

# Air Quality Conformity Analysis

for the FFY 2018-2021 TIP & the 2019 Metropolitan Transportation Plan

## SUMMARY

Each regional planning agency (including CRCOG) is required to demonstrate that their Metropolitan Transportation Plan and Transportation Improvement Program (TIP) do not violate the federal Clean Air Act. This demonstration requires tests for several types of pollutants, for several different analysis years, and for several different analysis areas or districts as explained below. For reasons also described below, the State performs a statewide analysis, with all Plans and TIP projects in the state analyzed together.

**Types of Pollutants.** The air quality analysis includes calculations of vehicle emissions of two types of pollutants:

1. Hydrocarbons (HC or VOC-Volatile Organic Compounds)
2. Nitrogen Oxides (NOx)

**Emissions Test.** Under the transportation conformity regulation, the principal criteria for a determination of conformity for transportation plans and programs are:

- The TIP and MTP must pass an emissions budget test using a motor vehicle emissions budget (MVEB) that has been found to be adequate by EPA for transportation conformity purposes, or an interim emission test;
- The latest planning assumptions and emission models specified for use in conformity determinations must be employed;
- The TIP and MTP must provide for the timely implementation of transportation control measures (TCMs) specified in the applicable air quality implementation plans; and
- Interagency and public consultation.

**Test:** For the Greater Connecticut ozone nonattainment area, VOC and NOx transportation emissions from the Action Scenarios must be less than the 2017 transportation emission budgets if analysis year is 2017 or later.

**20017 emissions budget:**

- VOC 15.9 tons/day
- NOx 22.2 tons/day

**Air Quality Analysis Districts.** The federal air quality districts for ozone are shown in the figure to the right. For ozone analysis purposes, CRCOG is part of the Greater Connecticut Moderate Ozone Area. The Greater Connecticut district includes other planning regions in addition to the Capitol Region. It uses county boundaries and includes the following counties: Hartford, Tolland, Litchfield, Windham, and New London. The Greater Connecticut district is

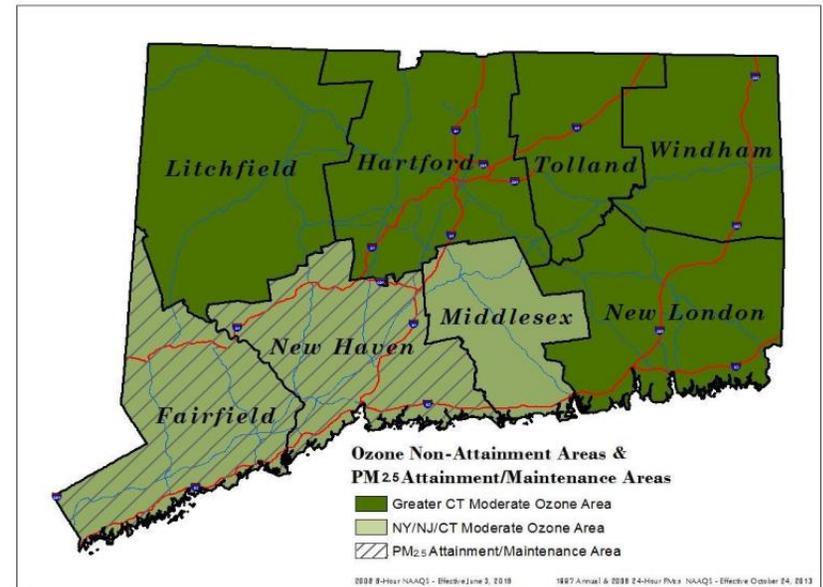


Figure 1. Map of Ozone Non-Attainment Areas

classified as a "moderate" nonattainment area. Previously it was a "marginal" nonattainment area. The designation changed in 2016 due to not meeting 2008 ozone standards prior to the July 20, 2015 deadline.

Since the air quality districts overlap many regional planning districts, the emissions analysis must be coordinated to include the TIPs and transportation plans of several regions. The Connecticut Department of Transportation performs this coordination role. Each region submits its draft TIP and Metropolitan Transportation Plan to the DOT. The DOT in turn combines the TIPs and the transportation plans for all appropriate regions to analyze the emissions impacts on each air quality district.

**Findings & Conclusions**

The data provided by the Connecticut Department of Transportation indicate that the Capitol Region’s Metropolitan Transportation Plan and TIP, when combined with all other regional plans and TIPs in the relevant air quality district, pass the test required under current conformity rules. The Region is in conformity with the federal Clean Air Act and the Connecticut State Implementation Plan. Provided below is a summary of the results. Actual emissions estimates and comparisons are provided in Table 1.

**Quantitative Analysis by Connecticut DOT.** The quantitative analysis required for this demonstration was performed by CTDOT in cooperation with the regional planning agencies. This cooperative effort is required because the federal air quality districts overlap Connecticut’s regional planning districts as explained above. The results are presented in the table below.

*Greater CT Ozone "Moderate" Nonattainment Area (emissions in tons per day)*

Year	RESULTS		BUDGET		DIFFERENCE	
	VOC	NOx	VOC	NOx	VOC	NOx
2018	14.96	21.18	15.9	22.2	-0.94	-1.02
2025	11.18	12.53	15.9	22.2	-4.72	-9.67
2035	6.49	7.53	15.9	22.2	-9.41	-14.67
2045	5.76	7.01	15.9	22.2	-10.14	-15.19
VOC: Hydrocarbons or Volatile Organic Compounds NOX: Nitrogen Oxides						