

## PROPOSED AMENDMENT TO THE 2016 MONTACHUSETT REGIONAL TRANSPORTATION PLAN (RTP) - SUMMARY

A recent decision by the U.S. Court of Appeals for the D.C. Circuit in the case of *South Coast Air Quality Management District v. EPA*, struck down portions of the *2008 Ozone National Ambient Air Quality Standards (NAAQS) State Implementation Plan (SIP) Requirements Rule*. These portions of the rule addressed implementation requirements for the 2008 ozone NAAQS and requirements associated with the revocation of the 1997 NAAQS. As a result, an air quality conformity determination for the Massachusetts metropolitan planning organizations' 2016 regional transportation plans (RTPs) is required.

### **Background**

- The 1970 Clean Air Act defined a one-hour national ambient air-quality standard (NAAQS) for ground-level ozone.
- The 1990 Clean Air Act Amendments further classified degrees of nonattainment of the one-hour standard based on the severity of monitored levels of the pollutant.
- The entire Commonwealth of Massachusetts was classified as being in serious nonattainment for the one-hour ozone standard. The required attainment date was set for 1999; later extended to 2003 and then to 2007.
- In 1997, the U.S. Environmental Protection Agency (EPA) proposed a new, eight-hour ozone NAAQS of 0.08 parts per million (ppm) to replace the one-hour standard, effective June 15, 2005.
- Nonattainment areas were further classified based on the severity of eight-hour values.
- Massachusetts as a whole was classified as being in moderate nonattainment but was separated into two nonattainment areas—Eastern Massachusetts and Western Massachusetts comprised as follows:

<b><u>Eastern Massachusetts Ozone Nonattainment Area</u></b>	<b><u>Western Massachusetts Ozone Nonattainment Area</u></b>
Cape Cod MPO Central Massachusetts MPO Merrimack Valley MPO Boston MPO Montachusett Region MPO Northern Middlesex MPO Old Colony MPO Southeastern Region MPO Martha's Vineyard Commission Nantucket Planning and Economic Development Commission	Berkshire Region MPO Franklin Regional Council of Governments Pioneer Valley MPO

- Both nonattainment areas were required to reduce its emissions of VOCs and NOx to achieve attainment of the eight-hour ozone NAAQS by 2009
- In March 2008, EPA published revisions to the eight-hour ozone NAAQS that established a new ozone standard of 0.075 ppm (parts per million).
- In December 2011, the EPA proposed that only Dukes County in MA be designated as being in nonattainment for the 0.075 ozone standard.
- On May 21, 2012, the air-quality designation areas for the 2008 NAAQS were published in the Federal Register with the only area in Massachusetts designated as being in nonattainment for ozone was Dukes County. All other counties were classified as unclassifiable/ attainment.
- As a result, the 13 MPOs were not required to perform a conformity determination for ozone for their regional transportation plans (RTP).
- Current RTPs adopted by the MPOs in August 2015 were developed, reviewed, and approved after April 2015 when air quality conformity determinations to the 1997 Ozone NAAQS were no longer required, as those standards and all associated area designations were permanently replaced by the 2008 NAAQS, which no longer designated Massachusetts as a non-attainment area(s) for ozone except for Dukes County.
- The United States Court of Appeals for the DC Circuit issued a decision in the *South Coast Air Quality Management District v. EPA* in February 2018, which struck down portions of the *2008 Ozone NAAQS SIP Requirements Rule* concerning the ozone NAAQS.
- The decision addresses two groups of ozone areas, one of which affects Massachusetts: areas that were designated as nonattainment for the 1997 ozone NAAQS at the time of revocation and are designated as attainment for the 2008 ozone NAAQS.
- These areas have not been required to make transportation conformity determinations for any ozone NAAQS since the 1997 ozone NAAQS were revoked by EPA in April 2016.

- As a result, Massachusetts is now required to perform a transportation conformity determination on any new RTP and transportation improvement program (TIP), updates, and amendments that include the addition of a project that is not exempt (also known as a regionally significant project) from transportation conformity.

### **MPO Requirements and Actions Needed**

In past transportation conformity determinations, it has been the policy that the TIP comes from an air quality conforming RTP. As a result of this recent court ruling and with the guidance of FHWA and FTA, the MPOs are now required to perform a conformity determination for ozone since a conformity determination was not performed for the current RTP.

MassDOT, after consultation with FHWA, FTA, EPA, and the Massachusetts Department of Environmental Protection (DEP), has determined that the MPOs should perform a conformity determination on the current RTPs, allowing each TIP to come from an air quality conforming RTP. This will allow for the approval of each MPO's 2019–2023 TIP and any other TIP amendments that may occur over the next year, prior to the adoption of the new RTPs in May 2019.

### *Air Quality Analysis Criteria*

- The horizon years for the travel demand model analysis are 2012 (base year), 2020, 2030, and 2040.
- Projections for future population, employment, and households were developed jointly by MassDOT, the Metropolitan Area Planning Council, and the Donahue Institute of the University of Massachusetts.
- Demographic projections were incorporated into the statewide travel demand model, along with updated travel characteristics from the 2010-2011 Massachusetts Travel Survey and the U.S. Census.
- The transit service assumptions for the MBTA were included in this analysis and were based on MBTA service in the spring of 2012.
- Factors used for calculating emissions changes were determined using the EPA's latest emissions model, Motor Vehicle Emissions Simulator (MOVES) 2014.
- The Federal Highway Administration's Highway Performance Monitoring System (HPMS) is used to track daily vehicle-miles of travel (VMT). For each MPO region, adjustment factors were developed.
- The adjustment factors were then applied to all modeled VOC and NOx emissions for the years 2020 through 2040 to ensure consistency with EPA-accepted procedures.

### *Inclusion of Regionally Significant Transportation Projects*

Only "regionally significant" projects are included in the travel-demand modeling. Regionally significant projects are defined as follows:

A transportation project ... that is on a facility that serves regional transportation needs (such as access to and from the area outside of the MPO region; major activity centers in the region; major planned developments, such as new retail malls and sport complexes; and transportation terminals (as well as most terminals themselves) and would be included in the modeling of a metropolitan area's transportation network...

### **Regionally Significant Projects Included in the Travel Demand Model for Montachusett**

<b>Analysis Year</b>	<b>Community</b>	<b>Project Description</b>
2030	Athol	Route 2 Interchange @ S. Athol Rd
2040	Phillipston to Athol	Route 2 Expansion

### *Ozone Analysis Results*

MassDOT's Office of Transportation Planning conducted an air-quality conformity analysis for the Commonwealth's 13 MPO's 2016 Regional Transportation Plans. The purpose of the conformity test is to show consistency with the emissions budgets set forth in the SIP.

The test used in this analysis was to show that the RTPs are consistent with the emission budgets set for the revoked 1997 eight-hour ozone NAAQS as described above. The table below shows the emissions result for the Eastern Massachusetts Ozone Nonattainment Area:

An Amendment to the RTP will be developed in coordination with MassDOT that outlines an Air Quality Conformity Determination for the MPOs for the 2016 RTP and the FFY 2019-2023 TIPs. This RTP Amendment will be put out for a 21-day public review and comment period that will close in August thus allowing for MPO endorsement at their regularly scheduled meeting.

**VOC Emissions Estimates  
Eastern Massachusetts Ozone Nonattainment Area  
(all emissions in tons per summer day: tpsd)**

<b>Year</b>	<b>VOC Action Emissions</b>	<b>VOC Budget</b>	<b>Difference (Action – Budget)</b>
2012	30.56	n/a	n/a
2020	6.68	63.50	-56.82
2030	5.68	63.50	-57.82
2040	4.69	63.50	-58.81

**NOx Emissions Estimates  
Eastern Massachusetts Ozone Nonattainment Area (tpsd)**

<b>Year</b>	<b>NOx Action Emissions</b>	<b>NOx Budget</b>	<b>Difference (Action – Budget)</b>
2012	116.97	n/a	n/a
2020	27.24	174.96	-147.72
2030	20.63	174.96	-154.33
2040	14.02	174.96	-160.94

Based on the preceding results, MassDOT Planning has found that the combined emission levels from transportation projects contained in the 2016 Regional Transportation Plans and 2019–2023 Transportation Improvement Programs – for both former ozone nonattainment areas in Massachusetts – demonstrate conformity with the SIP, the Clean Air Act, and the EPA conformity regulations.

The ozone analysis outlined in this section demonstrates that the implementation of the 2016 RTPs and 2019–2023 TIPs meets the “budget test,” and therefore satisfy the air quality ozone and carbon monoxide conformity criteria and is consistent with the air quality goals in the Massachusetts SIP.