Air Quality Conformity Analysis
for
Muskegon County, MI Nonattainment Area
Final
March 21, 2019

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in cooperation with
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1.0 Conformity

1.1 Introduction

Transportation conformity provisions of the Clean Air Act Amendments require metropolitan planning organizations (MPOs) make a determination that the Long-Range Transportation Plan (LRTP), Transportation Improvement Program (TIP), and projects conform to the State Implementation Plan (SIP) and regional emissions will not negatively impact the region’s ability to meet the National Ambient Air Quality Standards (NAAQS).

Conformity to the SIP means that the region’s LRTPs and TIPs 1) will not cause any new violations of the NAAQS; 2) will not increase the frequency or severity of existing violation; and 3) will not delay attaining the NAAQS. A demonstration is conducted by comparing emissions estimates generated from implementation of LRTPs and TIPs for analysis years to the motor vehicle emissions budgets (MVEBs) contained in the maintenance SIP.

The purpose of this report is to document the process and findings of the transportation conformity analysis for the nonattainment/conformity area.

1.2 Nonattainment Area and Conformity

Part of Muskegon County is a nonattainment area for the 2015 ozone NAAQS and the whole county is a conformity area for the 1997 ozone NAAQS. The larger conformity area will be used as the analysis area for both standards, and hereafter referred to as the Muskegon County nonattainment area. The MPO within the boundary is part of the West Michigan Metropolitan Transportation Planning Program (WestPlan).

Findings of the transportation conformity analysis are for projects within Muskegon County contained in:

- WestPlan 2040 LRTP, and
- WestPlan 2017-20 TIP.

1.3 Conformity Finding

The staff of the West Michigan Shoreline Regional Development Commission (WMSRDC) finds that the LRTPs and TIP conform to the SIP for the 2015 and 1997 ozone standards based on the results of this conformity analysis. This report makes the determination that the region’s transportation plan and programs satisfy all applicable criteria and procedures in the conformity regulations.

This conformity analysis document was subject to a public comment period from Feb. 28 through March 20, 2019.
The MPO policy committee made a formal conformity determination, through a resolution, at the WestPlan Policy Committee on March 20, 2019.

1.4 Results of Conformity Analysis

Conformity is demonstrated when the analysis-year emissions are equal to or less than the SIP budget. For the 2015 and 1997 ozone standards, as shown in Table 1, the emissions results for the analysis years show that the volatile organic compounds (VOC) and nitrogen oxides (NOx) emissions are lower than the SIP budgets; thus, conformity for the ozone standards are demonstrated.

<table>
<thead>
<tr>
<th>Analysis Year</th>
<th>Emissions (tons/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VOC</td>
</tr>
<tr>
<td>SIP Budget</td>
<td>6.67</td>
</tr>
<tr>
<td>2020</td>
<td>2.61</td>
</tr>
<tr>
<td>2030</td>
<td>1.54</td>
</tr>
<tr>
<td>2040</td>
<td>1.10</td>
</tr>
</tbody>
</table>

Table 1: Results of 2015 and 1997 Ozone Standard Conformity Analysis

2.0 Background and Attainment Status

2.1 Background

The Federal Clean Air Act Amendments of 1990 (CAAA) established rules to improve the air, protect public health, and protect the environment. The act requires the U.S. Environmental Protection Agency (EPA) to set, review, and revise the National Ambient Air Quality Standards (NAAQS) periodically.

The Clean Air Act links together air quality planning and transportation planning through the transportation conformity process. Air quality planning is controlled by Michigan’s SIP, which includes the state’s plans for attaining or maintaining the NAAQS. The main transportation planning tools are the metropolitan LRTP and the metropolitan TIP. Transportation conformity ensures that federal funding and approval are given to highway and transit activities that are consistent with the SIP and that these activities will not affect Michigan’s ability to achieve the NAAQS.

Transportation activities that are subject to conformity are LRTPs, TIPs, and all non-exempt federal projects that receive Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding or approval. The conformity process ensures emissions from LRTP, TIP, or projects are within acceptable levels specified within the SIP and meet the goals of the SIP.
Transportation conformity only applies to on-road sources and transportation-related pollutants: ozone, particulate matter (particulate sizes 2.5 and 10), nitrogen dioxide, and carbon monoxide.

In addition to emissions that are directly emitted, regulations specifically require certain precursor pollutants to be addressed. Precursor pollutants are those pollutants that contribute to the formation of other pollutants. For example, ozone is not directly emitted but created when NOx and VOC react with sunlight.

When the EPA revises a NAAQS, all areas of the country are evaluated to determine if monitored levels of the pollutant are at or below the standard; these areas are classified as attainment. If the pollutant level is above the standard, these areas are classified as nonattainment. MPOs in areas classified as nonattainment and maintenance must conduct conformity analysis on their transportation programs.

2.2 Attainment Status

On April 15, 2004, the EPA issued final designations of areas not attaining the 1997 ozone NAAQS (also referred to as 1997 ozone standard). Muskegon County was designated a nonattainment area.

On May 16, 2007, the EPA redesignated the area attainment/maintenance, approving and finding adequate motor vehicle emissions budgets for VOC and NOx for the year 2018. Placing the area into maintenance, this requires conformity emission to be compared to the motor vehicle emission budgets contained in the SIP, referred to as SIP budgets.

On July 20, 2012, the EPA designated all of Michigan as attainment for the strengthened 2008 ozone NAAQS.

On July 20, 2013, the EPA partially revoked the 1997 ozone standard, revoking the requirement to do transportation conformity for areas that were in maintenance. On April 6, 2015, the EPA completely revoked the 1997 ozone standard, which resulted in removal of all transportation conformity requirements.

On Aug. 3, 2018, the EPA designated part of Muskegon County as nonattainment for the strengthened 2015 ozone NAAQS (also referred to as 2015 ozone standard).

On April 23, 2018, the FHWA, complying with the court’s decision in South Coast Air Quality Management District v. EPA, started requiring areas in the country that were maintenance for the 1997 ozone standard and attainment for the 2008 ozone standard to conduct conformity. Later, this was amended to give MPOs until Feb. 16, 2019, to make conformity determinations.
2.3 SIP Budgets

The Muskegon County Nonattainment Area has existing maintenance budgets from the 1997 ozone standard maintenance SIP. Regulations require use of these budgets to test against for both ozone standards. Emissions generated must be equal to or less than the SIP budgets, also referred to as the MVEB. MVEB is the portion of the total allowable emissions allocated to highway and transit vehicle use in the maintenance or nonattainment area. By showing emissions are below the MVEB, the LRTPs and TIP are conforming to the SIP.

3.0 Interagency Consultation

Consultation with federal, state, and local transportation authorities is conducted through the Michigan Transportation Conformity Interagency Workgroup (MITC-IAWG). Issues discussed include evaluating and choosing emission models and methods, determining regionally significant project definition, procedures for future MITC-IAWG meetings, and rules for reviewing projects.

An initial MITC-IAWG was held on Oct. 29, 2018, with a meeting to review projects held Dec. 18, 2018; individuals attended in person or by conference call. At the meetings, the Allegan Nonattainment Area and the Grand Rapids Conformity Area were also discussed because all three MPOs are in Ottawa County. Summaries of the meetings and all interagency consultation correspondence related to this conformity is in Appendix A. Copies of this conformity analysis were sent to each MITC-IAWG member to review and comment.

4.0 Public Participation

The Public Participation Plan adopted by the MPO Policy Committee establishes the procedures by which the MPOs reach affected public agencies and the public. The same procedures were followed for this document, ensuring the public has an opportunity to review and comment before the MPO make a determination.

A formal public comment period for the draft Air Quality Conformity Analysis was held from Feb. 28 through March 20, 2019. Public comments received and responses to those comments are in Appendix B. No public comments were received.

5.0 Modeled Project in Conformity Analysis

All projects in the LRTPs, TIP, and amendments were evaluated for inclusion in the analysis. Projects classified as non-exempt must be analyzed. Projects with exempt classification that can be modeled with the travel demand model were modeled. Appendix C includes a complete list of the projects evaluated for, and included, in this analysis.
6.0 Transportation Modeling

6.1 Travel Demand Forecasting Models

Nonattainment areas are established independent of MPO boundaries. The Muskegon County Nonattainment Area is covered by the WestPlan travel demand forecasting model. The model was developed in TransCAD modeling software and used the latest demographic and employment data available to generate estimates of travel, vehicle miles of travel (VMT), and speeds. Detailed documentation is contained in a separate document available upon request.

6.1.2 WestPlan Model

The WestPlan model covers all of Muskegon County and northwest portion of Ottawa County. Only the part in Muskegon County is considered for this analysis. The model was developed by MDOT and is a standard four-step model with time of day, a base year of 2010 and horizon year of 2040. Each of the four steps - trip generation, trip distribution, mode choice, and traffic assignment - are checked for reasonableness against national standards. Final model validation verifies that the assigned volumes replicate actual traffic counts. The decennial 2010 census was the source of population and household base data. Employment data is developed from a private business database verified with local knowledge. Future data is based on the Regional Economic Models, Inc. (REMI) economic and demographic forecasts. The University of Michigan and MDOT jointly develop county-specific forecast data.

6.1.3 Coding Travel Demand Model Links for NFC by Urban and Rural

For emission modeling, the National Functional Classification (NFC) system is used to determine the function of roads; however, after 2010 NFCs do not distinguish roads by urban and rural. The emission model, Motor Vehicle Emission Simulator (MOVES), requires roads to be classified as urban or rural. MOVES requires roads to be grouped into one of four road types: rural restricted, rural unrestricted, urban restricted, and urban unrestricted. To determine a road’s urban or rural status, roads within the adjusted census urban boundary were considered urban and those outside as rural. NFCs designated as interstate and other freeways are considered restricted while all others are considered unrestricted. The Michigan Geographic Framework (GIS digital base map) was used to combine NFC with adjusted census urban boundary to generate MOVES road types for the network.

6.1.4 Highway Performance Monitoring System (HPMS)

The EPA and FHWA endorse HPMS as the source of VMT estimates. The travel demand modeling VMT is aggregated by NFC road types for the county then normalized to HPMS data for the base year/validation year of the travel demand model. Normalization factors were applied to all analysis years.
6.2 Analysis Years

Analysis years were determined by the MITC-IAWG. Projects requiring modeling are grouped into an analysis year based on the projects open to traffic date. Emissions are generated for each analysis year.

<table>
<thead>
<tr>
<th>Analysis Year</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>2015 ozone standard attainment year</td>
</tr>
<tr>
<td>2030</td>
<td>Interim year (so analysis years not more than 10 years apart)</td>
</tr>
<tr>
<td>2040</td>
<td>Last year of WestPlan long-range transportation plan</td>
</tr>
</tbody>
</table>

7.0 Latest Planning Assumptions

7.1 Demographic Data

The most current and future assumptions developed or approved by the MPO were used in the development of the travel demand model. Table 2 shows base and future year population and employment by county from the travel demand model.

Table 2: Base and Future Year Population and Employment by County

<table>
<thead>
<tr>
<th>County</th>
<th>Population</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
<td>2040</td>
</tr>
<tr>
<td>Muskegon County</td>
<td>172,188</td>
<td>169,601</td>
</tr>
</tbody>
</table>

7.2 Vehicle Miles of Travel

Vehicle miles of travel (VMT) is one measure of travel. Current and future levels of travel and growth rates are provided in Table 3.

Table 3: Vehicle Miles of Travel and Growth Rate by County

<table>
<thead>
<tr>
<th></th>
<th>Analysis year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Muskegon County</td>
</tr>
<tr>
<td>VMT</td>
<td>4,545,847</td>
</tr>
<tr>
<td>Growth Rate</td>
<td>1.000</td>
</tr>
</tbody>
</table>
7.3 Vehicle Hours of Travel

Vehicle hours of travel (VHT) is an indicator of congestion. Current and future levels are provided in Table 4.

<table>
<thead>
<tr>
<th>Analysis year</th>
<th>Muskegon County</th>
<th>VHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Year 2010</td>
<td>128,761</td>
<td>130,125</td>
</tr>
</tbody>
</table>

7.4 Transportation Control Measures

There are no transportation control measures (TCMs) identified in the applicable state implementation plan. Thus, no measures are included at this time.

8.0 Emission Modeling

8.1 MOVES Specifications

The EPA’s MOVES version MOVES2014b was used to generate emissions. Ozone is formed in the presence of heat and sunlight, so the highest ozone concentrations are monitored during the summer. This conformity analysis involves generating a summer (July) weekday emissions to simulate the meteorology of a high-ozone summer day.

8.2 Road Type Distribution

HPMS data is used to create MOVES road-type distribution fractions. County-level HPMS passenger data is used for motorcycle and passenger vehicles, and commercial HPMS is used for trucks and buses. HPMS VMT is aggregated to MOVES road types then converted to a fraction, generating a road-type distribution.

8.3 Average Speed

Speed distributions are created using a method developed by EPA for taking a single average speed and creating a distribution. The method generates an average speed fraction by MOVES road type, by day, by hour, and speed bin from speeds generated by the travel demand forecasting model. The same distribution is used for each vehicle type.

8.4 Ramp Fraction

The default vehicle hours of travel ramp fraction of 8 percent was used.
8.5 Average Weekday VMT to Annual VMT

Monthly VMT adjustment factors were obtained from MDOT’s data collection area. The EPA's AADVT Converter-Tool MOVES 2014 was used to convert annual average daily VMT to annual VMT, monthly VMT fractions, and daily VMT fractions. Hourly fractions use MOVES default data. For motorcycles, the monthly fractions use MOVES defaults since local data is limited. Future analysis years utilize the same fractions.

8.6 Vehicle Population

The source of the vehicle population is the Michigan Secretary of State (SOS) vehicle registration database of 2012. The database was supplemented with school bus data from the Michigan Department of Education and MDOT public transit bus data. The EPA's default distributions were used to determine intercity bus, refuse truck, single-unit truck, and combination truck categories. The SOS data must be converted to MOVES source (vehicle) types. Table 5 shows how vehicle body style combined with plate type and company code is used to obtain MOVES vehicle types.

Future year vehicle population is based on growth in VMT from base year to analysis year. The growth rate is applied to all MOVES vehicle types. Table 3 shows the VMT for each analysis year and growth rate.

8.7 Vehicle Age Distribution

MOVES require vehicle age as one of the local data inputs. The Michigan SOS vehicle registration database of 2012 was the source of vehicle ages. Vehicles are assigned to an age group, from 0 to 30-plus, based on model year indicated in the SOS database, with 0 being the newest vehicles (2012 or newer) and each year is its own group until vehicles are 30 years and older, which are aggregated into the 30-plus group. The SOS database is sorted by MOVES vehicle types and age. For intercity buses, refuse trucks, single-unit trucks, and combination trucks, the EPA’s default age distribution are used to calculate splits in population because of limited numbers. Base-year age distribution fractions were used for all future years.

8.8 Other Local Data

The MOVES model allows input for other types of local data, if available. This conformity demonstration used default meteorology data since the budgets were developed using default data; thus, analysis should also. Lacking local data, defaults were used for hoteling (truck parking) and starts. The default fuel data is correct for Michigan.

9.0 Conclusion

Conformity has a two-step approval process. The MPOs must make a formal conformity determination through a resolution that the findings of this conformity analysis conform to the SIP; thus, emissions are at or below the budgets found in the SIP. Then FHWA, jointly with the FTA, after consultation with the EPA, issues a letter of concurrence with the determination.
The conformity analysis described here and conducted by MDOT, with support of the WestPlan, concludes that the WestPlan 2040 LRTP and 2017-20 TIP meet all applicable requirements for conformity for the 2015 and 1997 ozone standards; thus, it is recommended for approval by FHWA.
<table>
<thead>
<tr>
<th>MOVES Source Type</th>
<th>SOS Body Style, Plate Type, and Company Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 – Motorcycles</td>
<td>Motorcycles</td>
</tr>
<tr>
<td>21 – Passenger Cars</td>
<td>Two-Door</td>
</tr>
<tr>
<td></td>
<td>Four-Door</td>
</tr>
<tr>
<td></td>
<td>Convertible</td>
</tr>
<tr>
<td></td>
<td>Roadster</td>
</tr>
<tr>
<td></td>
<td>Low-Speed</td>
</tr>
<tr>
<td>31 – Passenger Trucks</td>
<td>Station Wagon</td>
</tr>
<tr>
<td></td>
<td>Pickup</td>
</tr>
<tr>
<td></td>
<td>Van</td>
</tr>
<tr>
<td></td>
<td>Hearse with Plate Type, Personal</td>
</tr>
<tr>
<td></td>
<td>Ambulance with Plate Type, Personal</td>
</tr>
<tr>
<td></td>
<td>Panel Van with Plate Type, Personal</td>
</tr>
<tr>
<td>32 – Light Commercial Trucks</td>
<td>Pickup Commercial or Company</td>
</tr>
<tr>
<td></td>
<td>Van Commercial or Company</td>
</tr>
<tr>
<td></td>
<td>Hearse Commercial or Company</td>
</tr>
<tr>
<td></td>
<td>Ambulance Commercial or Company</td>
</tr>
<tr>
<td></td>
<td>Panel Van Commercial or Company</td>
</tr>
<tr>
<td></td>
<td>Utility Truck</td>
</tr>
<tr>
<td></td>
<td>Wrecker</td>
</tr>
<tr>
<td>40 – Buses</td>
<td>Bus; Supplemented with Other Data Sources</td>
</tr>
<tr>
<td>(MOVES: 41*, 42, 43)</td>
<td></td>
</tr>
<tr>
<td>50 – Single-Unit Trucks* (MOVES: 51, 52, 53)</td>
<td>Dump Truck</td>
</tr>
<tr>
<td></td>
<td>Mixer Truck</td>
</tr>
<tr>
<td></td>
<td>Stake Truck</td>
</tr>
<tr>
<td>54 – Motorhomes</td>
<td>Motorhome</td>
</tr>
<tr>
<td>60 – Combination Trucks* (MOVES: 61, 62)</td>
<td>Tractor Trailer</td>
</tr>
<tr>
<td></td>
<td>Tanker</td>
</tr>
</tbody>
</table>

* The EPA default age distribution is applied to calculate individual MOVES Source Type categories.
Appendix A: Meeting Summary of the Interagency Workgroups

**Summary of Meeting**
Michigan Transportation Conformity Interagency Workgroup (MITC-IAWG)
Grand Rapids Conformity Area
Allegan County Nonattainment Area
Muskegon County Nonattainment Area
9 a.m. - Noon (EDT), Monday, Oct. 29, 2018
MDOT Grand Region Office, 1420 Front St., Grand Rapids MI 49504

<table>
<thead>
<tr>
<th>Name</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrey Dewy</td>
<td>Federal Highway Administration (FHWA)</td>
</tr>
<tr>
<td>Breanna Bukowski</td>
<td>Michigan Department of Environmental Quality (MDEQ)</td>
</tr>
<tr>
<td>Kaitlyn Leffert</td>
<td>MDEQ</td>
</tr>
<tr>
<td>Michael Leslie</td>
<td>US Environmental Protection Agency (EPA)</td>
</tr>
<tr>
<td>Susan Weber</td>
<td>Federal Transit Administration (FTA)</td>
</tr>
<tr>
<td>Abed Itani</td>
<td>Grand Rapids MPO</td>
</tr>
<tr>
<td>Laurel Joseph</td>
<td>Grand Rapids MPO</td>
</tr>
<tr>
<td>George Yang</td>
<td>Grand Rapids MPO</td>
</tr>
<tr>
<td>Tim Burkman</td>
<td>Holland MPO</td>
</tr>
<tr>
<td>Carolyn Ulstad</td>
<td>Holland MPO</td>
</tr>
<tr>
<td>Elisa Hoekwater</td>
<td>Holland MPO</td>
</tr>
<tr>
<td>Any Haack</td>
<td>Muskegon MPO</td>
</tr>
<tr>
<td>Brain Mulnix</td>
<td>Muskegon MPO</td>
</tr>
<tr>
<td>Donna Wittl</td>
<td>Michigan Department of Transportation (MDOT)</td>
</tr>
<tr>
<td>Eric Mullen</td>
<td>MDOT</td>
</tr>
<tr>
<td>Dennis Kent</td>
<td>MDOT</td>
</tr>
<tr>
<td>Susan Rozema</td>
<td>MDOT</td>
</tr>
<tr>
<td>David Fairchild</td>
<td>MDOT</td>
</tr>
<tr>
<td>Ryan Gladding</td>
<td>MDOT</td>
</tr>
<tr>
<td>Tom Doyle</td>
<td>MDOT</td>
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<tr>
<td>Jon Roberts</td>
<td>MDOT</td>
</tr>
<tr>
<td>Tyler Kent</td>
<td>MDOT</td>
</tr>
<tr>
<td>Brian Sanada</td>
<td>MDOT</td>
</tr>
<tr>
<td>Angelica Salgado</td>
<td>FTA</td>
</tr>
<tr>
<td>Steve Redmond</td>
<td>MDOT</td>
</tr>
<tr>
<td>Mark Kloha</td>
<td>MDOT</td>
</tr>
<tr>
<td>Andera Faber</td>
<td>Grand Rapids MPO</td>
</tr>
</tbody>
</table>

Absent:
Angelica Salgado  FTA
Steve Redmond     MDOT
Mark Kloha         MDOT
Andera Faber       Grand Rapids MPO
Attendance at the meeting was in person or teleconferencing with web linking.

Materials distributed before the meeting:

1) Agenda
2) Exempt Project Excerpt from EPA Transportation Conformity Regulations – April 2012
3) 2016 Memorandum of Agreement Regarding Determination of Conformity of Transportation Plans, Programs, and Projects to State Implementation Plans
4) PM Hot-spot Analyses: FAQs
5) Link to information on Road Diets (agenda topic): https://safety.fhwa.dot.gov/road_diets/
6) Link to conformity training: https://www.fhwa.dot.gov/Environment/air_quality/conformity/training/sdtrain.cfm

This IAWG was for:

- Grand Rapids Area (Kent and Ottawa counties) – 1997 ozone conformity area
- Muskegon County – 2015 ozone nonattainment area and 1997 ozone conformity area
- Allegan County – 2015 ozone nonattainment area and 1997 ozone conformity area

The interagency work group meeting was facilitated by slides. The slides are provided with a summary of discussion related to slide below it. Some slides had no discussion.

It was emphasized this is a collaborative process and the group was encouraged to ask questions and have a discussion. It was stated that the group was there to discuss the rules (plus maybe set them up) to evaluate the road projects in the LRTPs and TIPs, along with those projects in the rural area (outside the MPOs), to ensure emissions from on-road travel are consistent with the goals of the SIP. It was discussed that the IAWG is evaluating projects from the LRTP and TIP and we are doing regional
conformity. Project-level conformity is also called hot spot analysis. For ozone nonattainment areas, project-level conformity is not required.

The statement was made that only part of Muskegon County is a nonattainment area for the 2015 ozone standard and was confirmed to be true. However, since the whole county is considered a maintenance area for the anti-backsliding requirement for the 1997 ozone standard, we are addressing both standards at the county level.

Conformity Areas:

1) Grand Rapids Conformity Area = Kent and Ottawa Counties
   - 1997 ozone conformity Area
     - Grand Rapids TMA
     - Part of Muskegon MPO
     - Part of the Holland MPO
     - Part of the STIP

2) Allegan County
   - 2015 Ozone Nonattainment Area also 1997 Ozone Conformity Area
     - Part of the Holland MPO
     - Part of the STIP

3) Muskegon County
   - 2015 Ozone Nonattainment Area also 1997 Ozone Conformity Area
     - Muskegon MPO

Each of the three areas listed above have a separate budget and are separate nonattainment or conformity areas. There are budgets for nitrogen oxides (NOx) and volatile organic compounds (VOC). The budgets developed in 2007 will be used.
The group discussed the court’s decisions. The status of the Grand Rapids conformity area is attainment but must do conformity for the reminder of the maintenance period, which is 10 years, because of anti-backsliding requirement. For the Grand Rapids TMA only, the LRTP update cycle will stay five years. It was stated a conformity finding needs to be in place on Feb. 16, 2019; that means having an approval letter from FHWA by that date. We will then be doing conformity on the new TIPs in 2019. It was proposed to Grand Rapids TMA that, if they wanted, MDOT would run the emission model for conformity until Sept. 30, 2019, to assist the MPOs in meeting the February 2019 deadline and getting through the new TIP development. Grand Rapids TMA said they would take MDOT’s offer. MDOT already does the modeling for Muskegon and Holland MPOs.

Discussion on what is being conformed. The LTRP, with all the projects from the TIP, are both conformed together. This gives a base, so moving forward can determine if projects would change the
conformity analysis, thus requiring a new analysis to be conducted. Any amendment after conformity analysis is completed will need to be reviewed by the IAWG. The question was asked if the changes to the TIP would potentially change the conformity analysis. If all projects are exempt, then the conformity analysis is still valid and will not change.

Michigan Transportation Conformity Interagency Workgroup (MITC-IAWG)

2016 MOA Regarding Determination of Conformity of Transportation Plans, Programs, and Projects to State Implementation Plans

Commonly known as the Transportation Conformity SIP

- Defines the roles,
- responsibilities,
- and regulations,
- and participating agencies for the IAWG.

Has everyone received a copy?

Everyone indicated they had received a copy of the Transportations Conformity SIP Memorandum of Agreement (MOA). The question was asked why SEMCOG was the only MPO who signed. The answer was because SEMCOG was the only nonattainment or maintenance area at the time the document was signed. Holland and Muskegon MPOs will need to sign the document because they are nonattainment areas for the 2015 ozone standard. Since the Grand Rapids TMA is in areas classified as “attainment,” they don’t have to sign the MOA. But these are the rules we use in Michigan for IAWGs. This provides for uniformity across the state, so all IAWGs are following the same format and rules. Most of the rules are included in the Transportation Conformity Rule, which will be referred to if needed. The Transportation Conformity SIP MOA provides an easier way to understand the rules and process.
The question was asked if there was an update chapter for the conformity analysis. We are trying to develop a standard conformity analysis document that can be used throughout the state. The document is currently a work in progress. This standard document will allow the air quality information or chapter in the LRTP to contain more than just the conformity analysis.
One of the main functions of the IAWG is to evaluate projects for the conformity analysis. The projects from the LRTP and TIP are evaluated for conformity. We are doing regional conformity – conformity must be determined every four years. Conformity must be determined before federal approval or acceptance of a project. Feb. 16, 2019, is the due date for areas to have completed a conformity analysis and start the four-year time clock for conformity for the 1997 ozone areas.

The question was asked if an amendment is for a small project, for example to receive funds for a transit bus shelter, would that still trigger the process. The answer is yes. All projects in amendments should be evaluated for exempt or non-exempt status by the IAWG. Projects that are exempt will not be required to be included in a conformity analysis or trigger a conformity analysis. Later, we will talk about which projects are exempt.
Non-federal projects only need to be included in regional conformity analysis if determined to be regionally significant for air quality.

**Air Quality Regionally Significant Projects:**

To determine which non-federal projects need to be included in a conformity analysis regardless of funding source

Conformity regulation definition:

Transportation project on a facility which serves regional transportation needs (access to and from the areas) from outside the region, access to major activity centers (and new centers of activity malls, sporting, transportation terminals) and

would normally be included in the travel demand model.

At a minimum includes principal arterials (national functional classification 1,2, and 3) and fixed guideway transit that offer an alternative to regional highway travel.

The question was asked if this definition is the same as the one the MPOs were asked to submit to MDOT statewide planning staff. The answer was no, they are for completely different reasons.

Projects that are 100 percent state or local funded, and do not require any federal approval, are not required to be included in the conformity analysis unless determined to be regionally significant for air quality. The IAWG can make the definition more stringent but not less. The question was asked what NFC 1, 2, and 3 are. Interstates are 1, other principle freeways and expressways are 2, and other principal arterials are 3. How does IAWG want to define regionally significant for air quality? The group agreed to this definition. Regionally significant projects need to be modeled in conformity but won’t trigger a conformity analysis.
All projects need to be evaluated to determine if they need to be included in a conformity analysis. The evaluation also determines if the project is exempt or non-exempt. If a project is classified as exempt, it does not need to be included in the conformity analysis. One of the main tasks of the IAWG is to determine if a project is exempt, thus the project does not need to be included (meaning modeled) in the conformity analysis. The Table 2 slide shows projects that have a minor or limited impact on air quality. It is important to understand why a project is exempt.

There was some confusion because the slide did not have pavement resurfacing and/or rehabilitation on a separate line, as it is shown on the information provided before the meeting. There were questions asking if resurfacing and rehabilitation projects are exempt. Yes, they are exempt. A follow-up question was asked, with that being the case, if it does not have to go through IAWG. No, they do have to go through the IAWG, but they don’t have to have a conformity analysis done on them. The question was asked if ”pavement rehabilitation” meant reconstruction. Yes, if it is being reconstructed to the same configuration as before and there is no change in capacity.
Exempt Projects: Transportation Conformity Regulations as of April 2012

Table 2 continued — Exempt Projects 93.126

**Mass Transit**
- Operating assistance to transit agencies.
- Purchase of support vehicles.
- Rehabilitation of transit vehicles.
- Purchase of office, shop, and operating equipment for existing facilities.
- Purchase of operating equipment for vehicles (e.g., radios, fare boxes, lifts, etc.).
- Construction or renovation of power, signal, and communications systems.
- Construction of small passenger shelters and information kiosks.
- Reconstruction or renovation of transit buildings and structures (e.g., rail or bus buildings, storage and maintenance facilities, stations, terminals, and ancillary structures).
- Rehabilitation or reconstruction of track structures, track, and track bed in existing rights-of-way.
- Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet.
- Construction of new bus or rail storage/maintenance facilities categorically excluded in 23 CFR part 772.

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Exempt Projects: Transportation Conformity Regulations as of April 2012

Table 2 continued — Exempt Projects 93.126

**Air Quality**
- Continuation of ride-sharing and van-pooling promotion activities at current levels.
- Bicycle and pedestrian facilities.

**Other**
- Specific activities which do not involve or lead directly to construction, such as:
  - Planning and technical studies.
  - Grants for training and research programs.
  - Planning activities conducted pursuant to titles 23 and 49 U.S.C.
  - Federal-aid systems revisions.
  - Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action.
  - Noise attenuation.
  - Emergency or hardship advance land acquisitions (23 CFR 710.503).
  - Acquisition of scenic easements.
  - Plantings, landscaping, etc.
  - Sign removal.
  - Directional and informational signs.
  - Transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures, or facilities).
  - Repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects involving substantial functional, locational, or capacity changes.
Table 3 lists project that are exempt from regional conformity but not project-level. Project-level is a more detailed analysis. The projects on this list have more local impacts on air quality than regional. We are doing regional conformity. Project-level is also called hot spot. Ozone nonattainment areas do not need to do project-level analysis. The question was asked why traffic signal synchronization projects are non-exempt. The answer is since a number of these projects are linked together, they would create an air quality benefit.

**Table 3 — Exempt Projects From Regional Conformity Analysis but not Project-level 93.127**

- Intersection channelization projects.
- Intersection signalization projects at individual intersections.
- Interchange reconfiguration projects.
- Changes in vertical and horizontal alignment.
- Truck size and weight inspection stations.
- Bus terminals and transfer points.
- Examples of: Intersection channelization projects:
  - Traffic circles
  - Addition of right turn lane or left turn lane at an intersection, individual lane length less than half a mile; usually not in travel demand model

**93.128 Traffic Signal Synchronization Projects**

- Non-exempt but not trigger a conformity analysis
- In Michigan the travel demand models can't model these projects

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**Exempt Projects: FHWA & EPA Clarifies Interpretations in 2017**

Added to Table 2 —Exempt Projects 93.126 in 2017:

- Auxiliary lane if less than one mile in length
  - Justification: Projects that correct, improve, or eliminate a hazardous location or feature
- Ramp metering
  - Justification: Projects that correct, improve, or eliminate a hazardous location or feature
- Road diets — In Michigan need further discussion, will hold statewide IA WG
  - Justification: Projects that correct, improve, or eliminate a hazardous location or feature or if safety project: Highway Safety Improvement Program implementation
The question was asked if an MPO should include all projects on their lists, both within financial constraint and not financially constrained, when the air quality analysis is run. No, the projects need to be financially constrained. As a project moves from design to build, its status as exempt can change.

The question was asked if Grand Rapids would need to include its BRT (bus rapid transit) in their travel demand model even though the other two MPOs do not have a BRT. Yes, Grand Rapids should include it in their travel demand model runs.
The emission generated from the conformity analysis must be equal or less than the budget or otherwise known as the MVEB. The MVEB is the portion of the total allowable emissions in the area allocated to highway and transit vehicle. By being below the SIP budget, the LRTP and TIP are conforming to the SIP. For Kent and Ottawa counties, the budget is the combined emissions for both. The MOVES model (the emissions model) generates emissions at the county level. The emission budget will stay the same until a second maintenance plan is developed. It was emphasized the conformity analysis needs to be done on the current LRTPs and TIPs.

There was discussion whether or not Grand Rapids should use their new travel demand model that is being developed now. They should wait to use it until the other two areas, Holland and Muskegon, complete their new travel demand models. So, the three models will have the same base year. This will assist in the emission modeling for Ottawa County which contains part of all three MPOs. Allegan County will need to have the 2021 analysis year, so the Holland projects in Allegan County will have slightly different analysis years from those in Ottawa County.
The question was asked if all projects need to be presented to the IAWG every time the MPO does an amendment. The answer is yes, even if they are on the exempt list. It is the job of IAWG to determine that. Because we are starting the process with some projects having already been determined to be part of an administrative modification list, all projects on that list should be evaluated for exempt or non-exempt status. Then, if an amendment is an administrative modification, it would be exempt.

The timeframe to do a conformity analysis was discussed, estimating it will take 60 days from IAWG meeting to start of public comment period. Once the process has been completed a few times it could be less but right now that is what MDOT is estimating. The process described above is if there is a non-
exempt project. If all projects are determined to be exempt by the IAWG, the projects can go straight to TAC or policy committee. The question was asked if the IAWG must happen before TAC. The answer is no, if your TAC committee is ok with not seeing it and your policy committee, too.

IAWG:

- Each affected agency needs a:
  - Representative
  - Advised to have alternate representative
  - Discussion:
- Projects for review need:
  - project description, costs, financial resources, etc.
  - working on standard format (JobNet)
- Meeting summary with participants sent to IAWG

- IAWG can be conducted by email or conference call
  - Non-exempt or unclear projects require conference call
  - Discussion:

IAWG designated representative:

DEQ contact: Breanna Bukowski
Alternate contact: Kaitlyn Leffert

FHWA contact: Andrea Dewey
Alternate contact: If needed, Andrea will delegate

EPA contact: Michael Leslie
Alternate contact: None

MDOT contact: Donna Wittl
Alternate contact: To be determined

FTA contact: Susan Weber
Alternate contact: To be determined

Grand Rapids MPO: To be determined
Alternate contact: to be determined

Muskegon MPO contact: To be determined
Alternate contact: To be determined
Regarding amendments, the group discussed how the three MPOs and the STIP projects could get assembled on one list for the IAWG to review. It was decided that the IAWG would review the projects between the technical meetings and the policy meetings. A single list would be assembled and distributed to the IAWG for review. It seems the group agreed to have the list of all amendments assembled on the second Tuesday of the month, making Jan. 8, 2019, the first one.

It was then decided, in order to have the conformity analysis completed by the Feb. 16, 2019, date, the list of current TIP and LRTP projects would need to be assemble the week of Nov. 12, 2018. Each MPO was going to send their list of TIP and LRTP projects to Donna Wittl. Donna would then distribute the list to the IAWG and schedule a conference call meeting to review the projects.

It was discussed that projects that are already completed do not need to be reviewed by the IAWG, so we will start with 2018 projects that have not been completed yet. The travel demand models should reflect projects that have been completed to date.
It was suggested that, at least at first, a response to the e-mail meeting would be required; this way, we know people are receiving the e-mails. It would be useful if people “reply all” in the beginning. Donna will need to follow up with people if they don’t respond.

Regional Emission and IAWG:

- Regional Emission Analysis:
  - Emission modeling using: MOVES2014b
  - Evaluate assumptions used in emission model
  - Who will run the emission model? TMA, MDOT, or both
**Conformity Analysis Document:**

Conformity analysis document (work in progress)
- Developing standardize document (10 page)
- Latest planning assumptions
- MOVES inputs
- Project list attached
  - (including project description, costs, financial resources, conformity status)
- Summary of IAWG meeting; decisions and participants
- Conformity analysis sent to IAWG
- The MPO will hold public comment period per Public Participation Plan
- Public comments will be addressed
- Formal conformity determination on LRTP and TIP by resolution of MPO
  (MPO makes a formal resolution supporting the findings of the conformity analysis)

• Other discussions items?

Donna will send out an example of the conformity document. The MVEB (SIP budget) for the Grand Rapids conformity areas was requested; it is in tons per day, VOC = 40.70 and NOx = 97.87.

**Summary of Meeting**

Michigan Transportation Conformity Interagency Workgroup (MITC- IAWG)
Muskegon County Nonattainment Area
Allegan County Nonattainment Area
Grand Rapids (Kent and Ottawa Counties) Conformity Area

3 – 4 p.m. (EST), Tuesday, Dec. 18, 2018
TPS 3rd floor, Van Wagoner Transportation Building, Lansing, MI

Conference number and web link information provided in e-mail
In attendance:

<table>
<thead>
<tr>
<th>Name</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrea Dewey</td>
<td>Federal Highway Administration (FHWA)</td>
</tr>
<tr>
<td>Breanna Bukowski</td>
<td>Michigan Department of Environmental Quality (DEQ)</td>
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<tr>
<td>Michael Leslie</td>
<td>Environmental Protection Agency (EPA)</td>
</tr>
<tr>
<td>Donna Wittl</td>
<td>Michigan Department of Transportation (MDOT)</td>
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<tr>
<td>Amy Haack</td>
<td>Muskegon MPO (WestPlan)</td>
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<tr>
<td>Brian Mulnix</td>
<td>Muskegon MPO (WestPlan)</td>
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<tr>
<td>Joel Fitzpatrick</td>
<td>Muskegon MPO (WestPlan)</td>
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<tr>
<td>Tim Burkman</td>
<td>Holland MPO (MACC)</td>
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<tr>
<td>Carolyn Ulstad</td>
<td>Holland MPO (MACC)</td>
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<tr>
<td>George Yang</td>
<td>Grand Rapids MPO (GVMC)</td>
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<td>Laurel Joseph</td>
<td>Grand Rapids MPO (GVMC)</td>
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<td>William Loehle</td>
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<td>Tom Doyle</td>
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<td>David Fairchild</td>
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<td>Jon Roberts</td>
<td>MDOT</td>
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<tr>
<td>Ryan Gladding</td>
<td>MDOT</td>
</tr>
</tbody>
</table>

Attendance at the meeting was in person or teleconferencing with web linking.

Agenda:

1) Review analysis years and model information.

2) Review project lists.
   Project lists are color coded, with yellow being non-exempt projects, orange being exempt but might want to discuss, and blue are project that need more information for a decision to be made. Workbooks may have more than one worksheet. Color coding was not part of list attached to conformity analysis.

3) Update on South Coast II court decision.

This meeting reviewed projects lists for three conformity areas:

Allegan County Nonattainment Area
Muskegon County Nonattainment Area
Grand Rapids (Kent and Ottawa counties) Conformity Area
The Allegan County Nonattainment Area was discussed first.

Analysis years were reviewed and agreed upon: base year 2010, the attainment year for the 2015 ozone standard is 2020, and interim years of 2030 and 2040 (the last year of the long-range transportation plan). The year 2021 is also needed because it is the budget year for the 1997 ozone standard.

The group discussed the project lists for the Holland MPO in Allegan County and the projects in the STIP in Allegan County.

It was stated that since a conformity analysis is being conducted any project, exempt or non-exempt that can be modeled with the travel demand model would be modeled.

The Muskegon County Nonattainment Area was discussed.

Analysis years were reviewed and agreed upon: base year 2010, and interim years of 2020, 2030, and 2040 (the last year of the long-range transportation plan). The group decided since 2018 would be past once the analysis was conducted it would be not be used as an analysis year. The group discussed the project lists for Muskegon County.

The Grand Rapids (Kent and Ottawa counties) Conformity Area was discussed.

The analysis years were reviewed, and it was agreed they would be the same as those for the Muskegon County Nonattainment Area.

The group discussed the project lists for Kent and Ottawa counties. Several projects on the list required clarification and after discussion were considered non-exempt.

An update on the South Coast II court decision was provided and discussed. It was stated that the EPA has released guidance on the requirements for the 1997 ozone areas. The guidance states what does not need to be done; areas do not need to run the emission model (MOVES) but need to do everything else, which includes IAWG to review projects, create a conformity document, and a policy committee resolution. FHWA is coming out with a template on what a conformity document would be without analysis. As part of the court decision, areas need to have in place a second maintenance plan. DEQ is currently working on these plans. Most 1997 areas in Michigan, it appears, will qualify for a “limited maintenance plan.” Once these second maintenance plans are in place, the conformity process will significantly diminish. Based on the unstable environment of the court case, and that doing the emission analysis is not much more work given the stability it will provide, we are going to continue to do a traditional conformity analysis to meet the Feb. 16, 2019, due date from the court.

The Grand Rapids Conformity Area will be affected by the creation and adoption of a limited maintenance plan for their second maintenance plan. To qualify for a limited maintenance plan, an area must be 85 percent below the standard. Since both Allegan and Muskegon counties were designated partially as nonattainment areas for the 2015 ozone standard, they will not qualify for this type of second maintenance plan. These two areas will require traditional maintenance plans and, because of the nonattainment designation for the 2015 ozone standard, will have to do traditional conformity for 20 years.
Future TIP amendments were discussed. All future TIP amendments need to be reviewed by the IAWG. IAWG meetings can be conducted by e-mail if all the projects are exempt. If an amendment contains a non-exempt project, a conference call IAWG will need to be held. A conference call can also be held even if all projects are exempt. There was a request made for a list of IAWG contacts. It was pointed out that the appointment for this meeting contained the list of contacts. One of the reasons the appointments and e-mails are not grouped or blind copied is so that participants know other members of the group. Details for conducting an e-mail IAWG meeting were provided at the last IAWG meeting, on Oct. 29, 2018. The IAWG needs at least five business days for review of the project lists.
Appendix B: Public Comments and Responses

No comments received.
Appendix C: Projects Included in Conformity Analysis

The list of projects begins on the following page.
<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Job Type</th>
<th>MPO</th>
<th>County</th>
<th>Responsible Agency</th>
<th>Project Name</th>
<th>Project Location</th>
<th>Primary Use</th>
<th>Federal Federal Funds</th>
<th>State State Funds</th>
<th>Local Matching</th>
<th>Total Match</th>
<th>Total Estimated Funds</th>
<th>Fund Source</th>
<th>Air Quality Comments</th>
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<tbody>
<tr>
<td>2018</td>
<td>Local</td>
<td>MPO</td>
<td>Muskegon</td>
<td>MPO</td>
<td>203732 WESTPLAN Muskegon Muskegon Area Transit System</td>
<td>Transit Capital</td>
<td>Exempt</td>
<td>$7,250</td>
<td>$17,250</td>
<td>$9,665</td>
<td>$23,115</td>
<td>$116,115</td>
<td>STUL</td>
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<td>Muskegon</td>
<td>MPO</td>
<td>201446 WESTPLAN Muskegon Muskegon Area Transit System</td>
<td>6th St</td>
<td>Areawide/Pioneer Resources/Muskegon</td>
<td>Reconstruct</td>
<td>$1,211,600</td>
<td>$86,655</td>
<td>$109,287</td>
<td>$534,071</td>
<td>STUL</td>
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Note: Total Estimated Funds and Fund Source may include Federal, State, and Local Funds. Air Quality Comments indicate compliance with air quality regulations.