



west virginia department of environmental protection

**Maintenance Plan Revision
for the
Weirton, West Virginia
1997 8-hour Ozone NAAQS,
Comprising Brooke and Hancock Counties**

**DRAFT
August 23, 2019**

West Virginia Division of Air Quality
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I. Request

The State of West Virginia is requesting that the United States Environmental Protection Agency (EPA) approve the *Maintenance Plan Revision for the 1997 8-hour Ozone NAAQS for the Weirton Area Comprising Brooke and Hancock Counties*, as a revision to the State Implementation Plan (SIP) meeting the requirements of Clean Air Act (CAA) Section 175(A)(b).

II. Background

The Federal Clean Air Act, 42 U.S.C.A. 7401 et seq. as amended by the Clean Air Act Amendments of 1990, P.L. 101-549, November 15, 1990 (CAA or the Act) requires all areas of the nation to attain and maintain compliance with the federal ambient air quality standards. These federal standards are designed to protect the public health and welfare from airborne pollutants and are referred to as the National Ambient Air Quality Standards (NAAQS). Pursuant to CAA Section 107(d)(1)(A), pollutant standards are established by the EPA and areas are designated as nonattainment (not meeting the standard), attainment (meeting the standard), or Unclassifiable (cannot be classified based on available information). States are required to comply with these NAAQS. When a nonattainment area becomes attainment, states must demonstrate and seek the EPA's approval to redesignate the area.

Pursuant to CAA Section 107(d)(3)(E), as amended, the EPA Administrator may not promulgate a redesignation of a nonattainment area (or portion thereof) to attainment unless states meet five (5) requirements. With regards to the redesignation or designation of West Virginia's ozone areas to attainment, and as discussed in the following narratives, West Virginia has met all five (5) of the following requirements:

1. the Administrator determines that the area has attained the applicable NAAQS;
2. the Administrator has fully approved the applicable implementation plan for the area under CAA Section 110(k);
3. the Administrator determines that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable implementation plan and applicable Federal air pollution control regulations and other permanent and enforceable reductions;
4. the Administrator has fully approved a maintenance plan for the area as meeting the requirements of Section 175A; and
5. the state containing such area has met all requirements applicable to the areas under Section 110, Part D.

On July 18, 1997 (62 FR 38856) the EPA established a new 8-hour ozone NAAQS (1997 ozone NAAQS). This standard was the result of a review of the available scientific evidence linking exposures to ambient ozone to adverse health and welfare effects at levels allowed by the older 1-hour standard. The 1-hour standard was replaced by an 8-hour standard at a level of 0.080 parts per million (ppm) with a form based on the 3-year average of the annual fourth-highest daily maximum 8-hour average ozone concentration measured at each monitor within an area.

Pursuant to the Clean Air Act Amendments of 1990 (CAAA), the EPA in the April 30, 2004 Federal Register (69 FR 23858), designated eleven (11) West Virginia counties as Subpart 1 or “basic” nonattainment areas with respect to the 1997 8-hour ozone NAAQS. The effective date of designation for Cabell, Wayne, Kanawha, Putnam, Wood, Marshall, Ohio, Brooke and Hancock counties was June 15, 2004. Berkeley and Jefferson Counties voluntarily entered into an Early Action Compact. Under this compact, the effective date of designation for Berkeley and Jefferson counties was initially deferred until September 30, 2005 (later deferred to December 31, 2006) with a final designation of attainment effective April 15, 2008. These designations were based on air quality data collected during 2001 - 2003 at state-operated and EPA-approved monitoring stations located in the Huntington-Ashland, WV-KY, Charleston, WV, Parkersburg-Marietta, WV-OH, Wheeling, WV-OH, Steubenville-Weirton, OH-WV, and Berkeley & Jefferson Counties, WV. Subpart 1 (basic) nonattainment areas were required to attain the standard within five (5) years of designation or by June 15, 2009.

The EPA published two (2) separate rules to set forth the planning and control requirements which apply to nonattainment areas for this standard. Phase 1, published on April 30, 2004 (69 FR 23951), addressed: classifications for the 8-hour NAAQS; revocation of the 1-hour NAAQS; how anti-backsliding principles will ensure continued progress toward attainment of the 8-hour ozone NAAQS; attainment dates; and the timing of emissions reductions needed for attainment. On November 29, 2005, the EPA published Phase 2 (70 FR 71612) addressing: reasonably available control technology and measures (RACT and RACM), reasonable further progress (RFP), modeling and attainment demonstrations, and new source review (NSR).

In August 2006, the State of West Virginia submitted a redesignation request and associated maintenance plan affirming completion of all five (5) of the required elements detailed above for the Weirton area. The Steubenville-Weirton, OH-WV ozone maintenance area consists of Brooke and Hancock counties (40CFR, §81.349 Table for “West Virginia—1997 8-Hour Ozone NAAQS (Primary and Secondary)”) and Jefferson county in Ohio (40CFR, §81.336 Table for “Ohio—1997 8-Hour Ozone NAAQS (Primary and Secondary)”). The EPA approved West Virginia’s redesignation request and maintenance plan for this area, effective June 13, 2007 (72 FR 27060). The EPA revised the ozone NAAQS in 2008.

The 2008 8-hour ozone NAAQS was promulgated by the EPA on March 12, 2008 (80 FR 12264) and became effective on May 27, 2008 (73 FR 16436). This final rule reduced the ozone standard from 0.080 ppm to 0.075 ppm. In a December 14, 2009 letter from the WVDEP to the EPA, West Virginia provided certified ambient air quality design value data with all site monitoring attainment and recommended all counties be designated as attainment/unclassifiable.

In May 21, 2012 (77 FR 30088), the EPA designated all West Virginia Counties as attainment/unclassifiable with the 2008 ozone NAAQS. On March 6, 2015, the EPA established a final SIP rule for implementing the 2008 ozone NAAQS. In addition to the final rule addressing a range of nonattainment area State Implementation Plans (SIP) requirements for the 2008 NAAQS, the rule also addressed the revocation of the 1997 ozone NAAQS and anti-backsliding requirements that apply when the 1997 ozone NAAQS was revoked. This action revoked listed states’ obligation for further complying with 1997 ozone NAAQS requirements and the need to conduct quantifiable regional air quality emission analyses under the Transportation Conformity requirements in 40CFR, §93.122.

On October 26, 2015 (80 FR 65292), the EPA strengthened the 8-hour ozone standard by promulgating the 2015 NAAQS. This standard reduced the ground level ozone from 0.075 ppm to 0.070 ppm based on extensive scientific evidence regarding the effects of ozone on public health and welfare.

In a September 29, 2016 letter to the EPA, the WVDEP recommended all West Virginia Counties be designated attainment/unclassifiable with the 2015 Ozone NAAQS based on certified ambient air monitoring design value data for 2013-2015. On June 4, 2018 (83 FR 25776), the EPA designated all areas in West Virginia as attainment/unclassifiable stating all West Virginia Counties meet the 2015 8-Hour Ozone NAAQS.

Environmental groups filed a petition for judicial review of EPA's regulation, challenging certain aspects of EPA's decision to revoke the 1997 NAAQS. On February 16, 2018, the D.C. Circuit Court issued a decision in *South Coast Air Quality Management District v. EPA (South Coast II)* that, among other things, granted the petition on this point. The Court held that "orphan maintenance areas" are required to submit second maintenance plans under Clean Air Act (CAA) Section 175A(b). These areas, therefore, must submit a second maintenance SIP revision to ensure maintenance through the full 20-year period following the effective date of redesignation. For Weirton, the end of the 20-year maintenance period would be at least 2027 (2007 plus 20 years).

The Court decision affects the following five (5) areas in West Virginia: Charleston, Huntington, Vienna, Weirton, and Wheeling. As defined by the EPA, these sites are considered orphan maintenance areas. It is worth noting that all five (5) of these areas have continued to maintain attainment for the 1997 8-hour Ozone NAAQS following the approval of the 1997 8-hour Ozone Maintenance Plan by the EPA. Furthermore, these areas have demonstrated attainment under the more stringent 2008 and 2015 8-hour Ozone NAAQS. Ambient air quality monitoring data for these areas indicates ozone concentrations in these areas are continuing a downward trend.

On November 20, 2018, the EPA issued a guidance document titled *Resource Document For 1997 Ozone NAAQS Areas: Supporting Information for States Developing Maintenance Plans*. The document provides technical information that may be helpful for a state wishing to develop and submit a revision of its SIP to ensure maintenance of the 1997 ozone NAAQS. The document also includes information addressing ambient air quality monitoring data, air quality modeling, and emissions inventory data. Additionally, it also provides information that may be useful for states wishing to pursue a Limited Maintenance Plan (LMP) option. A copy of this guidance is provided in **Appendix A**.

III. Limited Maintenance Plan

Section 107(d)(3)(e) of the CAA stipulates that for an area to be redesignated to attainment, the EPA must approve a maintenance plan that meets the requirements of Section 175A. Section 175A of the CAA defines the general framework of a maintenance plan. The maintenance plan must constitute a SIP revision and provide for maintenance of the relevant NAAQS in the affected areas. Section 175A further states that the plan must include the following:

- 1. A SIP revision providing for the maintenance of the NAAQS in the area.*
- 2. The initial maintenance plan must provide for maintenance of the NAAQS in the area for 10 years after redesignation.*
- 3. Eight (8) years after redesignation, the state must submit a second SIP revision for maintaining the NAAQS through the end of the second 10-year period beyond redesignation.*
- 4. Additional measures as necessary to ensure maintenance of the NAAQS in the area during this period.*
- 5. A contingency plan assuring that the state will promptly correct any violation of the standard which occurs after the redesignation of the area to attainment.*
- 6. The contingency plan shall include a requirement that the state will continue to implement all measures with respect to the control of the pollutant for the area that were contained in the SIP prior to the redesignation.*

In the November 20, 2018 guidance document, the EPA referenced three (3) past guidance documents describing “Limited Maintenance Plans,” (LMPs) where the EPA has interpreted Section 175A to indicate that an area can provide for maintenance of the NAAQS if it meets certain air quality-related criteria. Specifically, the key criteria outlined in these documents are that the current air quality levels for ambient monitoring sites in the area should be substantially below the NAAQS (e.g., below 85% of the level of the standard), and that air quality levels have not been highly variable during preceding years.

Although these documents cite specific NAAQS pollutants, states have also developed, and the EPA has approved, LMPs for other NAAQS pollutants when those NAAQS were under active

implementation planning. Accordingly, the EPA has taken the position that in appropriate cases, states can apply the principles outlined in these existing guidance documents in developing LMPs for certain 1997 ozone NAAQS maintenance areas, and 1997 ozone NAAQS nonattainment areas that are eligible for redesignation to attainment.

The three (3) documents listed in the EPA's guidance are as follows:

- *Limited Maintenance Plan Option for Nonclassifiable Ozone Nonattainment Areas. November 16, 1994.* This document addressed the LMP option available for the 1979 1-hour ozone NAAQS.
- *Limited Maintenance Plan Option for Nonclassifiable Carbon Monoxide Nonattainment Areas. October 6, 1995.* This document addressed the LMP option available for the 1971 carbon monoxide NAAQS.
- *Limited Maintenance Plan Option for Moderate PM10 Nonattainment Areas. August 9, 2001.* This document addressed the LMP option for the 1987 PM10 NAAQS.

Of the three (3) LMPs offered by the EPA, the qualifying criteria cited in the August 9, 2001 guidance document is the most stringent with regard to justification a state can present in their selection of LMP provisions. West Virginia meets the specified qualifications outlined in the August 9, 2001 document and has elected to use elements of this guidance as a basis for the development of our LMP for the second 8-hour 1997 Ozone Maintenance Plan. A copy of the August 9, 2001 LMP document is contained in **Appendix B**.

Each limited maintenance plan submission will be evaluated by the EPA on a case-by-case basis, taking into consideration the weight of evidence of the information presented in the SIP submission. Qualification for this LMP is discussed in the following section.

1. LMP Requirements

To qualify for the LMP option, an area should meet the following applicability criteria:

- The area should be attaining the 8-hour ozone NAAQS at all monitors in the area, at or below 85% of the NAAQS.
- The area should have a low risk of future exceedances as shown by a stable or improving air quality trend.

For the purposes of demonstrating a stable or improving air quality trend, West Virginia opted to take a more conservative approach and use a weighted design value of the most recent five (5) design values. As stated in 40CFR, §50.15, the ozone design value for a monitoring site is the 3-year average of the annual fourth-highest daily maximum 8-hour average ozone concentration. For our weighted design value, the five (5) most recent design values available cover the 2012-2018 ambient air monitoring data. This includes 3-year design values for 2012-2014, 2013-2015, 2014-2016, 2015-2017, and 2016-2018. Data from 2014, 2015, and 2016 is included in three (3) out of five (5) design values. Therefore, the 2012-2018 average design value is commonly referred to as a 5-year weighted average design value since data from 2014, 2015, and 2016 is given more weight. With overall ambient ozone concentrations levels trending downward, using a weighted average design value, which amplifies typically older and higher values, provides the most conservative approach at demonstrating area ozone levels are equal to or less than 85% of the 8-hour NAAQS.

An important criterion is related to mobile source emissions. West Virginia will demonstrate that the area should expect only limited growth in on-road motor vehicle nitrogen oxides (NOx) and volatile organic compound (VOC) emissions and has passed a motor vehicle regional air emissions analysis test.

The EPA's guidance describes that states may satisfy the Section 175A requirements applied to the 1997 ozone NAAQS to "provide for maintenance of the NAAQS" with an LMP according to the following criteria:

Current air quality levels significantly below the level of the standard: As indicated in prior documentation, the EPA believes that an ambient air quality design value at or below 85% of the NAAQS (i.e., an ozone design value of 0.071 ppm as compared to a level of 0.084 ppm, which is considered to be in compliance with the 1997 ozone standard to three (3) digits) could be considered significantly below the standard and may be a good indicator that air quality is not likely to deteriorate to a level that would violate the NAAQS over the next 10 year period.

Stable or improving air quality trend: Several kinds of analyses can be performed to assess whether an area has had relatively stable or consistently improving air quality levels over the long term, such that the probability of the area violating the standard in the future would be considered low. One basic approach would be to take the most recent design value for the area and add the maximum design value increase (over

one or more consecutive years) that has been observed in the area over the past several years. A sum that does not exceed the level of the 1997 ozone standard may be a good indicator of expected continued attainment. This type of metric should be considered on a case-by-case basis.

When the LMP option is selected, it is expected that the state will recalculate the average design value annually to ensure that the qualifying criteria continue to be met.

2. LMP Qualification

Based on the LMP requirements established by the EPA in their August 9, 2001 documentation, WVDEP has concluded that the Weirton area qualifies for an LMP based on our analysis of air quality data. Support for this position is provided in the following discussion where several deciding factors are evaluated.

The 1997 8-hour ozone NAAQS is 0.080 ppm. The EPA has made the determination that a design value of 0.084 ppm would meet the NAAQS, following standard rounding procedure. Therefore, the LMP qualifying threshold value of 85% of the NAAQS equates to 0.071 ppm.

The WVDEP evaluated the most recent five (5) years of ambient ozone air quality 3-year design values. Certified area design values, as provided to the EPA and included in EPA’s Air Quality System (AQS), were used in this evaluation. Design values for 2012-2014, 2013-2015, 2014-2016, 2015-2017, and 2016-2018 were used in this evaluation. Based on these values, the 5-year weighted average design value for the Weirton area was calculated to be 0.067 ppm, which is below the 0.071 ppm threshold level and 79% of the NAAQS. This evaluation demonstrates that 8-hour ozone air quality levels are significantly below the level of the standard. *Table 1* below summarizes these values. The table also includes a projected 2023 design value provided by the EPA. A more comprehensive discussion regarding this projection can be found in Section 3 *EPA 2023 Projections*.

Table 1. Weirton area 8-Hour design values in part per million (ppm).

Site	2012-14	2013-15	2014-16	2015-17	2016-18	5-Year Weighted	Projected 2023
Weirton	0.070	0.067	0.067	0.066	0.065	0.067	0.060

The EPA redesignated the area from nonattainment to attainment for the 1997 8-hour ozone NAAQS on June 13, 2007. *Figure 1* shows the historical 3-year ozone design values

beginning with year 2006. The values are shown compared to the 1997, 2008, and 2015 NAAQSs. The EPA’s projected 2023 design value is also included to illustrate predicted future data trends. As the chart depicts, ozone levels for the area have been relatively stable and on a downward trend over this period. Values have also continuously remained below the NAAQS. Ozone levels in the area are expected to continue to decrease, as supported by the EPA’s 2023 design value projection.

Emissions in general have been decreasing in West Virginia following the redesignation of the 1997 standard. These decreases are primarily due to more stringent air pollution regulations, the shutdown or conversion of coal-fired equipment, and attrition of older facilities and processes.

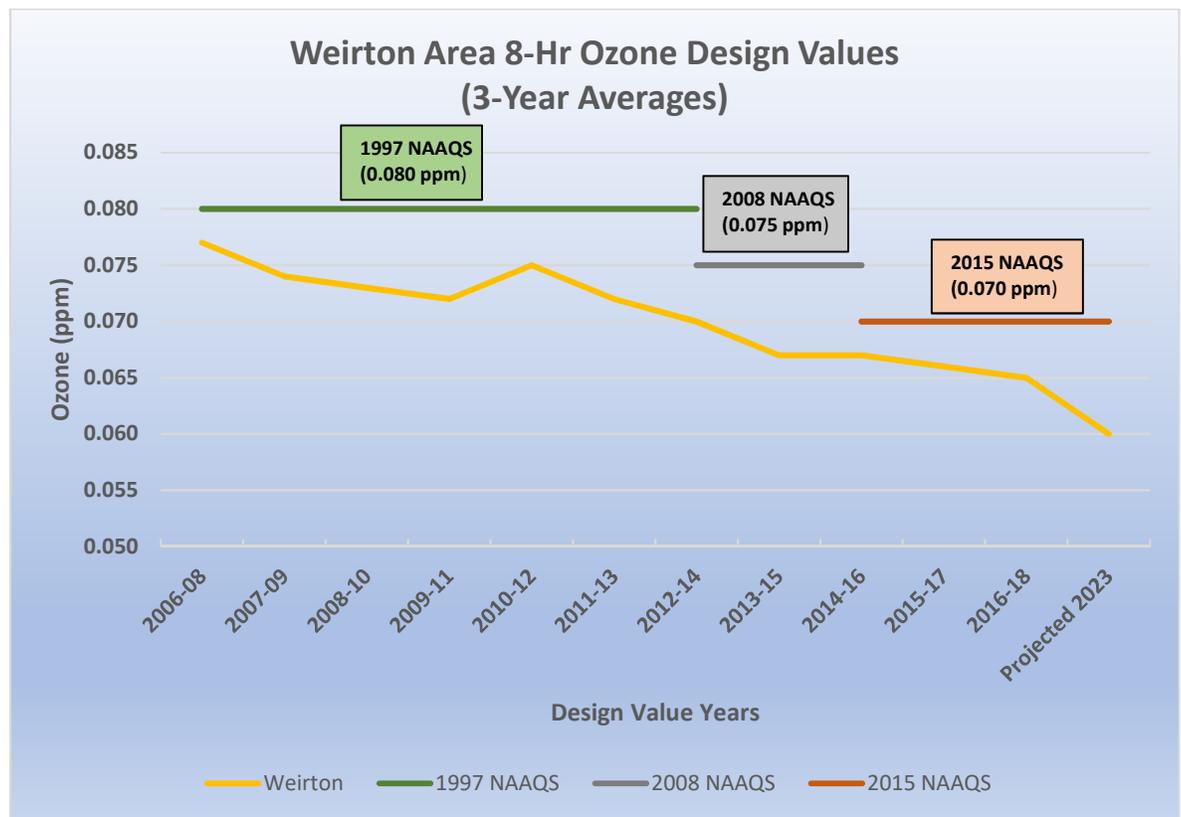


Figure 1. Historical 3-Year ozone design values for the Weirton area.

West Virginia’s certified design value data, both as a 5-year weighted average presented in Table 1 and as illustrated over time in Figure 1, verifies that ozone levels in the Weirton area are significantly below the 1997 8-hour NAAQS. Additionally, this data also demonstrates

that ozone levels for the area are stable or decreasing. Therefore, West Virginia has met the requirement to qualify for the LMP option.

3. EPA 2023 Projections

In June 2018, the EPA issued their “*Air Quality Modeling Technical Support Document for the Updated 2023 Projected Ozone Design Values*”. This technical support document (TSD) describes the air quality modeling the EPA performed to projected ozone design values at individual monitoring sites to 2023.

For the 2023 projections, the EPA used a 2011-based air quality modeling platform, which includes emissions, meteorology, and other inputs for 2011 as the base year and emissions for 2023 as the future analytic year base case. Specifically, the modeling platform included a variety of data that contained information pertaining to the modeling domain and simulation period. These include gridded, hourly emissions estimates and meteorological data, and boundary concentrations. Separate emissions inventories were prepared for the 2011 base year and the 2023 base case. All other inputs (i.e. meteorological fields, initial concentrations, and boundary concentrations) were specified for the 2011 base year model application and remained unchanged for the future-year model simulations. The 2011 modeling platform and projected 2023 emissions were used to drive the 2011 base year and 2023 future case air quality model simulations.

IV. Attainment Year Emissions Inventory

In the resource document, EPA provides emissions inventory data for 2014. These data represent annual and summer season NO_x and VOC emissions. EPA includes annual emissions in units of tons per year (tpy), ozone season emissions in units of tons per ozone season (tpOS), and daily summertime emissions in units of tons per day (tpd). These data are from the EPA 2014 modeling platform and are based on the most recently available National Emissions Inventory (2014 NEI version 2). The 2014 emissions inventory information is from the EPA 2014 version 7.0 modeling platform. The inventory documentation for this platform can be found here: <https://www.epa.gov/air-emissions-modeling/2014-version-70-platform>.

Table 3 provides the 2014 anthropogenic NO_x emissions inventory for the jurisdictions located within the Weirton, WV maintenance area. Emissions from each jurisdiction are broken down by emissions sector. *Table 4* provides the 2014 anthropogenic VOC emissions inventory for the

jurisdictions located within the maintenance area. The VOC emissions from each jurisdiction are broken down by emissions sector. The fire emissions sector includes emissions from agricultural burning, prescribed fires, wildfires, and other types of fires. The nonpoint emissions sector includes emissions from equipment, operations, and activities that are numerous and in total have significant emissions. Examples include emissions from commercial and consumer products, portable fuel containers, home heating, repair and refinishing operations, and crematories. The non-road emissions sector includes emissions from engines that are not primarily used to propel transportation equipment, such as generators, forklifts, and marine pleasure craft. The on-road emissions sector includes emissions from engines used primarily to propel equipment on highways and other roads, including passenger vehicles, motorcycles, and heavy-duty diesel trucks. The point source sector includes large industrial operations that are relatively few in number but have large emissions, such as kraft mills, electrical generating units, and pharmaceutical factories.

The annual and summertime, daily emissions were excerpted from: https://www.epa.gov/sites/production/files/2018-11/ozone_1997_naags_emiss_inv_data_nov_19_2018_0.xlsx (“2014 2028 area emiss by sector” tab) posted at <https://www.epa.gov/ground-level-ozone-pollution/1997-ozone-national-ambient-air-quality-standards-naags-nonattainment>.

Table 3: 2014 Attainment Year Anthropogenic NO_x Emissions Inventory, Weirton, WV Maintenance Area

Jurisdiction	Emissions Sector	2014 Annual NO _x Emissions (tpy)	2014 Summertime Daily NO _x Emissions (tpd)
Brooke Co, WV	Fire	0	0.0
	Nonpoint	403	1.0
	Nonroad	98	0.3
	Onroad	281	0.8
	Point	658	1.8
	Total	1,440	3.9
Hancock Co, WV	Fire	4	0.0
	Nonpoint	573	1.5
	Nonroad	83	0.3
	Onroad	265	0.7
	Point	419	1.1
	Total	1,344	3.6
Jefferson Co, OH	Fire	6	0.0
	Nonpoint	790	2.0
	Nonroad	150	0.5
	Onroad	869	2.4
	Point	12,814	34.6
	Total	14,628	39.5
Steubenville-Weirton Area, OH-WV Total		17,412	47.0

Table 4: 2014 Attainment Year VOC Anthropogenic Emissions Inventory, Weirton, WV Maintenance Area

Jurisdiction	Emissions Sector	2014 Annual VOC Emissions (tpy)	2014 Summertime Daily VOC Emissions (tpd)
Brooke Co, WV	Fire	0	0.00
	Nonpoint	4,228	11.47
	Nonroad	80	0.31
	Onroad	164	0.43
	Point	323	0.89
	Total	4,794	13.11
Hancock Co, WV	Fire	64	0.00
	Nonpoint	625	1.61
	Nonroad	106	0.44
	Onroad	212	0.54
	Point	156	0.43
	Total	1,163	3.01
Jefferson Co, OH	Fire	84	0.00
	Nonpoint	1,061	2.68
	Nonroad	330	1.32
	Onroad	527	1.35
	Point	289	0.82
	Total	2,291	6.17
Steubenville-Weirton Area, OH-WV Total		8,249	22

V. Maintenance Plan

In August 2006, West Virginia submitted the initial Maintenance Plan for the Weirton, West Virginia 1997 8-hour Ozone Area, comprising Brooke and Hancock counties. The Plan was successfully employed resulting in the decrease in ozone levels for the area, as indicated by the historical ambient air quality ozone design value. This Limited Maintenance Plan will serve as the required second 10-year maintenance plan and will ensure continued compliance with 1997 8-hour ozone NAAQS.

In accordance with the CAA, areas seeking to be redesignated to attainment under the LMP policy must have an attainment plan that has been approved by the EPA, pursuant to Section 107(d)(3)(E). The plan must include all control measures that were relied on by the state to demonstrate attainment of the NAAQS. The state must also ensure that the CAA requirements

for ozone pursuant to Section 110, Part D of the Act have been satisfied. To comply with the statute, the LMP should clearly indicate that all controls that were relied on to demonstrate attainment will remain in place. If a state wishes to roll back or eliminate controls, the area can no longer qualify for the LMP and the area will become subject to full maintenance plan requirements within 18 months of the determination that the LMP is no longer in effect. West Virginia is, at this time, not seeking to remove any control measures and will continue to implement all control measures in the ozone applicable SIP for the Weirton area.

Section 175A of the CAA defines the general framework of a maintenance plan. The maintenance plan must constitute a SIP revision and provide for maintenance of the relevant NAAQS in the affected areas for at least 10 years after redesignation. Section 175A further states that the plan must contain such additional measures, if any, as may be necessary to ensure such maintenance. The start date for the initial 10-year Maintenance Plan began when the EPA approved the redesignation request in 2007. Since a maintenance plan must ensure attainment for a minimum of 10 years, 2017 was the earliest year a plan could end. A second and final 10-year Maintenance Plan would be submitted to the EPA for their review and approval eight (8) years after redesignation and two (2) years prior to the expiration of the initial plan. The second plan would have been due to the EPA in 2015. However, with the EPA's revocation of the 1997 8-hour ozone NAAQS in 2012, a second maintenance plan was not required. With the D.C. Court's *South Coast Air Quality Management District v. EPA* decision, a second maintenance plan is now required and is being included as part of this request.

1. Maintenance Tracking Measures

West Virginia proposes to fully update its point, nonpoint, and mobile source emission inventories at 3-year intervals as required by the Consolidated Emissions Reporting Rule (CERR). These inventories ensure that projected area emission growth is sufficiently accurate and ongoing attainment with the NAAQS is maintained. The WVDEP will review annual point source NO_x and VOC emissions per 45CSR30, "*Requirements for Operating Permits*" (the Title V operating program) and by annually updating West Virginia's point source emission inventories. The nonpoint source inventory will be updated at least triennially using the same or similar techniques and methodologies as developed by the EPA. However, West Virginia may substitute the EPA nonpoint source categories default values with West Virginia specific values. The mobile source inventory will be updated at least triennially using the current approved Motor Vehicle Emission Simulator (MOVES) model. Like the nonpoint inventory, West Virginia may substitute actual West Virginia mobile data

for the EPA's default values. Mobile emissions data may also be obtained in consultation with the area's Metropolitan Planning Organization (MPO) and using appropriate data and methodology similar used for Transportation Conformity purposes.

Pursuant to Section 110, Part D of the CAA, WV has operated under the rules of Clean Air Interstate Rule (CAIR) following the approval of our 2006 maintenance plan. When CAIR was replaced by the Cross-State Air Pollution Rule (CSAPR), WV began implementation of the revised regulation. In June 2019, the federal CSAPR rules were adopted by the WVDEP and codified in 45CSR43. These control measures were one of the mechanisms relied on to demonstrate attainment and will remain in place to ensure that the CAA requirements continue to be fulfilled.

2. Monitoring Network

West Virginia will continue to conduct ambient ozone air quality monitoring in the area throughout the term of this Maintenance Plan to verify continued attainment with the 1997 8-hour ozone NAAQS and to protect any applicable Prevention of Significant Deterioration (PSD) increments. Air quality measurements will be performed in accordance with appropriate regulations and guidance documents along with EPA quality assurance requirements. Monitoring procedures will be determined in accordance with 40CFR, Part 58. Quality-assured ozone data will be submitted to the EPA through the AQS and ultimately certified by the WVDEP.

Pursuant to Section 103 of the CAA, WVDEP operates and maintains a network of ambient ozone air quality monitoring stations throughout the State. The stations serve to assess air quality levels based on population exposure, industry emissions, determine compliance with the National Ambient Air Quality Standards (NAAQS), background levels and other special purposes. Provision for the continued operation of the air monitoring network is provided for through federal grant funding.

3. Permanent and Enforceable Improvements

West Virginia has adopted permanent and federally enforceable control measures in order to regulate emission growth. These area control measures have been approved by the EPA. These include the permitting regulations Permits for Construction, Modification, Relocation, and Operation of Stationary Sources of Air Pollutants (45CSR13) and PSD (45CSR14)

permitting requirements will remain in effect through the maintenance plan period. Air permits issued will incorporate applicable PSD (45CSR14), New Source Performance Standards (45CSR16), and National Emission Standards for Hazardous Air Pollutants (45CSR34) requirements. In appropriate cases, Consent Orders and their specific requirements also may be used as a control measure.

Major emission sources proposing to construct new facilities or make a major modification to existing facilities within the area are required to obtain an NSR PSD permit through State Regulation 45CSR14. An engineering evaluation and analysis of information pertaining to the source is performed prior to issuance of any permit. The PSD program requires a modeling demonstration to be performed in order to ensure ongoing NAAQS compliance and applicable PSD increments are not exceeded.

Permanent and enforceable control measures implemented through air permits and Consent Orders are designed to maintain ambient air quality ozone levels.

VI. Contingency Measures

Section 175A of the CAA states that a maintenance plan must include contingency provisions, as necessary, to promptly correct any violation of the NAAQS which may occur after redesignation of the area to attainment. A contingency plan is considered an enforceable part of the SIP. States must ensure that the contingency measures are adopted as soon as possible once they are triggered by a specific event. The contingency plan identifies the measures to be adopted and provides a schedule and procedures for adoption and implementation of the measures if they are required. Normally, the implementation of contingency measures is triggered by a violation of the NAAQS, but the state may establish other triggers to prevent a violation of the NAAQS.

A limited maintenance plan also requires contingency measures to correct NAAQS violations. West Virginia proposes to retain the existing Contingency Plan that follows, which was previously approved by the EPA for the initial Weirton area Maintenance Plan.

If the design value for the 1997 8-hour ozone NAAQS is above 0.084 ppm at any of the ambient air quality ozone monitors in the area, West Virginia will accordingly select and adopt one or more of the following measures to assure continued attainment:

1. Extend the applicability of 45CSR21 (VOC/RACT rule) to include source categories previously excluded (e.g., wastewater treatment facilities).
2. Revise permitting requirements establishing more stringent emissions control measures and/or emissions offsets.
3. Implement NO_x RACT requirements if necessary.
4. Develop regulations to establish plant-wide emission caps (potentially with emissions trading provisions).
5. Implement Stage II Vapor Recovery regulations.
6. Establish a Public Awareness/Ozone Action Days Program, a two-pronged program focusing on increasing the public's understanding of air quality issues in the region and increasing support for actions to improve the air quality, resulting in reduced emissions on days when the ozone levels are likely to be high.
7. Initiate one or more of the following voluntary local control measures:
 - i. Bicycle and Pedestrian Measures - A series of measures designed to promote bicycling and walking including both promotional activities and enhancing the environment for these activities.
 - ii. Reduce Engine Idling - Voluntary program to restrict heavy duty diesel engine idling times for both trucks and school buses.
 - iii. Voluntary Partnership with Ground Freight Industry - A voluntary program using incentives to encourage the ground freight industry to reduce emissions.
 - iv. Increase Compliance with Open Burning Restrictions - Increase public awareness of the existing open burning restrictions and work with communities to increase compliance.
 - v. School Bus Engine Retrofit Program - Have existing school bus engines retrofitted to lower emissions.

One or more of these regulatory revisions or voluntary measures would be selected within three (3) months after verification of a monitored ozone standard violation. Quality assurance procedures must confirm the monitored violation within 45 days of occurrence. For each regulatory revision selected, a draft rule would be developed by the WVDEP. The WVDEP will adopt the selected control measure(s) as emergency rule(s) which will be implemented within six (6) months after adoption and will file the rule(s) as legislative rule(s) for permanent authorization by the legislature. For each voluntary measure selected, the WVDEP will initiate

program development with local governments within the area by the start of the following ozone season.

Furthermore, if the triennial inventories indicate emissions growth in excess of 10% of the 2011 base-year inventory or if a monitored ozone air quality exceedance pattern indicates that an ozone NAAQS violation may be imminent, then the WVDEP will evaluate existing control measures to ascertain if additional regulatory revisions are necessary to maintain the ozone standards. Such an exceedance pattern would include, but is not limited to, the measurement of three (3) exceedances or more occurring at the same monitor during a calendar year.

Based on the 2011 inventory data and calculation methodology, it is expected that area and mobile source emissions would not exhibit substantial increases between consecutive periodic year inventories. Therefore, if significant unanticipated emissions growth occurs, it is expected that point sources would be the cause. Regulation 45CSR30 requires major point source emitters to submit annual air emission inventories and Certified Emission Statements (CES), which contain VOC and NO_x emission totals. Any significant increases that occur can be identified from these inventories or statements without waiting for a triennial emissions inventory. This gives West Virginia the capability to identify needed regulations by source, source category, and pollutant and to begin the rule promulgation process, if necessary, in an expeditious manner.

Control measures from the initial Maintenance Plan have aided in the continual improvement of the area's ambient ozone air quality. Implementation of Contingency Plan measures have not been necessary during the initial Plan's performance period.

VII. Conformity:

The Transportation Conformity Rule (40CFR, Parts 51 and 93) and the General Conformity Rule (58 FR 63214; November 30, 1993) apply to areas operating under maintenance plans. Under either conformity rule one means of demonstrating conformity of Federal actions is to indicate that expected emissions from planned actions are consistent with the emissions budget for the area. Per EPA policy, emissions budgets in an LMP area may be treated as essentially not constraining for the length of the maintenance period on the grounds that growth during that time is not expected to trigger a violation of the 8-hour ozone NAAQS. While this policy does not exempt an area from the need to affirm conformity, it does allow the area to demonstrate conformity without undertaking certain requirements of these rules. For transportation

conformity purposes, the EPA would conclude that emission caps or motor vehicle emission budgets (MVEB) for highway vehicles in these areas are not constraining for the length of the maintenance period of the LMP because one can reasonably expect emissions growth in the area will not result in a violation of the ozone NAAQS; therefore, a regional emissions analysis would not be required under 40CFR, §93.109. In addition, the 1997 ozone NAAQS is a revoked standard, and the federal regulations specifically sunset the regional emissions analysis provisions on the effective date of a NAAQS revocation as explained in “Transportation Conformity Guidance for the South Coast II Court Decision”, EPA-420-B-18-050 November 2018. Similarly, Federal actions subject to the general conformity rule could be considered to satisfy the “budget test” specified in Section 93.158 (a)(5)(i)(A) of the rule (incorporated by reference by §45-35-4). Adoption of Requirements, for the same reasons that the budgets are essentially considered to be unlimited.

To comply with the 1997 8-hour ozone NAAQS requirements, West Virginia established VOC and NO_x MVEB for the five (5) areas mentioned above. MVEB were established for future years, which extended to 2018. In March 2011, West Virginia requested the EPA approve revisions to the 8-hour ozone Maintenance Plans for the five (5) West Virginia 1997 8-hour ozone maintenance areas, including Charleston, Huntington, Parkersburg, Weirton, and Wheeling. These revisions also reallocated emissions from the existing “safety margins” in each of the maintenance plans to increase the available MVEB for highway vehicles. The MVEBs were being increased in anticipation of mandatory use of the EPA’s most recently approved highway vehicle emissions model, MOVES10, in future transportation conformity determinations. It was anticipated the MOVES10 model would result in higher mobile NO_x emissions as compared to the MOBILE6 model originally used to calculate the MVEB. The EPA took direct final action to approve this SIP revision on September 15, 2011 (76 FR 56975).

The EPA’s approval of an LMP will provide that if the LMP criteria are no longer satisfied and a full maintenance plan must be developed to meet CAA requirements, the approval of the LMP would remain applicable for conformity purposes only until a full maintenance plan is submitted and the EPA has found the motor vehicle emissions budgets adequate for conformity purposes under 40CFR, Parts 51 and 93. The EPA will condition its approval of all LMPs in this fashion because in the case where the LMP criteria are not met and a full maintenance plan is required the EPA believes that LMPs would no longer be an appropriate mechanism for assuring maintenance of the standards.

As a result of the February 16, 2018 D.C. Circuit Court decision in *South Coast Air Quality Management District v. EPA*, the Steubenville-Weirton (BHJ) Metropolitan Planning Organization (MPO) (Steubenville, OH – Weirton, WV urbanized area) in partnership with Ohio Department of Transportation (ODOT) initiated a new regional air quality conformity analysis for its existing 2040 Transportation Plan and 2018 – 2021 Transportation Improvement Program. This new conformity process was also in response to FHWA’s April 23, 2018 guidance requiring conformity analyses for “orphaned” US EPA 1997 Ozone standard areas. ODOT provided future year emissions estimates using the MOVES2014a model. These years included 2018, 2025 and 2030 to cover the performance period of the second Maintenance Plan. To compare the area’s emissions to the previously established 2018 MVEB, 2018 emissions were estimated. A summary of the BHJ MPO report is provided in **Appendix C** and the Transportation Air Quality Conformity section of the BHJ Region 2040 Transportation Plan is provided in **Appendix D**.

Table 2 below summarizes the results and shows, as compared to the 2018 MVEB, future VOC and NOx emissions are well below the 2018 established MVEB. Therefore, based upon this analysis by ODOT, West Virginia concludes that it is reasonable to expect that the area will not experience enough motor vehicle emissions growth for a violation of the 1997 8-hour ozone NAAQs to occur through 2026.

Table 2. Projected motor vehicle emissions in short tons per day.

Area	2018 Budget		2018		2025		2030	
	VOC	NOx	VOC	NOx	VOC	NOx	VOC	NOx
Brooke Co & Hancock Co, WV	1.9	3.9	0.83	1.25	0.48	0.53	0.34	0.35
Jefferson Co, OH	2.14	2.43	1.99	2.09	1.24	0.95	0.89	0.64
Total	4.04	6.33	2.82	3.34	1.72	1.48	1.23	0.99

VIII. Public Review

WVDEP published notification for the public review and comment period concerning the draft second maintenance plan in the Weirton Daily Times, widely distributed newspaper serving the Weirton area. This maintenance plan was also available for public download at:

<https://dep.wv.gov/daq/publicnoticeandcomment/Pages/default.aspx>

Results of the public review may be found in **Appendix E**.

IX. Conclusion

As discussed, qualification for a limited maintenance plan requires that the area should be attaining the 8-hour ozone NAAQS. The average design value for the area, based upon the most recent five (5) years of ambient air quality data at all monitors in the area, should be at or below 85% of the NAAQS. WV elected to take a conservative approach and use a 5-year weighted design value rather than simply averaging the most recent five (5) years. Even subject to this more stringent analysis, the Weirton area 5-year weighted design value is 0.067 ppm. This falls under the maximum design value of 0.071 prescribed by the EPA and fulfills this requirement to qualify for an LMP.

Qualification for an LMP further requires that the area should have no NAAQS violations at any ambient air monitor in the area. The Weirton area has not had any NAAQS violations after the approval of the initial Maintenance Plan and has consistently had design values below the 1997, 2008, and 2015 NAAQS. The consistent achievement of decreasing ozone NAAQS fulfills this requirement to qualify for an LMP.

Finally, qualification for an LMP requires that the area should have a low risk of future exceedances. The historic data presented in *Figure 1* demonstrates a downward trend in ozone levels in the area. With regulatory controls currently in place, this trend is expected to continue in the future. This expectation is supported by the 2023 projection produced by the EPA presented in *Table 1*.

Furthermore, a transportation conformity analysis conducted by BHJ MPO and ODOT indicates that the 2018 VOC and NOx emissions fall below our budget for the Weirton area and future VOC and NOx emissions are projected to be on the decline.

Under consideration of the information presented, West Virginia requests that the EPA approve this limited maintenance plan as meeting the requirements of CAA Section 175(A) with respect to the 8-hour standard. This plan is effective until June 13, 2027.

Appendix A

**EPA's Resource Document For 1997 Ozone NAAQS
Areas: Supporting Information for States Developing
Maintenance Plans**

November 20, 2018

**RESOURCE DOCUMENT FOR 1997 OZONE NAAQS AREAS:
SUPPORTING INFORMATION FOR STATES DEVELOPING MAINTENANCE PLANS**

PURPOSE

The purpose of this resource document is to provide technical information that may be helpful for a state wishing to develop and submit a revision of its state implementation plan (SIP) to ensure maintenance of the 1997 ozone National Ambient Air Quality Standards (NAAQS). This document includes information addressing ambient air quality monitoring data, air quality modeling, and emissions inventory data. Note that this resource document also provides information that may be useful for states wishing to pursue the limited maintenance plan (LMP) option.

BACKGROUND

- The EPA revoked the 1997 ozone NAAQS effective April 5, 2015. Under the EPA’s regulations implementing the ozone NAAQS,¹ states were no longer responsible, under certain conditions, for developing and submitting maintenance plans for former 1997 ozone NAAQS nonattainment areas. See 40 Code of Federal Register (CFR) 51.1105(d). Environmental groups filed a petition for judicial review of the EPA’s regulation, challenging certain aspects of the decision. Among other things, the groups challenged the Agency’s rule that excused “orphan maintenance areas,” i.e., areas that had been redesignated to attainment for the 1997 ozone NAAQS and were initially designated attainment for the 2008 ozone NAAQS, from submitting a second maintenance plan for the 1997 ozone NAAQS.
- On February 16, 2018, the D.C. Circuit Court issued a decision in [South Coast Air Quality Management District v. EPA](#) (*South Coast II*) that, among other things, granted the petition on this point. 882 F.3d 1138. The Court held that “orphan maintenance areas” are required to submit second maintenance plans under Clean Air Act (CAA) section 175A(b). These areas, therefore, must submit a second maintenance SIP revision to ensure maintenance through the full 20-year period following the effective date of redesignation. (Note that depending on when an area received its redesignation, the area may only need to submit a second maintenance plan that covers the remainder of the second 10-year maintenance period.) The Court’s decision also addressed the EPA’s longstanding interpretation that, once a NAAQS was revoked, the EPA does not have authority to issue new designations or redesignations for that standard. The Court vacated the “redesignation substitute,” one of the Agency’s procedural mechanisms for removing antibacksliding requirements for the revoked 1997 NAAQS. In so doing, the *South Coast II* court decision held that the EPA could only lift those antibacksliding requirements with a full statutory redesignation under CAA

¹ 80 Federal Register (FR) 12264 (March 6, 2015).

section 107(d)(3)(E), suggesting that the Agency's prior interpretation of its lack of authority to redesignate areas under a revoked NAAQS was incorrect. Therefore, under the Court's decision, areas that were designated nonattainment for the 1997 ozone NAAQS at the time of revocation may request full redesignation under CAA section 107(d)(3) in order to remove antibacksliding requirements for the revoked 1997 standard, such as nonattainment new source review (NNSR).

- The EPA also notes that this resource document does not cover requirements for other CAA programs that apply in nonattainment and maintenance areas following the *South Coast II* decision. For example, guidance implementing transportation conformity requirements following the *South Coast II* decision is being developed by the EPA's Office of Transportation and Air Quality and will be available at: <https://www.epa.gov/state-and-local-transportation/policy-and-technical-guidance-state-and-local-transportation>.
- At the time the 1997 ozone NAAQS were revoked in 2015, 35 areas remained designated as nonattainment for that NAAQS, and 80 former nonattainment areas had been redesignated to attainment and were also initially designated attainment for the newer 2008 ozone NAAQS. (See table 1 for a list of these areas.)

LIMITED MAINTENANCE PLAN

- CAA section 175A(a) requires that areas seeking redesignation to attainment submit "a revision of the applicable state implementation plan to provide for the maintenance of the [NAAQS] for such air pollutant in the area concerned for at least 10 years after the redesignation." Section 175A(b) requires the state to submit a second plan for maintaining the NAAQS for another 10 years (i.e., 20 years after redesignation). In most cases, the EPA guidance instructs states to "provide for the maintenance of the [NAAQS]" using projected emissions inventories or air quality modeling showing continued maintenance until the end of the relevant maintenance period.²
- In three past guidance documents describing "limited maintenance plans," the EPA has interpreted section 175A to indicate that an area can "provide for maintenance of the NAAQS" if it meets certain air quality-related criteria. Specifically, the key criteria outlined in these documents are that the current air quality levels for ambient monitoring sites in the area should be substantially below the level of the standard (e.g., below 85% of the level of the standard), and that air quality levels had not been highly variable during preceding years.
- The three previously-issued limited maintenance plan memoranda are the following:

² See memorandum dated September 4, 1992, from John Calcagni, Director of OAQPS Air Quality Management Division, to the EPA Regional Office Air Division Directors, "Procedures for Processing Requests to Redesignate Areas to Attainment," pages 9-11.

- A. ["Limited Maintenance Plan Option for Nonclassifiable Ozone Nonattainment Areas." November 16, 1994.](#) This document addressed the LMP option available for the 1979 1-hour ozone NAAQS.
 - B. ["Limited Maintenance Plan Option for Nonclassifiable Carbon Monoxide Nonattainment Areas." October 6, 1995.](#) This document addressed the LMP option available for the 1971 carbon monoxide NAAQS.
 - C. ["Limited Maintenance Plan Option for Moderate PM₁₀ Nonattainment Areas." August 9, 2001.](#) This document addressed the LMP option for the 1987 PM₁₀ NAAQS.
- These memoranda cite specific NAAQS, but states have also developed – and the EPA has also approved – LMPs for other specific NAAQS when those NAAQS were under active implementation planning.³ Accordingly, the EPA believes that in appropriate cases states can apply the principles outlined in these existing guidance documents in developing LMPs for certain 1997 ozone NAAQS maintenance areas, and 1997 ozone NAAQS nonattainment areas that are eligible for redesignation to attainment.
 - As compared to developing a regular maintenance plan, development of an approvable LMP generally should be less resource intensive for local, state, and federal air quality and transportation agencies. A LMP submission may primarily rely on air quality data to demonstrate that the area is not expected to experience a future NAAQS violation, and it does not need to include projected future year emissions inventories or air quality modeling to make that demonstration, though including such information could further support the maintenance demonstration.

STATUTORY REQUIREMENTS FOR AREA REDESIGNATIONS AND MAINTENANCE PLANS

- A nonattainment area can be redesignated to attainment only if it satisfies the requirements of CAA section 107(d)(3)(E) of the CAA. The EPA's general guidelines for redesignation requests and maintenance plan SIP revisions are found in the 1992 the EPA guidance "Procedures for Processing Requests to Redesignate Areas to Attainment," Memorandum from John Calcagni, USEPA Office of Air Quality Planning and Standards, Director, Air Quality Management Division, September 4, 1992.
 1. The EPA has determined that the NAAQS for the applicable pollutant has been attained.
 - a. An area that is designated nonattainment for the 1997 ozone NAAQS would be eligible to be redesignated to attainment for that NAAQS if its most recent ozone design value is less than 0.085 parts per million (ppm). Areas with

³ See, e.g., 79 FR 41900 (July 18, 2014). Approval and Promulgation of Air Quality Implementation Plans; New Mexico; Grant County Sulfur Dioxide Limited Maintenance Plan.

design values of 0.085 ppm or greater are not eligible to redesignate to attainment for the 1997 ozone NAAQS.

2. The EPA has fully approved the applicable implementation plan under CAA section 110(k).
 3. The EPA has determined that the improvement in air quality is due to permanent and enforceable reductions in emissions.
 4. The state has met all applicable requirements for the area under CAA section 110 and the part D nonattainment area requirement (CAA sections 171-193).
 5. The EPA has fully approved a maintenance plan, including a contingency plan, for the area under CAA section 175A.
- A maintenance plan must satisfy the requirements of CAA section 175A, including:
 1. A SIP revision providing for the maintenance of the NAAQS in the area.
 - a. The initial maintenance plan must provide for maintenance of the NAAQS in the area for 10 years after redesignation.
 - b. Eight (8) years after redesignation, the state must submit a second SIP revision for maintaining the NAAQS through the end of the second 10-year period beyond redesignation.
 2. Additional measures as necessary to ensure maintenance of the NAAQS in the area during this period.
 3. A contingency plan assuring that the state will promptly correct any violation of the standard which occurs after the redesignation of the area to attainment.
 4. The contingency plan shall include a requirement that the state will continue to implement all measures with respect to the control of the pollutant for the area that were contained in the SIP prior to the redesignation.
 - Each limited maintenance plan submission will be evaluated by the EPA on a case-by-case basis, taking into consideration the weight of evidence of the information presented in the SIP submission.

SUPPORTING INFORMATION

The information described below may be helpful for a state interested in developing a regular maintenance plan or a limited maintenance plan SIP submission for a 1997 ozone NAAQS nonattainment or maintenance area.

1. AMBIENT AIR QUALITY DATA

The spreadsheet provided on the EPA website includes ozone ambient air quality monitoring data for the 115 areas that were initially designated as nonattainment for the 1997 ozone NAAQS beginning in 2004. The spreadsheet includes the following information for each 1997 ozone NAAQS area:

- Current designation status as of July 2018 (nonattainment or maintenance)
- Current area classification as of July 2018 (e.g., Marginal, Moderate, Serious)
- Three (3) year design values for 15 design value periods, from the 2001-2003 period to the 2015-2017 period.

2. AIR QUALITY MODELING DATA

The spreadsheet provided on the EPA website contains projected 2023 design values (based on projected emissions inventory data and air quality modeling performed by EPA in support of interstate ozone transport actions by the EPA and/or states for the 2008 and/or 2015 ozone NAAQS). Projected air quality values below the level of the standard for the area for one or more years during the maintenance plan period can be useful supporting information in a demonstration to show that the area is expected to continue to attain the standard during the maintenance period.

- More information on the EPA 2023 air quality modeling is available at:

<https://www.epa.gov/airmarkets/october-2017-memo-and-supplemental-information-interstate-transport-sips-2008-ozone-naaqs>

https://www.epa.gov/sites/production/files/2018-06/documents/aq_modelingtsd_updated_2023_modeling_o3_dvs.pdf

3. EMISSIONS INVENTORY DATA

Consistent with the EPA guidance, maintenance plans often use a projection of the attainment year emissions inventory to demonstrate that an area will maintain the NAAQS for 10 years. That is, state submissions provide a showing that nonattainment area emissions of nitrogen oxides (NO_x) and volatile organic compounds (VOC) are projected to remain at or below a level that is consistent with demonstrated attainment throughout the maintenance plan period. While past guidance documents have indicated that areas eligible for a limited maintenance plan need not demonstrate maintenance using emission inventory projections, we include this information to the extent it is helpful.

The spreadsheet provided on the the EPA website contains NO_x and VOC emissions data for two years for the 115 areas that were initially designated as nonattainment for the 1997 ozone NAAQS in 2004. The spreadsheet includes the following information for each area:

- Emissions Inventory data for 2014: Summer season NOx and VOC emissions (tons/season). These data are from the the EPA 2014 modeling platform and are based on the most recently available National Emissions Inventory (2014 NEI version 2).
 - The 2014 emissions inventory information is from the the EPA 2014 version 7.0 modeling platform. The inventory documentation for this platform can be found here: <https://www.epa.gov/air-emissions-modeling/2014-version-70-platform>.
- Projected emissions inventory for 2028: Summer season NOx and VOC emissions (tons/season), which may help support a conclusion that emissions will not increase in the future and the improvement in air quality is due to permanent and enforceable reductions in emissions.
- The 2028 emissions inventory is projected from the EPA 2011 version 6.3 modeling platform. The inventory documentation for this platform can be found here: <https://www.epa.gov/air-emissions-modeling/2011-version-63-platform>.

The relevant inventory scenario names are “2014fd” and “2028el.” The 2028 scenario was used to support past air quality modeling to support the regional haze program.

Due to the limited availability of emissions modeling information, the EPA is not able to provide a completely consistent set of emissions estimates for multiple projection years. In general, the emissions of NOx and VOC are going down over time in most areas. But there may be some methodological inconsistencies between the emissions scenarios noted above, which could lead to unexpected projected emissions increases. Therefore, emissions trends should be carefully examined for each area, especially where an emissions increase is projected.

PAST CRITERIA SUPPORTING LIMITED MAINTENANCE PLANS

As noted, the EPA’s prior guidance describes that states may satisfy the section 175A requirement to “provide for maintenance of the NAAQS” with a LMP according to the following criteria:

- Current air quality levels significantly below the level of the standard: As indicated in prior memoranda, the EPA believes that an air quality design value below 85% of the level of the standard (i.e., a design value of 0.071 ppm as compared to a level of 0.084 ppm, which is considered to be in compliance with the 1997 ozone standard to three digits) could be considered significantly below the standard and may be a good indicator that air quality is not likely to deteriorate to a level that would violate the NAAQS over the next 10 year period.
- Stable or improving air quality trend: Several kinds of analyses can be performed to assess whether an area has had relatively stable or consistently improving air quality

levels over the long term such that the probability of the area violating the standard in the future would be considered low. One basic approach would be to take the most recent design value for the area and add the maximum design value increase (over one or more consecutive years) that has been observed in the area over the past several years. A sum that does not exceed the level of the 1997 ozone standard may be a good indicator of expected continued attainment. This type of metric should be considered on a case-by-case basis.

TABLE 1
1997 OZONE NAAQS AREAS WITH MAINTENANCE AND NONATTAINMENT STATUS
AT THE TIME THE NAAQS WERE REVOKED IN 2015
AND THAT WERE ALSO DESIGNATED ATTAINMENT FOR THE 2008 OZONE NAAQS

State	1997 Ozone NAAQS Area Name	1997 Ozone NAAQS Status
AL	Birmingham Area	Maintenance
GA	Atlanta	Maintenance*
GA	Macon Area	Maintenance
GA	Murray County (Chattahoochee Nat Forest) Area	Maintenance
IN	Evansville Area	Maintenance
IN	Fort Wayne Area	Maintenance
IN	Greene County Area (IN)	Maintenance
IN	Indianapolis Area	Maintenance
IN	Jackson County Area	Maintenance
IN	La Porte County Area	Maintenance
IN	Muncie Area	Maintenance
IN	South Bend-Elkhart Area	Maintenance
IN	Terre Haute Area	Maintenance
KY-IN	Louisville Area	Maintenance
MA-NH	Boston-Manchester-Portsmouth (SE) Area	Maintenance
MD	Kent and Queen Anne's Counties Area	Maintenance
ME	Hancock, Knox, Lincoln and Waldo Counties (Central Maine Coast) Area	Maintenance
ME	Portland Area	Maintenance
MI	Allegan County Area	Maintenance
MI	Benton Harbor Area	Maintenance
MI	Benzie County Area	Maintenance
MI	Cass County Area	Maintenance
MI	Detroit-Ann Arbor Area	Maintenance
MI	Flint Area	Maintenance
MI	Grand Rapids Area	Maintenance
MI	Huron County Area	Maintenance
MI	Kalamazoo-Battle Creek Area	Maintenance
MI	Lansing-East Lansing Area	Maintenance
MI	Mason County Area	Maintenance
MI	Muskegon Area	Maintenance
MO-IL	St. Louis Area	Maintenance*
NC-SC	Charlotte-Gastonia-Rock Hill Area	Maintenance*
NC	Haywood and Swain Counties (Great Smoky NP) Area	Maintenance
NC	Raleigh-Durham-Chapel Hill Area	Maintenance
NC	Rocky Mount Area	Maintenance

State	1997 Ozone NAAQS Area Name	1997 Ozone NAAQS Status
NV	Las Vegas	Maintenance
OH	Canton-Massillon Area	Maintenance
OH	Cincinnati-Hamilton Area	Maintenance*
OH	Dayton-Springfield Area	Maintenance
OH	Lima Area	Maintenance
OH	Toledo Area	Maintenance
OH-PA	Youngstown-Warren-Sharon Area	Maintenance
OH-WV	Steubenville-Weirton Area	Maintenance
PA	Altoona Area	Maintenance
PA	Clearfield and Indiana Counties Area	Maintenance
PA	Erie Area	Maintenance
PA	Franklin County Area	Maintenance
PA	Greene County Area (PA)	Maintenance
PA	Harrisburg-Lebanon-Carlisle Area	Maintenance
PA	Johnstown Area	Maintenance
PA	Scranton-Wilkes-Barre Area	Maintenance
PA	State College Area	Maintenance
PA	Tioga County Area	Maintenance
PA	York Area	Maintenance
TN-KY	Clarksville-Hopkinsville Area	Maintenance
TN	Knoxville Area	Maintenance*
TX	Beaumont-Port Arthur Area	Maintenance
VA	Fredericksburg Area	Maintenance
VA	Madison and Page Counties (Shenandoah NP) Area	Maintenance
VA	Norfolk-Virginia Beach-Newport News (Hampton Roads) Area	Maintenance
VA	Richmond-Petersburg Area	Maintenance
WI	Door County Area	Maintenance
WI	Kewaunee County Area	Maintenance
WI	Manitowoc County Area	Maintenance
WI	Milwaukee-Racine Area	Maintenance
WV	Charleston Area	Maintenance
WV-KY- OH	Huntington-Ashland Area	Maintenance
WV-OH	Parkersburg-Marietta Area	Maintenance
WV-OH	Wheeling Area	Maintenance
CA	Sutter County (part) (Sutter Buttes)	Nonattainment
MA	Springfield (W. Mass) Area	Nonattainment
NY	Albany-Schenectady-Troy	Nonattainment
NY	Buffalo-Niagara Falls	Nonattainment
NY	Essex County (Whiteface Mtn.)	Nonattainment

State	1997 Ozone NAAQS Area Name	1997 Ozone NAAQS Status
NY	Jefferson County Area	Nonattainment
NY	Poughkeepsie Area	Nonattainment
NY	Rochester	Nonattainment
RI	Providence (all of RI) Area	Nonattainment

* The 2008 ozone NAAQS nonattainment area did not include all portions of the 1997 ozone NAAQS area. Thus, the remaining portion of the 1997 ozone NAAQS area should be addressed in a second maintenance plan.

Appendix B

**Limited Maintenance Plan Option for Moderate
PM10 Nonattainment Areas. August 9, 2001**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

AUG 09 2001

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

MEMORANDUM

SUBJECT: Limited Maintenance Plan Option for Moderate PM₁₀ Nonattainment Areas

FROM: *John A. Edvardson*
Lydia Wegman, Director
AQSSD (MD-15)

TO: Director, Office of Ecosystem Protection, Region I
Director, Division of Environmental Planning & Protection, Region II
Director, Air Protection Division, Region III
Director, Air, Pesticides & Toxics Management Division, Region IV
Director, Air and Radiation Division, Region V
Director, Air Pesticides & Toxics, Region VI
Director, Air and Toxics Division, Regions VII, IX
Director, Air Program, Region VIII
Director, Office of Air Quality, Region X

I. What is a Limited Maintenance Plan?

This memorandum sets forth new guidance¹ on maintenance plan submissions for certain moderate particulate matter (PM₁₀) nonattainment areas seeking redesignation to attainment (see section IV for further details on qualifying for the policy). If the area meets the criteria listed in this policy the State may submit a maintenance plan at the time it is requesting redesignation that is more streamlined than would ordinarily be permitted. This new option is being termed a limited maintenance plan (LMP)².

II. Why is there a need for a limited maintenance plan policy?

Before the U.S. Court of Appeals for the District of Columbia handed down its decision vacating the 1997 PM₁₀ national ambient air quality standards (NAAQS)(see American Trucking Associations, et al. v. Environmental Protection Agency (EPA), 175 F.3d 1027 (D.C. Cir. 1999),

¹This memorandum is intended to provide EPA's preliminary views on how certain moderate PM₁₀ nonattainment areas may qualify to submit a maintenance plan that meets certain limited requirements. Since it represents only the Agency's preliminary thinking that is subject to modification, this guidance is not binding on States, Tribes, the public, or EPA. Issues concerning the applicability of the limited maintenance plan policy will be addressed in actions to redesignate moderate PM₁₀ nonattainment areas under § 107 of the CAA. It is only when EPA promulgates redesignations applying this policy that those determinations will become binding on States, Tribes, the public, and EPA as a matter of law.

²Moderate PM₁₀ areas that do not meet the applicability criteria of this policy, and all serious PM₁₀ nonattainment areas, should submit maintenance plans that meet our guidance for submission of a full maintenance plan as described in the September 4, 1992 memorandum. "Procedures for Processing Requests to Redesignate Areas to Attainment," from John Calcagni, former Director of the Office of Air Quality Planning and Standards (OAQPS) Air Quality management Division to the Regional Air Division Directors (hereafter known as the Calcagni Memo).

we were prepared to make case-by-case determinations that would make the 1987 PM₁₀ NAAQS no longer applicable in any area meeting the standards. In taking actions to remove the applicability of the 1987 NAAQS, we would have removed, as well, the nonattainment designation and Clean Air Act (CAA) part D requirements from qualifying areas. As a result of the D.C. Circuit's decision, for areas subject to the 1987 NAAQS, the only route to recognized attainment of the NAAQS and removal of nonattainment status and requirements is formal redesignation to attainment, including submittal of a maintenance plan. Since many areas have been meeting the PM₁₀ NAAQS for 5 years or more and have a low risk of future exceedances, we believe a policy that would allow both the States and EPA to redesignate speedily areas that are at little risk of PM₁₀ violations would be useful.

III. How did EPA develop the approach used in the LMP option?

The EPA has studied PM₁₀ air quality data information for the entire country over the past eleven years (1989-1999) and has determined that some moderate PM₁₀ nonattainment areas have had a history of low PM₁₀ design values with very little inter-annual variation. When we looked at all the monitoring sites reporting data for those years, the data indicate that most of the average design values fall below 2 levels, 98 : g/m³ for the 24-hr PM₁₀ NAAQS and 40 : g/m³ for the annual PM₁₀ NAAQS. For most monitoring sites these levels are also below their individual site-specific critical design values (CDV). The CDV is an indicator of the likelihood of future violations of the NAAQS given the current average design value and its variability. The CDV is the highest average design value an area could have before it may experience a future exceedance of the NAAQS with a certain probability. A detailed explanation of the CDV is found in Attachment A³ to this policy which, because of its length, is a separate document accompanying this memorandum.

We believe that the very small amount of variation between the peaks and means in most of the data indicates a very stable relationship that can be reasonably expected to continue in the future absent any significant changes in emissions. The period we assessed provides a fairly long historical record and the data could therefore be expected to have been affected by a full range of meteorological conditions over the period. Therefore, the amount of emissions should be the only variable that could affect the stability in the air quality data. We believe we can reliably make estimates about the future variability of PM₁₀ concentrations across the country based on our statistical analysis of this data record, especially in areas where the amount of emissions is not expected to change.

IV. How do I qualify for the LMP option ?

To qualify for the limited maintenance plan option, an area should meet the following applicability criteria. The area should be attaining the NAAQS and the average PM₁₀ design

³ Dr. Shao-Hang Chu's paper entitled "Critical Design Value and Its Applications" explains the CDV approach and is included in its entirety in Attachment A. This paper has been accepted for publication and presentation at the 94th Air and Waste Management Association (A&WMA) Annual Conference in June 2001 in Orlando, Florida.

value⁴ for the area, based upon the most recent 5 years of air quality data at all monitors in the area, should be at or below 40 : g/m³ for the annual and 98 : g/m³ for the 24-hr PM₁₀ NAAQS with no violations at any monitor in the nonattainment area⁵. If an area cannot meet this test it may still be able to qualify for the LMP option if the average design values of the site are less than their respective site-specific CDV.

We believe it is appropriate to offer this second method of qualifying for the LMP because, based on the air quality data we have studied, we believe there are some monitoring sites with average design values above 40 : g/m³ or 98 : g/m³, depending on the NAAQS in question, that have experienced little variability in the data over the years. When the CDV calculation was performed for these sites we discovered that their average design values are less than their CDVs, indicating that the areas have a very low probability (1 in 10) of exceeding the NAAQS in the future. We believe it is appropriate to provide these areas the opportunity to qualify for the LMP in this circumstance since the 40 : g/m³ or 98 : g/m³ criteria are based on a national analysis and don't take into account each local situation.

The final criterion is related to mobile source emissions. The area should expect only limited growth in on-road motor vehicle PM₁₀ emissions (including fugitive dust) and should have passed a motor vehicle regional emissions analysis test. It is important to consider the impact of future transportation growth in the LMP, since the level of PM-10 emissions (especially from fugitive dust) is related to the level of growth in vehicle miles traveled (VMT). Attachment B (below) should be used for making the motor vehicle regional emissions analysis demonstration.

If the State determines that the area in question meets the above criteria, it may select the LMP option for the first 10 year maintenance period. Any area that does not meet these criteria should plan to submit a full maintenance plan that is consistent with our guidance in the Calcagni Memo in order to be redesignated to attainment. If the LMP option is selected, the State should continue to meet the qualifying criteria until EPA has redesignated the area to attainment. If an area no longer qualifies for the LMP option because a change in air quality affects the average design values before the redesignation takes effect, the area will be expected to submit a full maintenance plan.

Once an area selects the LMP option and it is in effect, the State will be expected to recalculate the average design value for the area annually and determine if the criteria used to qualify for the LMP will still be met. If, after performing the annual recalculation of the area's average design value in a given year, the State determines that the area no longer qualifies for the LMP, the State should take action to attempt to reduce PM₁₀ concentrations enough to requalify for the LMP. One possible approach the State could take is to implement a contingency measure

⁴The methods for calculating design values for PM₁₀ are presented in a document entitled the "PM₁₀ SIP Development Guideline", EPA-450/2-86-001, June 1987. The State should determine the most appropriate method to use from this Guideline in consultation with the appropriate EPA Regional office staff.

⁵If the EPA determines that the meteorology was not representative during the most recent five-year period, we may reject the State's request to use the LMP option and request, instead, submission of a full maintenance demonstration.

or measures found in its SIP. If, in the next annual recalculation the State is able to re-qualify for the LMP, then the LMP will go back into effect. If the attempt to reduce PM₁₀ concentrations fails, or if it succeeds but in future years it becomes necessary again to address increasing PM₁₀ concentrations in the area, that area no longer qualifies for the LMP. We believe that repeated increases in PM₁₀ concentrations indicate that the initial conditions that govern air quality and that were relied on to determine the area's qualification for the LMP have changed, and that maintenance of the NAAQS can no longer be assumed. Therefore, the LMP cannot be reinstated by further recalculations of the design values at this point. Once the LMP is determined to no longer be in effect, a full maintenance plan should be developed and submitted within 18 months of the determination.

Treatment of data used to calculate the design values.

Flagged Particulate Matter Data:

Three policies allow PM-10 data to be flagged for special consideration:

- Exceptional Events Policy (1986) for data affected by infrequent events such as industrial accidents or structural fires near a monitoring site;
- Natural Events Policy (1996) for data affected by wildfires, high winds, and volcanic and seismic activities, and;
- Interim Air Quality Policy on Wildland and Prescribed Fires for data affected by wildland fires that are managed to achieve resource benefits.

We will treat data affected by these events consistently with these previously-issued policies. We expect States to consider all data (unflagged and flagged) when determining the design value. The EPA Regional offices will work with the State to determine the validity of flagged data. Flagged data may be excluded on a case-by-case basis depending on State documentation of the circumstances justifying flags. Data flagged as affected by exceptional or natural events will generally not be used when determining the design value. However, in order for data affected by a natural event to be excluded, an adequate Natural Events Action Plan is required as described in the Natural Events policy.

Data flagged as affected by wildland and prescribed fires will be used in determining the design value. If the State is addressing wildland and prescribed fire use with the application of smoke management programs, the State may submit an LMP if the design value is too high only as a result of the fire-affected data.

We are in the process of developing a policy to address agricultural burning. When it is finalized we will amend the LMP option to account

for the new policy.

V. What should an LMP consist of?

Under the LMP, we will continue to satisfy the requirements of Section 107(d)(3)(E) of the Act which provides that a nonattainment area can be redesignated to attainment only if the following criteria are met:

1. The EPA has determined that the NAAQS for the applicable pollutant has been attained.
2. The EPA has fully approved the applicable implementation plan under section 110(k).
3. The EPA has determined that the improvement in air quality is due to permanent and enforceable reductions in emissions.
4. The State has met all applicable requirements for the area under section 110 and part D.
5. The EPA has fully approved a maintenance plan, including a contingency plan, for the area under section 175A.

However, there are some differences between what our previous guidance (the Calcagni memo) recommends that States include in a maintenance plan submission and what we are recommending under this policy for areas that qualify for the LMP. The most important difference is that under the LMP the demonstration of maintenance is presumed to be satisfied. The following is a list of core provisions which should be included in an LMP submission. Note that any final EPA determination regarding the adequacy of an LMP will be made following review of the plan submitted in light of the particular circumstances facing the area proposed for redesignation and based upon all available information.

a. Attainment Plan

The State's approved attainment plan should include an emissions inventory (attainment inventory) which can be used to demonstrate attainment of the NAAQS. The inventory should represent emissions during the same five-year period associated with the air quality data used to determine whether the area meets the applicability requirements of this policy (i.e., the most recent five years of air quality data). If the attainment inventory year is not one of the most recent five years, but the State can show that the attainment inventory did not change significantly during that five-year period, it may still be used to satisfy the policy. If the attainment inventory is determined to not be representative of the most recent 5 years, a new inventory must be developed. The State should review its inventory every three years to ensure emissions growth is incorporated in the attainment inventory if necessary.

b. Maintenance Demonstration

The maintenance demonstration requirement of the Act will be considered to be satisfied for the moderate PM₁₀ nonattainment areas meeting the air quality criteria discussed above. If

the tests described in Section IV are met, we will treat that as a demonstration that the area will maintain the NAAQS. Consequently, there is no need to project emissions over the maintenance period.

c. Important elements that should be contained within the redesignation request

1. Monitoring Network Verification of Continued Attainment

To verify the attainment status of the area over the maintenance period, the maintenance plan should contain a provision to assure continued operation of an appropriate, EPA-approved air quality monitoring network, in accordance with 40 CFR part 58. This is particularly important for areas using an LMP because there will be no cap on emissions.

2. Contingency Plan

Section 175A of the Act states that a maintenance plan must include contingency provisions, as necessary, to promptly correct any violation of the NAAQS which may occur after redesignation of the area to attainment. These contingency measures do not have to be fully adopted at the time of redesignation. However, the contingency plan is considered to be an enforceable part of the SIP and the State should ensure that the contingency measures are adopted as soon as possible once they are triggered by a specific event. The contingency plan should identify the measures to be adopted, and provide a schedule and procedure for adoption and implementation of the measures if they are required. Normally, the implementation of contingency measures is triggered by a violation of the NAAQS but the State may wish to establish other triggers to prevent a violation of the NAAQS, such as an exceedance of the NAAQS.

3. Approved attainment plan and section 110 and part D CAA requirements:

In accordance with the CAA, areas seeking to be redesignated to attainment under the LMP policy must have an attainment plan that has been approved by EPA, pursuant to section 107(d)(3)(E). The plan must include all control measures that were relied on by the State to demonstrate attainment of the NAAQS. The State must also ensure that the CAA requirements for PM₁₀ pursuant to section 110 and part D of the Act have been satisfied. To comply with the statute, the LMP should clearly indicate that all controls that were relied on to demonstrate attainment will remain in place. If a State wishes to roll back or eliminate controls, the area can no longer qualify for the LMP and the area will become subject to full maintenance plan requirements within 18 months of the determination that the LMP is no longer in effect.

V. How is Conformity treated under the LMP option?

The transportation conformity rule (40 CFR parts 51 and 93) and the general conformity rule (58 FR 63214; November 30, 1993) apply to nonattainment areas and maintenance areas operating under maintenance plans. Under either conformity rule one means of demonstrating conformity of Federal actions is to indicate that expected emissions from planned actions are consistent with the emissions budget for the area. Emissions budgets in LMP areas may be treated as essentially not constraining for the length of the maintenance period because it is unreasonable to expect that an area satisfying the LMP criteria will experience so much growth during that period of time such that a violation of the PM₁₀ NAAQS would result. While this policy does not exempt an area from the need to affirm conformity, it does allow the area to demonstrate conformity without undertaking certain requirements of these rules. For transportation conformity purposes, EPA would be concluding that emissions in these areas need not be capped for the maintenance period, and, therefore, a regional emissions analysis would not be required. Similarly, Federal actions subject to the general conformity rule could be considered to satisfy the “budget test” specified in section 93.158 (a)(5)(i)(A) of the rule, for the same reasons that the budgets are essentially considered to be unlimited.

EPA approval of an LMP will provide that if the LMP criteria are no longer satisfied and a full maintenance plan must be developed to meet CAA requirements (see Calcagni Memo referenced in footnote #2 for full maintenance plan guidance), the approval of the LMP would remain applicable for conformity purposes only until the full maintenance plan is submitted and EPA has found its motor vehicle emissions budgets adequate for conformity purposes under 40 CFR parts 51 and 93. EPA will condition its approval of all LMPs in this fashion because in the case where the LMP criteria are not met and a full maintenance plan is required EPA believes that LMPs would no longer be an appropriate mechanism for assuring maintenance of the standards.

For further information concerning the LMP option for moderate PM₁₀ areas please

contact Gary Blais at (919) 541-3223, or for questions about the CDV approach contact Dr. Shao-Hang Chu at (919) 541-5382. For information concerning transportation conformity requirements, please contact Meg Patulski of the Office of Transportation and Air Quality at (734) 214-4842.

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ATTACHMENT B: MOTOR VEHICLE REGIONAL ANALYSIS METHODOLOGY

The following methodology is used to determine whether increased emissions from on-road mobile sources could, in the next 10 years, increase concentrations in the area and threaten the assumption of maintenance that underlies the LMP policy. This analysis must be submitted and approved in order to be eligible for the LMP option.

The following equation should be used:

$$DV + (VMT_{pi} \times DV_{mv}) \# MOS$$

Where:

DV	=	the area's design value based on the most recent 5 years of quality assured data in : g/m^3
VMT_{pi}	=	the projected % increase in vehicle miles traveled (VMT) over the next 10 years
DV_{mv}	=	motor vehicle design value based on on-road mobile portion of the attainment year inventory in : g/m^3
MOS	=	margin of safety for the relevant PM-10 standard for a given area: 40 : g/m^3 for the annual standard or 98 : g/m^3 for the 24-hour standard

Please note that DV_{mv} is derived by multiplying DV by the percentage of the attainment year inventory represented by on-road mobile sources. This variable should be based on both primary and secondary PM_{10} emissions of the on-road mobile portion of the attainment year inventory, including re-entrained road dust.

States should consult with EPA regarding the three inputs used in the above calculation, and all EPA comments and concerns regarding inputs and results should be addressed prior to submitting a limited maintenance plan and redesignation request.

The VMT growth rate (VMT_{pi}) should be calculated through the following methods:

- 1) an extrapolation of the most recent 10 years of Highway Performance Monitoring System (HPMS) data over the 10-year period to be addressed by the limited maintenance plan; and
- 2) a projection of VMT over the 10-year period that would be covered by the limited maintenance plan, using whatever method is in practice in the area (if different than #1).

Areas where method #1 is the current practice for calculating VMT do not also have to do calculation #2, although this is encouraged. All other areas should use methods #1 and #2, and VMT_{pi} is whichever growth rate produced by methods #1 and #2 is highest. Areas will be expected to use transportation models for method #2, if transportation models are available.

Areas without transportation models should use reasonable professional practice.

Examples

1. DV = 80 : g/m³
 VMT_{pi} = 36%
 DV_{mv} = 30 : g/m³
 MOS = 98 : g/m³ for 24-hour PM-10 standard

$$80 + (.36 * 30) = 91$$

Less than 98 – Area passes regional analysis criterion.

2. DV = 35 : g/m³
 VMT_{pi} = 25%
 DV_{mv} = 6 : g/m³
 MOS = 40 : g/m³ for annual PM-10 standard

$$35 + (.25 * 6) = 37$$

Less than 40 – Area passes regional analysis criterion.

3. DV = 115 : g/m³
 VMT_{pi} = 25%
 DV_{mv} = 60 : g/m³
 MOS = 98 : g/m³ for 24-hour PM-10 standard

$$115 + (.25 * 60) = 130$$

More than 98 – Area does not pass criterion. Full section 175A maintenance plan required.

Appendix C

**Steubenville 2040 Transportation Plan Update
Conformity Analysis Summary**

Steubenville 2040 Transportation Plan Update Conformity Analysis Summary

The Steubenville MPO (Steubenville, OH – Weirton, WV urbanized area) is initiating a new conformity analysis/determination for its existing 2040 Transportation Plan and 2018 – 2021 Transportation Improvement Program. This new conformity process is in response to FHWA’s April 23, 2018 guidance requiring conformity analyses for “orphaned” US EPA 1997 Ozone standard areas.

Interagency Consultation Topics:

- **Latest planning assumptions**

BHJ and ODOT Modeling Section have reviewed and agreed that the following network years are on file for AQ analysis: 2018, 2020, 2025, 2030, and 2040. The Wellsburg Bridge is currently scheduled to be open to traffic in 2021 and is reflected in the 2025, 2030, and 2040 networks for AQ analysis. All the appropriate social and demographic variables used for the 2012 Transportation Plan conformity determinations are still valid. The majority of the projects in BHJ Transportation Plan are exempt from AQ Analysis

- **Latest emission modeling**

- Conformity analyses will use MOVES2014a (most current version)

Analyzed, regionally significant projects list

- **BHJ has identified two (2) regionally significant non-exempt projects that require analysis. Both projects are included in the appropriate model years corresponding to BHJ’s Transportation Plan.**

1. WV SR2 realignment in New Cumberland, WV - The New Cumberland project is currently programmed in BHJ’s FY2018-2021 Transportation Improvement Program with an obligation year of 2018 for right of way acquisition and construction. The project is scheduled to open to traffic in 2021 and is reflected in the 2025, 2030, and 2040 AQ networks.
2. Removal of the Market St Bridge over the Ohio River – The removal of the Market Street Bridge is reflected in the 2025, 2030, and 2040 AQ networks.

- **Conformity process schedule**

- AQ conformity runs

June 29, 2018 BHJ completes review and edit of the Travel Demand Model

July 27, 2018 ODOT Modeling & Forecasting completes analysis year emission runs

- Final BHJTS Conformity documentation recording emissions analysis methodology and results.

August 17 BHJ/ODOT Modeling & Forecast complete DRAFT report for review by consultation partners

August 31 Conformity documentation complete

- Transportation Plan Public Involvement effort to review conformity results

The next meeting of the BHJ Transportation Study Policy Committee is scheduled for September 19, 2018. The Public Involvement Process will begin September 5, 2018, two weeks prior to the meeting date.

- BHJTS Transportation Plan/2018 – 2021 TIP Conformity determination

The BHJ Transportation Study Policy Committee will adopt the TIP Conformity Determination at the next scheduled meeting September 19, 2018.

- **Conformity Tests – Analysis years per table below**

- Ozone - 1997 Standard Ozone SIP budget tests
- PM_{2.5} - Qualitative Conformity Determination per SIP mobile insignificance finding

Ozone

Attainment/SIP status:

- 1997 8-Hour Ozone Standard OH/WV Maintenance Area. - 72 FR 36599 - Effective 7/05/07.
- New WV Ozone budgets, effective Nov. 14, 2011 (76 FR 56975 - 9/15/11).
- New Ohio MOVES budgets <https://www.gpo.gov/fdsys/pkg/FR-2013-10-24/pdf/2013-24706.pdf>.

Geography:

- Jefferson County, OH
- Brooke and Hancock Counties, WV

Conformity Tests:

- 8-Hour budget tests of BHI 2040 Transportation Plan/TIP analysis years

Analysis Years:

- 2018 1st Analysis Year
- 2020 Current TIP year
- 2025 Interim Year
- 2030 Interim year
- 2040 T-Plan horizon year

1997 8-Hour Ozone Standard						
OH	2018 Budget	2018 Emissions	2020 Emissions	2025 Emissions	2030 Emissions	2040 Emissions
VOC	2.14	1.99	1.66	1.24	0.89	0.53
NOx	2.43	2.09	1.59	0.95	0.64	0.34
WV	2018 Budget	2018 Emissions	2020 Emissions	2025 Emissions	2030 Emissions	2040 Emissions
VOC	1.9	0.83	0.68	0.48	0.34	0.22
NOx	3.9	1.25	0.96	0.53	0.35	0.21

PM_{2.5}

Attainment/SIP status:

- 1997 annual and 2006 daily PM_{2.5} standard Maintenance Area mobile source insignificance finding – Ohio portion of region – (78 FR 57273) - Effective September 18, 2013

Geography:

- Jefferson County, OH
- Brooke and Hancock Counties, WV

Conformity Action:

- Qualitative conformity determination per SIP mobile insignificance finding

Appendix D

SECTION 9 - TRANSPORTATION AIR QUALITY CONFORMITY

SECTION 9 - TRANSPORTATION AIR QUALITY CONFORMITY

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SECTION 9 - TRANSPORTATION AIR QUALITY CONFORMITY

This section describes the requirements for conformity of transportation plans, programs, and projects developed, funded, and approved by Metropolitan Planning Organizations (MPO) as outlined in CFR Title 40 Part 93 (Updated March 2010) implemented by section 176(c) of the Clean Air Act. Transportation Conformity Regulation addresses air pollution from on-road mobile emissions created by cars, trucks, motorcycles, and transit vehicles. The regulation also applies to Volatile Organic Compounds (VOC), sometimes referred to as Hydrocarbons (HC), and Nitrogen Oxides (NO_x) emissions in non-attainment or maintenance (non-attainment areas re-designated as attainment) Ozone (O₃) areas. Conformity also applies to areas designated as non-attainment or maintenance for U.S. Environmental Protection Agency (US EPA) air quality standards set for Nitrogen Dioxide (NO₂), Carbon Monoxide (CO), Particulate Matter with an aerodynamic diameter less than 10 microns (PM₁₀), and Particulate Matter with an aerodynamic diameter less than 2.5 microns (PM_{2.5}). The US EPA has designated the Steubenville, OH and Weirton, WV, Metropolitan Area as "attainment" for both the 1997 PM_{2.5} Annual and the 2006 24-Hour PM_{2.5} standards. The US EPA has made a finding of insignificance for Ohio and West Virginia's motor vehicle emissions. By action taken on February 13, 2015, the US EPA has revoked the 1997 National Ambient Air Quality 8-Hour Ozone Standard effective 30-days after publication in the Federal Register.

TRANSPORTATION CONFORMITY DOCUMENTATION

The transportation conformity rule, as established under section 176(c) of the Clean Air Act, ensures that the U.S. Department of Transportation, Metropolitan Planning Organizations (MPO), and other recipients of federal funds under Title 23 U.S.C. or the Federal Transit Laws (49 U.S.C. Chapter 53) approve transportation activities that are consistent with air quality goals. Transportation conformity addresses air pollution from on-road mobile emissions created by cars, trucks, motorcycles, and transit vehicles. It ensures that these transportation activities do not worsen air quality or interfere with the "purpose" of the air quality State Implementation Plan (SIP), which is to meet the National Ambient Air Quality Standards (NAAQS). According to the Clean Air Act, transportation plans, programs, and projects cannot:

1. Create new NAAQS violations;
2. Increase the frequency or severity of existing NAAQS violations; or
3. Delay attainment of the NAAQS.

AIR QUALITY DESIGNATIONS

The federal requirements apply to areas designated as nonattainment for one or more NAAQS established pursuant to section 109 of the Clean Air Act (CAA), and nonattainment areas that the US EPA may subsequently re-designate to attainment with federally approved air quality maintenance plans. Conformity applies to both pollutants and specific *precursors*,

compounds that react in the atmosphere to form pollutants. The current US EPA NAAQS designations for the whole of all three counties (Jefferson, OH; Brooke-Hancock, WV) within the Steubenville-Weirton, OH-WV area are:

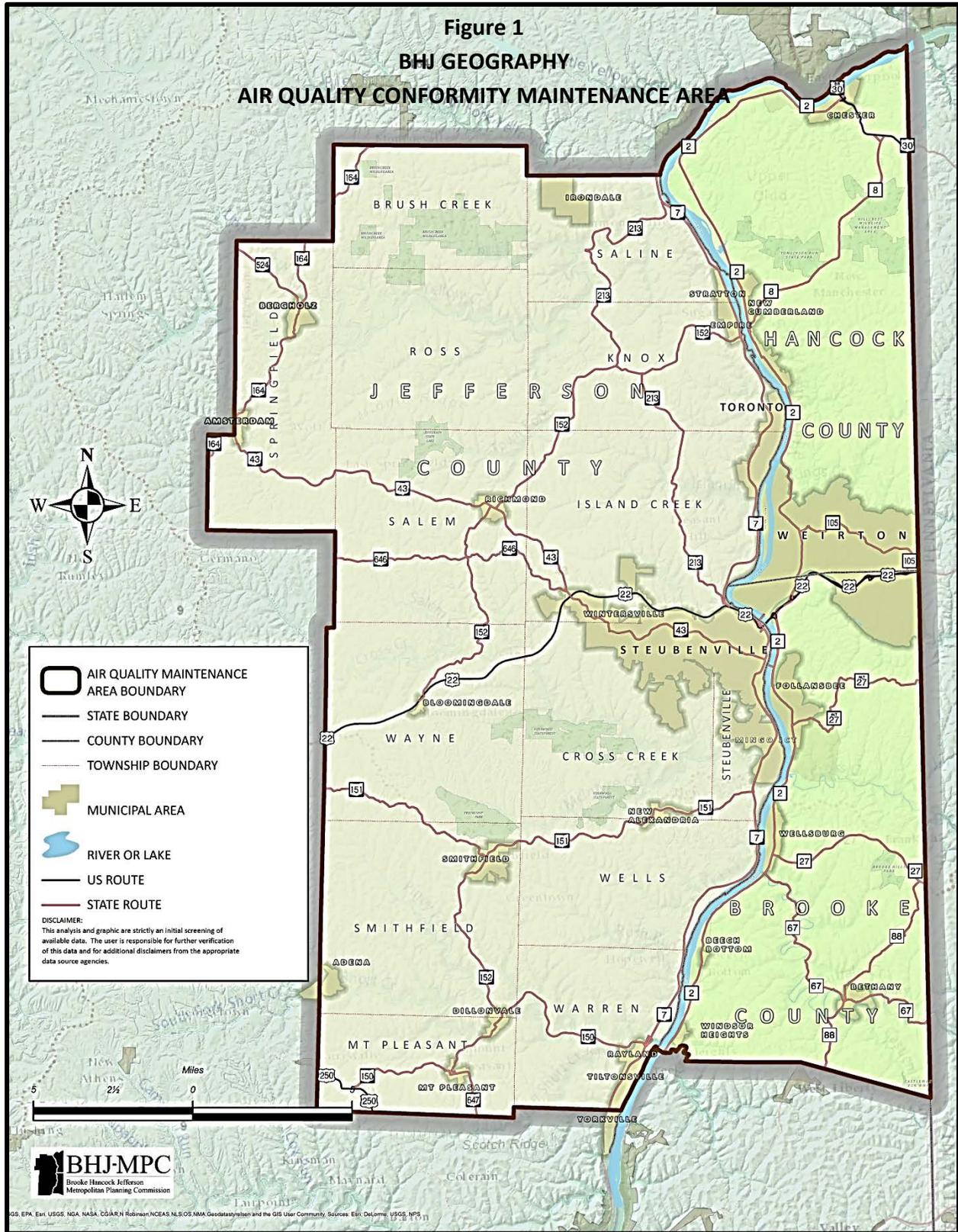
- 1997 PM_{2.5} Standard 40 CFR 93.109(f) - attainment; area with insignificant motor vehicle emissions
- 2006 PM_{2.5} Standard 40 CFR 93.109(f) - attainment; area with insignificant motor vehicle emissions
- 1997 8-Hour Ozone Standard - revoked

The federal requirements areas designated as attainment with insignificant motor vehicle emissions are not required to satisfy a regional emissions analysis for §93.118 and/or §93.119 for a given pollutant/precursor and NAAQS. On September 18, 2013 and on March 18, 2014 the US EPA issued an insignificant finding for the Ohio and West Virginia portion of the BHJ Study Area respectively for both the 1997 Annual PM_{2.5} Standard and the 2006 24-Hour PM_{2.5} Standard.

On February 13, 2015, the US EPA signed issued a pre-proposal version of the final 2008 ozone NAAQS SIP requirements rule. The final rule includes revocation of the 1997 ozone NAAQS for all purposes. As this rule, revokes the 1997 Ozone NAAQS for all purposes, the BHJ Transportation Plan and TIP will no longer need to demonstrate transportation conformity for this NAAQS. The Plan and TIP will continue to demonstrate transportation conformity for the PM_{2.5} NAAQS.

BHJ Resolution 2016-9, scheduled for adoption May 17, 2016 will approve the updated BHJ 2040 Transportation Plan and make a qualitative transportation conformity determination for the Plan and current 2016 – 2019 BHJ Transportation Improvement Program.

Figure 1
BHJ GEOGRAPHY
AIR QUALITY CONFORMITY MAINTENANCE AREA



Appendix E

Public Review and Comment

NOTICE OF PUBLIC COMMENT AND HEARING

West Virginia Department of Environmental Protection Second Maintenance Plan for the 1997 Ozone Nonattainment Areas Weirton, WV (Comprising Brooke and Hancock Counties)

The West Virginia Department of Environmental Protection (DEP), Division of Air Quality (DAQ) is soliciting comment and will hold a public hearing on the proposed *West Virginia Department of Environmental Protection Second Maintenance Plan for the Weirton, WV 1997 Ozone NAAQS Maintenance Area (Comprising Brooke and Hancock Counties)*.

The first Maintenance Plan for the Weirton area was approved by the United States Environmental Protection Agency (U.S. EPA) concurrent with the Weirton area redesignation to attainment with the 1997 Ozone National Ambient Air Quality Standard (NAAQS) effective June 13, 2007. Under Clean Air Act (CAA) section 175A(b), states must submit a revision to the first Maintenance Plan eight years after redesignation to attainment to provide for maintenance of the NAAQS for an additional ten years following the end of the first 10-year period. The second Maintenance Plan was delayed because the U.S. EPA's final implementation rule for the 2008 ozone NAAQS revoked the 1997 ozone NAAQS and removed the requirement for a second Maintenance Plan for areas that had been redesignated to attainment with the 1997 ozone NAAQS and were designated attainment with the 2008 ozone NAAQS. The D.C. Circuit (2018) in *South Coast Air Quality Management District v. EPA* vacated U.S. EPA's previous interpretation therefore, states must now submit Maintenance Plans for the second maintenance period.

Air quality monitoring data collected in this area continues to demonstrate attainment of the NAAQS. Historical and projected emissions show that existing state and federal requirements are sufficient to maintain the NAAQS in the Weirton area. The area has been designated attainment with both the 2008 and 2015 ozone NAAQS, which are more stringent than the 1997 ozone NAAQS.

The State of West Virginia is requesting that U.S. EPA approve a second 10-year Maintenance Plan for the Weirton area with respect to the 1997 8-hour ozone NAAQS. Once finalized the *Second Maintenance Plan for the Weirton, WV 1997 Ozone NAAQS Maintenance Area (Comprising Brooke and Hancock Counties)* will be submitted to U.S. EPA for approval and incorporation as a revision to the State Implementation Plan (SIP).

A public hearing will be held at 6 PM, November 6th, 2019 at the following location:

West Virginia DEP Wheeling Satellite Office
131A Peninsula St.
Wheeling, WV 26003

Written and oral comments will be accepted until the close of the hearing on November 6th, 2019 and will be made part of the formal record. Written comments will also be accepted for inclusion in the formal record by mail, facsimile, email or other delivery to the Division of Air Quality if postmarked or transmitted by 5:00 PM on November 6th, 2019. Please identify the document to which the comments apply, the commenter's name, address and telephone number. Send written comments to Laura M. Crowder, Director of the Division of Air Quality at the following address:

E-mail: Sandra.K.Adkins@wv.gov
Mailing address: West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Fax: (304) 926-0479

Copies of the proposed Maintenance Plan and documentation may be viewed on weekdays between 8:30 a.m. and 4:30 p.m. at the DEP Charleston office located at the above address, and may be viewed on the DAQ website under the Public Notice and Comment section: <https://dep.wv.gov/daq/publicnoticeandcomment/Pages/default.aspx>