



## Introduction

Transportation air quality conformity is a way to ensure that federal funding and approval are awarded to those transportation activities that are consistent with air quality goals. Under the Clean Air Act (CAA), transportation and air quality modeling procedures must be coordinated to ensure that the TIP and RTP are consistent with the State Implementation Plan (SIP). The SIP is a federally required document that provides a comprehensive assessment of regional air quality conditions (motorized and non-motorized) and desired targets if applicable. The purpose of this document is to ensure that the State and its member jurisdictions will be able to attain or maintain the levels of the National Ambient Air Quality Standards (NAAQS).

In order to receive transportation funding from the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), state and local transportation agencies in nonattainment or maintenance areas must demonstrate that all transportation air quality conformity requirements of the CAA are being met as set forth in the transportation conformity rule. As such, transportation plans are expected to conform to the SIP.

The integration of transportation and air quality planning is intended to ensure that transportation plans, programs, and projects will not:

- Cause or contribute to any new violation of any standard in any area;
- Increase the frequency or severity of any existing violation of any standard in any area; or
- Delay timely attainment of any standard or any required interim emissions reductions or other milestones in any area.

## National Ambient Air Quality Standard Designations

The CAA requires the EPA to set NAAQS for pollutants considered harmful to public health and the environment. A nonattainment area is any area that does not meet the national primary or secondary NAAQS. A maintenance area is any area that the EPA previously designated as a nonattainment area for one or more pollutants, and subsequently redesignated as an attainment area subject to the requirement to develop a maintenance plan under section 175A of the CAA. The Charleston area has previously been designated under the ozone and fine particulate matter (PM<sub>2.5</sub>) NAAQS. Transportation conformity requires nonattainment and maintenance areas to demonstrate that all future transportation projects will not hinder the area from reaching its attainment goals. Currently, the Charleston area is in attainment for all criteria pollutants and under a maintenance plan for the 2006 PM<sub>2.5</sub> standard. Additional information is provided about the background and history of the region's previous nonattainment and maintenance status.

### Ozone

Ozone is formed by chemical reactions occurring under specific atmospheric conditions. Two of the important classes of compounds in these reactions are hydrocarbons (including VOC) and oxides of nitrogen (NO<sub>x</sub>). Both of these are components of vehicular exhaust. Additionally, the hydrocarbons may be produced by evaporation from vehicle fuel system components and by displacement of vapors in the gas tank during refueling. By controlling these emissions, ozone formation can be controlled.

Effective June 15, 2004, EPA finalized ground-level ozone designations under the 1997 8-hour ozone NAAQS. Under this standard, a region was designated as being in nonattainment of the 1997 8-hour ozone standard if the 3-year average of the individual fourth highest air quality monitor readings, averaged over 8 hours throughout the day, exceeded the NAAQS of 0.08 parts per million (ppm).

On March 12, 2008, EPA revised its NAAQS for ozone by strengthening the standard to 0.075 parts per million (ppm). This revised 2008 8-hour ozone NAAQS is calculated in the same manner as the 1997 ozone NAAQS. To accompany the 2008 standard, EPA established (77 FR 30088) air quality designations. The rule provides for the revocation of the 1997 ozone NAAQS for transportation conformity purposes to occur 1 year after the effective date of the designations for the 2008 ozone NAAQS (July 20, 2012). Transportation conformity no longer applies to those areas that have been redesignated to attainment for the 1997 ozone NAAQS that are also classified as attainment for the 2008 ozone NAAQS.

The Charleston area, comprising Kanawha and Putnam counties, was designated as nonattainment for the 8-hour ozone standard in the April 30, 2004 Federal Register (69FR23858). However, the area was reclassified to attainment on August 10, 2006. As a provision of this attainment designation, the area was required to adhere to a maintenance plan that establishes motor vehicle emission budgets (MVEBs) for NO<sub>x</sub> and VOCs. Estimates of vehicle emissions were compared against these budgets to determine regional conformity for the ozone precursors.

With the introduction of the 2008 ozone NAAQS and the revocation of the 1997 standard, the Charleston region was affirmed as an attainment area with no maintenance plan requirements. Therefore, no air quality analysis for ozone is necessary for the Kanawha-Putnam area.

### PM<sub>2.5</sub>

Fine particle pollution can be emitted directly into the atmosphere or formed in the atmosphere. For example, sulfates and nitrates are two types of secondary particles. The former is a result of power plant and industry emissions, while the latter results from automobiles, power plants, and other combustion emission sources. Scientific studies have found a significant association between the exposure to fine particulates and such severe health issues as heart disease, lung disease, and premature death.

#### PM<sub>2.5</sub> Annual Standard

In 1997, the EPA issued the PM<sub>2.5</sub> fine particulate NAAQS in order to protect public health. The annual standard was set at 15 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) and was based on a 3-year average of annual mean PM<sub>2.5</sub> concentrations. The Charleston area, including Kanawha and Putnam counties, was designated as a nonattainment area under the 1997 annual PM<sub>2.5</sub> NAAQS. However, the area was redesignated to an attainment area on April 30, 2014.

On January 15, 2013, the EPA issued updated annual and 24-hour PM<sub>2.5</sub> standards. Known as the 2012 PM<sub>2.5</sub> standard, the threshold for annual PM<sub>2.5</sub> is set at 12  $\mu\text{g}/\text{m}^3$  and is assessed in the same manner as the 1997 annual PM<sub>2.5</sub> NAAQS. The Charleston area was designated as an attainment area for the 2012 annual PM<sub>2.5</sub> standard. The rule provides for the revocation of the 1997 annual PM<sub>2.5</sub>. Transportation conformity no longer applies to those areas that have been redesignated to attainment for the 1997 annual PM<sub>2.5</sub> NAAQS that are also classified as attainment for the 2012 annual PM<sub>2.5</sub> NAAQS. As a result, no air quality analysis for the annual PM<sub>2.5</sub> standard is required for the Kanawha-Putnam area.

PM<sub>2.5</sub> 24-Hour Standard

On December 18, 2006, the EPA issued the 2006 PM<sub>2.5</sub> standard that tightened the 24-hour fine particle standard from 65 µg/m<sup>3</sup> to 35 µg/m<sup>3</sup>. The Charleston area (Kanawha and Putnam counties) was designated as a nonattainment area under the 2006 24-hour PM<sub>2.5</sub> standard. However, the area was redesignated to an attainment area on April 30, 2014. As part of the 2012 PM<sub>2.5</sub> standard (issued January 15, 2013), the EPA affirmed the 24-hour PM<sub>2.5</sub> threshold set in 2006, maintaining a value of 35 µg/m<sup>3</sup>.

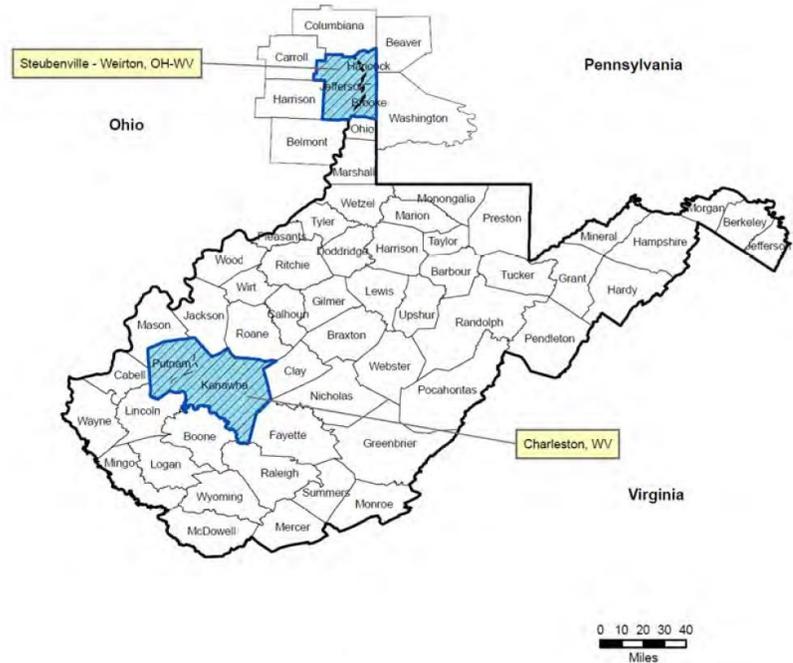
In 2012, the West Virginia Department of Environmental Protection (WVDEP) initiated the process to redesignate the Kanawha-Putnam area to reflect a finding of insignificance for highway sources of the 2006 24-hour PM<sub>2.5</sub> standard. The redesignation request for a finding of mobile source insignificance was approved.

The federal requirements—40 CFR 93.109(f)—stipulate that areas designated as attainment with SIP insignificant motor vehicle emissions findings are not required to satisfy a regional emissions analysis for §93.118 and/or §93.119 for a given pollutant/precursor and NAAQS. Instead, areas with SIP insignificance findings adopt qualitative conformity determination for regional transportation plans and TIPs.

Although the area is designated as attainment and there is a finding of insignificance, this does not preclude RIC from complying with the other still-effective requirements of the transportation conformity rule, such as interagency consultations, hot spot analyses as necessary, latest planning assumptions, public participation, etc.

**PM<sub>2.5</sub> 24-Hour Standard:**

**Maintenance Areas with Insignificant Highway Source Emissions**



## Conformity Determination

### Financial Constraint

The planning regulations, Sections 450.322(b)(11) and 450.324(e), require the transportation plan to be financially constrained while the existing transportation system is being adequately operated and maintained. Only projects for which construction and operating funds are reasonably expected to be available are included. The RIC MPO, in conjunction with WVDOT, has developed an estimate of available funds for “capacity increasing” transportation projects within the region. A project selection process was used to identify the projects that improve regional traffic congestion and fall within the overall available funding estimates.

### Public Participation

The *Kanawha-Putnam 2045 Regional Transportation Plan* has undergone the public participation requirements set forth in the Final Conformity Rule and Final Statewide / Metropolitan Planning Rule. The draft document was made available for 30 days of public review and comment beginning on August 4, 2017. Any comments received on the *Kanawha-Putnam 2045 Regional Transportation Plan* and conformity determination will be considered for incorporation prior to a request for approval from the RIC Policy Board.

### Interagency Consultation

Members of the region’s interagency consultation group—consisting of FHWA, FTA, US EPA, WVDOT, and WV DEP-DAQ—were engaged in discussions about the status of the region’s air quality and its relation to the RTP. Based on the current attainment status of the region, as well as the feedback of the interagency consultation group, it has been concluded that the *Kanawha-Putnam 2045 Regional Transportation Plan* conforms to federal and state air quality requirements.