INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

September 21, 2023

Ms. Debra Shore
Regional Administrator
U.S. EPA, Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3950

Dear Ms. Shore:

Re: MVEB Replacement Update to the Maintenance Plan for Indiana's Portion (Lake and Porter Counties) of the Chicago-Naperville, IL-IN-WI, 2008 8-Hour Ozone Nonattainment Area

The Indiana Department of Environmental Management (IDEM) submits the enclosed Motor Vehicle Emissions Budget (MVEB) replacement update to the maintenance plan for Indiana's Portion (Lake and Porter Counties) of the Chicago-Naperville, IL-IN-WI, 2008 8-Hour Ozone Nonattainment Area. The revised MVEBs reflect MOVES3 input file updates that have increased onroad vehicle emission rates, subsequent emission estimates, and ultimately the MVEBs for the area. On May 20, 2022, the United States Environmental Protection Agency (U.S. EPA) approved the Request for Redesignation and Maintenance Plan for Indiana's Portion (Lake and Porter Counties) of the Chicago-Naperville, IL-IN-WI, 2008 8-Hour Ozone Nonattainment Area that was submitted by IDEM on April 8 2022, with an immediate effective date. IDEM requests that U.S. EPA process this MVEB replacement update submittal for approval into Indiana's State Implementation Plan.

IDEM provided an opportunity for a public hearing on the MVEB replacement update to the maintenance plan for the 2008 8-hour ozone standard for Lake and Porter counties, Indiana, if a public hearing request was received by TBD. A hearing was scheduled for TBD. No request for a public hearing was received and the hearing was canceled. In addition, IDEM received no comments during the public notice process. Documents related to the public participation process are included in Appendix C of this submittal.

This MVEB replacement update incorporates onroad emission estimates and revised MVEBs using U.S. EPA's MOVES3 model. The onroad emission estimates were calculated using the MOVES3-based emission factors and data extracted from the Lake and Porter counties, Indiana, area's travel-demand model.

MVEBs are being revised due to recently updated MOVES3 inputs for the area that results in slightly higher emissions rates and subsequent emission projections. Revised and/or updated MOVES3 model inputs can be considerably different emission rate estimates when compared to previous input values when using the MOVES3 model.

Onroad safety margins, established through the interagency consultation process, are included for nitrogen oxides (NOx) and volatile organic compounds (VOCs). These onroad safety margins are allocated to onroad emission estimates in order to account for the wide array of assumptions that are factored into the calculation process (including MOVES3 data input files). With the addition of onroad safety margins applied to mobile sources, the Lake and Porter counties, Indiana, ozone maintenance area will continue to remain well below the overall safety margins for all sources. MVEBs are also constrained to ensure that total NOx and VOC emissions (i.e., all source categories) do not exceed attainment year emissions to ensure continued maintenance of the 2008 8-hour ozone standard.

This submittal consists of one (1) hard copy of the required documentation. An electronic version of the submittal in PDF format that is identical to the hard copy has been sent to Pamela Blakley, Chief of U.S. EPA Region 5's Control Strategies Section.

IDEM respectfully requests that U.S. EPA proceed with review of this MVEB replacement update and revised transportation conformity budgets and approval into Indiana's State Implementation Plan for the Lake and Porter counties, Indiana, maintenance area under the 2008 8-hour ozone standard. If you have any questions or need additional information, please contact Scott Deloney, Chief, Air Programs Branch, at (317) 233-5694.

Sincerely,

Matthew Stuckey
Assistant Commissioner
Office of Air Quality

MS/sad/sms

Enclosures:
MVEB Replacement Update to the Maintenance Plan for the 2008 8-Hour Ozone Standard for Lake and Porter Counties, Indiana and Appendices.
Electronic MOVES-based modeling input and output data files.

cc: Sarah Arra, U.S. EPA Region 5
Kathleen D'Agostino, U.S. EPA Region 5

Chris Panos, U.S. EPA Region 5
Katie Mullen, U.S. EPA Region 5
John Mooney, U.S. EPA Region 5
Pam Blakley, U.S. EPA Region 5
Anthony Maietta, U.S. EPA Region 5
Ty Warner, NIRPC
Kathy Luther, NIRPC
Scott Weber, NIRPC
Matt Stuckey, IDEM
Scott Deloney, IDEM
Brian Callahan, IDEM
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Onroad Emissions Motor Vehicle Emissions Budget (MVEB) Replacement and Emissions Update

for the

Indiana Portion (Lake and Porter Counties) of the Chicago-Naperville, IL-IN-WI 2008 8-Hour Ozone Standard Maintenance Area

September 2023

Final

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Introduction

On April 8, 2022, the Indiana Department of Environmental Management (IDEM) submitted supplemental information to the Technical Addendum to Section 182(c)(3) Certification of Enhanced I/M Program and Request for Redesignation and Maintenance Plan for Attainment of Indiana's Portion (Lake and Porter counties) of the Chicago-Naperville, IL-IN-WI, 2008 8-Hour Ozone Nonattainment Area. IDEM submitted the technical addendum and request for redesignation and maintenance plan to United States Environmental Protection Agency (U.S. EPA) on January 18, 2022, and December 6, 2021, respectively. U.S. EPA subsequently approved the Indiana request and motor vehicle emission budgets (MVEBs) on May 20, 2022 (87 FR 30821).

Onroad emissions and MVEBs included in the April 8, 2022, submittal were calculated using then-current MOVES3 inputs for Lake and Porter counties, Indiana. Recently updated MOVES3 inputs for the area have resulted in slightly higher emissions rates and subsequent emission projections. Therefore, IDEM is providing this MVEB replacement update and onroad emissions update to the previously submitted maintenance plan for Lake and Porter counties under the 2008 8-hour ozone standard to incorporate the most current MOVES input files.

Onroad Emission Estimates

Table 2.4 was included on Page 23 of the April 8, 2022, submittal. Table 2.4 - A (to be considered a replacement of the table included in the April 8, 2022, submittal) has been revised to incorporate updated onroad emission estimates for nitrogen oxides (NOx) and volatile organic compounds (VOCs) for the years 2019, 2030, and 2035. The year 2011 was removed from Table 2.4 - A as it is irrelevant for the purposes of this submittal.

Table 2.4: Emission Estimations and Projections for On-Road Mobile Sources – Lake and Porter Counties, Indiana, 2011 (Base-Year), 2019 (Attainment-Year), 2030 (Interim-Year), and 2035 (Maintenance-Year)

Lake and Porter	2011	2019	2030	2035
NOx, tpsd	31.55	9.48	4.55	4.77
VOC, tpsd	7.60	3.51	2.03	1.82

Table 2.4 - A: Emission Estimations and Projections for On-Road Mobile Sources – Lake and Porter Counties, 2019 (Attainment-Year), 2030 (Interim-Year), and 2035 (Maintenance-Year)

Lake and Porter	2019	2030	2035
NOx, tpsd	~~9.48~~ 9.99	~~4.55~~ 5.44	~~4.77~~ 5.08
VOC, tpsd	~~3.51~~ 3.50	~~2.03~~ 2.06	~~1.82~~ 2.42

Table 2.5 was included on Page 23 of the April 8, 2022, submittal. This table established the MVEBs for Lake and Porter Counties, Indiana. Table 2.5 - A (to be considered a replacement of the table included in the April 8, 2022, submittal) has been revised to incorporate updated MVEBs for NOx and VOCs for the years 2030, and 2035.

Table 2.5: Motor Vehicle Emission Budgets Lake and Porter Ozone Nonattainment Area

Lake and Porter	2030	2035
NOx, tpsd	5.23	5.49
VOC, tpsd	2.33	2.09

Table 2.5 - A: Motor Vehicle Emission Budgets Lake and Porter Ozone Nonattainment Area

Lake and Porter	2030	2035
NOx, tpsd	~~5.23~~ 6.53	~~5.49~~ 6.10
VOC, tpsd	~~2.33~~ 2.47	~~2.09~~ 2.90

Onroad emission estimates in Tables 2.4 – A and 2.5 – A were calculated using U.S. EPA's most current version of the MOVES3 model-produced emission factors and data extracted from the area's travel-demand model. The use of updated MOVES3 model input files for Lake and Porter counties, Indiana, can result in notably different emission estimates for the area when compared to those used to create the MVEBs for the Lake and Porter counties, Indiana, as submitted on April 8, 2022. A general summary of the MOVES methodology used in this area can be found in Appendix A. In addition, MOVES input and output files are being provided electronically with this submittal.

Onroad safety margins have been included for onroad emission estimates to accommodate the wide array of assumptions that are factored into the calculation process. Since assumptions change over time, it is necessary to have an onroad safety margin that will accommodate the impact of refined assumptions in the process. A twenty percent (20%) safety margin was applied to the projected emission estimates for

the years 2030 and 2035 through discussions with the Interagency Consultation Group, attached as Appendix B.

Emission Inventories

Tables 3.4 and 3.6 were included on Pages 28 and 30, respectively, of the April 8, 2022, submittal and detailed the sector-specific NOx and VOC emission inventory totals for Lake and Porter Counties, Indiana. These tables are used to demonstrate that the application of a safety margin to MVEBs is reasonable and appropriate.

Table 3.4 included NOx emission inventory totals, in tons per summer day, for the years 2011 (Base-Year), 2019 (Attainment-Year), 2030 (Interim-Year, and 2035 (Maintenance-Year) along with a safety margin per sector. Table 3.4 - A (to be considered a replacement of the table included in the April 8, 2022, submittal) has been revised to incorporate updated onroad emission estimates for NOx for the years 2019, 2030, and 2035. The year 2011 was removed from Table 3.4 - A as it is irrelevant for the purposes of this submittal.

Table 3.4: Lake and Porter Counties, Indiana NOx Emission Inventory Totals (Tons per Summer Day)

Sector	2011 Base	2019 Attainment	2030 Interim	2035 Maintenance	Safety Margin
Area	9.39	0.91	0.88	0.87	-0.04
Nonroad	15.84	13.43	10.25	8.49	-4.94
Onroad	31.55	9.48	4.55	4.77	-4.71
Point	70.77	59.91	60.79	61.51	1.60
EGU-Point	24.04	4.29	1.44	0.42	-3.87
Total	**151.59**	**88.02**	**77.91**	**76.06**	**-11.96**

Table 3.4 - A: Lake and Porter Counties, Indiana NOx Emission Inventory Totals (Tons per Summer Day)

Sector	2019 Attainment	2030 Interim	2035 Maintenance	Safety Margin
Area	0.91	0.88	0.87	-0.04
Nonroad	13.43	10.25	8.49	-4.94
Onroad	~~9.48~~ 9.99	~~4.55~~ 5.44	~~4.77~~ 5.08	~~-4.71~~ -4.91
Point	59.91	60.79	61.51	1.60
EGU-Point	4.29	1.44	0.42	-3.87
Total	**~~88.02~~ 88.53**	**~~77.91~~ 78.80**	**~~76.06~~ 76.37**	**~~-11.96~~ -12.16**

Table 3.6 included VOC emission inventory totals, in tons per summer day, for the years 2011 (Base-Year), 2019 (Attainment-Year), 2030 (Interim-Year, and 2025 (Maintenance-Year) along with a safety margin per sector. Table 3.6 - A (to be considered a replacement of the table included in the April 8, 2022, submittal) has been revised to incorporate updated onroad emission estimates for VOCs for the years 2019, 2030, and 2035. The year 2011 was removed from Table 3.4 - A as it is irrelevant for the purposes of this submittal.

Table 3.6: Lake and Porter Counties, Indiana VOC Emission Inventory Totals (Tons per Summer Day)

Sector	2011 Base	2019 Attainment	2030 Interim	2035 Maintenance	Safety Margin
Area	18.26	17.00	17.58	17.85	0.85
Nonroad	21.43	5.53	4.80	4.35	-1.18
Onroad	7.60	3.51	2.03	1.82	-1.69
Point	17.22	10.83	10.84	10.90	0.07
EGU-Point	0.54	0.47	0.56	0.67	0.20
Total	**65.05**	**37.34**	**35.81**	**35.59**	**-1.75**

Table 3.6 - A: Lake and Porter Counties, Indiana VOC Emission Inventory Totals (Tons per Summer Day)

Sector	2019 Attainment	2030 Interim	2035 Maintenance	Safety Margin
Area	17.00	17.58	17.85	0.85
Nonroad	5.53	4.80	4.35	-1.18
Onroad	~~3.51~~ 3.50	~~2.03~~ 2.06	~~1.82~~ 2.42	~~-1.69~~ -1.08
Point	10.83	10.84	10.90	0.07
EGU-Point	0.47	0.56	0.67	0.20
Total	**~~37.34~~ 37.33**	**~~35.81~~ 35.84**	**~~35.59~~ 36.19**	**~~-1.75~~ -1.14**

Furthermore, when compared to the overall safety margin as defined in the Code of Federal Regulations (CFR) at 40 CFR 93.101, it is evident the onroad safety margin allocation is reasonable and appropriate. More specifically, even with the allocation of an onroad safety margin to mobile sources, emissions will continue to remain well below the overall safety margin for all sources as detailed in Table 3.4 - A. MVEBs are constrained to ensure that the total emissions (i.e., all source categories) do not exceed the 2019 attainment year emissions of either VOC or NOx, thereby ensuring continued maintenance of the 2008 8-hour ozone standard.

Conclusion

This MVEB update to the April 8, 2022, submittal for Indiana's portion (Lake and Porter counties) of the Chicago-Naperville, IL-IN-WI, 2008 8-hour ozone maintenance area incorporates revised onroad emission estimates for the years 2019, 2020, and 2035 and revised NOx and VOC MVEBs for the years 2030 and 2035 using U.S. EPA's most current MOVES3 model. The onroad emission estimates were calculated using the most current MOVES3 input files and data extracted from the area's travel-demand model. Onroad safety margins for NOx and VOCs, established through the interagency consultation process, are included in order to account for the wide array of assumptions that are factored into the calculation process. MVEBs are also constrained to ensure that total NOx and VOC emissions (i.e., all source categories) do not exceed attainment year (2019) emissions to ensure continued maintenance of the 2008 8-hour ozone standard. With the addition of MOVES-based onroad safety margins applied to mobile sources, Lake and Porter counties will continue to remain well below the overall safety margins for all sources into the future. As such, the 2008 8-hour ozone maintenance plan for Lake and Porter counties, Indiana, continues to meet all applicable CAA requirements.

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Appendix A

Lake and Porter Counties, Indiana, Maintenance Area MOVES Methodology

MOVES3 Input Data and Parameters

March 24, 2023

Northwestern Indiana Regional Planning Commission (NIRPC) Lake and Porter Counties: 2008 8-Hour Ozone Maintenance Area

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1.0 Introduction

This report documents the methods used to create input parameters prior to running a set of MOVES3 runs for Northwest Indiana Regional Planning Commission (NIRPC) covering the 2008 8-hour Ozone Maintenance Area for Lake and Porter Counties. This report contains a discussion of the input settings used in MOVES3 and the development of the input datasets. Any topic not explicitly discussed in this report is assumed to use the MOVES3 national defaults or not be relevant for completing the 2008 8-hour Ozone Maintenance Area runs for Lake and Porter Counties.

Table 1: What Has Been Updated Since the MOVES2014a-based Runs?

MOVES Input	Updated?	Notes
Source (Vehicle) Type Population	**Yes**	*New BMV data*
Vehicle Type VMT (by 13 MOVES Vehicle Types)	**Yes**	*HourVMTFraction updated using INDOT WIM & ATR data*
Age Distribution (Vehicle Population by Age of Vehicle)	**Yes**	*New BMV data*
Fuel (AVFT, % Fuel Type/Engine Type by Vehicle Type)	**Yes**	*New BMV data*
Fuel (all other files)	**Yes**	*Used MOVES3 defaults for each county*
Average Speed Distribution (% of VHT in each 5 mph speed bin)	**Yes**	*Used MOVES3 defaults for each county*
Road Type Distribution (VMT by 5 MOVES Road Types)	**Yes**	*Updated using INDOT WIM & ATR data*
Ramp Fraction	**No**	*Retained inputs from MOVES2014a-based Runs*
Meteorology Data	**Yes**	*Used MOVES3 defaults for each county*
I/M Program	**No**	*Retained inputs from MOVES2014a-based Runs*

2.0 Source Type Population

The vehicle populations for light duty vehicles, which include motorcycles, passenger cars, passenger trucks, and light commercial trucks (source types 11, 21, 31, and 32 respectively) were developed from a new vehicle registration dataset provided to INDOT by the Indiana Bureau of Motor Vehicles (BMV) in February 2023. These are discussed in section 2.1 below. The vehicle populations for heavy duty vehicles, which include trucks and buses (source types 41, 42, 43, 51, 52, 53, 54, 61, and 62 respectively) were developed using procedures recommended in EPA's MOVES guidance. This is discussed in section 2.2.

2.1 BMV Vehicle Registration Data

A vehicle fleet dataset covering Lake, Porter, and LaPorte Counties (LaPorte County is part of NIRPC's Metropolitan Planning Area, even though it is not part of the 2008 8-Hour Ozone Nonattainment Area covered in this report) was provided to NIRPC courtesy of INDOT in February 2023. The analysis was performed by NIRPC staff. The dataset was processed by BMV and did not contain any personally identifiable or otherwise confidential information. The dataset also did not include any raw Vehicle Identification Numbers (VINs).

The raw BMV dataset contained the number of vehicles classified by the combination of:

- Vehicle Type
- Vehicle Year
- Fuel Type
- County

There were approximately 751,011 vehicles in the Lake, Porter, and LaPorte Counties vehicle registration dataset. Out of these, 683,109 were for On-road vehicles and of interest to this analysis.

BMV Vehicle Type Records Excluded from Further Analysis:

- Low Speed
- Off-Road Vehicle
- RV-Travel Trailer
- Snowmobile
- Special Machinery
- Trailer
- Watercraft

Table 2: BMV Data to MOVES3

BMV Type	MOVES Usage			
	Source Type ID	Source Type Population	Vehicle Age Distribution	AVFT File
MOTORCYCLE	11	X	X	MD
Dealer	21	X	X	X
PASSENGER	21	X	X	X
RV-Truck Camper	31	X	X	X
Truck 7,000	31	X	X	X
Truck 9,000	31	X	X	X
Truck Camper	31	X	X	X
Farm Truck	32	X	X	X
Truck 10,000	32	X	X	X
Truck 11,000	32	X	X	X
City Bus	42	T	MD	MD
Commercial Bus	42	T	MD	MD
Church Bus	43	T	MD	MD
School Bus	43	T	MD	MD
Special Bus	43	T	MD	MD
Recovery Vehicle	52	T	MD	MD
Truck 16,000	52	T	MD	MD
Truck 20,000	52	T	MD	MD
Truck 23,000	52	T	MD	MD
Truck 26,000	52	T	MD	MD
Truck 30,000	52	T	MD	MD
Truck 36,000	53	T	MD	MD
Truck 42,000	53	T	MD	MD
Truck 48,000	53	T	MD	MD
Truck 54,000	53	T	MD	MD
Truck 60,000	53	T	MD	MD
RV	54	T	MD	MD
RV-Motorhome	54	T	MD	MD
Farm Semi Tractor	61	T	MD	MD
Truck 66,000	61	T	MD	MD
Truck 66,000+	61	T	MD	MD
Semi Tractor	62	T	MD	MD
Truck	62	T	MD	MD
SEMI	62	T	MD	MD
Semi	62	T	MD	MD
LOW SPEED	N/A	N/A	N/A	N/A
OFF-ROAD VEHICLE	N/A	N/A	N/A	N/A
RV-Travel Trailer	N/A	N/A	N/A	N/A
SNOWMOBILE	N/A	N/A	N/A	N/A
SPECIAL MACHINERY	N/A	N/A	N/A	N/A
TRAILER	N/A	N/A	N/A	N/A
WATERCRAFT	N/A	N/A	N/A	N/A

Legend	
X	BMV values were used
MD	MOVES Defaults used in place of BMV data
T	BMV data used for Heavy Duty Veh. control total applied to MAR method
N/A	Discarded

2.2 Heavy Vehicle Source Types

Vehicle populations for all other source types (buses and heavy vehicles) were derived by applying the Mileage Accumulation Rate (MAR) method documented in EPA's Technical Guidance on the Use of MOVES2010 for Emission Inventory Preparation in State Implementation Plans and Transportation Conformity, Section 3.3 Source Type Population.

Mileage Accumulation Rates:
Development of the Mileage Accumulation Rates was done during the previous 2015-2019 emission rate development process facilitated by INDOT. The MARs developed at that time have been carried forward into this update, but have been updated to reconcile with current BMV data related to heavy vehicles. The default MARs were extracted from MOVES by running MOVES for a single pollutant and a single year for all vehicles, fuels, months, days, and hours. The activity output was set to report both distance and population. A ratio of population to vehicle-miles-traveled (VMT) was calculated from these outputs. The ratios were calculated for each source type.

The Northwestern Indiana Regional Planning Commission (NIRPC), which is the metropolitan planning organization (MPO) for Lake and Porter Counties, provided VMT by MOVES road types extracted from their travel demand model's base year. Since the default MARs in MOVES vary by year (but not by location), the MOVES run that was executed to extract the MARs was run for a year consistent with the travel demand model's base year. This resulted in MARs that could be applied directly to the validated VMTs reported by the travel demand model. The travel demand model VMTs were converted into annual VMT and distributed by vehicle types using statewide default VMT distribution factors documented in this report in the section on Default VMT Distributions. The MARs were then applied to the annual vehicle type VMTs. The result was an estimated vehicle population for each source type for the travel demand model's base year. Since the vehicle populations for source types 11, 21, 31, and 32 were developed directly from the vehicle registration data, the population estimates derived for those source types using the MAR method were discarded and the observed data were used instead. As a final step, MAR-derived heavy duty vehicle classes were adjusted proportionally to match heavy duty vehicle population totals for each county from BMV data.

2.3 Forecasting Vehicle Populations by Source Types

Future year vehicle populations were developed base on socioeconomic growth rates for the maintenance area. NIRPC provided base year and horizon year population and employment data for the area. Annual growth rates were calculated for population growth and employment growth individually. Population growth rates were then used to grow the light vehicle populations (source types 11, 21, 31, and 32). Employment growth rates were used to grow the heavy vehicle populations (source types 41, 42, 43, 51, 52, 53, 54, 61, and 62). Vehicle populations were calculated in 5-year increments from 2020 to 2050, including a 2019 base year. The county level source type values and forecasts are shown in Table 3. When generating MOVES3 emission rates the vehicle populations for Lake and Porter Counties are combined into a single input file.

Table 3: Lake and Porter Counties Vehicle Population by Year

SourceTypeID	Year 2019	2020	2025	2030	2035	2040	2050
11	20,266	20,332	19,569	19,891	20,219	20,552	21,234
21	284,893	285,825	219,319	222,931	226,603	230,334	237,984
31	164,454	164,992	214,148	217,674	221,259	224,903	232,372
32	50,349	50,514	91,741	93,252	94,787	96,348	99,548
41	314	315	317	322	328	333	344
42	166	167	168	170	173	176	182
43	2,154	2,161	2,175	2,211	2,247	2,284	2,360
51	59	59	60	61	62	63	65
52	3,906	3,919	3,953	4,018	4,084	4,151	4,289
53	464	466	469	476	484	492	508
54	891	894	1440	1,464	1,488	1,512	1,563
61	6,974	6,997	7,043	7,159	7,277	7,396	7,642
62	7,956	7,982	8,034	8,167	8,301	8,438	8,718

Data Sources: SourceTypes 11, 21, 31, and 32 use 2014 Indiana BMV summary statistics for vehicle registration & license plate data by county. All other Source Types use Mileage Accumulation Rate (MAR) method.

2.4 Vehicle Age Distribution

The vehicle age distributions for MOVES source types 11, 21, 31, and 32 (motorcycles, cars, passenger trucks, and light commercial vehicles respectively) were developed through an analysis of Indiana's 2022 vehicle registration data. The BMV dataset allowed the totals for each model year by vehicle type and county to be assembled into the required MOVES3 format. Whereby, the vehicles are classified into one year age bins between 0 and 29 years old, and older vehicles into the 30 years old or more bin.

In keeping with previous practice, vehicle age distributions were only derived for light duty vehicles from the BMV data (source types 11, 21, 31, and 32 from the vehicle registration data). Because of the transient nature of the heavy vehicle classes, MOVES3 default vehicle age distributions specific to each source types were used. Vehicle age distributions for all source types were grown using the EPA's Age Distribution Projection Tool for MOVES3. The vehicle age distributions for Lake and Porter Counties as a combined area are shown in Tables 4-9.

Table 4: Lake and Porter Counties Vehicle Age Distribution in 2019 Base Year

	SourceTypeID												
AgeID	11	21	31	32	41	42	43	51	52	53	54	61	62
0	0.210969	0.026737	0.014506	0.035512	0.064302	0.054574	0.062222	0.049424	0.058853	0.078754	0.06151	0.053563	0.067085
1	0.192115	0.053018	0.050066	0.073407	0.062673	0.053191	0.060645	0.048172	0.057361	0.076759	0.059951	0.053563	0.067085
2	0.157347	0.066554	0.058207	0.078647	0.062485	0.053032	0.060464	0.048028	0.05719	0.076529	0.059772	0.054105	0.067762
3	0.135977	0.061032	0.051985	0.065665	0.062423	0.052979	0.060403	0.04798	0.057133	0.076453	0.059712	0.057558	0.072087
4	0.105845	0.06598	0.078055	0.079362	0.061737	0.052397	0.05974	0.047452	0.056505	0.075612	0.059056	0.056418	0.07066
5	0.075091	0.064563	0.073391	0.073287	0.055917	0.047458	0.054108	0.042979	0.051178	0.068485	0.053488	0.048929	0.06128
6	0.047681	0.060839	0.074713	0.064772	0.046837	0.039751	0.045321	0.035999	0.042867	0.057363	0.044802	0.036603	0.045843
7	0.033103	0.064939	0.080665	0.072156	0.042579	0.036137	0.041201	0.032727	0.03897	0.052148	0.040729	0.034074	0.042676
8	0.019728	0.065	0.064383	0.059769	0.046827	0.039743	0.045312	0.035992	0.042858	0.057351	0.044793	0.035809	0.044849
9	0.011847	0.067713	0.068911	0.0689	0.053438	0.045353	0.051709	0.041073	0.048909	0.065448	0.051117	0.052629	0.065914
10	0.005325	0.060751	0.064803	0.058817	0.053271	0.045212	0.051548	0.040945	0.048756	0.065244	0.050958	0.062452	0.078217
11	0.002538	0.052437	0.055815	0.051075	0.040795	0.05362	0.041108	0.031356	0.039149	0.052388	0.030273	0.047826	0.059899
12	0.001301	0.05298	0.050114	0.0424	0.033192	0.048994	0.038293	0.025512	0.029448	0.039407	0.04661	0.038913	0.048735
13	0.000612	0.042526	0.038638	0.032614	0.027735	0.045609	0.033375	0.054598	0.03164	0.019477	0.029167	0.032515	0.046299
14	0.000248	0.044814	0.039004	0.033051	0.036429	0.037775	0.043086	0.063266	0.036444	0.019469	0.03478	0.042708	0.046207
15	0.000153	0.03273	0.03577	0.028287	0.028351	0.033295	0.021016	0.039565	0.035789	0.031185	0.03352	0.033237	0.030044
16	0.000067	0.02706	0.02441	0.019672	0.023588	0.027913	0.025367	0.034157	0.025999	0.02302	0.023315	0.027654	0.023052
17	0.00003	0.019745	0.016248	0.013518	0.017564	0.024497	0.020683	0.014635	0.019796	0.005226	0.020675	0.020591	0.013845
18	0.000013	0.015721	0.012994	0.010679	0.020119	0.025048	0.026689	0.040196	0.019374	0.003721	0.015546	0.023587	0.010007
19	0.000006	0.010933	0.009734	0.008337	0.022579	0.036661	0.030145	0.034228	0.022734	0.017578	0.020363	0.02647	0.00986
20	0.000002	0.009717	0.009659	0.007861	0.022641	0.028197	0.017388	0.027008	0.02894	0.018387	0.026594	0.026543	0.009576
21	0.000001	0.006084	0.007545	0.00536	0.021297	0.022441	0.020903	0.036743	0.025509	0.012162	0.023847	0.024967	0.00834
22	0.000001	0.00472	0.004359	0.003176	0.022137	0.020761	0.021174	0.029424	0.021171	0.002921	0.023292	0.025952	0.002197
23	0	0.003466	0.00326	0.002819	0.018775	0.017685	0.018686	0.036737	0.025574	0.00066	0.017364	0.022011	0.002282
24	0	0.003405	0.002806	0.002124	0.01658	0.015344	0.016222	0.019537	0.018134	0.001323	0.018639	0.019438	0.002895
25	0	0.002067	0.001898	0.001429	0.013046	0.011961	0.012527	0.020286	0.010153	0.001326	0.018907	0.015295	0.001496
26	0	0.001524	0.00101	0.000913	0.005207	0.011471	0.004628	0.005879	0.015824	0	0.012386	0.006104	0.000305
27	0	0.000741	0.000827	0.000854	0.004438	0.006255	0.003427	0.006619	0.008243	0.000585	0.007312	0.005202	0.000237
28	0	0.000821	0.000651	0.000655	0.003853	0.002715	0.004023	0.005865	0.007845	0.000422	0.00402	0.004518	0.000754
29	0	0.000749	0.000285	0.000238	0.00502	0.007381	0.003956	0.00147	0.008291	0	0.00053	0.005885	0.000248
30	0	0.010636	0.005287	0.004645	0.004164	0.002547	0.004629	0.002149	0.009364	0.000597	0.006972	0.004882	0.000264

Table 5: Lake and Porter Counties Vehicle Age Distribution in 2025

	SourceTypeID												
AgeID	11	21	31	32	41	42	43	51	52	53	54	61	62
0	0.048342	0.048342	0.0651	0.0651	0.055196	0.055196	0.055196	0.05644	0.05644	0.05644	0.05644	0.053196	0.053196
1	0.047747	0.047483	0.062737	0.06406	0.054027	0.054577	0.054114	0.05469	0.05473	0.054084	0.054368	0.052998	0.052657
2	0.046623	0.047041	0.060182	0.062907	0.053007	0.054086	0.053267	0.053094	0.053201	0.051877	0.0523	0.052887	0.052216
3	0.032797	0.024006	0.067353	0.049358	0.059959	0.052757	0.05846	0.045183	0.054287	0.069707	0.054904	0.050995	0.062493
4	0.026197	0.020759	0.061232	0.04959	0.05844	0.05142	0.056979	0.044039	0.052911	0.067941	0.053512	0.050995	0.062493
5	0.022844	0.031273	0.070056	0.052313	0.057801	0.050783	0.056327	0.043672	0.052438	0.067333	0.053111	0.051069	0.062493
6	0.02398	0.037687	0.076286	0.059693	0.056806	0.049738	0.055287	0.043157	0.051749	0.066448	0.05258	0.053389	0.065121
7	0.029656	0.045486	0.07574	0.055862	0.055231	0.04815	0.053671	0.042213	0.050538	0.064892	0.051538	0.051418	0.062474
8	0.030111	0.057715	0.075543	0.047105	0.049189	0.042712	0.04773	0.037817	0.045205	0.058046	0.046258	0.043815	0.053042
9	0.030065	0.057269	0.066145	0.049113	0.040854	0.035404	0.039613	0.0315	0.037627	0.048315	0.038571	0.032486	0.039256
10	0.034879	0.067788	0.055887	0.044136	0.036814	0.031823	0.035664	0.028477	0.033985	0.043639	0.034907	0.029973	0.036141
11	0.035788	0.071226	0.041043	0.038961	0.040157	0.034659	0.038881	0.031148	0.037149	0.047701	0.038214	0.031222	0.037589
12	0.034607	0.071717	0.030489	0.029927	0.045436	0.039136	0.043961	0.035348	0.042127	0.054093	0.043411	0.045476	0.054647
13	0.035016	0.059779	0.026726	0.027477	0.044524	0.038192	0.043015	0.034849	0.041467	0.053246	0.042883	0.053006	0.063456
14	0.023889	0.045344	0.023285	0.029736	0.033804	0.044814	0.033984	0.026538	0.033085	0.042483	0.02536	0.040225	0.048063
15	0.021073	0.037103	0.017173	0.02076	0.027258	0.040476	0.031345	0.02147	0.024724	0.031747	0.038868	0.032433	0.038664
16	0.036514	0.030551	0.011964	0.014901	0.022588	0.037307	0.027077	0.045696	0.026401	0.015595	0.02421	0.026857	0.036345
17	0.043054	0.034466	0.01887	0.025058	0.029412	0.030567	0.034627	0.052654	0.030215	0.015489	0.028737	0.034955	0.035871
18	0.050548	0.034673	0.018586	0.027093	0.022494	0.026363	0.016572	0.032561	0.029294	0.024494	0.027441	0.026712	0.022812
19	0.050139	0.025775	0.01381	0.024972	0.018552	0.021861	0.019813	0.027951	0.021144	0.017964	0.018999	0.02202	0.017308
20	0.048459	0.024226	0.014515	0.025494	0.013573	0.018769	0.015848	0.011842	0.015893	0.004026	0.016692	0.016097	0.010164
21	0.036878	0.017772	0.011947	0.024967	0.015411	0.01898	0.020254	0.032339	0.015454	0.002848	0.012493	0.018268	0.007264
22	0.046097	0.015974	0.010399	0.022293	0.017136	0.027449	0.022645	0.02738	0.018013	0.013364	0.016289	0.02031	0.007073
23	0.037241	0.011621	0.007686	0.019087	0.017037	0.020897	0.012943	0.021484	0.022786	0.013892	0.021174	0.020179	0.006795
24	0.029066	0.00998	0.005134	0.017747	0.015884	0.016446	0.015409	0.02906	0.019954	0.009129	0.018899	0.018802	0.00585
25	0.027295	0.007451	0.003897	0.013825	0.016357	0.015032	0.015448	0.023137	0.01645	0.002178	0.018374	0.019361	0.001523
26	0.021073	0.006319	0.003526	0.01227	0.013754	0.012673	0.013508	0.028726	0.019745	0.000489	0.013633	0.016268	0.001564
27	0.016804	0.004008	0.00185	0.008563	0.012037	0.010872	0.011612	0.015189	0.013909	0.000974	0.014566	0.014231	0.001962
28	0.014033	0.003544	0.001759	0.009428	0.009383	0.008371	0.008874	0.015679	0.007735	0.000969	0.014707	0.011091	0.001002
29	0.013716	0.002184	0.000792	0.005409	0.003713	0.007945	0.003248	0.004518	0.011979	0	0.009589	0.004385	0.000202
30	0.00547	0.001437	0.000288	0.002796	0.004164	0.002547	0.004629	0.002149	0.009364	0.000597	0.006972	0.004882	0.000264

Table 6: Lake and Porter Counties Vehicle Age Distribution in 2030

	SourceTypeID												
AgeID	11	21	31	32	41	42	43	51	52	53	54	61	62
0	0.052706	0.052706	0.059215	0.059215	0.049091	0.049091	0.049091	0.051242	0.051242	0.051242	0.051242	0.045356	0.045356
1	0.052841	0.051943	0.059226	0.059759	0.049365	0.049454	0.049372	0.051383	0.051043	0.050461	0.051082	0.046493	0.045937
2	0.051899	0.051639	0.058611	0.059768	0.049837	0.050072	0.049893	0.051909	0.051124	0.049694	0.050796	0.048052	0.04694
3	0.04831	0.051066	0.057889	0.059725	0.050381	0.050792	0.050486	0.051974	0.05107	0.048968	0.050607	0.049745	0.048057
4	0.046266	0.051848	0.057485	0.060247	0.051411	0.052075	0.051584	0.052788	0.051434	0.048841	0.051073	0.051743	0.04945
5	0.043894	0.051859	0.056071	0.059744	0.050696	0.051911	0.05095	0.051765	0.050752	0.047412	0.050034	0.051602	0.048972
6	0.040655	0.050572	0.053258	0.057943	0.048882	0.05052	0.049187	0.049592	0.048632	0.044895	0.047674	0.050512	0.047576
7	0.038083	0.049592	0.05009	0.055782	0.04724	0.049255	0.047667	0.047612	0.046717	0.042557	0.045392	0.049532	0.046295
8	0.026789	0.024969	0.054651	0.042656	0.052239	0.046879	0.051103	0.039848	0.046835	0.05618	0.046922	0.046528	0.053861
9	0.021398	0.021274	0.048393	0.041731	0.04976	0.044535	0.048624	0.038206	0.044844	0.053793	0.045069	0.045328	0.052329
10	0.018659	0.031524	0.05386	0.042812	0.048465	0.043229	0.047297	0.037478	0.043921	0.052685	0.044303	0.04461	0.051326
11	0.019587	0.037321	0.057013	0.047471	0.04691	0.041645	0.045698	0.036621	0.042829	0.051376	0.043402	0.04582	0.052472
12	0.024224	0.044212	0.055016	0.043161	0.044905	0.039622	0.043645	0.035424	0.041327	0.049574	0.04212	0.043352	0.049361
13	0.024595	0.053681	0.053365	0.035382	0.039384	0.034576	0.038207	0.031374	0.036525	0.043813	0.037397	0.036285	0.041112
14	0.024558	0.049119	0.045465	0.035881	0.032207	0.028176	0.031202	0.025842	0.030038	0.036033	0.030868	0.026427	0.029838
15	0.02849	0.052963	0.037025	0.031071	0.028572	0.024884	0.027634	0.023107	0.026809	0.032158	0.027665	0.023954	0.026933
16	0.029232	0.050213	0.026211	0.02643	0.030688	0.026651	0.029648	0.024988	0.028952	0.03473	0.029967	0.024507	0.027473
17	0.028267	0.045322	0.018776	0.019569	0.034179	0.029567	0.03297	0.028039	0.032435	0.038907	0.033702	0.035057	0.039149
18	0.028601	0.03454	0.01588	0.017325	0.032975	0.028377	0.031749	0.027326	0.031541	0.037835	0.032928	0.040122	0.044577
19	0.019513	0.024779	0.013366	0.018099	0.024645	0.032726	0.024675	0.020575	0.024861	0.029822	0.019274	0.029899	0.033098
20	0.017213	0.019387	0.009636	0.012347	0.019407	0.028796	0.022204	0.016363	0.018241	0.021882	0.029081	0.023456	0.025839
21	0.029825	0.015417	0.006579	0.008682	0.015829	0.026082	0.018866	0.034432	0.019241	0.010618	0.017928	0.019071	0.023806
22	0.035167	0.016933	0.01019	0.014333	0.020284	0.020987	0.023724	0.039233	0.021755	0.010418	0.021071	0.024373	0.023023
23	0.041288	0.016682	0.00988	0.015252	0.015269	0.017791	0.011169	0.023982	0.020834	0.016273	0.019906	0.018283	0.01435
24	0.040954	0.012198	0.007236	0.013852	0.012391	0.014488	0.013129	0.020352	0.014853	0.011789	0.013642	0.014795	0.010665
25	0.039582	0.011337	0.007511	0.013964	0.008993	0.01233	0.010415	0.008573	0.011096	0.002626	0.011923	0.010715	0.0062
26	0.030122	0.008238	0.006116	0.013526	0.010049	0.012254	0.013092	0.023142	0.010656	0.001835	0.008828	0.011936	0.004342
27	0.037653	0.007353	0.005271	0.011957	0.010993	0.017401	0.014388	0.019369	0.012267	0.008503	0.011393	0.013023	0.004141
28	0.030419	0.005322	0.003863	0.01015	0.010842	0.01313	0.008155	0.015111	0.015423	0.008784	0.014732	0.012819	0.003938
29	0.023742	0.004553	0.002562	0.009368	0.009947	0.010154	0.009548	0.020202	0.013339	0.005701	0.013006	0.011722	0.003321
30	0.00547	0.001437	0.000288	0.002796	0.004164	0.002547	0.004629	0.002149	0.009364	0.000597	0.006972	0.004882	0.000264

Table 7: Lake and Porter Counties Vehicle Age Distribution in 2035

	SourceTypeID												
AgeID	11	21	31	32	41	42	43	51	52	53	54	61	62
0	0.057016	0.057016	0.056219	0.056219	0.047745	0.047745	0.047745	0.049862	0.049862	0.049862	0.049862	0.043771	0.043771
1	0.05905	0.057096	0.056192	0.056322	0.047625	0.047708	0.047667	0.049513	0.049476	0.049211	0.049672	0.0442	0.044095
2	0.058695	0.056719	0.055768	0.056117	0.047252	0.047403	0.047399	0.049384	0.048747	0.048171	0.048969	0.044445	0.04412
3	0.056067	0.056401	0.055367	0.055976	0.047098	0.047516	0.047386	0.049269	0.048238	0.047513	0.048474	0.044978	0.044353
4	0.053214	0.055993	0.05495	0.055887	0.046882	0.047447	0.047076	0.049007	0.047901	0.046877	0.048121	0.045327	0.044355
5	0.050082	0.055376	0.053894	0.05528	0.046194	0.046861	0.046391	0.048529	0.047056	0.045666	0.047212	0.045229	0.043899
6	0.046724	0.054159	0.053137	0.055008	0.045739	0.046506	0.045943	0.047992	0.046262	0.044383	0.046395	0.045545	0.043676
7	0.043781	0.053264	0.05157	0.053973	0.045468	0.04638	0.045717	0.047836	0.045738	0.043146	0.045511	0.04624	0.043834
8	0.040754	0.051929	0.049676	0.052624	0.044925	0.046002	0.045215	0.046958	0.044824	0.04171	0.044438	0.046616	0.043689
9	0.03903	0.051907	0.048069	0.051751	0.044809	0.046105	0.045154	0.046792	0.044305	0.040829	0.043996	0.04721	0.043748
10	0.037028	0.051018	0.045633	0.049968	0.043514	0.045261	0.043918	0.045305	0.043169	0.039137	0.042555	0.046251	0.042542
11	0.034296	0.048831	0.042154	0.047155	0.041319	0.04339	0.041753	0.042829	0.04084	0.036588	0.039999	0.044471	0.040589
12	0.032126	0.046953	0.038553	0.044165	0.039314	0.041655	0.039837	0.040584	0.038732	0.034241	0.037585	0.042825	0.038773
13	0.022599	0.02256	0.040927	0.032876	0.042797	0.039042	0.042044	0.033499	0.038317	0.044606	0.038302	0.039506	0.044295
14	0.018051	0.01763	0.03528	0.031325	0.040136	0.036526	0.039387	0.031696	0.036221	0.042166	0.036302	0.03779	0.042246
15	0.015741	0.023652	0.037866	0.03101	0.038488	0.034908	0.037718	0.030694	0.035025	0.040773	0.035227	0.036524	0.040674
16	0.016523	0.025112	0.038662	0.033189	0.036678	0.033119	0.03588	0.029591	0.033715	0.039248	0.034037	0.036837	0.040824
17	0.020435	0.026516	0.036	0.029136	0.03456	0.031019	0.03373	0.028246	0.032112	0.037382	0.032593	0.034215	0.037687
18	0.020748	0.029306	0.033715	0.023075	0.029831	0.026651	0.02906	0.024668	0.028001	0.032597	0.028523	0.028115	0.030811
19	0.020717	0.025283	0.027772	0.022637	0.024012	0.021383	0.023361	0.020048	0.022732	0.026462	0.023227	0.020098	0.021944
20	0.024034	0.026002	0.022118	0.019178	0.020799	0.018444	0.0202	0.017563	0.019889	0.023153	0.020389	0.017719	0.019257
21	0.02466	0.023761	0.015351	0.015999	0.021987	0.019446	0.02133	0.018739	0.0212	0.02468	0.021787	0.01779	0.019272
22	0.023846	0.02085	0.010803	0.011641	0.0241	0.021233	0.023344	0.020752	0.023443	0.02729	0.024181	0.024979	0.026943
23	0.024128	0.015543	0.008997	0.010151	0.022884	0.020062	0.022123	0.019948	0.022497	0.02619	0.023295	0.028058	0.030104
24	0.016461	0.010957	0.007466	0.010458	0.016828	0.022767	0.016918	0.014818	0.017499	0.020371	0.013451	0.020515	0.021923
25	0.01452	0.008472	0.005317	0.00705	0.013144	0.019874	0.0151	0.011703	0.012753	0.014847	0.020154	0.015943	0.016951
26	0.02516	0.006669	0.003592	0.004906	0.01055	0.01772	0.012626	0.024288	0.013275	0.007109	0.012249	0.012719	0.015322
27	0.029667	0.007272	0.00551	0.008023	0.0133	0.014029	0.015619	0.027299	0.01481	0.006883	0.0142	0.015947	0.01453
28	0.03483	0.007126	0.005299	0.008468	0.00993	0.011797	0.007293	0.016571	0.014087	0.010678	0.013321	0.011849	0.00897
29	0.034548	0.005189	0.003853	0.007637	0.007929	0.009455	0.008435	0.013869	0.009909	0.007633	0.008999	0.009407	0.006539
30	0.00547	0.001437	0.000288	0.002796	0.004164	0.002547	0.004629	0.002149	0.009364	0.000597	0.006972	0.004882	0.000264

Table 8: Lake and Porter Counties Vehicle Age Distribution in 2040

	SourceTypeID												
AgeID	11	21	31	32	41	42	43	51	52	53	54	61	62
0	0.057001	0.057001	0.053876	0.053876	0.04665	0.04665	0.04665	0.048514	0.048514	0.048514	0.048514	0.042886	0.042886
1	0.057724	0.056875	0.053848	0.053818	0.046337	0.046469	0.046394	0.048054	0.047984	0.048124	0.048378	0.04295	0.042995
2	0.058032	0.056983	0.053642	0.05356	0.045823	0.04613	0.045947	0.048002	0.047416	0.047396	0.047946	0.042733	0.042877
3	0.055771	0.056706	0.053492	0.053403	0.045669	0.045936	0.045871	0.048293	0.047068	0.046793	0.047762	0.043108	0.043222
4	0.05405	0.05653	0.053198	0.053143	0.045852	0.046141	0.045938	0.048557	0.047092	0.046716	0.047946	0.04395	0.04398
5	0.052558	0.056428	0.052803	0.052843	0.045721	0.046056	0.045826	0.048481	0.046753	0.046316	0.047696	0.044389	0.044335
6	0.050844	0.056077	0.052015	0.052185	0.044922	0.045368	0.045065	0.047427	0.045764	0.045094	0.046794	0.04405	0.043907
7	0.048286	0.055104	0.050612	0.050992	0.043915	0.044451	0.044154	0.046613	0.044494	0.043558	0.045438	0.043538	0.043197
8	0.046124	0.054008	0.04899	0.049609	0.0428	0.043618	0.043166	0.04549	0.043154	0.042108	0.043965	0.042932	0.042332
9	0.043777	0.052776	0.047361	0.048267	0.04166	0.042633	0.041936	0.04428	0.042008	0.040726	0.04267	0.042161	0.041267
10	0.041201	0.051277	0.045191	0.046468	0.04044	0.041511	0.040714	0.04322	0.040725	0.039153	0.04124	0.041349	0.040153
11	0.038438	0.049206	0.043317	0.044973	0.039436	0.040604	0.039713	0.042109	0.039496	0.037539	0.039907	0.040913	0.039263
12	0.036017	0.047434	0.040864	0.042912	0.038612	0.039913	0.038923	0.041363	0.038527	0.036004	0.038555	0.040815	0.03873
13	0.033526	0.044131	0.038286	0.040713	0.03757	0.039019	0.037911	0.039991	0.037242	0.034331	0.037065	0.040422	0.037935
14	0.032108	0.040468	0.036052	0.038978	0.036909	0.038547	0.037291	0.039263	0.036315	0.033154	0.036133	0.040222	0.037333
15	0.030461	0.035993	0.032988	0.036297	0.035303	0.037298	0.035726	0.037463	0.034914	0.031357	0.034421	0.038719	0.03568
16	0.028214	0.030837	0.029377	0.03304	0.033007	0.035236	0.033444	0.034883	0.032577	0.028913	0.031851	0.036568	0.033448
17	0.026429	0.026336	0.025911	0.029861	0.030926	0.033334	0.031423	0.032568	0.030476	0.026691	0.02947	0.034592	0.031393
18	0.018591	0.01148	0.026544	0.021463	0.033145	0.030787	0.032652	0.02647	0.029733	0.034289	0.02956	0.031339	0.035234
19	0.01485	0.008444	0.022114	0.019777	0.030609	0.028385	0.030122	0.024671	0.027723	0.031972	0.027581	0.029444	0.033017
20	0.012949	0.01079	0.023204	0.019148	0.028672	0.026531	0.028179	0.023352	0.026256	0.03028	0.02614	0.027695	0.030949
21	0.013593	0.011029	0.023222	0.020093	0.026902	0.024804	0.026394	0.022174	0.024927	0.028747	0.024861	0.027431	0.030515
22	0.016811	0.011311	0.021236	0.017329	0.024959	0.02289	0.024432	0.020852	0.02342	0.027009	0.023437	0.025023	0.027673
23	0.017068	0.012219	0.01958	0.013515	0.021204	0.019373	0.020719	0.01793	0.020136	0.023222	0.020184	0.020187	0.022219
24	0.017043	0.010353	0.015897	0.013072	0.016802	0.015313	0.016395	0.014352	0.01612	0.018591	0.016179	0.014169	0.015541
25	0.019771	0.010519	0.012506	0.010941	0.014441	0.013111	0.014068	0.012477	0.014007	0.016154	0.014089	0.012377	0.013516
26	0.020286	0.009513	0.008587	0.009032	0.015023	0.013616	0.01462	0.013106	0.01472	0.016976	0.014814	0.012199	0.013282
27	0.019617	0.008283	0.005984	0.006509	0.016208	0.014644	0.015748	0.014294	0.016051	0.01851	0.016182	0.016814	0.018234
28	0.019849	0.006141	0.004942	0.00563	0.01527	0.013735	0.014808	0.013634	0.015296	0.01764	0.015464	0.018713	0.02019
29	0.013541	0.004311	0.004071	0.005758	0.011049	0.015351	0.011143	0.009969	0.011729	0.013527	0.008785	0.013429	0.014435
30	0.00547	0.001437	0.000288	0.002796	0.004164	0.002547	0.004629	0.002149	0.009364	0.000597	0.006972	0.004882	0.000264

Table 9: Lake and Porter Counties Vehicle Age Distribution in 2050

	SourceTypeID												
AgeID	11	21	31	32	41	42	43	51	52	53	54	61	62
0	0.05535	0.05535	0.053392	0.053392	0.044474	0.044474	0.044474	0.04626	0.04626	0.04626	0.04626	0.04025	0.04025
1	0.056363	0.055744	0.053518	0.053441	0.044942	0.044776	0.044942	0.046376	0.046409	0.046538	0.046384	0.041118	0.041221
2	0.056179	0.056126	0.05363	0.053487	0.04517	0.044846	0.045169	0.046301	0.046365	0.046625	0.046327	0.041704	0.041907
3	0.053468	0.056112	0.053532	0.053296	0.045425	0.04495	0.045422	0.046202	0.046291	0.046685	0.046255	0.042492	0.042786
4	0.050881	0.055939	0.053166	0.052767	0.045865	0.045247	0.045861	0.046248	0.046345	0.046868	0.046327	0.043615	0.043992
5	0.048278	0.055433	0.052519	0.05203	0.045856	0.045143	0.045847	0.045881	0.045973	0.046609	0.045993	0.044273	0.044709
6	0.045938	0.054801	0.051162	0.050617	0.045128	0.044367	0.045105	0.044867	0.044956	0.04569	0.04503	0.044119	0.044594
7	0.043973	0.054262	0.049926	0.049386	0.044307	0.043495	0.044266	0.043894	0.043988	0.044827	0.044121	0.043511	0.04402
8	0.042226	0.053688	0.04864	0.048091	0.043175	0.042326	0.043109	0.042705	0.042822	0.043777	0.043021	0.042478	0.043032
9	0.040236	0.052416	0.046744	0.046187	0.042057	0.04115	0.041963	0.041442	0.041581	0.042651	0.041863	0.041748	0.042359
10	0.038129	0.050929	0.044809	0.044281	0.041052	0.040302	0.040949	0.040286	0.040453	0.041625	0.040692	0.041139	0.041798
11	0.036253	0.049492	0.042949	0.042419	0.039643	0.039108	0.039582	0.038866	0.039029	0.040277	0.039548	0.039848	0.040532
12	0.034958	0.048092	0.040814	0.040271	0.038111	0.037811	0.038097	0.037801	0.037614	0.038687	0.038183	0.038345	0.039101
13	0.033596	0.045034	0.038634	0.038117	0.036631	0.036405	0.036669	0.036752	0.03616	0.03699	0.036782	0.037073	0.037784
14	0.032559	0.040562	0.036458	0.035994	0.035461	0.035341	0.035397	0.035696	0.035029	0.035757	0.035685	0.036211	0.036846
15	0.03166	0.036023	0.033975	0.033605	0.034346	0.034329	0.03429	0.034669	0.033894	0.03455	0.034545	0.035339	0.0359
16	0.030628	0.031475	0.031407	0.031144	0.032771	0.032909	0.032738	0.032992	0.032328	0.032777	0.032988	0.033884	0.034356
17	0.029086	0.026968	0.028684	0.028567	0.031114	0.031376	0.031145	0.031542	0.030631	0.030855	0.031175	0.032352	0.032659
18	0.027784	0.022922	0.026093	0.02612	0.029452	0.029968	0.029563	0.029956	0.028956	0.029072	0.029374	0.030819	0.03092
19	0.02637	0.019373	0.023752	0.023929	0.02784	0.028504	0.027884	0.028365	0.027468	0.0274	0.027746	0.029238	0.029125
20	0.024819	0.016257	0.021382	0.021736	0.026034	0.026808	0.02607	0.026732	0.025768	0.025491	0.02591	0.027437	0.027119
21	0.023154	0.013475	0.019388	0.0199	0.024649	0.025514	0.024682	0.025329	0.024346	0.02381	0.024398	0.026221	0.025618
22	0.021696	0.011234	0.017342	0.018006	0.023436	0.0244	0.023485	0.024198	0.023143	0.022254	0.022936	0.025259	0.024408
23	0.020196	0.009288	0.015451	0.016247	0.022139	0.023209	0.022202	0.022757	0.021796	0.020675	0.021462	0.024153	0.023085
24	0.019341	0.007884	0.01387	0.014831	0.021112	0.022302	0.021193	0.021723	0.020703	0.019448	0.020352	0.023206	0.021941
25	0.018349	0.006604	0.012264	0.013346	0.019601	0.020986	0.019703	0.020148	0.019389	0.017918	0.018854	0.021562	0.020248
26	0.016996	0.005396	0.010596	0.011787	0.017781	0.019279	0.017891	0.018237	0.017617	0.016088	0.016968	0.01965	0.018318
27	0.01592	0.004444	0.009094	0.010367	0.01616	0.017728	0.016301	0.016542	0.016045	0.014459	0.015261	0.017929	0.016587
28	0.011199	0.001884	0.0091	0.007279	0.016936	0.016034	0.016559	0.013161	0.015346	0.01821	0.01499	0.015818	0.018134
29	0.008945	0.001356	0.007421	0.006566	0.015168	0.01437	0.014812	0.011921	0.013931	0.016531	0.013599	0.014329	0.016386
30	0.00547	0.001437	0.000288	0.002796	0.004164	0.002547	0.004629	0.002149	0.009364	0.000597	0.006972	0.004882	0.000264

3.0 Vehicle Type VMT

As part of the previous 2015-2019 emission rate development effort, INDOT developed a default set of VMT distribution factors by Highway Performance Monitoring System (HPMS) vehicle type and by MOVES road type. The original distribution factors were developed by analyzing four consecutive years of continuous traffic count data ending in 2018 for various permanent traffic count stations throughout Indiana. During the current update, NIRPC staff evaluated the latest five years of continuous traffic count data; covering the years 2015, 2016, 2017, 2018, and 2019.

The vehicle counts reported at each station were provided by vehicle class. These were aggregated into the five basic HPMS vehicle types: motorcycle, light duty vehicle, bus, single-unit heavy truck, and combination heavy truck. The distribution of VMT by vehicle type was calculated for each road type by taking each vehicle type's percentage of total traffic. Control totals for VMT growth was derived from NIRPC's travel demand model for the years 2020, 2025, 2030, 2035, 2040, and 2050, and the percentages of VMT by the five HPMS vehicle types was applied to these growth control totals to get the future year Vehicle Type VMT as shown below in Table 10.

Table 10: Vehicle Type VMT by Year

HPMS Veh Type	2019 VMT	2020 VMT	2025 VMT	2030 VMT	2035 VMT	2040 VMT	2050 VMT
10	23,784,315	24,040,763	25,250,951	26,473,148	27,754,501	29,097,875	31,982,836
25	6,232,528,267	6,303,223,113	6,635,840,243	6,971,933,556	7,325,054,220	7,696,065,125	8,495,413,356
40	18,427,453	18,613,276	19,493,452	20,381,784	21,310,597	22,281,738	24,358,803
50	68,388,962	69,157,756	72,776,860	76,433,443	80,273,745	84,306,999	92,991,625
60	845,478,773	853,800,435	893,267,911	933,092,192	974,691,947	1,018,146,331	1,110,953,408

3.1 Road Type, Daily, and Monthly Distributions

Road Type, Daily and Monthly distribution factors were calculated from INDOT's official count adjustment factors which are more commonly used to develop AADT from raw traffic counts. These factors are based on the set of daily traffic counts collected from all permanent count stations throughout the state. Table 11 shows the Road Type distribution factors derived from updated INDOT traffic counts in 2015-2019.

Table 11: Road Type Distribution Factors

Road Type	Motorcycle	Passenger Car	Light Duty Truck	Bus	Single Unit Truck	Combination Truck
2	0.074537	0.029227	0.022458	0.056774	0.028751	0.091961
3	0.051197	0.106098	0.086256	0.030059	0.112989	0.083255
4	0.395221	0.20632	0.345467	0.603627	0.272032	0.642037
5	0.479044	0.545819	0.545819	0.30954	0.586228	0.182747

The daily distribution factors determine what percentage of VMT is occurring on weekdays and what percentage is occurring on weekends. The monthly distribution factors determine what percentage of annual VMT is occurring in each month of the year. Previously developed MOVES Daily and Monthly VMT fraction files were retained for use in the MOVES3 analysis using statewide defaults as shown in Table 12.

Table 12: Indiana Default Daily Distribution Factors

	DayID	
MonthID	2	5
1	0.232541	0.767459
2	0.238055	0.761945
3	0.239340	0.760660
4	0.239605	0.760395
5	0.248476	0.751524
6	0.248974	0.751026
7	0.248115	0.751885
8	0.252703	0.747297
9	0.249608	0.750392
10	0.246281	0.753719
11	0.243974	0.756026
12	0.225878	0.774122

3.2 Hourly Distributions

The same set of permanent traffic count locations discussed in the section on Default VMT Distributions was analyzed to develop a set of hourly distribution factors. These factors were calculated by road type, by HPMS vehicle type. Hourly factors were only calculated for the average weekday. The hourly distribution pattern for each traffic count location was reviewed. Any data that appeared to reflect either an error in the data or an outlier of behavior were removed to prevent bias in the data. Tables 13-16 show the hourly distributions for each MOVES3 Road Type.

Table 13: Hourly VMT Fraction: RoadType 2, Rural Restricted Access

	Vehicle Type					
Hr	Motorcycle	Passenger Car	Light Duty Truck	Bus	Single Unit Truck	Combination Truck
1	0.01259	0.010122	0.008497	0.025491	0.012661	0.019791
2	0.010407	0.006924	0.006642	0.02695	0.011462	0.021212
3	0.009804	0.005657	0.006128	0.02311	0.010774	0.020162
4	0.014033	0.006966	0.008429	0.023446	0.012872	0.021307
5	0.016521	0.010094	0.013403	0.024409	0.01742	0.025048
6	0.031205	0.024173	0.031655	0.032292	0.026101	0.030498
7	0.039908	0.039097	0.048153	0.030234	0.042045	0.033995
8	0.048286	0.052876	0.053515	0.038607	0.055612	0.038344
9	0.047232	0.04931	0.054144	0.045414	0.064738	0.044735
10	0.052129	0.048863	0.057068	0.05332	0.071111	0.051774
11	0.05592	0.05137	0.057585	0.057671	0.073023	0.055771
12	0.057282	0.053305	0.058275	0.054954	0.073187	0.057144
13	0.059201	0.055159	0.059941	0.054154	0.073932	0.056701
14	0.061515	0.05955	0.063502	0.057075	0.074649	0.05675
15	0.064778	0.066271	0.06839	0.055193	0.070423	0.057823
16	0.07135	0.076488	0.077211	0.055196	0.06286	0.057754
17	0.075498	0.084716	0.079255	0.055798	0.053471	0.056291
18	0.069376	0.082122	0.069325	0.050101	0.04369	0.052702
19	0.054219	0.062008	0.052105	0.045967	0.036341	0.050222
20	0.043214	0.045902	0.039079	0.046296	0.031205	0.046712
21	0.035814	0.03726	0.031102	0.04186	0.026124	0.042131
22	0.029429	0.031274	0.02498	0.03665	0.021582	0.038139
23	0.022345	0.023573	0.018296	0.034752	0.018976	0.034233
24	0.017942	0.01692	0.013319	0.03106	0.01574	0.030763

Table 14: Hourly VMT Fraction: RoadType 3, Rural Unrestricted Access

	Vehicle Type					
Hr	Motorcycle	Passenger Car	Light Duty Truck	Bus	Single Unit Truck	Combination Truck
1	0.00403	0.007318	0.005464	0.0037	0.004399	0.016416
2	0.00403	0.004113	0.003462	0.004554	0.004187	0.016751
3	0.004182	0.00328	0.003069	0.004649	0.00735	0.016548
4	0.005311	0.005725	0.004808	0.003984	0.008404	0.019584
5	0.014096	0.015126	0.014318	0.008253	0.015318	0.025847
6	0.029272	0.031678	0.035434	0.029314	0.029974	0.034425
7	0.03976	0.046849	0.051631	0.049616	0.055778	0.044047
8	0.044818	0.063391	0.063626	0.076843	0.077889	0.051279
9	0.037011	0.046036	0.055863	0.104924	0.085303	0.056824
10	0.041699	0.042784	0.054785	0.106536	0.087973	0.059976
11	0.050939	0.044418	0.056845	0.118679	0.088634	0.063351
12	0.056386	0.051297	0.061892	0.115454	0.085905	0.063586
13	0.063872	0.053725	0.061082	0.099991	0.085854	0.06441
14	0.07087	0.0545	0.063201	0.086424	0.08522	0.063704
15	0.077463	0.06569	0.068138	0.059292	0.077455	0.060966
16	0.084916	0.077596	0.076512	0.029504	0.066338	0.057006
17	0.09161	0.087189	0.079601	0.031781	0.043352	0.051744
18	0.08559	0.085673	0.073742	0.018404	0.029073	0.046776
19	0.068526	0.065633	0.054527	0.012048	0.018774	0.041319
20	0.050366	0.04573	0.039098	0.011858	0.012971	0.036413
21	0.035342	0.040062	0.029406	0.009677	0.010617	0.031888
22	0.021785	0.028902	0.021846	0.006166	0.007997	0.029026
23	0.011938	0.020503	0.013673	0.004838	0.006156	0.025557
24	0.006188	0.012783	0.007976	0.00351	0.005081	0.022558

Table 15: Hourly VMT Fraction: RoadType 4, Urban Restricted Access

	Vehicle Type					
Hr	Motorcycle	Passenger Car	Light Duty Truck	Bus	Single Unit Truck	Combination Truck
1	0.011484	0.01045	0.00904	0.018649	0.009097	0.019417
2	0.00718	0.00625	0.00563	0.016341	0.00801	0.019871
3	0.006369	0.004969	0.004649	0.015778	0.007836	0.018649
4	0.007378	0.005843	0.00588	0.016177	0.008683	0.019823
5	0.010814	0.009855	0.0109	0.022133	0.011745	0.023252
6	0.023546	0.02316	0.026352	0.029976	0.020401	0.029464
7	0.046175	0.049509	0.054241	0.039381	0.043526	0.037555
8	0.056723	0.078835	0.067451	0.050387	0.065953	0.044618
9	0.049317	0.063828	0.061411	0.058956	0.075633	0.051584
10	0.040614	0.046648	0.05363	0.058156	0.079073	0.055319
11	0.041513	0.04281	0.051259	0.061603	0.082472	0.058308
12	0.046517	0.045233	0.052979	0.064425	0.082064	0.058938
13	0.051796	0.047849	0.054798	0.063764	0.080809	0.057593
14	0.056671	0.050215	0.057688	0.062559	0.08118	0.057167
15	0.067188	0.058038	0.065678	0.061948	0.079509	0.057343
16	0.081004	0.07156	0.078691	0.060947	0.072772	0.056721
17	0.086386	0.083854	0.082137	0.057726	0.056336	0.055191
18	0.084326	0.087451	0.075693	0.051016	0.037172	0.053113
19	0.064595	0.060436	0.054367	0.045099	0.024934	0.04872
20	0.046954	0.042475	0.037395	0.038493	0.018813	0.04321
21	0.037378	0.035328	0.029318	0.032232	0.016245	0.039032
22	0.031656	0.03134	0.024997	0.028205	0.014246	0.035512
23	0.024599	0.025156	0.020351	0.02427	0.012447	0.031771
24	0.019816	0.018906	0.015462	0.021781	0.011042	0.027829

Table 16: Hourly VMT Fraction: RoadType 5, Urban Unrestricted Access

	Vehicle Type					
Hr	Motorcycle	Passenger Car	Light Duty Truck	Bus	Single Unit Truck	Combination Truck
1	0.009228	0.008527	0.006067	0.012683	0.003716	0.01064
2	0.005532	0.004853	0.003768	0.009949	0.003812	0.012431
3	0.004727	0.00379	0.003313	0.006948	0.004417	0.012151
4	0.004702	0.00442	0.004239	0.01136	0.005628	0.01447
5	0.008186	0.007942	0.008722	0.01539	0.008655	0.021051
6	0.022536	0.020386	0.023867	0.025693	0.019182	0.029917
7	0.043518	0.047828	0.054195	0.044833	0.041807	0.043678
8	0.060212	0.072146	0.067535	0.06919	0.073148	0.058865
9	0.055631	0.056701	0.064366	0.074706	0.088093	0.064086
10	0.048582	0.046649	0.060328	0.0804	0.092131	0.068094
11	0.049599	0.046815	0.059066	0.077406	0.094397	0.07034
12	0.057306	0.051603	0.061565	0.075333	0.091143	0.069831
13	0.060775	0.055532	0.062673	0.073976	0.089563	0.068541
14	0.060921	0.056221	0.062989	0.077999	0.091265	0.067118
15	0.064991	0.060758	0.066791	0.076104	0.090573	0.065126
16	0.072442	0.071548	0.075179	0.072804	0.077539	0.060524
17	0.077352	0.080365	0.075703	0.052641	0.046434	0.055769
18	0.077078	0.083225	0.068491	0.034769	0.026034	0.050646
19	0.063598	0.063785	0.052639	0.028509	0.017334	0.040275
20	0.048308	0.046228	0.037284	0.022059	0.011254	0.031067
21	0.038316	0.038657	0.029229	0.017408	0.007662	0.026853
22	0.030503	0.032511	0.023617	0.013712	0.006236	0.023192
23	0.02145	0.023602	0.01706	0.013944	0.005328	0.019375
24	0.014507	0.015908	0.011315	0.012185	0.004651	0.015962

4.0 Average Speed Distribution

National MOVES defaults are used for the average speed distribution inputs. Per the *User Guide for MOVES3*, when running MOVES3 in emission rate mode, the speed distribution is needed for model setup, but not used in the development of emission rates. The speed distribution for a given scenario is accounted for later in the inventory development process, when the emission rates are applied to detailed travel demand model outputs as part of the NIRPC Air Quality Post-Processor.

5.0 Ramp Fraction

The ramp fractions represent the percentage of vehicle-hours-traveled (VHT) for road types 2 (rural restricted access) and 4 (urban restricted access) occurring on the ramps associated with those road types. These fractions were calculated based on the percentage of VHT occurring on ramps reported by the base year travel demand model. These ramp fractions are shown in Table 17.

Table 17: Lake and Porter Counties Ramp Fractions

Road Type	Ramp Fraction
2	0.79%
4	6.66%

6.0 Meteorology Data

The default set of hourly temperatures and hourly relative humidity for use in MOVES3 was used. Meteorological data reflect summer conditions for ozone using MOVES3 inputs for a typical July day. The MOVES formatted meteorological data for the NIRPC counties of Lake and Porter are shown below in Table 18.

Table 18: Meteorology Assumptions, Lake and Porter Counties

monthID	zoneID	HourID	temperature	relHumidity
7	180890	1	67.0	88.0
7	180890	2	65.8	91.8
7	180890	3	64.9	94.9
7	180890	4	64.2	97.2
7	180890	5	63.6	99.0
7	180890	6	63.0	100.0
7	180890	7	62.5	100.0
7	180890	8	62.9	100.0
7	180890	9	65.5	92.6
7	180890	10	69.7	80.2
7	180890	11	74.0	69.4
7	180890	12	77.7	61.4
7	180890	13	80.9	55.3
7	180890	14	82.6	52.2
7	180890	15	83.2	51.2
7	180890	16	83.4	50.9
7	180890	17	83.0	51.6
7	180890	18	81.7	53.7

7	180890	19	79.7	57.5
7	180890	20	77.0	62.9
7	180890	21	74.3	68.8
7	180890	22	71.9	74.5
7	180890	23	70.3	78.8
7	180890	24	68.6	83.4

7.0 Fuel

Development of the updated NIRPC emission rates uses default MOVES3 fuel supply, fuel formulation, and fuel usage fractions, and defaults to summer conditions. Fuel supply, fuel formulation, and fuel usage fractions were held constant throughout all modeled years in accordance with EPA guidance. Tables 19-21 show the MOVE3 default fuel supply, fuel formulation, and fuel usage fractions for the Lake and Porter Counties region.

Table 19: MOVES3 Default Fuel Supply for Lake and Porter Counties

fuelRegionID	fuelYearID	monthGroupID	fuelFormulationID	marketShare	marketShareCV
1470011000	2019	7	8009	1	0.5
1470011000	2019	7	25003	1	0.5
1470011000	2019	7	27002	1	0.5

Table 20: MOVES3 Default Fuel Formulation for Lake and Porter Counties

Fuel Formulation ID	fuelSubtypeID	RVP	Sulfur Level	ETOH Volume	MTBE Volume	ETBE Volume	TAME Volume	aromaticContent	Olefin Content	benzeneContent	e200	e300	BioDieselEster Volume	CetaneIndex	PAH Content	T50	T90
10	10	6.9	30	0	0	0	0	26.1	5.6	1	41.09	83.09	0	0	0	218	329
20	20	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	51	7.7	11	85	0	0	0	0	0	0	999	999	0	0	0	999	999
96	10	8.7	338	0	0	0	0	26.4	11.9	1.64	50	83	0	0	0	199.82	329.41
97	10	6.6	150	0	0	0	0	24	11	0.8	52	84	0	0	0	195.74	324.86
98	12	8.8	30	10	0	0	0	25.77	8.44	0.65	47.61	84.89	0	0	0	212.28	321.72
99	12	8.8	30	10	0	0	0	25.77	8.44	0.65	47.61	84.89	0	0	0	212.28	321.72
8009	12	7	9.37595	10	0	0	0	16.6693	5.90573	0.500822	46.932	86.43	0	0	0	210.48	317.2
8309	10	7	9.37595	0	0	0	0	18.8693	4.30573	0.500822	39.932	86.63	0	0	0	220.36	312.91
8609	15	6.9	8.90715	15	0	0	0	15.8358	5.61045	0.475781	56.443	86.633	0	0	0	164.18	314.3
25003	21	0	6	0	0	0	0	0	0	0	0	0	3.4	0	0	0	0
27002	51	7.7	8	74	0	0	0	0	0	0.16	999	999	0	0	0	999	999

Table 21: MOVES3 Default Fuel Usage Fraction for Lake and Porter Counties

countyID	fuelYearID	modelYearGroupID	sourceBinFuelTypeID	fuelSupplyFuelTypeID	usageFraction
18089	2019	0	1	1	1
18089	2019	0	2	2	1
18089	2019	0	5	1	0.982134
18089	2019	0	5	5	0.017866

7.1 AVFT Assumptions

The 2022 BMV fleet mix data allowed the differentiation of vehicle types by fuel types. NIRPC staff analyzed the dataset for passenger cars and light duty trucks for model years 2020 and newer by their fuel/energy usage types. NIRPC staff deemed that the fuel types from the 2015-2019 emissions rate development process should be used for all older model years for these vehicle types. In accordance with EPA guidance, the fuel/energy usage types for the 2022 model year for these vehicle types was assumed to be held constant for all future model years. For all other MOVES3 vehicle types, national defaults were used. Table 22 shows the model year 2022 and newer fuel types for passenger cars, passenger trucks, and light commercial trucks.

Table 22: BMV-Derived Fuel Types for Model Year 2022 and Newer, Passenger Cars, Passenger Trucks, and Light Commercial Trucks

Fuel Type and Vehicle Technology								
Lake and Porter Counties			FuelType	1	2	5	1	9
			EngTech	1	1	1	12	30
Data Source	Vehicle Type	Code	Year	Gasoline	Diesel	E-85	Hybrid	Electric
BMV	Passenger Car	21	2022	89.24%	0.0063%	1.61%	5.63%	3.52%
BMV	Passenger Truck	31	2022	89.44%	0.15%	4.89%	4.45%	1.08%
BMV	Light Commercial Truck	32	2022	87.62%	7.20%	2.69%	2.23%	0.27%

8.0 Inspections and Maintenance (I/M) Program

Vehicles registered in Lake and Porter counties are required to undergo emissions tests and tampering inspections every two years if they were manufactured after 1976 and have a gross vehicle weight rating (GVWR) of 9,000 pounds or less. Vehicles manufactured in odd-numbered years are tested during odd-

numbered years and vehicles manufactured in even-numbered years tested during even-numbered years. Exemptions include vehicles manufactured during the four latest model years and antique vehicles. MOVES input coding is consistent with the current local I/M Program in Lake and Porter counties. Table 23 shows the MOVES3-formatted I/M parameters administered in Lake and Porter Counties.

Table 23: MOVES3-Formatted I/M Parameters for Lake and Porter Counties (Base Year 2019)

polProcessID	stateID	countyID	yearID	sourceTypeID	fuelTypeID	IMProgramID	inspectFreq	testStandardsID	begModelYearID	endModelYearID	useIMyn	complianceFactor
101	18	18089	2019	21	1	1	2	11	1976	1980	N	93.12
101	18	18089	2019	31	1	1	2	11	1976	1980	N	93.12
101	18	18089	2019	32	1	1	2	11	1976	1980	N	93.12
102	18	18089	2019	21	1	1	2	11	1976	1980	N	93.12
102	18	18089	2019	31	1	1	2	11	1976	1980	N	93.12
102	18	18089	2019	32	1	1	2	11	1976	1980	N	93.12
101	18	18089	2019	21	1	6	2	33	1981	1995	N	93.12
101	18	18089	2019	31	1	6	2	33	1981	1995	N	93.12
101	18	18089	2019	32	1	6	2	33	1981	1995	N	93.12
102	18	18089	2019	21	1	6	2	33	1981	1995	N	93.12
102	18	18089	2019	31	1	6	2	33	1981	1995	N	93.12
102	18	18089	2019	32	1	6	2	33	1981	1995	N	93.12
301	18	18089	2019	21	1	6	2	33	1981	1995	N	93.12
301	18	18089	2019	31	1	6	2	33	1981	1995	N	93.12
301	18	18089	2019	32	1	6	2	33	1981	1995	N	93.12
302	18	18089	2019	21	1	6	2	33	1981	1995	N	93.12
302	18	18089	2019	31	1	6	2	33	1981	1995	N	93.12
302	18	18089	2019	32	1	6	2	33	1981	1995	N	93.12
101	18	18089	2019	21	1	10	2	51	1996	2017	N	93.12
101	18	18089	2019	31	1	10	2	51	1996	2017	N	93.12
101	18	18089	2019	32	1	10	2	51	1996	2017	N	93.12
102	18	18089	2019	21	1	10	2	51	1996	2017	N	93.12
102	18	18089	2019	31	1	10	2	51	1996	2017	N	93.12
102	18	18089	2019	32	1	10	2	51	1996	2017	N	93.12
301	18	18089	2019	21	1	10	2	51	1996	2017	N	93.12
301	18	18089	2019	31	1	10	2	51	1996	2017	N	93.12
301	18	18089	2019	32	1	10	2	51	1996	2017	N	93.12
302	18	18089	2019	21	1	10	2	51	1996	2017	N	93.12
302	18	18089	2019	31	1	10	2	51	1996	2017	N	93.12
302	18	18089	2019	32	1	10	2	51	1996	2017	N	93.12
112	18	18089	2019	21	1	7	2	41	1976	1995	N	93.12
112	18	18089	2019	21	1	8	2	43	1996	2017	N	93.12
112	18	18089	2019	31	1	7	2	41	1976	1995	N	93.12
112	18	18089	2019	31	1	8	2	43	1996	2017	N	93.12
112	18	18089	2019	32	1	7	2	41	1976	1995	N	93.12
112	18	18089	2019	32	1	8	2	43	1996	2017	N	93.12
113	18	18089	2019	21	1	7	2	41	1976	1995	N	93.12
113	18	18089	2019	21	1	8	2	43	1996	2017	N	93.12
113	18	18089	2019	31	1	7	2	41	1976	1995	N	93.12
113	18	18089	2019	31	1	8	2	43	1996	2017	N	93.12
113	18	18089	2019	32	1	7	2	41	1976	1995	N	93.12
113	18	18089	2019	32	1	8	2	43	1996	2017	N	93.12
101	18	18089	2019	21	1	11	2	11	1976	1980	Y	95
101	18	18089	2019	31	1	11	2	11	1976	1980	Y	95
101	18	18089	2019	32	1	11	2	11	1976	1980	Y	95
102	18	18089	2019	21	1	11	2	11	1976	1980	Y	95
102	18	18089	2019	31	1	11	2	11	1976	1980	Y	95
102	18	18089	2019	32	1	11	2	11	1976	1980	Y	95

301	18	18089	2019	21	1	11	2	11	1976	1980	Y	95
301	18	18089	2019	31	1	11	2	11	1976	1980	Y	95
301	18	18089	2019	32	1	11	2	11	1976	1980	Y	95
302	18	18089	2019	21	1	11	2	11	1976	1980	Y	95
302	18	18089	2019	31	1	11	2	11	1976	1980	Y	95
302	18	18089	2019	32	1	11	2	11	1976	1980	Y	95
101	18	18089	2019	21	1	12	2	33	1981	1995	Y	95
101	18	18089	2019	31	1	12	2	33	1981	1995	Y	95
101	18	18089	2019	32	1	12	2	33	1981	1995	Y	95
102	18	18089	2019	21	1	12	2	33	1981	1995	Y	95
102	18	18089	2019	31	1	12	2	33	1981	1995	Y	95
102	18	18089	2019	32	1	12	2	33	1981	1995	Y	95
301	18	18089	2019	21	1	12	2	33	1981	1995	Y	95
301	18	18089	2019	31	1	12	2	33	1981	1995	Y	95
301	18	18089	2019	32	1	12	2	33	1981	1995	Y	95
302	18	18089	2019	21	1	12	2	33	1981	1995	Y	95
302	18	18089	2019	31	1	12	2	33	1981	1995	Y	95
302	18	18089	2019	32	1	12	2	33	1981	1995	Y	95
112	18	18089	2019	21	1	13	2	41	1976	1995	Y	95
112	18	18089	2019	31	1	13	2	41	1976	1995	Y	95
112	18	18089	2019	32	1	13	2	41	1976	1995	Y	95
113	18	18089	2019	21	1	13	2	41	1976	1995	Y	95
113	18	18089	2019	31	1	13	2	41	1976	1995	Y	95
113	18	18089	2019	32	1	13	2	41	1976	1995	Y	95
101	18	18089	2019	21	1	14	2	51	1996	2015	Y	95
101	18	18089	2019	31	1	14	2	51	1996	2015	Y	95
101	18	18089	2019	32	1	14	2	51	1996	2015	Y	95
102	18	18089	2019	21	1	14	2	51	1996	2015	Y	95
102	18	18089	2019	31	1	14	2	51	1996	2015	Y	95
102	18	18089	2019	32	1	14	2	51	1996	2015	Y	95
301	18	18089	2019	21	1	14	2	51	1996	2015	Y	95
301	18	18089	2019	31	1	14	2	51	1996	2015	Y	95
301	18	18089	2019	32	1	14	2	51	1996	2015	Y	95
302	18	18089	2019	21	1	14	2	51	1996	2015	Y	95
302	18	18089	2019	31	1	14	2	51	1996	2015	Y	95
302	18	18089	2019	32	1	14	2	51	1996	2015	Y	95
112	18	18089	2019	21	1	15	2	45	1996	2015	Y	95
112	18	18089	2019	31	1	15	2	45	1996	2015	Y	95
112	18	18089	2019	32	1	15	2	45	1996	2015	Y	95
113	18	18089	2019	21	1	15	2	45	1996	2015	Y	95
113	18	18089	2019	31	1	15	2	45	1996	2015	Y	95
113	18	18089	2019	32	1	15	2	45	1996	2015	Y	95

AIR QUALITY POST PROCESSOR USER GUIDE

For Emme Dekstop software

Version 1.0

June 2018

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Introduction

The Air Quality Post Processor (AQPP) is a custom tool for INRO's EMME Modeller software. This tool was developed for the Northern Indiana Regional Planning Commission (NIRPC) and the Indiana Department of Transportation (INDOT) to allow for the efficient and effective calculation of emission inventories for any area that is in non-attainment for National Ambient Air Quality Standards (NAAQS).

The AQPP tool combines rate data from the U.S. Environmental Protection Agency (EPA)'s Motor Vehicle Emissions Simulator (MOVES) and local Travel demand models to calculate emission inventories; including emission rates for vehicle-miles-traveled (VMT), vehicle-hours-traveled (VHT) and speeds. By combining MOVES rate data with local travel demand models the AQPP tool allows greater ease and precision in assessing the benefits of air quality achieved by improvements to an area's transportation system.

The AQPP tool for Emme Modeller has been developed for use by NIRPC and is based on INDOT'S existing AQPP tool for TransCAD. The AQPP tool for Emme Modeller was developed in order to allow NIRPC to calculate their own emission inventories with the same ease and efficiency as INDOT.

The original AQPP tool is a TransCAD extension developed by CDM Smith in March 2012 while under contract for INDOT. At the time of its development the majority of the travel demand models used in Indiana used the TransCAD modeling platform. It was for this reason that the original AQPP tool was developed as a TransCAD extension.

Air Quality Post Processor for Emme Modeller

The Air Quality Post Processor toolbox contains two tools called 'Scenario Manager' and 'Calculate Emissions'. The Scenario Manager tool is used to create, edit, or delete scenario configuration files used by the Calculate Emissions tool. A scenario configuration file contains the settings for, and location pointers to, the local travel demand model and MOVES rate data to be used by calculate emissions tool. The Calculate Emissions tool calculates emission rate data based on the information contained in a scenario configuration.

EMME MODELLER NOMENCLATURE

INRO software, makers of the EMME software, has established their own naming conventions for their software. To avoid confusion, the following terms should be understood.

Toolbox: a collection of similar or related processes within the EMME Modeller application

Tool: a singular program or function that performs a specific set of actions. Individual tools provide their own custom user interface to allow the user to specify the parameters to be used with the tool

Getting Started

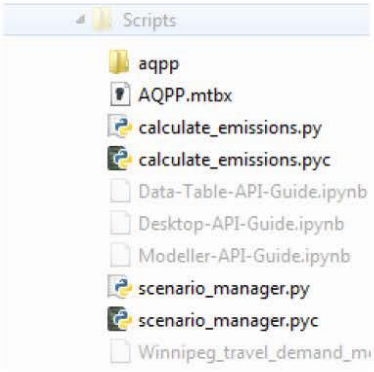
After the Air Quality Post Processor toolbox has been added to an Emme Desktop project, users will be ready to use the tools to calculate emission data. The Calculate Emissions tool uses a scenario configuration file to determine how the emissions will be calculated and where to find the travel demand model and MOVES data. Before being able to use the Calculate Emissions tool, users need to create a scenario configuration using the Scenario Manager tool.

INSTALLATION

The AQPP toolbox is configured to work within an existing EMME Desktop/Modeller project, as such the AQPP toolbox files need to be copied to the projects 'script' folder before they can be used.

The following steps will guide you through the process of installing the AQPP toolbox for a given project.

1. Copy the following folder and files into the 'Script's folder of the EMME Desktop/Modeller project you wish to add the AQPP tools to.
    a. aqpp folder (including all of its contents)
    b. AQPP.mtbx
    c. calculate_emissions.py
    d. calculate_emissions.pyc
    e. scenario_manager.py
    f. scenario_manager.pyc
2. Start the Emme Desktop application.
3. Open the project containing the scripts folder from step 1.
4. Click on the 'Modeller' tool, located in the Emme Dekstop toolbar.
5. In the Toolboxes pane of the Modeller window, click **Add a toolbox**.
6. Browse to the Scripts folder and select the AQPP.mtbx file.
7. Click Ok

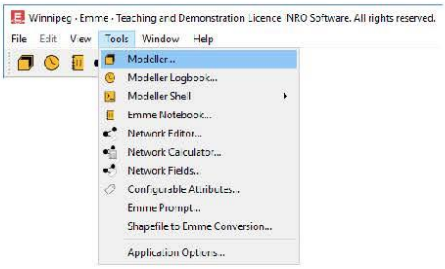


You should see a new Toolbox titled 'Air Quality Post Processor' in the Toolboxes list, containing the 'Scenario Manager' and 'Calculate Emissions' tools.

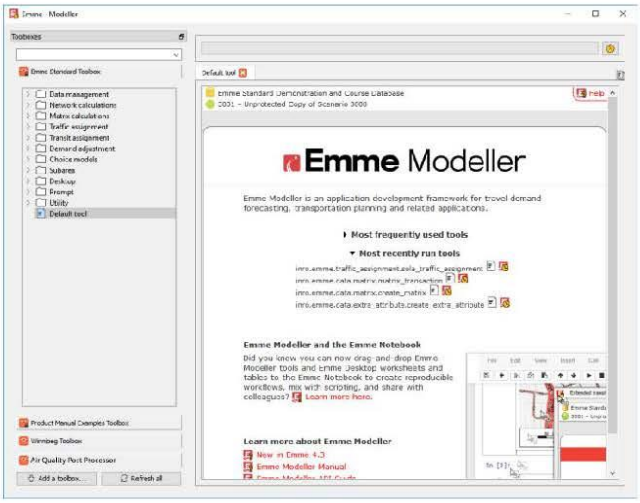
Please see the EMME Desktop help documents if you need additional assistance with using the EMME software.

OPENING THE AIR QUALITY POST PROCESSOR

1. Start the Emme Desktop application and open a project that has had the Air Quality Post Processor toolbox added to it.
2. Start the Emme Modeller.
   The Modeller can be started from either the menu pulldowns or the Desktop toolbar.
   a. From the pulldown menus, click on 'Tools' and then click on 'Modeller...'
   b. From the Desktop toolbar, click on the Modeller icon.



   c. Using the Modeller window: click on the 'Air Quality Post Processor' toolbox.



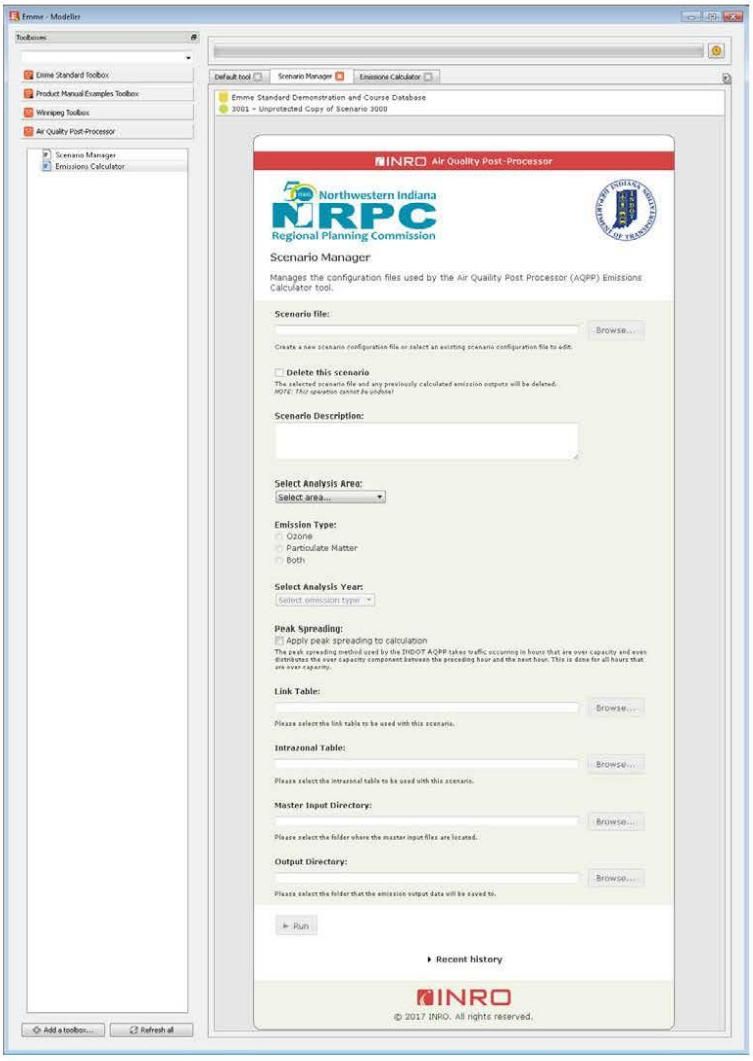
Using the Scenario Manager tool

The scenario manager tool is used to:

1. Create new scenario configurations
2. Edit existing scenario configuration files
3. Delete a scenario configuration file.
   WARNING: When deleting a scenario configuration file, all emission data in the configurations output directory will also be deleted.

STARTING THE SCENARIO MANAGER TOOL

From within the Air Quality Post Processor toolbox, double click on the 'Scenario Manager' tool, or right click on the tool and select 'Open in a new tab' from the tool context menu. This will open the Scenario Manager tool and load a new/blank configuration file.



Scenario Manager Tool page

CREATING A NEW SCENARIO CONFIGURATION FILE

When the Scenario Manager tool is first opened it will display a new/blank scenario configuration, allowing the user to start entering their configuration information.

NOTE: The 'Delete this scenario' checkbox is not used when creating a new scenario configuration and can be ignored when creating a new configuration.

1. Click the 'Browse' button, located to the right of the Scenario file textbox to specify the location where the configuration file will be saved to.

2. Enter a description and/or notes about the configuration into the Scenario Description textbox.

3. Select the county to calculate emissions for from the Select Analysis Area dropdown.

4. Pick the type of emission to be calculated from the Emission Type list

.

The available emission types are dependent upon the selected county; therefore users will need to select a county from the analysis are dropdown before they will be able to select an emission type.

5. Using the Analysis Year dropdown, select the year to calculate emissions for.

The Analysis Year values are dependent upon the selected county and emission type; therefore users will need to specify both the Analysis Area and emission type before the will be able to select the analysis year.

6. Set the Peak Spreading option by checking/unchecking the 'Apply peak spreading to calculation' checkbox.

Checking the box will cause the Calculate Emissions tool to redistribute excess hourly volume of each segment in the traffic demand model to its neighboring hours until all hourly volumes for the segment are at or under capacity.
Unchecking the box will cause the Calculate Emissions tool to use the existing hourly volumes of each segment in the traffic demand model.

7. Using the Link Table file select, specify the location of the Travel Demand Link Table to be used by the Calculate Emissions tool.

8. Using the Intrazonal Table file select, specify the location of the Intrazonal Table to be used by the Calculate Emissions tool.

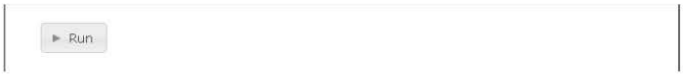
9. Using the Master Input Directory file select, select the folder that contains all of the MOVES rate data files to be used by the Calculate Emissions tool.

The Calculate Emissions tool will scan the Master Input Directory and any sub-directories inside of it for the required input data files.
The specified directory should contain the following Travel Demand/MOVES data files:

DATA FILE	EXAMPLE
Ozone and/or Particulate Matter rate per distance	Lake_2015_ratesperdist_oz.csv Lake_2015_ratesperdist_pm.csv
Ozone and/or Particulate Matter rate per vehicle	Lake_2015_ratespervehicle_oz.csv Lake_2015_ratespervehicle_pm.csv
County/Year Ozone rates per profile	Lake_2015_ratesperprofile_oz.csv
County/Year Source Type Population	Lake_2015_SourceTypePopulation.csv
Highway Performance Monitoring System (HPMS) feature class adjustments	HPMS_Adjustment.csv
Highway Performance Monitoring System fractional rates	HPMS_Fraction_INStatewide.csv
Hourly Vehicle Miles Traveled (VMT) rates	HourVMTFraction.csv
Vehicle Class Distribution rates	VehClassDist.csv

10. Using the Output Directory file select, specify the folder where the emission output data will be written to.

11. Click the Run button to save the scenario configuration file.



EDITING AN EXISTING SCENARIO CONFIGURATION

1. Using the 'Scenario File' file select, browse to the scenario configuration file to be edited and click the 'Open' button.

2. Edit the configurations values as needed.
3. Click the Run button to save the changes to the scenario configuration file.

DELETING A SCENARIO CONFIGURATION

WARNING: When deleting a scenario configuration file, all emission data in the configurations output directory will also be deleted.

1. Using the 'Scenario File' file select, browse to the scenario configuration file to be deleted and click the 'Open' button.

2. Check the 'Delete this scenario' checkbox

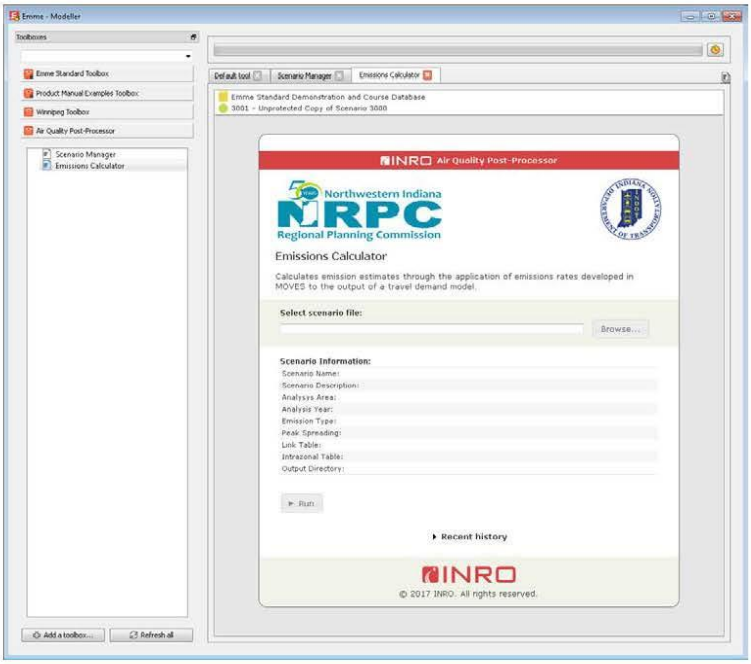
3. Click the Run button to delete the scenario configuration file.

Using the Calculate Emissions tool

The calculate emissions tool is used to create emission inventories from local travel demand models and MOVES rate data.

STARTING THE CALCULATE EMISSIONS TOOL

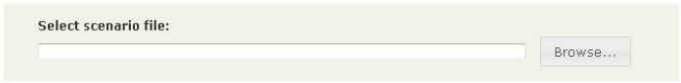
From within the Air Quality Post Processor toolbox, double click on the 'Calculate Emissions' tool, or right click on the tool and select 'Open in a new tab' from the tool context menu. This will open the Calculate Emissions tool.



Calculate Emissions Tool Page

RUNNING A SCENARIO CONFIGURATION

1. Click the 'Browse' button located to the right of the Select scenario file textbox and select the scenario configuration file to calculate emissions for.



2. After a scenario configuration file has been selected, the Scenario Information panel will display the details of the configuration before the starting the calculation process.

3. Click the 'Run' button to start the emission calculation process.

NOTE: The emission calculation process involves disaggregating each link in the travel demand model into individual source type, feature class, and hourly volume values. These individual values are then adjusted according to the MOVES rate data and the vehicle-miles-traveled (VMT), vehicle-hours-traveled (VHT) and speeds are calculated for each. These calculated values are then used to determine the emission rates for each segment. As such, the time required to complete the emission calculation is proportional to the number of segments in the travel demand model, with larger models requiring more time to complete.

Emission Inventory Data

The Calculate Emissions tool generates a summary report and four data files that make up the emission inventory. These files are stored in the output directory listed in the scenario configuration file.

REPORT SUMMARY

The report summary text file lists the settings used to calculate the missions for a given travel demand model. Included in the report are:

- The scenario configuration file settings
- The Travel demand and Air Quality Rate input file locations
- The calculate emissions output files locations
- The sequences settings for Source Type, Functional Classifications, Emission Processes, Road Type, and Pollutant Types
- Calculated emissions totals by county, emission type, and HPMS functional class.

RUNNING EMISSIONS LINK TABLE

This file contains data on the travel demand occurring on the roadway network corresponding to the area of analysis.

RUNNING EMISSIONS INTRAZONAL TABLE

This file contains information on the travel occurring on the roadway facilities not captured on the model's highway network. This could include travel in parking lots, on driveways, and on local and subdivision streets.

EMISSIONS SUMMARY BY FUNCTIONAL CLASS

This file contains information about the emission totals (measured in grams) for each county, emission type, and HPMS functional class.

PEAK SPREADING SHIFTS

NOTE: The Peak Spreading Shifts table will only be generated if the user checked the 'Apply peak spreading to calculation' option in the scenario configuration file.

Appendix B

Lake and Porter Counties, Indiana, Maintenance Area Interagency Consultation Group Meeting Minutes/Summary

Interagency Consultation Group (ICG) Conference Call Minutes

For the MOVES MVEB Replacement Update
Related to Indiana's Portion (Lake and Porter counties) of the Chicago-Naperville, IL-IN-WI, 2008 8-Hour Ozone Nonattainment Area

ICG Conference Call Date and Time

- May 9, 2023 at 10:30am Eastern

ICG Attendees

- Shawn Seals (IDEM), Tony Maietta (EPA), Frank Baukert (INDOT), Stephanie Belch (INDOT), Erica Tait (FHWA), Scott Weber (NIRPC), and Kathy Luther (NIRPC)

ICG Discussion Topics and Conclusions

- For the Ozone MVEB Replacement submittal, various mobile source margins of safety were discussed.
    - After discussion, the consensus of the ICG was that since a 20% mobile source margin of safety for VOC and NO_x emissions does not result in an exceedance of the all sources margins of safety, it was reasonable and appropriate for inclusion in MVEB replacement submittal.

Appendix C

Onroad Emissions Motor Vehicle Emissions Budget (MVEB) Replacement and Emissions Update for the Indiana Portion (Lake and Porter Counties) of the Chicago-Naperville, IL-IN-WI 2008 8-Hour Ozone Standard Maintenance Area

- **Legal Notice of Public Hearing**
- **IDEM Webmaster Certification of Legal Notice Publication**
- **Summary of Comments and Responses Thereto**
    - **No Comments Received**

LEGAL NOTICE OF PUBLIC HEARING

Onroad Emissions Motor Vehicle Emissions Budget (MVEB) Replacement and Emissions Update for the Indiana Portion (Lake and Porter Counties) of the Chicago-Naperville, IL-IN-WI 2008 8-Hour Ozone Standard Maintenance Area

Note: Legal notices for public hearings are no longer published in newspapers, but can be found on the Indiana Department of Environmental Management's web site at: IDEM: Public Notices: Northwest Indiana

Notice is hereby given under 40 Code of Federal Regulations (CFR) 51.102 that the Indiana Department of Environmental Management (IDEM) is accepting written comment and providing an opportunity for a public hearing regarding the *Onroad Emissions Motor Vehicle Emissions Budget (MVEB) Replacement and Emissions Update for the Indiana Portion (Lake and Porter Counties) of the Chicago-Naperville, IL-IN-WI 2008 8-Hour Ozone Standard Maintenance Area*. On April 8, 2022, the Indiana Department of Environmental Management (IDEM) submitted supplemental information to the Technical Addendum to Section 182(c)(3) Certification of Enhanced I/M Program and Request for Redesignation and Maintenance Plan for Attainment of Indiana's Portion (Lake and Porter counties) of the Chicago-Naperville, IL-IN-WI, 2008 8-Hour Ozone Nonattainment Area. United States EPA (U.S. EPA) subsequently approved the Indiana request and MVEBs on May 20, 2022 (87 FR 30821). Onroad emissions and MVEBs included in the April 8, 2022, submittal were calculated using then-current MOVES3 inputs for Lake and Porter counties, Indiana, and are being updated to remain current. All interested persons are invited and will be given reasonable opportunity to express their views concerning this submittal.

The purpose of this notice is to solicit public comment on Indiana's proposed MVEB replacement. Lake and Porter counties have been classified as a maintenance area for the 2008 8-hour ozone NAAQS and are subject to the requirements of Sections 172 and 182 of the Clean Air Act (CAA). As such, the above documents are being drafted and submitted consistent with U.S. EPA guidance. Upon completion of this public notice process, the MVEB replacement will be submitted to U.S. EPA for approval into the State Implementation Plans.

The draft documents will be available for review on or before August 10, 2023, on the following web page:

IDEM: Lake and Porter Counties Requests for Redesignation and Maintenance Plans

Copies of the draft documents will be made available on or before August 10, 2023, to any person upon request at the following locations:

- IDEM Office of Air Quality, Indiana Government Center North, 100 North Senate Avenue, Room N1003, Indianapolis, Indiana

- IDEM Northwest Regional Office, 330 West U.S. Highway 30, Suite F, Valparaiso, Indiana
- Crown Point Community Library, 122 North Main Street, Crown Point, Indiana
- Gary Public Library, 220 West 5th Avenue, Gary, Indiana
- Hammond Public Library, 564 State Street, Hammond, Indiana
- Lake County Public Library-Highland Branch, 2841 Jewett Street, Highland, Indiana
- Lake Station-New Chicago Branch Public Library, 2007 Central Avenue, Lake Station, Indiana
- Valparaiso Public Library, 103 Jefferson Street, Valparaiso, Indiana
- Whiting Public Library, 1735 Oliver Street, Whiting, Indiana

Any person may submit written comments on the *Onroad Emissions Motor Vehicle Emissions Budget (MVEB) Replacement and Emissions Update for the Indiana Portion (Lake and Porter Counties) of the Chicago-Naperville, IL-IN-WI 2008 8-Hour Ozone Standard Maintenance Area*. Consideration will be given solely to comments specific to the documentation referenced above. Written comments should be directed to: Mr. Shawn Seals, IDEM Office of Air Quality, Room 1003, 100 North Senate Avenue, Indianapolis, Indiana 46204. Written comments can also be submitted via fax (317) 233-5967 or email at SSeals@idem.IN.gov. Written comments must be submitted by September 11, 2023.

A public hearing on the *Onroad Emissions Motor Vehicle Emissions Budget (MVEB) Replacement and Emissions Update for the Indiana Portion (Lake and Porter Counties) of the Chicago-Naperville, IL-IN-WI 2008 8-Hour Ozone Standard Maintenance Area* will be held if a request is received by September 11, 2023. If requested, the hearing will be held on September 13, 2023, and the comment period will be extended to September 20, 2023. If held, the hearing will convene at 6:00 p.m. local time at the Lake Station-New Chicago Branch Public Library, located at 2007 Central Avenue, Lake Station, Indiana 46405. Interested parties may present oral or written comments at the public hearing, if held. If a hearing is held, oral statements will be heard, but for the accuracy of the record, a written copy of the statements should be submitted. Consideration will be given solely to comments specific to the documentation referenced above. If a request is not received by September 11, 2023, the public hearing will be cancelled.

Interested parties can check the online IDEM calendar at IDEM Calendar - State of Indiana or contact Mr. Shawn Seals (317) 233-0425 or SSeals@idem.IN.gov after September 11, 2023, to see if the public hearing has been cancelled.

If a public hearing is held, a transcript of the public hearing and all written submissions provided as part of the public hearing shall be open to public inspection at IDEM and copies may be made available to any person upon payment of reproduction costs. Any person heard or represented at the hearing or requesting notice shall be given written notice of actions resulting from the hearing.

For additional information, contact Mr. Shawn Seals via U.S. Mail at IDEM Office of Air Quality, Room N1003, Indiana Government Center North, 100 North Senate Avenue, Indianapolis, IN 46204, via e-mail at SSeals@idem.IN.gov, or via telephone at (317) 233-0425 (direct) or (800) 451-6027 (toll free in Indiana).

Speech and hearing impaired callers may contact the agency via the Indiana Relay Service at 1-800-743-3333. Individuals requiring reasonable accommodations for participation in this hearing should contact the IDEM Americans with Disabilities Act (ADA) coordinator at: Attn: ADA Coordinator, Indiana Department of Environmental Management – Mail Code 50-10, 100 North Senate Avenue, Indianapolis, IN 46204-2251, o*r call (317) 233-1785 (voice) or (317) 233-6565 (TDD). Please provide a minimum of 72 hours notification.*

August 9, 2023

CERTIFICATE OF PUBLICATION

This is to certify that the Indiana Department of Environmental Management (IDEM) Notice of the opportunity for a Public Hearing regarding the following:

- Draft Onroad Emissions Motor Vehicle Emissions Budget (MVEB) Replacement and Emissions Update for the Indiana Portion (Lake and Porter Counties) of the Chicago-Naperville, IL-IN-WI 2008 8-Hour Ozone Standard Maintenance Area

was published on IDEM's web site on August 8, 2023. It is expected that it will remain posted on the site until at least September 11, 2023.

The notice in full was available online at the following web address, under "Northwest Indiana":
https://www.in.gov/idem/public-notices/public-notices-northwest-indiana/

The draft document was posted online August 4, 2023, at the following web address under "2008 8-Hour Ozone Standard":
https://www.in.gov/idem/sips/redesignation-petitions-and-maintenance-plans/lake-and-porter-counties-redesignation-plans/

Web publication of the notice was at the request of Scott Deloney, Branch Chief, Programs Branch, Office of Air Quality, IDEM.

By:

Kevin Bump
IDEM Webmaster