ARKANSAS
ENERGY & ENVIRONMENT

Sarah Huckabee Sanders
GOVERNOR
Shane E. Khoury
SECRETARY

May 22, 2025

W. Scott Mason IV, Regional Administrator
United States EPA Region VI
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Dear Administrator Mason:

The State of Arkansas respectfully submits for your review the second 10-year maintenance plan for 2008 8-hour ozone national ambient air quality standard (NAAQS) for Crittenden County, Arkansas.

Crittenden County is included in the Memphis metropolitan 2008 ozone maintenance area (TN-MS-AR Area). In 2012, the U.S. Environmental Protection Agency (EPA) designated the TN-MS-AR Area as being in nonattainment for the 2008 8-hour ozone NAAQS. In 2016, the TN-MS-AR Area was redesignated to attainment and classified as a maintenance area. At that time, Arkansas submitted the first 10-year maintenance plan as required under the Clean Air Act (CAA) section 175A(a), addressing maintenance of the previously violated NAAQS for at least ten years after the redesignation.

CAA section 175A(b) requires the State to submit a second 10-year maintenance plan for maintaining the NAAQS for another ten years (i.e., total 20 years after redesignation). Arkansas now submits the second 10-year maintenance plan for Crittenden County, Arkansas. The second 10-yr maintenance plan includes an attainment emissions inventory, maintenance demonstration, monitoring data, verification of continued attainment, motor vehicle emission budgets, and a contingency plan. This package also includes evidence of required public notice and opportunity to comment.

On April 12 and April 13, 2025, notice of availability of the draft second 10-yr maintenance plan and scheduled public hearing was published in the *Arkansas Democrat-Gazette*, which is a newspaper in general circulation statewide. Information on the public notice, proposed revision, and supporting documents were posted to the Arkansas Department of Energy and Environment, Division of Environmental Quality's (DEQ), SIP webpage.[1] DEQ held a public hearing regarding this SIP revision on May 13, 2025; there were no attendees. The public comment period concluded on May 13, 2025, and DEQ received no comments pertaining to the proposed second 10-year maintenance plan. Included in the supplemental documentation is a copy of the public notice and proof of publication of the public hearing date and opportunity to comment on the proposed SIP revision, as required by 40 C.F.R. § 51.102.

This SIP package is being submitted electronically through the Central Data Exchange (CDX) State Planning Electronic Collaboration System (SPeCS) for SIPs web-based system in accordance with 40 CFR 51.103(a). I

[1] https://www.adeq.state.ar.us/air/planning/sip/

certify that all documents submitted to EPA in electronic form are exact duplicates of the hard copy documents. Additionally, I confirm that completeness requirements under 40 CFR 51, Appendix V, 2.1 are included in this package and documentation of such is provided within the uploaded submission.

Should questions arise, please do not hesitate to contact the DEQ's Office of Air Quality Associate Director Demetria Kimbrough, MPH at (501) 682-0927, or by email at Demetria.Kimbrough@arkansas.gov. Thank you for your consideration of Arkansas' submission.

Sincerely,

Shane Khoury
Secretary, Arkansas Department of Energy and Environment

2008 8-HOUR OZONE SECOND 10-YEAR MAINTENANCE PLAN FOR THE CRITTENDEN COUNTY, ARKANSAS PORTION OF THE MEMPHIS, TN-MS-AR METROPOLITAN STATISTICAL AREA

State of Arkansas
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Submitted to EPA
June 10, 2025

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Executive Summary

Crittenden County 2008 8-Hour Ozone Second 10-Year Maintenance Plan

A. Background

The 2008 8-hour ozone national ambient air quality standard (NAAQS) is 0.075 parts per million (ppm). A violation of this NAAQS occurs when the three-year average of the annual fourth-highest daily maximum 8-hour average ozone concentration is greater than 0.075 ppm. This three-year average is termed the "design value" for an ambient air quality monitoring site. The "controlling" design value is the highest monitoring site-specific design value in an area if multiple monitors are present in the defined area (e.g., a county, a metropolitan statistical area, etc.). On May 21, 2012 (77 FR 30088), based on 2007-2009 ambient air monitoring data collected from several monitoring sites in the Tennessee-Mississippi-Arkansas (TN-MS-AR) Metropolitan Statistical Area (Maintenance Area), the United States Environmental Protection Agency (EPA) designated and classified Crittenden County, Arkansas within the broader Maintenance Area as a marginal nonattainment area for the 2008 8-hour ozone NAAQS. Effective May 25, 2016 (81 FR 24030) and based on 2012-2014 monitoring data with a design value below the 2008 8-hour ozone NAAQS, the EPA redesignated the Crittenden County, AR portion of the Maintenance Area to attainment. As part of the redesignation action, the Arkansas Department of Energy and Environment (E&E) adopted, and the EPA approved, a maintenance plan for the Maintenance Area, as required under Clean Air Act (CAA) Section 175A.

B. Crittenden County Continued Air Quality

E&E currently operates one ozone monitoring site in Crittenden County, located approximately 10 miles northwest of downtown Memphis in Marion, Arkansas. The ozone data collected at this site demonstrates that the Crittenden County portion of the Maintenance Area is continuing to attain the 2008 8-hour ozone NAAQS with a design value below 0.075 ppm.

In addition to the collection of ozone concentration data, the State of Arkansas has implemented several state rules that have resulted in permanent and enforceable reductions in ozone precursor emissions statewide. Additionally, there are several federal actions that have resulted in lower emissions. This combination of state and federal actions is expected to result in the continued maintenance of the 2008 8-hour ozone NAAQS.

In this maintenance plan update, E&E evaluated for continued maintenance of the 2008 8-hour ozone NAAQS by assessing expected emissions inventories for the ozone precursors, oxides of nitrogen (NOx) and volatile organic compounds (VOCs) from 2016 to 2036.

C. Second 10-year Crittenden County Maintenance Plan Conclusion

The total anthropogenic 2036 final year emissions for the Crittenden County portion of the Maintenance Area are projected to be lower than the 2016 base year emissions and show a continuous decline from 2016 to 2036. Therefore, the Crittenden County portion of the Maintenance Area is expected to continue to attain the 2008 8-hour ozone NAAQS for the following 10-year period, maintaining compliance with this NAAQS through at least 2036. The Maintenance Area is also in compliance with Section 110 and Part D requirements of the CAA.

Section I. Introduction to the Ozone NAAQS

A. Ground-Level (Tropospheric) Ozone

Ozone is a colorless gas that both occurs naturally and can be produced by atmospheric chemical reactions among anthropogenic and biogenic precursor pollutants. Ozone is composed of three oxygen atoms (O_3), one more than the common oxygen molecule (O_2) we need to breathe to sustain life. The additional oxygen atom makes ozone extremely reactive with other molecules. Ozone in the Earth's upper atmosphere, known as stratospheric ozone, shields the Earth from the harmful effects of the sun's ultraviolet rays. Ozone found in the atmosphere closer to the Earth's surface, tropospheric ozone, is considered a harmful air pollutant due to its adverse impacts on human health and welfare.

Tropospheric ozone is commonly referred to as ground-level ozone and is not emitted directly, but rather is formed in the atmosphere by the reaction of NOx and VOC precursor pollutants in the presence of sunlight and the occurrence of other meteorological conditions that catalyze ozone production. These ozone precursor pollutants are emitted by many anthropogenic and biogenic source types. In Arkansas, ozone concentrations are typically elevated during the summertime. Changing weather patterns contribute to variation in ozone concentrations from year to year and from region to region. The precursor pollutants that form ozone can be emitted locally, and both ozone and these precursor pollutants can also be transported to an area from sources found hundreds of miles upwind.

B. 2008 8-Hour Ozone NAAQS

The Clean Air Act (CAA) requires EPA to set NAAQS for pollutants that are considered harmful to public health and the environment. The EPA has promulgated NAAQS for carbon monoxide, lead, nitrogen dioxide, particulate matter, sulfur oxides, and ground-level ozone, referred to as the six "criteria" air pollutants. Primary and secondary NAAQS under Section 109 of the CAA are set forth in Title 40 of the Code of Federal Regulations (CFR), Part 50. NAAQS are subject to revision and additional primary and secondary standards may be promulgated as the EPA deems necessary to protect public health and welfare. For each criteria air pollutant, a health-based or "primary" standard has been set to protect public health in general, and a welfare-based or "secondary" standard may be set to protect quality of life and the environment. Primary standards set limits to protect public health, including the health of "sensitive" populations such as individuals with underlying respiratory issues, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

In 2008, the EPA revised the NAAQS for ground-level ozone, setting both the "primary" and the "secondary" standards at 0.075 parts per million (ppm) averaged over an 8-hour period. At every ozone monitoring site, hourly average concentrations are recorded in ppm. Running 8-hour averages, that add a new hour and drop the oldest hour, are computed from the hourly ozone concentration data for each hour of the year, or applicable ozone season. Arkansas' ozone season, the period of time where ozone is most likely to be produced, occurs from May 1 through October 31 annually, although Arkansas operates its ozone monitoring sites year-around. The daily maximum 8-hour concentration for a given calendar day is the highest of the 24 possible 8-hour average concentrations computed for that day. The NAAQS requires the annual fourth highest daily maximum 8-hour concentration to be used in the design value calculation, which is the value

for regulatory comparison to the NAAQS. The design value is the three-year average, using the three most recent, consecutive calendar years, of the three annual fourth highest daily maximum 8-hour concentrations. Thus, a violation of the 2008 8-hour ozone NAAQS occurs when the computed design value is greater than 0.075 ppm NAAQS.

C. 2008 8-Hour Ozone Designations

The CAA requires the EPA to designate areas as attainment, nonattainment, or unclassifiable following the promulgation of a new or revised NAAQS. The highest monitoring site design value in an area with more than one monitor was used to determine the area's designation. Once an area's designation is finalized, specific CAA requirements must be followed, depending on an area's attainment status. Area-specific ozone nonattainment classifications are also assigned based on design value exceedance departures from the NAAQS in increasing severity of "Marginal", "Moderate", "Serious", "Severe", and "Extreme".

At the time of the 2008 8-hour ozone NAAQS designations, several monitors in the Memphis, TN-MS-AR Maintenance Area, including a monitor in the Crittenden County, AR portion of the Maintenance Area had design values above the 2008 8-hour ozone NAAQS of 0.075 ppm. The monitoring site located in Crittenden County, AR had a design value of 0.076 ppm for the three-year period of 2007-2009. Therefore, the EPA classified the Memphis, TN-MS-AR Metropolitan Statistical Area as an ozone marginal nonattainment area.

D. CAA Redesignation & Maintenance Plan Requirements

On December 10, 2015, based on more recent design values below the 2008 8-hour ozone NAAQS, E&E submitted to EPA a revision to its State Implementation Plan (SIP) and the first 10-year maintenance plan for the Crittenden County, Arkansas portion of the 2008 8-hour ozone NAAQS nonattainment area, as well as a request for redesignation to attainment status. On April 25, 2016, the EPA published (81 FR 24030) a final rule approving the redesignation of the Crittenden County, AR portion of the Maintenance Area to attainment, effective May 25, 2016.

According to the CAA section 175A(b), states must submit a second 10-year period revision update to the first maintenance plan to provide for maintenance of the NAAQS for the second 10-year period after reattainment. This document comprises E&E's required second 10-year period Crittenden County, AR Maintenance Plan SIP revision.

Section II. Memphis, TN-MS-AR Metropolitan Statistical Area Air Quality

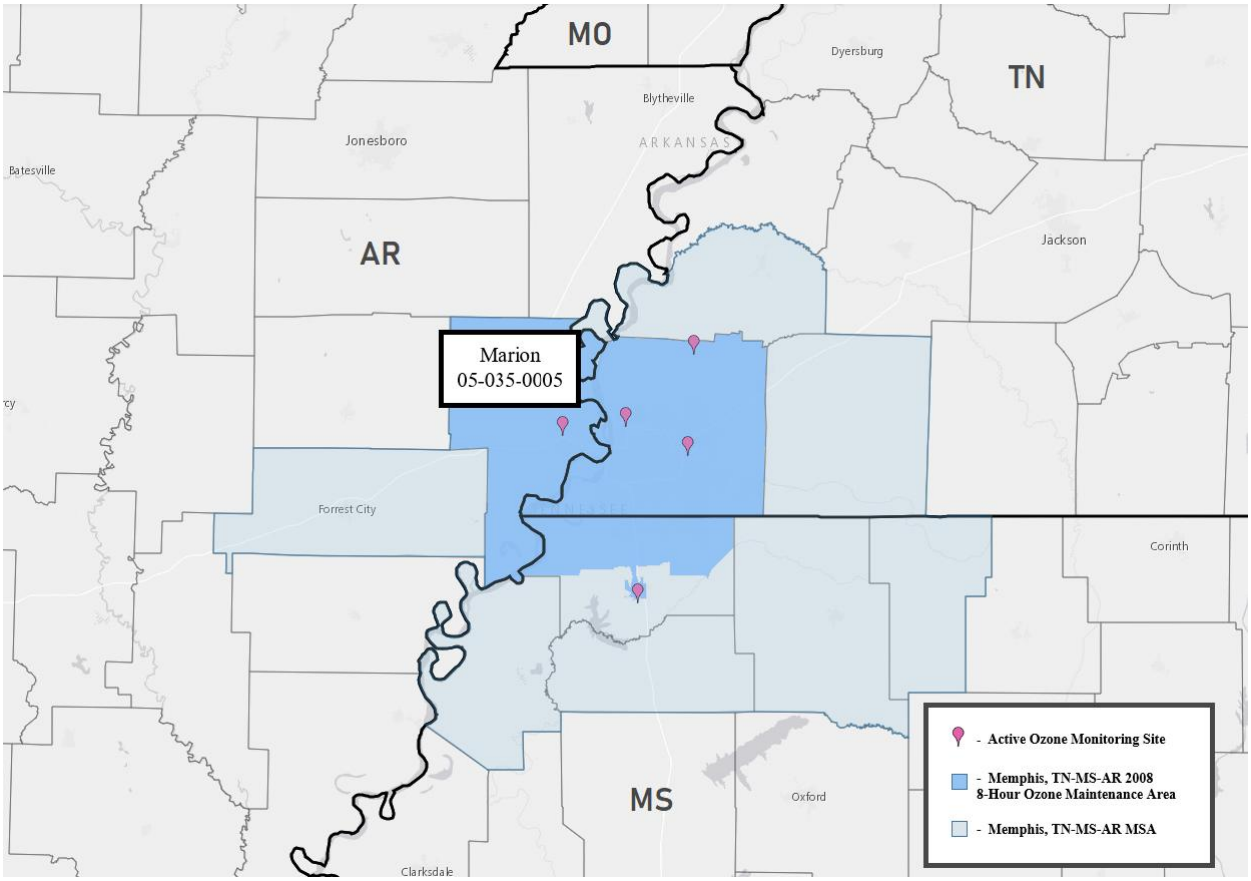
A. Air Quality Monitoring Sites in the Memphis Area

E&E is currently operating one ozone monitoring site in the Crittenden County, AR portion of the Maintenance Area. This monitoring site (Marion; ID#: 05-035-0005) is located in Crittenden County, AR, approximately 10 miles northwest of downtown Memphis, in Marion, Arkansas, and began operation on February 25, 1991. This monitor site is the same site that had the 2007-2009 design value above the 2008 8-hour ozone NAAQS and also the below 0.075 ppm design value that allowed for the redesignation to attainment and designation as a Maintenance Area.

Currently, the Memphis, TN-MS-AR Metropolitan Statistical Area contains five ozone monitoring sites. In addition to the Marion monitoring site operated by E&E in Crittenden County, AR, three of the

monitoring sites, Orgill (ID#: 45-157-1004), Frayser (ID#: 47-157-0021), and Shelby Farms (ID#: 47-157-0075), are operated by the Shelby County, Tennessee Health Department. One monitoring site, Hernando (ID#: 28-033-0002), is operated by the Mississippi Department of Environmental Quality. Figure 1 displays all the ozone monitoring site locations in the Maintenance Area.

Figure 1–Current ozone Monitoring Sites in the Memphis, TN-MS-AR Metropolitan Statistical Area



B. Historic & Current Air Quality (2010-2023)

The fourth highest daily maximum 8-hour ozone concentrations, listed in Table 1, as well as the design values, listed in Table 2, were obtained from EPA's Air Quality System (AQS) database of ambient air quality data. AQS calculates the design values in accordance with the procedures found in 40 CFR Appendix I to Part 50. Design values were calculated from the 2010-2012 three-year design value period through the 2020-2023 three-year design value period for each monitor in the Maintenance Area**.** All of the data listed in the tables on the following pages has been certified and submitted to the EPA. As shown in Table 2, the design values at the Marion monitoring site (05-035-0005) have not violated the 2008 8-hour ozone NAAQS since reattainment in 2016.

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Table 1 − Historic 4th Highest 8-Hour Ozone Values (ppm) for the Marion monitoring site

Monitor Site	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Marion (050350005)	0.078	0.082	0.079	0.067	0.067	0.066	0.070	0.064	0.070	0.064	0.069	0.072	0.071	0.074

Table 2 − Historic 8-Hour Ozone Design Values (ppm) for the Marion monitoring site

Monitor Site	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2017-2019	2018-2020	2019-2021	2020-2022	2021-2023
Marion (050350005)	0.077	0.079	0.076	0.071	0.066	0.067	0.066	0.068	0.066	0.067	0.068	0.070	0.072

C. Current Design Values (2020-2023)

The most recent three years of ozone monitoring data (2021-2023) for all five of the Maintenance Area's monitoring sites demonstrates continued compliance with the 2008 8-hour ozone NAAQS. Table 3 includes the 2021, 2022, and 2023 annual fourth highest daily maximum 8-hour average ozone concentrations and calculated 2023 design values (2021–2023 fourth high average) for all the monitors within the Maintenance Area. The 2023 8-hour ozone monitoring data for all monitors has been certified and Arkansas data was officially submitted to the EPA in accordance with 40 CFR 58.15 and 40 CFR 58.16.

Table 3 − Maintenance Area Monitoring Site 2023 Design Values

Monitoring Site Name	AQS Monitoring Site ID	4th Highest 8-Hour Ozone Value (ppm)			2023 Design Value (ppm)
		2021	2022	2023	
Marion	05-035-0005	0.072	0.071	0.074	0.072
Hernando	28-033-0002	0.065	0.075	0.071	0.070
Frayser	47-157-0021	0.067	0.069	0.070	0.068
Shelby Farms	47-157-0075	0.071	0.074	0.075	0.072
Orgill	47-157-1004	0.063	0.069	0.069	0.067

Section III. Voluntary, and Permanent and Enforceable Emissions Reductions

There are federal and state measures resulting in permanent and enforceable emissions reductions, which are described below.

A. Federal Permanent and Enforceable Measures for On-Road Mobile Sources

The EPA finalized the Tier 2 Motor Vehicle Emissions Standards and Gasoline Sulfur Control requirements in February 2000 (65 FR 6698, February 10, 2000). The Tier 2 standard covers passenger vehicles with a gross vehicle weight rating of more than 8,500 pounds (such as larger pickups and sport utility vehicles), which were not covered by the Tier 1 regulations.

The Tier 2 standard was phased in between 2004 and 2009. The tailpipe emissions standards of Tier 2 require manufacturers to achieve an average NOx tailpipe standard of 0.07 grams per mile (gpm), a 75% reduction from the 0.30 gpm previous standard. In addition, under the gasoline sulfur standard, most refiners will have to produce gasoline that averages no more than 30 ppm of sulfur. Sulfur can interfere with operations of catalytic converters in vehicles and thus cause higher NOx emissions. Benefits from the reduction of highway diesel fuel sulfur content will assure continued maintenance of the air quality standard and are expected to further reduce NOx emissions by 2030.

Future year VOC and NOx reductions will also be realized from EPA's Tier 3 Motor Vehicle Emissions and Fuel Standards, finalized in April 2014 (79 FR 23414, April 28, 2014). Under the Tier 3 standard, the tailpipe standard establishes a fleet average non-methane organic gas and nitrogen oxides (NMOG+NOx) limit. This standard was phased in starting in 2017 and continues through 2026 with the final NMOG+NOx limit set at 30 mg/ml. The gasoline sulfur standard of Tier 3 also required federal gasoline to meet an annual average standard of 10 ppm of sulfur by 2017. The Tier 3 tailpipe standards for light-duty vehicles will reduce the fleet average standards for the sum of non-methane organic gases (NMOG) and NOx, NMOG+NOx, by approximately 80%. The Tier 3 program for heavy-duty vehicles was estimated to reduce the fleet average standards for NMOG+NOx and PM by approximately 60%. Benefits from the Tier 3 standards will assure continued maintenance of the air quality standard.

In September 2011, the EPA and the National Highway Traffic Safety Administration (NHTSA) promulgated joint rules to reduce GHG emissions and improve fuel efficiency of combination tractors (semi-trucks), heavy-duty pickup trucks and vans, and vocational vehicles beginning with model year 2014 and applying to all model years by 2018 (76 FR 57106 September 15, 2011). The standards for combination tractors will reduce carbon dioxide (CO_2) emissions and fuel consumption by 9%-23% over the 2010 baselines. The standards for heavy-duty pickup trucks and vans will reduce CO_2 emissions by 17% for diesel vehicles and 12% for gasoline vehicles, on average per vehicle over the 2010 baselines, and will reduce fuel consumption by 15% for diesel vehicles and 10% for gasoline vehicles, on average per vehicle compared to a common baseline. The standards for vocational vehicles will reduce CO_2 emissions and fuel consumption by 6%-9% over the 2010 baselines. The decreased fuel consumption due to the Heavy-Duty National Program will result in decreased NOx emissions from vehicles as the fleet turns over.

B. Federal Permanent and Enforceable Measures for Nonroad Mobile Sources

EPA adopted the Clean Air Nonroad Diesel Rule that targets NOx and particulate matter (PM) emissions from non-road diesel engines in June 2004 (69 FR 38958, June 29, 2004). The rule sets Tier 4 emission standards for NOx based on the horsepower (hp) ratings of non-road engines. The NOx emission standard set by the Tier 4 is as follow: for engines less than 25 hp, the final emission standard would be set at the previously-set 5.6 grams per brake-horsepower-hour (g/bhp-hr); for engines of25 to 75 hp, the standard is set at 3.5 g/bhp-hr; for engines of 75 to 750 hp, the standard is set at 0.30 g/bhp-hr; and for engines of above 750 hp, the standard is set at 0.50 g/bhp-hr for generator set above 1200 hp and 2.6 g/bhp-hr for all other engines above 750 hp. The Tier 4 standards were phased in between 2008 and 2014, with larger mobile engines having an additional year of flexibility to meet the standard.

In addition to the Tier 4 standards, nonroad diesel fuel was affected by the rule. Nonroad diesel fuel was capped at 500 ppm sulfur in 2007. Sulfur was capped to the final 15 ppm level in 2010 for land-based nonroad diesel engine fuel; this final cap level was also applied to marine vessels and locomotives in 2012. The ultra-low sulfur fuel requirement makes it possible for manufacturers to use advanced engine-control systems that will reduce PM and NOx emissions as well. When the Tier 4 and nonroad diesel fuel standards are fully implemented, diesel NOx emissions are expected to be reduced by 90%. This reduction in nonroad emissions is important for the eight-hour ozone standard for Crittenden County, and in other parts of the country.

The nonroad spark-ignition engines and recreational engines standard (67 FR 68242 November 8, 2002), effective in July 2003, regulates NOx, hydrocarbons (HC), and carbon monoxide (CO). The large spark-ignition engines contribute to ozone formation. The standard applies to all new engines imported into or sold within the United States. It applies to large spark-ignition engines (e.g., forklifts and airport ground service equipment), recreational vehicles (e.g., off-highway motorcycles and all-terrain-vehicles), and recreational marine engines. When the emission standards are fully implemented in 2030, we expect a 75% reduction in HC emissions, 82% reduction in NOX emissions, and 61% reduction in CO emissions, and a 60% reduction in direct PM emissions from these engines, equipment, and vehicles. These controls help reduce ambient concentrations of ozone, CO, and fine particulate matter (PM).

The EPA and the NHTSA jointly developed the federal GHG and fuel economy standards for light-duty cars and trucks in model years 2012- 2016 (phase 1) and 2017-2025 (phase 2). The EPA also aligned implementation of the Tier 3 program with the second phase of the EPA and NHTSA federal GHG and fuel economy standards program, beginning in model year 2017. The final GHG and fuel economy standards were estimated to give an average industry fleet-wide level of 163 grams of CO_2 per mile in model year 2025, equivalent to 54.5 miles per gallon if achieved exclusively through fuel economy improvements. This program reduces the precursors of ambient ozone by improving fuel economy thus reducing the emissions emitted.

The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule (85 FR 24174 April 30, 2020) was issued by the EPA as an update to Phase 2 of the federal GHG and fuel economy standards for both passenger cars and light trucks. The new standard sets fuel economy and carbon dioxide standards (CO_2) that increase 1.5% in stringency each year from model years 2021 through 2026. On December 30, 2021 (86 FR 74434 December 30, 2021), the EPA revised the GHG emissions standards for light-duty vehicles to be more stringent than the SAFE rule standards for each model year from 2023 through 2026.

C. Federal Permanent and Enforceable Measures for Point Sources

The Mercury and Air Toxic Standards (MATS) regulates the emissions of mercury, acid gases, and mercury metallic toxic pollutants from new and existing coal and oil-fired electricity generating units (EGUs) (77 FR 9304, February 16, 2012). The MATS standard was fully implemented in 2016 and although not targeted at NOx emissions, the MATS rule is expected to result in additional NOx reductions nationwide from coal-fired EGUs.

The National Emission Standards for Hazardous Air Pollutants (NESHAP) for industrial, commercial, and institutional boilers (40 CFR Part 63 Subpart DDDDD) reduces VOC emissions. The compliance deadline for existing boilers was January 31, 2016. This NESHAP applies to boilers and process heaters located at major sources of hazardous air pollutants (HAPs) that burn natural gas, fuel oil, coal, biomass, refinery gas, or other gas by including work practice standards, such as boiler tune-ups and a one-time energy assessment, emission limitations for filterable PM, hydrochloric acid (HCl), mercury, and CO.

Three EPA engine-related rules also contribute to lower ozone concentrations. The NESHAP for reciprocating internal combustion engines (40 CFR Part 63 Subpart ZZZZ) limit VOC emissions. The Stationary Compression Ignition Internal Combustion Engines New Source Performance Standards (NSPS) (40 CFR Part 60 Subpart IIII) limit emissions of NOx, PM, SO_2, CO, and hydrocarbons from stationary diesel internal combustion engines. The NSPS Spark Ignition Internal Combustion Engines rule (40 CFR Part 60 Subpart JJJJ) established emission requirements depending on the engine maximum power, fuel, application, and other factors that control emissions of NOx, CO, and VOCs.

On March 15, 2021, the EPA finalized the Revised Cross-State Air Pollution Rule that became effective on June 29, 2021 and requires emissions reductions of nitrogen oxides (NOx) from electrical generating units.

D. State Permanent and Enforceable Measures

The New Source Review (NSR) program is a preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants. In areas not meeting health-based NAAQS, the program is referred to as the Prevention of Significant Deterioration (PSD) program. Arkansas Pollution Control and Ecology Commission (APC&EC) Rule No. 31 - Nonattainment New Source Review Requirements, Effective Date: May 28, 2006, was approved by EPA on April 12, 2007 (72 FR 18394), and effective May 14, 2007, codified in the Code of Arkansas Rules (CAR) at Title 8, Chapter I, Subchapter D, Part 43.

APC&EC Rule No. 18, Chapter 6 – Emissions from Open Burning includes a ban of certain open burning for additional control of NOx emissions and other pollutants, Effective Date: December 25, 2021, and codified in the CAR Title 8, Chapter I, Subchapter D, Part 40, Subpart 5 (8 CAR § 40-501, et. seq.).

Consent Orders executed between E&E and operators of two coal-fired electric generating stations to satisfy requirements under Regional Haze planning period II will provide additional reductions of ozone precursor pollutants in coming years. In December 2028, Entergy's White Bluff electric facility will cease firing with coal at two 850-MW boilers.[1] in December 2030, Entergy's Independence plant will cease firing with coal at two 900-MW boilers.[2]

[1] Administrative Order LIS No. 18-073
[2] Administrative Order LIS No. 22-084

E. Voluntary Activities

These non-regulatory activities indicate a commitment to achieving reductions utilizing more than just required controls.

a. EPA's Advance Program, Memphis Area Advance Workgroup

For Crittenden County, E&E participates in EPA's voluntary Advance Program. The program is a collaborative initiative between EPA, state and local governments, tribes, and other organizations to address ozone and particulate matter in attainment areas. The stated program goals are to improve public health by reducing ozone and particulate matter emissions and their respective precursor pollutants and to ensure that areas currently attaining the ozone and $PM_{2.5}$ NAAQS remain in attainment. Specifically, participating Advance Program partners take actions to reduce pollutant emissions, engage with community stakeholders to identify measures that make the most sense for a specific area, and collaborate with other participants to share successful initiatives. In addition, often pollutant-specific activities achieve multi-pollutant benefits. E&E also participates in a local Ozone Advance workgroup with the Mississippi Department of Environmental Quality (MDEQ) and the Shelby County Health Department (SCHD) to share information and resources and to more directly address needs of the shared Maintenance Area, including hosting public meetings.

b. Outreach and Education

Beginning with the 2025 ozone season, E&E will be exploring a focused public awareness campaign to educate citizens about ozone formation and to share simple ways to reduce precursor pollutants, especially when those emissions are most likely to cause upticks in ozone formation. Infographic flyers specific to activity type (for schools, businesses, agriculture, neighborhoods, etc.) and E&E will regularly share the information through social media posts/listserv announcements from March – October.

In collaboration with Arkansas Department of Agriculture (Forestry and Natural Resources Division), E&E publicizes Arkansas' voluntary smoke management guidelines, which help reduce air quality impacts of agricultural and prescribed burning by employing best practices. The agencies also developed and maintain a mobile app that allows for real-time checking of burning conditions that is supported by principles found within the state's smoke management guidelines.

c. Grants-based Activities

E&E's Energy Office is assisting communities across the state to tackle energy-saving measures. Funding made available by the United States Department of Energy through the Energy Efficiency and Conservation Block Grant (EECBG) program will be used to fund energy efficiency retrofits, energy efficiency audits, sustainable transportation, and workforce development projects. 60% of funding awarded through this program will go to communities not awarded a direct allocation under DOE's EECBG program. Projects funded under this grant support reduction of precursor pollutants from electricity generation.

Arkansas-based projects funded under the $100M Climate Pollution Reduction Implementation Grant received by regional planning organizations in Arkansas will have significant impacts on precursor emissions in the coming years. Many of the initiatives are focused on increasing alternative transportation (walking, biking, etc.), increasing green spaces in cities around the state, installing and maintaining electric vehicle charging stations,

traffic flow enhancement (using smart traffic light technology), and rebates for electric bikes. Also slated for funding are projects that will reduce emissions through building efficiency measures and natural lands restoration.

Through funding made available under the federal Diesel Emissions Reduction Act, Arkansas' GoRED! diesel emissions reduction program replaces aging diesel engines across the state. Projects are awarded on a competitive basis, and preference is given to projects that are in areas with specific air quality issues, such as Crittenden County.

Section IV. Maintenance Plan

A. Concept of Arkansas' Second Crittenden County Ten Year Maintenance Plan

The following sections demonstrate maintenance of the 2008 eight-hour ozone NAAQS throughout the maintenance period in Arkansas' portion of the maintenance area. Effective May 25, 2016 (81 FR 24030) and based on 2012-2014 monitoring data, the EPA redesignated Crittenden County, AR portion of the Maintenance Area to attainment for the 2008 8-hour ozone NAAQS. As part of the redesignation action, E&E adopted, and the EPA approved, a first 10-year maintenance plan for the Maintenance Area which demonstrated continued attainment of the 2008 8-hour ozone NAAQS. E&E's first maintenance plan included the time frame of May 1, 2015, through January 31, 2027, a period of twelve years and nine months. As described below, §7505a[3] specifies that states must continue to provide for maintenance of the standard for an additional ten years after the expiration of the initial 10-year period, for a total of 20 years.

> *42 U.S.C. §7505a. Maintenance plans*
>
> *(b) Subsequent plan revisions*
> *8 years after redesignation of any area as an attainment area under section 7407(d) of this title, the State shall submit to the Administrator an additional revision of the applicable State implementation plan for maintaining the national primary ambient air quality standard for 10 years after the expiration of the 10-year period referred to in subsection (a) of this section.*

E&E developed this ozone maintenance plan update to demonstrate on-going maintenance for Crittenden County, Arkansas for the second 10-year period, through at least 2036. The approach used by E&E to demonstrate continued maintenance is a comparison of a projected end of the maintenance period 2036 future year emissions inventory with a 2016 base year emissions inventory. Four emissions inventory sectors are included in the comparison: Point Source, Area Source, Nonroad Mobile Source, and Onroad Mobile Source. For comparison of the Point Source, Area Source, and Nonroad Mobile Source sectors components of the emissions inventory (see Section IV., E. below for the Onroad Mobile Sector 2016 base year to 2036 future year comparison methodology), E&E has identified a base year (2016), two interim years (2026 and 2032), and a final year (2036). The 2016 base year emissions inventory represents an emission level for a period when the 2008 eight-hour ozone NAAQS was not violated in the maintenance area. If the projected future year emissions remain at or below the 2016 base year emissions, continued maintenance is

[3] United States Code; Title 42 – The Public Health And Welfare; Chapter 85 - Air Pollution Prevention And Control; Subchapter I – Programs And Activities; Part D - Plan Requirements for Nonattainment Areas; subpart 1 - nonattainment areas in general; Sec. 7505a - Maintenance plans

demonstrated, and the 2008 eight-hour ozone NAAQS should not be violated in the future. In addition to comparing with the 2036 final year of the maintenance plan, the interim years are also compared to the 2016 base year to demonstrate that these years are also expected to show continued maintenance throughout the remaining maintenance period.

Also, the Arkansas contingency plan involves tracking and triggering mechanisms to determine when contingency measures are needed and a process of implementing the appropriate contingency measures. A quality assured/quality controlled (QA/QC) design value that exceeds the 2008 8-hour ozone NAAQS at any monitor within the Maintenance Area will trigger evaluation of the contingency plan. In conjunction with this Arkansas maintenance plan update, the MDEQ and the SCHD have developed their own separate maintenance plan updates for the MS and TN portions of the Maintenance Area, respectively.

B. Emission Inventories Data for Point Source, Nonpoint Area Source, and Nonroad Mobile Source Sectors

EPA's Air Emissions Reporting Requirements Rule[4] (AERR) requires state and local agencies to collect and submit emissions data to EPA on a set schedule. The EPA maintains the Emissions Inventory System (EIS) database as a central repository of emissions inventory data for all states and tribes. Then EPA blends EIS data with other data sources to create a comprehensive and detailed final dataset that is used by EPA, states, tribes, industry and others for air quality modeling, tracking progress in meeting Clean Air Act requirements, and to support state implementation plans (SIPs), among other uses.

EIS along with the blended other data are compiled into broader categories of man-made emission including Point Sources, Nonpoint Area Sources, Nonroad Mobile Sources, and Onroad Mobile Sources. EIS, other EPA emissions-related databases, and the EPA's 2016 version 2 (2016v2) emissions modeling platform (EMP) use the finer scale Source Classification Codes (SCCs) to classify the various types of activities that generate emissions with each SCC representing a unique source category-specific process or function.

Point sources are larger industrial or commercial stationary facilities that must have Title V permits issued by E&E and have the potential to emit more than 100 tons of NOx or VOCs. In EPA's 2016v2 EMP, point source emissions are quantified on an annual basis; thus, annual NOx and VOC emissions were divided by 365 days to obtain a daily emissions rate for NOx and VOCs within each SCC.

Nonpoint area sources are those stationary sources whose emissions are relatively small but due to the large number of these sources, the collective emissions can be important. Some examples of nonpoint area emission sources include residential heating, commercial combustion, asphalt paving, as well as commercial and consumer solvent use. In EPA's 2016v2 EMP, nonpoint area source emissions are quantified on an annual basis; thus, annual NOx and VOC emissions were divided by 365 days to obtain a daily emissions rate for each SCC and for NOx and VOCs separately within each SCC.

Nonroad mobile sources are equipment that use gasoline, diesel, and other fuels and are mobile but do not use roadways. Nonroad mobile source examples include construction equipment, lawn and garden equipment, aircraft ground support equipment, locomotives, and commercial marine

[4] https://www.epa.gov/air-emissions-inventories/air-emissions-reporting-requirements-aerr#rule-summary

vessels. In EPA's 2016v2 EMP, nonroad mobile source emissions are aggregated at the county level and quantified by month; thus, because summer meteorological conditions are most conducive for ozone formation, a June through August summation was divided by 92 days to obtain a daily emissions rate for each SCC and for NOx and VOC separately.

Onroad mobile sources include emissions from vehicles that travel on roads and use gasoline, diesel, and other fuels. Onroad mobile source emissions are aggregated at the county level. Onroad mobile emissions include exhaust emissions and other vehicle activities and associated emissions, such as refueling emissions and idling emissions, among others. Onroad mobile source emissions are quantified on a daily basis and for NOx and VOC separately.

C. EPA Development of Future Year Emissions for Point Source, Nonpoint Area Source, and Nonroad Mobile Source Sectors

In development of 2016v2 EMP, EPA used a 2016 base year and projected emission inventories for the future years of 2023, 2026 and 2032. The future year projections were developed using projection methods that are specific to the industry or activity type. Some projections were developed by running models to estimate future year emissions (e.g., EGUs, and onroad and nonroad mobile sources), or for other types of sources by adjusting the base year emissions according to the best estimate of changes expected to occur in the intervening years (e.g., non-EGU point and nonpoint area sources). When applicable, rules and specific legal obligations that go into effect in the intervening years, along with changes in activity, are considered. For more details on EPA's 2016v2 EMP future year projections, see EPA's Technical Support Document for the Preparation of Emissions Inventories for the 2016v2 North American Emissions Modeling Platform[5].

D. E&E's 2032 to 2036 Growth Rate Projection Methodology for Point Source, Nonpoint Area Source, and Nonroad Mobile Source Sectors

EPA projects future emissions inventories using future required emissions limits or similar, projected rates of growth in population, traffic trends, economic activities, and other parameters. The EPA's 2016v2 EMP data is stratified by Source Classification Codes (SCC) and by pollutant. Except for onroad mobile sources, it was used as the primary dataset in the following demonstrated maintenance of the 2008 8-hour ozone NAAQS in the Crittenden County portion of the ozone maintenance area. EPA's 2016v2 EMP was the basis for the historic to future emissions comparisons and included 2016 base year emissions, 2023 future year emissions (7-year growth), 2026 future year emissions (10-year growth), and 2032 future year emissions (16-year growth). Although both E&E's emission inventory data and the EPA's 2016v2 EMP emission inventory data include a large number of pollutants, only NOx and VOCs are reported within this maintenance plan update since they are important for ozone formation. Additional detailed anthropogenic emission inventory data for Crittenden County is provided in Appendix A. Using the 2016v2 EMP data, E&E further projected future emissions by 4 years from 2032 to 2036 using the methodologies described below. This methodology was applied to 60%; (112 out of 187) of the 2032 to 2036 projections. The remaining seventy-five (75) had flat 2016 to 2032 projections or had zero (0) emissions for a pollutant, both instances not requiring a 2032 to 2036

[5] https://www.epa.gov/system/files/documents/2022-02/2016v2_emismod_tsd_february2022.pdf

mathematically calculated projection. The below methodology had the following underlying assumptions:

1. Growth rate is a linear measure and can be arithmetically scaled.
2. Growth rate for 2016-2032 (EPA's 2016v2 EMP future projections) can be scaled for the period 2032-2036, and that the projections line from EPA's sixteen-year projections will have the same slope when extrapolated an additional four years to 2036.

As example, using EPA's 2016v2 EMP Diesel Line Haul Locomotives (SCC: 2285002006) 2016, 2023, 2026, and 2032 NOx data to project to 2036:

Annual Ozone Season NO_x (Tons)	
2016	455.609447
2023	376.287458
2026	352.603714
2032	331.447491

Step 1:

The slope of a line is a measure of steepness. Mathematically, slope is calculated as "rise over run", or change in Y over the change in X. When two or more X and Y pair coordinate points are known, then slope can be determined by finding the ratio of change in y to the change in X. For example, if a slope ratio is 2/1 and Y then increases by 2 units, X will then correspondingly increase by 1 unit. The slope equation is based on the mean of known Xs and Ys:

$$\text{Slope (m)} = \frac{\text{SUM}((X_1:X_N\text{-AVERAGE}(X_1:X_N))*(Y_1:Y_N\text{-AVERAGE}(Y_1:Y_N)))}{\text{SUM}((X_1:X_N\text{-AVERAGE}(X_1:X_N))\text{^}2)}$$

Using the EPA's 2016v2 EMP Diesel Line Haul Locomotives NO_x 2016, 2023, 2026, and 2032 data from above, the slope calculation is:

$$\text{Slope (m)} = \frac{\begin{array}{l}(2016 - 2024.25) * (455.609447 - 378.987027) + \\ (2023 - 2024.25) * (376.287458 - 378.987027) + \\ (2026 - 2024.25) * (352.603714 - 378.987027) + \\ (2032 - 2024.25) * (331.447491 - 378.987027)\end{array}}{(2016 - 2024.25)^2 + (2023 - 2024.25)^2 + (2026 - 2024.25)^2 + (2032 - 2024.25)^2}$$

$$\text{Slope (m)} = \frac{-1043.362705}{132.75} = -7.859606$$

This equation gives a slope (m) of -7.859606.

Step 2:

Once slope is calculated, a Y-intercept can be determined. The Y-intercept is the point where the line intersects the Y-axis, when the X value is 0.

The Y-intercept equation is:

Y-intercept (b) = AVERAGE(Y_1:Y_N)) - m*AVERAGE(X_1:X_N)

Using the EPA's 2016v2 EMP Diesel Line Haul Locomotives NO_x 2016, 2023, 2026, and 2032 data from above and the Slope (m) calculated in Step 1, the Y-intercept calculation is:

Y-intercept (b) = 378.987027 – (-7.859606) * 2024.25

Y-intercept (b) = 16288.794472

This equation gives the Y-intercept (b) at 16288.794472.

Step 3:

With both the slope and Y-intercept determined, the steepness of the line and thus the value for 2036 can be found by using the standard slope formula where m is the slope calculated in Step 1, the years are the X values and the NO_x Tons are the Y values, and the y-intercept is b.

The standard slope formula is:

Y = mX + b

Inserting m from Step 1, b from Step 2, and X which is 2036, and the Y will provide the corresponding Y coordinate (Diesel Line Haul Locomotives NO_x Tons) as the 2036 value.

Y = -7.859606 * 2036 + 16288.794472 = 286.636655

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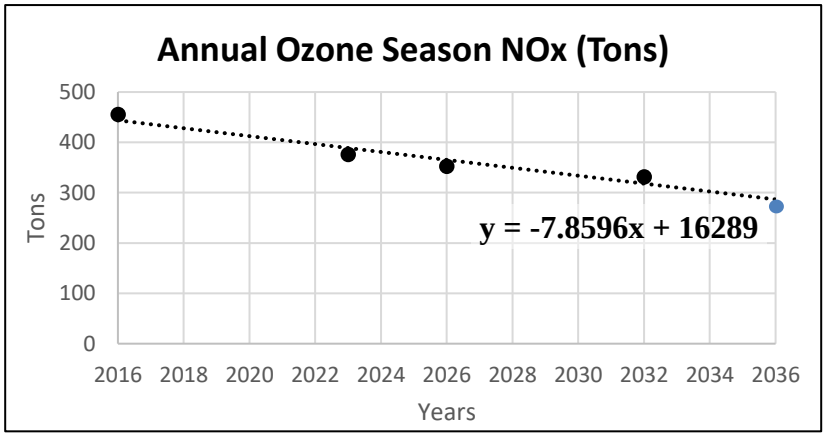
For the year 2036 X coordinate value, the corresponding Diesel Line Haul Locomotives NO_x Tons Y value coordinate value is 286.636655 (Tons). Thus, EPA's 2016v2 EMP projections and the calculated 2036 value taken together result in the data in the following table and graph:

Annual Ozone Season NOx (Tons)	
2016	455.609447
2023	376.287458
2026	352.603714
2032	331.447491
2036	286.636655



E. Onroad Mobile Sector 2016 base year to 2036 future year Comparison Methodology

a. EPA Motor Vehicle Emissions Simulator (MOVES)

The EPA's mobile source emissions model MOVES4.0.1 was used to generate 2016 base year and 2032 future year emissions for onroad mobile sources for the Crittenden County portion of the Maintenance Area. MOVES4.0.0 was released by EPA in August 2023, replacing the previous MOVES3 version of the model, and then updated to MOVES4.0.1 in January 2024. All emissions are calculated on a ton per summer day basis and onroad mobile source types were identified using MOVES4.0.1.

b. Interagency Consultation Component

As required by the federal transportation conformity rules (40 CFR §93.105), the conformity process includes a significant level of cooperative interaction among federal, state, and local agencies. For the Onroad Mobile Sector 2016 base year to 2036 future year component of the emissions inventory comparison, interagency consultation was conducted per an interagency Memorandum of Agreement (Appendix B). These interagency interactions included conference call meetings that included Arkansas Department of Transportation (ARDOT), Arkansas Department of Energy and Environment (E&E), the West Memphis Metropolitan Planning Organization (WMATS), U.S. Environmental Protection Agency (EPA), and Federal Highway Administration (FHWA). Conference calls were conducted to evaluate planning assumptions, methodologies, model input data, and analysis years, as prescribed in EPA guidance documents, the MOVES4 technical guidance document, guidance built into MOVES4, as well as available MOVES tools and calculators.

c. MOVES Data Inputs

A combination of local and national default (internal to MOVES) data was used in the Onroad Mobile Sector analysis. Local data was used for data items that have a significant impact on emissions, including vehicle miles of travel (VMT), vehicle population, speeds, and vehicle type mix, as well as environmental and fuel assumptions. Local data inputs to the analysis process reflect the latest available planning assumptions using information obtained from ARDOT, E&E and other local/national sources. See Appendix C for additional information regarding data inputs for the MOVES analysis.

F. Continued Maintenance Demonstration

Section IV., F. below includes emissions from all the emission source sectors (i.e., point, nonpoint area, nonroad mobile, and onroad mobile) for the Crittenden County portion of the Maintenance Area. All emissions are reported in tons of emissions per ozone season day (OSD) and zeros occur where an activity does not emit a particular pollutant. The sum of emissions for the Crittenden County portion of the Maintenance Area are tabulated in Table 19 and the Maintenance Demonstration is presented in Table 20.

a. Point Source Emissions Inventory

The point source inventory consists of emissions from airports/helipads, railyards, and larger industrial facilities.

i. These SCCs are mobile sources and activities at a specific Point Source airport location related to aircraft operation ground equipment emissions.

Table 4 − Point Source Airport Emissions (tons per day)

Pollutant	2016	2023	2026	2032	2036
Ozone Season Day (OSD) NOx Emissions	0.0085322	0.0084479	0.0084461	0.0084031	0.0083816
Ozone Season Day (OSD) VOC Emissions	0.0133344	0.0132262	0.0132239	0.0131686	0.013141

ii. These SCCs are for internal combustion engines using a variety of fuels to power engines at point sources, specifically for a Crittenden County railyard point source.

Table 5 − Point Source internal combustion engine Emissions (tons per day)

Pollutant	2016	2023	2026	2032	2036
Ozone Season Day NOx Emissions	0.1395013	0.1390892	0.1395013	0.1382458	0.1382688
Ozone Season Day VOC Emissions	0.0091362	0.0091092	0.0091362	0.0090539	0.0090554

iii. This set of SCCs applies to Point Source emissions, in the case of Crittenden County from chemical evaporation related to the preparation and application of paints and coatings, and storage of chemicals.

Table 6 − Other Point Source Emissions (tons per day)

Pollutant	2016	2023	2026	2032	2036
Ozone Season Day (OSD) NOx Emissions	0.008137	0.008137	0.008137	0.008137	0.008137
Ozone Season Day (OSD) VOC Emissions	0.3196142	0.2948181	0.2759127	0.2633091	0.2457641

b. Nonpoint area Source Emissions Inventory

i. This set of SCCs is for nonpoint area sources involved in nonroad mobile source operations.

Table 7 − Nonpoint area Source Rail Emissions (tons per day)

Pollutant	2016	2023	2026	2032	2036
Ozone Season Day (OSD) NOx Emissions	1.2482451	1.0309245	0.9660376	0.9080753	0.7853059
Ozone Season Day (OSD) VOC Emissions	0.058334	0.0444349	0.0400804	0.0323048	0.0246437

ii. This set of codes is for nonpoint area sources not included in the other categories and includes non-fire related agriculture and livestock production.

Table 8 − Nonpoint area Source Agriculture and Livestock Production Emissions (tons per day)

Pollutant	2016	2023	2026	2032	2036
Ozone Season Day (OSD) NOx Emissions	0	0	0	0	0
Ozone Season Day (OSD) VOC Emissions	0.0060981	0.0066852	0.006671	0.006804	0.0070725

iii. These SCCs are for reporting emissions from nonpoint source activities related to the use of solvents, including non-industrial uses.

Table 9 − Nonpoint area Source Solvent Utilization Emissions (tons per day)

Pollutant	2016	2023	2026	2032	2036
Ozone Season Day (OSD) NOx Emissions	0	0	0	0	0
Ozone Season Day (OSD) VOC Emissions	0.1903199	0.1903199	0.1903199	0.1903199	0.1903199

iv. These are combustion emissions from non-point sources, including industrial, commercial, and institutional sources that individually are too small in magnitude to report as a point source.

Table 10 − Nonpoint area Source Stationary Industrial and Commercial Wood Combustion Emissions (tons per day)

Pollutant	2016	2023	2026	2032	2036
Ozone Season Day (OSD) NOx Emissions	0.1243638	0.1263095	0.1283291	0.1306405	0.1321153
Ozone Season Day (OSD) VOC Emissions	0.0096099	0.0097603	0.0099163	0.0097827	0.0099167

v. This set of SCCs is for processes involved in handling waste for the purpose of its disposal, treatment or recovery, including composting and different from using waste as a fuel in a combustion process.

Table 11 − Nonpoint area Source Waste Disposal, Treatment, and Recovery (tons per day)

Pollutant	2016	2023	2026	2032	2036
Ozone Season Day (OSD) NOx Emissions	0	0	0	0	0
Ozone Season Day (OSD) VOC Emissions	0.0828715	0.0828715	0.0828715	0.0828715	0.0828715

vi. These SCCs are for reporting emissions resulting from storage and transport of petroleum materials, chemicals, and other bulk storage materials from non-point sources.

Table 12 − Nonpoint area Source Material Storage and Transport (tons per day)

Pollutant	2016	2023	2026	2032	2036
Ozone Season Day (OSD) NOx Emissions	0	0	0	0	0
Ozone Season Day (OSD) VOC Emissions	0.3032993	0.2795423	0.2634233	0.2526772	0.2364621

vii. These are combustion emissions from non-point industrial, commercial, and institutional sources that individually are too small in magnitude to report as a point source.

Table 13 − Nonpoint area Source Stationary Boiler and Internal Combustion Engine Fuel Combustion (tons per day)

Pollutant	2016	2023	2026	2032	2036
Ozone Season Day (OSD) NOx Emissions	0.1733556	0.1758959	0.1766481	0.1747343	0.1763332
Ozone Season Day (OSD) VOC Emissions	0.2760974	0.2505604	0.230878	0.2176932	0.1956399

viii. These SCCs are for reporting emissions resulting from storage and transport from nonpoint area sources not included in the other categories and for other miscellaneous nonpoint area source activities.

Table 14 − Nonpoint area Source Storage, Transport, and Miscellaneous Activities (tons per day)

Pollutant	2016	2023	2026	2032	2036
Ozone Season Day (OSD) NOx Emissions	0.012916	0.0129168	0.0129175	0.0129184	0.012919
Ozone Season Day (OSD) VOC Emissions	0.0571085	0.0571465	0.0571812	0.0572245	0.0572518

ix. These are wood combustion emissions from non-point residential sources that individually are too small in magnitude to report as a point source.

Table 15 − Nonpoint area Source Residential Wood Fuel Combustion (tons per day)

Pollutant	2016	2023	2026	2032	2036
Ozone Season Day (OSD) NOx Emissions	0.013643	0.0138469	0.013935	0.0141111	0.0142278
Ozone Season Day (OSD) VOC Emissions	3.738E-05	3.794E-05	3.818E-05	3.866E-05	3.898E-05

x. These SCCs are for emissions from non-point source activities related to the use of solvents.

Table 16 − Nonpoint area Source Solvent Utilization (tons per day)

Pollutant	2016	2023	2026	2032	2036
Ozone Season Day (OSD) NOx Emissions	0	0	0	0	0
Ozone Season Day (OSD) VOC Emissions	1.6218917	1.6229486	1.6239176	1.6251259	1.6258864

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c. Nonroad Mobile Source Emissions Inventory

This set of SCCs is for emissions from activities related to transportation equipment that is not typically used on roads and highways for transportation purposes. For example, processes related to forklifts, pavers, cranes, tractors, pumps, oil field equipment, etc.

For the future year estimations of the Nonroad Mobile Source category, EPA does not use the same methodology to estimate future year emissions as they do in the other categories. For the Nonroad Mobile Source category, EPA used the EPA's Motor Vehicle Emissions Simulator (MOVES) to estimate future year emissions by month.

Table 17 − Nonroad Mobile Source Emissions (tons per day)

Pollutant	2016	2023	2026	2032	2036
Ozone Season Day (OSD) NOx Emissions	2.2617370	1.2700409	1.0445889	0.6248288	0.4680138
Ozone Season Day (OSD) VOC Emissions	1.5208467	1.0728196	1.0091750	0.9559005	0.7768529

d. Onroad Mobile Source Emissions Inventory

Onroad mobile sources consist of passenger cars, passenger trucks, motorcycles, buses, heavy-duty trucks, and other motor vehicles traveling on public roadways.

Table 18 provides the onroad mobile NOx and VOC emissions for average summer day, tons per day values for the 2016 base year, 2023 and 2027 interim years, and the 2036 final year. The base year, interim years, and final year emissions were calculated using MOVES4.0.1

Table 18 − Onroad Mobile Source NOx and VOC Emissions for 2016, 2023, 2027, and 2036 (tons per average summer day)

Pollutant	2016	2023	2027	2036
Ozone Season Day (OSD) NOx Emissions	7.631	3.935	2.827	1.275
Ozone Season Day (OSD) VOC Emissions	1.408	0.945	0.670	0.424

e. Crittenden County Emissions for Point Source, Nonpoint Area Source, Nonroad Mobile Source from EPA's 2016v2 Emissions Modeling Platform

Table 19 provides summed emissions for Point Source (Sections F., a., i-iii above), Nonpoint Area Source (Sections F., b., i-x above), and Nonroad Mobile Source (Sections F., c. above).

Table 19 − Summed Crittenden County Point Source, Nonpoint Area Source, and Nonroad Mobile Source NOx and VOC Emissions for 2016, 2023, 2026, 2032, and 2036 (tons per day)

Sector & Pollutant	2016	2023	2026	2032	2036
Point Source (OSD) NOx Emissions	0.156	0.156	0.156	0.155	0.155
Nonpoint Area Source (OSD) NOx Emissions	1.573	1.360	1.298	1.240	1.121
Nonroad Mobile Source (OSD) NOx Emissions	2.262	1.270	1.045	0.625	0.468
Total OSD NOx Emissions	**3.991**	**2.786**	**2.499**	**2.020**	**1.744**
Point Source (OSD) VOC Emissions	0.342	0.317	0.298	0.286	0.268
Nonpoint Area Source (OSD) VOC Emissions	2.606	2.544	2.505	2.475	2.430
Nonroad Mobile Source (OSD) VOC Emissions	1.521	1.073	1.009	0.956	0.777
Total OSD VOC Emissions	**4.469**	**3.934**	**3.812**	**3.7167**	**3.475**

f. Maintenance Demonstration

Maintenance is demonstrated when future year total man-made pollutant-specific emissions (i.e., NOx and VOC Emissions in this Maintenance Plan Update) are less than the 2016 base year emissions. The following table provides total (Table 18 Onroad Mobile Source emissions totals plus Table 19 Point Source, Nonpoint Area Source, and Nonroad Mobile Source emissions totals) NOx and VOC emissions for the Crittenden County portion of the Maintenance Area. The difference between the base year (2016) and the final year (2036) illustrates that the continued maintenance of the 2008 8-hour ozone NAAQS for Crittenden County is expected.

Table 20 − Maintenance Demonstration

Pollutant	2016 Total	2036 Total	2016 to 2036 Difference
Ozone Season Day (OSD) NOx Emissions	11.62	3.02	-8.60
Ozone Season Day (OSD) VOC Emissions	5.88	3.90	-1.98

G. Contingency Plan

a. Overview

The CAA requires that the maintenance plan include provisions for contingency measures that would promptly be implemented by the state to correct any violation of the 8-hour ozone NAAQS[6]. Contingency measures are intended to provide further emission reductions if violations of the 8-

[6] United States Code; Title 42 – The Public Health And Welfare; Chapter 85 - Air Pollution Prevention And Control; Subchapter I – Programs And Activities; Part D - Plan Requirements for Nonattainment Areas; subpart 1 - nonattainment areas in general; Sec. 7505a - Maintenance plans

hour ozone NAAQS occur after redesignation to attainment. Consistent with this plan, E&E agrees to adopt and implement, as expeditiously as practicable, the necessary corrective actions for attainment of the standard.

> *42 U.S.C. §7505a. Maintenance plans*
>
> *d) Contingency provisions*
> *Each plan revision submitted under this section shall contain such contingency provisions as the Administrator deems necessary to assure that the State will promptly correct any violation of the standard which occurs after the redesignation of the area as an attainment area. Such provisions shall include a requirement that the State will implement all measures with respect to the control of the air pollutant concerned which were contained in the State implementation plan for the area before redesignation of the area as an attainment area. The failure of any area redesignated as an attainment area to maintain the national ambient air quality standard concerned shall not result in a requirement that the State revise its State implementation plan unless the Administrator, in the Administrator's discretion, requires the State to submit a revised State implementation plan.*

The two main elements of the Arkansas contingency plan are tracking mechanisms and triggering to determine when contingency measures are needed and a process of developing and adopting appropriate measures.

b. Contingency Plan Trigger

The primary trigger of the contingency plan will be a certified design value that exceeds the 2008 8-hour ozone NAAQS at any ozone monitoring site within the Maintenance Area. If the certified data indicates a violating design value for the 2008 8-hour ozone NAAQS, the trigger date will be the date of the design value violation, not the final certification date. If initial monitoring data indicates a possible design value violation but later certification indicates that a NAAQS violation did not occur, a triggering event will not have occurred, analyses will not be conducted further, and contingency measures will not need to be implemented.

c. Actions Resulting from Trigger Activation

If the primary trigger is activated, E&E will begin analyses to determine the source(s) of NOx and VOC and evaluate for emission control measures or modifications in activities that will be necessary for attaining or maintaining the 2008 8-hour ozone NAAQS. E&E will implement any contingency measure(s) indicated as beneficial through analysis within 24 months of a violation trigger. The following activation activities will be applied as practically as possible:

- Initial notification to the parties[7] of the Memorandum of Agreement (MOA) entitled "Interagency Consultation Procedures for Development of the State Implementation Plan for 8-hour Ozone in Crittenden County, Arkansas and the Determination of Transportation

[7] MOA parties are: U.S. Environmental Protection Agency, Federal Transit Administration, Federal Highway Administration, Arkansas Department of Energy & Environment, Arkansas Department of Transportation, Crittenden County Judge, West Memphis-Marion Area Transportation Study Policy Committee, and City of West Memphis.

Conformity Pursuant to the Clean Air Act as Amended".

- Coordinate efforts, as appropriate, with Shelby County Health Department and the Mississippi Department of Environmental Quality
- Verification through quality assurance and certification of the monitored ozone data exceeding the 2008 8-hour ozone NAAQS, via the ambient air quality monitor(s) in the Maintenance Area;
- Analysis of available data, including meteorology, pollutant transport, and related activities in the area to determine the possible cause of the 2008 8-hour ozone NAAQS exceedance;

d. Contingency measures that may be considered for adoption upon a contingency plan trigger

- Implementation of diesel retrofit programs, including incentives for performing retrofits for fleet vehicle operations;
- Alternative fuel programs for fleet vehicle operations; Gas can and lawnmower replacement programs;
- Open Burning changes during periods of a forecasted elevated ozone-related Air Quality Index;
- Additional voluntary NOx and VOCs emissions reductions from stationary sources;
- Enhance inspections of stationary sources to ensure emissions control equipment is functioning properly;
- Voluntary engine idling reduction programs; and
- Other currently unspecified control measures that might prove to be advantageous and other measures deemed appropriate at the time because of advances in control technologies.

Some programs, such as diesel retrofitting and gas can and lawnmower replacement programs, may be dependent on the availability of federal funding.

e. Tracking for Ongoing Maintenance

In addition to the measures listed above, E&E will evaluate the emissions inventory in Crittenden County at least once every three years. If actual emissions exceed the projected emissions in this maintenance plan by more than 20%, E&E will investigate the differences. Furthermore, E&E will continue operation of an appropriate air quality monitoring network in Crittenden County in accordance with 40 CFR Part 58, Ambient Air Quality Surveillance, and associated appendices.

H. Transportation Conformity Motor Vehicle Emission Budgets

a. Overview

The transportation conformity rule found in 40 CFR Part 93 ensures that transportation-related actions occurring in a nonattainment or maintenance area does not hinder the area from attaining and maintaining a NAAQS and requires specific emission budgets to be defined for the onroad mobile sources portion of the Crittenden County emission inventory.

b. 2023 to 2036 Motor Vehicle Emission Budgets

Section 40 CFR 93.118 states that a maintenance plan must establish motor vehicle emission budgets (MVEBs) for the last year of the maintenance plan, 2036 for this second 10-year updated maintenance plan. These budgets are used to assure that any transportation plans, programs, and projects are consistent with and conform to, the maintenance of acceptable air quality in Crittenden County. Section 40 CFR 93.101 defines a "Safety Margin".

> Per 40 CFR 93.101, *"Safety Margin means the amount by which the total projected emissions from all sources of a given pollutant are less than the total emissions that would satisfy the applicable requirement for reasonable further progress, attainment, or maintenance."*

After consideration, the members of the Crittenden County Air Quality Interagency Consultation Memorandum of Agreement decided to allocate 80% of the available 2036 MVEB safety margin to allow for any unanticipated growth in vehicle miles traveled, changes to vehicle mix assumptions, etc., that could influence the emission estimates. The MOVES4.0.1 established Onroad MVEB, available 2036 onroad NOx and VOC safety margin, and the 2036 Onroad MVEB that includes the applied safety margins are listed in Table 21.

Table 21 − NOx and VOC Onroad Mobile Source Motor Vehicle Emission Budgets for 2036

Motor Vehicle Emissions Budget and Safety Margin (Tons per Day)								
Year	**MOVES4.0.1 established Onroad MVEB**		**Total Available Onroad Safety Margin (pollutant-specific 2023 and 2036 difference)**		**Onroad Safety Margin Applied to 2036 MVEB (80% of Total Available)**		**Total Onroad MVEB (MOVES4.0.1 established Onroad MVEB + 80% of Total Available Onroad Safety Margin)**	
	NOx	**VOC**	**NOx**	**VOC**	**NOx**	**VOC**	**NOx**	**VOC**
2023	3.935	0.945	N/A	N/A	N/A	N/A	N/A	N/A
2036	1.275	0.424	2.660	0.521	2.128	0.417	**3.403**	**0.841**

Section V. Conclusion

The most recent three years (2021-2023) of ozone monitoring data for the Crittenden County portion of the Maintenance Area demonstrate continuing compliance with the 2008 8-hour ozone NAAQS. Since the 1990's, there have been many major programs enacted in Arkansas that have

led to significant actual, enforceable emissions reductions, which have led to improvements in the air quality in the Maintenance Area. Additionally, this maintenance plan demonstrates that the projected total emissions for 2036, the final year of the maintenance plan are less than the base year, 2016, total emissions. This SIP revision demonstrates that maintenance of the 2008 8-hour ozone NAAQS has been achieved for the Maintenance Area and will continue through the second 10-year maintenance period.

E&E will monitor periodic emissions inventory updates during the triennial National Emissions Inventory and compare them to projected emissions. E&E will continue proactive efforts including reviewing monitoring data and evaluating trends in an effort to identify possible violations as early as possible.

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Appendix A: Emissions Inventory Data for Point Source, Nonpoint Area Source, and Nonroad Mobile Source Sectors

List of Appendix A Tables

Appendix Table 1 – Point Source Airport Emissions

SCC	SCC Description	Facility Name	Pollutant	2016 Annual Emissions (Tons)	2023 Annual Emissions (Tons)	2026 Annual Emissions (Tons)	2032 Annual Emissions (Tons)	2036 Annual Emissions (Tons)
2275001000	Mobile Sources, Aircraft, Military Aircraft	West Memphis Municipal Airport	NOx	1.116661	1.116661	1.116661	1.116661	1.116661
			VOC	0.5432773	0.5432773	0.5432773	0.5432773	0.5432773
2275050011	Mobile Sources, Aircraft, General Aviation, Piston	Mission Field-Marotti Memorial	NOx	0.0028292	0.0028292	0.0028292	0.0028292	0.0028292
			VOC	0.0065495	0.0065495	0.0065495	0.0065495	0.0065495
		McNeely Charter Service	NOx	0.0721468	0.0721468	0.0721468	0.0721468	0.0721468
			VOC	0.1670187	0.1670187	0.1670187	0.1670187	0.1670187
		West Memphis Municipal Airport	NOx	0.5858125	0.5858125	0.5858125	0.5858125	0.5858125
			VOC	1.356147	1.356147	1.356147	1.356147	1.356147
		Crittenden Regional Hospital	NOx	0.000581	0.000581	0.000581	0.000581	0.000581
			VOC	0.0013451	0.0013451	0.0013451	0.0013451	0.0013451
2275050012	Mobile Sources, Aircraft, General Aviation, Turbine	McNeely Charter Service	NOx	0.1390516	0.1390516	0.1390516	0.1390516	0.1390516
			VOC	0.2961414	0.2961414	0.2961414	0.2961414	0.2961414
		West Memphis Municipal Airport	NOx	1.129061	1.129061	1.129061	1.129061	1.129061
			VOC	2.404588	2.404588	2.404588	2.404588	2.404588
		Crittenden Regional Hospital	NOx	0.0053055	0.0053055	0.0053055	0.0053055	0.0053055
			VOC	0.0112992	0.0112992	0.0112992	0.0112992	0.0112992
2275060011	Mobile Sources, Aircraft, Air Taxi, Piston	McNeely Charter Service	NOx	0.003375	0.0017223	0.0016875	0.0008437	0.0004219
			Emissions Factors:		0.5103	0.5	0.5	0.5
			VOC	0.0036245	0.0018496	0.0018122	0.0009061	0.0004531
			Emissions Factors:		0.5103	0.5	0.5	0.5
2275060012	Mobile Sources,	McNeely Charter Service	NOx	0.0594114	0.0303176	0.0297057	0.0148529	0.0074264
			Emissions Factors:		0.5103	0.5	0.5	0.5

	Aircraft, Air Taxi, Turbine		VOC	0.0770751	0.0393314	0.0385376	0.0192688	0.0096344
			Emissions Factors:		0.5103	0.5	0.5	0.5
Summed Annual NOx Emissions:				3.114235	3.0834884	3.0828417	3.0671451	3.0592968
Summed Annual VOC Emissions:				4.8670657	4.8275471	4.8267159	4.806541	4.7964535
Pollutant				**2016**	**2023**	**2026**	**2032**	**2036**
Ozone Season Day (OSD) NOx Emissions				0.0085322	0.0084479	0.0084461	0.0084031	0.0083816
Ozone Season Day (OSD) VOC Emissions				0.0133344	0.0132262	0.0132239	0.0131686	0.013141

Appendix Table 2 – Point Source Internal Combustion Engine Emissions

SCC	SCC Description	Facility Name	Pollutant	2016 Annual Emissions (Tons)	2023 Annual Emissions (Tons)	2026 Annual Emissions (Tons)	2032 Annual Emissions (Tons)	2036 Annual Emissions (Tons)
28500201	Internal Combustion Engines, Railroad Equipment, Diesel, Yard Locomotives	Marion Intermodal Terminal	NOx	38.188488	38.075658	38.188488	37.844792	*37.851075*
			Emissions Factors:		0.9970454	1.0029633	0.991	*1.000166*
			VOC	2.5010245	2.493635	2.5010245	2.4785153	*2.4789267*
			Emissions Factors:		0.9970454	1.0029633	0.991	*1.000166*
		West Memphis	NOx	12.729496	12.691886	12.729496	12.614931	*12.617025*
			Emissions Factors:		0.9970454	1.0029633	0.991	*1.000166*
			VOC	0.8336748	0.8312117	0.8336748	0.8261718	*0.8263089*
			Emissions Factors:		0.9970454	1.0029633	0.991	*1.000166*
Summed Annual NOx Emissions:				50.917985	50.767544	50.917985	50.459723	50.4681
Summed Annual VOC Emissions:				3.3346993	3.3248467	3.3346993	3.304687	3.3052356
Pollutant				**2016**	**2023**	**2026**	**2032**	**2036**
Ozone Season Day NOx Emissions				0.1395013	0.1390892	0.1395013	0.1382458	0.1382688
Ozone Season Day VOC Emissions				0.0091362	0.0091092	0.0091362	0.0090539	0.0090554

2036 Annual Emissions (Tons) in italics were determined using the methodology described in Section IV., D.

Appendix Table 3 – Other Point Source Emissions

SCC	SCC Description	Facility Name	Pollutant	2016 Annual Emissions (Tons)	2023 Annual Emissions (Tons)	2026 Annual Emissions (Tons)	2032 Annual Emissions (Tons)	2036 Annual Emissions (Tons)
40400150	Petroleum and Solvent Evaporation; Petroleum Liquids Storage (nonRefinery); Bulk Terminals; Miscellaneous Losses/Leaks: Loading Racks	Valero West Memphis Terminal	NOx	0	0	0	0	0
			VOC	0.0742	0.0742	0.0742	0.0742	0.0742
40400151	Petroleum and Solvent Evaporation; Petroleum Liquids Storage (nonRefinery); Bulk Terminals; Valves, Flanges, and Pumps		NOx	0	0	0	0	0
			VOC	0.159	0.159	0.159	0.159	0.159
40400153	Petroleum and Solvent Evaporation; Petroleum Liquids Storage (nonRefinery); Bulk Terminals; Vapor Control Unit Losses		NOx	2.97	2.97	2.97	2.97	2.97
			VOC	0.106	0.0954	0.0873182	0.0819304	*0.0744301*
			Emissions Factors:		0.9	0.9152853	0.9382963	*0.9084562*
40400199	Petroleum and Solvent Evaporation; Petroleum Liquids Storage (nonRefinery); Bulk Terminals; Other Not Classified		NOx	0	0	0	0	0
			VOC	25.6	25.6	25.6	25.6	25.6
40400251	Chemical Evaporation; Petroleum Liquids Storage (non-Refinery); Bulk Plants; Valves, Flanges, and Pumps		NOx	0	0	0	0	0
			VOC	0.32	0.32	0.32	0.32	0.32

40600299	Petroleum and Solvent Evaporation; Transportation and Marketing of Petroleum Products; Marine Vessels; Not Classified		NOx	0	0	0	0	0
			VOC	90.4	81.36	74.46761	69.872683	*63.47627*
			Emissions Factors:		0.9	0.9152853	0.9382963	*0.9084562*
Summed Annual NOx Emissions:				2.97	2.97	2.97	2.97	2.97
Summed Annual VOC Emissions:				116.6592	107.6086	100.70813	96.107813	89.7039
Pollutant				**2016**	**2023**	**2026**	**2032**	**2036**
Ozone Season Day (OSD) NOx Emissions				0.008137	0.008137	0.008137	0.008137	0.008137
Ozone Season Day (OSD) VOC Emissions				0.3196142	0.2948181	0.2759127	0.2633091	0.2457641

2036 Annual Emissions (Tons) in italics were determined using the methodology described in Section IV., D.

Appendix Table 4 – Nonpoint area Source Rail Emissions

SCC	SCC Description	Pollutant	2016 Annual Emissions (Tons)	2023 Annual Emissions (Tons)	2026 Annual Emissions (Tons)	2032 Annual Emissions (Tons)	2036 Annual Emissions (Tons)
2285002006	Diesel Line Haul Locomotives	NOx	455.60945	376.28746	352.60371	331.44749	*286.63666*
		Emissions Factors:		0.8258992	0.9370594	0.94	*0.8648026*
		VOC	21.291895	16.218736	14.629339	11.791248	*8.9949364*
		Emissions Factors:		0.7617329	0.9020024	0.806	*0.7628486*
Summed Annual NOx Emissions:			455.60945	376.28746	352.60371	331.44749	286.63666
Summed Annual VOC Emissions:			21.291895	16.218736	14.629339	11.791248	8.9949364
Pollutant			**2016**	**2023**	**2026**	**2032**	**2036**
Ozone Season Day (OSD) NOx Emissions			1.2482451	1.0309245	0.9660376	0.9080753	0.7853059
Ozone Season Day (OSD) VOC Emissions			0.058334	0.0444349	0.0400804	0.0323048	0.0246437

2036 Annual Emissions (Tons) in italics were determined using the methodology described in Section IV., D.

Appendix Table 5 – Nonpoint area Source Agriculture and Livestock Production Emissions

SCC	SCC Description	Pollutant	2016 Annual Emissions (Tons)	2023 Annual Emissions (Tons)	2026 Annual Emissions (Tons)	2032 Annual Emissions (Tons)	2036 Annual Emissions (Tons)
2805002000	Agriculture Production - Livestock; Beef Cattle Composite	NOx	0	0	0	0	0
		VOC	0.3164789	0.3156195	0.3184043	0.3212634	*0.3216169*
		Emissions Factors:		0.9972844	1.0060841	1.0089793	*1.0011003*
2805035000	Agriculture Production - Livestock; Horses and Ponies Waste Emissions	NOx	0	0	0	0	0
		VOC	0.0844817	0.0844817	0.0844817	0.0844817	0.0844817
2805018000	Agriculture Production - Livestock; Dairy cattle composite	NOx	0	0	0	0	0
		VOC	0.0013673	0.0013816	0.0013848	0.0013969	*0.0014041*
		Emissions Factors:		1.0061849	1.0128002	1.0087088	*1.0051366*
2805009100	Agriculture Production - Livestock; Poultry production - broilers	NOx	0	0	0	0	0
		VOC	0.0034498	0.0038138	0.003887	0.0040972	*0.0042835*
		Emissions Factors:		1.0830455	1.1267457	1.0540866	*1.0454737*
2805040000	Agriculture Production - Livestock; Sheep and Lambs Waste Emissions	NOx	0	0	0	0	0
		VOC	0.0022824	0.0022824	0.0022824	0.0022824	0.0022824
2805045000	Agriculture Production - Livestock; Goats Waste Emissions	NOx	0	0	0	0	0
		VOC	0.1599435	0.1599435	0.1599435	0.1599435	0.1599435
2805007100	Agriculture Production - Livestock; Poultry production - manure management systems	NOx	0	0	0	0	0
		VOC	0.0264732	0.0289746	0.0298081	0.0318269	*0.033183*
		Emissions Factors:		1.0687801	1.1259732	1.0677259	*1.0426081*
2805010100		NOx	0	0	0	0	0

	Agriculture Production - Livestock; Poultry production - turkeys	VOC	0.00595	0.0060387	0.0061001	0.0062055	*0.0062622*
		Emissions Factors:		1.0121936	1.0252236	1.0172749	*1.0091478*
2805025000	Agriculture Production - Livestock; Hogs and Pigs Waste Emissions	NOx	0	0	0	0	0
		VOC	1.6253948	1.8375479	1.8286099	1.8719531	*1.9680126*
		Emissions Factors:		1.0893336	1.1250251	1.0237028	*1.0513151*
Summed Annual NOx Emissions:			0	0	0	0	0
Summed Annual VOC Emissions:			2.2258216	2.4400835	2.4349019	2.4834506	2.58147
Pollutant			**2016**	**2023**	**2026**	**2032**	**2036**
Ozone Season Day (OSD) NOx Emissions			0	0	0	0	0
Ozone Season Day (OSD) VOC Emissions			0.0060981	0.0066852	0.006671	0.006804	0.0070725

2036 Annual Emissions (Tons) in italics were determined using the methodology described in Section IV., D.

Appendix Table 6 – Nonpoint area Source Solvent Utilization Emissions

SCC	SCC Description	Pollutant	2016 Annual Emissions (Tons)	2023 Annual Emissions (Tons)	2026 Annual Emissions (Tons)	2032 Annual Emissions (Tons)	2036 Annual Emissions (Tons)
2461022000	Emulsified asphalt	NOx	0	0	0	0	0
		VOC	42.037995	42.037995	42.037995	42.037995	42.037995
2461021000	Cutback asphalt	NOx	0	0	0	0	0
		VOC	27.42877	27.42877	27.42877	27.42877	27.42877
Summed Annual NOx Emissions:			0	0	0	0	0
Summed Annual VOC Emissions:			69.466765	69.466765	69.466765	69.466765	69.466765
Pollutant			**2016**	**2023**	**2026**	**2032**	**2036**
Ozone Season Day (OSD) NOx Emissions			0	0	0	0	0
Ozone Season Day (OSD) VOC Emissions			0.1903199	0.1903199	0.1903199	0.1903199	0.1903199

Appendix Table 7 – Nonpoint area Source Stationary Industrial and Commercial Wood Combustion Emissions

SCC	SCC Description	Pollutant	2016 Annual Emissions (Tons)	2023 Annual Emissions (Tons)	2026 Annual Emissions (Tons)	2032 Annual Emissions (Tons)	2036 Annual Emissions (Tons)
2102008000	Industrial Wood Combustion	NOx	42.950268	43.660428	44.397584	45.241262	*45.77955*
		Emissions Factors:		1.0165345	1.0336975	1.0190028	*1.0118982*
		VOC	3.3188838	3.3737598	3.4307219	3.3819518	*3.4308439*
		Emissions Factors:		1.0165345	1.0336975	1.0190028	*1.0144568*
2103008000	Commercial Institutional Wood Total: All Boiler Types	NOx	2.4425331	2.4425331	2.4425331	2.4425331	2.4425331
		VOC	0.1887412	0.1887412	0.1887412	0.1887412	0.1887412
Summed Annual NOx Emissions:			45.392801	46.102961	46.840118	47.683795	48.222083
Summed Annual VOC Emissions:			3.507625	3.562501	3.6194631	3.570693	3.6195851
Pollutant			**2016**	**2023**	**2026**	**2032**	**2036**
Ozone Season Day (OSD) NOx Emissions			0.1243638	0.1263095	0.1283291	0.1306405	0.1321153
Ozone Season Day (OSD) VOC Emissions			0.0096099	0.0097603	0.0099163	0.0097827	0.0099167

2036 Annual Emissions (Tons) in italics were determined using the methodology described in Section IV., D.

Appendix Table 8 – Nonpoint area Source Waste Disposal, Treatment, and Recovery

SCC	SCC Description	Pollutant	2016 Annual Emissions (Tons)	2023 Annual Emissions (Tons)	2026 Annual Emissions (Tons)	2032 Annual Emissions (Tons)	2036 Annual Emissions (Tons)
2680003000	Green Waste (e.g., residential or municipal yard wastes)	NOx	0	0	0	0	0
		VOC	30.24809	30.24809	30.24809	30.24809	30.24809
Summed Annual NOx Emissions:			0	0	0	0	0
Summed Annual VOC Emissions:			30.24809	30.24809	30.24809	30.24809	30.24809
Pollutant			**2016**	**2023**	**2026**	**2032**	**2036**
Ozone Season Day (OSD) NOx Emissions			0	0	0	0	0
Ozone Season Day (OSD) VOC Emissions			0.0828715	0.0828715	0.0828715	0.0828715	0.0828715

Appendix Table 9 – Nonpoint area Source Material Storage and Transport

SCC	SCC Description	Pollutant	2016 Annual Emissions (Tons)	2023 Annual Emissions (Tons)	2026 Annual Emissions (Tons)	2032 Annual Emissions (Tons)	2036 Annual Emissions (Tons)
2501060051	Gasoline Service Stations: Stage 1: Submerged Filling	NOx	0	0	0	0	0
		VOC	19.717957	17.746162	16.4083	15.516393	14.170563
		Emissions Factors:		0.9	0.8321501	0.9456429	0.913264
2501060052	Gasoline Service Stations: Stage 1: Splash Filling	NOx	0	0	0	0	0
		VOC	0	0	0	0	0
2501060053	Gasoline Service Stations: Stage 1: Balanced Submerged Filling	NOx	0	0	0	0	0
		VOC	34.058296	30.652467	28.341615	26.801047	*24.476431*
		Emissions Factors:		0.9	0.8321501	0.9456429	*0.913264*
2501060201	Gasoline Service Stations - Underground Tank Breathing and Emptying	NOx	0	0	0	0	0
		VOC	32.936695	29.643026	27.408275	25.918441	*23.670378*
		Emissions Factors:		0.9	0.8321501	0.9456429	*0.913264*
2501080050	Airports Aviation Gasoline Stage 1 Total	NOx	0	0	0	0	0
		VOC	23.95973	23.95973	23.95973	23.95973	23.95973
2501080100	Airports Aviation Gasoline Stage 2 Total	NOx	0	0	0	0	0
		VOC	0.0315668	0.0315668	0.0315668	0.0315668	0.0315668
Summed Annual NOx Emissions:			0	0	0	0	0
Summed Annual VOC Emissions:			110.70425	102.03295	96.149487	92.227177	86.308668
Pollutant			**2016**	**2023**	**2026**	**2032**	**2036**
Ozone Season Day (OSD) NOx Emissions			0	0	0	0	0
Ozone Season Day (OSD) VOC Emissions			0.3032993	0.2795423	0.2634233	0.2526772	0.2364621

2036 Annual Emissions (Tons) in italics were determined using the methodology described in Section IV., D.

Appendix Table 10 – Nonpoint area Source Stationary Boiler and Internal Combustion Engine Fuel Combustion

SCC	SCC Description	Pollutant	2016 Annual Emissions (Tons)	2023 Annual Emissions (Tons)	2026 Annual Emissions (Tons)	2032 Annual Emissions (Tons)	2036 Annual Emissions (Tons)
2102001000	Industrial Boilers: Anthracite Coal	NOx	0	0	0	0	0
		VOC	0	0	0	0	0
2102002000	Industrial Boilers: Bituminous /Subbituminous Coal	NOx	0	0	0	0	0
		VOC	0	0	0	0	0
2102004001	Industrial/Distillate Oil/Boilers	NOx	0.311653	0.3788433	0.3895663	0.3895663	*0.4254879*
		Emissions Factors:		1.2155935	1.25	1	*1.0922093*
		VOC	0.0031165	0.0037884	0.0038957	0.0038957	*0.0042549*
		Emissions Factors:		1.2155935	1.25	1	*1.0922093*
2102004002	Industrial/Distillate Oil/IC Engines	NOx	9.23125	11.221447	11.539063	11.539063	*12.603071*
		Emissions Factors:		1.2155935	1.25	1	*1.0922093*
		VOC	0.648765	0.7886345	0.8109562	0.8109562	*0.8857339*
		Emissions Factors:		1.2155935	1.25	1	*1.0922093*
2102005000	Industrial/Residual Oil/Total: All Boiler Types	NOx	0	0	0	0	0
		VOC	0	0	0	0	0
2102006000	Industrial/Natural Gas/Total: Boilers and IC Engines	NOx	0	0	0	0	0
		VOC	0	0	0	0	0
2102007000	Industrial/Liquified Petroleum Gas/Total: All Boiler Types	NOx	0.0096114	0.0120142	0.0120143	0.0120143	*0.0131682*
		Emissions Factors:		1.25	1.25	1	*1.0960452*
		VOC	0.0002441	0.0003051	0.0003051	0.0003051	*0.0003344*
		Emissions Factors:		1.25	1.25	1	*1.0960452*
2102011000	Industrial/Kerosene/Total: All Boiler Types	NOx	0	0	0	0	0
		VOC	0	0	0	0	0
2103001000		NOx	0	0	0	0	0

	Commercial/Institutional Stationary Source Fuel Combustion Anthracite Coal	VOC	0	0	0	0	0
2103002000	Commercial/Institutional Stationary Source Fuel Combustion Bituminous/Subbituminous Coal	NOx	0	0	0	0	0
		VOC	0	0	0	0	0
2103004001	Commercial/Institutional/Distillate Oil/Boilers	NOx	0.0119663	0.0149578	0.0149578	0.0149578	*0.0163944*
		Emissions Factors:		1.25	1.25	1	*1.0960452*
		VOC	0.0002034	0.0002543	0.0002543	0.0002543	*0.0002787*
		Emissions Factors:		1.25	1.25	1	*1.0960455*
2103004002	Commercial/Institutional/Distillate Oil/IC Engines	NOx	0.3562185	0.4452731	0.4452731	0.4452731	*0.4880395*
		Emissions Factors:		1.25	1.25	1	*1.0960452*
		VOC	0.0230374	0.0287968	0.0287968	0.0287968	*0.0315625*
		Emissions Factors:		1.25	1.25	1	*1.0960452*
2103005000	Commercial/Institutional/Residual Oil/Total: All Boiler Types	NOx	0	0	0	0	0
		VOC	0	0	0	0	0
2103006000	Commercial/Institutional/Natural Gas/Total: Boilers and IC Engines	NOx	11.2502	10.025526	9.9717579	9.2731989	*8.7114797*
		Emissions Factors:		1.0642747	1.1147692	1.0189586	*0.9394255*
		VOC	0.726345	0.7730306	0.809707	0.8250579	*0.8589964*
		Emissions Factors:		1.0642747	1.1147692	1.0189586	*1.0411347*
2103007000	Commercial/Institutional/Liquified Petroleum Gas/Total: All Combustor Types	NOx	0.48796	0.48796	0.48796	0.48796	0.48796
		VOC	0.0178313	0.0178313	0.0178313	0.0178313	0.0178313
2103011000	Commercial/Institutional/Kerosene/Total: All Combustor Types	NOx	0	0	0	0	0
		VOC	0	0	0	0	0
2104001000		NOx	0	0	0	0	0

	Stationary Source Fuel Combustion; Residential; Anthracite Coal; Total: All Combustor Types	VOC	0	0	0	0	0
2104002000	Stationary Source Fuel Combustion; Residential; Bituminous/Subbituminous Coal; Total: All Combustor Types	NOx	0	0	0	0	0
2104002000		VOC	0	0	0	0	0
2104004000	Stationary Source Fuel Combustion; Residential; Distillate Oil; Total: All Combustor Types	NOx	0.0460625	0.0460625	0.0460625	0.0460625	0.0460625
		VOC	0.0017913	0.0017913	0.0017913	0.0017913	0.0017913
2104006000	Stationary Source Fuel Combustion; Residential; Natural Gas; Total: All Combustor Types	NOx	37.0784	37.0784	37.0784	37.0784	37.0784
		VOC	2.16948	2.16948	2.16948	2.16948	2.16948
2104007000	Stationary Source Fuel Combustion, Residential, Liquified Petroleum Gas (LPG)	NOx	4.46461	4.46461	4.46461	4.46461	4.46461
		VOC	0.173817	0.173817	0.173817	0.173817	0.173817
2104011000	Stationary Source Fuel Combustion; Residential; Kerosene; Total: All Heater Types	NOx	0.0266504	0.0266504	0.0266504	0.0266504	0.0266504
		VOC	0.0010364	0.0010364	0.0010364	0.0010364	0.0010364
2302002100	Industrial Processes, Food and Kindred Products: SIC 20, Commercial Cooking, Conveyorized Charbroiling	NOx	0	0	0	0	0
		VOC	0.423159	0.4235822	0.4239701	0.4244539	*0.4247584*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2302002200	Industrial Processes, Food and Kindred Products: SIC 20, Commercial Cooking, Under-fired Charbroiling	NOx	0	0	0	0	0
		VOC	1.4272	1.4286272	1.4299357	1.4315674	*1.4325943*
		Emissions Factors:		1.0010000	1.0019168	1.0011411	*1.0007173*

2302003000	Industrial Processes, Food and Kindred Products: SIC 20, Commercial Cooking, Deep Fat Frying	NOx	0	0	0	0	0
		VOC	0	0	0	0	0
2302003100	Industrial Processes, Food and Kindred Products: SIC 20, Commercial Cooking, Flat Griddle Frying	NOx	0	0	0	0	0
		VOC	0	0	0	0	0
2302003200	Industrial Processes, Food and Kindred Products: SIC 20, Commercial Cooking, Clamshell Griddle Frying	NOx	0	0	0	0	0
		VOC	0	0	0	0	0
2505030120	Storage and Transport, Petroleum and Petroleum Product Transport, Truck	NOx	0	0	0	0	0
		VOC	1.23931	1.115379	1.031292	0.9752339	*0.890646*
		Emissions Factors:		0.9	0.8321501	0.9456429	*0.913264*
2505040120	Storage and Transport; Petroleum and Petroleum Product Transport; Pipeline; Gasoline	NOx	0	0	0	0	0
		VOC	93.9202	84.52818	77.367398	72.593544	*65.948053*
		Emissions Factors:		0.9	0.9152853	0.9382963	*0.9084562*
Summed Annual NOx Emissions:			63.274785	64.201998	64.476569	63.77801	64.361602
Summed Annual VOC Emissions:			100.77554	91.454534	84.270467	79.458021	71.408574
Pollutant			**2016**	**2023**	**2026**	**2032**	**2036**
Ozone Season Day (OSD) NOx Emissions			0.1733556	0.1758959	0.1766481	0.1747343	0.1763332
Ozone Season Day (OSD) VOC Emissions			0.2760974	0.2505604	0.230878	0.2176932	0.1956399

2036 Annual Emissions (Tons) in italics were determined using the methodology described in Section IV., D.

Appendix Table 11 – Nonpoint area Source Storage, Transport, and Miscellaneous activities

SCC	SCC Description	Pollutant	2016 Annual Emissions (Tons)	2023 Annual Emissions (Tons)	2026 Annual Emissions (Tons)	2032 Annual Emissions (Tons)	2036 Annual Emissions (Tons)
2501011011	Storage and Transport; Petroleum and Petroleum Product Storage	NOx	0	0	0	0	0
		VOC	2.145614	2.1477596	2.1497268	2.1521798	*2.1537237*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2501011012	Storage and Transport; Petroleum and Petroleum Product Storage	NOx	0	0	0	0	0
		VOC	2.407469	2.4098765	2.4120837	2.4148361	*2.4165684*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2501011013	Storage and Transport; Petroleum and Petroleum Product Storage; Residential Portable Gas Cans; Spillage During Transport	NOx	0	0	0	0	0
		VOC	2.4322	2.4346322	2.4368622	2.4396428	*2.4413929*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2501011014	Storage and Transport; Petroleum and Petroleum Product Storage	NOx	0	0	0	0	0
		VOC	0.4438082	0.444252	0.4446589	0.4451663	*0.4454856*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2501011015	Storage and Transport; Petroleum and Petroleum Product Storage; Residential Portable Gas Cans; Refilling at the Pump - Spillage	NOx	0	0	0	0	0
		VOC	0.0649428	0.0650077	0.0650673	0.0651415	*0.0651883*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2501012012	Commercial Gas Cans/Evaporation	NOx	0	0	0	0	0
		VOC	0.0768951	0.076972	0.0770425	0.0771304	*0.0771857*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2501012013	Storage and Transport; Petroleum and Petroleum Product Storage	NOx	0	0	0	0	0
		VOC	3.31789	3.3212079	3.3242499	3.3280431	*3.3304305*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2501012014	Commercial Gas Cans/Refilling Vapor	NOx	0	0	0	0	0
		VOC	1.278535	1.2798135	1.2809858	1.2824475	*1.2833674*

		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2501012015	Commercial Gas Cans/Refilling Spillage	NOx	0	0	0	0	0
		VOC	0.124955	0.12508	0.1251945	0.1253374	*0.1254273*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2501055120	Bulk Gasoline Terminals	NOx	0	0	0	0	0
		VOC	0	0	0	0	0
2610000100	Waste Disposal, Treatment, and Recovery; Open Burning; All Categories; Yard Waste - Leaf Species Unspecified	NOx	0.0632391	0.0632391	0.0632391	0.0632391	0.0632391
		VOC	0.2855959	0.2855959	0.2855959	0.2855959	0.2855959
2610000400	Open Burning- All Categories, Yard Waste, Brush Species Unspecified	NOx	0.0632391	0.0632391	0.0632391	0.0632391	0.0632391
		VOC	0.2855959	0.2855959	0.2855959	0.2855959	0.2855959
2610000500	Open Burning- All Categories, Land Clearing Debris	NOx	1.094508	1.094508	1.094508	1.094508	1.094508
		VOC	3.091985	3.091985	3.091985	3.091985	3.091985
2610030000	Open Burning- Residential, Household Waste	NOx	3.210979	3.210979	3.210979	3.210979	3.210979
		VOC	3.347399	3.347399	3.347399	3.347399	3.347399
2630020000	Waste Disposal, Treatment, and Recovery; Wastewater Treatment; Public Owned; Total Processed	NOx	0	0	0	0	0
		VOC	0.79305	0.7938431	0.7945702	0.7954768	0.7960475
		Emissions Factors:		1.001	1.0019168	1.0011411	1.0007173
2810025000	Charcoal Grilling, Residential	NOx	0.2823807	0.2826631	0.282922	0.2832448	0.283448
		Emissions Factors:		1.001	1.0019168	1.0011411	1.0007173
		VOC	0.748685	0.7494337	0.7501201	0.7509761	0.7515148
		Emissions Factors:		1.001	1.0019168	1.0011411	1.0007173
2810060200	Other Combustion; Cremation; Animals	NOx	8.683E-06	8.683E-06	8.683E-06	8.683E-06	8.683E-06
		VOC	7.292E-07	7.292E-07	7.292E-07	7.292E-07	7.292E-07
Summed Annual NOx Emissions:			4.7143545	4.7146369	4.7148958	4.7152187	4.7154218
Summed Annual VOC Emissions:			20.844621	20.858455	20.871138	20.886954	20.896909
Pollutant			**2016**	**2023**	**2026**	**2032**	**2036**
Ozone Season Day (OSD) NOx Emissions			0.012916	0.0129168	0.0129175	0.0129184	0.012919
Ozone Season Day (OSD) VOC Emissions			0.0571085	0.0571465	0.0571812	0.0572245	0.0572518

2036 Annual Emissions (Tons) in italics were determined using the methodology described in Section IV., D.

Appendix Table 12 – Nonpoint area Source Residential Wood Fuel Combustion

SCC	SCC Description	Pollutant	2016 Annual Emissions (Tons)	2023 Annual Emissions (Tons)	2026 Annual Emissions (Tons)	2032 Annual Emissions (Tons)	2036 Annual Emissions (Tons)
2104008100	Fireplace: general	NOx	1.0359204	1.110372	1.1425063	1.2067837	*1.2493751*
		Emissions Factors:		1.07187	1.10289	1.05626	*1.0352933*
		VOC	7.5303434	8.0715492	8.3051404	8.7723876	*9.0819942*
		Emissions Factors:		1.07187	1.10289	1.05626	*1.0352933*
2104008220	Woodstove: fireplace inserts; EPA certified; non-catalytic	NOx	0.1923902	0.1923902	0.1923902	0.1923902	0.1923902
		VOC	1.0125801	1.0125801	1.0125801	1.0125801	1.0125801
2104008230	Woodstove: fireplace inserts; EPA certified; catalytic	NOx	0.116079	0.116079	0.116079	0.116079	0.116079
		VOC	0.8705927	0.8705927	0.8705927	0.8705927	0.8705927
2104008310	Woodstove: freestanding, non-EPA certified	NOx	0.831839	0.831839	0.831839	0.831839	0.831839
		VOC	15.745522	15.745522	15.745522	15.745522	15.745522
2104008320	Woodstove: freestanding, EPA certified, non-catalytic	NOx	0.6627509	0.6627509	0.6627509	0.6627509	0.6627509
		VOC	3.4881618	3.4881618	3.4881618	3.4881618	3.4881618
2104008330	Woodstove: freestanding, EPA certified, catalytic	NOx	0.399872	0.399872	0.399872	0.399872	0.399872
		VOC	2.9990406	2.9990406	2.9990406	2.9990406	2.9990406
2104008400	Woodstove: pellet-fired, general	NOx	0.2283022	0.2283022	0.2283022	0.2283022	0.2283022
		VOC	0.1320547	0.1320547	0.1320547	0.1320547	0.1320547
2104008510	Residential Heating: Wood furnace indoor	NOx	0.1196275	0.1196275	0.1196275	0.1196275	0.1196275
		VOC	0.7775785	0.7775785	0.7775785	0.7775785	0.7775785
2104008610	Hydronic heater: outdoor	NOx	0.129327	0.129327	0.129327	0.129327	0.129327
		VOC	4.3583197	4.3583197	4.3583197	4.3583197	4.3583197
2104008700	Outdoor wood burning device	NOx	1.2635768	1.2635768	1.2635768	1.2635768	1.2635768
		VOC	9.1852337	9.1852337	9.1852337	9.1852337	9.1852337
Summed Annual NOx Emissions:			4.9796848	5.0541364	5.0862707	5.1505481	5.1931395
Summed Annual VOC Emissions:			46.099427	46.640633	46.874224	47.341471	47.651078
Pollutant			**2016**	**2023**	**2026**	**2032**	**2036**
Ozone Season Day (OSD) NOx Emissions			0.013643	0.0138469	0.013935	0.0141111	0.0142278
Ozone Season Day (OSD) VOC Emissions			3.738E-05	3.794E-05	3.818E-05	3.866E-05	3.898E-05

2036 Annual Emissions (Tons) in italics were determined using the methodology described in Section IV., D.

Appendix Table 13 – Nonpoint area Source Solvent Utilization

SCC	SCC Description	Pollutant	2016 Annual Emissions (Tons)	2023 Annual Emissions (Tons)	2026 Annual Emissions (Tons)	2032 Annual Emissions (Tons)	2036 Annual Emissions (Tons)
2460200000	Non-industrial: Consumer and Commercial All Household Products	NOx	0	0	0	0	0
		VOC	9.4664559	9.4759223	9.4846016	9.4954244	*9.5022359*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2460290000	Miscellaneous Non-industrial: Consumer and Commercial; Household Products: Miscellaneous Household Products	NOx	0	0	0	0	0
		VOC	82.99337	83.076363	83.152455	83.247339	*83.307057*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2460110000	Miscellaneous Non-industrial: Consumer and Commercial Hair Care Products	NOx	0	0	0	0	0
		VOC	84.68136	84.766041	84.843681	84.940495	*85.001427*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2460190000	Personal Care Products: Miscellaneous Personal Care Products	NOx	0	0	0	0	0
		VOC	2.4510802	2.4535312	2.4557785	2.4585808	*2.4603444*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2460600000	Non-industrial: Consumer and Commercial- All Adhesives and Sealants	NOx	0	0	0	0	0
		VOC	36.183191	36.219374	36.252549	36.293916	*36.319951*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2401001000	Surface Coating Architectural	NOx	0	0	0	0	0
		VOC	34.974268	35.009242	35.041308	35.081293	*35.106459*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2460500000	Non-industrial: Consumer and Commercial- All Coatings and Related Products	NOx	0	0	0	0	0
		VOC	10.884874	10.895758	10.905738	10.918183	*10.926015*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2402000000	Paint Strippers	NOx	0	0	0	0	0
		VOC	5.8615661	5.8674277	5.8728018	5.8795032	*5.8837209*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2401100000		NOx	0	0	0	0	0

	Surface Coating- Industrial Maintenance	VOC	38.887325	38.926213	38.961866	39.006325	*39.034306*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2425000000	Graphic Arts	NOx	0	0	0	0	0
		VOC	73.485491	73.558976	73.626351	73.710365	*73.763241*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2461800000	Pesticide Application	NOx	0	0	0	0	0
		VOC	3.9070251	3.9109321	3.9145143	3.9189811	*3.9217923*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2461850000	Miscellaneous Non-industrial: Commercial Agricultural Pesticide	NOx	0	0	0	0	0
		VOC	205.73882	205.73882	205.73882	205.73882	205.73882
2420000000	Dry Cleaning	NOx	0	0	0	0	0
		VOC	0.4818822	0.4818822	0.4818822	0.4818822	0.4818822
2460900000	Miscellaneous Non-industrial: Consumer and Commercial-Miscellaneous (NEC)	NOx	0	0	0	0	0
		VOC	0.9105835	0.9114941	0.912329	0.91337	*0.9140252*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
2460100000	Non-industrial: Consumer and Commercial Personal Care Products	NOx	0	0	0	0	0
		VOC	1.0831632	1.0842464	1.0852395	1.0864778	*1.0872572*
		Emissions Factors:		1.001	1.0019168	1.0011411	*1.0007173*
Summed Annual NOx Emissions:			0	0	0	0	0
Summed Annual VOC Emissions:			591.99046	592.37623	592.72992	593.17096	593.44854
Pollutant			**2016**	**2023**	**2026**	**2032**	**2036**
Ozone Season Day (OSD) NOx Emissions			0	0	0	0	0
Ozone Season Day (OSD) VOC Emissions			1.6218917	1.6229486	1.6239176	1.6251259	1.6258864

2036 Annual Emissions (Tons) in italics were determined using the methodology described in Section IV., D.

Appendix Table 14 – Nonroad Mobile Source Emissions

SCC	SCC Description	Pollutant	2016 Jun-Aug	2023 Jun-Aug	2026 Jun-Aug	2032 Jun-Aug	2036 Jun-Aug
2260001022	Mobile - Non-Road Equipment - Gasoline	NOx	0.4334425	0.5218566	0.5474842	0.5903424	*0.6387925*
		Emissions Factors:		1.2039812	1.0491085	1.0782822	*1.0820712*
		VOC	38.601642	29.17908	28.889048	30.057924	*25.359259*
		Emissions Factors:		0.7559026	0.990060	1.040461	*0.843680*
2260001060	Mobile - Non-Road Equipment - Gasoline	NOx	0.0469170	0.0433132	0.0449606	0.0482234	*0.0468454*
		Emissions Factors:		0.9231865	1.0380357	1.0725708	*0.9714241*
		VOC	0.2261802	0.2149129	0.2216540	0.2359904	*0.2319594*
		Emissions Factors:		0.9501843	1.0313666	1.0646795	*0.9829187*
2260002022	Mobile - Non-Road Equipment - Gasoline	NOx	0.0053601	0.0066542	0.0066450	0.0066818	*0.0072978*
		Emissions Factors:		1.2414390	0.9986207	1.0055253	*1.0921909*
		VOC	0.2080424	0.2584259	0.2581295	0.2596419	*0.2836395*
		Emissions Factors:		1.242179	0.9988528	1.0058592	*1.0924257*
2260003022	Mobile - Non-Road Equipment - Gasoline	NOx	0.0001873	0.0002358	0.0002562	0.0003034	*0.0003306*
		Emissions Factors:		1.2589538	1.0865057	1.1842155	*1.0897277*
		VOC	0.0044238	0.0055693	0.0060537	0.0071658	*0.0078098*
		Emissions Factors:		1.258954	1.0869784	1.1836945	*1.0898772*
2260004020	Mobile - Non-Road Equipment - Gasoline	NOx	0.0136193	0.0148626	0.0154267	0.0165549	*0.0172721*
		Emissions Factors:		1.0912928	1.0379551	1.0731324	*1.0433184*
		VOC	0.4678157	0.5108512	0.5301920	0.5691710	*0.5939345*
		Emissions Factors:		1.0919923	1.0378599	1.0735186	*1.0435081*
2260004021	Lawn and Garden Equipment; Chain Saws < 6 HP	NOx	0.0135686	0.0148136	0.0153803	0.0164985	*0.0172180*
		Emissions Factors:		1.0917578	1.0382509	1.0727077	*1.0436062*
		VOC	0.6096016	0.6655385	0.6909933	0.7412352	*0.7735573*
		Emissions Factors:		1.0917599	1.0382468	1.0727098	*1.0436057*
2260004022	Lawn and Garden Equipment; Mowers, Tractors, Turf Equipment (Commercial)	NOx	0.0000085	0.0000093	0.0000097	0.0000104	*0.0000108*
		Emissions Factors:		1.0917572	1.0397730	1.0712074	*1.0441522*
		VOC	0.0001644	0.0001796	0.0001865	0.0002002	*0.0002090*

		Emissions Factors:		1.0924141	1.0382123	1.0734584	*1.0437580*
2260004033	Lawn and Garden Equipment; All Residential Except Chain Saws and Snowblowers	NOx	0.0438639	0.0478684	0.0496853	0.0533190	*0.0556287*
		Emissions Factors:		1.0912935	1.0379554	1.0731344	*1.0433186*
		VOC	1.2010519	1.2894085	1.3382230	1.4367377	*1.4895001*
		Emissions Factors:		1.073566	1.0378580	1.0736161	*1.0367238*
2260004044	Lawn and Garden Equipment; Other Commercial	NOx	0.0329533	0.0359770	0.0373531	0.0400690	*0.0418162*
		Emissions Factors:		1.0917583	1.0382481	1.0727100	*1.0436054*
		VOC	0.8686276	0.9485731	0.9848049	1.0566535	*1.1027952*
		Emissions Factors:		1.0920366	1.0381961	1.0729572	*1.0436677*
2260005022	Agricultural Equipment; Total	NOx	0.0031980	0.0031217	0.0031102	0.0030339	*0.0029982*
		Emissions Factors:		0.9761332	0.9963329	0.9754595	*0.9882433*
		VOC	0.0667363	0.0650709	0.0648927	0.0632950	*0.0625367*
		Emissions Factors:		0.9750445	0.9972615	0.9753792	*0.9880208*
2260006022	Mobile Sources; Off-highway Vehicle Gasoline, 2-Stroke; Agricultural Equipment	NOx	0.0116329	0.0132805	0.0138437	0.0150969	*0.0159999*
		Emissions Factors:		1.1416370	1.0424097	1.0905226	*1.0598126*
		VOC	0.3190224	0.362758	0.3780611	0.4121014	*0.4361411*
		Emissions Factors:		1.1370926	1.0421855	1.0900391	*1.0583344*
2260007022	Mobile Sources; Off-highway Vehicle Gasoline, 2-Stroke; Logging Equipment	NOx	0.0006212	0.0006193	0.0006038	0.0005863	*0.0005812*
		Emissions Factors:		0.9968748	0.9749226	0.9710619	*0.9912887*
		VOC	0.0278862	0.0277991	0.0271019	0.0263176	*0.0260883*
		Emissions Factors:		0.9968745	0.9749207	0.9710618	*0.9912878*
2265001022	Off-highway Gasoline, 4-Stroke /Recreational Equipt /4-Stroke Other Recreational Equip.	NOx	1.4956460	1.4667002	1.5046444	1.6010905	*1.5939484*
		Emissions Factors:		0.9806466	1.0258705	1.0640989	*0.9955393*
		VOC	16.247130	15.623705	15.997439	16.989799	*16.754266*
		Emissions Factors:		0.961629	1.023921	1.062032	*0.986137*

2265001050	Off-highway Gasoline, 4-Stroke /Recreational Equipt /Specialty Vehicles/Carts	NOx	0.0562036	0.0613483	0.0637257	0.0683383	*0.0713240*
		Emissions Factors:		1.0915353	1.0387535	1.0723824	*1.0436889*
		VOC	0.1929819	0.2106465	0.2188087	0.2346492	*0.2449002*
		Emissions Factors:		1.091535	1.0387484	1.0723944	*1.0436863*
2265001060	Off-highway Gasoline, 4-Stroke /Recreational Equipt /Specialty Vehicles/Carts	NOx	0.0662883	0.0503282	0.0454516	0.0393764	*0.0304386*
		Emissions Factors:		0.7592322	0.9031038	0.8663368	*0.7730181*
		VOC	0.2576775	0.1904095	0.1702743	0.1493961	*0.1115657*
		Emissions Factors:		0.738945	0.8942532	0.8773847	*0.7467777*
2265002022	Off-highway Gasoline, 4-Stroke /Construction & Mining Equipt /4-Stroke Construction Equipment	NOx	0.0383324	0.0363029	0.0352269	0.0347533	*0.0334422*
		Emissions Factors:		0.9470542	0.9703606	0.9865563	*0.9622745*
		VOC	0.1170092	0.1235936	0.1216908	0.1218050	*0.1243111*
		Emissions Factors:		1.0562723	0.9846043	1.0009387	*1.0205745*
2265003022	Off-highway Gasoline, 4-Stroke /Industrial Equipt /4-Stroke Industrial Equipment	NOx	0.1554541	0.1384204	0.1454986	0.1674130	*0.1602425*
		Emissions Factors:		0.8904263	1.05114	1.1506156	*0.9571689*
		VOC	0.2112028	0.2240809	0.2390649	0.2789666	*0.2877037*
		Emissions Factors:		1.0609754	1.0668687	1.1669072	*1.0313194*
2265003060	Off-highway Gasoline, 4-Stroke /Industrial Equipt /AC\Refrigeration	NOx	0.0007084	0.0008621	0.0009372	0.0011094	*0.0011978*
		Emissions Factors:		1.2169484	1.0871219	1.1837618	*1.0796621*
		VOC	0.0025302	0.0031298	0.0034026	0.0040279	*0.0043688*
		Emissions Factors:		1.2369777	1.0871610	1.1837791	*1.0846320*
2265004022	Off-highway Gasoline, 4-Stroke /Lawn & Garden Equipt	NOx	0.2436387	0.2593292	0.2692402	0.2888683	*0.2985248*
		Emissions Factors:		1.0644006	1.0382180	1.0729018	*1.0334288*

	/4-Stroke Mowers, Tractors, Turf Eqt (Commercial)	VOC	0.7755932	0.836142	0.8680919	0.9314383	*0.9673500*
		Emissions Factors:		1.0780677	1.0382112	1.0729719	*1.0385551*
2265004033	Off-highway Gasoline, 4-Stroke /Lawn & Garden Equipt /4-Stroke Lawn & Garden Equipt (Residential)	NOx	0.8339212	0.7502434	0.7770483	0.8335664	*0.7989002*
		Emissions Factors:		0.8996574	1.0357282	1.0727345	*0.9584121*
		VOC	5.5331545	4.9558311	5.1362720	5.5100780	*5.2704037*
		Emissions Factors:		0.8956611	1.0364098	1.0727777	*0.9565026*
2265004044	Off-highway Gasoline, 4-Stroke /Lawn & Garden Equipt /4-Stroke Lawn & Garden Equipt (Commercial)	NOx	0.1213833	0.1191990	0.1226943	0.1312180	*0.1308147*
		Emissions Factors:		0.9820051	1.0293231	1.0694715	*0.9969265*
		VOC	0.6283026	0.6425915	0.6650600	0.7122442	*0.7237436*
		Emissions Factors:		1.0227421	1.0349655	1.0709472	*1.0161454*
2265005022	Off-highway Gasoline, 4-Stroke /Agricultural Equipt /4-Stroke Agriculture Equipment	NOx	1.9700066	1.5269661	1.2440411	0.5656738	*0.2999107*
		Emissions Factors:		0.7751071	0.8147143	0.4547067	*0.5301830*
		VOC	4.0987858	3.182279	2.6687975	1.2932280	*0.7661470*
		Emissions Factors:		0.7763955	0.8386435	0.4845733	*0.5924299*
2265006022	Off-highway Gasoline, 4-Stroke /Commercial Equipt /4-Stroke Commercial Equipment	NOx	0.5550888	0.5417144	0.5585304	0.6059556	*0.6022282*
		Emissions Factors:		0.9759059	1.0310421	1.0849108	*0.9938488*
		VOC	2.3432541	2.4238077	2.5128285	2.7354110	*2.7901871*
		Emissions Factors:		1.0343768	1.0367277	1.0885785	*1.0200248*
2265007022	Off-highway Vehicle Gasoline, Logging Equipment, 4-Stroke Logging Equipment	NOx	0.0020158	0.0010493	0.0009629	0.0009030	*0.0004132*
		Emissions Factors:		0.5205258	0.9176582	0.9378321	*0.4576315*
		VOC	0.0089855	0.0050644	0.0046426	0.0043357	*0.0023286*
		Emissions Factors:		0.5636198	0.9167205	0.9338905	*0.5370729*

2267001060	Off-highway LPG /Recreational Equipt /Specialty Vehicles/Carts	NOx	0.0141412	0.0090670	0.0070482	0.0044659	*0.0015063*
		Emissions Factors:		0.6411752	0.7773503	0.6336200	*0.3372999*
		VOC	0.0031055	0.001941	0.0014556	0.0007940	*0.0001117*
		Emissions Factors:		0.6250027	0.7499583	0.5454828	*0.1406837*
2267002022	Off-highway LPG /Construction & Mining Equipt /LPG Construction Equipment	NOx	0.0106356	0.0058943	0.0050891	0.0044244	*0.0019157*
		Emissions Factors:		0.5542058	0.8633971	0.8693884	*0.4329694*
		VOC	0.0021506	0.0009147	0.0007193	0.0005559	*0.000094*
		Emissions Factors:		0.4253142	0.7864003	0.7727489	*0.169109*
2267003022	Off-highway LPG /Industrial Equipt /LPG Industrial Equipment	NOx	1.2365510	1.0313638	1.1148756	1.3152092	*1.2323120*
		Emissions Factors:		0.8340649	1.0809722	1.1796914	*0.9369703*
		VOC	0.2088874	0.1224885	0.1314142	0.1545703	*0.1146391*
		Emissions Factors:		0.5863854	1.0728697	1.1762066	*0.7416631*
2267004044	Off-highway LPG /Lawn & Garden Equipt /LPG Lawn & Garden Equipment (Commercial)	NOx	0.0040211	0.0034357	0.0035654	0.0038281	*0.0035744*
		Emissions Factors:		0.8544071	1.0377582	1.0736904	*0.9337143*
		VOC	0.0006064	0.000406	0.0004211	0.0004527	*0.0003596*
		Emissions Factors:		0.6696122	1.0372037	1.0748315	*0.7943770*
2267005022	Off-highway Vehicle LPG, Agricultural Equipment, LPG Agriculture Equipment	NOx	0.0065362	0.0050938	0.0040888	0.0016848	*0.0008035*
		Emissions Factors:		0.7793214	0.8026991	0.4120501	*0.4768927*
		VOC	0.0014334	0.0011654	0.0009520	0.0003729	*0.0002085*
		Emissions Factors:		0.8130354	0.8168447	0.3917314	*0.5591977*
2267006022	Off-highway Vehicle LPG, Agricultural Equipment, LPG Agriculture Equipment	NOx	0.1879722	0.1087194	0.0890140	0.0666993	*0.0233519*
		Emissions Factors:		0.5783804	0.8187497	0.7493118	*0.3501075*
		VOC	0.0318027	0.0169269	0.0132378	0.0089963	*0.0008666*
		Emissions Factors:		0.5322475	0.7820551	0.6795918	*0.0963314*

2268002022	Off-highway Vehicle CNG, Construction Equipment, CNG Construction Equipment	NOx	0.0000498	0.0000182	0.0000143	0.0000099	*0.0000001*
		Emissions Factors:		0.3657378	0.7835607	0.6953782	*0.0100705*
		VOC	0.0000391	1.186E-05	0.0000084	0.0000046	*0.0000001*
		Emissions Factors:		0.3033846	0.7057750	0.5519713	*0.0216450*
2268003022	Off-highway Vehicle CNG, Industrial Equipment, CNG Industrial Equipment	NOx	0.0950829	0.0817286	0.0887783	0.1051567	*0.1000979*
		Emissions Factors:		0.8595513	1.0862572	1.1844859	*0.9518930*
		VOC	0.0567063	0.0348411	0.0377863	0.0448288	*0.0348816*
		Emissions Factors:		0.6144139	1.0845296	1.1863792	*0.7781055*
2268003060	Off-highway Vehicle CNG	NOx	0.0002966	0.0002444	0.0002568	0.0003021	*0.0002784*
		Emissions Factors:		0.8239686	1.0509162	1.1763551	*0.9214511*
		VOC	0.0001854	0.0001103	0.0001110	0.0001293	*0.0000923*
		Emissions Factors:		0.5946345	1.0066931	1.1648649	*0.7137126*
2268005022	Off-highway Vehicle CNG, Agricultural Equipment, CNG Agriculture Equipment	NOx	0.0902915	0.0603769	0.0588798	0.0538150	*0.0392632*
		Emissions Factors:		0.6686880	0.9752051	0.9139804	*0.7295961*
		VOC	0.0580910	0.0289805	0.0280819	0.0242407	*0.0102007*
		Emissions Factors:		0.4988804	0.9689949	0.8632120	*0.4208092*
2268006022	Off-highway Vehicle CNG, Commercial Equipment, CNG Commercial Equipment	NOx	0.0767791	0.0567973	0.0504483	0.0428470	*0.0315738*
		Emissions Factors:		0.7397492	0.8882179	0.8493242	*0.7368963*
		VOC	0.0437778	0.030851	0.0265904	0.0212565	*0.0139379*
		Emissions Factors:		0.7047188	0.8618964	0.7994045	*0.6557030*
2270001060	Off-highway Diesel /Recreational Equipt /Specialty Vehicles/Carts	NOx	0.1670047	0.1224350	0.1072739	0.0834236	*0.0583793*
		Emissions Factors:		0.7331229	0.8761702	0.7776691	*0.6997934*
		VOC	0.0406375	0.023576	0.0184835	0.0111543	*0.0016944*
		Emissions Factors:		0.5801549	0.7839970	0.6034748	*0.1519074*

2270002022	Off-highway Diesel /Construction & Mining Equipt /Diesel Construction Equipment	NOx	4.4733937	2.1003730	1.6220677	1.1919292	*0.083153*
		Emissions Factors:		0.4695256	0.7722760	0.7348209	*0.069763*
		VOC	0.4663279	0.1897561	0.1294643	0.0663249	*0.083001*
		Emissions Factors:		0.4069156	0.6822670	0.5123023	*1.251431*
2270003022	Off-highway Diesel /Industrial Equipt /Diesel Industrial Equipment	NOx	1.0753182	0.5623216	0.5239525	0.5523076	*0.291059*
		Emissions Factors:		0.5229350	0.9317667	1.0541176	*0.526987*
		VOC	0.0768650	0.0281334	0.0224306	0.0175437	*0.007489*
		Emissions Factors:		0.3660101	0.7972966	0.7821320	*0.426876*
2270003060	Off-highway Diesel /Industrial Equipt /AC\Refrigeration	NOx	1.1571517	1.1873727	1.2724574	1.4966414	*1.5258023*
		Emissions Factors:		1.0261167	1.0716580	1.1761819	*1.0194842*
		VOC	0.0760144	0.0410197	0.0407041	0.0462594	*0.0289908*
		Emissions Factors:		0.5396303	0.9923056	1.1364821	*0.6266993*
2270004022	Off-highway Diesel /Lawn & Garden Equipt /Diesel Mowers, Tractors, Turf Equipt (Commercial)	NOx	0.0333339	0.0287664	0.0285277	0.0297983	*0.0274421*
		Emissions Factors:		0.8629773	0.9917016	1.0445403	*0.9209298*
		VOC	0.0033569	0.002362	0.0023038	0.0023721	*0.0018702*
		Emissions Factors:		0.7036458	0.9753474	1.0296469	*0.7883909*
2270004044	Off-highway Diesel /Lawn & Garden Equipt /Diesel Lawn & Garden Equipment (Commercial)	NOx	0.2632075	0.2054605	0.1826598	0.1510822	*0.1176005*
		Emissions Factors:		0.7806028	0.8890263	0.8271233	*0.7783876*
		VOC	0.0248239	0.0159503	0.0131731	0.0095768	*0.0045991*
		Emissions Factors:		0.6425376	0.8258854	0.7269955	*0.4802318*
2270005022	Off-highway Diesel /Agricultural Equipt /Diesel Agriculture Equipment	NOx	172.111446	85.999891	66.216519	28.799528	*16.901148*
		Emissions Factors:		0.499676	0.769960	0.434930	*0.586855*
		VOC	14.204810	6.184915	4.559906	1.821118	*2.408790*
		Emissions Factors:		0.435410	0.737263	0.399376	*1.322698*

2270006022	Off-highway Diesel /Commercial Equipt /Diesel Commercial Equipment	NOx	1.7165212	1.2980689	1.1817277	0.9646018	*0.7378960*
		Emissions Factors:		0.7562208	0.9103737	0.8162640	*0.7649747*
		VOC	0.2046897	0.1186393	0.0972170	0.0602689	*0.0140089*
		Emissions Factors:		0.5796059	0.8194334	0.6199412	*0.2324402*
2270007022	Off-highway Vehicle Diesel, Diesel Logging Equipment	NOx	0.0234923	0.0039938	0.0023615	0.0020360	*0.007863*
		Emissions Factors:		0.1700053	0.5912905	0.8621699	*3.861943*
		VOC	0.0013894	0.0002357	0.0001494	0.0001266	*0.000455*
		Emissions Factors:		0.1696253	0.6339306	0.8473896	*3.593997*
2282005022	Pleasure Craft /Gasoline 2-Stroke /2-Stroke Pleasure Craft	NOx	8.5405500	9.3821352	9.5478069	9.7297542	*10.178727*
		Emissions Factors:		1.0985399	1.0176582	1.0190565	*1.046144*
		VOC	44.970179	24.599552	20.803274	17.545468	*6.6775382*
		Emissions Factors:		0.547019	0.845677	0.843399	*0.3805848*
2282010005	Pleasure Craft /Gasoline 4-Stroke /Inboard/Sterndrive	NOx	4.7724126	3.4994091	2.9509348	2.1122403	*1.3676562*
		Emissions Factors:		0.7332579	0.8432666	0.7157869	*0.6474908*
		VOC	5.9948492	4.8739256	4.4796461	3.8289657	*3.1979356*
		Emissions Factors:		0.8130189	0.9191043	0.8547474	*0.8351957*
2282020022	Pleasure Craft /Diesel /Diesel Pleasure Craft	NOx	5.2646382	5.1677547	5.2073749	5.4529647	*5.4042188*
		Emissions Factors:		0.9815973	1.0076668	1.0471619	*0.9910607*
		VOC	0.2971227	0.3406678	0.3603894	0.3905039	*0.4162095*
		Emissions Factors:		1.1465558	1.0578913	1.0835607	*1.0658270*
2285002015	Railroad Equipt /Diesel /Railway Maintenance	NOx	0.6062231	0.3978301	0.3252612	0.1819199	*0.0662861*
		Emissions Factors:		0.6562437	0.8175882	0.5593041	*0.3643694*
		VOC	0.1015095	0.0597782	0.0468621	0.0207025	*0.002066*
		Emissions Factors:		0.588893	0.7839331	0.4417753	*0.099795*
2285004015	Railroad Equipt /Gasoline, 4-Stroke /Railway Maintenance	NOx	0.0079684	0.0080093	0.0081676	0.0083556	*0.0084172*
		Emissions Factors:		1.0051345	1.0197657	1.0230175	*1.0073690*
		VOC	0.0305758	0.0327603	0.0335673	0.0344207	*0.0356902*
		Emissions Factors:		1.0714429	1.0246350	1.0254235	*1.0368810*
2285006015		NOx	0.0007282	0.0003086	0.0002634	0.0002397	*0.0000243*

	Railroad Equipt /LPG /Railway Maintenance	Emissions Factors:		0.4237910	0.8535288	0.9100228	*0.1014251*
		VOC	0.000159	0.000048	0.000035	0.000028	*0.000029*
		Emissions Factors:		0.301021	0.740109	0.800000	*1.024011*
Summed Jun-Aug NOx Emissions:			208.079807	116.981945	96.102175	57.484251	43.076527
Summed Jun-Aug VOC Emissions:			139.917899	98.699405	92.844098	87.942849	71.470465
Pollutant			**2016**	**2023**	**2026**	**2032**	**2036**
Ozone Season Day (OSD) NOx Emissions			2.2617370	1.2715429	1.0445889	0.6248288	0.4682231
Ozone Season Day (OSD) VOC Emissions			1.5208467	1.0728196	1.0091750	0.9559005	0.7768529

2036 Annual Emissions (Tons) in italics were determined using the methodology described in Section IV., D.

Appendix B: Interagency Memorandum of Agreement For 8-Hour Ozone In Crittenden County

MEMORANDUM OF AGREEMENT
INTERAGENCY CONSULTATION PROCEDURES
FOR DEVELOPMENT OF THE STATE IMPLEMENTATION PLAN FOR 8-HOUR OZONE IN CRITTENDEN COUNTY, ARKANSAS AND THE DETERMINATION OF TRANSPORTATION CONFORMITY PURSUANT TO THE CLEAN AIR ACT AS AMENDED

I. General

The Federal Clean Air Act Amendments (CAA) of 1990 as codified in 42 United States Code (USC) §§7401 *et seq.* require each state to submit a revision to its State Implementation Plan for Air Quality by November 25, 1994, or within 12 months of an area's redesignation from attainment to nonattainment, if the State has not previously submitted such a revision. Pursuant to this requirement, the transportation conformity rules, as specified in 40 CFR part 93, subpart A (62 FR 43780) dated August 15, 1997 and amended through July 1, 2004 (69 FR 40004), are incorporated by reference with the exception of 93.105. The requirements of 93.105 are addressed in this Memorandum of Agreement (MOA).

This Memorandum of Agreement (MOA) describes the roles and responsibilities of each Agency and provides procedures for interagency consultation, coordination, and resolution of conflicts at the federal, state, and local levels as related to a State Implementation Plan (SIP) and Transportation Conformity determination.

The City of West Memphis acting as the transit provider (the City), Crittenden County (the County), the West Memphis Metropolitan Planning Organization (MPO), the Arkansas State Highway and Transportation Department (AHTD), the Arkansas Department of Environmental Quality (ADEQ), the Federal Highway Administration - Arkansas Division (FHWA), the Federal Transit Administration - Region 6 (FTA), and the United States Environmental Protection Agency - Region 6 (EPA) will undertake these consultation procedures in making conformity determinations on the West Memphis-Marion Area Transportation Study (WMATS) transportation plan, programs, and projects. In addition, the MPO, the City, AHTD, ADEQ, FHWA, FTA, and EPA will undertake these consultation procedures in developing applicable State Implementation Plans for Crittenden County.

II. Definitions and Abbreviations: (See Appendix A)

III. Interagency Consultation Procedures: General Factors

Representatives from the MPO, the City, the County, AHTD, and ADEQ will undertake an interagency consultation process with each other and with the FHWA, the FTA, and the EPA on the development of:

- The emission inventories, emission budgets and State Implementation Plan (SIP) revisions;
- Transportation Control Measures (TCMs) as required in the SIP;

- The MPO Long Range Transportation Plan (LRP), as defined by 23 CFR 450, and any amendments that may affect air quality conformity determinations;
- The Transportation Improvement Program (TIP) and any amendments involving regionally significant projects that trigger amendments to the LRP and, in turn, affect air quality conformity determinations;
- The LRP and TIP conformity determinations required by 40 CFR 93.104;
- Project-level conformity determinations;
- Interim Plan and TIP as needed in case of a conformity lapse; and
- Identification and definition of regionally significant projects.

A. General Consultation Procedures

1. The parties to this agreement will define the lead agency as the agency with statutory and/or regulatory authority over the specific task, activity, or responsibility required by 40 CFR Parts 51 and 93,23 CFR Part 450, and 49 CFR 613.

2. It will be the role and responsibility of each lead agency in the interagency consultation process to:
   - Coordinate the interagency consultation process with the agencies listed in Section I of this document;
   - Consult with the agencies listed in Section I of this document;
   - Send the agencies listed in Section I of this document the appropriate information requested for meaningful participation;
   - Request the agencies listed in Section I of this document to review and comment on information pertinent to the SIP development and conformity determination of the LRP and TIP; and
   - Notify the participating agencies of pertinent meetings during the development of the LRP, TIP, and projects.

3. Before taking any action, it will be the role and responsibility of each lead agency to:
   - Consider the comments of each agency that is a party to this agreement;
   - Respond to those comments per Section III.E. of this document;
   - Assure that their agency responds to comments before the record of any decision or action (e.g., conformity determination, SIP budget submission, etc.); and
   - Include comments and written responses in the record of any decision or action.

4. When not fulfilling the role and responsibilities of a lead agency, an agency will be referred to as a participating agency and it will be their role and responsibility to:
   - Confer with the lead agency and other participants in the consultation process;
   - Review and comment as appropriate (including comments in writing) on all proposed and final documents and decisions as requested by the lead agency;
   - Attend interagency consultation meetings in person or through conference call per the request of the lead agency;

- Provide information on any area of substantive expertise or responsibility (including planning assumptions, modeling, information on status of TCM implementation, and interpretation of regulatory or other legal requirements); and
- Provide technical assistance to the lead agency when requested.

B. Agency Roles and Responsibilities

1. The MPO will be the lead agency responsible for assuring the adequacy of the interagency consultation process with respect to the development of the LRP, TIP, and any amendments or revisions to these documents within the transportation planning boundary. The MPO will also be the lead agency responsible for assuring the adequacy of the interagency consultation process with respect to any MPO conformity determination under this rule. Specifically, the MPO will be responsible for:
    - Developing the LRP and TIP;
    - Developing transportation and socioeconomic data and planning assumptions and providing such data and planning assumptions to air quality agencies for use in air quality analysis to support a conformity determination of the LRP, TIP, and projects;
    - Identifying regionally significant transportation projects in the LRP and regional emissions budget test report and monitoring such projects;
    - Making the conformity determination on the LRP and TIP following review and comment by the City, AHTD, ADEQ, FHWA, EPA, and the public;
    - Developing the Interim LRP and TIP that includes exempt projects and TCMs within the MPO Boundary. The Interim Plan and TIP will be developed in accordance with the National MOU between USDOT and EPA on Transportation Conformity (See Appendix B);
    - Preparing the conformity determination report for the LRP and TIP, in cooperation with AHTD and the City;
    - Providing the opportunity for public comment and review on the LRP and TIP regional conformity determination in accordance with the MPO public involvement procedures developed pursuant to 23 CFR 450;
    - Evaluating any Transportation Control Measures (TCMs) transportation impacts;
    - Identifying system- or facility-based or other programmatic (non regulatory) TCMs that may be included in the SIP.

2. The Arkansas State Highway and Transportation Department (AHTD) will be the lead agency responsible for assuring the adequacy of the interagency consultation process with respect to the development of the Statewide Transportation Plan, the State Transportation Improvement Program (STIP), and any amendments or revisions to these documents. Specifically, the AHTD will be responsible for:
    - Developing VMT estimates and projections in accordance with reasonable professional practice;
    - Developing the Statewide Transportation Plan and STIP;
    - Distributing draft and final NEPA documents (involving Federal-aid highway funds) to other agencies;

- Reviewing and commenting on, in cooperation with the MPO and ADEQ, proposed revisions to motor vehicle emission factors including fleet mix, fleet age, and the effectiveness of inspection and maintenance programs if such programs are required;
- Making project level conformity determination for projects outside the MPO study area boundary but within the non-attainment area.

3. The Arkansas Department of Environmental Quality (ADEQ) will be the lead agency responsible for assuring the adequacy of the interagency consultation process with respect to the development of the applicable State Implementation Plan (SIP) and control strategy implementation plan revisions. Specifically, the ADEQ will be responsible for:
   - Developing emission inventories;
   - Developing emission budgets;
   - Conducting emission tests (inside and outside the MPO Planning Boundary);
   - Conducting attainment demonstrations which may include airshed modeling;
   - Revising control strategy implementation plans as needed;
   - Developing TCMs, as necessary, in cooperation with the MPO, the transit provider, and the AHTD;
   - Updating and developing motor vehicle emissions estimates with data supplied by AHTD and the MPO;
   - Allocating mobile emissions budgets to the MPO and AHTD as developed from cooperative planning by the working group to determine future mobile activities in the non-attainment area; and
   - Reviewing the LRP conformity determinations, LRP/TIP consistency reports, TIP conformity determinations, and TCMs to ensure they are consistent with SIP air quality objectives and budgets.

4. The Federal Highway Administration - Arkansas Division (FHWA) will be the lead agency responsible for:
   - Providing guidance to the MPO, the City and AHTD on 23 CFR Part 450 and 771 and 49 CFR 613, federal project funding, and other federally-mandated requirements and programs that pertain to the Federal-aid highway programs;
   - Coordinating with the EPA Region 6 Office on the validity of regional emissions budget tests and the MPO conformity determinations on LRP and TIP;
   - Approving the STIP, jointly with FTA, that incorporates the approved conforming TIP before federal project funding authorizations;
   - Responding with a USDOT action on the MPO's conformity determination on the LRP and TIP within 60 days of receipt of the supporting documentation, with copies to the MPO, the City, the County, AHTD, ADEQ, FTA, and EPA, unless otherwise agreed to;
   - Making project level conformity determination for FHWA funded projects; and
   - Coordinating with FTA for transportation planning and programming in accordance with the Joint Memorandum of Agreement between Federal Highway

Administration – AR Division and Federal Transit Administration – Region 6 signed July 30, 2004 (See Appendix C).

5. The Federal Transit Administration – Region 6 (FTA) will be the lead agency responsible for:
   - Providing guidance to programs that pertain to the Federal-aid transit program;
   - Approving the STIP, jointly with FHWA, that incorporate the approved conforming TIP before federal project funding authorizations; and
   - Making project level conformity determinations for FTA funded projects.

6. The United States Environmental Protection Agency - Region 6 (EPA) will be the lead agency responsible for:
   - Reviewing and approving the SIP, SIP revisions, and TCMs; establishing original and/or updating emissions budgets;
   - Providing guidance on the transportation conformity criteria and procedures (40 CFR Parts 51 and 93) to the agencies in the interagency consultation process;
   - Providing comments to FHWA and the MPO on conformity determinations for the LRP and TIP within 30 days of receipt of the supporting documentation from FHWA, unless otherwise agreed to.

C. Interagency Consultation Meetings

1. Statewide Interagency Consultation Meetings

AHTD and ADEQ will initiate interagency consultation meetings among the AHTD, ADEQ, the MPO, the City, the County, FHWA, FTA, and EPA on policy issues that affect transportation planning and programming, air quality planning, and conformity. The above agencies will convene these interagency consultation meetings on policy issues at least quarterly, unless otherwise agreed. AHTD and ADEQ will decide cooperatively when to convene interagency consultation meetings and will cooperatively establish the agenda for each meeting. AHTD will take responsibility for scheduling and notification of the meeting, publishing the agenda, and recording and distributing meeting minutes.

2. Subject/Area Specific Interagency Consultation Meetings

The lead agency on a specific issue or subject (TIP or LRP conformity determination, developing an Interim Plan and TIP, TCMs, emissions budgets, SIP revisions, etc.) will initiate interagency consultation meetings with the other agencies party to this agreement as needed.

D. Interagency Review and Comment

1. Distribution of Draft Documents for Review and Comment Before Formal Adoption

   a. LRP and TIP Conformity Determinations

      - The MPO will send the draft conformity determination report on the LRP to the City, the County, AHTD, FHWA, EPA, and ADEQ before submitting the report to the public for review or making an LRP conformity determination.

- The City, the County, AHTD and ADEQ will have a 21-day technical review and comment period.
- The MPO will address comments received from ADEQ in the Appendix of the conformity determination report before submitting the report to the public for review or making a conformity determination.
- In addition, the MPO will send written correspondence to the ADEQ Air Division Chief addressing ADEQ comments.

b. State Implementation Plan Revisions
- ADEQ will send a draft mobile emissions budget; mobile, control strategy, implementation plan; and changes to the conformity SIP, and TCMs to the MPO, the City, and AHTD for a technical review and to FHWA, FTA, and EPA for informational purposes. The reviewing agencies will have a 21-day technical review period.
- ADEQ will then address the written comments received from the agency review and prepare the draft documents to present to the MPO Policy Committee.
- ADEQ will send the MPO, the City, and AHTD the documents that are made available for public hearing and public comment at the time of the announcement of the public comment period. The agencies will have until the end of the public comment period to provide additional comments on the document.
- ADEQ will address all comments received during the public comment period, prior to final adoption of the SIP.

c. Project Level Conformity Determinations (outside the MPO Boundary)
- AHTD will send the draft conformity determination report on projects outside the MPO boundary to the City, the County, MPO, FHWA, FTA, EPA, and ADEQ before submitting the report to the public for review or making a conformity determination.
- The City, the County, MPO and ADEQ will have a 21-day technical review and comment period.
- AHTD will address comments received from ADEQ in the Appendix of the conformity determination report before submitting the report to the public for review or making a conformity determination.
- In addition, AHTD will send written correspondence to the ADEQ Air Division Chief addressing ADEQ comments.

2. Distribution of Final Documents to Federal Agencies for Review, Comment, and USDOT Determination (LRP and TIP Determination)

a. Transmittal

i. The MPO will transmit the final conformity determination resolution and report as described below:
- Five (5) copies to AHTD – Planning and Research Division
- Two (2) copies to ADEQ – Air Division
- One (1) copy to EPA
- One (1) Original and One (1) copy to FHWA

- One (1) copy to FTA

ii. The MPO will also upload to the WMATS Yahoo website the final conformity determination resolution and report.

b. FHWA will allow 30 days for EPA review and comment on the documentation before making a USDOT conformity determination on a LRP or TIP.

c. USDOT will make a conformity determination upon receipt and resolution of all interagency comments on an LRP and TIP.

d. USDOT will attempt to provide the MPO with a conformity determination within 60 days of receipt of the conformity determination documentation from the MPO.

e. FHWA will notify the MPO and AHTD if the federal agencies need additional information to determine conformity on the LRP or TIP.

3. Distribution of Final Documents to Federal Agencies for Review, Comment, and USDOT Determination (project level conformity determination)

a. Transmittal

i. AHTD will transmit the final project level conformity determination and report as described below:

- Two (2) copies to MPO
- Two (2) copies to ADEQ – Air Division
- One (1) copy to EPA
- One (1) Original and One (1) copy to FHWA
- One (1) copy to FTA

ii. AHTD will also upload to the WMATS Yahoo website the final project level conformity determination report.

b. USDOT will allow 30 days for EPA review and comment on the documentation before making a USDOT conformity determination on the proposed project.

c. USDOT will make a conformity determination upon receipt and resolution of all interagency comments on the proposed project.

d. USDOT will attempt to provide the AHTD with a conformity determination within 60 days of receipt of the conformity determination documentation from the AHTD.

e. USDOT will notify the AHTD if the federal agencies need additional information to determine conformity on the proposed project.

E. Response to Agency Comments

The lead agency responsible for the final documents subject to the interagency consultation process outlined in this MOA, will respond to significant comments of the participating

agencies in the interagency consultation process. The lead agency will make any significant comments and responses from the agencies part of the record of decision or action. Examples of final documents are: regional emissions reduction and/or budget test report, the MPO conformity determination on the LRP or TIP, Interim Plan and TIP, SIP revisions, and a list and schedule of implementation of TCMs.

F. Distribution of Final Documentation

The lead agency will provide a copy of the final document that is a product of this consultation process and any pertinent supporting documentation to each participating agency within 21 days upon approval or adoption of the document or conformity determination. Examples of final documents are: applicable mobile emissions budgets from the approved SIP, emissions factors, the LRP and TIP conformity determinations and corresponding reports, and the Interim Plan and TIP.

IV. Interagency Consultation Procedures: Specific Consultation Processes

A. Air Quality Planning

1. Developing the List of Transportation Control Measures (TCMs)

The MPO and AHTD will work with the City and ADEQ and coordinate through the MPO Policy and Technical Committees to develop the approved list of TCMs that go into ant applicable control strategy SIP that may be developed. The MPO, the City, and the AHTD must endorse any TCMs that require state or federal transportation funds in order to implement.

2. Evaluating TCMs in the SIP

The MPO, MPO Technical Committee, the City, AHTD, will coordinate with ADEQ to determine the status, implementation problems, and to resolve problems with any TCMs.

3. Determining Transportation Inputs to the Emission Budget

The MPO, the City, and AHTD will work with ADEQ to determine transportation inputs, including base and future year VMT, speed assumptions, and vehicle mix assumptions used in the development of the mobile emission budget.

4. Developing the Conformity SIP Rule

ADEQ will work with the MPO, AHTD, and the City to develop the Conformity SIP rules that apply to nonattainment areas within Arkansas but outside the MPO planning boundary.

B. Transportation Planning

1. Forecasting VMT

The MPO and AHTD will forecast VMT based on reasonable professional practice. The forecast methods must be reviewed, agreed upon, and documented through the Interagency consultation process.

2. Determining Regionally Significant Projects

The MPO will engage in consultation with the participating agencies on their identified list of regionally significant projects through the process described in section III.D.1.a. and III.D.2.a. of this MOA. The MPO and the City will cooperatively identify regionally significant projects for inclusion in the regional emissions reduction and/or analysis and conformity determination reports on their LRP and TIP. AHTD will identify regionally significant projects outside the MPO study area for inclusion in the regional emissions analysis.

3. Determining Exempt Projects
   The MPO and the City will identify projects exempt from the regional emissions reduction and/or budget test requirement (40 CFR §93.126 and §93.127) in their report documenting the MPO conformity determination on their LRP and LRP/TIP consistency reports. The MPO will engage in consultation with the participating agencies on their identified list of exempt projects through the process described in section III.D.1.a. and III.D.2.a. of this MOA.

4. Notification of LRP and TIP Amendments on Exempt Projects
   The MPO will notify the participating agencies via the MPO Policy and Technical Committees meeting agenda mailings of the LRP and TIP revisions or amendments that merely add or delete exempt projects listed in 40 CFR §93.126 or §93.127.

5. Evaluating the Need for New Conformity Determinations
   a. LRP and TIP Amendments
      The MPO will coordinate through written correspondence with the participating agencies when a TIP/LRP amendment occurs which may trigger the need for a new conformity determination.

   b. Adoption of a new TIP
      The MPO will develop a report, which demonstrates the consistency between the LRP and TIP when a new or amended TIP is adopted. The MPO will follow the procedures outlined in Section III.D.1.a. and III.D.2.a. of this MOA for coordination with the participating agencies.

   c. Adoption of a new LRP
      The MPO will coordinate through written correspondence, and meetings as needed, with the participating agencies during the alternatives testing phase of the long-range planning process. In addition, the MPO will coordinate through written correspondence, and meetings as necessary, with the participating agencies before the MPO adopts a new or amended LRP that triggers the need for a new conformity determination.

6. Evaluating Changes in Project Design Concept and Scope
   When a project's design concept and scope changes (decrease/increase in length by one mile or more, increase/decrease in number of lanes, change in project termini, substantial

increase/decrease in ridership, change in project timing, length, cross-section, etc.), it is the responsibility of the project sponsor to inform the MPO of the change.

The MPO, in coordination with the City, AHTD, ADEQ, FHWA, FTA, and EPA through either written or verbal correspondence, will determine the need for a new conformity determination.

The MPO will coordinate the comment process consistent with the adopted WMATS *Early Public Involvement Policy and Procedure* (See Appendix D). Proposed changes in project Design Concept and/or Scope will be published in a local newspaper and provided to all MPO member jurisdictions and MOA signatory agencies for a 15-day public comment period. At the end of the public comment period any comments will be provided to the Citizen Advisory Committee for review and additional comment. All comments on the proposed change and its impact on conformity will then be taken to the Policy Committee for consideration of any necessary LRP and TIP amendments.

The MPO will coordinate with the City, AHTD, ADEQ, FHWA, FTA, and EPA when a project's design concept and scope changes (e.g., etc.) in a way that may impact the need for a new conformity determination on the LRP and/or TIP.

7. Developing an Interim Plan and TIP
   The MPO will develop an Interim Plan and TIP consisting of TCMs included in an approved SIP and any exempt highway and transit projects that may advance during a conformity lapse. The MPO will send the draft Interim Plan and TIP to the City, AHTD, ADEQ, FHWA, FTA, and EPA for their concurrence. The agencies will have 30 days, unless otherwise agreed, to provide comments and their concurrence to the MPO. Upon the MPO's receipt of the concurrence of the participating agencies, the MPO Technical Committee will review and recommend approval to the Policy Committee. The MPO Policy Committee will take approval action on the Interim Plan and TIP. Projects will need to be included in the Interim Plan and TIP in order for FHWA and FTA to advance them during the conformity lapse.

V. Resolving and Appealing Disagreements

A. Resolution of Conflicts among ADEQ, AHTD, the transit agency, and the MPO on Air Quality and Transportation Conformity Activities.

1. Any conflict dealing with requirements under 40 CFR Parts 51 and 93 between the transit agency, AHTD, ADEQ, and the MPO that the staff of the involved agencies cannot resolve will be escalated within each agency. First, the City of West Memphis Community Planning Development Director (acting as the transit provider), AHTD Planning and Research Engineer, ADEQ Air Division Chief, and Chair of the MPO Technical Committee will meet to attempt to resolve any disagreement.

2. If these agency representatives cannot reach an agreement within one week of their meeting, they will escalate the dispute to the Mayor of West Memphis (acting as the transit provider), Director of Highways and Transportation for the Arkansas State

Highway and Transportation Department, the Director of the Arkansas Department of Environmental Quality, and the Chair of the MPO Policy Committee, or their designees.

3. ADEQ has 14 calendar days to appeal to the Governor after AHTD or MPO has notified the Director of the Arkansas Department of Environmental Quality of the resolution of his or her comments. If ADEQ appeals to the Governor, then the governor must concur in the final conformity determination.

4. The Governor may delegate his or her role in the process to another official or agency within the State, but not to the head or staff of ADEQ, AHTD, the MPO, the Arkansas Pollution Control and Ecology Commission, the Arkansas Highway Commission, or any agency that has responsibility for any of these functions.

B. Resolution of Conflicts between EPA and USDOT (FHWA and FTA) on Air Quality and Transportation Conformity Activities.
Any conflict dealing with requirements under 40 CFR Parts 51 and 93 between EPA and USDOT that the staff of the involved agencies cannot resolve will be resolved in accordance with the National Memorandum of Understanding between the U.S. Department of Transportation and the U.S. Environmental Protection Agency (See Appendix B).

VI. Public Involvement Procedures

A. MPO Conformity Determinations on LRP and TIP
The MPO will provide the opportunity for public review and comment according to the MPO's Public Involvement Procedures (See Appendix D) as developed pursuant to 23 USC 134. The MPO will include copies of written public comments they receive on a LRP/TIP consistency report in the final report approved by the MPO.

B. All Other Public Involvement
All public review and comment opportunities will be in conformance with respective signatory agency rules and requirements. Copies of written public comments received at any stage in the development of the final report will be included in said report.

VII. Extensions of Time

Interagency review and comment periods referenced in this document may be extended by the affected agencies. Extensions of time must be approved by a majority of the following: the Director of the Arkansas Department of Environmental Quality; the Director of the Arkansas Highway and Transportation Department; and the Chair of the MPO Policy Committee; or their designees. Extensions of time shall be documented in writing, either through meeting minutes or by formal agreement.

VIII. Modification of Agreement

This memorandum of agreement may be modified, amended, or revoked by agreement of all the parties hereto. All modifications, amendments, and revocations shall be in writing. All parties shall consent to such changes in writing.

IN WITNESS WHEREOF, the MPO, the City, the County, AHTD, ADEQ, FHWA-Arkansas, FHWA- FTA Region 6, and EPA Region 6 have executed this Memorandum of Understanding (MOA) as of _____ (date).

Crittenden County Judge

Chairman
West Memphis-Marion Area
Transportation Study Policy Committee

Mayor
City of West Memphis

Director of Highways & Transportation
Arkansas State Highway and Transportation Department

Director
Arkansas Department of Environmental Quality

Division Administrator
Federal Highway Administration
Arkansas Division

Regional Administrator
Environmental Protection Agency
Region 6

Regional Administrator
Federal Transit Administration
Region 6

LIST OF APPENDICES

Appendix A – Definitions and Abbreviations

Appendix B – USDOT and EPA National Memorandum of Understanding

Appendix C – Joint Memorandum of Agreement between FHWA and FTA for FTA Region 6

Appendix D - West Memphis – Marion Area Transportation Study *Early Public Involvement Policy and Procedure*

Appendix E – References

Appendix A – Definitions and Abbreviations

~ A ~

ADEQ: Arkansas Department of Environmental Quality
AHTD: Arkansas Highway and Transportation Department
Air shed Modeling: The method of using a simulation model to predict the reductions in ground level ozone concentrations that could be expected from emission reduction programs.
Attainment Demonstration: A method of showing that an area is in attainment of the National Ambient Air Quality Standards by monitoring emissions and/or modeling projected outcomes of SIPs and STIPs.

~ C ~

CAA: Clean Air Act (1970) as amended (42 USC 7401 *et seq.*)
CFR: United States Code of Federal Regulations
City: The City of West Memphis
Conformity Determination: Demonstrates that the total emissions projected for a long range transportation plan or transportation improvement program are within the emissions limits ("budgets") established by the air quality plan or State Implementation Plan (SIP), and that transportation control measures (TCMs) are implemented in a timely fashion. Conformity determinations demonstrate that planned transportation actions will not cause or contribute to a new violation of the National Ambient Air Quality Standards (NAAQS), delay the attainment of the NAAQS, or increase the frequency or severity of any existing violation of the NAAQS.
Conformity Lapse: The conformity determination for a long range transportation plan or transportation improvement program has expired, and there is no long range transportation plan or transportation improvement program.
Consistency Report: A report on the reliability or uniformity of successive results or events .
Control Strategy Implementation Plan: an implementation plan developed by the State air agency which contains specific strategies for controlling the emissions of and reducing ambient levels of pollutants in order to satisfy Clean Air Act requirements for demonstrations of reasonable further progress and attainment.
Control Strategy Implementation Plan: An implementation plan developed by the State air agency which contains specific strategies for controlling the emissions of and reducing ambient levels of pollutants in order to satisfy the Clean Air Act requirements for demonstrations of reasonable further progress and attainment.
County: Crittenden County

~ D ~

Decision Meeting:
USDOT: United States Department of Transportation

~ E ~

Emission Budget: The portion of the allowable emissions defined in the submitted or approved control strategy implementation plan, plan revisions, or maintenance plan for a certain date for the purpose of meeting reasonable further progress milestones or demonstrating attainment or maintenance of the NAAQS for any criteria pollutant or its precursors, allocated to highway and transit vehicle use and emissions.
Emission Budget Tests: Projected emissions from highway and transit usage must be less than or equal to the emissions limits for on-road mobile vehicles that are established by the SIP.
Emission Factors: Representative annual average values that relate the quantity of a pollutant emitted to an activity.
Emissions Inventory (ies): A comprehensive listing, by source, of the air pollutant emissions.
EPA: Environmental Protection Agency, also United States Environmental Protection Agency.

~ F ~

Fleet Age: The percentage distribution by model year of the on-road motor vehicle fleet. This can be on a county, state, or national basis.
Fleet Mix: The percentage distribution by vehicle type of the on-road motor vehicle fleet. This can be on a county, state, or national basis.
FHWA: Federal Highway Administration
FTA: Federal Transit Administration – Region 6

~ I ~

Interagency Consultation: The formal coordinating mechanism among transportation and air agency staffs and is central to the entire conformity process.
Interim TIP: An MPO can prepare an Interim plan and TIP in order to proceed with additional projects. An Interim/TIP would need to comply with the TEA-21 planning regulations and planning requirements, including public involvement.

~ L ~

Lead Agency: The agency with statutory and/or regulatory authority over the specific tasks, activities, or responsibilities as required by 40 CFR Parts 51 and 93, 23 CFR Part 450, and 49 CFR 613.
LRP (Long Range Transportation Plan): The strategy for the future of the area's transportation system, intended to provide the highest level of mobility and safety possible, and to meet the needs of economic development and quality of life into the future. The Long Range Transportation Plan must have a 20-year horizon. It must be developed in accordance with 23 CFR part 450.

~ M ~

MOA: Memorandum of Agreement
Modeling: Emissions data is gathered to create simulation models which can help to predict what air quality will be like in the future and what effect new regulations might have on air quality.
MPO: Metropolitan Planning Organization is that organization designated as being responsible, together with the State, for conducting the continuing, cooperative, and comprehensive planning under 23 USC 134 and 49 USC 5303; it is the forum for cooperative decision-making.
MPO Planning Boundary: The planning boundary as defined by the West Memphis-Marion Area Transportation Study Long Range Plan. That area which covers, minimally, the urban zones and the contiguous geographic areas likely to become urbanized within the twenty-year forecast period of the long-range transportation plan. For CAA nonattainment or maintenance areas, this boundary shall include at least the boundary of the nonattainment or maintenance area, unless otherwise provided by agreement between the MPO and the Governor per 23 CFR 450.310(f).
MSA: Metropolitan Statistical Area as defined by the United States Census Bureau

~ N ~

NAAQS: National Ambient Air Quality Standards are those standards established pursuant to Section 109 of the Clean Air Act.
NEPA: National Environmental Policy Act as amended (42 USC 4321 *et seq.)*
Non-attainment Area: The geographic region designated by EPA pursuant to the Clean Air Act as not meeting the NAAQS for any pollutant for which a standard exists.

~ P ~

Participating Agency: An agency that is not fulfilling the role and responsibilities of a lead agency.
Planning Assumptions: Factors and projections agreed to by the members of the Interagency Working Group for use in air shed and transportation modeling activities.
Policy Committee: Locally elected officials, representatives of the state highway agency, and the transit providers responsible for the Metropolitan Planning Organization activities
Programmatic Transportation Control Measures: An overall plan or schedule of non-regulatory measures used to achieve on-road emission reductions
Project Level Conformity: In carbon monoxide and particulate matter non-attainment and maintenance areas, additional localized or micro-scale analysis may be necessary to determine project level conformity for federally funded or approved highway and transit projects.

~ R ~

Regional Emission Analysis: is the part of a conformity determination that assesses whether the emissions produced by transportation activities are consistent with state, local, and federal air

quality goals. A regional emissions analysis considers the entire transportation network of a nonattainment area and calculates the emissions that will be generated by that transportation network at a given point in time.

Regionally Significant Projects: A transportation project (other than an exempt project in accordance with 40 CFR 93.126, 93.127) that is on a facility which serves regional transportation needs (such as access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc. or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed guide-way transit facilities that offer an alternative to regional highway travel.

Regulatory TCM: A TCM is any measure that is specifically identified and committed to in the applicable implementation plan that is either one of the types listed in section 108 of the CAA, or any other measure for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Notwithstanding the first sentence of this definition, vehicle technology-based, fuel-based, and maintenance-based measures which control the emissions from vehicles under fixed traffic conditions are not TCMs for the purposes of this subpart. Transportation Control Measures included in the State Implementation Plan that by their inclusion in a regulatory document must be implemented as a part of the attainment process.

Reviewing Agency: Those agencies required per 40 CFR 93.105 to be provided reasonable opportunity for consultation in development of conformity analyses, including at a minimum State air agencies, local air quality and transportation agencies, USDOT, and EPA. Representatives of the MPOs, State and local air quality planning agencies, State and local transportation agencies, and other organizations with responsibilities for developing, submitting, or implementing provisions of an implementation plan required by the CAA must consult with each other and with local or regional offices of EPA, FHWA, and FTA on the development of the implementation plan, the transportation plan, the TIP, and associated conformity determinations.

~ S ~

SIP: State Implementation Plan; see Control Strategy Implementation Plan
STIP: State Transportation Improvement Plan
STP: Surface Transportation Program

~ T ~

TCM (Transportation Control Measure): Transportation projects, programs, and activities designed to achieve on-road emission reductions by decreasing vehicle use or improving traffic flow and congested conditions. This can be regulatory or voluntary depending upon the method of implementation (regulatory if in the State Implementation Plan).

Technical Committee: A group populated by designees of the Policy Committee including all jurisdictions in a Metropolitan Planning Organization's planning boundary, the state highway agency, FHWA, and transit providers.
TIP (Transportation Improvement Program): A multi-year prioritized list of projects (3 years at a minimum) covering a metropolitan planning area, which is consistent with the metropolitan transportation plan, proposed to be funded or approved by FHWA or FTA. It must be developed in accordance with 23 CFR part 450.
Transit Provider: City of West Memphis
Transportation Planning Boundary: That area in which the agencies will perform its planning functions.
Travel Demand Model: A computer simulation program used as a tool to determine the impact of various projects (construction, retail, or employment) on travel in an area.

~ U ~

USC: United States Code

~ V ~

VMT: Vehicle Miles Traveled. Calculated the sum of the distances traveled by all motor vehicles in a specified region based on average annual traffic counts as collected, recorded, and reported by the Arkansas State Highway and Transportation Department.

~ W ~

WMATS: West Memphis-Marion Area Transportation Study
Written Correspondence: Formal correspondence transmitted through the U.S. Postal Service or other courier service, not to include e-mail or faxing.

U.S. Department of Transportation and U.S. Environmental Protection Agency

NATIONAL MEMORANDUM OF UNDERSTANDING BETWEEN THE U.S. DEPARTMENT OF TRANSPORTATION AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY

BACKGROUND

A number of transportation planning and conformity issues revealed the value that improved Federal agency coordination could add in identifying and resolving conformity issues and questions about transportation plan/transportation improvement program (TIP) status and specific project actions. Interagency coordination can minimize disruptions to the transportation planning and project development processes while ensuring that communities are making progress toward air quality compliance. In addition, the Environmental Protection Agency (EPA) and Department of Transportation (DOT), in coordination with the President's Council on Environmental Quality, agree that there is an obvious need to clarify the transportation conformity rule's provisions regarding projects that can proceed during a conformity lapse. Additional information is available in the FHWA/FTA June 18, 1999, guidance memorandum entitled, "Additional Supplemental Guidance for the Implementation of the Circuit Court Decision Affecting Transportation Conformity," and EPA's May 14, 1999, guidance memorandum entitled, "Conformity Guidance on Implementation of March 2, 1999, Conformity Court Decision."

Also important to this Memorandum of Understanding (MOU) is the fact that in 1998, Congress enacted an environmental streamlining provision, directing U.S. DOT and environmental agencies to streamline Federal highway and transit project development through a coordinated environmental review process (Section 1309 of TEA-21).

I. PURPOSE OF THIS AGREEMENT

The purpose of this national MOU is to ensure the proper implementation of the transportation conformity rule's provisions through better and more efficient EPA and DOT consultation in order to facilitate timely conformity decisions. It also ensures that integrated transportation and air quality planning and project development processes will be achieved in a timely way, through the transportation conformity and State Implementation Plan (SIP) development processes. This MOU also fulfills part of the January 16, 1998, agreement between DOT and EPA. The March 2, 1999, District of Columbia Circuit Court decision does not affect .the consultation provisions of this MOU. This MOU does not change any of the requirements in the metropolitan planning regulations, transportation conformity regulation (40 CFR parts 51 and 93), or National Environmental Policy Act (NEPA) provisions.

This national MOU provides an overall interagency coordination framework between EPA and DOT. The EPA and DOT field offices will use the national framework of this MOU, in addition to EPA and DOT regional/division MOU provisions that are supportive of the MOU's goals. The EPA and DOT field offices are encouraged to develop or update their regional/division MOUs in accordance with this framework. The EPA and DOT field offices are encouraged to use existing consultation/notification processes, such as the provisions included as part of the interagency consultation process, to implement the national MOU, whenever appropriate.

The EPA and DOT will carry out this MOU consistent with the statutory mandate to streamline environmental decisionmaking for Federal surface transportation projects and programs. In particular, conformity coordination and decisions will be carried out under the terms of the MOU on environmental streamlining, which was signed by seven Federal agencies in July 1999.

This national conformity MOU supersedes the "Memorandum of Understanding Between the Department of Transportation and the Environmental Protection Agency Regarding the Integration of Transportation and Air Quality Planning," which was signed on June 14, 1978.

II. GOALS OF THIS MOU

The DOT and EPA have identified several goals which will be addressed by this agreement or future policy memoranda, including:

- To support ongoing EPA and DOT consultation on conformity determinations to ensure the proper use of the conformity rule's provisions.
- To improve interagency consultation so that transportation planning, conformity, and project development issues are identified and resolved prior to a conformity lapse and freeze.
- To improve interagency consultation in the SIP development process, so that SIP measures that will reduce mobile source emissions are expeditiously implemented.
- To carry out conformity reviews consistent with NEPA streamlining efforts.

III. DOT AND EPA AGREE TO THE FOLLOWING:

A. Improved EPA and DOT Coordination: General

1. The DOT and EPA will notify each other when conformity determinations and SIPs are submitted. The EPA and DOT should also utilize existing opportunities and coordination of transportation and air quality planning activities among the Federal agencies through the interagency consultation processes for transportation conformity.

agency to comment on the conformity determinations of transportation plans, TIPs, (and on new conformity determinations required by plan/TIP amendments), and projects and on the transportation-related provisions of SIPs and Federal Implementation Plans (FIPs) within a reasonable, expedient and mutually agreeable time frame, such as within 30 days. All comments and responses to comments should be documented. The EPA and DOT field staff and managers will notify each other when issues arise, so that there will be a reasonable opportunity for discussion. This coordination will ensure that issues can be escalated to EPA and DOT Regional and Division Administrators when necessary. Details for achieving close coordination on conformity and SIP reviews should be determined collaboratively by individual EPA and DOT field offices. If such details are included in the existing interagency consultation process, they should be adopted.

3. If the issues remain unresolved and efforts to resolve the issues are exhausted between the affected EPA Regional Administrator and FHWA Division Administrator and FTA Regional Administrator, the issues must be escalated to EPA and DOT headquarters offices for the purpose of seeking resolution within 30 days, before DOT makes its final conformity determination or before EPA takes its approval action on the SIP or FIP. If both DOT and EPA agree, this time period may be extended. Ultimately, under the CAA it is DOT's affirmative responsibility to make the final conformity determination. Likewise, the ultimate responsibility for final approval action on the SIP and FIP rests with EPA.

4. Senior managers from FHWA, FTA, and EPA headquarters offices will meet semi-annually to discuss conformity and SIP issues and to evaluate the implementation of this national MOU. Meetings may be canceled if EPA and DOT agree that a meeting is unnecessary.

B. Implementation of Transportation Conformity and Transportation-Related SIP Requirements:

1. In the event of an impending conformity determination lapse, the project development process will not be accelerated for the purpose of approving projects so they can proceed during the lapse.

2. The DOT will no longer grant TIP extensions in nonattainment and maintenance areas.

3. The Clean Air Act and TEA-21 require that an integrated transportation/air quality planning process be used as the vehicle to identify effective transportation control measures (TCMs) and ensure their funding sources. Therefore, the procedures in Appendix A must be used, if the States propose to advance new TCMs during a conformity lapse.

C. Improved EPA and DOT Coordination: Prior to a Conformity Lapse and Freeze:

The following provisions will apply 6 months prior to an anticipated conformity lapse or when EPA has notified an area of a freeze, unless the EPA and FTA Regional Administrators and FHWA Division Administrator agree that additional Federal coordination is unnecessary:

1. The EPA and DOT field managers will meet periodically to discuss pending conformity determinations, transportation project development actions, and SIP deficiencies, as appropriate, for the particular nonattainment or maintenance area.

2. The EPA and DOT field managers will meet at least 90 days before an anticipated conformity lapse or freeze to determine which projects could receive funding commitments (plans, specifications, and estimates approval, full funding grant agreement, or an equivalent approval or authorization) before the lapse, which projects could potentially be delayed, and which actions are necessary to correct transportation-related SIP deficiencies prior to the lapse or freeze. The EPA and DOT meetings are encouraged more than 90 days before an anticipated conformity lapse or shortly after EPA has notified the State of the impending freeze. The EPA and DOT headquarters offices encourage their regional and division offices to negotiate more specific consultation procedures where appropriate. The EPA and DOT regions and divisions will exchange information necessary to facilitate timely discussions.

3. The EPA and DOT field offices agree to notify EPA and DOT headquarters offices if sub-section III.C. of this MOU is initiated. If it is anticipated that an issue cannot be resolved at the EPA and DOT Regional and Division Administrator levels, the issue must be escalated to EPA and DOT headquarters offices for the purpose of seeking resolution within 30 days of escalation, before the DOT regional or division office makes its conformity determination. If both DOT and EPA agree, this time period may be extended. Similar steps will be taken when a conformity lapse is caused or exacerbated by SIP issues.

4.

IV. AGENCY SIGNATURES

We commit that our agencies will adhere to the specific agreements outlined in this MOU. The DOT and EPA have worked closely in the development of this agreement, and both agencies look forward to the continued cooperative working relationship in the successful implementation of the SIP/FIP process, the metropolitan planning regulations (23 CFR part 450), the transportation conformity rule (40 CFR parts 51 and 93), and the NEPA process (42 U.S.C. 4321 et seq.).

This agreement is effective on 4/19/2000.

United States Department of Transportation:

(Original signed by)

Kenneth R. Wykle
Administrator
Federal Highway Administration

(Original signed by)

Nuria I. Fernandez
Acting Administrator
Federal Transit Administration

United States Environmental Protection Agency

(Original signed by)

Robert Perciasepe
Assistant Administrator for
the Office of Air and Radiation

Appendix A

Advancing New Transportation Control Measures During a Conformity Lapse

A. Interim Plan and TIP Requirements

Federal transportation law requires that projects must be in a plan and TIP to receive Title 23 and Title 49 funds. Therefore, in the event of a conformity lapse, an MPO must create an Interim Plan and TIP for any projects to be federally-funded and approved during the lapse, including exempt projects and transportation control measures (TCMs). The Interim Plan and TIP must be developed in a manner consistent with 23 U.S.C. 134, particularly these criteria:

1. The Interim Plan and TIP must be developed based on previous planning assumptions and goals; appropriately adjusted for currently available projections for population growth, economic activity and other relevant data.

2. The Interim Plan and TIP must be developed with public involvement consistent with the normal transportation plan and program development processes.

3. The Interim Plan and TIP must satisfy the Title 23 and 49 requirements for financial planning and constraint, and, as appropriate, for congestion management systems.

4. The Interim TIP must be approved by the MPO and the Governor (or the Governor's designee).

B. TCMs in a previously conforming Plan and TIP

Projects in the previously conforming transportation plan must be included in the Interim Plan and TIP if State and local agencies intend to request EPA to approve them into the SIP as new TCMs (as defined in 40 CFR 93.101 of the transportation conformity rule which includes TCMs defined by Section 108(f)(1)(A) of the Clean Air Act (CAA)) and if they have emission reductions benefits. The TCMs can not proceed during a conformity lapse until they are contained in an EPA approved SIP with identifiable emission reduction benefits. States may, but are not required to, apply the identified emission reduction benefits directly as SIP credits in control strategy SIPs and maintenance plans. Future conformity analyses may reflect the emission reduction benefits identified in the SIP for regionally significant TCMs; such emission reduction benefits must be adjusted to reflect latest planning assumptions (40 CFR 93.110) at the time of the conformity analysis, and as appropriate to meet the requirements of 40 CFR 93.122. For non-regionally significant TCMs, the emission reduction benefits identified in the SIP may be used for future conformity analyses; such emission reduction benefits must be adjusted to reflect latest planning assumptions (40 CFR 93.110) at the time of the conformity analysis, and as appropriate to meet the requirements of 40 CFR 93.122(a).

C. New TCMs not from a previously conforming Plan and TIP

New TCMs, not included in a previously conforming Plan and TIP, may be advanced during a conformity lapse provided they are included in an Interim Plan and TIP that meet the criteria in Section A and are contained in an EPA approved SIP with identified emission reduction benefits. They must also meet the following criteria:

1. They must be identified through the interagency consultation process (i.e., Federal, State, and local transportation and air quality agencies).

2. They must be described at a level of detail and analysis appropriate to their overall level of investment and complexity (i.e., regionally significant TCMs must be described and analyzed at a significant level of detail, appropriate to the scale of the project and adequate for emissions analysis purposes, while non-regionally significant TCMs may be presented in much less detail).

3. If regionally significant (as defined in 40 CFR 93.101), they must be shown to yield reduced emissions on a regional basis compared to regional emissions without the TCMs for the analysis period. The analysis period will include the SIPs milestone year(s) (if relevant), and the year the TCMs are open to traffic or become operational (if the TCMs's schedule is outside the SIP's time frame). Transportation and air quality planners must consult with each other on the methodologies used to estimate the transportation and air quality benefits of the regionally significant projects. Off-model analysis techniques must be used, to the

significant TCMs. Appropriate techniques will be decided through interagency consultation.

4. The TCMs will be submitted as a SIP revision to EPA for approval, and their emissions benefits must be identified to support EPA's approval into the SIP. TCMs can not proceed during a lapse until they are contained in an EPA approved SIP with identifiable emission reduction benefits. States may, but are not required to, apply the identified emission reduction benefits directly as SIP credits in control strategy SIPs and maintenance plans. Future conformity analyses may reflect the emission reduction benefits identified in the SIP for regionally significant TCMs; such emission reduction benefits must be adjusted to reflect latest planning assumptions (40 CFR 93.110) at the time of the conformity analysis, and as appropriate to meet the requirements of 40 CFR 93.122. For non-regionally significant TCMs, the emission reduction benefits identified in the SIP may be used for future conformity analyses; such emission reduction benefits must be adjusted to reflect latest planning assumptions (40 CFR 93.110) at the time of the conformity analysis, and as appropriate to meet the requirements of 40 CFR 93.122(a).

Under this scenario, the State and MPO may advance any TCMs defined by 40 CFR 93.101 of the transportation conformity rule (which includes TCMs defined by Section 108(f)(1)(A) of the CAA).

It is expected that the process necessary to develop Interim Plans and TIPs with new projects, not previously conforming, will take most areas at least 6 months. Areas which expect to return to conformity earlier than 6 months should concentrate on reestablishing conformity, rather than embarking on developing an Interim Plan and TIP, for new projects.

The DOT's planning regulations and EPA's conformity regulation will be amended to clarify the implementation of the TCMs processes outlined above.

Appendix C

See the Yahoo website:

http://groups.yahoo.com/group/WMATS/files/2%20-%20Interagency%20Agreement/

JOINT MEMORANDUM OF AGREEMENT (MOA)
BETWEEN THE OFFICES OF THE
FEDERAL HIGHWAY ADMINISTRATION (FHWA)
AND THE
FEDERAL TRANSIT ADMINISTRATION (FTA)
FOR ADMINISTRATION OF TRANSPORTATION
PLANNING AND PROGRAMMING IN THE
FTA REGION SIX AREA

Our Region has a long history of cooperation between FHWA and FTA staffs in the delivery of the two agencies' programs. This agreement for the coordination of program matters is an example of the agencies' cooperative efforts. The agreement, originally executed in 1991, prior to the passage of Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), has undergone several revisions in response to our customers' need for more streamlined Federal actions on the Unified Planning Work Program (UPWP), Transportation Improvement Program (TIP), Statewide Transportation Improvement Program (STIP), Metropolitan and Statewide Planning Findings, Certification of the Transportation Planning Process, Congestion Management Systems (CMS) and Intelligent Transportation Systems (ITS), Air Quality Conformity Findings, and Corridor Studies/Alternatives Analysis. This agreement is intended to strengthen the already strong working relationship of the two agencies in their efforts to fulfill the mutual responsibility for transportation planning and the programming of Federal funds. It is also meant to achieve maximum staff efficiencies through the elimination of duplicative reviews and actions thereby improving the quality of assistance to our customer's expectations, and improving our delivery of oversight responsibilities insofar as timeliness and consistency.

The FTA and the FHWA mutually agree to the following procedures for transportation planning activities in the FTA Region 6 areas (Arkansas, Louisiana, New Mexico, Oklahoma and Texas). Additionally, all parties agree to the tracking of performance measures as outlined in attachment A.

A. Review and Approval of Unified Planning Work Programs (UPWP)

Background

Section 134 of 23 U. S. C. establishes Federal requirements for metropolitan transportation planning. The regulations for implementing these provisions are contained in 23 C.F.R 450 and 49 C.F.R. 613 and include the requirement for submission of the UPWP.

Procedures

All UPWPs will be submitted by the State DOT to the FHWA Division Office and FTA Regional Office. Review, reconciliation of comments and action on the UPWPs will be accomplished within 30 days of receipt by FHWA and FTA.

Except for West Memphis, all Transportation Management Area (TMA) UPWPs will be concurrently reviewed by the FHWA Division and the FTA Regional Offices. The FHWA Division and FTA Regional staffs shall meet or teleconference as necessary to discuss and resolve any comments relevant to providing a joint response. The FHWA Division will prepare the draft letter and transmit it to the FTA Regional Office. The approval will be issued as a joint FTA Region/FHWA Division letter. The signatories may be as delegated for approval of the UPWP.

The FHWA Division will act as the Executive Agent for FTA for the review and approval of the UPWPs for all non-TMAs and for the West Memphis, Arkansas TMA. The FHWA Division shall consult with the FTA Region on unusual or potentially controversial transit related studies. The FTA Regional staff will advise the FHWA Division of any concerns within two weeks of receipt of the UPWP. The FHWA Division will provide the FTA Region with a copy of all UPWP approvals and correspondence. Any revisions to the UPWPs will be handled in a similar manner.

B. Approval of Statewide Transportation Improvement Programs (STIP)

Background

Section 135 of Title 23 U.S.C. establishes Federal requirements for statewide transportation planning. The regulations, 23 C.F.R 450 and 49 C.F.R 613, require that at least every two years the State will submit their proposed STIP to the FHWA and the FTA for joint approval prior to the obligation of Federal funds made available to the State under Title 23 and the Federal Transit Act. These regulations also require that the State include with their proposed STIP a certification that the transportation planning process is being carried out in accordance with the requirements listed in the regulations.

Procedures (STIP)

The State will submit their proposed STIP to the FHWA Division Office and FTA Regional Office for review and approval. The STIP shall be reviewed for compliance with the requirements of Section 135 and the regulations in 23 C.F.R 450. This joint review shall include, but not be limited to, the requirements on air quality conformity, public involvement, fiscal constraint, inclusion of all Title 23 and Federal Transit Act funded projects including metropolitan and Federal Lands TIPs, and the acceptability of the State's certification that the transportation planning process is being carried out in accordance with all applicable requirements of §450.220(a).

The FHWA Division and the FTA Regional Office shall meet or teleconference as necessary to discuss and resolve any comments relevant to providing a joint approval of the State's STIP. This joint review effort will be documented in the form of a "Joint Record of Review" compiled by the FHWA Division Office and processed as outlined in the section of this agreement pertaining to TIP Federal findings. This "Joint Record of Review" shall form the official record

documenting the FHWA/FTA joint review efforts on the STIP. The FTA Regional Administrator and the FHWA Division Administrator (or their designee), will take joint action as described by 23 C.F.R 450.220 based on the comments listed in the "Joint Record of Review." A draft action letter will be prepared by the FHWA Division Office and sent to the FTA Regional Office for coordination. Notification of the action taken for the STIP will be forwarded to the State by the FHWA Division Administrator. Initial STIP comments will be prepared by U.S. DOT within 30 days of receiving the STIP. Final action by U.S. DOT on the STIP will be within 60 days after receiving the STIP from the State assuming initial comments have been addressed.

(STIP Amendments)

Depending on the nature of the proposed STIP Amendment, the STIP Amendment may be acted upon jointly by FHWA and FTA in a manner similar to that described above, or it may be acted upon unilaterally by either FHWA or FTA. If the amendment is for highway projects only, then FHWA will take unilateral action. If the amendment is for transit projects only, then FTA will take unilateral action. For unilateral actions, the State DOT will submit the STIP amendment only to the appropriate Federal agency for action.

C. Federal transportation planning finding for TIPs

Background

23 C.F.R 450.320 requires a joint Federal finding that the TIP for each metropolitan planning area is the product of a continuing, comprehensive transportation planning process carried on cooperatively by the State, Metropolitan Planning Organization (MPO), and transit operator, in accordance with 23 U.S.C. 134 and 49 U.S.C. 5303 of the Federal Transit Act. The finding shall be based on the self-certification by the State and the MPO under 23 C.F.R 450.334 and upon other reviews as deemed necessary by FHWA and FTA.

Procedures

For each metropolitan planning area, the FHWA Division Office and the FTA Regional Office will review the status of the transportation planning process prior to approval of the STIP. The review shall include, but not be limited to, the State/MPO self-certification required by 23 C.F.R 450.334(a), the existence of an approved transportation plan that appropriately addresses the planning factors, the adequacy of the public involvement process, the reasonableness of the financial plan, relationship of projects in the TIP to long range transportation plan, air quality conformity of transportation plans and TIP, and satisfaction of the Congestion Management System (CMS) requirements in carbon monoxide (CO) and ozone non-attainment TMAs.

In a TMA designated as non-attainment for CO and/or ozone, the CMS shall provide an appropriate analysis of all reasonable (including multimodal) travel demand reduction and operational management strategies for the corridor in which a project that will result in a significant increase in capacity for single occupancy vehicles (adding general purpose lanes to an existing highway or constructing a new highway) is proposed.

The FHWA Division Office and the FTA Regional Office will evaluate each metropolitan planning process based on previous reviews, attendance at meetings, review of the UPWP, discussions, etc. A Joint Record of Review will be prepared by the FHWA Division Office. The FHWA Division Office will sign the Joint Record of Review and forward the document to FTA.

The FTA will concur, concur with additional comments, or advise the FHWA Division Office of any significant concerns. The FHWA Division and FTA Regional Offices shall meet or teleconference as necessary to discuss and resolve any significant concerns relevant to the joint finding. The FTA will sign the Joint Record of Review and return the document to the FHWA Division Office for distribution. This Joint Record of Review shall form the official record documenting the joint review efforts on the transportation planning process necessary for the FHWA/FTA finding that the TIPs contained in the STIP for the State are based on a continuing, comprehensive, transportation planning process carried on cooperatively by the States, MPOs, and transit operators, in accordance with the provisions of 23 U.S.C. 134 and 49 U.S.C. 5303 of the Federal Transit Act.

D. Air Quality conformity reviews and conformity determinations for Metropolitan Transportation Plans (MTPs) and Transportation Improvement Programs (TIPs) in metropolitan planning areas designated non-attainment or maintenance under the Clean Air Act.

Background

Section 176(c) of the Clean Air Act established conformity requirements for metropolitan transportation plans, TIPs, and projects in areas designated as non-attainment or maintenance. Section 176(d) of the Clean Air Act established priority requirements for programs supported by the Federal Government in order to provide for timely implementation of eligible portions of air quality plans. Section 109(j) of 23 U.S.C. established consistency requirements to assure that highways are consistent with approved plans for air quality.

Procedures

The FHWA will serve as Executive Agent for FTA on all actions, reviews and meetings required to fulfill their mutual responsibility for Air Quality Conformity Findings. FHWA Division Offices will conduct reviews of conformity determinations for plans, TIPs and amendments, and provide guidance to the States and MPOs. When the review of conformity determinations for Transportation Plans and TIPs has been completed by the MPO and State DOT; the State DOT will provide U.S. DOT and Environmental Protection Agency (EPA) with copies of the conformity determinations along with plans and/or programs and other pertinent documents. EPA will normally be given 30 days for their review and comment. U.S. DOT will meet or teleconference with EPA as necessary to resolve pertinent comments that may result from the concurrent reviews. The FHWA Division Administrator (or designee) will make a conformity finding upon completion of the review by U.S. DOT and resolution of pertinent comments by

EPA. Information copies of all Air Quality conformity actions and correspondence will be provided to the FTA Regional Office and the EPA Regional Office. FHWA Division offices will keep the FTA Region office informed of the progress and relevant issues during the conformity review process.

E. Certification of Transportation Management Area (TMA) Transportation Planning Process

Background

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), and The Transportation Equity Act for the 21st Century (TEA-21) requires a joint FHWA/FTA certification of the transportation planning process for all Transportation Management Areas (TMAs) at least every three years. A joint certification review along with other documentation and site visits is the basis used for determining that the transportation planning process in a TMA meets or substantially meets the requirements of 23 C.F.R Part 450.

Procedures

The certification review of all TMAs will be a joint effort between the two agencies. A review team consisting of FHWA Division and FTA Regional Office personnel will be identified for each review. If necessary, other technical expertise will be added to the team. Either the FHWA Division or FTA Regional Office representative will be designated as the lead or co-lead for the review. The lead or co-lead agency will be responsible for scheduling the review, obtaining the material for the desk audit, logistics for the review, preparation of the agenda, determining the lead for the topics to be discussed, closeout after the review, preparation of the draft report, circulation to other Federal team members for comments, external circulation of the report to MPO, transit operator, State DOT, and other appropriate participants for review of factual accuracy.

Assignment of lead or co-lead agency responsibility will be determined based upon an evaluation of staff workload, modal interest and the complexity of the issues in an individual TMA. The schedule and assignments for certification reviews will be developed by the FTA Regional and FHWA Division Offices by July 1st for the next fiscal year. Topics for the on-site review will be developed jointly by FHWA and FTA, based on emphasis areas and issues of concern in the specific TMA including (at a minimum) the items in this MOA as well as CMS and ITS.

Certification of the TMAs will be by the FTA Regional and the FHWA Division Administrators. The final report (certification) of the review will be completed within 90 days of the on-site visit. The presentation of findings will be done jointly by FHWA and FTA, and will take place within 60 days of the issuance of the final report or at the next MPO policy committee meeting.

F. Corridor Studies/Alternatives Analysis

Background

All major transportation investments must emerge from a multimodal transportation planning process in order to be eligible for Federal funding. As part of the planning process, local project sponsors may perform a corridor level analysis of mode and alignment alternatives in corridors for which projects may be proposed. Corridor studies/alternatives analysis is a key planning tool undertaken within the multimodal metropolitan and statewide planning processes, supplemented by subsequent project development analyses, for determining appropriate solutions to transportation challenges.

Procedures

Each agency will participate in a corridor study/alternatives analysis until modal issues are clear and/or a DOT lead agency can be determined by agreement between the two agencies. Either agency may serve as DOT lead, dependent upon the issues involved and the relative predominance of the mode. The environmental work will remain with the identified modal agency. If an agency determines that there are no reasonable alternatives involving their modal interest, the agency may advise the study/analysis sponsor that the other party to this agreement will serve as DOT lead for the remainder of the study. Regardless of which U.S. DOT agency serves as lead for the study, every effort will be made to link planning and National Environmental Policy Act of 1969 as well as striving to streamline the environmental process.

G. Consolidated Planning Grant and Electronic Signatures

The Consolidated Planning Grant (CPG) is a joint effort by the FHWA and FTA to create a single federal grant process for the respective transportation planning programs, thereby streamlining the administrative process to our customers. In FY 2004, FTA Region 6 has one CPG, which is in the state of Arkansas, and is administered by FTA. All parties agree to revisit the CPG concept in each respective state, and work towards implementing additional CPGs within Region 6.

Likewise, all parties to this agreement are in favor of implementing electronic signatures for all appropriate planning products, thereby further streamlining the planning process for our customers. A task force will be formed to research the requirements of having electronic signatures.

This agreement may be canceled by mutual agreement of all parties or by a 30-day written notification of any signatory.

The effective date of this MOA is September 1, 2004.

Robert C. Patrick
Regional Administrator
Federal Transit Administration

C. D. (Dan) Reagan
Texas Division Administrator
Federal Highway Administration

William A Sussmann
Louisiana Division Administrator
Federal Highway Administration

Sandra L. Otto
Arkansas Division Administrator
Federal Highway Administration

Walter Kudzia
Oklahoma Division Administrator
Federal Highway Administration

Don Martinez
New Mexico Division Administrator
Federal Highway Administration

Attachment A – Tracking Performance Measures

Planning Topic	Lead Agency	Performance Measure	Actual Performance Measure
UPWP	FHWA/FTA	30 days	
STIP	FHWA/FTA	30 days – Initial Comments	
STIP	FHWA/FTA	60 days – Final Approval	
TIP Planning Findings	FHWA/FTA	60 days (concurrent with STIP approval)	
Certification Reviews – Final Report	FHWA/FTA	90 days from on-site review	
Certification Review – Presentation	FHWA/FTA	Within 60 days of final report	

EARLY PUBLIC INVOLVEMENT POLICY AND PROCEDURE

INTRODUCTION

Public involvement is a key component of any planning process. Every person must have the opportunity to take part, feel entitled to participate, welcome to join in, and able to influence the transportation decisions made by the West Memphis-Marion Area Transportation Study (WMATS).

Federal regulations for MPO transportation planning (23 CFR Part 450.316(b)(1)) require there be a proactive public involvement process that provides complete information, timely public notice, full public access to key decisions, and supports early and continuing involvement of the public in developing plans and programs. A deliberate and concerted effort, as provided in this plan, is necessary to ensure adequate public involvement opportunities exist throughout the WMATS area.

This requirement was a critical part of the Intermodal Surface Efficiency Act of 1991 (ISTEA) and continues as such under the Surface Transportation Extension Act of 2004, Part V.

PREVIOUS WORK AND ACCOMPLISHMENTS

An advisory committee was formed in 1974, as part of the West Memphis-Marion Area Transportation Study. The advisory committee was formed in an attempt to involve the public in making decisions about how to allocate federal transportation funds in the metropolitan area. In a continuing effort to meet this objective, this advisory committee was reconstructed in April 1984, and again in April 1993. Efforts continue to mobilize this committee in order to provide maximum public involvement in MPO activities, to ensure an understanding of the transportation planning process by the citizens within the study area through education and information, and to gather and incorporate public input from a cross sectional representation of the county, various cities and towns, minority groups, and other groups within the study area.

According to the MPO bylaws, the chairperson of the West Memphis Transportation Policy Committee appoints the chairperson of the Citizens Advisory Committee for one year. Additionally, the Citizens Advisory Committee meets on a call basis to review various aspects of the planning process, most particularly the TIP and LRP. A quorum constitutes those present and a majority of those present will be needed to pass any resolution. The duties and responsibilities of the Citizens Advisory Committee are as follows:

> Review community values and goals of the Urban Transportation System and make appropriate recommendations to the West Memphis Transportation Policy Committee;

Review trends in the transportation industry and advise the other committees of the possible effects upon the approved transportation system and recommend solutions;

Identify functional problems within the existing transportation system and recommend solutions; and,

To provide further understanding and information, the chairperson of the Citizens Advisory Committee is invited and encouraged to attend the MPO Policy and Technical Committee meetings.

TITLE VI AND ENVIRONMENTAL JUSTICE

As the transportation planning process evolved through ISTEA and TEA-21 a renewed emphasis was given to Title VI of the Civil Rights Act of 1964 and environmental justice. Title VI declares:

"No person in the United States shall, on the basis of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

- *Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000)*

President Clinton's 1994 Executive Order 12898 to address environmental justice concerns provided additional reinforcement to Title VI and requires:
"Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

- *Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 1994*

Agencies that use federal funds, such as HATS, also must make a meaningful effort to involve low-income and minority populations in the process of making decisions regarding the use of those federal funds.

In support of Executive Order 12898, the United States Department of Transportation (DOT) issued an Order on Environmental Justice (DOT Order 5610.2) in 1997. The Federal Highway Administration (FHWA) followed with an Order on Environmental Justice (FHWA Order 6640.23) in 1998 to establish policies and procedures for compliance with Executive Order 12898.

The FHWA Order established three fundamental environmental justice principles:

1. To avoid, minimize, or mitigate disproportionately high and adverse human health and

environmental effects, including social and economic effects, on minority populations and low-income populations.

2. To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.

3. To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

Executive Order 12898 and the DOT and FHWA Orders on Environmental Justice address persons belonging to any of the following groups:

- **Black** - a person having origins in any of the black racial groups of Africa.
- **Hispanic** - a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
- **Asian** - a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent.
- **American Indian and Alaskan Native** - a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition.

OMB, in its Bulletin No. 00-02, "Guidance on Aggregation and Allocation of Data on Race for Use in Civil Rights Monitoring and Enforcement," issued March 9, 2000, provided guidance on the way Federal agencies collect and use aggregate data on race.
Added to the previous standard delineations of race/ethnicity was the category of:
- **Native Hawaiian or Other Pacific Islander** - a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- **Low-Income** - a person whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines.
- **Adverse effects** – the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness, or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion, or separation of minority or low-income individuals within a given community or from the broader community; the denial of, reduction in, or significant delay in the receipt of, benefits of DOT programs, policies, or activities.

Disproportionately high and adverse effect on minority and low-income populations- (1) is predominantly borne by a minority and/or a low-income population, or (2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or

non-low-income population.

WMATS will define non-discriminating plans and programs through inclusive and continuing public involvement. The manner of involving the public will change from one plan or program to the next since there is no 'one-size-fits-all' standard. WMATS will remain flexible and adaptable in this respect. Meeting the literal requirements of the law is the minimum acceptable level of effort, but experience has proven genuine public input demands more than the minimum accepted by regulations. This public involvement plan provides for a variety of methods to be used by WMATS as particular or unique local circumstances warrant. WMATS public involvement efforts will produce: non-discriminating transportation plans and programs responsive to public input; and, an engaged and informed citizenry of all socioeconomic, racial and ethnic backgrounds in matters of regional transportation planning; and, a sustained dialogue between the people and the transportation policymakers of the WMATS region.

Not only can public involvement improve the quality of decisions, but also effectively resolve conflict among competing interests, build trust, and educate and inform both the general public and policy-makers alike.

OVERVIEW OF PUBLIC NOTICE AND ACCESSIBILITY ...

All WMATS meetings are open to the public and advertised in the local newspaper and on the MPO web site at least 72 hours in advance of the meeting. An initial fifteen (15) day comment period is advertised at the beginning of the planning process to ensure that the public has the opportunity to comment and make recommendations on the proposed plan(s) and program(s) to be developed or revised. Following that time and after the draft development of the plan(s) or program(s), a thirty-day public review and comment periods are held prior to the adoption of WMATS transportation plans and programs. In the case of the Long Range Transportation Plan and Conformity Determination Reports, formal public meetings are held prior to the adoption by the MPO Policy Committee. Those formal public meetings are advertised at least 2 weeks in advance. Legal notices indicate where copies for review can be obtained and where to send comments. When comments are received, a summary, analysis, and report on the disposition of all comments is discussed at the WMATS Citizens Advisory Committee and Technical Coordinating Committee meetings and made part of the final document. When the final document differs significantly from the one that was made available for public comment or raises new issues, an additional opportunity for public comment is provided. All meetings are held in places accessible to disabled individuals.

PLANS AND PROGRAMS

These public involvement guidelines are mainly concerned with the twenty-year (minimum) **Long-Range Plan** (LRP), and the short-range **Transportation Improvement Program** (TIP) and the corresponding conformity determinations and, this document, the **Early Public Involvement Policy and Procedures** (EPIP). However, it is the policy of the West Memphis MPO to advertise the development of other policy documents and plans such as the Unified

Planning Work Program (UPWP) to the public and to discuss the initial development and drafts of such documents at called Citizens Advisory Committee meetings whenever possible.

The **Long-Range Transportation Plan** (LRP) provides for the future transportation in the MPO study area by identifying needs and establishing priorities. This minimum twenty-year plan includes a transportation plan that supports the social, economic, environmental, and energy goals of the region, a narrative describing the planning process, a financially constrained project list, various maps supporting project selection, and maps indicating project location.

The West Memphis-Marion Area Transportation Study (WMATS) as part of Crittenden County has been designated non-attainment for ozone. Because of this designation, the LRP must demonstrate that it meets the transportation conformity requirements of the Clean Air Act (CAA) as set forth in the transportation conformity rule and be comprehensively reassessed and updated by the MPO in at least three year intervals. Specifically, the MPO, in making the conformity determination, must demonstrate that the LRP does not create new violations of the NAAQS, increase the frequency or severity of NAAQS violations nor delay the timely attainment of the NAAQS.

- Clean Air Act requirements related to transportation plans, programs and projects may be found at *42 USC Sections 7401-7671.*)

Once approved, the LRP is adopted as the master street plan for all jurisdictions within the West Memphis-Marion Study Area by each governing body.

The **Transportation Improvement Program** (TIP) is an ongoing three (3) year work plan and investment strategy for surface transportation projects that represents the short-range implementation of the Long Range Transportation Plan and as such must also demonstrate transportation conformity.

The TIP includes a yearly schedule of projects for the three-year period beginning with the current fiscal year, the projected cost of the projects and a financial summary indicating funding source.

The **Early Public Involvement Policy and Procedures** (EPIP) describes the efforts to involve the public in the planning process as well as the methodologies utilized.

The **Unified Planning Work Program** (UPWP) is a document that identifies all anticipated major urban transportation planning work tasks and activities carried out by participating agencies within the MPO study area during the MPO fiscal year.

Early Public Involvement Policy and Procedures

PURPOSE AND OBJECTIVE

A public participation process should avoid the undesirable extremes of minimal and meaningless public involvement on one hand and burdensome and unworkable involvement on the other.

In addressing these issues within the context of Environmental Justice the MPO will seek to:

- Explore needs within the minority, disabled and low-income communities
- Involve the minority community and disabled and low income persons in the planning process
- Include minorities and disabled and low income persons on committees and in leadership roles
- Document Title VI efforts
- Advertise public meetings in places where minorities and disabled and low income persons go
- Hold meetings at times and places convenient for the minority community
- Communicate in languages other than English (orally and written)
- Consider special needs in public accommodations
- Follow-up with minority community after public meetings, when decisions are made and after project implementation

It is the objective of the Metropolitan Planning Organization (MPO) to accomplish this in an efficient manner by adhering to the procedures that are set forth in the "Methodology" section of this document.

METHODOLOGY

All meetings of the WMATS including the MPO Policy Committee and related committees will be open to the public. Meetings will be held as necessary to ensure public involvement in the planning process.

Long Range Transportation Plan

Specifically, to allow for early public involvement in the planning process, the following steps will be taken:

1. A notice referring to the efforts to update the Long Range Plan (LRP) and conformity determination will be published in the local newspaper and on the MPO web site and provided to other interested parties;

2. A description of the LRP, the jurisdictions involved, the eligible types of projects (including transit, bikeways, etc.) and a brief summary of the seven (7) consolidated planning factors of TEA-21 and now STEA04, part V will be

included and available to the public in an easy-to-understand format;

3. The public will have the opportunity to comment, in writing within fifteen (15) days, on the proposed document(s) development process. All comments shall be directed to the MPO; and,

4. The Citizens Advisory Committee will have the opportunity to review the public comments and to provide additional comments to the Policy Committee.

Following the initial comment period, the MPO will draft the proposed LRP. Then, to allow public involvement as an ongoing activity through the LRP adoption process, the following steps will be taken:

1. A notice will be published in the local newspaper and the MPO web site and provided to other interested agencies indicating that the LRP is being considered for adoption. A copy of the LRP draft will be placed in the following locations **(these locations will be referred to as the *normal public review locations* elsewhere in this document)** and will be made available for public review and comment:

   Office of the MPO Study Director
   796 West Broadway
   West Memphis, AR 72301

   West Memphis City Hall
   205 South Redding
   West Memphis, AR 72301

   Marion City Hall
   14 Military Road
   Marion, AR 72364

   Sunset City Hall
   300 Highway 77 Bypass
   Marion, AR 72364

   Office of the Crittenden County Judge
   Court House
   Marion, AR 72364

   Public Library
   Oliver and Avalon
   West Memphis, AR 72301

Public Library
116 Center
Marion, AR 72364

MPO Web Site
http://mpo.midsouthcc.edu

2. A description of the LRP, the jurisdictions involved, the eligible types of projects, a brief summary of the seven (7) planning factors the total amount of money being considered for expenditure in the twenty-year period will be provided in an easy-to-read format;

3. The public will have the opportunity to comment, in writing within 30 days, on the LRP and conformity determination. All comments shall be directed to the MPO and documented;

4. The Citizens Advisory Committee will also have the opportunity to review the public comments on the LRP and conformity determination and will then have the opportunity to provide additional comments to the Policy Committee.

5. Formal public hearings (at least 2) will be advertised at least two weeks in advance and held in both the Marion and West Memphis area.

6. When the final document differs significantly from the one that was made available for public comment or raises new issues, an additional opportunity for public comment is provided before adoption.

7. Adoption by the MPO Policy Committee.

This procedure will be held at least every three years for the comprehensive reassessment and update of the LRP and conformity determination.

Transportation Improvement Program (TIP)

The development and approval of the TIP usually occurs sometime in late August or September and allows for the distribution of federal and state funds to our study area for scheduled projects when the federal fiscal year that begins on October 1. Because the TIP is the short range planning document that generally follows the priorities of the LRP, a shortened public involvement process is preferred.

1. A notice will be published in the local newspaper and the MPO web site and provided to other interested agencies indicating that the TIP is being considered

for adoption. A copy of the TIP will be placed in **the *normal public review locations*** and will be made available for public review and comment:

2. The public will have the opportunity to comment in writing within 15 days on the TIP and conformity determination. All comments shall be directed to the MPO and documented;

3. The Citizens Advisory Committee will also have the opportunity to review the public comments on the TIP and conformity determination and will then have the opportunity to provide additional comments to the Policy Committee.

4. When the final document differs significantly from the one that was made available for public comment or raises new issues, an additional opportunity for public comment is provided before adoption.

5. Adoption by the MPO Policy Committee.

Most amendments that occur to the TIP will follow the above procedure. However, TIP amendments that are project specific generally would not call for public input but when such an amendment becomes necessary, notice, whenever possible will be publicized with a 15-day comment period. Again, after the comment period, the Citizens Advisory Committee will have the opportunity to review the public comments and provide additional comments and recommendations to the MPO Policy Committee before final approval.

THE EARLY PUBLIC INVOLVEMENT PLAN AND PROCEDURES (EPIP)

When revisions to this document become necessary the following steps will be taken:

1. A notice will be published in the local newspaper and the MPO web site and provided to other interested agencies indicating that it is being considered for revision and adoption and a copy of the EPIP will be placed in **the *normal public review locations*** and will be made available for public review and comment

2. The public will have the opportunity to comment in writing within 45 days. All comments shall be directed to the MPO and documented;

3. The Citizens Advisory Committee will also have the opportunity to review the public comments and will then have the opportunity to provide additional comments to the Policy Committee.

4. When the final document differs significantly from the one that was made available for public comment or raises new issues, an additional opportunity for public comment is provided before adoption.

5. Adoption by the MPO Policy Committee.

OTHER PROGRAMS AND DOCUMENTS

The UPWP and other documents of interest will be made available for public comment in a similar fashion as the TIP and will follow the same approval process as the TIP for amendments, updates and/or revisions.

COMMENTS

Because the TIP is a short range-planning document that specifies scheduled projects and the funds committed to those projects, under federal guidelines, the MPO Policy Committee must approve any change in the project schedule. Accordingly, because the LRP is the approved major road plan for the participating agencies in the study area, any change that would impact the integrity of the transportation plan would require the approval of the MPO Policy Committee. In each case, the AHTD and FHWA are notified of all such changes.

PRODUCT

Reports to the WMATS Committees concerning the results of forums, attendance, issues and areas of concern.

An acceptable transportation planning process and transportation system for this area that facilitates the efficient, economic movement of people and goods in this area.

AGENCY RESPONSIBILITY, STAFFING

The Study Director is responsible for coordination with assistance from administrative, planning and engineering staff persons of the following entities:

The City of West Memphis
The City of Marion
The Town of Sunset
Crittenden County
The Arkansas State Highway and Transportation Department (AHTD)
The Federal Highway Administration (FHWA)
The Memphis Area Association of Governments
The West Memphis Office of Planning and Development
The MPO Consultant
The Arkansas Department of Environmental Quality (ADEQ)*
The Environmental Protection Agency (EPA)*

***Added per ADEQ comments on January 26, 2005**

Appendix E – References

Title 23: Highways
23USC134: Metropolitan Planning
Title 23: Highways
23CFR450: Planning Assistance and Standards
23CFR771: Environmental Impact and Related Procedures
Title 40: Protection of Environment
40CFR51: Requirements for Preparation, Adoption, and Submittal of Implementation Plans
40CFR93: Determining Conformity of Federal Actions to State or Federal Implementation Plans
40CFR93.104: Frequency of Conformity Determinations
40CFR93.126: Exempt Projects
40CFR93.127: Projects Exempt from Regional Emissions Analysis
Title 49: Transportation
49CFR613: Planning Assistance and Standards
Subpart A: Metropolitan Transportation Planning and Programming

Appendix C: MOVES Data Inputs for the Onroad Mobile Sector Analysis

The following parameters were identified for use in the preparation of this analysis and were applied in MOVES4.0.1:

- Pollutants monitored: The precursors for ozone, oxides of nitrogen (NOx) and volatile organic compounds (VOC) were the evaluated pollutants
- Modeled years for Maintenance Plan Update and future transportation conformity purposes: 2016, 2023, 2027, 2036, 2046, and 2050
- MOVES modeling technique: Inventory method
- Scale: County
- Time Span:
  - Time aggregation: Hour
  - Month: July
  - Hours of day selected
  - Weekdays only
- Geographic Bounds: Crittenden County, AR
- Vehicles/Equipment: All valid source types and fuel types
- Road Type: All road types including off-network
- Pollutants and Processes: Oxides of Nitrogen (NOx), Volatile Organic Compound (VOC)
- Strategies: none
- General Output: Units = grams, joules and miles
- Output Emissions: Time = hour, Location = county, on-road emission rates by road type and source use type
- Advanced Performance: none

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The following assumptions were applied within the County Data Manager portion of MOVES4.0.1:

- Source Type Population: Local data from Arkansas Department of Finance and Administration (DFA) vehicle registration database
- Vehicle miles traveled (VMT) by vehicle type
  - HPMS Vehicle Type: Annual data derived from ARDOT traffic classification counts conducted in Crittenden County
  - Monthly VMT Fractions: Local data unavailable; therefore, Monthly Fractions from inputting Annual Average Weekday Vehicles Travelled (AADVMT) into the AADVMT Converter
  - Daily VMT Fractions: Local data is unavailable; therefore, Daily Fractions from inputting Annual Average Weekday Vehicles Travelled (AADVMT) into the AADVMT Converter
  - Hourly VMT Fractions: Local from ARDOT traffic classification counts conducted in Crittenden County
- Vehicle Inspection/Maintenance (I/M) Programs: There is no I/M program in Crittenden County
- Fuel Formulation: MOVES4.0.1 default data with a conservative Gasoline Reid Vapor Pressure of 9.0 pounds/square inch (psi)
- Fuel Supply: MOVES4.0.1 default data with Gasoline Reid Vapor Pressure of 9.0psi
- Fuel Usage Fraction: MOVES4.0.1 default data used due to limitations in the DFA vehicle registration databased
- Alternate Vehicle Fuel and Technologies (AVFT): National Emissions Inventory (NEI) inputs which were compiled by EPA based on the combination state submitted data and EPA information at the county level
- Meteorological Data: Local data from NOAA and collected at the West Memphis, Arkansas Municipal Airport (NOAA Station ID: KAWM) was used to produce average 24-hour temperature and humidity profiles for June 1 through August 31 from each of the most recent three years (i.e., 2021, 2022, and 2023) as summer meteorological conditions are most conducive for ozone formation
- Age Distribution: For sources 11, 21, 31, 32, 43, 51, 52, 54, local data from the DFA vehicle registration database; MOVES4.0.1 National default data used to more realistically model intercity traffic for sources 41, 53, 61 and 62
- Average Speed Distribution: Local data obtained from ARDOT traffic classification counts and the National Performance Management Research Data Set (NPMRDS) derived from U.S. Federal Highway Administration