



CAPE COD  
COMMISSION

2016 REGIONAL TRANSPORTATION PLAN  
Technical Appendix N: Greenhouse Gas  
Analysis

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# Technical Appendix N: Air Quality Conformity

The transportation system is a critical component of the Commonwealth of Massachusetts' infrastructure; it facilitates economic development, access to goods and services, and social interaction and enrichment. While the system has numerous benefits that users depend upon daily, it also contributes over one third of the Bay State's greenhouse gas (GHG) emissions, a key cause of climate change. Sprawling development patterns and automobile dependence also contribute to physical inactivity, which is associated with various negative health outcomes, while motor vehicle pollution contaminates the air, causing respiratory and other health conditions.

## LEGISLATIVE BACKGROUND

In 2010, the Massachusetts Department of Transportation (MassDOT) responded to these challenges by launching its comprehensive sustainability initiative, the GreenDOT Policy. GreenDOT was born of numerous state laws and policies aimed at reducing GHG emissions, improving public health, and leading on environmental stewardship. The Global Warming Solutions Act (GWSA), which Governor Deval Patrick signed into law in 2008, set legally-enforceable goals of reducing GHG emissions by 25 percent below 1990 levels by 2020, and 80 percent below 1990 levels by 2050. The Healthy Transportation Compact, created by the 2009 Transportation Reform Law, is a coordinated multi-agency effort to encourage the healthy transportation modes of walking, bicycling, and public transit, and to ensure that public health factors are taken into account in transportation decision-making. In addition, Executive Orders 484 and 515, known as Leading by Example and Environmental Purchasing Policy respectively, require state agencies to invest public resources in ways that support environmental sustainability by conserving energy and water, implementing efficiency measures, and producing or purchasing renewable energy. Taken together, the Global Warming Solutions Act, Healthy Transportation Compact, and Leading by Example policy form the foundation for the GreenDOT Policy.

The GreenDOT Policy Directive, released in June 2010, set forth the primary goals of reducing GHG emissions; promoting the healthy transportation modes of walking, bicycling, and public transit; and supporting smart growth development. The 2012 GreenDOT Implementation Plan then outlined specific tasks and targets for achieving these goals, including the Mode Shift Goal, which calls for a tripling of the amount of walking, bicycling, and public transit ridership in Massachusetts between 2010 and 2030. The Cape Cod Regional Transportation Plan (RTP) reflects the vision of the GreenDOT with the Multimodal Options/Healthy Transportation Goal including a Performance Measure reflecting the state Mode Shift Goal.

## GREENHOUSE GAS (GHG) ANALYSIS

Under MassDOT guidance, the impacts of RTP projects on GHG emissions have been evaluated and considered as a part of the project selection process. The anticipated GHG impacts from projects specifically identified in the RTP are as follows.

TABLE 1. HIGHWAY REGIONAL TARGET PROJECTS – ANTICIPATED GHG IMPACTS

PROJECT	ANTICIPATED GHG IMPACT
Barnstable: Hyannis Access Improvements	Quantified Decrease in Emissions from Traffic Operational Improvement – To be verified by statewide modeling
Route 28 Multimodal Improvements: Various Locations	Assumed Nominal Decrease in Emissions from Sidewalk and Bicycle Infrastructure
Route 6 Outer Cape Safety Improvements	Assumed Nominal Decrease in Emissions from Sidewalk and Bicycle Infrastructure
Canal Area: Belmont Circle/ Route 25 Ramp Improvements	Quantified Decrease in Emissions from Traffic Operational Improvement – To be verified by statewide modeling
Canal Area: Route 6 Exit 1C Reconfiguration	Quantified Decrease in Emissions from Traffic Operational Improvement – To be verified by statewide modeling
Cape Cod Rail Trail Expansion: S. Wellfleet to Provincetown	Assumed Nominal Decrease in Emissions from Bicycle Infrastructure
Infrastructure Improvements (Platform, Parking, etc.) for Buzzards Bay Commuter Rail Service	Assumed Nominal Decrease in Emissions from Other Improvements
Cape Cod Rail Trail Expansion: Barnstable to Sandwich	Assumed Nominal Decrease in Emissions from Bicycle Infrastructure
Shining Sea Bikepath Extension to Cape Cod Canal Bikepath	Assumed Nominal Decrease in Emissions from Bicycle Infrastructure

Additional information on GHG impacts from projects included in the RTP will be available from MassDOT following the completion of their statewide modeling efforts.

More detailed GHG analysis of projects is conducted as they are considered for inclusion in the Transportation Improvement Program.

## MASSDOT “CONFORMITY-RELATED” EMISSIONS ANALYSIS

All the Massachusetts Metropolitan Planning Organizations (MPO) and MassDOT continue to meet the requirements of air quality conformity according to the Code of Federal Regulations, and as evaluated through inter-agency consultation. Specifically:

On March 6, 2015, (80 FR 12264, effective April 6, 2015) EPA published the Final Rulemaking, “Implementation of the 2008 National Ambient Air Quality Standards (NAAQS) for Ozone: State Implementation Plan Requirements; Final Rule.” This rulemaking removed

transportation conformity to the 1997 Ozone NAAQS (the standard referenced by CLF and the subject of a 12/23/14 DC Circuit Court decision).

Link to Final EPA Rulemaking: <http://www.gpo.gov/fdsys/pkg/FR-2015-03-06/pdf/2015-04012.pdf>

Since the RTPs have been developed, reviewed, and will be approved after April 6, 2015, air quality conformity determinations to the 1997 Ozone NAAQS are no longer required, as those standards and all associated area designations have been permanently replaced by the 2008 NAAQS, which (with actually a stricter level of allowable ozone concentration than the 1997 standards) no longer designate Massachusetts as a non-attainment area(s) for ozone (except for Dukes County – see below).

Through the Interagency air quality consultation process (involving U.S. DOT, EPA, MassDEP, MassDOT, and the MPOs) the latest EPA rulemakings, the referenced court decision, ozone standards and area designations were all reviewed. Specific transportation conformity requirements in Massachusetts for this RTP round are as follows:

- No conformity determination is required for the 2008 Ozone NAAQS, as Dukes County (the only designated non-attainment area) is classified as an “isolated rural nonattainment area” and therefore only needs to evaluate transportation conformity when the Martha Vineyard Commission has a “regionally significant” project that would trigger conformity.
- The Boston carbon monoxide attainment area with a current maintenance plan in place (with a carbon monoxide motor vehicle emission budget) will prepare a carbon monoxide air quality analysis for the Boston Area (nine communities).
- The Lowell, Waltham, Worcester and Springfield Areas are classified attainment with a limited maintenance plan in place. No regional air quality analysis is required in limited maintenance plan areas as emissions may be treated as essentially not constraining for the length of the maintenance period because it is unreasonable to expect that such areas will experience so much growth in that period that a violation of the carbon monoxide NAAQS would result. Therefore, in areas with approved limited maintenance plans, Federal actions requiring conformity determinations under the transportation conformity rule are considered to satisfy the “budget test.” All other transportation conformity requirements under 40 CFR 93.109(b) continue to apply in limited maintenance areas, including project level conformity determinations based on carbon monoxide hot spot analyses under 40 CFR 93.116.

In consideration of the comments received, combined with MassDOT’s greenhouse gas (GHG) reporting requirements for the Commonwealth’s Global Warming Solutions Act (310 CMR 60.05), MassDOT will conduct a “conformity-related” emissions analysis for ozone precursors, consistent with the 1997 NAAQS standards (currently superseded by the 2008 NAAQS). This emissions analysis will be for informational purposes only (as it is currently NOT federally required), and will be contained in a separate air quality document (also to include GHG emissions analysis) that will be completed at the end of August 2015 – the results of which will then be available to the MPOs, the Massachusetts Executive Office of Energy and Environmental Affairs (and affiliate agencies), and all other interested parties.

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