	0427-NFXX	X6	GNHTD	NEW HAVEN	GNHTD - NEW BUS ADMIN/MAINT FACILITY	ALL	2015	350	280	70	0
08	5307P	0427-0062		X6	GNHTD	NEW HAVEN	GNHTD - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY15	OTH	2015	75	60	15	0
08	5307P	0427-0062	0427-PXXX1	X6	GNHTD	NEW HAVEN	GNHTD - REPLACE PARATRANSIT VEHICLES	ACQ	2015	615	492	123	0
08	5307P	0427-0062	0427-PXXXX(0427-NFXX)	X6	GNHTD	NEW HAVEN	GNHTD - NEW BUS ADMIN/MAINT FACILITY	ROW	2015	1,500	1,200	300	0
05	5307P	0430-XXXX		X6	CTTRANSIT	WATERBURY	CDOT/WATERBURY - WATERBURY BUS MAINTENANCE FACILITY	CON	2015	40,000	32,000	8,000	0
									2015 Total	154,883	123,906	30,977	0
06	5307P	0036-0200	0036-XXXX	X6	NVCOG/VALLEY TD	DERBY	NVCOG/VTD-ADMIN CAPITAL/MISC SUPPORT FFY '16	OTH	2016	400	320	80	0
07	5307P	0410-0070	0410-TXXX	X6	GBTA	BRIDGEPORT	GBT MAINTENANCE & ADMINISTRATION FACILITY EXPANSION	ALL	2016	7,000	5,600	1,400	0
13	5307P	0414-0062	0414-TXXX	X6	SEAT	NORWICH	SEAT - FACILITY IMPROVEMENTS FY 15	OTH	2016	548	438	110	0
13	5307P	0414-0062	0414-TXXX	X6	SEAT	NORWICH	SEAT - REPLACEMENT BUSES FY 15	OTH	2016	3,103	2,482	621	0
13	5307P	0414-0062	0414-XXXX	X6	SEAT	NORWICH	SEAT - ADMIN CAPITAL/SUPPORT EQUIP & SCV PROGRAM FY 15	OTH	2016	1,026	821	205	0
									2016 Total	12,077	9,662	2,415	0
10	5307S	0063-0710		X6	I-84	HARTFORD	ON-BOARD TRAVEL SURVEY AND REGIONAL MODEL CALIBRATION-TRANSFER FROM FHWA	PL	2015	750	600	150	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
75	5307S	0170-3106	0170-3033	X6	VARIOUS	STATEWIDE	FY13: STATEWIDE MARKETING (NY-NJ-CT MODERATE) -TRANSFER FROM FHWA	OTH	2015	1,525	1,220	305	0
76	5307S	0170-3107	0170-3032	X6	VARIOUS	STATEWIDE	FY 13: STATEWIDE MARKETING (GR.CT MODERATE)-TRANSFER FROM FHWA (CMAQ)	OTH	2015	975	780	195	0
71	5307S	0171-0305		X6	CT FASTRAK	HARTFORD/NEW BRITAIN	CT FASTRAK OPERATING FUNDS-TRANSFER FROM FHWA (CMAQ)	OTH	2015	25,500	20,400	5,100	0
07	5307S	0410-0049		X6	GBTA	BRIDGEPORT	GBTA - REPLACE 25 2003 35-FOOT AND 15 2003 40-FOOT BUSES FOR FIXED ROUTE SERVICE-FUNDS TRANSFERRED FROM CMAQ	OTH	2015	13,500	10,800	2,700	0
01	5307S	0412-0143		X6	NORWALK TD	NORWALK	NORWALK TD - COMPREHENSIVE OPERATIONS ANALYSIS - TRANSFER FROM FHWA	OTH	2015	400	320	80	0
01	5307S	0412-0143		X6	NORWALK TD	NORWALK	NORWALK TD - STUDY OF FACILITY NEEDS AND FACILITY ANALYIS - TRANSFER FROM FHWA	OTH	2015	350	280	70	0
10	5307S	0426-XXXX		CC	INTERMODAL TRIANGLE	HARTFORD	GHTD-ASYLUM STREET TRANSIT CORRIDOR IMPROVEMENTS-TRANSFER FROM FHWA	ALL	2015	1,250	1,000	0	250
									2015 Total	44,250	35,400	8,600	250
08	5307S	0083-XXXX		X6	CITY OF MILFORD/MILFORD TD	MILFORD	CITY OF MILFORD/MTD- BIKE LOCKERS AT MILFORD RR STATION- TRANSFER FROM FHWA-CMAQ	OTH	2016	70	56	0	14
75	5307S	0170-3124		X6	VARIOUS	NY/NJ/CT MODERATE NON-ATTAINMENT REG	FY15: STATEWIDE MARKETING (NY-NJ-CT) TRANSFER FROM FHWA	OTH	2016	733	586	147	0
76	5307S	0170-3125		X6	VARIOUS	GREATER CT MODERATE NON-ATTAINMENT F	FY15: STATEWIDE MARKETING (GREATER CT MODERATE)-TRANSFER FROM FHWA (CMAQ)	OTH	2016	460	368	92	0
71	5307S	0171-0305		X6	CT FASTRAK	HARTFORD/NEW BRITAIN	CT FASTRAK OPERATING FUNDS-TRANSFER FROM FHWA (CMAQ)	OTH	2016	15,000	12,000	3,000	0
07	5307S	0410-XXXX		X6	GBTA	BRIDGEPORT	GBTA- REAL-TIME PASSENGER INFORMATION SIGNAGE AT MAJOR HUBS -TRANSFER FROM FHWA-CMAQ	OTH	2016	217	174	0	43
01	5307S	0416-0076		X6	HART	DANBURY	HART - RESERVE COMMUTER CONNECTION - TRANSFER FROM FHWA-CMAQ	OTH	2016	257	206	51	0
11	5307S	0478-0077		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - MADISON TO MIDDLETOWN BUS ROUTE - TRANSFER FROM FHWA-CMAQ	OTH	2016	472	377	94	0
									2016 Total	17,209	13,767	3,385	57
71	5307S	0171-0305		X6	CT FASTRAK	HARTFORD/NEW BRITAIN	CT FASTRAK OPERATING FUNDS-TRANSFER FROM FHWA (CMAQ)	OTH	2017	15,000	12,000	3,000	0
									2017 Total	15,000	12,000	3,000	0
78	5309B	0300-0149		X6	NHL-ML	VARIOUS	NHL - POSITIVE TRAIN CONTROL (INCLUDING WATERBURY BRANCH)	ALL	2015	12,000	9,600	2,400	0
01	5309B	0300-XXXX		X6	NHL-DB	VARIOUS	REPLACEMENT OF SIXTH WAYSIDE SUBSTATION - NORWALK	CON	2015	10,000	8,000	2,000	0
77	5309B	0300-XXXX	301-T119	X6	NHL-ML	VARIOUS	NHL-ML CATENARY REPLACEMENT - SECTION C1A AND SECTION C2	CON	2015	80,000	64,000	16,000	0
									2015 Total	102,000	81,600	20,400	0
71	5309P	0171-0305		CC	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - NEW STARTS - FFY 2015	ALL	2015	58,716	46,973	11,743	0
									2015 Total	58,716	46,973	11,743	0
71	5309Q	0171-0305		CC	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - NEW STARTS - FFY 2013	ALL	2015	58,716	46,973	11,743	0
71	5309Q	0171-0305		CC	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - NEW STARTS - FFY 2014	ALL	2015	58,716	46,973	11,743	0
									2015 Total	117,432	93,946	23,486	0
70	5310E	0170-XXXX	OTHR-RURL	X6	VARIOUS BUS	RURAL	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-RURAL	OTH	2015	400	320	0	80
80	5310E	0170-XXXX	NHVN-URBN	X6	VARIOUS BUS	NEW HAVEN URBANIZED AREA	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-NEW HAVEN	OTH	2015	697	557	0	139
70	5310E	0170-XXXX	BPSM-URBN	X6	VARIOUS BUS	BRPT/STFD URBAN AREA	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-BRDGPT/STMFD	OTH	2015	1,076	861	0	215
70	5310E	0170-XXXX	HTFD-URBN	X6	VARIOUS BUS	HARTFORD URBANIZED AREA	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-HARTFORD	OTH	2015	1,227	981	0	245
									2015 Total	3,399	2,720	0	680
70	5310E	0170-XXXX	OTHR-RURL	X6	VARIOUS BUS	RURAL	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-RURAL	OTH	2016	412	329	0	82
80	5310E	0170-XXXX	NHVN-URBN	X6	VARIOUS BUS	NEW HAVEN URBANIZED AREA	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-NEW HAVEN	OTH	2016	718	574	0	144
70	5310E	0170-XXXX	BPSM-URBN	X6	VARIOUS BUS	BRPT/STFD URBAN AREA	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-BRDGPT/STMFD	OTH	2016	1,109	887	0	222
70	5310E	0170-XXXX	HTFD-URBN	X6	VARIOUS BUS	HARTFORD URBANIZED AREA	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-HARTFORD	OTH	2016	1,263	1,011	0	253
									2016 Total	3,501	2,801	0	700
70	5310E	0170-XXXX	OTHR-RURL	X6	VARIOUS BUS	RURAL	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-RURAL	OTH	2017	424	339	0	85
80	5310E	0170-XXXX	NHVN-URBN	X6	VARIOUS BUS	NEW HAVEN URBANIZED AREA	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-NEW HAVEN	OTH	2017	739	591	0	148
70	5310E	0170-XXXX	BPSM-URBN	X6	VARIOUS BUS	BRPT/STFD URBAN AREA	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-BRDGPT/STMFD	OTH	2017	1,142	914	0	228
70	5310E	0170-XXXX	HTFD-URBN	X6	VARIOUS BUS	HARTFORD URBANIZED AREA	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-HARTFORD	OTH	2017	1,301	1,041	0	260
									2017 Total	3,606	2,885	0	721
70	5310E	0170-XXXX	OTHR-RURL	X6	VARIOUS BUS	RURAL	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-RURAL	OTH	2018	437	349	0	87
80	5310E	0170-XXXX	NHVN-URBN	X6	VARIOUS BUS	NEW HAVEN URBANIZED AREA	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-NEW HAVEN	OTH	2018	761	609	0	152
70	5310E	0170-XXXX	BPSM-URBN	X6	VARIOUS BUS	BRPT/STFD URBAN AREA	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-BRDGPT/STMFD	OTH	2018	1,176	941	0	235
70	5310E	0170-XXXX	HTFD-URBN	X6	VARIOUS BUS	HARTFORD URBANIZED AREA	SEC 5310 PRGRM-ENHANCED MOBLTY OF SENIORS/INDIVIDUALS w/DISABILITIES-HARTFORD	OTH	2018	1,340	1,072	0	268
									2018 Total	3,715	2,972	0	743
13	5311O	0474-0082		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 OPERATING - FY 2014	OTH	2016	1,401	701	462	238
									2016 Total	1,401	701	462	238
70	5311P	0170-XXXX		X6	SECTION 5311	VARIOUS	SECTION 5311 PROG ADJUST TO ACTUAL APPR & RTAP PROG FFY 2014	OTH	2016	403	322	81	0
,11,13,15	5311P	0444-TXXX	XXXX-XXXX	X6	SECTION 5311	VARIOUS	SECTION 5311 - INTERCITY BUS PROJECTS FY 14	OTH	2016	46	37	0	9
03	5311P	0472-XXXX		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 CAPITAL FY 2014	OTH	2016	875	700	175	0
03	5311P	0472-0063		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 OPERATING - FY 2014	OTH	2016	387	193	193	0
13	5311P	0474-XXXX		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 CAPITAL FY 2014	OTH	2016	881	705	176	0
15	5311P	0476-XXXX		X6	NECT TD	KILLINGLY	NECT TD - SECTION 5311 CAPITALFY 2014	OTH	2016	375	300	75	0
11	5311P	0480-XXXX		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - SECTION 5311 CAPITAL FY 2014	OTH	2016	50	40	10	0
									2016Total	3,017	2,297	710	9
3,4	5311C-21	0472-XXXX		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 CAPITAL FY 2015	OTH	2015	858	686	172	0
13	5311C-21	0474-XXXX		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 CAPITAL FY 2015	OTH	2015	630	504	126	0
15	5311C-21	0476-XXXX		X6	NECT TD	KILLINGLY	NECT TD - SECTION 5311 CAPITALFY 2015	OTH	2015	195	156	39	0
12	5311C-21	0478-XXXX		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 CAPITAL FY 2015	OTH	2015	595	476	119	0
									2015 Total	2,278	1,822	456	0
3,4	5311C-21	0472-XXXX		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 CAPITAL FY 2016	OTH	2016	275	220	55	0
13	5311C-21	0474-XXXX		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 CAPITAL FY 2016	OTH	2016	145	116	29	0
15	5311C-21	0476-XXXX		X6	NECT TD	KILLINGLY	NECT TD - SECTION 5311 CAPITALFY 2016	OTH	2016	210	168	42	0
12	5311C-21	0478-XXXX		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 CAPITAL FY 2016	OTH	2016	170	136	34	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
									2016 Total	800	640	160	0
3,4	5311C-21	0472-XXXX		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 CAPITAL FY 2017	OTH	2017	285	228	57	0
13	5311C-21	0474-XXXX		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 CAPITAL FY 2017	OTH	2017	295	236	59	0
15	5311C-21	0476-XXXX		X6	NECT TD	KILLINGLY	NECT TD - SECTION 5311 CAPITALFY 2017	OTH	2017	255	204	51	0
12	5311C-21	0478-XXXX		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 CAPITAL FY 2017	OTH	2017	850	680	170	0
11	5311C-21	0480-XXXX		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - SECTION 5311 CAPITAL FY 2017	OTH	2017	20	16	4	0
									2017 Total	1,705	1,364	341	0
3,4	5311C-21	0472-XXXX		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 CAPITAL FY 2018	OTH	2018	300	240	60	0
13	5311C-21	0474-XXXX		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 CAPITAL FY 2018	OTH	2018	225	180	45	0
15	5311C-21	0476-XXXX		X6	NECT TD	KILLINGLY	NECT TD - SECTION 5311 CAPITALFY 2018	OTH	2018	350	280	70	0
12	5311C-21	0478-XXXX		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 CAPITAL FY 2018	OTH	2018	600	480	120	0
									2018 Total	1,475	1,180	295	0
3,4	5311C-21	0472-XXXX		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 CAPITAL FY 2019	OTH	FYI	300	240	60	0
13	5311C-21	0474-XXXX		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 CAPITAL FYI	OTH	FYI	225	180	45	0
15	5311C-21	0476-XXXX		X6	NECT TD	KILLINGLY	NECT TD - SECTION 5311 CAPITALFY 2019	OTH	FYI	350	280	70	0
12	5311C-21	0478-XXXX		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 CAPITAL FY 2019	OTH	FYI	600	480	120	0
11	5311C-21	0480-XXXX		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - SECTION 5311 CAPITAL FY 2019	OTH	FYI	50	40	10	0
									FYI Total	1,525	1,220	305	0
3,4	5311O-21	0472-0059		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 OPERATING - FY 2015	OTH	2015	862	431	285	147
3,4	5311O-21	0472-XXXX		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 OPERATING (DIAL-A-RIDE) - FY 2015	OTH	2015	23	0	23	0
13	5311O-21	0474-0082		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 OPERATING - FY 2015	OTH	2015	988	494	326	168
13	5311O-21	0474-XXXX		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 OPERATING (ADA TRANSIT) - FY 2015	OTH	2015	36	0	18	18
13	5311O-21	0474-XXXX		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 OPERATING (WILLIMANTIC-DANIELSON) - FY 2015	OTH	2015	42	0	42	0
15	5311O-21	0476-0062		X6	NECT TD	KILLINGLY	NECT TD - SECTION 5311 OPERATING - FY 2015	OTH	2015	534	267	176	91
12	5311O-21	0478-0069		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 OPERATING SHUTTLE (SHORELINE) - FY 2015	OTH	2015	600	300	300	0
12	5311O-21	0478-0070		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 OPERATING RURAL - FY 2015	OTH	2015	240	120	79	41
12	5311O-21	0478-XXXX		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 OPERATING SHUTTLE (SOUTHEAST) - FY 2015	OTH	2015	88	0	88	0
11	5311O-21	0480-0053		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - SECTION 5311 OPERATING - FY 2015	OTH	2015	133	66	44	23
									2015 Total	3,546	1,678	1,381	487
3,4	5311O-21	0472-0059		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 OPERATING - FY 2016	OTH	2016	888	444	293	151
3,4	5311O-21	0472-XXXX		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 OPERATING (DIAL-A-RIDE) - FY 2016	OTH	2016	24	0	24	0
13	5311O-21	0474-0082		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 OPERATING - FY 2016	OTH	2016	1,018	509	336	173
13	5311O-21	0474-XXXX		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 OPERATING (ADA TRANSIT) - FY 2016	OTH	2016	37	0	19	19
13	5311O-21	0474-XXXX		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 OPERATING (WILLIMANTIC-DANIELSON) - FY 2016	OTH	2016	43	0	43	0
15	5311O-21	0476-0062		X6	NECT TD	KILLINGLY	NECT TD - SECTION 5311 OPERATING - FY 2016	OTH	2016	550	275	181	93
12	5311O-21	0478-0069		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 OPERATING SHUTTLE (SHORELINE) - FY 2016	OTH	2016	618	309	309	0
12	5311O-21	0478-0070		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 OPERATING RURAL - FY 2016	OTH	2016	247	123	81	42
12	5311O-21	0478-XXXX		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 OPERATING SHUTTLE (SOUTHEAST) - FY 2016	OTH	2016	91	0	91	0
11	5311O-21	0480-0053		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - SECTION 5311 OPERATING - FY 2016	OTH	2016	137	68	45	23
									2016 Total	3,653	1,729	1,423	501
3,4	5311O-21	0472-0059		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 OPERATING - FY 2017	OTH	2017	915	457	302	156
3,4	5311O-21	0472-XXXX		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 OPERATING (DIAL-A-RIDE) - FY 2017	OTH	2017	25	0	25	0
13	5311O-21	0474-0082		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 OPERATING - FY 2017	OTH	2017	1,048	524	346	178
13	5311O-21	0474-XXXX		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 OPERATING (ADA TRANSIT) - FY 2017	OTH	2017	38	0	19	19
13	5311O-21	0474-XXXX		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 OPERATING (WILLIMANTIC-DANIELSON) - FY 2017	OTH	2017	45	0	45	0
15	5311O-21	0476-0062		X6	NECT TD	KILLINGLY	NECT TD - SECTION 5311 OPERATING - FY 2017	OTH	2017	566	283	187	96
12	5311O-21	0478-0069		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 OPERATING SHUTTLE (SHORELINE) - FY 2017	OTH	2017	636	318	318	0
12	5311O-21	0478-0070		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 OPERATING RURAL - FY 2017	OTH	2017	254	127	84	43
12	5311O-21	0478-XXXX		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 OPERATING SHUTTLE (SOUTHEAST) - FY 2017	OTH	2017	94	0	94	0
11	5311O-21	0480-0053		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - SECTION 5311 OPERATING - FY 2017	OTH	2017	141	70	46	24
									2017 Total	3,762	1,780	1,465	516
3,4	5311O-21	0472-0059		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 OPERATING - FY 2018	OTH	2018	942	471	311	160
3,4	5311O-21	0472-XXXX		X6	NWCT TD	TORRINGTON	NWCT TD - SECTION 5311 OPERATING (DIAL-A-RIDE) - FY 2018	OTH	2018	25	0	25	0
13	5311O-21	0474-0082		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 OPERATING - FY 2018	OTH	2018	1,242	524	540	178
13	5311O-21	0474-XXXX		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 OPERATING (ADA TRANSIT) - FY 2018	OTH	2018	40	0	20	20
13	5311O-21	0474-XXXX		X6	WINDHAM TD	WINDHAM	WINDHAM TD - SECTION 5311 OPERATING (WILLIMANTIC-DANIELSON) - FY 2018	OTH	2018	46	0	46	0
15	5311O-21	0476-0062		X6	NECT TD	KILLINGLY	NECT TD - SECTION 5311 OPERATING - FY 2018	OTH	2018	583	292	192	99
12	5311O-21	0478-0069		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 OPERATING SHUTTLE (SHORELINE) - FY 2018	OTH	2018	655	328	328	0
12	5311O-21	0478-0070		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 OPERATING RURAL - FY 2018	OTH	2018	262	131	86	45
12	5311O-21	0478-XXXX		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 OPERATING SHUTTLE (SOUTHEAST) - FY 2018	OTH	2018	97	0	97	0
11	5311O-21	0480-0053		X6	MIDDLETOWN TD	MIDDLETOWN	MIDDLETOWN TD - SECTION 5311 OPERATING - FY 2018	OTH	2018	145	72	48	25
									2018 Total	4,038	1,818	1,693	526
70	5311T-21	0170-XXXX		X6	SECTION 5311	VARIOUS	SECTION 5311 PROG ADJUST TO ACTUAL APPR, ADMIN & RTAP PROG FFY 2015	OTH	2015	920	920	0	0
									2015 Total	920	920	0	0
70	5311T-21	0170-XXXX		X6	SECTION 5311	VARIOUS	SECTION 5311 PROG ADJUST TO ACTUAL APPR, ADMIN & RTAP PROG FFY 2016	OTH	2016	948	948	0	0
									2016 Total	948	948	0	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
70	5311T-21	0170-XXXX		X6	SECTION 5311	VARIOUS	SECTION 5311 PROG ADJUST TO ACTUAL APPR, ADMIN & RTAP PROG FFY 2017	OTH	2017	976	976	0	0
									2017 Total	976	976	0	0
70	5311T-21	0170-XXXX		X6	SECTION 5311	VARIOUS	SECTION 5311 PROG ADJUST TO ACTUAL APPR, ADMIN & RTAP PROG FFY 2018	OTH	2018	1,005	1,005	0	0
									2018 Total	1,005	1,005	0	0
70	5316H	0170-T798	OTHR-RURL	X6	VARIOUS BUS	RURAL	JOB ACCESS AND REVERSE COMMUTE - RURAL	OTH	2015	207	104	0	104
80	5316H	0170-T798	NHVN-URBN	X6	VARIOUS BUS	NEW HAVEN URBANIZED AREA	JOB ACCESS AND REVERSE COMMUTE - NEW HAVEN	OTH	2015	623	312	0	312
70	5316H	0170-T798	BPSM-URBN	X6	VARIOUS BUS	BRPT/STFD URBAN AREA	JOB ACCESS AND REVERSE COMMUTE - BRIDGEPORT/STAMFORD	OTH	2015	810	405	0	405
70	5316H	0170-T798	OTHR-URBN	X6	VARIOUS BUS	OTHER URBAN AREA	JOB ACCESS AND REVERSE COMMUTE - OTHER URBAN AREA	OTH	2015	869	435	0	435
70	5316H	0170-T798	HTFD-URBN	X6	VARIOUS BUS	HARTFORD URBANIZED AREA	JOB ACCESS AND REVERSE COMMUTE - HARTFORD	OTH	2015	979	489	0	489
									2015 Total	3,489	1,744	0	1,744
70	5316H	0170-T798	OTHR-RURL	X6	VARIOUS BUS	RURAL	JOB ACCESS AND REVERSE COMMUTE - RURAL	OTH	2016	218	109	0	109
80	5316H	0170-T798	NHVN-URBN	X6	VARIOUS BUS	NEW HAVEN URBANIZED AREA	JOB ACCESS AND REVERSE COMMUTE - NEW HAVEN	OTH	2016	654	327	0	327
70	5316H	0170-T798	BPSM-URBN	X6	VARIOUS BUS	BRPT/STFD URBAN AREA	JOB ACCESS AND REVERSE COMMUTE - BRIDGEPORT/STAMFORD	OTH	2016	851	425	0	425
70	5316H	0170-T798	OTHR-URBN	X6	VARIOUS BUS	OTHER URBAN AREA	JOB ACCESS AND REVERSE COMMUTE - OTHER URBAN AREA	OTH	2016	913	456	0	456
70	5316H	0170-T798	HTFD-URBN	X6	VARIOUS BUS	HARTFORD URBANIZED AREA	JOB ACCESS AND REVERSE COMMUTE - HARTFORD	OTH	2016	1,028	514	0	514
									2016 Total	3,663	1,832	0	1,832
70	5317J	0170-TNF1	HTFD-URBN	X6	VARIOUS BUS	HARTFORD URBANIZED AREA	NEW FREEDOM - HARTFORD	OTH	2015	737	369	0	369
80	5317J	0170-TNF2	NHVN-URBN	X6	VARIOUS BUS	NEW HAVEN URBANIZED AREA	NEW FREEDOM - NEW HAVEN	OTH	2015	449	225	0	225
70	5317J	0170-TNF3	BPSM-URBN	X6	VARIOUS BUS	BRPT/STFD URBAN AREA	NEW FREEDOM - BRIDGEPORT/STAMFORD	OTH	2015	710	355	0	355
70	5317J	0170-TNF5	OTHR-RURL	X6	VARIOUS BUS	RURAL	NEW FREEDOM - RURAL	OTH	2015	219	110	0	110
									2015 Total	2,116	1,058	0	1,058
70	5317J	0170-TNF1	HTFD-URBN	X6	VARIOUS BUS	HARTFORD URBANIZED AREA	NEW FREEDOM - HARTFORD	OTH	2016	774	387	0	387
80	5317J	0170-TNF2	NHVN-URBN	X6	VARIOUS BUS	NEW HAVEN URBANIZED AREA	NEW FREEDOM - NEW HAVEN	OTH	2016	472	236	0	236
70	5317J	0170-TNF3	BPSM-URBN	X6	VARIOUS BUS	BRPT/STFD URBAN AREA	NEW FREEDOM - BRIDGEPORT/STAMFORD	OTH	2016	745	373	0	373
70	5317J	0170-TNF5	OTHR-RURL	X6	VARIOUS BUS	RURAL	NEW FREEDOM - RURAL	OTH	2016	230	115	0	115
									2016 Total	2,221	1,111	0	1,111
70	5312	0170-XXXY	0170-XXXX	X6	GBT/CT TRANSIT HARTFORD	HARTFORD/BRIDGEPORT	(LONO DISCREATIONARY GRANT ELECTRIC BUSES & EQUIP)	OTH	2016	12,000	10,000	2,000	0
									2016 Total	12,000	10,000	2,000	0
10	5337P	0400-XXXX		X6	CTTRANSIT	VARIOUS	REHAB CTTRANSIT HARTFORD FACILITY & PARK & RIDE LOTS FY 16	ALL	2016	3,833	3,066	767	0
									2016 Total	3,833	3,066	767	0
79	5339	0400-XXXX		X6	CTTRANSIT	VARIOUS	CTTRANSIT SYSTEMWIDE BUS REPLACEMENTS	ACQ	2016	6,700	5,360	1,340	0
									2016 Total	6,700	5,360	1,340	0
79	5339	0400-XXXX		X6	CTTRANSIT	VARIOUS	CTTRANSIT SYSTEMWIDE BUS REPLACEMENTS	ACQ	2017	6,700	5,360	1,340	0
									2017 Total	6,700	5,360	1,340	0
79	5339	0400-XXXX		X6	CTTRANSIT	VARIOUS	CTTRANSIT SYSTEMWIDE BUS REPLACEMENTS	ACQ	2018	6,700	5,360	1,340	0
									2018 Total	6,700	5,360	1,340	0
10	BRX	0063-0699		X6	I-84	HARTFORD	REHAB BRIDGES 03160A-D, 03301 & 03303 - HARTFORD VIADUCT	FD	2015	1,250	1,125	125	0
08	BRX	0092-0522		X6	I-95	NEW HAVEN	REPLACE BR 00163A OVER WEST RIVER - AC ENTRY	CON	2015	0	0	0	0
08	BRX	0092-0522		X6	I-95	NEW HAVEN	REPLACE BR 00163A OVER WEST RIVER - AC CONVERSION	CON	2015	10,000	9,000	1,000	0
									2015 Total	11,250	10,125	1,125	0
10	BRX	0063-0699		X6	I-84	HARTFORD	REHAB BRIDGES 03160A-D, 03301 & 03303 - HARTFORD VIADUCT	CON	2016	99	89	10	0
08	BRX	0092-0522		X6	I-95	NEW HAVEN	REPLACE BR 00163A o/ WEST RIVER - AC CONVERSION	CON	2016	5,556	5,000	556	0
									2016 Total	5,654	5,089	565	0
08	BRZ	0061-0150		X6	SKIFF STREET	HAMDEN	REPLACE BR 04127 O/ MILL RIVER	CON	2015	5,361	4,289	0	1,072
10	BRZ	0088-0186		X6	CURTIS ST	NEW BRITAIN	REHAB BR 02917 CURTIS ST OVER ROUTE 72	FD	2015	400	320	80	0
01	BRZ	0102-0319		X6	PERRY AVE	NORWALK	REHAB BR 04154 o/ NORWALK RIVER	CON	2015	5,000	4,000	1,000	0
									2015 Total	10,761	8,609	1,080	1,072
10	BRZ	0023-0127		X6	TOWN BRIDGE RD	CANTON	REHAB/REPLACE BR 05222 OVER FARMINGTON RV	CON	2016	6,288	5,030	0	1,258
10	BRZ	0023-0127		X6	TOWN BRIDGE RD	CANTON	REHAB/REPLACE BR 05222 OVER FARMINGTON RV	ROW	2016	51	41	0	10
10	BRZ	0088-0186		X6	CURTIS ST	NEW BRITAIN	REHAB BR 02917 CURTIS ST OVER ROUTE 72	CON	2016	6,000	4,800	1,200	0
									2016 Total	12,339	9,871	1,200	1,268
07	CMAQ	0015-0344		X6	I-95	BRIDGEPORT	ROUTE 8 AREA VMS	CON	2015	0	0	0	0
07	CMAQ	0015-0344		X6	I-95	BRIDGEPORT	ROUTE 8 AREA VMS	CON	2015	3,200	3,200	0	0
07	CMAQ	0015-0345		X6	I-95	BRIDGEPORT	ROUTE 8 AREA CCTV	CON	2015	0	0	0	0
07	CMAQ	0015-0345		X6	I-95	BRIDGEPORT	ROUTE 8 AREA CCTV	CON	2015	3,500	3,500	0	0
10	CMAQ	0053-0187		X7	GRISWOLD ST	GLASTONBURY	INT. IMPR. @ HARRIS ST & HOUSE ST	CON	2015	1,566	1,124	0	442
07	CMAQ	0084-0108		X7	CT111 / CT110	MONROE	CONSTRUCT ROUNDABOUT AT CT111/110	ROW	2015	325	260	65	0
08	CMAQ	0092-0666		X8	VARIOUS	NEW HAVEN	TRAFFIC SIGNAL UPGRADE @ 15 LOCATIONS	CON	2015	2,665	2,665	0	0
75	CMAQ	0170-3106	0170-3033	X6	VARIOUS	STATEWIDE	FY13: STATEWIDE MARKETING (NY-NJ-CT MODERATE) -TRANSFER TO FTA (5307S)	OTH	2015	1,525	1,220	305	0
76	CMAQ	0170-3107	0170-3032	X6	VARIOUS	STATEWIDE	FY 13: STATEWIDE MARKETING (GR.CT MODERATE)-TRANSFER TO FTA (5307S)	OTH	2015	975	780	195	0
70	CMAQ	0170-3118		X6	VARIOUS	STATEWIDE	FY15: CT CLEAN FUELS (NY-NJ-CT)	OTH	2015	1,156	925	0	231
70	CMAQ	0170-3119		X6	VARIOUS	STATEWIDE	FY15: CT CLEAN FUELS (GREATER CT)	OTH	2015	1,156	925	0	231
70	CMAQ	0170-3120		X6	VARIOUS	STATEWIDE	FY15: STATEWIDE TRANS DEMAND MGMNT (NY-NJ-CT)	OTH	2015	3,177	2,542	635	0
70	CMAQ	0170-3121		X6	VARIOUS	STATEWIDE	FY15: STATEWIDE TRANS DEMAND MGMNT (GREATER CT)	OTH	2015	1,994	1,595	399	0
75	CMAQ	0170-3122		X6	VARIOUS	STATEWIDE	FY15: TELECOMMUTING PARTNERSHIP (NY-NJ-CT)	OTH	2015	440	352	88	0
70	CMAQ	0170-3123		X6	VARIOUS	STATEWIDE	FY15: TELECOMMUTING PARTNERSHIP (GREATER CT)	OTH	2015	276	221	55	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
70	CMAQ	0170-3126		X6	VARIOUS	STATEWIDE	FY15: ADVANCED TECH BUSES (GREATER CT)	OTH	2015	4,150	3,320	830	0
71	CMAQ	0171-0305		X6	CT FASTRAK	HARTFORD/NEW BRITAIN	CT FASTRAK OPERATING FUNDS-TRANSFER TO FTA (5307S)	OTH	2015	25,500	20,400	5,100	0
71	CMAQ	0171-0375		X6	VARIOUS	DISTRICT 1	INSTALL OSTA TRAFFIC SIGNALS	PD	2015	137	137	0	0
71	CMAQ	0171-0375		X6	VARIOUS	DISTRICT 1	REPLACE VMS: I-91, 84, 384, CT2, 5, 15,20	FD	2015	431	431	0	0
07	CMAQ	0410-0049		X6	GBTA	BRIDGEPORT	GBTA - REPLACE 25 2003 35-FOOT AND 15 2003 40-FOOT BUSES FOR FIXED ROUTE SERVICE-FUNDS TRANSFER TO FTA (5307S)	OTH	2015	13,500	10,800	2,700	0
									2015 Total	65,673	54,397	10,372	904
07	CMAQ	0015-0344		X6	I-95	BRIDGEPORT	ROUTE 8 AREA VMS	CON	2016	3,200	3,200	0	0
07	CMAQ	0015-0345		X6	I-95	BRIDGEPORT	ROUTE 8 AREA CCTV	CON	2016	3,500	3,500	0	0
07	CMAQ	0015-0365		X8	WASHINGTON AVE	BRIDGEPORT	TRAFFIC SIGNAL SYSTEM (5 LOCATIONS) (FD)	FD	2016	75	60	15	0
07	CMAQ	0015-0374		X6	TRAIL	BRIDGEPORT	PEQUONNOCK RIVER TRAIL EXTENSION	PD	2016	245	100	120	25
07	CMAQ	0015-0376		X8	PARK AVENUE	BRIDGEPORT	TRAFFIC SIGNAL MODERNIZATION AT VARIOUS INTERSECTIONS ON PARK AVENUE	PD	2016	220	220	0	0
01	CMAQ	0056-0315		X8	GLENVILLE CORRIDOR	GREENWICH	SIGNAL OPTIMIZATION AND INTERSECTION IMPROVEMENTS	PD	2016	275	275	0	0
10	CMAQ	0063-0690		X8	VARIOUS	HARTFORD	TRAFFIC SIGNAL UPGRADE AT 14 LOCATIONS	FD	2016	90	90	0	0
08	CMAQ	0079-0241		X8	VARIOUS	MERIDEN	TRAFFIC SIGNAL MODERIZATION AT VARIOUS INTERSECTIONS	PD	2016	280	280	0	0
08	CMAQ	0083-XXXX		X6	CITY OF MILFORD/MILFORD TD	MILFORD	CITY OF MILFORD/MTD- BIKE LOCKERS AT MILFORD RR STATION- TRANSFER TO FTA 5307S	OTH	2016	70	56	0	14
10	CMAQ	0088-0192		X8	VARIOUS	NEW BRITAIN	TRAFFIC SIGNAL MODERIZATION AT VARIOUS INTERSECTIONS	PD	2016	175	175	0	0
08	CMAQ	0092-0646		X6	I-95/I-91	NEW HAVEN	NEW HAVEN AREA VMS UPGRADES	CON	2016	0	0	0	0
08	CMAQ	0092-0646		X6	I-95/I-91	NEW HAVEN	NEW HAVEN AREA VMS UPGRADES (FD)	FD	2016	400	400	0	0
08	CMAQ	0092-0647		X6	I-95/I-91	NEW HAVEN	NEW HAVEN AREA CCTV UPGRADES (100% FEDERAL)	CON	2016	0	0	0	0
08	CMAQ	0092-0647		X6	I-95/I-91	NEW HAVEN	NEW HAVEN AREA CCTV UPGRADES	FD	2016	400	360	40	0
08	CMAQ	0092-0666		X8	VARIOUS	NEW HAVEN	TRAFFIC SIGNAL UPGRADES AT 15 LOCATIONS	FD	2016	215	215	0	0
01	CMAQ	0102-0347		X8	VARIOUS	NORWALK	TRAFFIC SIGNAL UPGRADE AT 10 LOCATIONS	FD	2016	175	175	0	0
10	CMAQ	0118-0170		X8	RT 3/99/411	ROCKY HILL	REPLACE AND UPGRADE COMPUTERIZED TRAFFIC SIGNAL SYSTEM AT VARIOUS INTERSECTIONS	PD	2016	1,133	906	227	0
01	CMAQ	0135-0337		X8	VARIOUS	STAMFORD	TRAFFIC SIGNAL MODERNIZATION AT VARIOUS INTERSECTIONS	PD	2016	100	100	0	0
10	CMAQ	0164-0240		X8	DAY HILL ROAD	WINDSOR	TRAFFIC SIGNAL MODERNIZATION AT VARIOUS INTERSECTIONS ALONG DAY HILL ROAD	PD	2016	120	120	0	0
70	CMAQ	0170-3124		X6	VARIOUS	STATEWIDE	FY15: STATEWIDE MARKETING (NY-NJ-CT)	OTH	2016	733	586	147	0
76	CMAQ	0170-3125		X6	VARIOUS	GREATER CT MODERATE NON-ATTAINMENT F	FY15: STATEWIDE MARKETING (GREATER CT MODERATE)- TRANSFER TO FTA (5307S)	OTH	2016	460	368	92	0
70	CMAQ	0170-3400		X6	VARIOUS	STATEWIDE	FY16: STATEWIDE TRANS DEMAND MGMNT (GREATER CT MODERATE)	OTH	2016	1,595	1,276	319	0
70	CMAQ	0170-3399		X6	VARIOUS	STATEWIDE	FY16: STATEWIDE TRANS DEMAND MGMNT (NY-NJ-CT MODERATE)	OTH	2016	2,542	2,034	508	0
70	CMAQ	0170-3401		X6	VARIOUS	STATEWIDE	FY16: TELECOMMUTING PARTNERSHIP (NY-NJ-CT MODERATE)	OTH	2016	352	282	70	0
70	CMAQ	0170-3402		X6	VARIOUS	STATEWIDE	FY16: TELECOMMUTING PARTNERSHIP (GREATER CT MODERATE)	OTH	2016	221	177	44	0
70	CMAQ	0170-3406		X6	VARIOUS	STATEWIDE	FY16: STATEWIDE MARKETING (NY-NJ-CT MODERATE)	OTH	2016	755	604	151	0
70	CMAQ	0170-3407		X6	VARIOUS	STATEWIDE	FY16: STATEWIDE MARKETING (GREATER CT MODERATE)	OTH	2016	474	379	95	0
71	CMAQ	0171-0305		X6	CT FASTRAK	HARTFORD/NEW BRITAIN	CT FASTRAK OPERATING FUNDS-TRANSFER TO FTA (5307S)	OTH	2016	15,000	12,000	3,000	0
71	CMAQ	0171-0375		X6	REPLACE VMS: I-91, 84, 384, CT2, 5, 15, 20	DISTRICT 1	REPLACE VMS: I-91, 84, 384, CT2, 5, 15, 20	CON	2016	10,700	10,700	0	0
71	CMAQ	0171-0413		X6	I-91	CROMWELL/MERIDEN	I-91 CCTV INSTALLATION	PD	2016	665	599	67	0
71	CMAQ	0171-0414		X6	I-691	SOUTHINGTON/MERIDEN	I-691 CCTV INSTALLATION	PD	2016	665	599	67	0
71	CMAQ	0171-0415		X6	RT 9/72	FARMINGTON/CROMWELL	RT 9/72 CCTV INSTALLATION	PD	2016	850	680	170	0
07	CMAQ	0410-XXXX		X6	GBTA	BRIDGEPORT	GBTA- REAL-TIME PASSENGER INFORMATION SIGNAGE AT MAJOR HUBS-TRANSFER TO FTA 5307S	OTH	2016	217	174	0	43
01	CMAQ	0416-0076		X6	HART	DANBURY	HART - RESERVE COMMUTER CONNECTION - TRANSFER TO FTA	OTH	2016	257	206	51	0
11	CMAQ	0478-0077		X6	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - MADISON TO MIDDLETOWN BUS ROUTE - TRANSFER TO FTA	OTH	2016	472	377	94	0
									2016 Total	46,631	41,271	5,277	82
07	CMAQ	0015-0365		X8	WASHINGTON AVE	BRIDGEPORT	TRAFFIC SIGNAL SYSTEM (5 LOCATIONS)	CON	2017	2,250	1,780	445	0
07	CMAQ	0015-0374		X6	TRAIL	BRIDGEPORT	PEQUONNOCK RIVER TRAIL EXTENSION	FD	2017	90	72	0	18
01	CMAQ	0056-0312		X8	VARIOUS	GREENWICH	TRAFFIC SIGNAL UPGRADE	CON	2017	2,500	2,500	0	0
01	CMAQ	0056-0312		X8	VARIOUS	GREENWICH	TRAFFIC SIGNAL UPGRADE	FD	2017	200	200	0	0
01	CMAQ	0056-0315		X8	GLENVILLE CORRIDOR	GREENWICH	SIGNAL OPTIMIZATION AND INTERSECTION IMPROVEMENTS	FD	2017	225	225	0	0
10	CMAQ	0063-0690		X8	VARIOUS	HARTFORD	TRAFFIC SIGNAL UPGRADE AT 14 LOCATIONS	CON	2017	2,700	2,700	0	0
07	CMAQ	0084-0108		X7	CT111 / CT110	MONROE	CONSTRUCT ROUNDABOUT AT CT111/110	CON	2017	3,900	3,120	780	0
08	CMAQ	0092-0646		X6	I-95/I-91	NEW HAVEN	NEW HAVEN AREA VMS UPGRADES (100% FEDERAL)	CON	2017	0	0	0	0
08	CMAQ	0092-0647		X6	I-95/I-91	NEW HAVEN	NEW HAVEN AREA CCTV UPGRADES (100% FEDERAL)	CON	2017	0	0	0	0
08	CMAQ	0092-0646		X6	I-95/I-91	NEW HAVEN	NEW HAVEN AREA VMS UPGRADES (100% FEDERAL)	CON	2017	4,250	4,250	0	0
08	CMAQ	0092-0647		X6	I-95/I-91	NEW HAVEN	NEW HAVEN AREA CCTV UPGRADES (100% FEDERAL)	CON	2017	2,750	2,475	275	0
08	CMAQ	0092-0666		X8	VARIOUS	NEW HAVEN	TRAFFIC SIGNAL UPGRADES @ 15 LOCATIONS	CON	2017	2,525	2,525	0	0
08	CMAQ	0092-0682		X8	CT 34/SR 706	NEW HAVEN	TRAFFIC SIGNAL MODERNIZATION AT VARIOUS INTERSECTIONS	PD	2017	246	246	0	0
01	CMAQ	0102-0347		X8	VARIOUS	NORWALK	TRAFFIC SIGNAL UPGRADE AT 10 LOCATIONS	CON	2017	2,750	2,750	0	0
01	CMAQ	0102-0360		X8	VARIOUS	NORWALK	UPGRADE TRAFFIC SIGNALS & INSTALL DYNAMIC MESSAGE SIGNS	PD	2017	375	375	0	0
05	CMAQ	0151-0325		X8	VARIOUS	WATERBURY	TRAFFIC SIGNAL UPGRADE AT 15 LOCATIONS	CON	2017	2,780	2,780	0	0
05	CMAQ	0151-0325		X8	VARIOUS	WATERBURY	TRAFFIC SIGNAL UPGRADE AT 15 LOCATIONS	FD	2017	88	88	0	0
71	CMAQ	0171-0305		X6	CT FASTRAK	HARTFORD/NEW BRITAIN	CT FASTRAK OPERATING FUNDS-TRANSFER TO FTA (5307S)	OTH	2017	15,000	12,000	3,000	0
71	CMAQ	0171-0413		X6	I-91	CROMWELL/MERIDEN	I-91 CCTV INSTALLATION	FD	2017	285	257	29	0
71	CMAQ	0171-0414		X6	I-691	SOUTHINGTON/MERIDEN	I-691 CCTV INSTALLATION	FD	2017	285	257	29	0
71	CMAQ	0171-0415		X6	RT 9/72	FARMINGTON/CROMWELL	RT 9/72 CCTV INSTALLATION	FD	2017	365	292	73	0
11	CMAQ	0171-0416		X6	RT 9	CROMWELL/MIDDLETOWN	RT 9 CCTV INSTALLATION	PD	2017	340	272	68	0
									2017 Total	41,655	37,384	4,253	18
07	CMAQ	0015-0374		X6	TRAIL	BRIDGEPORT	PEQUONNOCK RIVER TRAIL EXTENSION	CON	2018	1,600	1,280	0	320

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
07	CMAQ	0015-0376		X8	PARK AVENUE	BRIDGEPORT	TRAFFIC SIGNAL MODERNIZATION AT VARIOUS INTERSECTIONS ON PARK AVENUE	FD	2018	225	225	0	0
08	CMAQ	0079-0241		X8	VARIOUS	MERIDEN	TRAFFIC SIGNAL MODERIZATION AT VARIOUS INTERSECTIONS	FD	2018	300	300	0	0
10	CMAQ	0088-0192		X8	VARIOUS	NEW BRITAIN	TRAFFIC SIGNAL MODERIZATION AT VARIOUS INTERSECTIONS	FD	2018	125	125	0	0
08	CMAQ	0092-0646		X6	I-95/I-91	NEW HAVEN	NEW HAVEN AREA VMS UPGRADES	CON	2018	4,250	4,250	0	0
08	CMAQ	0092-0647		X6	I-95/I-91	NEW HAVEN	NEW HAVEN AREA CCTV UPGRADES	CON	2018	2,750	2,475	275	0
08	CMAQ	0092-0682		X8	CT 34/SR 706	NEW HAVEN	TRAFFIC SIGNAL MODERNIZATION AT VARIOUS INTERSECTIONS	FD	2018	114	114	0	0
01	CMAQ	0102-0360		X8	VARIOUS	NORWALK	UPGRADE TRAFFIC SIGNALS & INSTALL DYNAMIC MESSAGE SIGNS	FD	2018	460	460	0	0
10	CMAQ	0118-0170		X8	RT 3/99/411	ROCKY HILL	REPLACE AND UPGRADE COMPUTERIZED TRAFFIC SIGNAL SYSTEM AT VARIOUS INTERSECTIONS	FD	2018	486	389	97	0
10	CMAQ	0118-0170		X8	RT 3/99/411	ROCKY HILL	REPLACE AND UPGRADE COMPUTERIZED TRAFFIC SIGNAL SYSTEM AT VARIOUS INTERSECTIONS	ROW	2018	180	144	36	0
01	CMAQ	0135-0337		X8	VARIOUS	STAMFORD	TRAFFIC SIGNAL MODERNIZATION AT VARIOUS INTERSECTIONS	FD	2018	100	100	0	0
10	CMAQ	0164-0240		X8	DAY HILL ROAD	WINDSOR	TRAFFIC SIGNAL MODERNIZATION AT VARIOUS INTERSECTIONS ALONG DAY HILL ROAD	FD	2018	145	145	0	0
71	CMAQ	0171-0413		X6	I-91	CROMWELL/MERIDEN	I-91 CCTV INSTALLATION	CON	2018	9,484	8,536	948	0
71	CMAQ	0171-0414		X6	I-691	SOUTHINGTON/MERIDEN	I-691 CCTV INSTALLATION	CON	2018	9,445	8,501	945	0
71	CMAQ	0171-0415		X6	RT 9/72	FARMINGTON/CROMWELL	RT 9/72 CCTV INSTALLATION	CON	2018	12,076	9,661	2,415	0
11	CMAQ	0171-0416		X6	RT 9	CROMWELL/MIDDLETOWN	RT 9 CCTV INSTALLATION	FD	2018	150	120	30	0
									2018 Total	41,890	36,824	4,746	320
07	CMAQ	0015-0376		X8	PARK AVENUE	BRIDGEPORT	TRAFFIC SIGNAL MODERNIZATION AT VARIOUS INTERSECTIONS ON PARK AVENUE	CON	FYI	2,755	2,755	0	0
01	CMAQ	0056-0315		X8	GLENVILLE CORRIDOR	GREENWICH	SIGNAL OPTIMIZATION AND INTERSECTION IMPROVEMENTS	CON	FYI	1,750	1,750	0	0
08	CMAQ	0079-0241		X8	VARIOUS	MERIDEN	TRAFFIC SIGNAL MODERIZATION AT VARIOUS INTERSECTIONS	CON	FYI	2,609	2,609	0	0
10	CMAQ	0088-0192		X8	VARIOUS	NEW BRITAIN	TRAFFIC SIGNAL MODERIZATION AT VARIOUS INTERSECTIONS	CON	FYI	2,750	2,750	0	0
08	CMAQ	0092-0682		X8	CT 34/SR 706	NEW HAVEN	TRAFFIC SIGNAL MODERNIZATION AT VARIOUS INTERSECTIONS	CON	FYI	1,572	1,572	0	0
01	CMAQ	0102-0360		X8	VARIOUS	NORWALK	UPGRADE TRAFFIC SIGNALS & INSTALL DYNAMIC MESSAGE SIGNS	CON	FYI	2,547	2,547	0	0
10	CMAQ	0118-0170		X8	RT 3/99/411	ROCKY HILL	REPLACE AND UPGRADE COMPUTERIZED TRAFFIC SIGNAL SYSTEM AT VARIOUS INTERSECTIONS	CON	FYI	10,800	8,640	2,160	0
01	CMAQ	0135-0337		X8	VARIOUS	STAMFORD	TRAFFIC SIGNAL MODERNIZATION AT VARIOUS INTERSECTIONS	CON	FYI	3,000	3,000	0	0
10	CMAQ	0164-0240		X8	DAY HILL ROAD	WINDSOR	TRAFFIC SIGNAL MODERNIZATION AT VARIOUS INTERSECTIONS ALONG DAY HILL ROAD	CON	FYI	1,155	1,155	0	0
11	CMAQ	0171-0416		X6	RT 9	CROMWELL/MIDDLETOWN	RT 9 CCTV INSTALLATION	CON	FYI	4,849	3,879	970	0
									FYI Total	33,787	30,657	3,130	0
11	FBD	0026-0124		X6	CHESTER-HADLYME	CHESTER	CHESTER - HADLYME FERRY OFFICE	PD	2015	225	140	85	0
									2015 Total	225	140	85	0
11	FBD	0026-0124		X6	CHESTER-HADLYME	CHESTER	CHESTER - HADLYME FERRY OFFICE	FD	2016	225	70	155	0
									2016 Total	225	70	155	0
07	FBD	0015-0312		NRS		BRIDGEPORT	HIGH SPEED FERRY TERMINAL	CON	2018	2,708	2,166	542	0
									2018 Total	2,708	2,166	542	0
10	FRA	0164-0239		X6	RR GRADE	WINDSOR	WINDSOR RR GRADE CROSSING IMPROVEMENT - FRA NOFA	ALL	2015	3,000	2,400	600	0
									2015 Total	3,000	2,400	600	0
03	HCBPP	0031-0131		X6	CT 128	CORNWALL	REHAB BR 01338 OVER HOUSATONIC RV	CON	2017	300	240	60	0
									2017 Total	300	240	60	0
07	HPPS	0015-0371		NRS	SEAVIEW AVE	BRIDGEPORT	SEAVIEW AVENUE CORRIDOR PROJECT	PD	2015	975	780	0	195
10	HPPS	0042-0300		X6	CHARTER OAK GREENWAY	EAST HARTFORD	CHARTER OAK GREENWAY MULTI-USE TRAIL	CON	2015	648	478	0	170
04	HPPS	0143-0184		X6	Main St	TORRINGTON	MAIN STREET STREETSCAPE	CON	2015	430	430	0	0
									2015 Total	2,053	1,688	0	365
06	HPPS	0002-0125		X6	VARIOUS	ANSONIA	ANSONIA PARK & RIVERWALK - PHASE 2	CON	2016	1,445	1,301	0	144
08	HPPS	0059-0162		X6	TRAIL	GUILFORD	CONSTRUCT 5,000' MULTI-USE TRAIL, MADISON TO CT146, ALONG US1	CON	2016	810	484	326	0
11	HPPS	0082-0308		X6		MIDDLETOWN	CENTRAL BUSINESS DISTRICT PARKING GARAGE	FD	2016	811	649	0	162
08	HPPS	0092-0621		X6		NEW HAVEN	FARMINGTON CANAL GREENWAY - AC ENTRY	CON	2016	0	0	0	0
08	HPP	0092-0621		X6		NEW HAVEN	FARMINGTON CANAL GREENWAY	CON	2016	157	126	0	31
08	HPPS	0092-0621		X6		NEW HAVEN	FARMINGTON CANAL GREENWAY	CON	2016	7,209	5,519	0	1,690
08	HPPS	0092-0680		CC	CT 34	NEW HAVEN	CONVERSION OF RT 34 FROM EXPRESSWAY TO AT-GRADE BLVD- PHASE 2(BREAKOUT OF 92-614)	ROW	2016	205	164	0	41
01	HPPS	0102-0325		X7	US 1	NORWALK	INTERSECTION IMPROVEMENT ON US RT 1 AT RT 53	CON	2016	1,605	1,284	321	0
03	HPPS	0121-0130		X6	US 44	SALISBURY	SAFETY IMPROVEMENT AT CT 41 (WEST JUNCTION)	CON	2016	699	559	140	0
08	HPPS	0156-0178		X6	WEST HAVEN STATION BIKE PATH	WEST HAVEN	SIDEWALK AND BIKE PATH STREETSCAPE	PD	2016	125	125	0	0
									2016 Total	13,066	10,211	787	2,069
08	HPPS	0014-0184		X6	TRAIL	BRANFORD	CONSTRUCT 3,000 FT MULTI-USE TRAIL, YOUNGS POND PARK TO TILCON ROAD	FD	2017	88	70	0	18
08	HPPS	0014-0184		X6	TRAIL	BRANFORD	CONSTRUCT 3,000 FT MULTI-USE TRAIL, YOUNGS POND PARK TO TILCON ROAD	CON	2017	600	364	0	236
07	HPPS	0015-0371		NRS	SEAVIEW AVE	BRIDGEPORT	SEAVIEW AVENUE CORRIDOR PROJECT	FD	2017	975	780	0	195
07	HPPS	0015-0371		NRS	SEAVIEW AVE	BRIDGEPORT	SEAVIEW AVENUE CORRIDOR PROJECT	ROW	2017	250	200	0	50
08	HPPS	0043-0129		X6	TRAIL	EAST HAVEN	PED & BIKE FACILITIES FOR SHORELINE GREENWAY TRAIL IN EAST HAVEN	FD	2017	112	90	0	22
08	HPPS	0043-0129		X6	TRAIL	EAST HAVEN	PED & BIKE FACILITIES FOR SHORELINE GREENWAY TRAIL IN EAST HAVEN	CON	2017	530	288	0	242
13	HPPS	0058-0283		X6		GROTON	MYSTIC STREETSCAPE EXT. (PHASE 3)	CON	2017	2,084	1,667	0	417
13	HPPS	0058-0308		X6	THOMAS ROAD	GROTON	BICYCLE/PEDESTRIAN FACILITY	CON	2017	1,024	819	0	205
10	HPPS	0063-0626		X6	HUYSHOPE AVE	HARTFORD	STREETSCAPE IMPROVEMENTS AT COLTSVILLE	CON	2017	3,900	3,120	0	780
08	HPPS	0075-0130		X6	TRAIL	MADISON	SHORELINE GREENWAY TRAIL	CON	2017	700	560	140	0
02	HPPS	0096-0192		X7	US 6	NEWTOWN	INTERSECTION & ROADWAY IMPROVEMENTS TO ROUTE 6, COMMERCE ROAD & EDMOND ROAD	CON	2017	2,515	2,012	503	0
08	HPPS	0100-0174		CC		NORTH HAVEN	CONSTRUCT VALLEY SERVICE RD	CON	2017	1,613	1,180	0	433

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
06	HPPS	0126-0163		X6	PED/BIKE	SHELTON	HOUSATONIC RIVERWALK	CON	2017	750	600	0	150
01	HPPS	0135-0301		X6	ATLANTIC STREET	STAMFORD	ATLANTIC ST RR BRIDGE OVERPASS	CON	2017	4,962	3,970	992	0
01	HPPS	0135-0335		X6	WEST MAIN STREET	STAMFORD	REPLACE BRIDGE 02212 OVER MILL RIVER	FD	2017	142	114	0	28
05	HPPS	0151-0321		X6	MULTI USE TRAIL	WATERBURY	MULTI-USE TRL ALONG S MAIN ST & PLATTS MILL RD	FD	2017	831	664	0	166
05	HPPS	0151-0321		X6	MULTI USE TRAIL	WATERBURY	MULTI-USE TRL ALONG S MAIN ST & PLATTS MILL RD	ROW	2017	166	133	0	33
05	HPPS	0151-0321		X6	MULTI USE TRAIL	WATERBURY	MULTI-USE TRL ALONG S MAIN ST & PLATTS MILL RD	CON	2017	4,748	3,993	0	755
08	HPPS	0156-0178		X6	WEST HAVEN STATION BIKE PATH	WEST HAVEN	SIDEWALK AND BIKE PATH STREETSCAPE	FD	2017	125	125	0	0
									2017 Total	26,114	20,748	1,635	3,730
07	HPPS	0015-0312		NRS	FERRY TERMINAL	BRIDGEPORT	HIGH SPEED FERRY TERMINAL	CON	2018	3,375	2,700	675	0
07	HPPS	0015-0371		NRS	SEAVIEW AVE	BRIDGEPORT	SEAVIEW AVENUE CORRIDOR PROJECT	CON	2018	12,269	9,815	0	2,454
06	HPPS	0036-0184		NRS	CT 34	DERBY	RECONSTRUCTION; BRIDGE ST. TO AUSONIO DR.	CON	2018	3,374	2,699	675	0
11	HPPS	0082-0308		X6	CBD PARKING	MIDDLETOWN	CENTRAL BUSINESS DISTRICT PARKING GARAGE	CON	2018	13,000	5,936	0	7,064
08	HPPS	0092-0614		CC	CT 34	NEW HAVEN	CONVERSION OF RT 34 FROM EXPRESSWAY TO AT-GRADE BLVD- (PHASE 3)	ROW	2018	109	88	0	22
									2018 Total	32,127	21,238	1,350	9,540
06	HPPS	0124-0165		X7	CT 67	SEYMOUR	SPOT IMPROVEMENT FROM SWAN TO FRANKLIN	CON	FYI	700	560	140	0
01	HPPS	0135-0335		X6	WEST MAIN STREET	STAMFORD	REPLACE BRIDGE 02212 OVER MILL RIVER	CON	FYI	4,148	1,350	0	2,798
08	HPPS	0156-0178		X6	WEST HAVEN STATION BIKE PATH	WEST HAVEN	SIDEWALK AND BIKE PATH STREETSCAPE	CON	FYI	724	724	0	0
									FYI Total	5,572	2,634	140	2,798
70	HSIP	0170-SFTY		X6	VARIOUS	STATEWIDE	SAFETY PROGRAM, HSIP - RURAL & OTHER.	ALL	2015	26,608	23,948	2,661	0
									2015 Total	26,608	23,948	2,661	0
70	HSIP	0170-SFTY		X6	VARIOUS	STATEWIDE	SAFETY PROGRAM, HSIP - RURAL & OTHER.	ALL	2016	26,608	23,948	2,661	0
									2016 Total	26,608	23,948	2,661	0
70	HSIP	0170-SFTY		X6	VARIOUS	STATEWIDE	SAFETY PROGRAM, HSIP - RURAL & OTHER.	ALL	2017	26,608	23,948	2,661	0
									2017 Total	26,608	23,948	2,661	0
70	HSIP	0170-SFTY		X6	VARIOUS	STATEWIDE	SAFETY PROGRAM, HSIP - RURAL & OTHER.	ALL	2018	26,608	23,948	2,661	0
									2018 Total	26,608	23,948	2,661	0
70	HSIP	0170-SFTY		X6	VARIOUS	STATEWIDE	SAFETY PROGRAM, HSIP - RURAL & OTHER.	ALL	FYI	26,608	23,948	2,661	0
									FYI Total	26,608	23,948	2,661	0
08	I-M	0092-0522		X6	I-95	NEW HAVEN	REPLACE BR 00163A OVER WEST RIVER - AC ENTRY	CON	2015	0	0	0	0
08	I-M	0092-0522		X6	I-95	NEW HAVEN	REPLACE BR 00163A OVER WEST RIVER - AC CONVERSION	CON	2015	9,167	8,250	917	0
08	I-M	0092-0531		CC	I-91/I-95	NEW HAVEN	INTERCHANGE RECONSTRUCTION, CONTRACT E - AC ENTRY	CON	2015	0	0	0	0
08	I-M	0092-0531		CC	I-91/I-95	NEW HAVEN	INTERCHANGE RECONSTRUCTION, CONTRACT E AT 90% - AC CONVERSION	CON	2015	5,333	4,800	533	0
									2015 Total	14,500	13,050	1,450	0
08	I-M	0092-0522		X6	I-95	NEW HAVEN	REPLACE BR 00163A o/ WEST RIVER - AC CONVERSION	CON	2016	3,333	3,000	333	0
									2016 Total	3,333	3,000	333	0
10	IMD	0042-0305		X6	SR 500	EAST HARTFORD	REHAB BR 02375 OVER I-84 EB & RAMP 833	CON	2015	5,300	4,240	1,060	0
05	IMD	0080-0128		CC	I-84	MIDDLEBURY	IMPROVEMENTS AT INTERCHANGE 17-AC ENTRY	PD	2015	0	0	0	0
05	IMD	0080-0128		CC	I-84	MIDDLEBURY	IMPROVEMENTS AT INTERCHANGE 17-AC CONVERSION	PD	2015	563	450	113	0
									2015 Total	5,863	4,690	1,173	0
05	NFRP	0151-0273			I-84	WATERBURY	UPGRADE EXPRESSWAY - PHASE 3 - AC ENTRY	CON	2016	0	0	0	0
05	NFRP	0151-0273			I-84	WATERBURY	UPGRADE EXPRESSWAY - PHASE 3 - AC CONVERSION	CON	2016	17,875	14,300	3,575	0
									2016 Total	17,875	14,300	3,575	0
05	NFRP	0151-0273			I-84	WATERBURY	UPGRADE EXPRESSWAY - PHASE 3 - AC CONVERSION	CON	2017	17,875	14,300	3,575	0
									2017 Total	17,875	14,300	3,575	0
07	NHPP	0015-0366		X6	VARIOUS	BRIDGEPORT	STAFF BRIDGEPORT OPS CENTER (FY14-17) - AC ENTRY	SF	2015	0	0	0	0
07	NHPP	0015-0366	0173-XXXX	X6	VARIOUS	BRIDGEPORT	STAFF BRIDGEPORT OPS CENTER (FY15) - AC CONCERSION	SF	2015	7,500	6,750	750	0
10	NHPP	0063-0702		X6	I-91	HARTFORD/WINDSOR	PAVEMENT PRESERVATION ON I-91	CON	2015	11,532	10,379	1,153	0
08	NHPP	0092-0531		CC	I-91/I-95	NEW HAVEN	INTERCHANGE RECONSTRUCTION, CONTRACT E @ 90% - AC ENTRY	CON	2015	0	0	0	0
08	NHPP	0092-0531		CC	I-91/I-95	NEW HAVEN	INTERCHANGE RECONSTRUCTION, CONTRACT E AT 90% - AC CONVERSION	CON	2015	23,111	20,800	2,311	0
10	NHPP	0093-0195		X6	VARIOUS	HARTFORD	STAFF NEWINGTON OPS CENTER (FY14-17) - AC ENTRY	SF	2015	0	0	0	0
10	NHPP	0093-0195	0170-XXXX	X6	VARIOUS	HARTFORD	STAFF NEWINGTON OPS CENTER (FY15) - AC CONVERSION	SF	2015	9,576	7,661	1,915	0
01	NHPP	0102-0358		NM	CT 7/15	NORWALK	NORWALK RT 7/15 INTERCHANGE - AC ENTRY	PD	2015	0	0	0	0
01	NHPP	0102-0358		NM	CT 7/15	NORWALK	NORWALK RT 7/15 INTERCHANGE - AC CONVERSION	PD	2015	5,000	4,000	1,000	0
05	NHPP	0130-0173		X7	I-84	SOUTHBURY	SHORT-TERM IMPROVEMENTS ON I-84 BETWEEN EXITS 14-16	ROW	2015	200	160	40	0
01	NHPP	0135-0270		X6	CT 15	STAMFORD	RESURFACING/SAFETY, STAMFORD TO NEW CANAAN	CON	2015	0	0	0	0
01	NHPP	0135-0270		X6	CT 15	STAMFORD	RESURFACING/SAFETY, STAMFORD TO NEW CANAAN	CON	2015	10,660	8,528	2,132	0
07	NHPP	0144-0193		X6	CT 25	TRUMBULL	ROUTE 25: UPDATE SIGNSALONG ROUTE 25 FROM ROUTE 15 TO ROUTE 111	CON	2015	7,000	5,600	1,400	0
07	NHPP	0144-0193		X6	CT 25	TRUMBULL	ROUTE 25: UPDATE SIGNSALONG ROUTE 25 FROM ROUTE 15 TO ROUTE 111	FD	2015	10	8	2	0
05	NHPP	0151-0273		CC	I-84	WATERBURY	UPGRADE EXPRESSWAY - PHASE 3 - AC ENTRY	CON	2015	0	0	0	0
05	NHPP	0151-0273		CC	I-84	WATERBURY	UPGRADE EXPRESSWAY - PHASE 3 - AC CONVERSION	CON	2015	17,135	17,135	0	0
08	NHPP	0156-0180		X6	I-95	WEST HAVEN/ORANGE	I-95 RESURFACING, BRIDGE & SAFETY IMPROVEMENTS	PD	2015	3,000	2,700	300	0
70	NHPP	0170-3226		X6	VARIOUS	STATEWIDE	CE SIGN SUPPORT INSP - NHS ROADS 7/1/13 - 12/31/16 - AC ENTRY	OTH	2015	0	0	0	0
70	NHPP	0170-3226		X6	VARIOUS	STATEWIDE	CE SIGN SUPPORT INSP - NHS ROADS 7/1/13 - 12/31/16 - AC CONVERSION	OTH	2015	2,416	1,933	483	0
70	NHPP	0170-3258		X6	NHS	STATEWIDE	NHS PAVEMENT MANAGEMENT ANALYSIS (12/2/13-12/1/16) - AC ENTRY	PL	2015	0	0	0	0
70	NHPP	0170-3258		X6	NHS	STATEWIDE	NHS PAVEMENT MANAGEMENT ANALYSIS (FY14-16)	PL	2015	420	336	84	0
70	NHPP	0170-3303		X6		STATEWIDE	REPLACE OVERHEAD SIGN SUPPORTS (FD)	FD	2015	10	8	2	0
70	NHPP	0170-3303		X6		STATEWIDE	REPLACE OVERHEAD SIGN SUPPORTS	CON	2015	4,000	3,200	800	0
70	NHPP	0170-3346		X6	VARIOUS	STATEWIDE	INSTALL ROAD WEATHER INFO SYSTEMS (RWIS)	PD	2015	144	115	29	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
74	NHPP	0174-0381		X6	CT 8	DISTRICT 4	UPGRADE SIGNING, FROM I-84 IN WATERBURY TO WINCHESTER	CON	2015	5,000	4,000	1,000	0
									2015 Total	106,714	93,313	13,401	0
72, 73	NHPP	0015-0375		X6	VARIOUS	VARIOUS	STAFF BRIDGEPORT OPS. CTR. (8/1/16-7/31/18) - AC ENTRY	OTH	2016	0	0	0	0
72, 73	NHPP	0015-0375		X6	VARIOUS	VARIOUS	STAFF BRIDGEPORT OPS. CTR. (8/1/16-7/31/18) - AC CONVERSION	OTH	2016	2,633	2,369	263	0
72, 73	NHPP	0015-0377		X6	VARIOUS	VARIOUS	CHAMP SAFETY SERVICE PATROL ALONG I-95 CORRIDOR (8/1/16-7/31/18) - AC ENTRY	OTH	2016	0	0	0	0
72, 73	NHPP	0015-0377		X6	VARIOUS	VARIOUS	CHAMP SAFETY SERVICE PATROL ALONG I-95 CORRIDOR (8/1/16-7/31/18) - AC CONVERSION	OTH	2016	2,128	1,915	213	0
05	NHPP	0025-0146		X6	I-84	CHESHIRE	PAVEMENT PRESERVATION ON I-84	CON	2016	7,900	7,110	790	0
11	NHPP	0033-0131		X6	CT 9	CROMWELL	PAVEMENT PRESERVATION ON ROUTE 9	CON	2016	11,100	8,880	2,220	0
07	NHPP	0050-0219		X6	I-95	FAIRFIELD	PAVEMENT PRESERVATION ON I-95	CON	2016	18,400	16,560	1,840	0
10	NHPP	0055-0141		X7	RT 10/202	GRANBY	INTERSECTION IMPROVEMENTS AT EAST ST & NOTCH RD	PD	2016	850	680	170	0
10	NHPP	0063-0703		CC	I-91/RT 15	HARTFORD	RELOCATION AND RECONFIGURATION OF INTERCHANGE 29	FD	2016	11,000	8,800	2,200	0
10	NHPP	0063-0703		CC	I-91/RT 15	HARTFORD	RELOCATION AND RECONFIGURATION OF INTERCHANGE 29	ROW	2016	250	200	50	0
10	NHPP	0063-0713		X6	I-91/I-84	HARTFORD	I-91/I-84 INTERCHANGE IMPROVEMENTS STUDY	PL	2016	1,000	800	200	0
08	NHPP	0092-0531		CC	I-91/I-95	NEW HAVEN	INTERCHANGE RECONSTRUCTION, CONTRACT E AT 90% - AC CONVERSION	CON	2016	14,200	12,780	1,420	0
10	NHPP	0093-0210		X6	FACILITY	NEWINGTON	NEWINGTON HIGHWAY OPRATIONS CONTROL CENTER EXPANSION AND RECONSTRUCTION	PD	2016	320	256	64	0
70	NHPP	0093-0215		X6	VARIOUS	VARIOUS	STAFF NEWINGTON OPS. CTR. (8/1/16-7/31/18) - AC ENTRY	OTH	2016	0	0	0	0
70	NHPP	0093-0215		X6	VARIOUS	VARIOUS	STAFF NEWINGTON OPS. CTR. (8/1/16-7/31/18) - AC CONVERSION	OTH	2016	4,497	3,597	899	0
70	NHPP	0093-0217		X6	VARIOUS	VARIOUS	CHAMP SAFETY SERVICE PATROL ON INTERSTATES & LIMITED ACCESS HWYS (8/1/16-7/31/18) - AC ENTRY	OTH	2016	0	0	0	0
70	NHPP	0093-0217		X6	VARIOUS	VARIOUS	CHAMP SAFETY SERVICE PATROL ON INTERSTATES & LIMITED ACCESS HWYS (8/1/16-7/31/18) - AC CONVERSION	OTH	2016	2,394	1,915	479	0
01	NHPP	0102-0295		X6	I-95	NORWALK	MEDIAN BARRIER/RESURFACING	ROW	2016	150	135	15	0
01	NHPP	0102-0358		NM	CT 7/15	NORWALK	NORWALK RT 7/15 INTERCHANGE - AC CONVERSION	PD	2016	5,000	4,000	1,000	0
08	NHPP	0106-0128		X7	RT 15	ORANGE	INTERCHANGE 58 IMPROVEMENTS ON RT 15 AT RT 34	PD	2016	500	400	100	0
07	NHPP	0138-0248		CC	I-95	STRATFORD	RECONSTRUCTION AT INTERCHANGE 33	ROW	2016	285	257	29	0
07	NHPP	0138-0248		CC	I-95	STRATFORD	RECONSTRUCTION AT INTERCHANGE 33	FD	2016	2,300	2,070	230	0
05	NHPP	0151-0273		CC	I-84	WATERBURY	UPGRADE EXPRESSWAY - PHASE 3 - AC CONVERSION	CON	2016	42,125	33,700	8,425	0
01	NHPP	0158-0211		X6	CT 15	WESTPORT	RESURF/SAFETY, CT 33 WESTPORT TO MOREHOUSE HWY FAIRFIELD	FD	2016	2,000	1,600	400	0
01	NHPP	0158-0211		X6	CT 15	WESTPORT	RESURF/SAFETY, CT 33 WESTPORT TO MOREHOUSE HWY FAIRFIELD- AC ENTRY	CON	2016	0	0	0	0
01	NHPP	0158-0211		X6	CT 15	WESTPORT	RESURF/SAFETY, CT 33 WESTPORT TO MOREHOUSE HWY FAIRFIELD- AC CONV.	CON	2016	37,500	30,000	7,500	0
10	NHPP	0159-0191		X6	I-91	WETHERSFIELD/HARTFORD	RESURFACING, BRIDGE & SAFETY IMPROVMENTS ON I-91 FROM MILE POINT 33.45 TO 36.58	FD	2016	600	540	60	0
70	NHPP	0170-3258		X6	NHS	STATEWIDE	NHS PAVEMENT MANAGEMENT ANALYSIS (FY14-16)	PL	2016	560	448	112	0
70	NHPP	0170-3346		X6	VARIOUS	STATEWIDE	INSTALL ROAD WEATHER INFO SYSTEMS (RWIS)	FD	2016	413	330	83	0
70	NHPP	0170-3362		X6	VARIOUS	STATEWIDE	SIGN SUPPORT REPLACEMENTS	PD	2016	190	152	38	0
70	NHPP	0170-3362		X6	VARIOUS	STATEWIDE	SIGN SUPPORT REPLACEMENTS	FD	2016	10	8	2	0
70	NHPP	0170-3415		X6	STATEWIDE	VARIOUS	CE SIGN SUPPORT INSP - NHS ROADS (9/1/16-8/31/21) - AC ENTRY	OTH	2016	0	0	0	0
70	NHPP	0170-3415		X6	STATEWIDE	VARIOUS	CE SIGN SUPPORT INSP - NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2016	2,000	1,600	400	0
73	NHPP	0173-0354		X6	I-95	DISTRICT 3	UPDATE SIGNING VINCINITY OF EXITS 54 TO 85	PD	2016	360	324	36	0
74	NHPP	0174-0407		X6	VARIOUS	DISTRICT 4	REPLACEMENT OF HIGHWAY ILLUMINATION SYSTEMS IN VARIOUS LOCATIONS IN DISTRICT 4	PD	2016	800	640	160	0
74	NHPP	0174-0407		X6	VARIOUS	DISTRICT 4	REPLACEMENT OF HIGHWAY ILLUMINATION SYSTEMS IN VARIOUS LOCATIONS IN DISTRICT 4	FD	2016	200	160	40	0
									2016 Total	171,664	142,226	29,437	0
72, 73	NHPP	0015-0375		X6	VARIOUS	VARIOUS	STAFF BRIDGEPORT OPS. CTR. (8/1/16-7/31/18) - AC CONVERSION	OTH	2017	2,633	2,369	263	0
72, 73	NHPP	0015-0377		X6	VARIOUS	VARIOUS	CHAMP SAFETY SERVICE PATROL ALONG I-95 CORRIDOR (8/1/16-7/31/18) - AC CONVERSION	OTH	2017	2,128	1,915	213	0
10	NHPP	0042-0317		X6	CT 2	EAST HARTFORD	RESURFACING & MEDIAN REPLACEMENT ON CT 2	FD	2017	960	768	192	0
10	NHPP	0042-0317		X6	RT 2	EAST HARTFORD	RESURFACING & MEDIAN REPLACEMENT ON CT 2	ROW	2017	125	113	13	0
13	NHPP	0058-0307		X6	I-95	GROTON	SAFETY IMPR. FROM MYSTIC RIVER BR TO RI ST LINE	CON	2017	21,000	18,900	2,100	0
10	NHPP	0063-0633		CC	US 44	HARTFORD	SAFETY IMPROVEMENT HOMESTEAD AVE TO GARDEN ST	CON	2017	0	0	0	0
10	NHPP	0063-0633		X6	US 44	HARTFORD	SAFETY IMPROVEMENT HOMESTEAD AVE TO GARDEN ST	CON	2017	20,320	16,256	4,064	0
10	NHPP	0093-0210		X6	FACILITY	NEWINGTON	NEWINGTON HIGHWAY OPRATIONS CONTROL CENTER EXPANSION AND RECONSTRUCTION	FD	2017	740	592	148	0
10	NHPP	0093-0210		X6	FACILITY	NEWINGTON	NEWINGTON HIGHWAY OPRATIONS CONTROL CENTER EXPANSION AND RECONSTRUCTION	CON	2017	13,200	10,560	2,640	0
70	NHPP	0093-0215		X6	VARIOUS	VARIOUS	STAFF NEWINGTON OPS. CTR. (8/1/16-7/31/18) - AC CONVERSION	OTH	2017	4,497	3,597	899	0
70	NHPP	0093-0217		X6	VARIOUS	VARIOUS	CHAMP SAFETY SERVICE PATROL ON INTERSTATES & LIMITED ACCESS HWYS (8/1/16-7/31/18) - AC CONVERSION	OTH	2017	2,394	1,915	479	0
02	NHPP	0096-0200		X6	I-84	NEWTOWN	PAVEMENT PRESERVATION ON I-84	FD	2017	400	360	40	0
02	NHPP	0096-0200		X6	I-84	NEWTOWN	PAVEMENT PRESERVATION ON I-84	ROW	2017	50	45	5	0
01	NHPP	0102-0295		X6	I-95	NORWALK	MEDIAN BARRIER/RESURFACING	CON	2017	0	0	0	0
01	NHPP	0102-0295		X6	I-95	NORWALK	MEDIAN BARRIER/RESURFACING	CON	2017	20,500	18,450	2,050	0
01	NHPP	0102-0358		NM	CT 7/15	NORWALK	NORWALK RT 7/15 INTERCHANGE - AC ENTRY	FD	2017	0	0	0	0
01	NHPP	0102-0358		NM	CT 7/15	NORWALK	NORWALK RT 7/15 INTERCHANGE - AC CONVERSION	FD	2017	5,000	4,000	1,000	0
08	NHPP	0106-0128		X7	RT 15	ORANGE	INTERCHANGE 58 IMPROVEMENTS ON RT 15 AT RT 34	FD	2017	420	336	84	0
07	NHPP	0138-0248		CC	I-95	STRATFORD	RECONSTRUCTION AT INTERCHANGE 33- AC ENTRY	CON	2017	0	0	0	0
05	NHPP	0151-0273		CC	I-84	WATERBURY	UPGRADE EXPRESSWAY - PHASE 3 - AC CONVERSION	CON	2017	17,125	13,700	3,425	0
08	NHPP	0156-0180		X6	I-95	WEST HAVEN/ORANGE	I-95 RESURFACING, BRIDGE & SAFETY IMPROVEMENTS	FD	2017	3,500	3,150	350	0
01	NHPP	0158-0211		X6	CT 15	WESTPORT	RESURF/SAFETY, CT 33 WESTPORT TO MOREHOUSE HWY FAIRFIELD- AC CONV.	CON	2017	22,500	18,000	4,500	0
70	NHPP	0170-3362		X6	VARIOUS	STATEWIDE	SIGN SUPPORT REPLACEMENTS	CON	2017	4,000	3,200	800	0
70	NHPP	0170-3415		X6	STATEWIDE	VARIOUS	CE SIGN SUPPORT INSP - NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2017	2,500	2,000	500	0
10	NHPP	0171-0304		X6	I-84	DISTRICT 1	UPDATE SIGNING IN THE VICINITY OF EXIT 30 TO EXIT 39A	CON	2017	12,650	11,385	1,265	0
73	NHPP	0173-0472		X6	CT 15	VARIOUS	SIGN UPDATES ON ROUTE 15, EXITS 27-53	CON	2017	3,500	3,500	0	0
74	NHPP	0174-0380		X6	CT 8	DISTRICT 4	UPGRADE SIGNING, FROM SHELTON TO I-84 IN WATERBURY	FD	2017	15	12	3	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
74	NHPP	0174-0380		X6	CT 8	DISTRICT 4	UPGRADE SIGNING, FROM SHELTON TO I-84 IN WATERBURY	CON	2017	5,000	4,000	1,000	0
74	NHPP	0174-0407		X6	VARIOUS	DISTRICT 4	REPLACEMENT OF HIGHWAY ILLUMINATION SYSTEMS IN VARIOUS LOCATIONS IN DISTRICT 4	CON	2017	14,000	11,200	2,800	0
									2017 Total	179,156	150,323	28,833	0
13	NHPP	0044-0156		X7	I-95	EAST LYME	IMPROVEMENT OF I-95 INTERCHANGE 74 AT CT 161	ROW	2018	4,000	3,200	800	0
13	NHPP	0044-0156		X7	I-95	EAST LYME	IMPROVEMENT OF I-95 INTERCHANGE 74 AT CT 161	FD	2018	5,000	4,000	1,000	0
10	NHPP	0063-0703		CC	I-91/RT 15	HARTFORD	RELOCATION AND RECONFIGURATION OF INTERCHANGE 29-AC ENTRY	CON	2018	0	0	0	0
10	NHPP	0063-0703		CC	I-91/RT 15	HARTFORD	RELOCATION AND RECONFIGURATION OF INTERCHANGE 29-AC CONVERSION	CON	2018	56,000	44,800	11,200	0
05	NHPP	0080-0128		CC	I-84	MIDDLEBURY	IMPROVEMENTS AT INTERCHANGE 17	CON	2018	29,000	23,200	5,800	0
02	NHPP	0096-0200		X6	I-84	NEWTOWN	PAVEMENT PRESERVATION ON I-84	CON	2018	33,000	29,700	3,300	0
01	NHPP	0102-0295		X6	I-95	NORWALK	MEDIAN BARRIER/RESURFACING	CON	2018	20,500	18,450	2,050	0
01	NHPP	0102-0358		NM	CT 7/15	NORWALK	NORWALK RT 7/15 INTERCHANGE - AC CONVERSION	FD	2018	5,000	4,000	1,000	0
07	NHPP	0138-0248		CC	I-95	STRATFORD	RECONSTRUCTION AT INTERCHANGE 33- AC CONVERSION	CON	2018	27,000	24,300	2,700	0
05	NHPP	0151-0273		CC	I-84	WATERBURY	UPGRADE EXPRESSWAY - PHASE 3 - AC CONVERSION	CON	2018	10,000	8,000	2,000	0
10	NHPP	0159-0191		X6	I-91	WETHERSFIELD/HARTFORD	RESURFACING, BRIDGE & SAFETY IMPROVMENTS ON I-91 FROM MILE POINT 33.45 TO 36.58	CON	2018	0	0	0	0
10	NHPP	0159-0191		X6	I-91	WETHERSFIELD/HARTFORD	RESURFACING, BRIDGE & SAFETY IMPROVMENTS ON I-91 FROM MILE POINT 33.45 TO 36.58	CON	2018	18,000	16,200	1,800	0
70	NHPP	0170-3415		X6	STATEWIDE	VARIOUS	CE SIGN SUPPORT INSP - NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2018	1,000	800	200	0
73	NHPP	0173-0354		X6	I-95	DISTRICT 3	UPDATE SIGNING, EXITS 54 TO 85	CON	2018	8,308	7,477	831	0
73	NHPP	0173-0354		X6	I-95	DISTRICT 3	UPDATE SIGNING, EXITS 54 TO 85	FD	2018	40	36	4	0
73	NHPP	0173-0441		X6	CT 8	DISTRICT 3	UPGRADE SIGNING FROM I-95 THROUGH SHELTON	FD	2018	15	12	3	0
73	NHPP	0173-0441		X6	CT 8	DISTRICT 3	UPGRADE SIGNING FROM I-95 THROUGH SHELTON	CON	2018	5,000	4,000	1,000	0
									2018 Total	221,863	188,175	33,688	0
05	NHPP	0017-0187		X7	CT 72	BRISTOL	INTERSECTION IMPROVEMENTS AT CT 69 AND DIVINITY STREET	CON	FYI	4,050	3,240	810	0
10	NHPP	0063-0703		CC	I-91/RT 15	HARTFORD	RELOCATION AND RECONFIGURATION OF INTERCHANGE 29-AC CONVERSION	CON	FYI	125,000	100,000	25,000	0
13	NHPP	0044-0156		X7	I-95	EAST LYME	IMPROVEMENT OF I-95 INTERCHANGE 74 AT CT 161	CON	FYI	112,000	89,600	22,400	0
08	NHPP	0106-0108		X6	US 1	ORANGE	OPERATIONAL LANE FROM MILFORD TO CT 114	CON	FYI	13,150	10,520	2,630	0
08	NHPP	0106-0128		X7	RT 15	ORANGE	INTERCHANGE 58 IMPROVEMENTS ON RT 15 AT RT 34	CON	FYI	4,500	3,600	900	0
05	NHPP	0151-0273		CC	I-84	WATERBURY	UPGRADE EXPRESSWAY - PHASE 3 - AC CONVERSION	CON	FYI	36,960	36,960	0	0
08	NHPP	0156-0180		X6	I-95	WEST HAVEN/ORANGE	I-95 RESURFACING, BRIDGE & SAFETY IMPROVEMENTS - AC ENTRY	CON	FYI	0	0	0	0
08	NHPP	0156-0180		X6	I-95	WEST HAVEN/ORANGE	I-95 RESURFACING, BRIDGE & SAFETY IMPROVEMENTS - AC CONVERSION	CON	FYI	52,000	46,800	5,200	0
10	NHPP	0159-0191		X6	I-91	WETHERSFIELD/HARTFORD	RESURFACING, BRIDGE & SAFETY IMPROVMENTS ON I-91 FROM MILE POINT 33.45 TO 36.58	CON	FYI	36,000	32,400	3,600	0
70	NHPP	0170-3415		X6	STATEWIDE	VARIOUS	CE SIGN SUPPORT INSP - NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	FYI	3,500	2,800	700	0
									FYI Total	387,160	325,920	61,240	0
07	NHPP-BRX	0015-0369		X6		BRIDGEPORT	REHAB BR 00105A	PD	2015	150	135	15	0
13	NHPP-BRX	0028-0202		X6	CT 2	COLCHESTER	REHAB 3 CULVERTS ON ROUTE 2	PD	2015	750	600	150	0
10	NHPP-BRX	0042-0304		X6	SR 500	EAST HARTFORD	REPLACE BR 02374 OVER I-84 RAMP 833 & 831 - COMBO 42-304/305/310/316	CON	2015	6,900	5,520	1,380	0
10	NHPP-BRX	0042-0305		X6	SR 500	EAST HARTFORD	REHAB BR 02375 OVER I-84 EB & RAMP 833 - AC ENTRY	CON	2015	0	0	0	0
10	NHPP-BRX	0042-0310		X6	CT 2 WB	EAST HARTFORD	REHAB BR 02368A OVER I-84 EB - COMBO 42-304/305/310/316	CON	2015	11,000	8,800	2,200	0
13	NHPP-BRX	0058-0332		X6	CT 349	GROTON	REHAB BR 03330 & 03331 O/ AMTRAK (FD)	FD	2015	600	480	120	0
15	NHPP-BRX	0068-0211		X6	I-395	KILLINGLY	REPLACE BR 03469 OVER TRACY ROAD-AC ENTRY	CON	2015	0	0	0	0
15	NHPP-BRX	0068-0211		X6	I-395	KILLINGLY	REPLACE BR 03469 OVER TRACY ROAD-AC CONVERSION	CON	2015	4,750	4,275	475	0
10	NHPP-BRX	0063-0700		X6	I-84 EB	HARTFORD	REHAB BRIDGE 01765 OVER AMTRAK RR	ROW	2015	50	45	5	0
10	NHPP-BRX	0063-0700		X6	I-84 EB	HARTFORD	REHAB BRIDGE 01765 OVER AMTRAK RR	FD	2015	500	450	50	0
10	NHPP-BRX	0063-0701		X6	I-84 WB	HARTFORD	REHAB BRIDGE 01765 OVER AMTRAK RR	ROW	2015	50	45	5	0
10	NHPP-BRX	0063-0701		X6	I-84 WB	HARTFORD	REHAB BRIDGE 01765 OVER AMTRAK RR	FD	2015	500	450	50	0
10	NHPP-BRX	0063-0705		X6		HARTFORD	REHAB BR 03367 & 03368 OVER NEW PARK AVENUE	PD	2015	150	135	15	0
10	NHPP-BRX	0063-0707		X6	I-84	HARTFORD	REHABILITATE BRIDGE #01686A OVER MARKET	PD	2015	200	180	20	0
15	NHPP-BRX	0068-0211		X6	I-395	KILLINGLY	REPLACE BR 03469 OVER TRACY ROAD	CON	2015	0	0	0	0
11	NHPP-BRX	0082-0314		X6	I-91	MIDDLETOWN	REHAB BR 06852 & 06853	PD	2015	400	360	40	0
08	NHPP-BRX	0092-0522		X6	I-95	NEW HAVEN	REPLACE BR 00163A OVER WEST RIVER - AC ENTRY	CON	2015	0	0	0	0
08	NHPP-BRX	0092-0627		CC	I-95	NEW HAVEN	CONTRACT B2(w/ E) - SB WEST APPROACH (90/10) - AC ENTRY	CON	2015	0	0	0	0
08	NHPP-BRX	0092-0627		CC	I-95	NEW HAVEN	CONTRACT B2 (W/ E) - SB WEST APPROACH (90/10)(BREAKOUT OF 92-532)	CON	2015	7,778	7,000	778	0
08	NHPP-BRX	0092-0668		X6	I-91	NEW HAVEN	REHAB BR 03093 OVER QUINNIPIAC RV	ROW	2015	50	45	5	0
08	NHPP-BRX	0092-0668		X6	I-91	NEW HAVEN	REHAB BR 03093 OVER QUINNIPIAC RV	FD	2015	650	585	65	0
08	NHPP-BRX	0092-0669		X6	I-91	NEW HAVEN	REHAB BR 03014 A OVER MILL RV & STATE ST-AC ENTRY	CON	2015	0	0	0	0
08	NHPP-BRX	0092-0669		X6	I-91	NEW HAVEN	REHAB BR 03014 A OVER MILL RV & STATE ST-AC CONVERSION	CON	2015	10,816	9,734	1,082	0
08	NHPP-BRX	0092-0669		X6	I-91	NEW HAVEN	REHAB BR 03014 A OVER MILL RV & STATE ST-AC CONVERSION	ROW	2015	50	45	5	0
08	NHPP-BRX	0092-0669		X6	I-91	NEW HAVEN	REHAB BR 03014 A OVER MILL RV & STATE ST-AC CONVERSION	FD	2015	450	405	45	0
08	NHPP-BRX	0092-0670		X6	I-95	NEW HAVEN	Q BRIDGE LED LIGHTING BREAKOUT	CON	2015	5,000	4,000	1,000	0
08	NHPP-BRX	0092-0675		X6	I-91	NEW HAVEN	REHAB BR 03094 OVER AMTRAK	PD	2015	250	225	25	0
13	NHPP-BRX	0094-0252		X6	I-95 SB	NEW LONDON	REHAB BR 02514 A/B - SB GOLD STAR	ROW	2015	265	239	27	0
13	NHPP-BRX	0094-0252		X6	I-95 SB	NEW LONDON	REHAB BR 02514 A/B - SB GOLD STAR (FD)	FD	2015	860	774	86	0
01	NHPP-BRX	0102-0348		X6	I-95	NORWALK	REHAB BR 00059 - YANKEE DOODLE BRIDGE	FD	2015	1,350	1,080	270	0
15	NHPP-BRX	0108-0186		X6	I-395	PLAINFIELD	REHAB BR 00302 OVER MOOSUP RIVER	PD	2015	250	225	25	0
09	NHPP-BRX	0109-0172		X6	I-84	PLAINVILLE	REHAB BRIDGES 03311, 03312, 03313, 03320 & 03322-AC ENTRY	CON	2015	0	0	0	0
10	NHPP-BRX	0109-0172		X6	I-84	PLAINVILLE	REHAB BRIDGES 03311, 03312, 03313, 03320 & 03322 - AC CONVERSION	CON	2015	11,444	10,300	1,144	0
06	NHPP-BRX	0126-0170		X6	ROUTE 8	SHELTON	MINOR PAINT AND STEEL REHAB OF BR 00571, CT 8 OVER RT 110 & HOUSATONIC RV	FD	2015	600	480	120	0
05	NHPP-BRX	0130-0180		X6	I-84	SOUTHBURY	REHAB BR 01155 & 01156 OVER RTS 6 & 67	PD	2015	500	450	50	0
01	NHPP-BRX	0135-0334		X6	I-95	STAMFORD	REHAB BR 00032 OVER METRO NORTH RR	PD	2015	1,200	1,080	120	0
07,08	NHPP-BRX	0138-0221		X6	I-95	STRATFORD	REPLACE BR 00135, MOSES WHEELER. - AC ENTRY	CON	2015	0	0	0	0
07,08	NHPP-BRX	0138-0221		X6	I-95	STRATFORD	REPLACE BR 00135, MOSES WHEELER. - AC CONVERSION	CON	2015	11,111	10,000	1,111	0
13	NHPP-BRX	0152-0157		X6	I-95	WATERFORD	REHAB BR 00352 A&B OVER OIL MILL ROAD	CON	2015	4,900	4,410	490	0
13	NHPP-BRX	0152-0158		X6	I-395	WATERFORD	REHAB BR 00255 OVER RT 85	PD	2015	250	225	25	0
13	NHPP-BRX	0163-0203		X6	CT 66	WINDHAM	REPLACE BR 00490 OVER NATCHAUG RV	ROW	2015	50	40	10	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
13	NHPP-BRX	0163-0203		X6	CT 66	WINDHAM	REPLACE BR 00490 OVER NATCHAUG RV	FD	2015	215	172	43	0
70	NHPP-BRX	0170-3222		X6	VARIOUS	STATEWIDE	SF BRIDGE INSP - NHS ROADS 9/1/13 - 12/31/16 - AC ENTRY	OTH	2015	0	0	0	0
70	NHPP-BRX	0170-3222		X6	VARIOUS	STATEWIDE	SF BRIDGE INSP - NHS ROADS 9/1/13 - 12/31/16	OTH	2015	4,725	3,780	945	0
70	NHPP-BRX	0170-3224		X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - NHS ROADS 7/1/13 - 12/31/16 - AC ENTRY	OTH	2015	0	0	0	0
70	NHPP-BRX	0170-3224		X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - NHS ROADS 7/1/13 - 12/31/16	OTH	2015	10,625	8,500	2,125	0
70	NHPP-BRX	0170-3225		X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - NON-NHS ROADS 7/1/13 - 12/31/16	OTH	2015	0	0	0	0
70	NHPP-BRX	0170-3225		X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - NON-NHS ROADS 7/1/13 - 12/31/16	OTH	2015	4,300	3,440	860	0
70	NHPP-BRX	0170-0BRX	0170-0BRX	X6	VARIOUS	STATEWIDE	ON/OFF-SYSTEMS BRIDGE IMPROVEMENTS, BRX & BRZ.	ALL	2015	50,000	40,000	10,000	0
70	NHPP-BRX	0170-3339	170U-Wnhs	X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - UWATER - NHS ROADS	OTH	2015	0	0	0	0
70	NHPP-BRX	0170-3339	170U-Wnhs	X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - UWATER - NHS ROADS (FY 15)	OTH	2015	1,300	1,040	260	0
70	NHPP-BRX	0170-3340	170U-Wnon	X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - UWATER - NON-NHS ROADS	OTH	2015	0	0	0	0
									2015 Total	154,990	129,749	25,240	0
08	NHPP-BRX	0014-0185		X6	I-95	BRANFORD	REPLACEMENT OF BR 00196 OVER US 1	ROW	2016	50	45	5	0
08	NHPP-BRX	0014-0185		X6	I-95	BRANFORD	REPLACEMENT OF BR 00196 OVER US 1	FD	2016	600	540	60	0
13	NHPP-BRX	0044-0153		X6	I-95	EAST LYME	REPLACE BR 00250 O/ ROUTE 161	FD	2016	550	495	55	0
13	NHPP-BRX	0058-0332		X6	CT 349	GROTON	REHAB BR 03330 & 03331 OVER AMTRAK	CON	2016	14,000	11,200	2,800	0
08	NHPP-BRX	0059-0163		X6	I-95	GUILFORD	CULVERT REHAB, I-95 OVER SPINNING MILL BROOK	CON	2016	1,450	1,305	145	0
10	NHPP-BRX	0063-0692		X6	I-91 & CSR 508	HARTFORD	REHAB OF BRIDGES 01469A & 01469C	CON	2016	6,215	5,593	621	0
10	NHPP-BRX	0063-0692		X6	I-91 & CSR 508	HARTFORD	REHAB OF BRIDGES 01469A & 01469C	FD	2016	1,200	1,080	120	0
10	NHPP-BRX	0063-0699		X6	I-84	HARTFORD	REHAB BRIDGES 03160A-D, 03301 & 03303 - HARTFORD VIADUCT AC ENTRY	CON	2016	0	0	0	0
10	NHPP-BRX	0063-0699		X6	I-84	HARTFORD	REHAB BRIDGES 03160A-D, 03301 & 03303 - HARTFORD VIADUCT - AC CONV.	CON	2016	34,901	31,411	3,490	0
10	NHPP-BRX	0063-0699		X6	I-84	HARTFORD	REHAB BRIDGES 03160A-D, 03301 & 03303 - HARTFORD VIADUCT	ROW	2016	610	549	61	0
10	NHPP-BRX	0063-0700		X6	I-84 EB	HARTFORD	REHAB BRIDGE 01765 OVER AMTRAK RR AC ENTRY	CON	2016	0	0	0	0
10	NHPP-BRX	0063-0700		X6	I-84 EB	HARTFORD	REHAB BRIDGE 01765 OVER AMTRAK RR- AC CONVERSION	CON	2016	9,899	8,909	990	0
10	NHPP-BRX	0063-0701		X6	I-84 WB	HARTFORD	REHAB BRIDGE 01766 OVER AMTRAK RR AC ENTRY	CON	2016	0	0	0	0
10	NHPP-BRX	0063-0701		X6	I-84 WB	HARTFORD	REHAB BRIDGE 01766 OVER AMTRAK RR	CON	2016	7,625	6,863	763	0
10	NHPP-BRX	0063-0705		X6	I-84	HARTFORD	REHAB BR 03367 & 03368 OVER NEW PARK AVENUE	ROW	2016	50	45	5	0
10	NHPP-BRX	0063-0705		X6	I-84	HARTFORD	REHAB BR 03367 & 03368 OVER NEW PARK AVENUE	FD	2016	800	720	80	0
10	NHPP-BRX	0063-0707		X6	I-84	HARTFORD	REHAB BRIDGE 01686A OVER MARKET STREET.	FD	2016	630	567	63	0
10	NHPP-BRX	0063-0708		X6	I-84	HARTFORD	REHAB I-84/SISSON AVENUE BRIDGES	PD	2016	1,000	900	100	0
10	NHPP-BRX	0063-0708		X6	I-84	HARTFORD	REHAB I-84/SISSON AVENUE BRIDGES	FD	2016	1,000	900	100	0
10	NHPP-BRX	0063-0712		X6	I-84	HARTFORD	REHAB BR 00980B OVER CT RIVER ON I-84WB TR 826 TO I-91NB	PD	2016	425	383	43	0
11	NHPP-BRX	0082-0312		X6	CT 66	MIDDLETOWN	PHASE 2 REHAB BR 00524 (ARRIGONI), APPROACH SPANS (FD)	FD	2016	700	560	140	0
08	NHPP-BRX	0092-0522		X6	I-95	NEW HAVEN	REPLACE BR 00163A o/ WEST RIVER - AC CONVERSION	CON	2016	23,333	21,000	2,333	0
08	NHPP-BRX	0092-0668		X6	I-91	NEW HAVEN	REHAB BR 03093 OVER QUINNIPIAC RV	CON	2016	10,855	9,770	1,086	0
08	NHPP-BRX	0092-0675		X6	I-91	NEW HAVEN	REHAB BR 03094 OVER AMTRAK	FD	2016	450	405	45	0
13	NHPP-BRX	0094-0235		X6	I-95 NB	NEW LONDON	REHAB BR 03819 - NB GOLD STAR (FD)	FD	2016	6,300	5,670	630	0
13	NHPP-BRX	0094-0235		X6	I-95 NB	NEW LONDON	REHAB BR 03819 - NORTHBOUND GOLD STAR	ROW	2016	505	455	51	0
10	NHPP-BRX	0109-0172		X6	I-84	PLAINVILLE	REHAB BRIDGES 03311, 03312, 03313, 03320 & 03322 - AC CONVERSION	CON	2016	12,556	11,300	1,256	0
06	NHPP-BRX	0126-0170		X6	RT 8	SHELTON	FULL PAINTING AND STEEL REHAB OF BR 00571 OVER RT 110 & HOUSATONIC RV-AC ENTRY	CON	2016	0	0	0	0
06	NHPP-BRX	0126-0170		X6	RT 8	SHELTON	FULL PAINTING AND STEEL REHAB OF BR 00571 OVER RT 110 & HOUSATONIC RV-AC CONVERSION	CON	2016	48,600	38,880	9,720	0
05	NHPP-BRX	0130-0180		X6	I-84	SOUTHBURY	REHAB BR 01155 & 01156 OVER RTS 6 & 67	FD	2016	500	450	50	0
01	NHPP-BRX	0135-0334		X6	I-95	STAMFORD	REHAB BR 00032 OVER METRO NORTH RR	FD	2016	2,000	1,800	200	0
10	NHPP-BRX	0139-0113		X6	CT 190	SUFFIELD/ENFIELD	REHAB BRIDGE 03295 OVER THE CT RIVER AND AMTRAK RAILROAD	PD	2016	400	320	80	0
05	NHPP-BRX	0151-0326		X6	I-84/CT 8	WATERBURY	REHABILATE 8 BRIDGES ON ROUTE 8 INTERCHANGE WITH I-84, BRIDGES 03190 A, B,C,D,E & F & 03191 D& E	FD	2016	3,000	2,400	600	0
05	NHPP-BRX	0151-0326		X6	I-84/CT 8	WATERBURY	REHABILATE 8 BRIDGES ON ROUTE 8 INTERCHANGE WITH I-84, BRIDGES 03190 A, B,C,D,E & F & 03191 D& E	ROW	2016	810	648	162	0
13	NHPP-BRX	0152-0158		X6	I-395	WATERFORD	REHAB BR 00255 OVER RT 85	FD	2016	250	225	25	0
70	NHPP-BRX	0170-3382		X6	VARIOUS	STATEWIDE	LOAD RATINGS FOR BRIDGES - NHS ROADS - AC ENTRY	OTH	2016	0	0	0	0
70	NHPP-BRX	0170-3382		X6	VARIOUS	STATEWIDE	LOAD RATINGS FOR BRIDGES - NHS ROADS - AC CONV.	OTH	2016	2,000	1,600	400	0
70	NHPP-BRX	0170-3339	170U-Wnhs	X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - UWATER - NHS ROADS (FY 16)	OTH	2016	1,300	1,040	260	0
70	NHPP-BRX	0170-3411		X6	STATEWIDE	VARIOUS	SF BRIDGE INSP - NHS ROADS (9/1/16-8/31/21) - AC ENTRY	OTH	2016	0	0	0	0
70	NHPP-BRX	0170-3411		X6	STATEWIDE	VARIOUS	SF BRIDGE INSP - NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2016	2,915	2,332	583	0
70	NHPP-BRX	0170-3413		X6	STATEWIDE	VARIOUS	CE BRIDGE INSP - NHS ROADS (9/1/16-8/31/21) - AC ENTRY	OTH	2016	0	0	0	0
70	NHPP-BRX	0170-3413		X6	STATEWIDE	VARIOUS	CE BRIDGE INSP - NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2016	11,730	9,384	2,346	0
70	NHPP-BRX	0170-0BRX	0170-0BRX	X6	VARIOUS	STATEWIDE	ON/OFF-SYSTEMS BRIDGE IMPROVEMENTS, BRX & BRZ.	ALL	2016	50,000	40,000	10,000	0
08, 10	NHPP-BRX	0171-0404		X6	VARIOUS	DISTRICT 1	REPLACE JOINTS ON VARIOUS NHS BRIDGES IN DISTRICT 1	CON	2016	6,338	5,070	1,268	0
									2016 Total	265,546	224,812	40,734	0
08	NHPP-BRX	0014-0185		X6	I-95	BRANFORD	REPLACEMENT OF BR 00196 OVER US 1	CON	2017	7,000	6,300	700	0
13	NHPP-BRX	0028-0202		X6	CT 2	COLCHESTER	REHAB 3 CULVERTS ON ROUTE 2	FD	2017	750	600	150	0
10	NHPP-BRX	0063-0705		X6	I-84	HARTFORD	REHAB BR 03367 & 03368 OVER NEW PARK AVENUE	CON	2017	7,000	5,600	1,400	0
10	NHPP-BRX	0063-0712		X6	I-84	HARTFORD	REHAB BR 00980B OVER CT RIVER ON I-84WB TR 826 TO I-91NB	FD	2017	425	383	43	0
08	NHPP-BRX	0092-0522		X6	I-95	NEW HAVEN	REPLACE BR 00163A o/ WEST RIVER - AC CONVERSION	CON	2017	14,444	13,000	1,444	0
13	NHPP-BRX	0094-0235		X6	I-95 NB	NEW LONDON	REHAB BR 03819 - NB GOLD STAR	CON	2017	0	0	0	0
01	NHPP-BRX	0102-0348		X6	I-95	NORWALK	REHAB BR 00059 - YANKEE DOODLE BRIDGE	CON	2017	0	0	0	0
01	NHPP-BRX	0102-0348		X6	I-95	NORWALK	REHAB BR 00059 - YANKEE DOODLE BRIDGE	CON	2017	11,250	10,125	1,125	0
15	NHPP-BRX	0108-0186		X6	I-395	PLAINFIELD	REHAB BR 00302 OVER MOOSUP RIVER	FD	2017	250	225	25	0
09	NHPP-BRX	0131-0190		CC	CT 10	SOUTHINGTON	REMOVE BR 00518 , RECONSTRUCT CT 10/322 INTERSECTION	CON	2017	9,200	7,360	1,840	0
01	NHPP-BRX	0135-0307		X6	US 1	STAMFORD	REPLACE BRIDGE 00315 OVER NOROTON RIVER	CON	2017	8,600	6,880	1,720	0
07	NHPP-BRX	0138-0245		X6	US 1	STRATFORD	REPLACE BR 00326 OVER METRO NORTH RR	CON	2017	10,910	8,728	2,182	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
10	NHPP-BRX	0139-0113		X6	CT 190	SUFFIELD/ENFIELD	REHAB BRIDGE 03295 OVER THE CT RIVER AND AMTRAK RAILROAD	FD	2017	500	400	100	0
05	NHPP-BRX	0151-0332		X6	I-84	WATERBURY	REHAB BR 03191F OVER RAMP 202 MEADOW STREET	PD	2017	250	225	25	0
05	NHPP-BRX	0151-0332		X6	I-84	WATERBURY	REHAB BR 03191F OVER RAMP 202 MEADOW STREET	FD	2017	250	225	25	0
05	NHPP-BRX	0151-0332		X6	I-84	WATERBURY	REHAB BR 03191F OVER RAMP 202 MEADOW STREET	ROW	2017	50	45	5	0
13	NHPP-BRX	0163-0203		X6	CT 66	WINDHAM	REPLACE BR 00490 OVER NATCHAUG RV	CON	2017	7,250	5,800	1,450	0
70	NHPP-BRX	0170-3382		X6	VARIOUS	STATEWIDE	LOAD RATINGS FOR BRIDGES - NHS ROADS - AC CONV.	OTH	2017	2,000	1,600	400	0
70	NHPP-BRX	0170-3339	170U-Wnhs	X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - UWATER - NHS ROADS (FY 17)	OTH	2017	1,300	1,040	260	0
70	NHPP-BRX	0170-3411		X6	STATEWIDE	VARIOUS	SF BRIDGE INSP - NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2017	3,090	2,472	618	0
70	NHPP-BRX	0170-3413		X6	STATEWIDE	VARIOUS	CE BRIDGE INSP - NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2017	12,317	9,854	2,463	0
70	NHPP-BRX	0170-0BRX	0170-0BRX	X6	VARIOUS	STATEWIDE	ON/OFF-SYSTEMS BRIDGE IMPROVEMENTS, BRX & BRZ.	ALL	2017	50,000	40,000	10,000	0
13	NHPP-BRX	0172-0446		X6	VARIOUS	DISTRICT 2	REPLACE BEARINGS & PRESERVE BEAM ENDS ON VARIOUS NHS BRIDGES	CON	2017	8,100	6,480	1,620	0
									2017 Total	154,936	127,341	27,595	0
10	NHPP-BRX	0063-0708		X6	I-84	HARTFORD	REHAB I-84/SISSON AVENUE BRIDGES	CON	2018	26,000	23,400	2,600	0
08	NHPP-BRX	0092-0675		X6	I-91	NEW HAVEN	REHAB BR 03094 OVER AMTRAK	CON	2018	6,000	5,400	600	0
13	NHPP-BRX	0094-0235		X6	I-95 NB	NEW LONDON	REHAB BR 03819 - NB GOLD STAR	CON	2018	41,111	37,000	4,111	0
01	NHPP-BRX	0102-0348		X6	I-95	NORWALK	REHAB BR 00059 - YANKEE DOODLE BRIDGE	CON	2018	11,250	10,125	1,125	0
01	NHPP-BRX	0135-0334		X6	I-95	STAMFORD	REHAB BR 00032 OVER METRO NORTH RR	CON	2018	32,000	28,800	3,200	0
10	NHPP-BRX	0139-0113		X6	CT 190	SUFFIELD/ENFIELD	REHAB BRIDGE 03295 OVER THE CT RIVER AND AMTRAK RAILROAD	CON	2018	5,000	4,000	1,000	0
05	NHPP-BRX	0151-0312		X6	I-84 EB	WATERBURY	REHAB BR 03191A OVER I-84 WB, CT 8 & NAUGATUCK RV- AC ENTRY	CON	2018	0	0	0	0
05	NHPP-BRX	0151-0312		X6	I-84 EB	WATERBURY	REHAB BR 03191A OVER I-84 WB, CT 8 & NAUGATUCK RV- AC CONVERSION	CON	2018	18,920	17,028	1,892	0
05	NHPP-BRX	0151-0313		X6	I-84 WB	WATERBURY	REHAB BR 03191B o/ I-84 WB, CT 8 & NAUGATUCK RV- AC ENTRY	CON	2018	0	0	0	0
05	NHPP-BRX	0151-0313		X6	I-84 WB	WATERBURY	REHAB BR 03191B o/ I-84 WB, CT 8 & NAUGATUCK RV - AC CONVERSION	CON	2018	12,750	11,475	1,275	0
05	NHPP-BRX	0151-0326		X6	I-84/CT 8	WATERBURY	REHABILATE 8 BRIDGES ON ROUTE 8 INTERCHANGE WITH I-84, BRIDGES 03190 A, B,C,D,E & F & 03191 D& E	CON	2018	0	0	0	0
05	NHPP-BRX	0151-0326		X6	I-84/CT 8	WATERBURY	REHABILATE 8 BRIDGES ON ROUTE 8 INTERCHANGE WITH I-84, BRIDGES 03190 A, B,C,D,E & F & 03191 D& E	CON	2018	37,500	30,000	7,500	0
70	NHPP-BRX	0170-3382		X6	VARIOUS	STATEWIDE	LOAD RATINGS FOR BRIDGES - NHS ROADS - AC CONV.	OTH	2018	2,000	1,600	400	0
70	NHPP-BRX	0170-0BRX	0170-0BRX	X6	VARIOUS	STATEWIDE	ON/OFF-SYSTEMS BRIDGE IMPROVEMENTS, BRX & BRZ.	ALL	2018	50,000	40,000	10,000	0
70	NHPP-BRX	0170-3339	170U-Wnhs	X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - UWATER - NHS ROADS (FY 18)	OTH	2018	1,000	800	200	0
70	NHPP-BRX	0170-3340	170U-Wnon	X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - UWATER - NON-NHS ROADS (FY 18)	OTH	2018	300	240	60	0
70	NHPP-BRX	0170-3411		X6	STATEWIDE	VARIOUS	SF BRIDGE INSP - NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2018	3,275	2,620	655	0
70	NHPP-BRX	0170-3413		X6	STATEWIDE	VARIOUS	CE BRIDGE INSP - NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2018	12,932	10,346	2,586	0
									2018 Total	260,038	222,834	37,205	0
10	NHPP-BRX	0063-0712		X6	I-84	HARTFORD	REHAB BR 00980B OVER CT RIVER ON I-84WB TR 826 TO I-91NB	CON	FYI	5,000	4,500	500	0
13	NHPP-BRX	0094-0235		X6	I-95 NB	NEW LONDON	REHAB BR 03819 - NB GOLD STAR	CON	FYI	124,889	112,400	12,489	0
15	NHPP-BRX	0108-0186		X6	I-395	PLAINFIELD	REHAB BR 00302 OVER MOOSUP RIVER	CON	FYI	11,400	10,260	1,140	0
05	NHPP-BRX	0151-0312		X6	I-84 EB	WATERBURY	REHAB BR 03191A OVER I-84 WB, CT 8 & NAUGATUCK RV- AC CONVERSION	CON	FYI	31,950	28,755	3,195	0
05	NHPP-BRX	0151-0313		X6	I-84 WB	WATERBURY	REHAB BR 03191B o/ I-84 WB, CT 8 & NAUGATUCK RV - AC CONVERSION	CON	FYI	21,250	19,125	2,125	0
05	NHPP-BRX	0151-0326		X6	I-84/CT 8	WATERBURY	REHABILATE 8 BRIDGES ON ROUTE 8 INTERCHANGE WITH I-84, BRIDGES 03190 A, B,C,D,E & F & 03191 D& E	CON	FYI	62,050	49,640	12,410	0
05	NHPP-BRX	0151-0332		X6	I-84	WATERBURY	REHAB BR 03191F OVER RAMP 202 MEADOW STREET	CON	FYI	5,000	4,500	500	0
08	NHPP-BRX	0167-0108		X7	CT 15	WOODBRIDGE	TUNNEL IMPROVEMENTS UNDER WEST ROCK RIDGE- AC ENTRY	CON	FYI	0	0	0	0
08	NHPP-BRX	0167-0108		X7	CT 15	WOODBRIDGE	TUNNEL IMPROVEMENTS UNDER WEST ROCK RIDGE- AC CONVERSION	CON	FYI	200,000	160,000	40,000	0
70	NHPP-BRX	0170-3382		X6	VARIOUS	STATEWIDE	LOAD RATINGS FOR BRIDGES - NHS ROADS - AC CONV.	OTH	FYI	4,000	3,200	800	0
70	NHPP-BRX	0170-0BRX	0170-0BRX	X6	VARIOUS	STATEWIDE	ON/OFF-SYSTEMS BRIDGE IMPROVEMENTS, BRX & BRZ.	ALL	FYI	50,000	40,000	10,000	0
70	NHPP-BRX	0170-3339	170U-Wnhs	X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - UWATER - NHS ROADS (FYI)	OTH	FYI	1,000	800	200	0
70	NHPP-BRX	0170-3340	170U-Wnon	X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - UWATER - NON-NHS ROADS (FYI)	OTH	FYI	300	240	60	0
70	NHPP-BRX	0170-3411		X6	STATEWIDE	VARIOUS	SF BRIDGE INSP - NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	FYI	7,152	5,722	1,430	0
70	NHPP-BRX	0170-3413		X6	STATEWIDE	VARIOUS	CE BRIDGE INSP - NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	FYI	27,837	22,270	5,567	0
									FYI Total	551,828	461,411	90,417	0
08	NHS	0092-0522		X6	I-95	NEW HAVEN	REPLACE BR 00163A OVER WEST RIVER - AC ENTRY	CON	2015	0	0	0	0
08	NHS	0092-0522		X6	I-95	NEW HAVEN	REPLACE BR 00163A OVER WEST RIVER - AC CONVERSION	CON	2015	10,000	9,000	1,000	0
08	NHS	0092-0531		CC	I-91/I-95	NEW HAVEN	INTERCHANGE RECONSTRUCTION, CONTRACT E - AC ENTRY	CON	2015	0	0	0	0
08	NHS	0092-0531		CC	I-91/I-95	NEW HAVEN	INTERCHANGE RECONSTRUCTION, CONTRACT E AT 90% - AC CONVERSION	CON	2015	2,778	2,500	278	0
									2015 Total	12,778	11,500	1,278	0
08	NHS	0092-0522		X6	I-95	NEW HAVEN	REPLACE BR 00163A o/ WEST RIVER - AC CONVERSION	CON	2016	1,111	1,000	111	0
									2016 Total	1,111	1,000	111	0
70	RT	0170-RT10		X6	VARIOUS	STATEWIDE	RECREATION TRAILS	OTH	2015	962	962	0	0
									2015 Total	962	962	0	0
70	RT	0170-RT10		X6	VARIOUS	STATEWIDE	RECREATION TRAILS	OTH	2016	962	962	0	0
									2016 Total	962	962	0	0
70	RT	0170-RT10		X6	VARIOUS	STATEWIDE	RECREATION TRAILS	OTH	2017	962	962	0	0
									2017 Total	962	962	0	0
70	RT	0170-RT10		X6	VARIOUS	STATEWIDE	RECREATION TRAILS	OTH	2018	962	962	0	0
									2018 Total	962	962	0	0
70	RT	0170-RT10		X6	VARIOUS	STATEWIDE	RECREATION TRAILS	OTH	FYI	962	962	0	0
									FYI Total	962	962	0	0
12	SRSI	0049-0108		X6		ESSEX	PEDESTRIAN SAFETY IMPROVEMENTS	CON	2015	457	457	0	0
10	SRSI	0077-0236		X6	SRTS	MANSFIELD	PEDESTRIAN SAFETY IMPROVEMENTS IN THE VINCINITY OF THE SOUTHEAST ELEMENTARY SCHOOL	PE	2015	40	40	0	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
01	SRSI	0102-0355		X6	SRTS	NORWALK	PEDESTRIAN SAFETY IMPROVEMENTS IN THE VINCINITY OF THE ROTON MIDDLE SCHOOL	PE	2015	40	40	0	0
09	SRSI	0131-0201		X6	SRSI	SOUTHINGTON	PED SAFETY IMPROVEMENT , VIC DEPAOLO SCHOOL	CON	2015	498	498	0	0
10	SRSI	0146-0197		X6	SKINNER ELEMENTARY	VERNON	PED IMPR VINC. SKINNER ROAD ELEMENTARY	CON	2015	491	491	0	0
									2015 Total	1,527	1,527	0	0
07	SRSI	0138-0242		X6	SRSI	STRATFORD	PED SAFETY IMPROVEMENT VIC WILCOXSON SCHOOL	CON	2016	407	407	0	0
05	SRSI	0151-0324		X6	SRSI	WATERBURY	PED SAFETY IMPR, VIC GILMARTIN SCHOOL	CON	2016	500	500	0	0
									2016 Total	907	907	0	0
10	SRSI	0077-0236		X6	SRTS	MANSFIELD	PEDESTRIAN SAFETY IMPROVEMENTS IN THE VINCINITY OF THE SOUTHEAST ELEMENTARY SCHOOL	CON	2017	495	495	0	0
01	SRSI	0102-0355		X6	SRTS	NORWALK	PEDESTRIAN SAFETY IMPROVEMENTS IN THE VINCINITY OF THE ROTON MIDDLE SCHOOL	CON	2017	465	465	0	0
10	SRSI	0132-0129		X6	ELI TERRY	SOUTH WINDSOR	PED SAFETY IMPROVEMENTS VIC. ELI TERRY ELEMENTARY SCHOOL	CON	2017	470	470	0	0
									2017 Total	1,430	1,430	0	0
05	STPA	0025-0144		X6	BIKEWAY	CHESHIRE	FARMINGTON CANAL TRAIL: CORNWALL AV TO CT-68 & JARVIS ST TO SOUTHINGTON TL	CON	2015	2,250	1,800	450	0
06	STPA	0036-0184		CC	ROUTE 34	DERBY	RECONSTRUCTION; BRIDGE ST. TO AUSONIO DR.	ROW	2015	8,000	6,400	1,600	0
10	STPA	0042-0301		X6	CHARTER OAK GREENWAY	EAST HARTFORD	EAST HARTFORD MULTI-USE TRAIL (SIMMONS RD) -AC ENTRY	CON	2015	0	0	0	0
10	STPA	0042-0301		X6	CHARTER OAK GREENWAY	EAST HARTFORD	EAST HARTFORD MULTI-USE TRAIL (SIMMONS RD) - AC CONV	CON	2015	2,000	1,800	200	0
10	STPA	0042-0320		X6	RT 15	EAST HARTFORD	PAVEMENT PRESERVATION ON RT 15	CON	2015	5,000	4,000	1,000	0
10	STPA	0051-0260		CC	CT 4	FARMINGTON	RECONSTRUCTION OF RT 10 TO MOUNTAIN SPRING ROADS (PHASE 1)	CON	2015	7,250	5,800	1,450	0
10	STPA	0076-0217		X6		MANCHESTER	CHARTER OAK GREENWAY EXTENSION	CON	2015	0	0	0	0
10	STPA	0076-0217		X6		MANCHESTER	CHARTER OAK GREENWAY EXTENSION	CON	2015	2,750	2,200	550	0
08	STPA	0092-0531		CC	I-91/I-95	NEW HAVEN	INTERCHANGE RECONSTRUCTION, CONTRACT E - AC ENTRY	CON	2015	0	0	0	0
08	STPA	0092-0531		CC	I-91/I-95	NEW HAVEN	INTERCHANGE RECONSTRUCTION, CONTRACT E AT 90% - AC CONVERSION	CON	2015	833	725	108	0
08	STPA	0092-0570		X6		NEW HAVEN	BOATHOUSE BLD AT LONG WHARF (80%) - PHASE 2	CON	2015	22,225	13,460	8,365	400
08	STPA	0092-0571		X6		NEW HAVEN	SHORELINE RESTORATION @ LONG WHARF (80%)	CON	2015	3,400	2,720	680	0
01	STPA	0135-0323		X6	VARIOUS	STAMFORD	ADA SIDEWALK RAMPS ALONG US1, CT137 & SR435	FD	2015	63	50	13	0
01	STPA	0135-0323		X6	VARIOUS	STAMFORD	ADA SIDEWALK RAMPS ALONG US1, CT137 & SR493	CON	2015	600	480	120	0
07	STPA	0138-0211		X6	US 1	STRATFORD	INT. IMPR. @ W. BROAD & NOBLE STS.	ROW	2015	50	40	10	0
05	STPA	0151-0273		CC	I-84	WATERBURY	UPGRADE EXPRESSWAY - PHASE 3 - AC ENTRY	CON	2015	0	0	0	0
01	STPA (EBS)	0158-0201		X7	CT 136	WESTPORT	INTERSECTION IMPROVEMENT AT WESTON ROAD AND CLINTON AVENUE	CON	2015	2,540	2,032	508	0
70	STPA	0170-3227		X6	VARIOUS	STATEWIDE	CE SIGN SUPPORT INSP - NON-NHS ROADS 7/1/13 - 12/31/16 - AC ENTRY	OTH	2015	0	0	0	0
70	STPA	0170-3227		X6	VARIOUS	STATEWIDE	CE SIGN SUPPORT INSP - NON-NHS ROADS 7/1/13 - 12/31/16 - AC CONVERSION	OTH	2015	690	552	138	0
70	STPA	0170-3228		X6	VARIOUS	STATEWIDE	CE MAST ARM INSP - STATEWIDE 7/1/13 - 12/31/16 - AC ENTRY	OTH	2015	0	0	0	0
70	STPA	0170-3259		X6	NON-NHS	STATEWIDE	NON-NHS PAVEMENT MANAGEMENT ANALYSIS (12/2/13-12/1/16) - AC ENTRY	PL	2015	0	0	0	0
70	STPA	0170-3259		X6	NON-NHS	STATEWIDE	NON-NHS PAVEMENT MANAGEMENT ANALYSIS (12/2/13-12/1/16)	PL	2015	513	411	103	0
70	STPA	0170-3359		X6	VARIOUS	STATEWIDE	SIZE & WEIGHT ENFORCEMENT PROGRAM (FY15-17) AC ENTRY	CON	2015	0	0	0	0
70	STPA	0170-3359		X6	VARIOUS	STATEWIDE	SIZE & WEIGHT ENFORCEMENT PROGRAM (FY15-17) AC CONVERSION	CON	2015	500	400	100	0
71	STPA	0171-0376		X7	VARIOUS	DISTRICT 1	INSTALL OSTA TRAFFIC SIGNALS	ROW	2015	100	80	20	0
71	STPA	0171-0377		X7	VARIOUS	DISTRICT 1	TRAFFIC SIGNAL INSTALLATION & REVISIONS	ROW	2015	145	145	0	0
71	STPA	0171-0394		X7	VARIOUS	DISTRICT 1	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 1	PD	2015	455	455	0	0
72	STPA	0172-0422		X7	VARIOUS	DISTRICT 2	INSTALL OSTA TRAFFIC SIGNALS	ROW	2015	100	80	20	0
72	STPA	0172-0423		X7	VARIOUS	DISTRICT 2	TRAFFIC SIGNAL INSTALLATION & REVISIONS	ROW	2015	100	100	0	0
72	STPA	0172-0436		X7	VARIOUS	DISTRICT 2	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 2	PD	2015	350	350	0	0
73	STPA	0173-0437		X7	VARIOUS	DISTRICT 3	TRAFFIC SIGNAL INSTALLATION & REVISIONS	ROW	2015	125	125	0	0
73	STPA	0173-0451		X7	VARIOUS	DISTRICT 3	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 3	PD	2015	385	385	0	0
74	STPA	0174-0376		X7	VARIOUS	DISTRICT 4	REPLACE TRAFFIC SIGNALS	ROW	2015	100	100	0	0
74	STPA	0174-0392		X7	VARIOUS	DISTRICT 4	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 4	PD	2015	350	350	0	0
									2015 Total	60,875	45,040	15,435	400
02	STPA	0016-0098		X6	CT 133	BRIDGEWATER	SAFETY IMPROVEMENTS VIC. WEWAKA BROOK	CON	2016	5,000	4,000	1,000	0
05	STPA	0017-0183		X7	CT 69	BRISTOL	WIDENING, MAPLE AVE & PEACEDALE STREET #2	CON	2016	2,476	1,981	495	0
02	STPA	0034-0309		X7	SR 806	DANBURY	NEWTOWN ROAD WIDENING AT OLD SHELTER ROCK ROAD	ROW	2016	140	105	35	0
70	STPA	0063-0715		X6	VARIOUS	STATEWIDE	DRS: MOTOR FUEL TAX ENFORCEMENT (FFY17-FFY19)	CON	2016	0	0	0	0
70	STPA	0063-0715		X6	VARIOUS	STATEWIDE	DRS: MOTOR FUEL TAX ENFORCEMENT (FFY17-FFY19)	CON	2016	35	35	0	0
02	STPA	0095-0234		NRS	CT 67	NEW MILFORD	CT 67 NEW MILFORD, RECONSTRUCTION AND REALIGNMENT	CON	2016	232	232	0	0
10	STPA	0131-0203		X6	TRAIL	SOUTHINGTON	CONSTRUCTION OF A PORTION OF THE FARMINGTON CANAL HERITAGE TRAIL	PD	2016	198	158	40	0
05	STPA	0151-0273		CC	I-84	WATERBURY	UPGRADE EXPRESSWAY - PHASE 3 - AC CONVERSION	CON	2016	13,506	11,750	1,756	0
70	STPA	0170-3228		X6	VARIOUS	STATEWIDE	CE MAST ARM INSP - STATEWIDE 7/1/13 - 12/31/16 AC CONVERSION	OTH	2016	281	225	56	0
70	STPA	0170-3259		X6	NON-NHS	STATEWIDE	NON-NHS PAVEMENT MANAGEMENT ANALYSIS (12/2/13-12/1/16)	PL	2016	727	582	145	0
70	STPA	0170-3359		X6	VARIOUS	STATEWIDE	SIZE & WEIGHT ENFORCEMENT PROGRAM (FY15-17) AC CONVERSION	CON	2016	500	400	100	0
70	STPA	0170-3416		X6	STATEWIDE	VARIOUS	CE SIGN SUPPORT INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC ENTRY	OTH	2016	0	0	0	0
70	STPA	0170-3416		X6	STATEWIDE	VARIOUS	CE SIGN SUPPORT INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2016	500	400	100	0
10	STPA	0171-0394		X7	VARIOUS	DISTRICT 1	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 1	ROW	2016	225	225	0	0
71	STPA	0171-0394		X7	VARIOUS	DISTRICT 1	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 1	FD	2016	195	195	0	0
72	STPA	0172-0422		X7	VARIOUS	DISTRICT 2	INSTALL OSTA TRAFFIC SIGNALS	CON	2016	1,150	920	180	50
72	STPA	0172-0436		X7	VARIOUS	DISTRICT 2	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 2	FD	2016	150	150	0	0
72	STPA	0172-0436		X7	VARIOUS	DISTRICT 2	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 2	ROW	2016	100	100	0	0
73	STPA	0173-0451		X7	VARIOUS	DISTRICT 3	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 3	FD	2016	165	165	0	0
73	STPA	0173-0451		X7	VARIOUS	DISTRICT 3	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 3	ROW	2016	160	160	0	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
74	STPA	0174-0392		X7	VARIOUS	DISTRICT 4	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 4	FD	2016	300	300	0	0
74	STPA	0174-0392		X7	VARIOUS	DISTRICT 4	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 4	ROW	2016	125	125	0	0
									2016 Total	26,165	22,208	3,907	50
08	STPA	0014-0174		X6	SR 740	BRANFORD	REALIGNMENT, BROOKWOOD TO WILLIAMS RDS	CON	2017	5,800	4,640	1,160	0
05	STPA	0025-0145		X6		CHESHIRE	FARMINGTON CANAL TRAIL CONSTRUCTION	CON	2017	6,725	5,380	1,345	0
02	STPA	0034-0309		X7	SR 806	DANBURY	NEWTOWN ROAD WIDENING AT OLD SHELTER ROCK ROAD	CON	2017	1,085	868	217	0
10	STPA	0076-0220		X7	CT 83 & OAKLAND ST	MANCHESTER	CONSTRUCTION OF TWO ROUNDABOUTS - 83 @ OAKLAND; OAKLAND @ LOCAL ROADS	PD	2017	600	480	120	0
10	STPA	0131-0203		X6	TRAIL	SOUTHINGTON	CONSTRUCTION OF A PORTION OF THE FARMINGTON CANAL HERITAGE TRAIL	CON	2017	1,800	1,440	36	0
10	STPA	0131-0203		X6	TRAIL	SOUTHINGTON	CONSTRUCTION OF A PORTION OF THE FARMINGTON CANAL HERITAGE TRAIL	FD	2017	108	86	22	0
10	STPA	0131-0203		X6	TRAIL	SOUTHINGTON	CONSTRUCTION OF A PORTION OF THE FARMINGTON CANAL HERITAGE TRAIL	ROW	2017	250	200	50	0
07	STPA	0144-0192		X6	TRAIL	TRUMBULL	EXTENSION OF THE PEQUONNOCK RIVER TRAIL (SECTION A2)	CON	2017	1,200	960	0	240
05	STPA	0151-0273		CC	I-84	WATERBURY	UPGRADE EXPRESSWAY - PHASE 3 - AC CONVERSION	CON	2017	13,506	11,750	1,756	0
70	STPA	0170-3359		X6	VARIOUS	STATEWIDE	SIZE & WEIGHT ENFORCEMENT PROGRAM (FY15-17) AC CONVERSION	CON	2017	500	400	100	0
70	STPA	0170-3416		X6	STATEWIDE	VARIOUS	CE SIGN SUPPORT INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2017	750	600	150	0
71	STPA	0171-0394		X7	VARIOUS	DISTRICT 1	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 1	CON	2017	2,900	2,900	0	0
71	STPA	0171-0417		X7	VARIOUS	DISTRICT 1	INSTALL/REPLACE OSTA TRAFFIC SIGNALS IN DISTRICT 1	PD	2017	436	436	0	0
72	STPA	0172-0436		X7	VARIOUS	DISTRICT 2	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 2	CON	2017	2,200	2,200	0	0
73	STPA	0173-0451		X7	VARIOUS	DISTRICT 3	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 3	CON	2017	2,500	2,500	0	0
74	STPA	0174-0392		X7	VARIOUS	DISTRICT 4	DESIGN & INSTALL OSTA TRAFFIC SIGNALS IN DISTRICT 4	CON	2017	3,250	3,250	0	0
									2017 Total	43,610	38,090	4,955	240
06	STPA	0036-0184		CC	CT 34	DERBY	RECONSTRUCTION; BRIDGE ST. TO AUSONIO DR.	CON	2018	6,626	5,301	1,325	0
70	STPA	0063-0715		X6	VARIOUS	STATEWIDE	DRS: MOTOR FUEL TAX ENFORCEMENT (FFY17-FFY19)	CON	2018	35	35	0	0
10	STPA	0076-0220		X7	CT 83 & OAKLAND ST	MANCHESTER	CONSTRUCTION OF TWO ROUNDABOUTS - 83 @ OAKLAND; OAKLAND @ LOCAL ROADS	FD	2018	700	560	140	0
10	STPA	0076-0220		X7	CT 83 & OAKLAND ST	MANCHESTER	CONSTRUCTION OF TWO ROUNDABOUTS - 83 @ OAKLAND; OAKLAND @ LOCAL ROADS	ROW	2018	50	40	10	0
05	STPA	0151-0273		CC	I-84	WATERBURY	UPGRADE EXPRESSWAY - PHASE 3 - AC CONVERSION	CON	2018	13,506	11,750	1,756	0
70	STPA	0170-3416		X6	STATEWIDE	VARIOUS	CE SIGN SUPPORT INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2018	250	200	50	0
71	STPA	0171-0417		X7	VARIOUS	DISTRICT 1	INSTALL/REPLACE OSTA TRAFFIC SIGNALS IN DISTRICT 1	FD	2018	187	187	0	0
71	STPA	0171-0417		X7	VARIOUS	DISTRICT 1	INSTALL/REPLACE OSTA TRAFFIC SIGNALS IN DISTRICT 1	ROW	2018	110	110	0	0
									2018 Total	21,463	18,182	3,281	0
70	STPA	0063-0715		X6	VARIOUS	STATEWIDE	DRS: MOTOR FUEL TAX ENFORCEMENT (FFY17-FFY19)	CON	FYI	35	35	0	0
10	STPA	0076-0220		X7	CT 83 & OAKLAND ST	MANCHESTER	CONSTRUCTION OF TWO ROUNDABOUTS - 83 @ OAKLAND; OAKLAND @ LOCAL ROADS	CON	FYI	5,500	4,400	1,100	0
05	STPA	0151-0273		CC	I-84	WATERBURY	UPGRADE EXPRESSWAY - PHASE 3 - AC CONVERSION	CON	FYI	13,506	11,750	1,756	0
70	STPA	0170-3416		X6	STATEWIDE	VARIOUS	CE SIGN SUPPORT INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	FYI	1,000	800	200	0
71	STPA	0171-0417		X7	VARIOUS	DISTRICT 1	INSTALL/REPLACE OSTA TRAFFIC SIGNALS IN DISTRICT 1	CON	FYI	3,350	3,350	0	0
									FYI Total	23,391	20,335	3,056	0
07	STPA-BRX	0015-0363		X6	CT 8	BRIDGEPORT	REPLACE BR 03761, 03762, 03764, 03765 OVER LINDLEY ST & CAPITOL AVE	CON	2015	32,765	27,850	4,915	0
02	STPA-BRX	0018-0134		X6	CT 133	BROOKFIELD	REHAB BRIDGE 01343 OF HOUSATONIC RIVER	PD	2015	200	160	40	0
13	STPA-BRX	0044-0154		X6	CT 156	EAST LYME	REHAB BR 06026 OVER NIANTIC RIVER	PD	2015	350	280	70	0
10	STPA-BRX	0093-0200		X6	CT 175	NEWINGTON	REHAB BR 04326 o/ AMTRAK	FD	2015	470	376	94	0
10	STPA-BRX	0093-0200		X6	CT 175	NEWINGTON	REHAB BR 04326 o/ AMTRAK	ROW	2015	50	40	10	0
08	STPA-BRX	0106-0121		X6	CT 114	ORANGE	REPLACE BR 02637 OVER RACE BROOK (U-20)	CON	2015	2,300	1,840	460	0
10	STPA-BRX	0118-0169		X6	CT160	ROCKY HILL	REHAB BRDIGES 03163 & 03164 OVER I-91	PD	2015	250	200	50	0
01	STPA-BRX	0135-0307		X6	US 1	STAMFORD	REPLACE BRIDGE 00315 OVER NOROTON RIVER	FD	2015	441	353	88	0
01	STPA-BRX	0135-0307		X6	US 1	STAMFORD	REPLACE BRIDGE 00315 OVER NOROTON RIVER	ROW	2015	285	228	57	0
07,08	STPA-BRX	0138-0221		X6	I-95	STRATFORD	REPLACE BR 00135, MOSES WHEELER. - AC ENTRY	CON	2015	0	0	0	0
07,08	STPA-BRX	0138-0221		X6	I-95	STRATFORD	REPLACE BR 00135, MOSES WHEELER. - AC CONVERSION	CON	2015	2,177	2,177	0	0
70	STPA-BRX	0170-3223		X6	VARIOUS	STATEWIDE	SF BRIDGE INSP - NON-NHS ROADS 9/1/13 - 12/31/16 - AC ENTRY	OTH	2015	0	0	0	0
70	STPA-BRX	0170-3223		X6	VARIOUS	STATEWIDE	SF BRIDGE INSP - NON-NHS ROADS 9/1/13 - 12/31/16	OTH	2015	4,000	3,200	800	0
70	STPA-BRX	0170-3340	170U-WNON	X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - UWATER - NON-NHS ROADS-AC ENTRY	OTH	2015	0	0	0	0
70	STPA-BRX	0170-3340	170U-WNON	X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - UWATER - NON-NHS ROADS (FY 15)-AC CONVERSION	OTH	2015	1,200	960	240	0
									2015 Total	44,488	37,664	6,824	0
07	STPA-BRX	0015-0339		X6	CT 130	BRIDGEPORT	REHAB BR 02475 OVER PEQUONNOCK RV (PHASE 2)	FD	2016	1,000	800	200	0
13	STPA-BRX	0044-0154		X6	CT 156	EAST LYME	REHAB BR 06026 OVER NIANTIC RIVER	FD	2016	400	320	80	0
01	STPA-BRX	0056-0305		X6	RT 1	GREENWICH	REPLACE BR 01872 OVER GREENWICH CREEK	ROW	2016	200	160	40	0
08	STPA-BRX	0092-0522		X6	I-95	NEW HAVEN	REPLACE BR 00163A o/ WEST RIVER - AC CONVERSION	CON	2016	2,222	2,000	222	0
08	STPA-BRX	0092-0522		X6	I-95	NEW HAVEN	REPLACE BR 00163A o/ WEST RIVER - AC ENTRY	CON	2016	0	0	0	0
10	STPA-BRX	0118-0169		X6	CT160	ROCKY HILL	REHAB BRDIGES 03163 & 03164 OVER I-91	FD	2016	350	280	70	0
01	STPA-BRX	0135-0325		X6	US 1	STAMFORD	REHAB BR 00037 OVER I-95	ROW	2016	100	80	20	0
01	STPA-BRX	0135-0325		X6	US 1	STAMFORD	REHAB BR 00037 OVER I-95	FD	2016	770	616	154	0
07	STPA-BRX	0138-0245		X6	US 1	STRATFORD	REPLACE BR 00326 OVER METRO NORTH RR	FD	2016	720	576	144	0
07	STPA-BRX	0138-0245		X6	US 1	STRATFORD	REPLACE BR 00326 OVER METRO NORTH RR	ROW	2016	94	75	19	0
10	STPA-BRX	0155-0169		X6	MAYFLOWER ST	WEST HARTFORD	REHAB BR 01748, MAYFLOWER ST OVER I-84	CON	2016	4,400	3,520	880	0
13	STPA-BRX	0163-0196		X6	CT 66	WINDHAM	REHAB BR 00488 OVER P&W RR (LIST 20)	ROW	2016	50	40	10	0
13	STPA-BRX	0163-0196		X6	CT 66	WINDHAM	REHAB BR 00488 OVER P&W RR (LIST 20)	FD	2016	300	240	60	0
70	STPA-BRX	0170-3340	170U-WNON	X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - UWATER - NON-NHS ROADS (FY 16)-AC CONVERSION	OTH	2016	1,200	960	240	0
70	STPA-BRX	0170-3383		X6	VARIOUS	STATEWIDE	LOAD RATINGS FOR BRIDGES - NON-NHS ROADS - AC ENTRY	OTH	2016	0	0	0	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
70	STPA-BRX	0170-3383		X6	VARIOUS	STATEWIDE	LOAD RATINGS FOR BRIDGES - NON-NHS ROADS - AC CONV.	OTH	2016	1,000	800	200	0
70	STPA-BRX	0170-3412		X6	STATEWIDE	VARIOUS	SF BRIDGE INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC ENTRY	OTH	2016	0	0	0	0
70	STPA-BRX	0170-3412		X6	STATEWIDE	VARIOUS	SF BRIDGE INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2016	2,385	1,908	477	0
70	STPA-BRX	0170-3414		X6	STATEWIDE	VARIOUS	CE BRIDGE INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC ENTRY	OTH	2016	0	0	0	0
70	STPA-BRX	0170-3414		X6	STATEWIDE	VARIOUS	CE BRIDGE INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2016	6,521	5,217	1,304	0
									2016 Total	21,712	17,592	4,120	0
02	STPA-BRX	0018-0134		X6	CT 133	BROOKFIELD	REHAB BRIDGE 01343 OF HOUSATONIC RIVER	FD	2017	300	240	60	0
02	STPA-BRX	0018-0134		X6	CT 133	BROOKFIELD	REHAB BRIDGE 01343 OF HOUSATONIC RIVER	ROW	2017	50	40	10	0
08	STPA-BRX	0059-0157		X6	CT 146	GUILFORD	REPLACE BRIDGE 02677 OVER STREAM	CON	2017	2,400	1,920	480	0
10	STPA-BRX	0093-0200		X6	CT 175	NEWINGTON	REHAB BR 04326 OVER AMTRAK	CON	2017	7,800	6,240	1,560	0
10	STPA-BRX	0118-0169		X6	CT160	ROCKY HILL	REHAB BRDIGES 03163 & 03164 OVER I-91	CON	2017	6,000	4,800	1,200	0
01	STPA-BRX	0135-0325		X6	US 1	STAMFORD	REHAB BR 00037 OVER I-95	CON	2017	20,000	16,000	4,000	0
13	STPA-BRX	0163-0196		X6	CT 66	WINDHAM	REHAB BR 00488 OVER P&W RR (LIST 20)	CON	2017	0	0	0	0
70	STPA-BRX	0170-3340	170U-WNON	X6	VARIOUS	STATEWIDE	CE BRIDGE INSP - UWATER - NON-NHS ROADS (FY 17)-AC CONVERSION	OTH	2017	1,200	960	240	0
70	STPA-BRX	0170-3383		X6	VARIOUS	STATEWIDE	LOAD RATINGS FOR BRIDGES - NON-NHS ROADS - AC CONV.	OTH	2017	1,000	800	200	0
70	STPA-BRX	0170-3412		X6	STATEWIDE	VARIOUS	SF BRIDGE INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2017	2,528	2,022	506	0
70	STPA-BRX	0170-3414		X6	STATEWIDE	VARIOUS	CE BRIDGE INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2017	6,847	5,478	1,369	0
									2017 Total	48,125	38,500	9,625	0
07	STPA-BRX	0015-0339		X6	CT 130	BRIDGEPORT	REHAB BR 02475 OVER PEQUONNOCK RV (PHASE 2)	CON	2018	10,000	8,000	2,000	0
02	STPA-BRX	0018-0134		X6	CT 133	BROOKFIELD	REHAB BRIDGE 01343 OF HOUSATONIC RIVER	CON	2018	5,000	4,000	1,000	0
13	STPA-BRX	0044-0154		X6	CT 156	EAST LYME	REHAB BR 06026 OVER NIANTIC RIVER	CON	2018	5,000	4,000	1,000	0
13	STPA-BRX	0163-0196		X6	CT 66	WINDHAM	REHAB BR 00488 OVER P&W RR (LIST 20)	CON	2018	0	0	0	0
13	STPA-BRX	0163-0196		X6	CT 66	WINDHAM	REHAB BR 00488 OVER P&W RR (LIST 20)	CON	2018	9,000	7,200	1,800	0
70	STPA-BRX	0170-3383		X6	VARIOUS	STATEWIDE	LOAD RATINGS FOR BRIDGES - NON-NHS ROADS - AC CONV.	OTH	2018	1,000	800	200	0
70	STPA-BRX	0170-3412		X6	STATEWIDE	VARIOUS	SF BRIDGE INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2018	2,680	2,144	536	0
70	STPA-BRX	0170-3414		X6	STATEWIDE	VARIOUS	CE BRIDGE INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	2018	7,189	5,751	1,438	0
									2018 Total	39,869	31,895	7,974	0
13	STPA-BRX	0163-0196		X6	CT 66	WINDHAM	REHAB BR 00488 OVER P&W RR (LIST 20)	CON	FYI	0	0	0	0
70	STPA-BRX	0170-3383		X6	VARIOUS	STATEWIDE	LOAD RATINGS FOR BRIDGES - NON-NHS ROADS - AC CONV.	OTH	FYI	2,000	1,600	400	0
70	STPA-BRX	0170-3412		X6	STATEWIDE	VARIOUS	SF BRIDGE INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	FYI	5,852	4,682	1,170	0
70	STPA-BRX	0170-3414		X6	STATEWIDE	VARIOUS	CE BRIDGE INSP - NON-NHS ROADS (9/1/16-8/31/21) - AC CONVERSION	OTH	FYI	15,474	12,379	3,095	0
									FYI Total	23,326	18,661	4,665	0
07	STPBS	0015-0360		X8	MAIN ST	BRIDGEPORT	TRAFFIC SIGNAL IMPROVEMENTS ON MAIN ST	CON	2015	8,900	8,900	0	0
07	STPBS	0015-0360		X8	MAIN ST	BRIDGEPORT	TRAFFIC SIGNAL IMPROVEMENTS ON MAIN ST	FD	2015	491	491	0	0
07	STPBS	0015-0363		X6	CT 8	BRIDGEPORT	REPLACE BR 03761, 03762, 03764, 03765 OVER LINDLEY ST & CAPITOL AVE	CON	2015	8,235	7,000	1,235	0
01	STPBS	0035-0196		X6		DARIEN	DARIEN NOROTON HEIGHTS STUDY	PL	2015	250	200	25	25
06	STPBS	0036-0179		CC	CT 8	DERBY	IMPROVEMENTS @ INTERCHANGE 18 - AC ENTRY	CON	2015	0	0	0	0
06	STPBS	0036-0179		CC	CT 8	DERBY	IMPROVEMENTS @ INTERCHANGE 18-AC CONV	CON	2015	3,000	2,400	600	0
01	STPBS	0056-0305		X6	RT 1	GREENWICH	REPLACE BR 01872 OVER GREENWICH CREEK	PD	2015	175	140	35	0
07	STPBS	0084-0109		X7	PEPPER ST	MONROE	MINOR WIDENING & OPERATIONAL IMPROVEMENTS ON PEPPER ST	FD	2015	481	384	48	48
07	STPBS	0084-0109		X7	PEPPER ST	MONROE	MINOR WIDENING & OPERATIONAL IMPROVEMENTS ON PEPPER ST	ROW	2015	870	696	87	87
01	STPBS	0102-0351		X6	WEST AVE	NORWALK	CROSSWALK UPGRADES: WALL STREET TO NORTH MAIN STREET.	CON	2015	409	327	0	82
01	STPBS	0102-0356		X6	WEST ROCKS ROAD	NORWALK	REHAB BR 00722 OVER RT 15	PD	2015	200	160	40	0
02	STPBS	0117-0149		X6	CT 35	RIDGEFIELD	REPLACE BR 02277 OVER RIDGEFIELD BROOK	CON	2015	3,200	2,560	640	0
06	STPBS	0124-0169		X6	RIMMON STREET	SEYMOUR	RECLAMATION & DRAINAGE IMPROVEMENTS ON RIMMON STREET	ROW	2015	110	88	11	11
06	STPBS	0124-0169		X6	RIMMON STREET	SEYMOUR	RECLAMATION & DRAINAGE IMPROVEMENTS ON RIMMON STREET	FD	2015	405	324	41	41
01	STPBS	0135-0321		X7	OAKLAWN AVE	STAMFORD	RECONSTRUCTION: HALPIN AVE TO CAMORE ST (FD)	FD	2015	225	180	23	23
01	STPBS	0135-0321		X7	OAKLAWN AVE	STAMFORD	RECONSTRUCTION: HALPIN AVE TO CAMORE ST	ROW	2015	1,100	880	110	110
01	STPBS	0135-0327		X6	CROSSWALK	STAMFORD	PEDESTRIAN CROSSWALK	CON	2015	1,000	800	200	0
01	STPBS	0135-0333		X6		STAMFORD	STAMFORD BICYCLE AND PEDESTRIAN PLAN	PL	2015	250	200	25	25
07	STPBS	0138-0241	0138-TMP1	X7	WEST BROAD ST	STRATFORD	INTERSECTION & DRAINAGE IMPROVEMENTS ON W. BROAD ST AT LINDEN AVE & CALIFORNIA ST	ROW	2015	200	160	20	20
07	STPBS	0138-0241	0138-TMP1	X7	WEST BROAD ST	STRATFORD	INTERSECTION & DRAINAGE IMPROVEMENTS ON W. BROAD ST AT LINDEN AVE & CALIFORNIA ST	FD	2015	350	280	35	35
07	STPBS	0144-0191		X6	TRAIL	TRUMBULL	PEQUONNOCK RIVER TRAIL	FD	2015	854	683	171	0
01	STPBS	0412-0143		X6	NORWALK TD	NORWALK	NORWALK TD - COMPREHENSIVE OPERATIONS ANALYSIS - TRANSFER TO FTA	OTH	2015	400	320	80	0
01	STPBS	0412-0143		X6	NORWALK TD	NORWALK	NORWALK TD - STUDY OF FACILITY NEEDS AND FACILITY ANALYSIS - TRANSFER TO FTA	OTH	2015	350	280	70	0
									2015 Total	31,456	27,454	3,495	506
06	STPBS	0002-0125		X6	VARIOUS	ANSONIA	ANSONIA PARK & RIVERWALK - PHASE 2	CON	2016	400	320	0	80
07	STPBS	0015-0368		CC	LAFAYETTE CIRCLE	BRIDGEPORT	REALIGNMENT OF LAFAYETTE CIRCLE & IMPROVEMENTS ON SR700	PD	2016	750	600	75	75
06	STPBS	0036-0195		X7	DERBY-MILFORD RD	DERBY	OPERATIONAL IMPR - DERBY-MILFORD RD AT RT 34	ROW	2016	120	96	24	0
06	STPBS	0036-0195		X7	DERBY-MILFORD RD	DERBY	OPERATIONAL IMPROVEMENT - DERBY-MILFORD RD AT RT 34	FD	2016	492	394	98	0
01	STPBS	0056-0305		X6	RT 1	GREENWICH	REPLACE BR 01872 OVER GREENWICH CREEK	FD	2016	175	140	35	0
07	STPB	0084-0109		X7	PEPPER ST	MONROE	MINOR WIDENING & OPERATIONAL IMPROVEMENTS ON PEPPER ST	CON	2016	5,763	4,610	576	576
01	STPB	0102-0325		X7	US 1	NORWALK	INTERSECTION IMPROVEMENT ON US RT 1 AT RT 53	CON	2016	145	116	29	0
06	STPBS	0124-0169		X6	RIMMON STREET	SEYMOUR	RECLAMATION & DRAINAGE IMPROVEMENTS ON RIMMON STREET	CON	2016	3,705	2,964	371	371
01	STPBS	0135-0321		X7	OAKLAWN AVE	STAMFORD	RECONSTRUCTION: HALPIN AVE TO CAMORE ST	CON	2016	2,950	2,360	295	295
07	STPBS	0138-0241	0138-TMP1	X7	WEST BROAD ST	STRATFORD	INTERSECTION & DRAINAGE IMPROVEMENTS ON W. BROAD ST AT LINDEN AVE & CALIFORNIA ST	CON	2016	5,057	4,046	506	506

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
07	STPBS	0144-0191		X6	TRAIL	TRUMBULL	PEQUONNOCK RIVER TRAIL	CON	2016	4,370	3,496	874	0
01	STPBS	0161-0141		X7	US 7	WILTON	INTERSECTION IMPROVEMENTS AT GRUMMAN HILL ROAD WITH COMPLETE SIGNAL REPLACEMENT	PD	2016	600	480	120	0
									2016 Total	24,528	19,622	3,003	1,903
07	STPBS	0015-0368		CC	LAFAYETTE CIRCLE	BRIDGEPORT	REALIGNMENT OF LAFAYETTE CIRCLE & IMPROVEMENTS ON SR700	FD	2017	750	600	75	75
07	STPBS	0015-0368		CC	LAFAYETTE CIRCLE	BRIDGEPORT	REALIGNMENT OF LAFAYETTE CIRCLE & IMPROVEMENTS ON SR700	ROW	2017	1,400	1,120	140	140
01	STPBS	0102-0297		CC	EAST AVE	NORWALK	RECONSTRUCTION AT METRO NORTH BRIDGE # 42.14	CON	2017	5,000	4,000	1,000	0
01	STPB	0102-0356		X6	WEST ROCKS ROAD	NORWALK	REHAB BR 00722 OVER RT 15	FD	2017	120	96	24	0
									2017 Total	7,270	5,816	1,239	215
06	STPBS	0036-0195		X7	DERBY-MILFORD RD	DERBY	OPERATIONAL IMPROVEMENT - DERBY-MILFORD RD AT RT 34	CON	2018	4,000	3,200	800	0
01	STPBS	0102-0350		X6	TRAIL	NORWALK	CONSTRUCTION OF THE THIRD SECTION OF THE NORWALK RIVER VALLEY TRAIL	CON	2018	2,933	2,346	0	587
01	STPBS	0161-0141		X7	US 7	WILTON	INTERSECTION IMPROVEMENTS AT GRUMMAN HILL ROAD WITH COMPLETE SIGNAL REPLACEMENT	FD	2018	400	320	80	0
01	STPBS	0161-0141		X7	US 7	WILTON	INTERSECTION IMPROVEMENTS AT GRUMMAN HILL ROAD WITH COMPLETE SIGNAL REPLACEMENT	ROW	2018	500	400	100	0
									2018 Total	7,833	6,266	980	587
07	STPBS	0015-0368		CC	LAFAYETTE CIRCLE	BRIDGEPORT	REALIGNMENT OF LAFAYETTE CIRCLE & IMPROVEMENTS ON SR700	CON	FYI	8,900	5,520	690	2,690
06	STPB	0126-0174		X6	SR 712	SHELTON	REHAB BR 01659 OVER THE HOUSATONIC RIVER	CON	FYI	4,000	2,120	1,880	0
01	STPBS	0161-0141		X7	US 7	WILTON	INTERSECTION IMPROVEMENTS AT GRUMMAN HILL ROAD WITH COMPLETE SIGNAL REPLACEMENT	CON	FYI	2,670	2,136	534	0
									FYI Total	15,570	9,776	3,104	2,690
10	STPH	0007-0185		X6	FARMINGTON AVE	BERLIN	REPLACE BR 04474 OVER MATTABESSET RIVER	CON	2015	5,300	4,240	530	530
11	STPH	0033-0129	0033-H001	X7	WILLOWBROOK ROAD	CROMWELL	PAVEMENT REHABILITATION ON WILLOWBROOK ROAD	FD	2015	238	190	24	24
11	STPH	0033-0129	0033-H001	X7	WILLOWBROOK ROAD	CROMWELL	PAVEMENT REHABILITATION ON WILLOWBROOK ROAD	ROW	2015	400	320	40	40
11	STPH	0041-0115		X6	NORTH MAIN ST	EAST HAMPTON	CHRISTOPHER BROOK CULVERT REPLACEMENT	CON	2015	750	600	75	75
10	STPH	0051-0260		CC	CT 4	FARMINGTON	RECONSTRUCTION OF RT 10 TO MOUNTAIN SPRING ROADS (PHASE 1)	CON	2015	7,250	5,800	1,450	0
10	STPH	0051-0269		X7	ROUTE 177	FARMINGTON	INTERSECTION IMPROVEMENT ON RT 177 @ NEW BRITAIN AVE	PD	2015	400	320	40	40
10	STPH	0053-0175		X6	CT 3	GLASTONBURY	PUTNAM BRIDGE REHABILITATION - AC ENTRY	CON	2015	0	0	0	0
10	STPH	0053-0175		X6	CT 3	GLASTONBURY	PUTNAM BRIDGE REHABILITATION	CON	2015	5,000	4,000	1,000	0
11	STPH	0060-0151		X6	CT 154	HADDAM	REPLACE BR 00625 O/ CANDLEWOOD HILL BROOK	CON	2015	4,700	3,760	940	0
10	STPH	0063-0710		X6	I-84	HARTFORD	ON-BOARD TRAVEL SURVEY AND REGIONAL MODEL CALIBRATION-TRANSFER TO FTA	PL	2015	750	600	150	0
10	STPH	0076-0217		X6		MANCHESTER	CHARTER OAK GREENWAY EXTENSION	CON	2015	2,750	2,200	550	0
11	STPH	0082-0313		X6	BOW LANE	MIDDLETOWN	REHAB BRIDGE 00632 OVER RT 9	PD	2015	200	160	40	0
10	STPH	0088-0185		X6	HART STREET	NEW BRITAIN	RECONSTRUCTION OF HART STREET	ROW	2015	25	20	3	3
10	STPH	0088-0185		X6	HART STREET	NEW BRITAIN	RECONSTRUCTION OF HART ST	FD	2015	300	240	30	30
10	STPH	0118-0166		X6	CT 99	ROCKY HILL	REPLACE BR 02102 o/ HOG BROOK	ROW	2015	50	40	10	0
10	STPH	0118-0166		X6	CT 99	ROCKY HILL	REPLACE BR 02102 o/ HOG BROOK	FD	2015	225	180	45	0
10	STPH	0132-0131		X7	AVERY ST	SOUTH WINDSOR	RECON. & MINOR WIDENING ON AVERY ST	CON	2015	2,934	2,347	294	294
10	STPH	0142-0149		X7	RT 195/74	TOLLAND	OPERATIONAL IMPROVEMENTS ON RTS 195/74 AT THE TOLLAND GREEN	FD	2015	703	562	141	0
10	STPH	0142-0149		X7	RT 195/74	TOLLAND	OPERATIONAL IMPROVEMENTS ON RTS 195/74 AT THE TOLLAND GREEN	ROW	2015	100	80	20	0
10	STPH	0146-0195	0146-H024	X6	SOUTH STREET	VERNON	RECONSTRUCTION AND MINOR WIDENING ON SOUTH STREET	ROW	2015	355	284	36	36
10	STPH	0146-0195		X6	SOUTH ST	VERNON	RECONSTRUCTION AND MINOR WIDENING ON SOUTH STREET	FD	2015	270	216	27	27
10	STPH	0155-0168		X7	PARK ROAD	WEST HARTFORD	OPERATIONAL IMPROVEMENTS PARK ROAD AT SR501 (FD)	FD	2015	295	236	30	30
10	STPH	0426-XXXX		CC	INTERMODAL TRIANGLE	HARTFORD	ASYLUM STREET TRANSIT CORRIDOR IMPROVEMENTS - TRANSFER TO FTA	ALL	2015	1,250	1,000	0	250
									2015 Total	34,245	27,395	5,473	1,377
10	STPH	0011-0152		X6	GREENWAY	BLOOMFIELD	BLOOMFIELD GREENWAY (PHASES A-C)	CON	2016	1,885	1,508	0	377
05	STPH	0017-0187		X7	CT 72	BRISTOL	INTERSECTION IMPROVEMENTS AT CT 69 AND DIVINITY STREET	PD	2016	750	600	150	0
10	STPH	0042-0323		X6	SILVER LANE	EAST HARTFORD	CRCOG - SILVER LANE STUDY	PL	2016	200	160	20	20
10	STPH	0046-0126		X6	US 5	EAST WINDSOR	CRCOG - ROUTE 5 STUDY	PL	2016	250	200	50	0
10	STPH	0051-0269		X7	ROUTE 177	FARMINGTON	INTERSECTION IMPROVEMENT ON RT 177 AT NEW BRITAIN AVE	FD	2016	400	320	40	40
10	STPH	0051-0269		X7	ROUTE 177	FARMINGTON	INTERSECTION IMPROVEMENT ON RT 177 AT NEW BRITAIN AVE	ROW	2016	800	640	80	80
11	STPH	0060-0160		X7	CT 82/CT 154	HADDAM	REPLACE 2 T-TYPE INTERSECTIONS WITH ROUNDABOUTS	PD	2016	375	300	75	0
10	STPH	0063-0704		X6	AIRPORT RD	HARTFORD	REHAB BR 00481 OVER RTE 15	CON	2016	5,203	4,163	1,041	0
11	STPH	0082-0305		X6	WEST STREET	MIDDLETOWN	REPLACE BRIDGE OVER 03993 OVER P & W RAILROAD	FD	2016	430	344	86	0
11	STPH	0082-0305		X6	WEST STREET	MIDDLETOWN	REPLACE BRIDGE OVER 03993 OVER P & W RAILROAD	ROW	2016	120	96	24	0
10	STPH	0088-0185		X6	HART STREET	NEW BRITAIN	RECONSTRUCTION OF HART ST	CON	2016	3,850	3,080	399	385
11	STPH	0112-0116		X6	RT 66	EAST HAMPTON	ROUTE 66 CORRIDOR STUDY	PL	2016	365	292	37	37
10	STPH	0146-0195		X6	SOUTH ST	VERNON	RECONSTRUCTION AND MINOR WIDENING ON SOUTH STREET	CON	2016	4,336	3,468	434	434
10	STPH	0155-0169		X6	MAYFLOWER ST	WEST HARTFORD	REHAB BR 01748, MAYFLOWER ST OVER I-84	CON	2016	4,400	3,520	880	0
10	STPH	0159-0189		X6	RIDGE ROAD	WETHERSFIELD	REHABILITATE RIDGE ROAD BRIDGE 00807 OVER ROUTE 5/15	FD	2016	300	240	60	0
									2016 Total	23,664	18,930	3,374	1,372
05	STPH	0017-0187		X7	CT 72	BRISTOL	INTERSECTION IMPROVEMENTS AT CT 69 AND DIVINITY STREET	FD	2017	750	600	150	0
05	STPH	0017-0187		X7	CT 72	BRISTOL	INTERSECTION IMPROVEMENTS AT CT 69 AND DIVINITY STREET	ROW	2017	4,150	3,320	830	0
11	STPH	0033-0129	0033-H001	X7	WILLOWBROOK ROAD	CROMWELL	PAVEMENT REHABILITATION ON WILLOWBROOK ROAD	CON	2017	1,525	1,220	153	153
10	STPH	0042-0318		X6	BREWER STREET	EAST HARTFORD	RECONSTRUCTION OF BREWER STREET	CON	2017	4,545	3,160	395	990
10	STPH	0042-0318		X6	BREWER STREET	EAST HARTFORD	RECONSTRUCTION OF BREWER STREET	ROW	2017	160	128	16	16
10	STPH	0042-0318		X6	BREWER STREET	EAST HARTFORD	RECONSTRUCTION OF BREWER STREET (FD)	FD	2017	280	224	28	28
10	STPH	0051-0269		X7	ROUTE 177	FARMINGTON	INTERSECTION IMPROVEMENT ON RT 177 AT NEW BRITAIN AVE	CON	2017	2,800	2,240	280	280
11	STPH	0060-0160		X7	CT 82/CT 154	HADDAM	REPLACE 2 T-TYPE INTERSECTIONS WITH ROUNDABOUTS	FD	2017	375	300	75	0
11	STPH	0060-0160		X7	CT 82/CT 154	HADDAM	REPLACE 2 T-TYPE INTERSECTIONS WITH ROUNDABOUTS	ROW	2017	200	160	40	0
10	STPH	0063-0633		CC	US 44	HARTFORD	SAFETY IMPROVEMENT HOMESTEAD AVE TO GARDEN ST	CON	2017	2,430	1,944	486	0
05	STPH	0110-0132		X6	FALL MOUNTAIN WATER ROAD	PLYMOUTH	RECONSTRUCT A 780' SECTION	CON	2017	210	168	0	42

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
10	STPH	0142-0149		X7	RT 195/74	TOLLAND	OPERATIONAL IMPROVEMENTS ON RTS 195/74 AT THE TOLLAND GREEN	CON	2017	4,220	3,376	844	0
10	STPH	0142-0149		X7	RT 195/74	TOLLAND	OPERATIONAL IMPROVEMENTS ON RTS 195/74 AT THE TOLLAND GREEN	FD	2017	400	320	80	0
10	STPH	0142-0149		X7	RT 195/74	TOLLAND	OPERATIONAL IMPROVEMENTS ON RTS 195/74 AT THE TOLLAND GREEN	ROW	2017	50	40	10	0
10	STPH	0155-0168		X7	PARK ROAD	WEST HARTFORD	OPERATIONAL IMPROVEMENTS PARK ROAD AT SR501	CON	2017	5,925	4,740	593	593
10	STPH	0171-0421		X8	VARIOUS	CRCOG	EVALUATE & RETIME COMPUTERIZED TRAFFIC SIGNAL SYSTEMS	PE	2017	2,800	2,240	560	0
									2017 Total	30,820	24,180	4,539	2,101
10	STPH	0165-0468		X7	CT-20 AT CT-75	WINDSOR LOCKS	REALIGN CT 20 OFF-RAMP TO CT 75	CON	2018	2,783	2,226	278	278
10	STPH	0055-0141		X7	RT 10/202	GRANBY	INTERSECTION IMPROVEMENTS AT EAST ST & NOTCH RD	FD	2018	550	440	110	0
10	STPH	0055-0141		X7	RT 10/202	GRANBY	INTERSECTION IMPROVEMENTS AT EAST ST & NOTCH RD	ROW	2018	100	80	20	0
									2018 Total	3,433	2,746	408	278
05	STPH	0017-0187		X7	CT 72	BRISTOL	INTERSECTION IMPROVEMENTS AT CT 69 AND DIVINITY STREET	CON	FYI	4,050	3,240	810	0
10	STPH	0055-0141		X7	RT 10/202	GRANBY	INTERSECTION IMPROVEMENTS AT EAST ST & NOTCH RD	CON	FYI	4,695	3,756	919	0
11	STPH	0060-0160		X7	CT 82/CT 154	HADDAM	REPLACE 2 T-TYPE INTERSECTIONS WITH ROUNDABOUTS	CON	FYI	5,000	4,000	1,000	0
									FYI Total	13,745	10,996	2,729	0
08	STPNH	0043-0128		X6	CT 100	EAST HAVEN	REHAB BR 01665 & REALIGN INTERSECTION AT RT 1	CON	2015	3,200	2,560	640	0
08	STPNH	0059-0161	0059-H001	X7	LONG HILL RD	GUILFORD	MINOR WIDENING, RECLAMATION & DRAINAGE IMPROVEMENTS ON LONG HILL RD	FD	2015	453	362	45	45
08	STPNH	0092-0561		X6	STATE ST	NEW HAVEN	BRIDGE 03748 OVER MILL RIVER	CON	2015	0	0	0	0
08	STPNH	0092-0561		X6	STATE ST	NEW HAVEN	BRIDGE 03748 OVER MILL RIVER	CON	2015	4,251	3,401	850	0
08	STPNH	0092-0672		CC	RT 69	NEW HAVEN/WOODBRIDGE	MINOR INTERSECTION AND PED IMPROVEMENTS IN THE VICINITY OF INTERCHANGE 59	PD	2015	500	400	100	0
12	STPNH	0105-0211		X6	US 1	OLD SAYBROOK	REPLACE BR 01890 OVER CENTER BROOK	ROW	2015	50	40	10	0
12	STPNH	0105-0211		X6	US 1	OLD SAYBROOK	REPLACE BR 01890 OVER CENTER BROOK	FD	2015	260	208	52	0
08	STPNH	0156-0170		X7	US 1	WEST HAVEN	INTERSECTION IMPROVEMENT AT ROUTE 122 - AC ENTRY	CON	2015	0	0	0	0
08	STPNH	0156-0170		X7	US 1	WEST HAVEN	INTERSECTION IMPROVEMENT AT ROUTE 122 - AC CONV	CON	2015	5,600	4,480	1,120	0
									2015 Total	14,314	11,451	2,818	45
08	STPNH	0014-0177		X6	CT 146	BRANFORD	REPLACE BR 02675 OVER SYBIL CREEK	ROW	2016	82	66	16	0
08	STPNH	0014-0179		X6	CT 139	BRANFORD	REPLACE BR 01358 OVER BRANFORD RIVER	CON	2016	7,405	5,924	1,481	0
08	STPNH	0059-0161		X7	LONG HILL RD	GUILFORD	MINOR WIDENING, RECLAMATION & DRAINAGE IMPROVEMENTS ON LONG HILL RD	CON	2016	4,106	3,234	436	436
08	STPNH	0061-0151		X7	VARIOUS	HAMDEN	SIGNAL REPLACEMENTS AT SEVEN LOCATIONS IN HAMDEN (FD)	FD	2016	250	250	0	0
08	STPNH	0092-0672		CC	RT 69	NEW HAVEN/WOODBRIDGE	MINOR INTERSECTION AND PED IMPROVEMENTS IN THE VICINITY OF INTERCHANGE 59	FD	2016	310	248	62	0
08	STPNH	0092-0672		CC	RT 69	NEW HAVEN/WOODBRIDGE	MINOR INTERSECTION AND PED IMPROVEMENTS IN THE VICINITY OF INTERCHANGE 59	ROW	2016	250	200	50	0
08	STPNH	0100-0175		CC	SACKET POINT RD	NORTH HAVEN	ROAD RECONSTRUCTION & BRIDGE REPLACEMENT	ROW	2016	400	320	40	40
08	STPNH	0100-0178		X6	BASSETT ROAD	NORTH HAVEN	REPLACE BRIDGE 03120 OVER I-91	ROW	2016	185	148	37	0
08	STPNH	0100-0178		X6	BASSETT ROAD	NORTH HAVEN	REPLACE BRIDGE 03120 OVER I-91	PD	2016	400	320	80	0
08	STPNH	0100-0178		X6	BASSETT ROAD	NORTH HAVEN	REPLACE BRIDGE 03120 OVER I-91	FD	2016	500	400	100	0
08	STPNH	0100-0178		X6	BASSETT ROAD	NORTH HAVEN	REPLACE BRIDGE 03120 OVER I-91-AC CONVERSION	CON	2016	1,250	1,000	250	0
08	STPNH	0100-0178		X6	BASSETT ROAD	NORTH HAVEN	REPLACE BRIDGE 03120 OVER I-91-AC ENTRY	CON	2016	0	0	0	0
									2016 Total	15,138	12,109	2,552	476
08	STPNH	0014-0177		X6	CT 146	BRANFORD	REPLACE BR 02675 OVER SYBIL CREEK	CON	2017	2,800	2,240	560	0
08	STPNH	0061-0151		X7	VARIOUS	HAMDEN	SIGNAL REPLACEMENTS AT SEVEN LOCATIONS IN HAMDEN	CON	2017	2,930	2,930	0	0
08	STPNH	0100-0178		X6	BASSETT ROAD	NORTH HAVEN	REPLACE BRIDGE 03120 OVER I-91-AC CONVERSION	CON	2017	9,150	7,320	1,830	0
11	STPNH	0105-0209		X6	CT 154	OLD SAYBROOK	REPLACE BR 02708 OVER PLUM BANK CREEK & BR 01386 OVER BACK RIVER	FD	2017	175	140	35	0
11	STPNH	0105-0209		X6	CT 154	OLD SAYBROOK	REPLACE BR 02708 o/ PLUM BANK CREEK & BR 01386 OVER BACK RIVER	ROW	2017	25	20	5	0
									2017 Total	15,080	12,650	2,430	0
08	STPNH	0092-0672		CC	RT 69	NEW HAVEN/WOODBRIDGE	MINOR INTERSECTION AND PED IMPROVEMENTS IN THE VICINITY OF INTERCHANGE 59	CON	2018	4,100	3,280	820	0
08	STPNH	0100-0175		CC	SACKETT POINT RD	NORTH HAVEN	ROAD RECONSTRUCTION & BRIDGE REPLACEMENT	CON	2018	13,000	10,400	1,300	1,300
									2018 Total	17,100	13,680	2,120	1,300
08	STPNH	0092-0681		X7	CT 10	NEW HAVEN	INTERSECTION IMPROVEMENT AT SR 745 & KIMBERLY AVE	CON	FYI	2,500	2,000	500	0
									FYI Total	2,500	2,000	500	0
13	STPNL	0137-0155		X6	CT 2	STONINGTON	REHAB BR 03821 OVER CT 78 ON-RAMP	CON	2015	1,425	1,140	285	0
									2015 Total	1,425	1,140	285	0
13	STPNL	0058-0327		X7	CRYSTAL LAKE RD	GROTON	MINOR WIDENING, INTERSECTION IMPROVEMENT & MULTI-USE PATH ON CRYSTAL LAKE RD	CON	2016	6,104	4,883	610	610
13	STPNL	0085-0144		X6	OLD COLCHESTER RD	MONTVILLE	CULVERT REPL OVER FOX BRK	ROW	2016	50	40	5	5
13	STPNL	0085-0144		X6	OLD COLCHESTER RD	MONTVILLE	CULVERT REPL OVER FOX BRK (FD)	FD	2016	226	181	23	23
13	STPNL	0103-0259		X6	SHERMAN ST	NORWICH	REHAB BR 04047 AND 03797 OVER YANTIC RV	CON	2016	3,560	2,848	356	356
13	STPNL	0120-0092		X6	RT 85	SALEM	ROUTE 85 SPOT IMPROVEMENTS	ROW	2016	110	88	22	0
13	STPNL	0120-0092		X6	RT 85	SALEM	ROUTE 85 SPOT IMPROVEMENTS	FD	2016	350	280	70	0
									2016 Total	10,400	8,320	1,086	994
13	STPNL	0085-0144		X6	OLD COLCHESTER RD	MONTVILLE	CULVERT REPL OVER FOX BRK	CON	2017	529	423	53	53
13	STPNL	0120-0092		X6	RT 85	SALEM	ROUTE 85 SPOT IMPROVEMENTS	CON	2017	1,200	960	240	0
									2017 Total	1,729	1,383	293	53
05	STPO	0025-0144		X6	BIKEWAY	CHESHIRE	FARMINGTON CANAL TRAIL: CORNWALL AV TO CT-68 & JARVIS ST TO SOUTHINGTON TL	CON	2015	2,250	1,800	450	0
05	STPO	0025-0145		X6		CHESHIRE	FARMINGTON CANAL TRAIL CONSTRUCTION	FD	2015	400	320	80	0
05	STPO	0025-0145		X6		CHESHIRE	FARMINGTON CANAL TRAIL CONSTRUCTION	ROW	2015	585	468	117	0
10	STPO	0032-0130		X6	CT 31	COVENTRY	RECONSTRUCTION OF ROUTE 31	CON	2015	9,000	7,200	1,800	0
13	STPO	0058-0327		X7	CRYSTAL LAKE ROAD	GROTON	MINOR WIDENING, INT IMPROVEMENT AND MULTI -USE PATH	FD	2015	434	347	43	43
04	STPO	0065-0112		X6	RT 4	HARWINTON	REHAB BR 00425 OVER WEST BRANCH LEADMINE BROOK	CON	2015	2,039	1,631	408	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
05	STPO	0080-0128		CC	I-84	MIDDLEBURY	IMPROVEMENTS AT INTERCHANGE 17	PD	2015	1,063	850	213	0
13	STPO	0103-0265		X6	CT 97	NORWICH	REPLACE BR 02589 OVER COLD BROOK	PD	2015	150	120	30	0
15	STPO	0115-0114		X6	US 44	PUTNAM	REHAB BRIDGE 00992 OVER QUINNIBAUG RV	CON	2015	0	0	0	0
15	STPO	0115-0114		X6	US 44	PUTNAM	REHAB BRIDGE 00992 OVER QUINNIBAUG RV	CON	2015	2,478	1,982	496	0
13	STPO	0133-0097		X6	CT 97	SPRAGUE	REPLACE BR 01291 OVER BEAVER BROOK	PD	2015	150	120	30	0
									2015 Total	18,549	14,839	3,666	43
02	STPO	0016-0098		X6	CT 133	BRIDGEWATER	SAFETY IMPROVEMENTS VIC. WEWAKA BROOK	CON	2016	5,000	4,000	1,000	0
11	STPO	0027-0123		X6	RT 81	CLINTON	ROUTE 81 CORRIDOR STUDY	PL	2016	150	120	15	15
02	STPO	0034-0347		CC	SR 806	DANBURY	IMPROVEMENTS: OLD NEWTOWN TO PLUMTREES AND EAGLE TO INDUSTRIAL PLAZA ROADS	FD	2016	500	400	100	0
02	STPO	0034-0347		CC	SR 806	DANBURY	IMPROVEMENTS: OLD NEWTOWN TO PLUMTREES AND EAGLE TO INDUSTRIAL PLAZA ROADS	ROW	2016	1,400	1,120	280	0
05	STPO	0087-0145		X7	CROSS STREET	NAUGATUCK	RECONSTRUCTION OF CROSS ST (FD)	FD	2016	437	350	44	44
05	STPO	0087-0145		X7	CROSS STREET	NAUGATUCK	RECONSTRUCTION OF CROSS ST	ROW	2016	825	660	83	83
02	STPO	0117-0159		X7	CT 35 (MAIN ST)	RIDGEFIELD	INTERSECTION IMPROVEMENT ON MAIN ST. BETWEEN BAILEY AVE & GOVERNOR ST	ROW	2016	140	112	28	0
05	STPO	0151-0322		X6	SR 847	WATERBURY	ADA CURB RAMP INSTALLATION	CON	2016	1,219	975	244	0
03	STPO	0162-0145		X6	HOLABIRD AVE	WINCHESTER	RECONSTRUCTION OF HOLABIRD AVENUE	CON	2016	4,050	1,650	2,400	0
									2016 Total	13,721	9,387	4,193	141
02	STPO	0034-0347		CC	SR 806	DANBURY	IMPROVEMENTS: OLD NEWTOWN TO PLUMTREES AND EAGLE TO INDUSTRIAL PLAZA ROADS	CON	2017	7,500	6,000	1,500	0
05	STPO	0080-0128		CC	I-84	MIDDLEBURY	IMPROVEMENTS AT INTERCHANGE 17	FD	2017	1,625	1,300	325	0
05	STPO	0080-0128		CC	I-84	MIDDLEBURY	IMPROVEMENTS AT INTERCHANGE 17	ROW	2017	300	240	60	0
05	STPO	0087-0145		X7	CROSS STREET	NAUGATUCK	RECONSTRUCTION OF CROSS ST	CON	2017	4,050	3,240	405	405
02	STPO	0096-0192		X7	US 6	NEWTOWN	INTERSECTION & ROADWAY IMPROVEMENTS TO ROUTE 6, COMMERCE ROAD & EDMOND ROAD	CON	2017	1,985	1,588	397	0
02	STPO	0096-0196		X7	PECK'S LANE	NEWTOWN	REALIGN PECK'S LANE AT CT 25, W/ DRAINAGE SYSTEM	CON	2017	2,200	1,760	440	0
02	STPO	0096-0196		X7	PECK'S LANE	NEWTOWN	REALIGN PECK'S LANE AT CT 25, WITH DRAINAGE SYSTEM	ROW	2017	200	160	40	0
13	STPO	0103-0265		X6	CT 97	NORWICH	REPLACE BR 02589 OVER COLD BROOK	FD	2017	100	80	20	0
13	STPO	0103-0265		X6	CT 97	NORWICH	REPLACE BR 02589 OVER COLD BROOK	ROW	2017	50	40	10	0
02	STPO	0117-0159		X7	CT 35 (MAIN ST)	RIDGEFIELD	INTERSECTION IMPROVEMENT ON MAIN ST. BETWEEN BAILEY AVE & GOVERNOR ST	CON	2017	3,150	2,520	630	0
13	STPO	0133-0097		X6	CT 97	SPRAGUE	REPLACE BR 01291 OVER BEAVER BROOK	FD	2017	100	80	20	0
13	STPO	0133-0097		X6	CT 97	SPRAGUE	REPLACE BR 01291 OVER BEAVER BROOK	ROW	2017	55	44	11	0
									2017 Total	21,315	17,052	3,858	405
13	STPR	0028-0199		X6	CT 85	COLCHESTER	REPLACE BR 06784 OVER CABIN BRK	FD	2015	100	80	20	0
10	STPR	0039-0099		X6	CT 20	EAST GRANBY	REPLACE BR 06705 o/ BROOK	ROW	2015	50	40	10	0
11	STPR	0040-0141		X6	CT 82	EAST HADDAM	REHAB BR 01138 OVER CT RIVER	PD	2015	300	240	60	0
13	STPR	0052-0091		X6	CT 207	FRANKLIN	REHAB BR 06787 & 06788 o/ BEAVER BROOK	PD	2015	300	240	60	0
04	STPR	0073-0182		X6	CT 8 NB	LITCHFIELD	REHAB BRIDGE 00608 OVER NAUGATUCK RIVER	CON	2015	15,190	12,152	3,038	0
04	STPR	0086-0091		X6	CT 109	MORRIS	REPLACE BR 01309 OVER WIGWAM RESERVOIR	PD	2015	250	200	50	0
13	STPR	0101-0116		X6	CT 49	NORTH STONINGTON	REPLACE BR 02968 OVER PENDLETON BROOK	PD	2015	200	160	40	0
15	STPR	0108-0185		X6		PLAINFIELD	REHAB BR 00668 OVER MILL BROOK	PD	2015	200	160	40	0
15	STPR	0111-0119		X6	CT 44	POMFRET	BR 00990 OVER WAPPOQUIA BRK	CON	2015	2,400	1,920	480	0
15	STPR	0111-0122		X6	CT 44	POMFRET	REPLACE BR 02339 O/ BARK MEADOW BROOK	PD	2015	150	120	30	0
13	STPR	0113-0109		X6	CT 2	PRESTON	REPLACE BR 05455 OVER HEWITT BROOK	ROW	2015	50	40	10	0
02	STPR	0116-0133		X6	CT 53	REDDING	REPLACE BR 01018 OVER SAUGATUCK RIVER	CON	2015	2,400	1,920	480	0
	STPR	0123-0066		X6	CT 14	SCOTLAND	REPLACE BR 00681 OVER MERRICK BROOK	PD	2015	150	120	30	0
15	STPR	0136-0072		X6	CT 14A	STERLING	REPLACE BR 02132 O/ CEDAR SWAMP BROOK	PD	2015	150	120	30	0
03	STPR	0143-0187		X6	NEWFIELD RD	TORRINGTON	NEWFIELD ROAD PAVEMENT PRESERVATION	CON	2015	688	550	138	0
	STPR	0147-0060		X6	CT 49	VOLUNTOWN	REPLACE BR 02969 OVER KOISTINEN BROOK	PD	2015	150	120	30	0
03	STPR	0150-0131		X6	CT 109	WASHINGTON	REPLACE BR 06786 OVER MALLORY BROOK	FD	2015	238	191	48	0
03	STPR	0150-0131		X6	CT 109	WASHINGTON	REPLACE BR 06786 OVER MALLORY BROOK	ROW	2015	92	74	18	0
15	STPR	0169-0128		X6	CT 169	WOODSTOCK	BRIDGE 02738 OVER GRAVELLY BRK (LIST 25)	ROW	2015	38	30	8	0
15	STPR	0169-0128		X6	CT 169	WOODSTOCK	BRIDGE 02738 OVER GRAVELLY BRK (LIST 25)	FD	2015	175	140	35	0
70	STPR	0170-3346		X6	VARIOUS	STATEWIDE	INSTALL ROAD WEATHER INFO SYSTEMS (RWIS)	PD	2015	6	5	1	0
									2015 Total	23,277	18,622	4,656	0
03	STPR	0005-0114		X7	CT 219/318	BARKHAMSTED	INTERSECTION IMPROVEMENTS AT RT 219 & RT 318	PD	2016	1,200	960	240	0
02	STPR	0016-0101		X6	RT 133	BRIDGEWATER	UTILITY BREAKOUT OF 16-98	CON	2016	3,000	2,400	600	0
13	STPR	0028-0199		X6	CT 85	COLCHESTER	REPLACE BR 06784 OVER CABIN BRK	CON	2016	1,600	1,280	320	0
10	STPR	0039-0099		X6	CT 20	EAST GRANBY	REPLACE BR 06705 OVER BROOK	CON	2016	1,086	868	217	0
11	STPR	0040-0141		X6	CT 82	EAST HADDAM	REHAB BR 01138 OVER CT RIVER	FD	2016	300	240	60	0
13	STPR	0052-0090		X6	CT 207	FRANKLIN	REPLACE BR 06777 OVER AYERS BROOK	CON	2016	791	633	158	0
11	STPR	0060-0158		X6	CT 9	HADDAM	REHAB BRIDGE 06728 OVER MILL RIVER	PD	2016	120	96	24	0
03	STPR	0097-0095		X6	US 44	NORFOLK	REPLACEMENT OF RETAINING WALLS ON US 44	PD	2016	1,200	960	240	0
13	STPR	0101-0116		X6	CT 49	NORTH STONINGTON	REPLACE BR 02968 OVER PENDLETON BROOK	FD	2016	300	240	60	0
13	STPR	0101-0116		X6	CT 49	NORTH STONINGTON	REPLACE BR 02968 OVER PENDLETON BROOK	ROW	2016	50	40	10	0
15	STPR	0108-0185		X6		PLAINFIELD	REHAB BR 00668 OVER MILL BROOK	FD	2016	300	240	60	0
15	STPR	0108-0185		X6		PLAINFIELD	REHAB BR 00668 OVER MILL BROOK	ROW	2016	50	40	10	0
15	STPR	0111-0122		X6	CT 44	POMFRET	REPLACE BR 02339 OVER BARK MEADOW BROOK	FD	2016	100	80	20	0
15	STPR	0111-0122		X6	CT 44	POMFRET	REPLACE BR 02339 OVER BARK MEADOW BROOK	ROW	2016	50	40	10	0
13	STPR	0113-0109		X6	CT 2	PRESTON	REPLACE BR 05455 OVER HEWITT BROOK	CON	2016	2,558	2,047	512	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
13	STPR	0120-0090		X6	RT 82	SALEM	REPLACE BR 01140 OVER EAST BRANCH EIGHT MILE RV	ROW	2016	50	40	10	0
13	STPR	0120-0090		X6	RT 82	SALEM	REPLACE BR 01140 OVER EAST BRANCH EIGHT MILE RV	FD	2016	500	400	100	0
13	STPR	0120-0093		X6	CT 85	SALEM	REPLACE BRIDGE 02540 OVER LITTLE BROOK	PD	2016	300	240	60	0
03	STPR	0121-0130		X6	US 44	SALISBURY	SAFETY IMPROVEMENT AT CT 41 (WEST JUNCTION)	CON	2016	921	737	184	0
03	STPR	0121-0135		X6	TWIN LAKES ROAD	SALISBURY	PAVEMENT RECLAMATION AND RESURFACING BETWEEN LAKES RD & COOPER HILL RD	CON	2016	928	742	93	93
10	STPR	0134-0147		X7	RT 190	STAFFORD	INTERSECTION IMPROVEMENTS ON RTE 190 AT RTE 319	PD	2016	800	640	160	0
15	STPR	0136-0072		X6	CT 14A	STERLING	REPLACE BR 02132 OVER CEDAR SWAMP BROOK	FD	2016	100	80	20	0
15	STPR	0136-0072		X6	CT 14A	STERLING	REPLACE BR 02132 OVER CEDAR SWAMP BROOK	ROW	2016	50	40	10	0
10	STPR	0142-0150		X6	CT 74	TOLLAND	REPLACE BR 01120 OVER SKUNGAMAUG RV	PD	2016	350	280	70	0
03	STPR	0150-0131		X6	CT 109	WASHINGTON	REPLACE BR 06786 OVER MALLORY BROOK	CON	2016	1,730	1,384	346	0
10	STPR	0160-0139		X6	CT 74	WILLINGTON	REHAB BR 00982 OVER WILLIMANTIC RV	CON	2016	9,500	7,600	1,900	0
70	STPR	0170-3346		X6	VARIOUS	STATEWIDE	INSTALL ROAD WEATHER INFO SYSTEMS (RWIS)	FD	2016	23	19	5	0
									2016 Total	27,957	22,365	5,499	93
03	STPR	0031-0131		X6	CT 128	CORNWALL	REHAB BR 01338 OVER HOUSATONIC RV	CON	2017	300	240	60	0
13	STPR	0052-0091		X6	CT 207	FRANKLIN	REHAB BR 06787 & 06788 o/ BEAVER BROOK	FD	2017	300	240	60	0
11	STPR	0060-0158		X6	CT 9	HADDAM	REHAB BRIDGE 06728 OVER MILL RIVER	FD	2017	120	96	24	0
11	STPR	0060-0158		X6	CT 9	HADDAM	REHAB BRIDGE 06728 OVER MILL RIVER	ROW	2017	50	40	10	0
03	STPR	0086-0091		X6	CT 109	MORRIS	REPLACE BR 01309 OVER WIGWAM RESERVOIR	FD	2017	610	488	122	0
15	STPR	0108-0185		X6	RT 12	PLAINFIELD	REHAB BR 00668 OVERMILL BROOK	CON	2017	1,200	960	240	0
13	STPR	0120-0093		X6	CT 85	SALEM	REPLACE BRIDGE 02540 OVER LITTLE BROOK	FD	2017	300	240	60	0
13	STPR	0120-0093		X6	CT 85	SALEM	REPLACE BRIDGE 02540 OVER LITTLE BROOK	ROW	2017	50	40	10	0
15	STPR	0123-0066		X6	CT 14	SCOTLAND	REPLACE BR 00681 OVER MERRICK BROOK	ROW	2017	50	40	10	0
15	STPR	0123-0066		X6	CT 14	SCOTLAND	REPLACE BR 00681 OVER MERRICK BROOK	FD	2017	100	80	20	0
10	STPR	0129-0115		X6	SR 528	SOMERS	REHAB OF CULVERT BR 05587 OVER GILLETTES BROOK	PD	2017	100	80	20	0
10	STPR	0129-0115		X6	SR 528	SOMERS	REHAB OF CULVERT BR 05587 OVER GILLETTES BROOK	FD	2017	100	80	20	0
10	STPR	0129-0115		X6	SR 528	SOMERS	REHAB OF CULVERT BR 05587 OVER GILLETTES BROOK	ROW	2017	50	40	10	0
10	STPR	0134-0147		X7	RT 190	STAFFORD	INTERSECTION IMPROVEMENTS ON RTE 190 AT RTE 319	ROW	2017	165	132	33	0
10	STPR	0134-0147		X7	RT 190	STAFFORD	INTERSECTION IMPROVEMENTS ON RTE 190 AT RTE 319	FD	2017	800	640	160	0
15	STPR	0136-0073		X6	CT 14	STERLING	REPLACE BR 00688 OVER MOSSUP RIVER	PD	2017	150	120	30	0
15	STPR	0136-0073		X6	CT 14	STERLING	REPLACE BR 00688 OVER MOSSUP RIVER	FD	2017	150	120	30	0
15	STPR	0136-0073		X6	CT 14	STERLING	REPLACE BR 00688 OVER MOSSUP RIVER	ROW	2017	50	40	10	0
10	STPR	0142-0150		X6	CT 74	TOLLAND	REPLACE BR 01120 OVER SKUNGAMAUG RV	FD	2017	350	280	70	0
10	STPR	0142-0150		X6	CT 74	TOLLAND	REPLACE BR 01120 OVER SKUNGAMAUG RV	RW	2017	50	40	10	0
13	STPR	0147-0060		X6	CT 49	VOLUNTOWN	REPLACE BR 02969 OVER KOISTINEN BROOK	ROW	2017	50	40	10	0
13	STPR	0147-0060		X6	CT 49	VOLUNTOWN	REPLACE BR 02969 OVER KOISTINEN BROOK	FD	2017	100	80	20	0
10	STPR	0160-0150		X6	I-84	WILLINGTON	REHAB BR 02169 OVER LOWER RUBY BROOK	PD	2017	200	180	20	0
10	STPR	0160-0150		X6	I-84	WILLINGTON	REHAB BR 02169 OVER LOWER RUBY BROOK	FD	2017	300	270	30	0
10	STPR	0160-0150		X6	I-84	WILLINGTON	REHAB BR 02169 OVER LOWER RUBY BROOK	ROW	2017	50	45	5	0
									2017 Total	5,745	4,651	1,094	0
03	STPR	0005-0114		X7	CT 219/318	BARKHAMSTED	INTERSECTION IMPROVEMENTS AT RT 219 & RT 318	FD	2018	500	400	100	0
03	STPR	0005-0114		X7	CT 219/318	BARKHAMSTED	INTERSECTION IMPROVEMENTS AT RT 219 & RT 318	ROW	2018	50	40	10	0
11	STPR	0040-0141		X6	CT 82	EAST HADDAM	REHAB BR 01138 OVER CT RIVER	CON	2018	7,825	6,260	1,565	0
13	STPR	0052-0091		X6	CT 207	FRANKLIN	REHAB BR 06787 & 06788 o/ BEAVER BROOK	CON	2018	1,200	960	240	0
13	STPR	0101-0116		X6	CT 49	NORTH STONINGTON	REPLACE BR 02968 OVER PENDLETON BROOK	CON	2018	1,400	1,120	280	0
13	STPR	0120-0090		X6	RT 82	SALEM	REPLACE BR 01140 OVER EAST BRANCH EIGHT MILE RV	CON	2018	4,500	3,600	900	0
10	STPR	0134-0147		X7	RT 190	STAFFORD	INTERSECTION IMPROVEMENTS ON RTE 190 AT RTE 319	CON	2018	4,365	3,492	873	0
									2018 Total	19,840	15,872	3,968	0
03	STPR	0005-0114		X7	CT 219/318	BARKHAMSTED	INTERSECTION IMPROVEMENTS AT RT 219 & RT 318	CON	FYI	3,150	2,520	630	0
11	STPR	0060-0158		X6	CT 9	HADDAM	REHAB BRIDGE 06728 OVER MILL RIVER	CON	FYI	600	480	120	0
04	STPR	0086-0091		X6	CT 109	MORRIS	REPLACE BR 01309 OVER WIGWAM RESERVOIR	CON	FYI	2,900	2,320	580	0
03	STPR	0097-0095		X6	US 44	NORFOLK	REPLACEMENT OF RETAINING WALLS ON US 44	ROW	FYI	100	80	20	0
03	STPR	0097-0095		X6	US 44	NORFOLK	REPLACEMENT OF RETAINING WALLS ON US 44	FD	FYI	500	400	100	0
03	STPR	0097-0095		X6	US 44	NORFOLK	REPLACEMENT OF RETAINING WALLS ON US 44	CON	FYI	17,853	14,282	3,571	0
13	STPR	0120-0093		X6	CT 85	SALEM	REPLACE BRIDGE 02540 OVER LITTLE BROOK	CON	FYI	2,000	1,600	400	0
15	STPR	0136-0073		X6	CT 14	STERLING	REPLACE BR 00688 OVER MOSSUP RIVER	CON	FYI	1,500	1,200	300	0
10	STPR	0142-0150		X6	CT 74	TOLLAND	REPLACE BR 01120 OVER SKUNGAMAUG RV	CON	FYI	2,000	1,600	400	0
									FYI Total	30,603	24,482	6,121	0
10	STPSP	0048-0196		X6	CT 5	ENFIELD	REHABILITATE CT 5 BRIDGE 03361 OVER ROUTE 190	CON	2015	4,200	3,360	840	0
									2015 Total	4,200	3,360	840	0
10	STPSP	0063-0633		X6	US 44	HARTFORD	SAFETY IMPROVEMENT HOMESTEAD AVE TO GARDEN ST	CON	2017	6,250	5,000	1,250	0
									2017 Total	6,250	5,000	1,250	0
05	STPT	0025-0145		X6		CHESHIRE	FARMINGTON CANAL TRAIL CONSTRUCTION	PD	2015	400	320	80	0
10	STPT	0042-0300		X6	CHARTER OAK GREENWAY	EAST HARTFORD	CHARTER OAK GREENWAY MULTI-USE TRAIL	CON	2015	469	376	94	0
10	STPT	0077-0217		X6	CT 195	MANSFIELD	STORRS ROAD DOWNTOWN STREETSCAPE IMPROVEMENT	CON	2015	967	773	0	193
07	STPT	0144-0192		X6	TRAIL	TRUMBULL	EXTENSION OF THE PEQUONNOCK RIVER TRAIL (SECTION A2)	ROW	2015	870	696	87	87
70	STPT	0170-3178		X6	VARIOUS	STATEWIDE	STPT FED ELIGIBLE PE ACTIVITIES, FOR CLE-AC CON	PE(PD)	2015	1,040	832	208	0
									2015 Total	3,746	2,997	469	280
10	STPT	0051-0268		X6	TRAIL	FARMINGTON/PLAINVILLE	CONSTRUCTION OF A SECTION OF THE FARMINGTON CANAL HERITAGE TRAIL	FD	2016	190	152	38	0

Region	FACode	Proj	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
07	STPT	0144-0192		X6	TRAIL	TRUMBULL	EXTENSION OF THE PEQUONNOCK RIVER TRAIL (SECTION A2)	FD	2016	235	188	0	47
									2016 Total	425	340	38	47
13	STPT	0058-0308		X6	THOMAS ROAD	GROTON	BICYCLE/PEDESTRIAN FACILITY	CON	2017	465	372	0	93
									2017 Total	465	372	0	93
15	STPW	0115-0120		X6	WOODSTOCK AVENUE	PUTNAM	REHABILITATION BRIDGE 04760 OVER LITTLE RIVER	PD	2016	200	160	0	40
									2016 Total	200	160	0	40
15	STPW	0115-0120		X6	WOODSTOCK AVENUE	PUTNAM	REHABILITATION BRIDGE 04760 OVER LITTLE RIVER	FD	2017	100	80	0	20
15	STPW	0115-0120		X6	WOODSTOCK AVENUE	PUTNAM	REHABILITATION BRIDGE 04760 OVER LITTLE RIVER	ROW	2017	60	48	0	12
									2017 Total	160	128	0	32
15	STPW	0115-0120		X6	WOODSTOCK AVENUE	PUTNAM	REHABILITATION BRIDGE 04760 OVER LITTLE RIVER	CON	2018	1,350	1,080	0	270
									2017 Total	1,350	1,080	0	270
07	TAPB	0050-0218		X6	KINGS HIGHWAY	FAIRFIELD	PEDESTRIAN IMPROVEMENTS TO KINGS HIGHWAY	PD	2015	50	40	0	10
01	TAPB	0102-0351		X6	WEST AVE	NORWALK	CROSSWALK UPGRADES, WALL STREET TO NORTH MAIN STREET.	CON	2015	713	570	0	143
07	TAPB	0144-0191		X6	TRAIL	TRUMBULL	PEQUONNOCK RIVER TRAIL	ROW	2015	135	108	27	0
									2015 Total	898	718	27	153
07	TAPB	0050-0218		X6	KINGS HIGHWAY	FAIRFIELD	PEDESTRIAN IMPROVEMENTS TO KINGS HIGHWAY	FD	2016	137	110	0	27
05	TAPB	0124-0170		X6	RT 8	SEYMOUR	NAUGATUCK RIVER GREENWAY	CON	2016	955	764	0	191
									2016 Total	1,092	874	0	218
07	TAPB	0050-0218		X6	KINGS HIGHWAY	FAIRFIELD	PEDESTRIAN IMPROVEMENTS TO KINGS HIGHWAY	CON	2017	2,414	1,115	0	1,299
									2017 Total	2,414	1,115	0	1,299
10	TAPH	0011-0152		X6	GREENWAY	BLOOMFIELD	BLOOMFIELD GREENWAY (PHASES A-C)	CON	2016	1,512	1,210	0	302
									2016 Total	1,512	1,210	0	302
12	TAPNL	0104-0172		X6	ROUTE 156	OLD LYME	ROUTE 156 BIKE ROUTE	FD	2016	74	59	0	15
11	TAPNL	0104-0172		X6	RT 156	OLD LYME	ROUTE 156 BIKE ROUTE	CON	2016	812	650	0	162
									2016 Total	886	709	0	177
13	TAPO	0163-0204		X6	HOP RIVER TRAIL	WINDHAM	HOP RIVER TRAIL BRIDGE REHABILITATION	PD	2015	65	52	13	0
									2015 Total	65	52	13	0
02	TAPO	0096-0202		X6		NEWTOWN	NEWTOWN PEDESTRIAN IMPROVEMENTS	FD	2016	60	48	0	12
02	TAPO	0096-0202		X6		NEWTOWN	NEWTOWN PEDESTRIAN IMPROVEMENTS	FD	2017	77	62	0	15
13	TAPO	0163-0204		X6	HOP RIVER TRAIL	WINDHAM	HOP RIVER TRAIL BRIDGE REHABILITATION	FD	2016	65	52	13	0
									2016 Total	202	162	13	27
11	TAPO	0082-0311		X6		MIDDLETOWN	MULTI-USE TRAIL, WESLEYAN HILLS TO WESLEYAN UNIVERSITY	CON	2017	665	532	0	133
11	TAPO	0082-0311		X6		MIDDLETOWN	MULTI-USE TRAIL, WESLEYAN HILLS TO WESLEYAN U	ROW	2017	20	16	0	4
11	TAPO	0082-0311		X6		MIDDLETOWN	MULTI-USE TRAIL, WESLEYAN HILLS TO WESLEYAN U	FD	2017	127	101	0	25
02	TAPO	0096-0202		X6		NEWTOWN	NEWTOWN PEDESTRIAN IMPROVEMENTS	CON	2017	750	600	0	150
13	TAPO	0163-0204		X6	HOP RIVER TRAIL	WINDHAM	HOP RIVER TRAIL BRIDGE REHABILITATION	CON	2017	370	296	74	0
									2017 Total	1,932	1,545	74	312
02	TAPR	0016-0100		X6	RT 133	BRIDGEWATER	SIDEWALK CONSTRUCTION CONNECTING TOWN HALL, HISTORICAL SOCIETY AND MIDDLE SCHOOL	FD	2015	50	40	0	10
									2015 Total	50	40	0	10
02	TAPR	0016-0100		X6	RT 133	BRIDGEWATER	SIDEWALK CONSTRUCTION CONNECTING TOWN HALL, HISTORICAL SOCIETY AND MIDDLE SCHOOL	CON	2016	400	320	0	80
03	TAPR	0150-0130		X6		WASHINGTON	ADA MPROVEMENT TO BRYAN MEMORIAL PLAZA AND TOWN HALL.	CON	2016	700	560	0	140
									2016 Total	1,100	880	0	220
08	TCSP	0092-0661		X6		NEW HAVEN	INSTALL MULTI-MODAL WAYFINDING SIGN SYSTEM	CON	2015	489	391	0	98
01	TCSP	0135-0335		X6	WEST MAIN STREET	STAMFORD	REPLACE BRIDGE 02212 OVER MILL RIVER	PD	2015	863	690	0	173
03	TCSP	0143-0190		X6	MAIN ST	TORRINGTON	BREAKOUT OF MAIN STREET STREETSCAPE	CON	2015	327	327	0	0
									2015 Total	1,680	1,409	0	270
07	TIGER	0015-0373		CC	NHL-ML	BRIDGEPORT	BARNUM RAILROAD STATION - BRIDGEPORT - TIGER	PE	2017	18,500	10,000	8,500	0
									2016 Total	18,500	10,000	8,500	0
08	TIGER	0076-XXXX		NM	MERIDEN TOD DISTRICT.	MERIDEN	CONSTRUCT NEEDED ROAD WAY IMPROVEMENTS IN MERIDEN'S TOD DISTRICT.	ALL	FYI	16,790	10,074	0	6,716
									FYI Total	16,790	10,074	0	6,716
01	TIGER 5	0102-TIGR5		NM	WEST AVE	NORWALK	WEST AVE CIRCULATOR	ALL	2015	0	0	0	0
									2015 Total	0	0	0	0
01	TIGER 5	0102-TIGR5		NM	WEST AVE	NORWALK	WEST AVE CIRCULATOR	ALL	2016	0	0	0	0
									2016 Total	0	0	0	0
01	TIGER 5	0102-TIGR5		NM	WEST AVE	NORWALK	WEST AVE CIRCULATOR	ALL	2017	0	0	0	0
									2017 Total	0	0	0	0
01	TIGER 5	0102-TIGR5		NM	WEST AVE	NORWALK	WEST AVE CIRCULATOR	ALL	2018	0	0	0	0
									2018 Total	0	0	0	0
08	TIGER 5	0092-XXXX		CC		NEW HAVEN	DOWNTOWN CROSSING- PHASE 2	CON	FYI	12,500	10,000	0	2,500
01	TIGER 5	0102-TIGR5		NM	WEST AVE	NORWALK	WEST AVE CIRCULATOR	ALL	FYI	18,720	12,500	0	6,220
									FYI Total	31,220	22,500	0	8,720
05	TIGER 6	0151-XXXX		CC	VARIOUS	WATERBURY	(WATER) RECONSTRUCTION OF FREIGHT ST, JACKSON ST, RAIL STATION AND ENHANCEMENT OF MEADOW ST AND RIL STATION AREA.	FD	2015	1,925	1,422	0	503
									2015 Total	1,925	1,422	0	503
05	TIGER 6	0151-XXXX		CC	VARIOUS	WATERBURY	(WATER) RECONSTRUCTION OF FREIGHT ST, JACKSON ST, RAIL STATION AND ENHANCEMENT OF MEADOW ST AND RIL STATION AREA.	ROW	2016	875	646	0	229
05	TIGER 6	0151-XXXX		CC	VARIOUS	WATERBURY	(WATER) RECONSTRUCTION OF FREIGHT ST, JACKSON ST, RAIL STATION AND ENHANCEMENT OF MEADOW ST AND RIL STATION AREA.	CON	2016	16,700	12,332	0	4,368
									2016 Total	17,575	12,978	0	4,597
									Grand Total	6,141,429	4,540,257	1,525,236	75,604