



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

January 21, 2021

Ms. Cheryl L. Newton
Acting Regional Administrator
U.S. EPA Region 5
77 West Jackson Boulevard
Mail Code: R-19J
Chicago, IL 60604-3507

Re: Clean Air Act Sections 172 and 182 State
Implementation Plan Submittal for Areas
Designated as “Nonattainment,” “Marginal”
under the 2015 8-Hour Ozone National Ambient
Air Quality Standards, including Calumet,
Hobart, North, Ross, and St. John townships in
Lake County, and Clark and Floyd Counties

Dear Ms. Newton:

Pursuant to Sections 172 and 182 of the Clean Air Act (CAA), the Indiana Department of Environmental Management (IDEM) is submitting amendments to Indiana’s State Implementation Plan (SIP) for areas designated as “nonattainment” and classified as “Marginal” under the 2015 8-hour ozone National Ambient Air Quality Standards (NAAQS).¹ The areas include Calumet, Hobart, North, Ross, and St. John townships in Lake County, which are part of the Chicago, IL-IN-WI nonattainment area, and Clark and Floyd counties, which are part of the Louisville, KY-IN nonattainment area.

Indiana hereby requests review and approval of the following submittals that fulfill requirements in Sections 172 and 182 of the CAA:

- Enclosure 1 - 2017 Base-Year Emissions Inventory for Indiana’s Portions of the Chicago, Illinois-Indiana-Wisconsin (IL-IN-WI) and Louisville, Kentucky-Indiana (KY-IN), 2015 8-Hour Ozone Marginal Nonattainment Areas. The base-year emissions inventory satisfies the state’s obligation under Section 182(a)(1) of the CAA and represents a comprehensive and accurate inventory of ozone precursor emissions for Calumet, Hobart, North, Ross, and St. John townships in Lake County, and Clark and Floyd counties.

¹ See 83 FR 25776

- Enclosure 2 - Certification of Indiana's Nonattainment New Source Review (NNSR) Plan for the 2015 8-Hour Ozone National Ambient Air Quality Standards (NAAQS). Indiana's existing NNSR rules are contained in 326 Indiana Administrative Code (IAC) 2-3. These rules satisfy, and are at least as stringent as, the NNSR SIP plan requirements contained in 40 Code of Federal Regulations (CFR) 51.165 for the 2015 8-hour ozone NAAQS.
- Enclosure 3 - Certification of Indiana's Emissions Reporting Rule (326 IAC 2-6) for the 2015 8-Hour Ozone National Ambient Air Quality Standards (NAAQS).

IDEM provided a 30-day comment period and opportunity for a public hearing concerning the submittal for the 2017 Base-Year Inventory for Indiana's Portions of the Chicago, Illinois-Indiana-Wisconsin (IL-IN-WI) and Louisville, Kentucky-Indiana (KY-IN) "Marginal" Nonattainment Areas and Certifications of Indiana's Nonattainment New Source Review and Emissions Statement Programs Under the 2015 8-Hour Ozone National Ambient Air Quality Standards (NAAQS). A public hearing was not requested and there were not any comments received. Please refer to Public Participation Process Documentation (Enclosure 4) for further information and dates regarding the public participation process.

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 Doug Aburano, Chief of U.S. EPA Region 5's Attainment Planning and Maintenance Section, and Chris Panos of U.S. EPA Region 5. If you have any questions or need additional information, please contact Brian Callahan, Chief, Air Quality Standards and Implementation Section, Office of Air Quality, at (317) 232-8244 or bcallaha@idem.IN.gov.

Sincerely,



Matt Stuckey
Assistant Commissioner
Office of Air Quality

MS/sd/bc/gf/as

Enclosures

1. 2017 Base-Year Emissions Inventory for Indiana's Portions of the Chicago, Illinois-Indiana-Wisconsin (IL-IN-WI) and Louisville, Kentucky-Indiana (KY-IN), 2015 8-Hour Ozone Marginal Nonattainment Areas
2. Certification of Indiana's Nonattainment New Source Review (NNSR) Plan for the 2015 8-Hour Ozone National Ambient Air Quality Standards (NAAQS)
3. Certification of Indiana's Emissions Reporting Rule (326 IAC 2-6) for the 2015 8-Hour Ozone National Ambient Air Quality Standards (NAAQS)
4. Public Participation Process Documentation

cc: Chris Panos, U.S. EPA Region 5 (no enclosures)

Doug Aburano, U.S. EPA Region 5 (no enclosures)
Kathleen D' Agostino, U.S. EPA Region 5 (no enclosures)
Emily Crispell, U.S. EPA Region 5 (no enclosures)
Matt Stuckey, IDEM-OAQ (no enclosures)
Scott Deloney, IDEM-OAQ (no enclosures)
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Gale Ferris, IDEM-OAQ (w/ enclosures)
Amy Smith, IDEM-OAQ (w/ enclosures)
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Enclosure 1

2017 Base-Year Emissions Inventory for
Indiana's Portions of the Chicago, Illinois-
Indiana-Wisconsin (IL-IN-WI) and Louisville,
Kentucky-Indiana (KY-IN) 2015 8-Hour Ozone
Marginal Nonattainment Areas

**Calumet, Hobart, North, Ross, and St. John
Townships in Lake County**

and

Clark and Floyd Counties

Developed by:

The Indiana Department of Environmental
Management

January 2021

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Release Technical Support Document, April 2020

Appendix 1B - Supplemental Onroad Emissions Data for Lake County

Appendix 1C - Supplemental Onroad Emissions Data for Clark and Floyd
Counties

1.0 Introduction

On October 1, 2015, United States Environmental Protection Agency (U.S. EPA) promulgated revisions to the primary and secondary National Ambient Air Quality Standards (NAAQS) for ozone, strengthening the standard to a level of 0.070 parts per million (ppm).¹ Designations for the 2015 8-hour ozone NAAQS were issued in two rounds. In round 1, most Indiana counties were designated “attainment/unclassifiable”.² In round 2, all remaining areas of the state were designated “attainment/unclassifiable” except for the following areas, which were designated as “marginal nonattainment”:³

- Calumet, Hobart, North, Ross, and Saint John townships in Lake County within the Chicago, IL-IN-WI nonattainment area, and
- Clark and Floyd counties within the Louisville, KY-IN nonattainment area.

For areas designated “nonattainment” with a “marginal” classification for the 2015 NAAQS, Section 182(a)(1) of the Clean Air Act (CAA) requires the development of a comprehensive, accurate, and current inventory of actual emissions from all sources in the nonattainment area, including periodic revisions as the Administrator may determine necessary to assure that the requirements for this part are met. This document has been developed following U.S. EPA guidance for the submittal of a comprehensive state implementation plan (SIP) quality emissions inventory of ozone precursor emissions, oxides of nitrogen (NO_x) and volatile organic compounds (VOCs), representative of the base year.⁴

2.0 Base-Year Emissions Inventory

U.S. EPA’s rule for the “Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area State Implementation Plan Requirements” (referred to as the 2015 ozone implementation rule) indicates that states shall use a reasonable further progress (RFP) baseline year for the 2015 ozone standards that corresponds with the calendar year for the most recent triennial emissions inventory preceding the year of the area’s effective date of nonattainment designation.⁵ U.S. EPA’s 2017 National Emissions Inventory (NEI) is the most recently available triennial emissions inventory preceding the nonattainment designations in April 2018. Based on the 2015 ozone implementation rule and in consultation with U.S. EPA, the Indiana Department of Environmental Management (IDEM) has selected the base-year of 2017 for the inventory.

IDEM has prepared a comprehensive and accurate inventory of ozone precursor emissions (NO_x and VOCs) for partial Lake County (Section 4.0 of this document), and Clark and Floyd counties (Section 5.0 of this document), organized by anthropogenic source categories: point sources, including electric-generating units (EGUs) and nonEGUs; nonpoint sources (also called area sources); nonroad mobile sources; and onroad

¹ See [80 FR 65292, October 26, 2015](#).

² See [82 FR 54232, November 16, 2017](#).

³ See [83 FR 25776, June 4, 2018](#).

⁴ <https://www.epa.gov/air-emissions-inventories/air-emissions-inventory-guidance-documents>.

⁵ See [83 FR 62998, December 6, 2018](#).

mobile sources. Tables are provided for each area, including summaries by source categories and detailed data by source classification codes (SCCs) and point sources.

Indiana has elected to use U.S. EPA's 2017 NEI for point, nonpoint (area), and nonroad anthropogenic emission sources.⁶ Onroad values were interpolated from emission factors produced by the 2014a version of U.S. EPA's MOVES software program. Biogenic emissions are not included in these summaries.

2.1 Point (EGU and NonEGU)

IDEM's Office of Air Quality (OAQ) collects data, calculates, and stores emissions for point sources on an annual basis in the Emission Inventory Tracking System (EMITS). These point source emissions are uploaded to the NEI each year using the Emission Inventory System (EIS) and feedback is provided to U.S. EPA on a variety of other estimates. Point source data was collected through Indiana's Emission Statement Program according to Title 326, Article 2, Rule 6 of the Indiana Administrative Code (326 IAC 2-6). All data is collated into the EMITS and submitted to U.S. EPA through the EIS Gateway. U.S. EPA has added to this inventory, incorporating data from various sources such as data submitted to the Clean Air Markets Database. Airport operations are handled as point sources in the database (see Section 3.2 of U.S. EPA's 2017 National Emissions Inventory Complete Release Technical Support Document, April 2020, for which a link is provided in Appendix 1A).

2.2 Nonpoint

Nonpoint sources were developed by U.S. EPA with comments provided by the states. Section 4 of U.S. EPA's 2017 National Emissions Inventory Complete Release Technical Support Document, April 2020 (Appendix 1A) describes in detail the stationary sources included in the nonpoint source estimations, emission estimation methods, sources of data for inputs, where states provided input, and how controls were taken into account.

2.3 Nonroad Mobile Sources

Section 5 of U.S. EPA's 2017 National Emissions Inventory Complete Release Technical Support Document, April 2020 (Appendix 1A) details the nonroad mobile source emissions generated by a diverse collection of equipment, ranging from lawn mowers to locomotive support. U.S. EPA MOVES model estimates emissions from nonroad mobile sources using a variety of fuel types.

2.4 Onroad Mobile Sources

Onroad mobile source estimations have been provided by local metropolitan planning organizations (MPOs) for each area at IDEM's request:

- Northwest Indiana Regional Planning Commission (NIRPC) provided onroad emissions data, as shown in Table 4.2, for Calumet, Hobart, North, Ross, and Saint John townships in Lake County. Detailed data and information concerning calculations are provided in Appendix 1B, "Supplemental Onroad Emissions Data for Lake County".

⁶ <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data>.

- Kentuckiana Regional Planning and Development Agency (KIPDA) provided onroad emissions data for 2017 for Clark and Floyd counties. KIPDA, with the assistance of Louisville Metro Air Pollution Control District, has MOVES runs using the "inventory mode" for the years 2015 and 2020, which has been interpolated to arrive at 2017 NOx and VOC tons per summer day totals. Table 5.1 contains the total for Clark and Floyd counties. Summary data and details concerning calculations are provided in Appendix 1C, "Supplemental Onroad Data for Clark and Floyd Counties".

3.0 Temporal Allocation of Annual Emissions

The area, nonroad and point source categories were calculated using the same formulation for average season day emissions. Annual base year emissions were compiled from U.S. EPA's 2017 Emissions Modeling Platform.⁷ The annual emissions provided by this inventory were then used to calculate average summer day emissions using U.S. EPA guidance on how the model estimates daily emissions.⁸ The monthly profile percentages for June, July and August were added together and then divided by the number of days in the season (92). This is applied at the process level using the profiles that are specified for each source classification code (SCC) that is assigned to the process.⁹ Partial Lake County emissions estimates (Section 4.0) and Clark and Floyd counties emissions estimates (Section 5.0) are rounded to two decimal places.

4.0 Partial Lake County Summary and Detailed Data

The following tables contain summaries and detailed data concerning the partial Lake County inventory. Emission inventories are usually built on a countywide basis. To adapt a full Lake County inventory to a subset that represents the five nonattainment townships several steps were taken. Point (EGU and NonEGU) sources for the townships were identified as those above a latitude of 41.435, which marks the appropriate southern boundary of the nonattainment area. Area and nonroad source classification codes were assigned ratios representing their percentage of activity within Lake County, as shown in Table 4.1. For onroad sources, partial county emissions data was provided by NIRPC in consultation with IDEM and U.S. EPA. Through consultation with IDEM, U.S. EPA, and NIRPC, it was determined that NIRPC could interpolate 2017 emission rates using the 2015 and 2020 rates provided by the Indiana Department of Transportation. To extract the specific five townships designated as nonattainment by U.S. EPA a two-step approach was taken. For the running emissions, the network links in the NIRPC travel demand model from these five townships were applied to the interpolated 2017 emission rates. For the nonrunning emissions, it was agreed that NIRPC could multiply the full county nonrunning emissions by the percentage of registered vehicles that reside in the five designated as nonattainment townships. The combination of these running and nonrunning emissions are the 2017 onroad emission estimates included in this document.

⁷ <https://www.epa.gov/air-emissions-modeling/2017-emissions-modeling-platform>.

⁸ <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.360.5157&rep=rep1&type=pdf>.

⁹ <https://ofmpub.epa.gov/sccwebservices/sccsearch/>.

Table 4.1: Partial Lake County Emission Allocation Ratios

Ratio	Type	Comment
0.85	Employment	Represents the fraction of Lake County employment contained within the five nonattainment townships.
0.84	Population	Represents the fraction of Lake County population contained within the five nonattainment townships.
0.15	Agriculture Acreage	Represents the fraction of Lake County agricultural acreage contained within the five nonattainment townships.
Source: Employment and population estimates from Stats Indiana (https://www.stats.indiana.edu/population/sub_cnty_estimates/2019/e2019_townships.asp). Agricultural estimate from State GIS database.		

The tables show NO_x and VOC emission estimates in tons per ozone season day unless otherwise noted.

Table 4.2: Partial Lake County NO_x and VOC Emissions by Source Category, Tons per Ozone Season Day, 2017

County	Source Category	NO _x	VOCs
Lake	EGU	0.30	0.12
Lake	Nonpoint	5.21	11.40
Lake	Nonroad	3.78	2.06
Lake	Point	29.88	8.04
Lake	Onroad	10.32	4.71

Table 4.3: Detailed Partial Lake County NO_x and VOC Emissions by SCC Level One Descriptions, Tons per Ozone Season Day, 2017

County	Source Category	SCC Level One	NO _x	VOCs
Lake	EGU	External Combustion Boilers	0.05	0.04
Lake	EGU	Internal Combustion Engines	0.25	0.08
Lake	Nonpoint	Industrial Processes	0.03	0.16
Lake	Nonpoint	Miscellaneous Area Sources	0.01	0.04
Lake	Nonpoint	Mobile Sources	3.30	0.17
Lake	Nonpoint	Solvent Utilization		9.96
Lake	Nonpoint	Stationary Source Fuel Combustion	1.81	0.16
Lake	Nonpoint	Storage and Transport		0.69
Lake	Nonpoint	Waste Disposal, Treatment, and Recovery	0.06	0.23
Lake	Nonroad	Mobile Sources	3.78	2.06
Lake	Point	Chemical Evaporation	0.02	2.56

Lake	Point	External Combustion	0.00	0.00
Lake	Point	External Combustion Boilers	13.92	0.47
Lake	Point	Industrial Processes	15.04	4.92
Lake	Point	Internal Combustion Engines	0.84	0.06
Lake	Point	Mobile Sources	0.04	0.03

Table 4.4: Detailed Partial Lake County NO_x and VOC Emissions by SCC Level One and Two Descriptions, Tons per Ozone Season Day, 2017

County	Source Category	SCC Level One	SCC Level Two	NO _x	VOCs
Lake	EGU	External Combustion Boilers	Electric Generation	0.05	0.04
Lake	EGU	Internal Combustion Engines	Electric Generation	0.25	0.08
Lake	Nonpoint	Industrial Processes	Food and Kindred Products: SIC 20		0.08
Lake	Nonpoint	Industrial Processes	Oil and Gas Exploration and Production	0.03	0.08
Lake	Nonpoint	Miscellaneous Area Sources	Agriculture Production - Livestock		0.00
Lake	Nonpoint	Miscellaneous Area Sources	Other Combustion	0.01	0.03
Lake	Nonpoint	Mobile Sources	Marine Vessels, Commercial	0.71	0.05
Lake	Nonpoint	Mobile Sources	Railroad Equipment	2.59	0.12
Lake	Nonpoint	Solvent Utilization	Degreasing		1.02
Lake	Nonpoint	Solvent Utilization	Dry Cleaning		0.00
Lake	Nonpoint	Solvent Utilization	Graphic Arts		1.10
Lake	Nonpoint	Solvent Utilization	Miscellaneous Non-industrial: Commercial		0.51
Lake	Nonpoint	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial		4.92
Lake	Nonpoint	Solvent Utilization	Surface Coating		2.40
Lake	Nonpoint	Stationary Source Fuel Combustion	Commercial/Institutional	0.29	0.02

County	Source Category	SCC Level One	SCC Level Two	NO_x	VOCs
Lake	Nonpoint	Stationary Source Fuel Combustion	Industrial	1.43	0.08
Lake	Nonpoint	Stationary Source Fuel Combustion	Residential	0.10	0.06
Lake	Nonpoint	Storage and Transport	Petroleum and Petroleum Product Storage		0.52
Lake	Nonpoint	Storage and Transport	Petroleum and Petroleum Product Transport		0.17
Lake	Nonpoint	Waste Disposal, Treatment, and Recovery	Composting		0.05
Lake	Nonpoint	Waste Disposal, Treatment, and Recovery	Open Burning	0.06	0.15
Lake	Nonpoint	Waste Disposal, Treatment, and Recovery	Wastewater Treatment		0.03
Lake	Nonroad	Mobile Sources	CNG	0.00	0.00
Lake	Nonroad	Mobile Sources	Off-highway Vehicle CNG	0.02	0.01
Lake	Nonroad	Mobile Sources	Off-highway Vehicle Diesel	3.15	0.28
Lake	Nonroad	Mobile Sources	Off-highway Vehicle Gasoline	0.34	1.38
Lake	Nonroad	Mobile Sources	Off-highway Vehicle Gasoline, 2-Stroke	0.01	0.25
Lake	Nonroad	Mobile Sources	Off-highway Vehicle Gasoline, 4-Stroke	0.02	0.06
Lake	Nonroad	Mobile Sources	Off-highway Vehicle LPG	0.16	0.02
Lake	Nonroad	Mobile Sources	Pleasure Craft	0.08	0.05
Lake	Nonroad	Mobile Sources	Railroad Equipment	0.01	0.00
Lake	Point	Chemical Evaporation	Organic Chemical Storage		0.03
Lake	Point	Chemical Evaporation	Organic Solvent Evaporation	0.01	0.12
Lake	Point	Chemical Evaporation	Petroleum Liquids Storage (non-Refinery)	0.01	1.67
Lake	Point	Chemical Evaporation	Petroleum Product Storage at Refineries		0.56

County	Source Category	SCC Level One	SCC Level Two	NO_x	VOCs
Lake	Point	Chemical Evaporation	Printing/Publishing		0.00
Lake	Point	Chemical Evaporation	Surface Coating Operations		0.15
Lake	Point	Chemical Evaporation	Transportation and Marketing of Petroleum Products	0.00	0.02
Lake	Point	Chemical Evaporation	unknown		0.01
Lake	Point	External Combustion	Space Heaters	0.00	0.00
Lake	Point	External Combustion Boilers	Commercial/Institutional	0.18	0.01
Lake	Point	External Combustion Boilers	Industrial	13.74	0.46
Lake	Point	Industrial Processes	Chemical Manufacturing	0.85	0.06
Lake	Point	Industrial Processes	Fabricated Metal Products	0.02	0.00
Lake	Point	Industrial Processes	Food and Agriculture	0.02	0.30
Lake	Point	Industrial Processes	In-process Fuel Use	2.50	0.10
Lake	Point	Industrial Processes	Mineral Products	2.42	0.02
Lake	Point	Industrial Processes	Miscellaneous Manufacturing Industries	0.49	0.01
Lake	Point	Industrial Processes	Petroleum Industry	2.17	1.26
Lake	Point	Industrial Processes	Primary Metal Production	6.47	2.76
Lake	Point	Industrial Processes	Pulp and Paper and Wood Products		0.17
Lake	Point	Industrial Processes	Secondary Metal Production	0.10	0.23
Lake	Point	Internal Combustion Engines	Commercial/Institutional	0.09	0.01
Lake	Point	Internal Combustion Engines	Industrial	0.06	0.00
Lake	Point	Internal Combustion Engines	Railroad Equipment	0.69	0.05

County	Source Category	SCC Level One	SCC Level Two	NO _x	VOCs
Lake	Point	Mobile Sources	Aircraft	0.04	0.03
Lake	Point	Mobile Sources	Off-highway Vehicle Diesel	0.00	0.00
Lake	Point	Mobile Sources	Off-highway Vehicle Gasoline, 4-Stroke	0.00	0.00

Table 4.5: Detailed Partial Lake County NO_x and VOC Emissions by SCCs, Tons per Ozone Season Day, 2017

County	Source Category	SCC	NO _x	VOCs
Lake	EGU	10100601	0.02	0.01
Lake	EGU	10100704	0.03	0.03
Lake	EGU	20100201	0.25	0.08
Lake	Nonpoint	2102001000	0.00	0.00
Lake	Nonpoint	2102002000	0.00	0.00
Lake	Nonpoint	2102004001	0.01	0.00
Lake	Nonpoint	2102004002	0.16	0.01
Lake	Nonpoint	2102005000	0.00	0.00
Lake	Nonpoint	2102006000	1.21	0.07
Lake	Nonpoint	2102007000	0.01	0.00
Lake	Nonpoint	2102008000	0.04	0.00
Lake	Nonpoint	2102011000	0.00	0.00
Lake	Nonpoint	2103001000	0.00	0.00
Lake	Nonpoint	2103002000	0.00	0.00
Lake	Nonpoint	2103004001	0.00	0.00
Lake	Nonpoint	2103004002	0.00	0.00
Lake	Nonpoint	2103005000	0.00	0.00
Lake	Nonpoint	2103006000	0.25	0.01
Lake	Nonpoint	2103007000	0.01	0.00
Lake	Nonpoint	2103008000	0.02	0.00
Lake	Nonpoint	2103011000	0.00	0.00
Lake	Nonpoint	2104001000	0.00	0.00
Lake	Nonpoint	2104002000	0.00	0.00

County	Source Category	SCC	NO_x	VOCs
Lake	Nonpoint	2104004000	0.00	0.00
Lake	Nonpoint	2104006000	0.08	0.00
Lake	Nonpoint	2104007000	0.00	0.00
Lake	Nonpoint	2104008100	0.00	0.01
Lake	Nonpoint	2104008210	0.00	0.00
Lake	Nonpoint	2104008220	0.00	0.00
Lake	Nonpoint	2104008230	0.00	0.00
Lake	Nonpoint	2104008310	0.00	0.01
Lake	Nonpoint	2104008320	0.00	0.00
Lake	Nonpoint	2104008330	0.00	0.00
Lake	Nonpoint	2104008400	0.00	0.00
Lake	Nonpoint	2104008510	0.00	0.00
Lake	Nonpoint	2104008530	0.00	0.00
Lake	Nonpoint	2104008610	0.00	0.01
Lake	Nonpoint	2104008620	0.00	0.00
Lake	Nonpoint	2104008630	0.00	0.00
Lake	Nonpoint	2104008700	0.00	0.01
Lake	Nonpoint	2104009000	0.00	0.01
Lake	Nonpoint	2104011000	0.00	0.00
Lake	Nonpoint	2280002101	0.02	0.00
Lake	Nonpoint	2280002102	0.07	0.00
Lake	Nonpoint	2280002103	0.13	0.02
Lake	Nonpoint	2280002104	0.06	0.00
Lake	Nonpoint	2280002201	0.14	0.01
Lake	Nonpoint	2280002202	0.19	0.01
Lake	Nonpoint	2280002203	0.08	0.01
Lake	Nonpoint	2280002204	0.03	0.00
Lake	Nonpoint	2285002006	2.38	0.11
Lake	Nonpoint	2285002007	0.16	0.01
Lake	Nonpoint	2285002008	0.06	0.00
Lake	Nonpoint	2302002100		0.02
Lake	Nonpoint	2302002200		0.05
Lake	Nonpoint	2302003000		0.01

County	Source Category	SCC	NO_x	VOCs
Lake	Nonpoint	2302003100		0.01
Lake	Nonpoint	2302003200		0.00
Lake	Nonpoint	2310000551		0.00
Lake	Nonpoint	2310000552		0.00
Lake	Nonpoint	2310000553		0.00
Lake	Nonpoint	2310010100	0.00	0.00
Lake	Nonpoint	2310010200	0.00	0.00
Lake	Nonpoint	2310010300		0.04
Lake	Nonpoint	2310011001	0.00	0.00
Lake	Nonpoint	2310011201		0.00
Lake	Nonpoint	2310011501		0.00
Lake	Nonpoint	2310011502		0.00
Lake	Nonpoint	2310011503		0.00
Lake	Nonpoint	2310011505		0.01
Lake	Nonpoint	2310011600	0.01	0.00
Lake	Nonpoint	2310021010	0.00	0.00
Lake	Nonpoint	2310021030		0.00
Lake	Nonpoint	2310021100	0.00	0.00
Lake	Nonpoint	2310021102	0.00	0.00
Lake	Nonpoint	2310021202	0.00	0.00
Lake	Nonpoint	2310021251	0.00	0.00
Lake	Nonpoint	2310021300		0.01
Lake	Nonpoint	2310021302	0.01	0.00
Lake	Nonpoint	2310021351	0.00	0.00
Lake	Nonpoint	2310021400	0.00	0.00
Lake	Nonpoint	2310021501		0.00
Lake	Nonpoint	2310021502		0.00
Lake	Nonpoint	2310021503		0.00
Lake	Nonpoint	2310021505		0.00
Lake	Nonpoint	2310021506		0.00
Lake	Nonpoint	2310021603	0.00	0.00
Lake	Nonpoint	2310023000	0.00	0.00
Lake	Nonpoint	2310023010	0.00	0.00

County	Source Category	SCC	NO_x	VOCs
Lake	Nonpoint	2310023030		0.00
Lake	Nonpoint	2310023100	0.00	0.00
Lake	Nonpoint	2310023102	0.00	0.00
Lake	Nonpoint	2310023202	0.00	0.00
Lake	Nonpoint	2310023251	0.00	0.00
Lake	Nonpoint	2310023300		0.00
Lake	Nonpoint	2310023302	0.00	0.00
Lake	Nonpoint	2310023310		0.00
Lake	Nonpoint	2310023351	0.00	0.00
Lake	Nonpoint	2310023400	0.00	0.00
Lake	Nonpoint	2310023511		0.00
Lake	Nonpoint	2310023512		0.00
Lake	Nonpoint	2310023513		0.00
Lake	Nonpoint	2310023515		0.00
Lake	Nonpoint	2310023516		0.00
Lake	Nonpoint	2310023603	0.00	0.00
Lake	Nonpoint	2310111401		0.00
Lake	Nonpoint	2310121401		0.00
Lake	Nonpoint	2401001000		1.34
Lake	Nonpoint	2401005000		0.25
Lake	Nonpoint	2401008000		0.17
Lake	Nonpoint	2401015000		0.01
Lake	Nonpoint	2401020000		0.11
Lake	Nonpoint	2401025000		0.00
Lake	Nonpoint	2401030000		0.05
Lake	Nonpoint	2401055000		0.00
Lake	Nonpoint	2401065000		0.00
Lake	Nonpoint	2401070000		0.18
Lake	Nonpoint	2401085000		0.09
Lake	Nonpoint	2401090000		0.00
Lake	Nonpoint	2401100000		0.21
Lake	Nonpoint	2401200000		0.00
Lake	Nonpoint	2415000000		1.02

County	Source Category	SCC	NO_x	VOCs
Lake	Nonpoint	2420000000		0.00
Lake	Nonpoint	2425000000		1.10
Lake	Nonpoint	2460100000		1.10
Lake	Nonpoint	2460200000		1.12
Lake	Nonpoint	2460400000		0.11
Lake	Nonpoint	2460500000		0.53
Lake	Nonpoint	2460600000		1.02
Lake	Nonpoint	2460800000		1.00
Lake	Nonpoint	2460900000		0.04
Lake	Nonpoint	2461021000		0.03
Lake	Nonpoint	2461022000		0.38
Lake	Nonpoint	2461850000		0.10
Lake	Nonpoint	2501011011		0.04
Lake	Nonpoint	2501011012		0.04
Lake	Nonpoint	2501011013		0.05
Lake	Nonpoint	2501011014		0.01
Lake	Nonpoint	2501011015		0.00
Lake	Nonpoint	2501012011		0.00
Lake	Nonpoint	2501012012		0.00
Lake	Nonpoint	2501012013		0.06
Lake	Nonpoint	2501012014		0.02
Lake	Nonpoint	2501012015		0.00
Lake	Nonpoint	2501050120		0.02
Lake	Nonpoint	2501055120		0.00
Lake	Nonpoint	2501060051		0.04
Lake	Nonpoint	2501060052		0.00
Lake	Nonpoint	2501060053		0.08
Lake	Nonpoint	2501060201		0.09
Lake	Nonpoint	2501080050		0.05
Lake	Nonpoint	2501080100		0.00
Lake	Nonpoint	2505030120		0.00
Lake	Nonpoint	2505040120		0.17
Lake	Nonpoint	2610000100	0.00	0.00

County	Source Category	SCC	NO_x	VOCs
Lake	Nonpoint	2610000400	0.00	0.00
Lake	Nonpoint	2610000500	0.05	0.13
Lake	Nonpoint	2610030000	0.01	0.01
Lake	Nonpoint	2630020000		0.03
Lake	Nonpoint	2680003000		0.05
Lake	Nonpoint	2805002000		0.00
Lake	Nonpoint	2805007100		0.00
Lake	Nonpoint	2805009100		0.00
Lake	Nonpoint	2805010100		0.00
Lake	Nonpoint	2805018000		0.00
Lake	Nonpoint	2805025000		0.00
Lake	Nonpoint	2805035000		0.00
Lake	Nonpoint	2805040000		0.00
Lake	Nonpoint	2805045000		0.00
Lake	Nonpoint	2810025000	0.01	0.03
Lake	Nonpoint	2810060100	0.00	0.00
Lake	Nonpoint	2810060200	0.00	0.00
Lake	Nonroad	2260002022	0.00	0.14
Lake	Nonroad	2260003022	0.00	0.00
Lake	Nonroad	2260004020	0.00	0.05
Lake	Nonroad	2260004021	0.00	0.13
Lake	Nonroad	2260004022	0.00	0.00
Lake	Nonroad	2260004033	0.00	0.08
Lake	Nonroad	2260004035	0.00	0.00
Lake	Nonroad	2260004036	0.00	0.07
Lake	Nonroad	2260004044	0.01	0.14
Lake	Nonroad	2260005022	0.00	0.00
Lake	Nonroad	2260006022	0.00	0.04
Lake	Nonroad	2260007022	0.00	0.00
Lake	Nonroad	2265001050	0.01	0.03
Lake	Nonroad	2265002022	0.03	0.06
Lake	Nonroad	2265003022	0.04	0.03
Lake	Nonroad	2265003060	0.00	0.00

County	Source Category	SCC	NO_x	VOCs
Lake	Nonroad	2265004022	0.05	0.11
Lake	Nonroad	2265004033	0.08	0.32
Lake	Nonroad	2265004035	0.00	0.02
Lake	Nonroad	2265004036	0.00	0.02
Lake	Nonroad	2265004044	0.02	0.09
Lake	Nonroad	2265005022	0.00	0.00
Lake	Nonroad	2265006022	0.09	0.22
Lake	Nonroad	2265007022	0.00	0.00
Lake	Nonroad	2267002022	0.00	0.00
Lake	Nonroad	2267003022	0.14	0.02
Lake	Nonroad	2267004044	0.00	0.00
Lake	Nonroad	2267005022	0.00	0.00
Lake	Nonroad	2267006022	0.01	0.00
Lake	Nonroad	2268002022	0.00	0.00
Lake	Nonroad	2268003022	0.01	0.01
Lake	Nonroad	2268003060	0.00	0.00
Lake	Nonroad	2268005022	0.00	0.00
Lake	Nonroad	2268006022	0.01	0.00
Lake	Nonroad	2270002022	2.43	0.22
Lake	Nonroad	2270003022	0.22	0.01
Lake	Nonroad	2270003060	0.11	0.01
Lake	Nonroad	2270004022	0.01	0.00
Lake	Nonroad	2270004036	0.00	0.00
Lake	Nonroad	2270004044	0.04	0.00
Lake	Nonroad	2270005022	0.08	0.01
Lake	Nonroad	2270006022	0.19	0.02
Lake	Nonroad	2270007022	0.00	0.00
Lake	Nonroad	2282005022	0.03	0.15
Lake	Nonroad	2282010005	0.08	0.05
Lake	Nonroad	2282020022	0.06	0.00
Lake	Nonroad	2285002015	0.01	0.00
Lake	Nonroad	2285004015	0.00	0.00
Lake	Nonroad	2285006015	0.00	0.00

County	Source Category	SCC	NO_x	VOCs
Lake	Point	10200401	0.17	0.00
Lake	Point	10200501	0.04	0.00
Lake	Point	10200601	9.18	0.20
Lake	Point	10200602	0.78	0.04
Lake	Point	10200603	0.08	0.00
Lake	Point	10200701	1.38	0.13
Lake	Point	10200704	2.11	0.08
Lake	Point	10200799	0.00	0.00
Lake	Point	10201002	0.00	0.00
Lake	Point	10300602	0.01	0.00
Lake	Point	10300799	0.17	0.01
Lake	Point	10500106	0.00	0.00
Lake	Point	20200102	0.01	0.00
Lake	Point	20200104	0.03	0.00
Lake	Point	20200201	0.00	0.00
Lake	Point	20200202	0.00	0.00
Lake	Point	20200401	0.02	0.00
Lake	Point	20300101	0.09	0.01
Lake	Point	2265008005	0.00	0.00
Lake	Point	2270008005	0.00	0.00
Lake	Point	2275001000	0.03	0.01
Lake	Point	2275020000	0.01	0.00
Lake	Point	2275050011	0.00	0.00
Lake	Point	2275050012	0.00	0.01
Lake	Point	2275060011	0.00	0.00
Lake	Point	2275060012	0.00	0.00
Lake	Point	2275070000	0.00	0.00
Lake	Point	28500201	0.69	0.05
Lake	Point	30102320		0.01
Lake	Point	30102322		0.00
Lake	Point	30102399	0.07	0.01
Lake	Point	30103204	0.08	0.00
Lake	Point	30107002	0.00	0.02

County	Source Category	SCC	NO_x	VOCs
Lake	Point	30107101	0.22	0.01
Lake	Point	30187097		0.00
Lake	Point	30187098		0.00
Lake	Point	30188801		0.00
Lake	Point	30190003	0.49	0.00
Lake	Point	30190023	0.00	0.00
Lake	Point	30200754	0.02	0.00
Lake	Point	30201401		0.00
Lake	Point	30201403		0.07
Lake	Point	30201407		0.00
Lake	Point	30201410		0.03
Lake	Point	30201412		0.00
Lake	Point	30201899		0.19
Lake	Point	30299998		0.01
Lake	Point	30300305	0.00	0.00
Lake	Point	30300336		0.00
Lake	Point	30300371	0.03	0.00
Lake	Point	30300372	0.00	0.00
Lake	Point	30300375	0.01	0.00
Lake	Point	30300376	1.75	0.00
Lake	Point	30300399	0.15	0.00
Lake	Point	30301503	0.55	0.48
Lake	Point	30301511		0.00
Lake	Point	30301513	0.45	0.10
Lake	Point	30301515	0.00	0.02
Lake	Point	30301517	0.01	0.01
Lake	Point	30301518	0.00	0.00
Lake	Point	30301526	2.13	0.04
Lake	Point	30301527	0.08	0.00
Lake	Point	30301528	0.08	0.02
Lake	Point	30301532	0.02	
Lake	Point	30301540		0.00
Lake	Point	30301542	0.00	0.00

County	Source Category	SCC	NO_x	VOCs
Lake	Point	30301565	0.03	0.00
Lake	Point	30301573		0.24
Lake	Point	30301574		0.23
Lake	Point	30301575	0.00	0.00
Lake	Point	30301577		0.00
Lake	Point	30301581	0.02	0.00
Lake	Point	30301587		0.04
Lake	Point	30301598	0.00	0.00
Lake	Point	30301599	1.11	1.51
Lake	Point	30390024	0.06	0.05
Lake	Point	30399999	0.00	0.00
Lake	Point	30400112		0.00
Lake	Point	30400131		0.01
Lake	Point	30400138		0.02
Lake	Point	30400150		0.15
Lake	Point	30400199		0.04
Lake	Point	30402201	0.08	0.01
Lake	Point	30490033	0.02	0.00
Lake	Point	30501620	2.42	0.01
Lake	Point	30501699		0.00
Lake	Point	30599999		0.01
Lake	Point	30600106	1.70	0.02
Lake	Point	30600201	0.39	0.01
Lake	Point	30600503		0.21
Lake	Point	30600602		0.01
Lake	Point	30600701		0.09
Lake	Point	30600801		0.25
Lake	Point	30600802		0.02
Lake	Point	30600812		0.00
Lake	Point	30600816		0.00
Lake	Point	30600817		0.00
Lake	Point	30600904	0.08	0.22
Lake	Point	30601301		0.40

County	Source Category	SCC	NO_x	VOCs
Lake	Point	30609904		0.01
Lake	Point	30688801		0.00
Lake	Point	30700499		0.17
Lake	Point	30988801		0.00
Lake	Point	30990003	0.02	0.00
Lake	Point	39000699	1.63	0.05
Lake	Point	39000701	0.87	0.05
Lake	Point	39000797	0.00	0.00
Lake	Point	39990023	0.03	0.00
Lake	Point	39990024	0.37	0.00
Lake	Point	39999999	0.08	0.00
Lake	Point	40100251		0.00
Lake	Point	40100335		0.00
Lake	Point	40200101		0.07
Lake	Point	40200201		0.01
Lake	Point	40201801		0.05
Lake	Point	40201803		0.02
Lake	Point	40201805		0.00
Lake	Point	40301016		0.02
Lake	Point	40301017		0.00
Lake	Point	40301018		0.00
Lake	Point	40301021		0.18
Lake	Point	40301024		0.00
Lake	Point	40301099		0.00
Lake	Point	40301107		0.23
Lake	Point	40301115		0.02
Lake	Point	40301119		0.01
Lake	Point	40301120		0.00
Lake	Point	40301197		0.06
Lake	Point	40301299		0.04
Lake	Point	40400101		0.00
Lake	Point	40400106		0.01
Lake	Point	40400107		0.00

County	Source Category	SCC	NO_x	VOCs
Lake	Point	40400108		0.00
Lake	Point	40400109		0.00
Lake	Point	40400116		0.13
Lake	Point	40400117		0.00
Lake	Point	40400121		0.02
Lake	Point	40400122		0.04
Lake	Point	40400140		0.04
Lake	Point	40400141		0.00
Lake	Point	40400148		0.06
Lake	Point	40400149		0.05
Lake	Point	40400150	0.01	0.02
Lake	Point	40400151		0.03
Lake	Point	40400152		0.00
Lake	Point	40400153		0.04
Lake	Point	40400154		0.04
Lake	Point	40400160		0.01
Lake	Point	40400161		0.10
Lake	Point	40400170		0.50
Lake	Point	40400171		0.00
Lake	Point	40400172		0.05
Lake	Point	40400178		0.17
Lake	Point	40400179		0.16
Lake	Point	40400199		0.00
Lake	Point	40400205		0.02
Lake	Point	40400250	0.00	0.00
Lake	Point	40400261		0.11
Lake	Point	40400301		0.00
Lake	Point	40400302		0.00
Lake	Point	40400304		0.05
Lake	Point	40400306		0.02
Lake	Point	40400322		0.00
Lake	Point	40500516		0.00
Lake	Point	40600130		0.00

County	Source Category	SCC	NO _x	VOCs
Lake	Point	40600131		0.01
Lake	Point	40600133		0.00
Lake	Point	40600134		0.00
Lake	Point	40600135	0.00	0.00
Lake	Point	40600140		0.00
Lake	Point	40600141	0.00	0.00
Lake	Point	40600166		0.00
Lake	Point	40688801		0.00
Lake	Point	40714697		0.00
Lake	Point	40714698		0.01
Lake	Point	40715809		0.00
Lake	Point	40715810		0.00
Lake	Point	40799999		0.01
Lake	Point	42500202		0.00
Lake	Point	42500301		0.01
Lake	Point	49000206		0.00
Lake	Point	49000299	0.01	0.12

Table 4.6: Partial Lake County Point Source NO_x and VOC Emissions, Tons per Year and Tons per Ozone Season Day, 2017

County	Agency Facility ID	Site Name	NO _x (TPY)	VOCs (TPY)	NO _x (tons per ozone season day)	VOCs (tons per ozone season day)
Lake		COLEHOUR	26.41	1.73	0.07	0.00
Lake		COMMUNITY HOSPITAL	0.01	0.01	0.00	0.00
Lake		EAST CHICAGO	18.12	1.19	0.05	0.00
Lake		ESCC	0.01	0.01	0.00	0.00
Lake		Gary/Chicago	12.32	6.87	0.04	0.02
Lake		GIBSON	1.44	0.09	0.00	0.00
Lake		Griffith-Merrillville	1.20	2.59	0.00	0.01
Lake		HOBART SKY RANCH	0.16	0.35	0.00	0.00
Lake		HORSESHOE CASINO	0.01	0.01	0.00	0.00

County	Agency Facility ID	Site Name	NO _x (TPY)	VOCs (TPY)	NO _x (tons per ozone season day)	VOCs (tons per ozone season day)
Lake		IVANHOE	4.79	0.31	0.01	0.00
Lake		JOHNSONS STRAWBERRY FARM	0.00	0.01	0.00	0.00
Lake		KIRK	204.22	13.39	0.55	0.04
Lake		NIPSCO SOUTHLAKE COMPLEX	0.01	0.01	0.00	0.00
Lake		NORTHWEST FAMILY HOSP	0.01	0.01	0.00	0.00
Lake		POLICE	0.01	0.01	0.00	0.00
Lake		ST MARGARET MERCY	0.01	0.01	0.00	0.00
Lake		ST MARGARET MERCY HOSPITAL	0.01	0.01	0.00	0.00
Lake		ST MARY MEDICAL CENTER	0.01	0.01	0.00	0.00
Lake	00003	BP Products North America Inc Whiting R	1,439.96	659.08	3.81	1.78
Lake	00006	Albanese Confectionery Group Inc	4.55	68.81	0.01	0.19
Lake	00062	CCL Design		0.57		0.00
Lake	00072	Marathon Pipe Line, LLC		50.64		0.14
Lake	00081	Enbridge Energy Limited Partnership Ha		23.98		0.07
Lake	00112	CARMEUSE LIME INC	888.73	5.15	2.42	0.01
Lake	00118	ArcelorMittal Plate, LLC (Gary Plate)	8.89	0.99	0.02	0.00
Lake	00121	US STEEL GARY WORKS	3,089.13	226.25	8.42	0.62
Lake	00133	South Shore Slag LLC contractor of USS	3.79	0.31	0.01	0.00
Lake	00161	Industrial Steel Construction Inc		24.33		0.07
Lake	00171	Oil Technology Inc contractor of USS Ga		1.02		0.00
Lake	00172	USS Central Teaming Company Inc	1.57	0.13	0.00	0.00
Lake	00173	Mid Continent Coal & Coke contractor of	0.00	0.00	0.00	0.00
Lake	00174	Tube City IMS LLC contractor of USS Gar	0.19	0.01	0.00	0.00
Lake	00176	USS BRANDENBURG INDUSTRIAL SERVICE CO	0.00	1.65	0.00	0.00
Lake	00201	JUPITER ALUMINUM CORPORATION	24.50	86.99	0.06	0.24
Lake	00202	Silgan Containers Manufacturing Corpora	5.53	23.91	0.02	0.07
Lake	00203	CARGILL INC	71.25	47.83	0.19	0.13
Lake	00204	Armsted Rail Company Inc	38.08	5.08	0.10	0.01

County	Agency Facility ID	Site Name	NO _x (TPY)	VOCs (TPY)	NO _x (tons per ozone season day)	VOCs (tons per ozone season day)
Lake	00209	Premcor Pipeline Company		15.20		0.04
Lake	00214	EXPLORER PIPELINE COMP		94.55		0.26
Lake	00220	Niagara LaSalle Corporation	11.69	2.19	0.03	0.01
Lake	00227	DOVER CHEMICAL HAMMOND WORKS	8.21	8.70	0.02	0.02
Lake	00228	Huhtamaki Inc.	13.29	64.20	0.04	0.17
Lake	00230	WOLF LAKE TERMINALS INC	25.42	4.57	0.07	0.01
Lake	00231	MPLX Terminals LLC	0.00	56.94	0.00	0.16
Lake	00233	ExxonMobil Pipeline Company		34.58		0.09
Lake	00239	Buckeye Terminals LLC	0.30	58.31	0.00	0.16
Lake	00242	Eco Services Operations Corp	29.07	8.98	0.08	0.02
Lake	00291	Buckeye Terminals, LLC., Hartsdale Stat	0.00	24.72	0.00	0.07
Lake	00300	US STEEL EAST CHICAGO	24.06	0.74	0.07	0.00
Lake	00301	Safety Kleen Oil Recovery Company Incor	87.27	6.85	0.23	0.02
Lake	00307	CITGO East Chicago Terminal		190.93		0.52
Lake	00310	W.R. Grace & Co. - Conn.	193.68	1.31	0.52	0.00
Lake	00316	ARCELORMITTAL USA LLC	2,868.45	829.38	7.81	2.25
Lake	00318	ArcelorMittal USA LLC	1,056.28	103.93	2.88	0.28
Lake	00320	BUCKEYE TERMINALS LLC East Chicago Term	3.47	82.86	0.01	0.23
Lake	00345	Tradebe Treatment and Recycling LLC	11.80	48.63	0.03	0.13
Lake	00356	Beemsterboer Slag Corp contractor of Ar	20.32	1.19	0.06	0.00
Lake	00358	Harsco Metals Americas - contractor of	3.89	3.48	0.01	0.01
Lake	00369	Oil Technology Incorporated – contracto		0.71		0.00
Lake	00375	Oil Technology Inc - contractor of Acel		3.60		0.01
Lake	00382	Indiana Harbor Coke Company LP contract	713.74	1.40	1.94	0.00
Lake	00384	NATIONAL PROCESSING COMPANY		1.49		0.00
Lake	00435	PRAXAIR INC	63.45	4.94	0.17	0.01
Lake	00448	Ironside Energy LLC contractor of Acelo	17.35	14.44	0.05	0.04
Lake	00449	Whiting Clean Energy Inc	84.80	25.80	0.25	0.08

County	Agency Facility ID	Site Name	NO _x (TPY)	VOCs (TPY)	NO _x (tons per ozone season day)	VOCs (tons per ozone season day)
Lake	00458	Holcim US Incorporated	9.28	0.90	0.03	0.00
Lake	00465	Fritz Enterprises, Inc. - contractor of	17.74	1.42	0.05	0.00
Lake	00497	Enbridge Energy Limited Partnership Gr		46.90		0.13
Lake	00505	AKJ Industries Inc contractor of USS Ga		0.38		0.00
Lake	00537	Beemsterboer Slag Corporation A Contrac	0.00	0.00	0.00	0.00
Lake	00538	Phoenix Services LLC A Contractor of Ar	0.11	0.01	0.00	0.00
Lake	00578	Fritz Enterprises Incorporated	10.31	0.83	0.03	0.00
Lake	05057	MID CONTINENT COAL & COKE COMPANY	3.97	0.32	0.01	0.00

5.0 Clark and Floyd Counties Summary and Detailed Data

The following tables contain summaries and detailed data on the Clark and Floyd counties inventory. The tables show NO_x and VOC emission estimates in tons per ozone season day unless otherwise noted.

Table 5.1: Summary of Clark and Floyd Counties NO_x and VOC Emissions by Source Category, Tons per Ozone Season Day, 2017

County	Source Category	NO _x	VOCs
Clark	EGU	0.05	0.02
Clark	Nonpoint	1.28	6.46
Clark	Nonroad	1.10	0.66
Clark	Point	1.58	2.12
Clark	Onroad	7.71	2.85
Floyd	EGU	1.07	0.01
Floyd	Nonpoint	0.77	4.75
Floyd	Nonroad	0.82	0.48
Floyd	Point	0.00	0.00
Floyd	Onroad	4.78	3.09

Table 5.2: Detailed Clark and Floyd Counties NO_x and VOC Emissions by SCC Level One Descriptions, Tons per Ozone Season Day, 2017

County	Source Category	SCC Level One	NO_x	VOCs
Clark	EGU	Internal Combustion Engines	0.05	0.02
Clark	Nonpoint	Industrial Processes	0.03	0.11
Clark	Nonpoint	Miscellaneous Area Sources	0.00	0.20
Clark	Nonpoint	Mobile Sources	0.41	0.02
Clark	Nonpoint	Solvent Utilization		5.03
Clark	Nonpoint	Stationary Source Fuel Combustion	0.71	0.06
Clark	Nonpoint	Storage and Transport		0.70
Clark	Nonpoint	Waste Disposal, Treatment, and Recovery	0.13	0.34
Clark	Nonroad	Mobile Sources	1.10	0.66
Clark	Point	Chemical Evaporation		1.94
Clark	Point	External Combustion Boilers	0.02	0.00
Clark	Point	Industrial Processes	1.54	0.15
Clark	Point	Mobile Sources	0.01	0.02
Clark	Point	Waste Disposal	0.01	0.01
Floyd	EGU	External Combustion Boilers	1.07	0.01
Floyd	Nonpoint	Industrial Processes		0.01
Floyd	Nonpoint	Miscellaneous Area Sources	0.00	0.09
Floyd	Nonpoint	Mobile Sources	0.23	0.01
Floyd	Nonpoint	Solvent Utilization		4.22
Floyd	Nonpoint	Stationary Source Fuel Combustion	0.47	0.04
Floyd	Nonpoint	Storage and Transport		0.23
Floyd	Nonpoint	Waste Disposal, Treatment, and Recovery	0.06	0.15
Floyd	Nonroad	Mobile Sources	0.82	0.48
Floyd	Point	Mobile Sources	0.00	0.00

Table 5.3: Detailed Clark and Floyd Counties NO_x and VOC Emissions by SCC Level One and Two Descriptions, Tons per Ozone Season Day, 2017

County	Data Category	SCC Level One	SCC Level Two	NO_x	VOCs
Clark	EGU	Internal Combustion Engines	Electric Generation	0.05	0.02
Clark	Nonpoint	Industrial Processes	Food and Kindred Products: SIC 20		0.02
Clark	Nonpoint	Industrial Processes	Oil and Gas Exploration and Production	0.03	0.09
Clark	Nonpoint	Miscellaneous Area Sources	Agriculture Production - Livestock		0.19
Clark	Nonpoint	Miscellaneous Area Sources	Other Combustion	0.00	0.01
Clark	Nonpoint	Mobile Sources	Marine Vessels, Commercial	0.29	0.01
Clark	Nonpoint	Mobile Sources	Railroad Equipment	0.12	0.01
Clark	Nonpoint	Solvent Utilization	Degreasing		0.45
Clark	Nonpoint	Solvent Utilization	Dry Cleaning		0.00
Clark	Nonpoint	Solvent Utilization	Graphic Arts		1.65
Clark	Nonpoint	Solvent Utilization	Miscellaneous Non-industrial: Commercial		0.21
Clark	Nonpoint	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial		1.39
Clark	Nonpoint	Solvent Utilization	Surface Coating		1.32
Clark	Nonpoint	Stationary Source Fuel Combustion	Commercial/Institutional	0.10	0.01
Clark	Nonpoint	Stationary Source Fuel Combustion	Industrial	0.59	0.03
Clark	Nonpoint	Stationary Source Fuel Combustion	Residential	0.02	0.02
Clark	Nonpoint	Storage and Transport	Petroleum and Petroleum Product Storage		0.61
Clark	Nonpoint	Storage and Transport	Petroleum and Petroleum Product Transport		0.09
Clark	Nonpoint	Waste Disposal, Treatment, and Recovery	Composting		0.00

County	Data Category	SCC Level One	SCC Level Two	NO _x	VOCs
Clark	Nonpoint	Waste Disposal, Treatment, and Recovery	Open Burning	0.13	0.33
Clark	Nonpoint	Waste Disposal, Treatment, and Recovery	Wastewater Treatment		0.01
Clark	Nonroad	Mobile Sources	CNG	0.00	0.00
Clark	Nonroad	Mobile Sources	LPG	0.00	0.00
Clark	Nonroad	Mobile Sources	Off-highway Vehicle CNG	0.00	0.00
Clark	Nonroad	Mobile Sources	Off-highway Vehicle Diesel	0.95	0.08
Clark	Nonroad	Mobile Sources	Off-highway Vehicle Gasoline	0.09	0.48
Clark	Nonroad	Mobile Sources	Off-highway Vehicle Gasoline, 2-Stroke	0.00	0.06
Clark	Nonroad	Mobile Sources	Off-highway Vehicle Gasoline, 4-Stroke	0.01	0.02
Clark	Nonroad	Mobile Sources	Off-highway Vehicle LPG	0.05	0.01
Clark	Nonroad	Mobile Sources	Pleasure Craft	0.00	0.00
Clark	Nonroad	Mobile Sources	Railroad Equipment	0.00	0.00
Clark	Point	Chemical Evaporation	Surface Coating Operations		1.94
Clark	Point	External Combustion Boilers	Industrial	0.02	0.00
Clark	Point	Industrial Processes	Mineral Products	1.54	0.15
Clark	Point	Industrial Processes	Pulp and Paper and Wood Products		0.00
Clark	Point	Mobile Sources	Aircraft	0.01	0.02
Clark	Point	Waste Disposal	Solid Waste Disposal - Government	0.01	0.01
Floyd	EGU	External Combustion Boilers	Electric Generation	1.07	0.01
Floyd	Nonpoint	Industrial Processes	Food and Kindred Products: SIC 20		0.01

County	Data Category	SCC Level One	SCC Level Two	NO_x	VOCs
Floyd	Nonpoint	Miscellaneous Area Sources	Agriculture Production - Livestock		0.08
Floyd	Nonpoint	Miscellaneous Area Sources	Other Combustion	0.00	0.01
Floyd	Nonpoint	Mobile Sources	Marine Vessels, Commercial	0.09	0.00
Floyd	Nonpoint	Mobile Sources	Railroad Equipment	0.14	0.01
Floyd	Nonpoint	Solvent Utilization	Degreasing		0.18
Floyd	Nonpoint	Solvent Utilization	Dry Cleaning		0.00
Floyd	Nonpoint	Solvent Utilization	Graphic Arts		2.23
Floyd	Nonpoint	Solvent Utilization	Miscellaneous Non-industrial: Commercial		0.08
Floyd	Nonpoint	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial		0.92
Floyd	Nonpoint	Solvent Utilization	Surface Coating		0.81
Floyd	Nonpoint	Stationary Source Fuel Combustion	Commercial/Institutional	0.05	0.00
Floyd	Nonpoint	Stationary Source Fuel Combustion	Industrial	0.41	0.02
Floyd	Nonpoint	Stationary Source Fuel Combustion	Residential	0.01	0.02
Floyd	Nonpoint	Storage and Transport	Petroleum and Petroleum Product Storage		0.22
Floyd	Nonpoint	Storage and Transport	Petroleum and Petroleum Product Transport		0.02
Floyd	Nonpoint	Waste Disposal, Treatment, and Recovery	Composting		0.00
Floyd	Nonpoint	Waste Disposal, Treatment, and Recovery	Open Burning	0.06	0.15
Floyd	Nonpoint	Waste Disposal, Treatment, and Recovery	Wastewater Treatment		0.01
Floyd	Nonroad	Mobile Sources	CNG	0.00	0.00
Floyd	Nonroad	Mobile Sources	Off-highway Vehicle CNG	0.00	0.00

County	Data Category	SCC Level One	SCC Level Two	NO _x	VOCs
Floyd	Nonroad	Mobile Sources	Off-highway Vehicle Diesel	0.69	0.06
Floyd	Nonroad	Mobile Sources	Off-highway Vehicle Gasoline	0.07	0.32
Floyd	Nonroad	Mobile Sources	Off-highway Vehicle Gasoline, 2-Stroke	0.00	0.08
Floyd	Nonroad	Mobile Sources	Off-highway Vehicle Gasoline, 4-Stroke	0.00	0.01
Floyd	Nonroad	Mobile Sources	Off-highway Vehicle LPG	0.04	0.01
Floyd	Nonroad	Mobile Sources	Pleasure Craft	0.00	0.00
Floyd	Nonroad	Mobile Sources	Railroad Equipment	0.00	0.00
Floyd	Point	Mobile Sources	Aircraft	0.00	0.00

Table 5.4: Detailed Clark and Floyd Counties NO_x and VOC Emissions by SCC, Tons per Ozone Season Day, 2017

County	Source Category	SCC	NO _x	VOCs
Clark	EGU	20100802	0.05	0.02
Clark	Nonpoint	2102001000	0.00	0.00
Clark	Nonpoint	2102002000	0.00	0.00
Clark	Nonpoint	2102004001	0.00	0.00
Clark	Nonpoint	2102004002	0.07	0.00
Clark	Nonpoint	2102005000	0.00	0.00
Clark	Nonpoint	2102006000	0.50	0.03
Clark	Nonpoint	2102007000	0.00	0.00
Clark	Nonpoint	2102008000	0.02	0.00
Clark	Nonpoint	2102011000	0.00	0.00
Clark	Nonpoint	2103001000	0.00	0.00
Clark	Nonpoint	2103002000	0.00	0.00
Clark	Nonpoint	2103004001	0.00	0.00
Clark	Nonpoint	2103004002	0.00	0.00
Clark	Nonpoint	2103005000	0.00	0.00

County	Source Category	SCC	NO_x	VOCs
Clark	Nonpoint	2103006000	0.09	0.00
Clark	Nonpoint	2103007000	0.00	0.00
Clark	Nonpoint	2103008000	0.01	0.00
Clark	Nonpoint	2103011000	0.00	0.00
Clark	Nonpoint	2104001000	0.00	0.00
Clark	Nonpoint	2104002000	0.00	0.00
Clark	Nonpoint	2104004000	0.00	0.00
Clark	Nonpoint	2104006000	0.01	0.00
Clark	Nonpoint	2104007000	0.00	0.00
Clark	Nonpoint	2104008100	0.00	0.00
Clark	Nonpoint	2104008210	0.00	0.00
Clark	Nonpoint	2104008220	0.00	0.00
Clark	Nonpoint	2104008230	0.00	0.00
Clark	Nonpoint	2104008310	0.00	0.00
Clark	Nonpoint	2104008320	0.00	0.00
Clark	Nonpoint	2104008330	0.00	0.00
Clark	Nonpoint	2104008400	0.00	0.00
Clark	Nonpoint	2104008510	0.00	0.00
Clark	Nonpoint	2104008530	0.00	0.00
Clark	Nonpoint	2104008610	0.00	0.00
Clark	Nonpoint	2104008620	0.00	0.00
Clark	Nonpoint	2104008630	0.00	0.00
Clark	Nonpoint	2104008700	0.00	0.00
Clark	Nonpoint	2104009000	0.00	0.00
Clark	Nonpoint	2104011000	0.00	0.00
Clark	Nonpoint	2280002201	0.05	0.01
Clark	Nonpoint	2280002202	0.24	0.01
Clark	Nonpoint	2285002007	0.12	0.01
Clark	Nonpoint	2310010100		0.00
Clark	Nonpoint	2302002200		0.01
Clark	Nonpoint	2302003000		0.00
Clark	Nonpoint	2302003100		0.00
Clark	Nonpoint	2302003200		0.00

County	Source Category	SCC	NO_x	VOCs
Clark	Nonpoint	2310000551		0.00
Clark	Nonpoint	2310000552		0.00
Clark	Nonpoint	2310000553		0.00
Clark	Nonpoint	2310010100	0.00	0.00
Clark	Nonpoint	2310010200	0.00	0.00
Clark	Nonpoint	2310010300		0.05
Clark	Nonpoint	2310011001	0.00	0.00
Clark	Nonpoint	2310011201		0.00
Clark	Nonpoint	2310011501		0.00
Clark	Nonpoint	2310011502		0.00
Clark	Nonpoint	2310011503		0.00
Clark	Nonpoint	2310011505		0.01
Clark	Nonpoint	2310011600	0.02	0.00
Clark	Nonpoint	2310021010	0.00	0.00
Clark	Nonpoint	2310021030		0.00
Clark	Nonpoint	2310021100	0.00	0.00
Clark	Nonpoint	2310021102	0.00	0.00
Clark	Nonpoint	2310021202	0.00	0.00
Clark	Nonpoint	2310021251	0.00	0.00
Clark	Nonpoint	2310021300		0.01
Clark	Nonpoint	2310021302	0.01	0.00
Clark	Nonpoint	2310021351	0.00	0.00
Clark	Nonpoint	2310021400	0.00	0.00
Clark	Nonpoint	2310021501		0.00
Clark	Nonpoint	2310021502		0.00
Clark	Nonpoint	2310021503		0.00
Clark	Nonpoint	2310021505		0.00
Clark	Nonpoint	2310021506		0.00
Clark	Nonpoint	2310021603	0.00	0.00
Clark	Nonpoint	2310023000	0.00	0.00
Clark	Nonpoint	2310023010	0.00	0.00
Clark	Nonpoint	2310023030		0.00
Clark	Nonpoint	2310023100	0.00	0.00

County	Source Category	SCC	NO_x	VOCs
Clark	Nonpoint	2310023102	0.00	0.00
Clark	Nonpoint	2310023202	0.00	0.00
Clark	Nonpoint	2310023251	0.00	0.00
Clark	Nonpoint	2310023300		0.00
Clark	Nonpoint	2310023302	0.00	0.00
Clark	Nonpoint	2310023310		0.00
Clark	Nonpoint	2310023351	0.00	0.00
Clark	Nonpoint	2310023400	0.00	0.00
Clark	Nonpoint	2310023511		0.00
Clark	Nonpoint	2310023512		0.00
Clark	Nonpoint	2310023513		0.00
Clark	Nonpoint	2310023515		0.00
Clark	Nonpoint	2310023516		0.00
Clark	Nonpoint	2310023603	0.00	0.00
Clark	Nonpoint	2310111401		0.00
Clark	Nonpoint	2310121401		0.00
Clark	Nonpoint	2401001000		0.38
Clark	Nonpoint	2401005000		0.09
Clark	Nonpoint	2401008000		0.05
Clark	Nonpoint	2401015000		0.07
Clark	Nonpoint	2401020000		0.21
Clark	Nonpoint	2401025000		0.08
Clark	Nonpoint	2401055000		0.03
Clark	Nonpoint	2401065000		0.00
Clark	Nonpoint	2401070000		0.04
Clark	Nonpoint	2401080000		0.30
Clark	Nonpoint	2401090000		0.00
Clark	Nonpoint	2401100000		0.06
Clark	Nonpoint	2401200000		0.00
Clark	Nonpoint	2415000000		0.45
Clark	Nonpoint	2420000000		0.00
Clark	Nonpoint	2425000000		1.65
Clark	Nonpoint	2460100000		0.31

County	Source Category	SCC	NO_x	VOCs
Clark	Nonpoint	2460200000		0.32
Clark	Nonpoint	2460400000		0.03
Clark	Nonpoint	2460500000		0.15
Clark	Nonpoint	2460600000		0.29
Clark	Nonpoint	2460800000		0.28
Clark	Nonpoint	2460900000		0.01
Clark	Nonpoint	2461021000		0.01
Clark	Nonpoint	2461022000		0.13
Clark	Nonpoint	2461850000		0.07
Clark	Nonpoint	2501011011		0.01
Clark	Nonpoint	2501011012		0.01
Clark	Nonpoint	2501011013		0.01
Clark	Nonpoint	2501011014		0.00
Clark	Nonpoint	2501011015		0.00
Clark	Nonpoint	2501012011		0.00
Clark	Nonpoint	2501012012		0.00
Clark	Nonpoint	2501012013		0.02
Clark	Nonpoint	2501012014		0.01
Clark	Nonpoint	2501012015		0.00
Clark	Nonpoint	2501050120		0.27
Clark	Nonpoint	2501055120		0.00
Clark	Nonpoint	2501060051		0.05
Clark	Nonpoint	2501060052		0.00
Clark	Nonpoint	2501060053		0.08
Clark	Nonpoint	2501060201		0.10
Clark	Nonpoint	2501080050		0.06
Clark	Nonpoint	2501080100		0.00
Clark	Nonpoint	2505030120		0.01
Clark	Nonpoint	2505040120		0.08
Clark	Nonpoint	2610000100	0.00	0.00
Clark	Nonpoint	2610000400	0.00	0.00
Clark	Nonpoint	2610000500	0.11	0.31
Clark	Nonpoint	2610030000	0.02	0.02

County	Source Category	SCC	NO_x	VOCs
Clark	Nonpoint	2630020000		0.01
Clark	Nonpoint	2680003000		0.00
Clark	Nonpoint	2805002000		0.02
Clark	Nonpoint	2805007100		0.14
Clark	Nonpoint	2805009100		0.00
Clark	Nonpoint	2805010100		0.01
Clark	Nonpoint	2805018000		0.01
Clark	Nonpoint	2805025000		0.00
Clark	Nonpoint	2805035000		0.01
Clark	Nonpoint	2805040000		0.00
Clark	Nonpoint	2805045000		0.00
Clark	Nonpoint	2810025000	0.00	0.01
Clark	Nonpoint	2810060100	0.00	0.00
Clark	Nonpoint	2810060200	0.00	0.00
Clark	Nonroad	2260001022	0.00	0.10
Clark	Nonroad	2260001060	0.00	0.00
Clark	Nonroad	2260002022	0.00	0.03
Clark	Nonroad	2260003022	0.00	0.00
Clark	Nonroad	2260004020	0.00	0.01
Clark	Nonroad	2260004021	0.00	0.03
Clark	Nonroad	2260004022	0.00	0.00
Clark	Nonroad	2260004033	0.00	0.02
Clark	Nonroad	2260004035	0.00	0.00
Clark	Nonroad	2260004036	0.00	0.02
Clark	Nonroad	2260004044	0.00	0.03
Clark	Nonroad	2260005022	0.00	0.00
Clark	Nonroad	2260006022	0.00	0.01
Clark	Nonroad	2260007022	0.00	0.00
Clark	Nonroad	2265001022	0.00	0.04
Clark	Nonroad	2265001050	0.00	0.01
Clark	Nonroad	2265001060	0.00	0.00
Clark	Nonroad	2265002022	0.01	0.01
Clark	Nonroad	2265003022	0.01	0.01

County	Source Category	SCC	NO_x	VOCs
Clark	Nonroad	2265003060	0.00	0.00
Clark	Nonroad	2265004022	0.01	0.03
Clark	Nonroad	2265004033	0.02	0.09
Clark	Nonroad	2265004035	0.00	0.01
Clark	Nonroad	2265004036	0.00	0.00
Clark	Nonroad	2265004044	0.01	0.02
Clark	Nonroad	2265005022	0.00	0.00
Clark	Nonroad	2265006022	0.02	0.06
Clark	Nonroad	2265007022	0.00	0.00
Clark	Nonroad	2267001060	0.00	0.00
Clark	Nonroad	2267002022	0.00	0.00
Clark	Nonroad	2267003022	0.04	0.01
Clark	Nonroad	2267004044	0.00	0.00
Clark	Nonroad	2267005022	0.00	0.00
Clark	Nonroad	2267006022	0.00	0.00
Clark	Nonroad	2268002022	0.00	0.00
Clark	Nonroad	2268003022	0.00	0.00
Clark	Nonroad	2268003060	0.00	0.00
Clark	Nonroad	2268005022	0.00	0.00
Clark	Nonroad	2268006022	0.00	0.00
Clark	Nonroad	2270001060	0.00	0.00
Clark	Nonroad	2270002022	0.55	0.05
Clark	Nonroad	2270003022	0.07	0.00
Clark	Nonroad	2270003060	0.03	0.00
Clark	Nonroad	2270004022	0.00	0.00
Clark	Nonroad	2270004036	0.00	0.00
Clark	Nonroad	2270004044	0.01	0.00
Clark	Nonroad	2270005022	0.24	0.02
Clark	Nonroad	2270006022	0.05	0.01
Clark	Nonroad	2270007022	0.00	0.00
Clark	Nonroad	2282005022	0.00	0.02
Clark	Nonroad	2282010005	0.00	0.00
Clark	Nonroad	2282020022	0.00	0.00

County	Source Category	SCC	NO_x	VOCs
Clark	Nonroad	2285002015	0.00	0.00
Clark	Nonroad	2285004015	0.00	0.00
Clark	Nonroad	2285006015	0.00	0.00
Clark	Point	10200501	0.00	0.00
Clark	Point	10200504	0.00	0.00
Clark	Point	10200602	0.01	0.00
Clark	Point	10200903	0.01	0.00
Clark	Point	2275050011	0.00	0.00
Clark	Point	2275050012	0.00	0.01
Clark	Point	2275060011	0.00	0.00
Clark	Point	2275060012	0.00	0.00
Clark	Point	30500606	0.24	0.00
Clark	Point	30500622	1.17	0.14
Clark	Point	30501401	0.14	0.00
Clark	Point	30799998		0.00
Clark	Point	40200101		1.94
Clark	Point	40200201		0.00
Clark	Point	50100402		0.01
Clark	Point	50100406	0.01	0.00
Floyd	EGU	10100202	1.07	0.01
Floyd	EGU	10100501	0.00	0.00
Floyd	Nonpoint	2102001000	0.00	0.00
Floyd	Nonpoint	2102002000	0.00	0.00
Floyd	Nonpoint	2102004001	0.00	0.00
Floyd	Nonpoint	2102004002	0.04	0.00
Floyd	Nonpoint	2102005000	0.00	0.00
Floyd	Nonpoint	2102006000	0.35	0.02
Floyd	Nonpoint	2102007000	0.00	0.00
Floyd	Nonpoint	2102008000	0.01	0.00
Floyd	Nonpoint	2102011000	0.00	0.00
Floyd	Nonpoint	2103001000	0.00	0.00
Floyd	Nonpoint	2103002000	0.00	0.00
Floyd	Nonpoint	2103004001	0.00	0.00

County	Source Category	SCC	NO_x	VOCs
Floyd	Nonpoint	2103004002	0.00	0.00
Floyd	Nonpoint	2103005000	0.00	0.00
Floyd	Nonpoint	2103006000	0.04	0.00
Floyd	Nonpoint	2103007000	0.00	0.00
Floyd	Nonpoint	2103008000	0.00	0.00
Floyd	Nonpoint	2103011000	0.00	0.00
Floyd	Nonpoint	2104001000	0.00	0.00
Floyd	Nonpoint	2104002000	0.00	0.00
Floyd	Nonpoint	2104004000	0.00	0.00
Floyd	Nonpoint	2104006000	0.01	0.00
Floyd	Nonpoint	2104007000	0.00	0.00
Floyd	Nonpoint	2104008100	0.00	0.00
Floyd	Nonpoint	2104008210	0.00	0.00
Floyd	Nonpoint	2104008220	0.00	0.00
Floyd	Nonpoint	2104008230	0.00	0.00
Floyd	Nonpoint	2104008310	0.00	0.00
Floyd	Nonpoint	2104008320	0.00	0.00
Floyd	Nonpoint	2104008330	0.00	0.00
Floyd	Nonpoint	2104008400	0.00	0.00
Floyd	Nonpoint	2104008510	0.00	0.00
Floyd	Nonpoint	2104008530	0.00	0.00
Floyd	Nonpoint	2104008610	0.00	0.00
Floyd	Nonpoint	2104008620	0.00	0.00
Floyd	Nonpoint	2104008630	0.00	0.00
Floyd	Nonpoint	2104008700	0.00	0.00
Floyd	Nonpoint	2104009000	0.00	0.00
Floyd	Nonpoint	2104011000	0.00	0.00
Floyd	Nonpoint	2280002201	0.03	0.00
Floyd	Nonpoint	2280002202	0.06	0.00
Floyd	Nonpoint	2285002006	0.14	0.01
Floyd	Nonpoint	2302002100		0.00
Floyd	Nonpoint	2302002200		0.01
Floyd	Nonpoint	2302003000		0.00

County	Source Category	SCC	NO_x	VOCs
Floyd	Nonpoint	2302003100		0.00
Floyd	Nonpoint	2302003200		0.00
Floyd	Nonpoint	2401001000		0.25
Floyd	Nonpoint	2401005000		0.01
Floyd	Nonpoint	2401008000		0.03
Floyd	Nonpoint	2401015000		0.02
Floyd	Nonpoint	2401020000		0.01
Floyd	Nonpoint	2401025000		0.18
Floyd	Nonpoint	2401030000		0.17
Floyd	Nonpoint	2401055000		0.00
Floyd	Nonpoint	2401065000		0.00
Floyd	Nonpoint	2401070000		0.08
Floyd	Nonpoint	2401090000		0.02
Floyd	Nonpoint	2401100000		0.04
Floyd	Nonpoint	2401200000		0.00
Floyd	Nonpoint	2415000000		0.18
Floyd	Nonpoint	2420000000		0.00
Floyd	Nonpoint	2425000000		2.23
Floyd	Nonpoint	2460100000		0.21
Floyd	Nonpoint	2460200000		0.21
Floyd	Nonpoint	2460400000		0.02
Floyd	Nonpoint	2460500000		0.10
Floyd	Nonpoint	2460600000		0.19
Floyd	Nonpoint	2460800000		0.19
Floyd	Nonpoint	2460900000		0.01
Floyd	Nonpoint	2461021000		0.00
Floyd	Nonpoint	2461022000		0.07
Floyd	Nonpoint	2461850000		0.01
Floyd	Nonpoint	2501011011		0.01
Floyd	Nonpoint	2501011012		0.01
Floyd	Nonpoint	2501011013		0.01
Floyd	Nonpoint	2501011014		0.00
Floyd	Nonpoint	2501011015		0.00

County	Source Category	SCC	NO_x	VOCs
Floyd	Nonpoint	2501012011		0.00
Floyd	Nonpoint	2501012012		0.00
Floyd	Nonpoint	2501012013		0.02
Floyd	Nonpoint	2501012014		0.01
Floyd	Nonpoint	2501012015		0.00
Floyd	Nonpoint	2501050120		0.04
Floyd	Nonpoint	2501055120		0.00
Floyd	Nonpoint	2501060051		0.03
Floyd	Nonpoint	2501060052		0.00
Floyd	Nonpoint	2501060053		0.04
Floyd	Nonpoint	2501060201		0.05
Floyd	Nonpoint	2501080050		0.00
Floyd	Nonpoint	2501080100		0.00
Floyd	Nonpoint	2505030120		0.00
Floyd	Nonpoint	2505040120		0.01
Floyd	Nonpoint	2610000100	0.00	0.00
Floyd	Nonpoint	2610000400	0.00	0.00
Floyd	Nonpoint	2610000500	0.05	0.13
Floyd	Nonpoint	2610030000	0.01	0.01
Floyd	Nonpoint	2630020000		0.01
Floyd	Nonpoint	2680003000		0.00
Floyd	Nonpoint	2805002000		0.00
Floyd	Nonpoint	2805007100		0.00
Floyd	Nonpoint	2805009100		0.00
Floyd	Nonpoint	2805010100		0.00
Floyd	Nonpoint	2805018000		0.00
Floyd	Nonpoint	2805025000		0.07
Floyd	Nonpoint	2805035000		0.00
Floyd	Nonpoint	2805040000		0.00
Floyd	Nonpoint	2805045000		0.00
Floyd	Nonpoint	2810025000	0.00	0.01
Floyd	Nonpoint	2810060100	0.00	0.00
Floyd	Nonpoint	2810060200	0.00	0.00

County	Source Category	SCC	NO_x	VOCs
Floyd	Nonroad	2260002022	0.00	0.03
Floyd	Nonroad	2260003022	0.00	0.00
Floyd	Nonroad	2260004020	0.00	0.01
Floyd	Nonroad	2260004021	0.00	0.05
Floyd	Nonroad	2260004022	0.00	0.00
Floyd	Nonroad	2260004033	0.00	0.02
Floyd	Nonroad	2260004035	0.00	0.00
Floyd	Nonroad	2260004036	0.00	0.02
Floyd	Nonroad	2260004044	0.00	0.05
Floyd	Nonroad	2260005022	0.00	0.00
Floyd	Nonroad	2260006022	0.00	0.01
Floyd	Nonroad	2260007022	0.00	0.00
Floyd	Nonroad	2265001050	0.00	0.00
Floyd	Nonroad	2265002022	0.01	0.01
Floyd	Nonroad	2265003022	0.01	0.01
Floyd	Nonroad	2265003060	0.00	0.00
Floyd	Nonroad	2265004022	0.02	0.04
Floyd	Nonroad	2265004033	0.01	0.06
Floyd	Nonroad	2265004035	0.00	0.00
Floyd	Nonroad	2265004036	0.00	0.01
Floyd	Nonroad	2265004044	0.01	0.03
Floyd	Nonroad	2265005022	0.00	0.00
Floyd	Nonroad	2265006022	0.02	0.05
Floyd	Nonroad	2265007022	0.00	0.00
Floyd	Nonroad	2267002022	0.00	0.00
Floyd	Nonroad	2267003022	0.04	0.01
Floyd	Nonroad	2267004044	0.00	0.00
Floyd	Nonroad	2267005022	0.00	0.00
Floyd	Nonroad	2267006022	0.00	0.00
Floyd	Nonroad	2268002022	0.00	0.00
Floyd	Nonroad	2268003022	0.00	0.00
Floyd	Nonroad	2268003060	0.00	0.00
Floyd	Nonroad	2268005022	0.00	0.00

County	Source Category	SCC	NO _x	VOCs
Floyd	Nonroad	2268006022	0.00	0.00
Floyd	Nonroad	2270002022	0.49	0.04
Floyd	Nonroad	2270003022	0.06	0.00
Floyd	Nonroad	2270003060	0.02	0.00
Floyd	Nonroad	2270004022	0.00	0.00
Floyd	Nonroad	2270004036	0.00	0.00
Floyd	Nonroad	2270004044	0.02	0.00
Floyd	Nonroad	2270005022	0.05	0.00
Floyd	Nonroad	2270006022	0.04	0.00
Floyd	Nonroad	2270007022	0.00	0.00
Floyd	Nonroad	2282005022	0.00	0.01
Floyd	Nonroad	2282010005	0.00	0.00
Floyd	Nonroad	2282020022	0.00	0.00
Floyd	Nonroad	2285002015	0.00	0.00
Floyd	Nonroad	2285004015	0.00	0.00
Floyd	Nonroad	2285006015	0.00	0.00
Floyd	Point	2275050011	0.00	0.00
Floyd	Point	2275050012	0.00	0.00

Table 5.5: Clark and Floyd Counties Point Source NO_x and VOC Emissions, Tons per Year and Tons per Ozone Season Day, 2017

County	Agency Facility ID	Site Name	NO _x (TPY)	VOCs (TPY)	NO _x (tons per ozone season day)	VOCs (tons per ozone season day)
Clark		Clark County	3.36	6.18	0.01	0.02
Clark		HOLIDAY INN LAKEVIEW	0.00	0.00	0.00	0.00
Clark		HOLLOWAY FIELD	0.00	0.00	0.00	0.00
Clark	00006	JEFFBOAT LLC		62.34		0.18
Clark	00007	Kitchen Kompact Inc		478.23		1.37
Clark	00008	Lehigh Cement Company LLC	517.28	53.41	1.41	0.15
Clark	00016	Haas Cabinet Company, Inc		0.00		0.00
Clark	00018	PQ CORP	53.59	0.45	0.15	0.00

County	Agency Facility ID	Site Name	NO _x (TPY)	VOCs (TPY)	NO _x (tons per ozone season day)	VOCs (tons per ozone season day)
Clark	00079	KOETTER WOODWORKING INC	3.67	0.92	0.01	0.00
Clark	00097	Clark-Floyd Landfill	2.66	4.59	0.01	0.01
Clark	00109	Haas Cabinet Company, Inc		133.70		0.38
Clark	00124	Clark Floyd Landfill Gas Generating Sta	17.65	8.55	0.05	0.02
Floyd		PROFESSIONAL ARTS BUILDING	0.01	0.01	0.00	0.00
Floyd	00004	Duke Energy Indiana, LLC-Gallagher Gene	392.90	3.31	1.07	0.01

6.0 Public Participation

In accordance with 40 CFR 51.102, IDEM provided notice of the opportunity for a public hearing regarding the Draft 2017 Base-Year Emissions Inventory for Indiana's Portions of the Chicago, Illinois-Indiana-Wisconsin (IL-IN-WI) and Louisville, Kentucky-Indiana (KY-IN) 2015 8-Hour Ozone "Marginal" Nonattainment Areas.

Notice of availability of the complete document was posted on IDEM's website, at <https://www.in.gov/idem/5474.htm>, under "Statewide" on September 24, 2020, and remained posted until at least October 26, 2020. During the public comment period IDEM did not receive any public comments. The deadline during the public comment period to request a hearing was October 26, 2020. There was not a request for a public hearing and therefore the hearing was not required to be held.

A copy of the legal notice is provided in Enclosure 4, Public Participation Documentation.

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Appendix 1A

U.S. EPA 2017 National Emissions Inventory Complete Release Technical Support Document, April 2020

https://www.epa.gov/sites/production/files/2020-04/documents/nei2017_tsd_full_30apr2020.pdf

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Appendix 1B

Supplemental Onroad Emissions Data for Lake County:

- Northwest Indiana (Lake and Porter Counties)
Nonattainment/Maintenance Area Onroad
Mobile Emission Estimates
- NIRPC MOVES2014 Input Data and Parameters

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Northwest Indiana (Lake and Porter Counties)
Nonattainment/Maintenance Area Onroad Mobile Emission Estimates
OZONE Estimates Should be Shown in Tons per Summer Day

County	Emission Type	2015		2017		2020	
		VOC	NOx	VOC	NOx	VOC	NOx
		Tons/Summer Day	Tons/Summer Day	Tons/Summer Day	Tons/Summer Day	Tons/Summer Day	Tons/Summer Day
Calumet, Hobart, North, Ross, and St. John Townships, Lake County, IN*	Running & Non-Running	5.43	12.99	4.71	10.32	3.62	7.17
Lake County, Indiana	Running & Non-Running	6.58	16.18	5.73	12.91	4.4	8.94
Porter County, Indiana	Running & Non-Running	2.59	7.27	2.3	5.86	1.78	4.07
All Counties Running and Non-running TOTALS		9.17	23.45	8.03	18.77	6.18	13.01

*Partial county emissions data provided by NIRPC in consultation with U.S. EPA, using vehicle miles traveled (VMT) and vehicle source type population splits by township area.

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MOVES2014 Input Data and Parameters

May 27, 2015

Northwest Indiana Regional Planning Commission (NIRPC)
Lake, Porter and LaPorte Counties

Developed for:
Indiana Department of Transportation

Developed by:



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1.0 Introduction

This report documents the methods used to create input parameters prior to running a set of MOVES2014 runs for Northwest Indiana Regional Planning Commission (NIRPC) covering the following:

- Lake and Porter Counties 8-hour Ozone Maintenance Area
- Lake and Porter Counties PM 2.5 non-attainment area.
- LaPorte County 8-hour Ozone Maintenance Area

This report contains a discussion of the input settings used in MOVES2014 and the development of the input datasets. These MOVES2014 runs are intended to develop a default set of emission rates that can be used for conformity determination and is part of a statewide effort being conducted by the Indiana Department of Transportation (INDOT) for all participating MPOs or other jurisdictions with air quality conformity needs.

What Has Been Updated?

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 MOVES2014 defaults for each county
Average Speed Distribution (% of VHT in each 5 mph speed bin)	No	Not Needed for Emission Rate Mode (Dummy Inputs)
Road Type Distribution (VMT by 5 MOVES Road Types)	No	Retained inputs from 2012 emission rate development
Ramp Fraction	No	Retained inputs from 2012 emission rate development
Meteorology Data	No	Retained inputs from 2012 emission rate development
I/M Program	No	Retained inputs from 2012 emission rate development

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 December of 2014. 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 below.

2.1 BMV Vehicle Registration and License Data

A statewide vehicle fleet dataset was provided to the Indiana Department of Transportation (INDOT) from the Indiana Bureau of Motor Vehicles (BMV) in December of 2014. The analysis was performed by the Corradino Group under contract to INDOT. The dataset was processed by BMV and combined attributes of both vehicle title/registration (VIN) and license type.

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

- Vehicle Type, and
- Vehicle Year, and
- Fuel Type, and
- County

There were approximately 6.67 million VINs in the statewide data set. Out of these, approximately 5.85 million were for On-Road vehicles 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 shows how the BMV Vehicle Type classifications were cross-mapped to MOVES Source Type ID categories. The vehicle populations for light duty vehicles, which including motorcycles, passenger cars, passenger trucks, and light commercial trucks (source types 11, 21, 31, and 32 respectively) were developed from the 2014 BMV vehicle registration. 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) used the BMV heavy duty vehicle population as a control total for each county.

Table 2: BMV Data to MOVES2014

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 BVM 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 2011-2012 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. The MPO 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 2015 to 2045. The county level source type values and forecasts are shown in Tables A-1, A-2, and A-3 in Appendix A. When generating MOVES2014 emission rates the vehicle populations for Lake and Porter Counties are

combined into a single input file. LaPorte County emission rates are developed separately, so the county's vehicle population files are not combined with Lake and Porter county files.

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 2014 vehicle registration data. The BMV dataset allowed the totals for each model year by vehicle type and county to be assembled into the required MOVES 2014 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, MOVES2014 default vehicle age distributions specific to each source types were used. Vehicle age distributions for all source types were kept constant for all future years. The vehicle age distributions for Lake and Porter Counties as a combined area are shown in Appendix A of this report.

3.0 Vehicle Type VMT

As part of the previous 2011-2012 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 2010 for twenty permanent traffic count stations throughout Indiana. During the current update, the Corradino Group evaluated the latest four years of continuous traffic count data; covering the years 2011, 2012, 2013, and 2014.

The stations were selected to provide a spread of locations corresponding to each of the four MOVES road types. Furthermore, these stations were selected from among sites that were concentrated in nonattainment and maintenance areas. An inventory of the sites used to develop the distributions is shown in Figure 1. Of the available sites, 16 unique Weigh in Motion (WIM) sites and 26 ATR sites were utilized.

The vehicle counts reported at each station were provided by vehicle class. These were aggregated into the six basic HPMS vehicle types: motorcycle, passenger car, light truck, 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.

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. 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. After comparing results for Daily and Monthly distributions developed using the 2007-2010 data versus the newer 2011-2014 data, the differences were trivial and the previously developed MOVES Daily and Monthly VMT fraction files were retained for use in the MOVES2014 analysis.

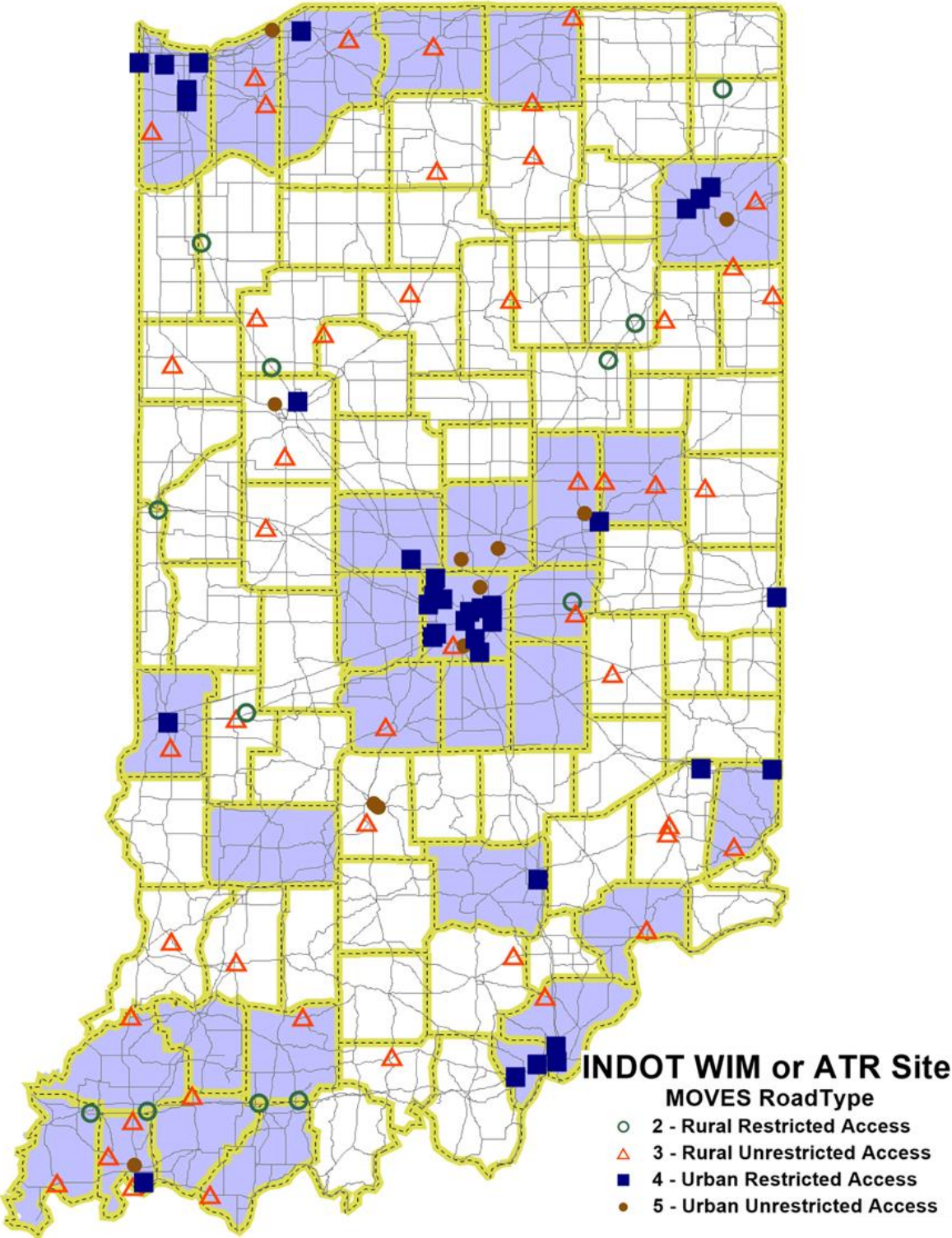
VehTypeVMT - When converting files from MOVES 2010 format to MOVES 2014 format, HPMS Base Year VMT by HPMS Vehicle Type ID was converted so that VMT for HPMS vehicle types 20 and 30 were combined and classified as HPMS vehicle type 25.

The statewide default daily distribution factors are shown in Tables C-1, C-2, and C-4 in Appendix C. The statewide default monthly distribution factors are also shown in Appendix C.

3.2 Hourly Distributions

The same set of forty two 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. The statewide default hourly distribution factors are presented in Appendix B.

Figure 1 - INDOT Continuous Count Locations



4.0 Average Speed Distribution

National MOVES defaults are used for the average speed distribution inputs. Per the *User Guide for MOVES2014*, when running MOVES2014 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 INDOT 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 reported in Appendix C.

6.0 Meteorology Data

The default set of hourly temperatures and hourly relative humidity for use in MOVES 2014 was retained from the MOVES 2010a inputs originally developed using EPA's data converters for changing MOBILE6.2 minimum / maximum temperatures and absolute humidity to the MOVES equivalent formats.

Meteorological data reflect average annual conditions for the PM 2.5 runs. During the previous emission rate update, the MOBILE6.2 meteorological input data for each of the twelve months of the years were averaged together to create average annual temperatures and humidity. These were then passed through the data converters. The data reflect summer conditions for ozone using MOBILE6.2 inputs for July. The MOVES formatted meteorological data for the NIRPC counties of Lake, Porter, and LaPorte as a combined area are presented in Appendix C of this report.

7.0 Fuel

The 2014 version of MOVES has features developed as a result of the EPA Tier 2 Gasoline Model, impacts of ethanol and other key fuel properties, and incorporates the EPA Sulfur Effects Model. MOVES2014 has a new set of Fuel Supply Regions based on regional fuels, and reduces the number of Fuels in MOVES from approximately 300 to 40. MOVES2014 contains the most current ethanol (E10, E15, E85) and fuel formulation projections based on AEO2014.

Development of the updated NIRPC emission rates uses default MOVES2014 fuel formulation assumptions based on each county's Fuel Supply Region, and defaults to summer conditions.

Figure 2-Indiana Fuel Supply Regions



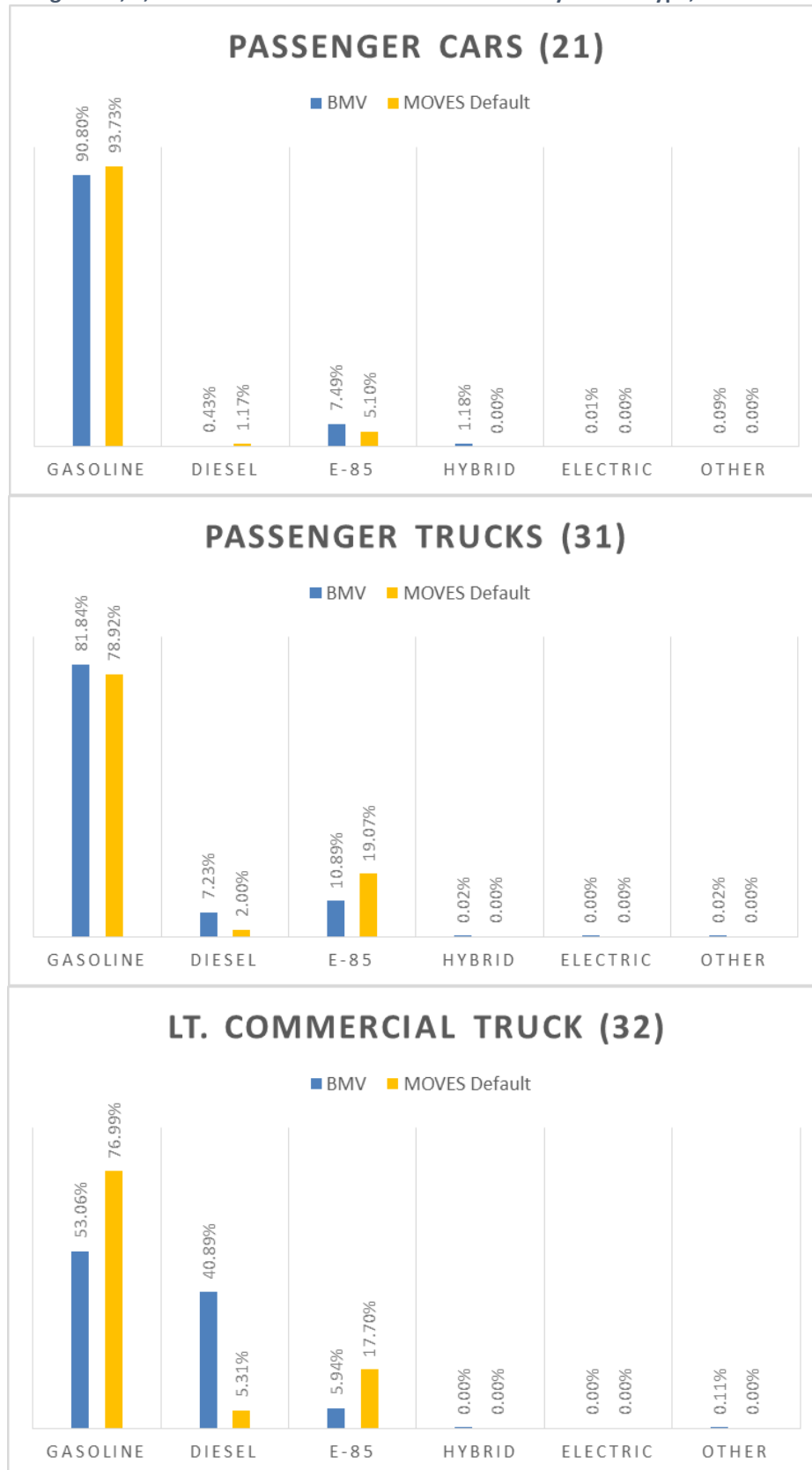
AVFT Assumptions

The 2014 BMV fleet mix data allowed the differentiation of vehicle types by fuel types. An evaluation of differences between BMV-derived data and MOVES 2014 defaults was conducted for light duty vehicles. Results showed that in many of the urban counties, the number of hybrid and electric passenger cars is large enough to warrant inclusion in the AVFT input file. The default MOVES file assumes zero hybrid or electric cars statewide. Additionally, BMV data shows a much larger fraction of diesel powered light duty trucks than indicated in the default data. And, the E-85 market share is actually much smaller in Indiana, than assumed in the default data. Statewide results are shown in Table 3, and Figures 3, 4, and 5. Because of these differences, it was decided that the BMV data provides a better set of assumptions for the light duty vehicle classes. Specific AVFT values used for this region are shown in the appendix A.

Table 3: Comparison of BMV Data to MOVES2014 AVFT Defaults

Fuel Type and Vehicle Technology										
Statewide				FuelType -->	1	2	5	1	9	X
				EngTech -->	1	1	1	12	30	X
Data Source	Vehicle Type	Code	Year	Gasoline	Diesel	E-85	Hybrid	Electric	Other	
BMV	Passenger Car	21	2015	90.80%	0.43%	7.49%	1.18%	0.01%	0.09%	
BMV	Passenger Truck	31	2015	81.84%	7.23%	10.89%	0.02%	0.00%	0.02%	
BMV	Light Commercial Truck	32	2015	53.06%	40.89%	5.94%	0.00%	0.00%	0.11%	
MOVES Default	Passenger Car	21	2015	93.73%	1.17%	5.10%	0.00%	0.00%	0.00%	
MOVES Default	Passenger Truck	31	2015	78.92%	2.00%	19.07%	0.00%	0.00%	0.00%	
MOVES Default	Light Commercial Truck	32	2015	76.99%	5.31%	17.70%	0.00%	0.00%	0.00%	

Figures 3, 4, & 5 – BMV vs. MOVES Default for Fuels by Source Type, Statewide



8.0 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. See Table C-8 in Appendix C.



9.0 Summary of MOVES2014 Runs and Settings

Table 4 –Summary of Lake and Porter Ozone and PM 2.5 Emission Rate Runs

<i>Lake and Porter Runs</i>			
	Screen	MOVES Input Item	
		Ozone	PM 2.5
Description	Description	User Choice	
Scale	Domain/Scale	County	
	Calculation Type	Emission Rate	
Time Spans	Time Aggregation Level	Hour	Hour
	Year	2015, 2020, 2025, 2030, 2035, 2040, 2045	2015, 2020, 2025, 2030, 2035, 2040, 2045
	Months	July	April
	Days	Weekday	Weekday
	Hours	Select All	Select All
Geographic Bounds	Geographic Bounds	Lake County*	Lake County*
Vehicles	Vehicles	All Gas and Diesel Combinations	
Road Type	Road Type	Select All	
Pollutants/ Processes	Pollutants/ Processes	VOC, NOx, and supporting	PM 2.5 with all subspecies; NOx & SO2
General Output	Database Name	LakePorter Ozone	LakePorter PM
	Units	Select "Grams" and "Miles" and "Joules"	
	Activity	Distance, Population	
Output Emissions Detail	On Road	Select "Source Use Type" and "Road Type"	

*Represents both Lake and Porter Counties.

Table 5 –Summary of LaPorte County Ozone Emission Rate Runs

<i>LaPorte Runs</i>		
MOVES Input Item		
Screen		Ozone
Description	Description	User Choice
Scale	Domain/Scale	County
	Calculation Type	Emission Rate
Time Spans	Time Aggregation Level	Hour
	Year	2015, 2020, 2025, 2030, 2035, 2040, 2045
	Months	July
	Days	Weekday
	Hours	Select All
Geographic Bounds	Geographic Bounds	LaPorte County
Vehicles	Vehicles	All Gas and Diesel Combinations
Road Type	Road Type	Select All
Pollutants/ Processes	Pollutants/ Processes	VOC, NOx, and supporting
General Output	Database Name	LaPorte Ozone
	Units	Select "Grams" and "Miles" and "Joules"
	Activity	Distance, Population
Output Emissions Detail	On Road	Select "Source Use Type" and "Road Type"

Table 6 –Summary of County Data Manager Inputs

County Data Manager Input			
	Excel Sheet Tab Name	Ozone	PM 2.5
Source (Vehicle) Type Population	sourceTypeYear	Local Registration for Source Types 11, 21, 31, and 32; Estimated population using default MOVES mileage accumulation rates and local VMT for all other source types. Future year vehicle populations based on population growth rates for source types 11, 21, 31, and 32. Employment growth used for all other source types.	
Vehicle Type VMT (by 13 MOVES Vehicle Types)	HPMSVTypeYear	Statewide default vehicle distributions across road types developed by INDOT using an analysis of permanent count station data from a statewide data set.	
	MonthVMTFraction	Statewide default monthly fractions developed by INDOT using an analysis of permanent count station data from a statewide data set.	
	DayVMTFraction	Statewide default daily fractions developed by INDOT using an analysis of permanent count station data from a statewide data set.	
	HourVMTFraction	Statewide default hourly fractions developed by INDOT using an analysis of permanent count station data from a statewide data set.	
Average Speed Distribution (% of VHT in each 5 mph speed bin)	avgSpeed Distribution	National defaults.	
Road Type Distribution (VMT by 5 MOVES Road Types)	roadType Distribution	Calculated from local VMT data. Use travel demand model base year distributions for all years.	
Age Distribution (Vehicle Population by Age of Vehicle)	sourceTypeAge Distribution	Local age distributions developed from vehicle registration data for source types 11, 21, 31, and 32. Default MOVES age distributions for all other source types.	
Ramp Fraction	RoadType	Based on NIRPC travel demand model.	
Meteorology Data	ZoneMonthHour	MOBILE6 Summer Met Data Converted to MOVES format	MOBILE6 12 month Met Data Converted to MOVES format and averaged to annual meteorology
Fuel (% of Market Share by Fuel Type)	FuelFormulation	MOVES Defaults	
	FuelSupply	County MOVES Defaults for Summer (check if varies among counties)	County MOVES Defaults for annual (check if varies among counties)
I/M Program	IMCoverage	Consistent with current local I/M Program	

MOVES Codes used in the Appendices

Throughout the following appendices, references are made to MOVES2014 codes for two types of data. The values for the source type codes are shown in the Table 7 below. The values for the road type codes are shown in Table 8.

Table 7 - MOVES (vehicle) Source Types

SourceTypeID	Description
11	Motorcycles
21	Passenger Car
31	Passenger Truck
32	Light Commercial Truck
41	Intercity Bus
42	Transit Bus
43	School Bus
51	Refuse Truck
52	Single Unit Short-haul Truck
53	Single Unit Long-haul Truck
54	Motor Home
61	Combination Short-haul Truck
62	Combination Long-haul Truck

Table 8 - MOVES Road Types

RoadTypeID	Description
1	Off Network
2	Rural Restricted Access
3	Rural Unrestricted Access
4	Urban Restricted Access
5	Urban Unrestricted Access

Appendix A – Updated Vehicle Fleet Assumptions Derived from BMV Data

Table A-1: Vehicle Population for Lake County

sourceTypeID	Year									
	2010	2012	2014	2015	2020	2025	2030	2035	2040	2045
11	12,337	12,527	12,718	12,840	13,283	13,742	14,218	14,710	15,218	15,667
21	196,949	199,987	203,025	204,970	212,059	219,394	226,982	234,833	242,954	250,115
31	107,894	109,559	111,223	112,289	116,172	120,190	124,347	128,648	133,098	137,020
32	33,033	33,543	34,052	34,379	35,567	36,797	38,071	39,387	40,750	41,951
41	231	236	240	244	253	264	276	288	299	310
42	123	125	128	130	134	140	146	153	159	164
43	1,584	1,614	1,645	1,666	1,736	1,810	1,886	1,966	2,050	2,121
51	41	42	43	44	45	47	49	51	54	55
52	2,695	2,748	2,800	2,835	2,955	3,079	3,211	3,346	3,488	3,609
53	321	327	334	338	352	367	383	399	416	431
54	616	628	640	648	675	703	734	764	797	824
61	4,978	5,075	5,171	5,236	5,458	5,689	5,930	6,182	6,443	6,668
62	5,680	5,790	5,901	5,975	6,227	6,491	6,767	7,053	7,352	7,608

Table A-2: Vehicle Population for Porter County

sourceTypeID	Year									
	2010	2012	2014	2015	2020	2025	2030	2035	2040	2045
11	6,612	6,714	6,816	6,881	7,119	7,365	7,620	7,882	8,157	8,396
21	69,425	70,496	71,567	72,253	74,752	77,336	80,012	82,779	85,642	88,166
31	45,870	46,578	47,285	47,739	49,389	51,098	52,865	54,694	56,586	58,254
32	14,044	14,260	14,477	14,616	15,121	15,644	16,185	16,745	17,324	17,834
41	58	59	60	61	63	66	68	71	74	76
42	30	31	31	32	33	34	36	37	39	40
43	397	405	413	418	435	454	474	493	514	532
51	13	13	14	14	14	15	15	16	17	17
52	897	915	932	944	983	1,025	1,069	1,114	1,161	1,202
53	106	108	110	112	116	121	126	132	138	142
54	204	208	212	215	223	233	243	254	265	274
61	1,435	1,463	1,490	1,509	1,573	1,639	1,709	1,781	1,856	1,921
62	1,637	1,669	1,700	1,722	1,794	1,870	1,949	2,032	2,118	2,191

Table A-3: Vehicle Population for LaPorte County

sourceTypeID	Year									
	2010	2012	2014	2015	2020	2025	2030	2035	2040	2045
11	2,820	2,846	2,871	2,886	2,947	3,009	3,073	3,138	3,204	3,266
21	50,742	51,200	51,658	51,927	53,025	54,146	55,291	56,461	57,655	58,760
31	33,729	34,034	34,338	34,517	35,247	35,992	36,753	37,530	38,324	39,058
32	10,327	10,420	10,513	10,568	10,791	11,019	11,252	11,490	11,733	11,958
41	48	49	50	50	52	53	55	57	59	61
42	26	26	27	27	28	29	30	31	32	33
43	329	334	339	342	353	365	377	389	402	413
51	13	14	14	14	14	15	15	16	16	17
52	842	854	866	874	902	932	962	993	1,025	1,054
53	100	102	103	104	108	111	115	119	122	126
54	192	195	198	200	206	213	220	227	235	241
61	1,616	1,639	1,662	1,677	1,731	1,788	1,845	1,905	1,967	2,022
62	1,845	1,871	1,897	1,914	1,976	2,040	2,106	2,174	2,244	2,307

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.

Table A-4: Vehicle Age Distribution for Lake County

Vehicle Age Distribution for Lake County														
AgeID	SourceTypeID													
	11	21	31	32	41	42	43	51	52	53	54	61	62	
0	0.001374	0.008340	0.002494	0.012087	0.064302	0.054574	0.062222	0.049424	0.058853	0.078754	0.061510	0.053563	0.067085	
1	0.024433	0.054402	0.040446	0.021072	0.062673	0.053191	0.060645	0.048172	0.057361	0.076759	0.059951	0.053563	0.067085	
2	0.035352	0.060541	0.040612	0.031768	0.062485	0.053032	0.060464	0.048028	0.057190	0.076529	0.059772	0.054105	0.067762	
3	0.036191	0.058054	0.039864	0.033480	0.062423	0.052979	0.060403	0.047980	0.057133	0.076453	0.059712	0.057558	0.072087	
4	0.028403	0.052297	0.046681	0.033907	0.061737	0.052397	0.059740	0.047452	0.056505	0.075612	0.059056	0.056418	0.070660	
5	0.026418	0.047029	0.032839	0.016579	0.055917	0.047458	0.054108	0.042979	0.051178	0.068485	0.053488	0.048929	0.061280	
6	0.046652	0.041365	0.026146	0.022890	0.046837	0.039751	0.045321	0.035999	0.042867	0.057363	0.044802	0.036603	0.045843	
7	0.054974	0.060531	0.048842	0.060327	0.042579	0.036137	0.041201	0.032727	0.038970	0.052148	0.040729	0.034074	0.042676	
8	0.065053	0.066109	0.053955	0.042357	0.046827	0.039743	0.045312	0.035992	0.042858	0.057351	0.044793	0.035809	0.044849	
9	0.064213	0.059333	0.050796	0.064820	0.053438	0.045353	0.051709	0.041073	0.048909	0.065448	0.051117	0.052629	0.065914	
10	0.060854	0.065959	0.058632	0.057867	0.053271	0.045212	0.051548	0.040945	0.048756	0.065244	0.050958	0.062452	0.078217	
11	0.048484	0.056773	0.061126	0.060862	0.040795	0.053620	0.041108	0.031356	0.039149	0.052388	0.030273	0.047826	0.059899	
12	0.061923	0.058270	0.058715	0.052733	0.033192	0.048994	0.038293	0.025512	0.029448	0.039407	0.046610	0.038913	0.048735	
13	0.050928	0.052756	0.058278	0.055942	0.027735	0.045609	0.033375	0.054598	0.031640	0.019477	0.029167	0.032515	0.046299	
14	0.044132	0.049197	0.056491	0.055835	0.036429	0.037775	0.043086	0.063266	0.036444	0.019469	0.034780	0.042708	0.046207	
15	0.040467	0.042045	0.050110	0.055086	0.028351	0.033295	0.021016	0.039565	0.035789	0.031185	0.033520	0.033237	0.030044	
16	0.032832	0.039475	0.050360	0.042037	0.023588	0.027913	0.025367	0.034157	0.025999	0.023020	0.023315	0.027654	0.023052	
17	0.025960	0.025040	0.038679	0.033586	0.017564	0.024497	0.020683	0.014635	0.019796	0.005226	0.020675	0.020591	0.013845	
18	0.020463	0.025352	0.042566	0.036047	0.020119	0.025048	0.026689	0.040196	0.019374	0.003721	0.015546	0.023587	0.010007	
19	0.021303	0.013446	0.023465	0.029522	0.022579	0.036661	0.030145	0.034228	0.022734	0.017578	0.020363	0.026470	0.009860	
20	0.015194	0.014957	0.027684	0.025350	0.022641	0.028197	0.017388	0.027008	0.028940	0.018387	0.026594	0.026543	0.009576	
21	0.014278	0.008204	0.022758	0.025136	0.021297	0.022441	0.020903	0.036743	0.025509	0.012162	0.023847	0.024967	0.008340	
22	0.012827	0.006517	0.015962	0.016793	0.022137	0.020761	0.021174	0.029424	0.021171	0.002921	0.023292	0.025952	0.002197	
23	0.007788	0.003712	0.008314	0.011766	0.018775	0.017685	0.018686	0.036737	0.025574	0.000660	0.017364	0.022011	0.002282	
24	0.006795	0.003360	0.007732	0.010696	0.016580	0.015344	0.016222	0.019537	0.018134	0.001323	0.018639	0.019438	0.002895	
25	0.008017	0.001969	0.004967	0.010375	0.013046	0.011961	0.012527	0.020286	0.010153	0.001326	0.018907	0.015295	0.001496	
26	0.006490	0.002357	0.006214	0.012943	0.005207	0.011471	0.004628	0.005879	0.015824	0.000000	0.012386	0.006104	0.000305	
27	0.005116	0.001262	0.003679	0.009306	0.004438	0.006255	0.003427	0.006619	0.008243	0.000585	0.007312	0.005202	0.000237	
28	0.008628	0.001418	0.002245	0.005883	0.003853	0.002715	0.004023	0.005865	0.007845	0.000422	0.004020	0.004518	0.000754	
29	0.010460	0.000880	0.001164	0.007594	0.005020	0.007381	0.003956	0.001470	0.008291	0.000000	0.000530	0.005885	0.000248	
30	0.113996	0.019050	0.018186	0.045352	0.004164	0.002547	0.004629	0.002149	0.009364	0.000597	0.006972	0.004882	0.000264	

Data Sources: SourceTypes 11, 21, 31, and 32 were obtained directly from Dec. 2014 Indiana BMV summary statistics for vehicle registration & license plate data by county. All other Source Types use MOVES defaults.

Table A-5: Vehicle Age Distribution for Porter County

AgeID	SourceTypeID													
	11	21	31	32	41	42	43	51	52	53	54	61	62	
0	0.001004	0.009873	0.003318	0.007176	0.064302	0.054574	0.062222	0.049424	0.058853	0.078754	0.061510	0.053563	0.067085	
1	0.029682	0.059695	0.043803	0.017096	0.062673	0.053191	0.060645	0.048172	0.057361	0.076759	0.059951	0.053563	0.067085	
2	0.034270	0.068999	0.045440	0.026171	0.062485	0.053032	0.060464	0.048028	0.057190	0.076529	0.059772	0.054105	0.067762	
3	0.038428	0.070466	0.046016	0.032503	0.062423	0.052979	0.060403	0.047980	0.057133	0.076453	0.059712	0.057558	0.072087	
4	0.026670	0.060969	0.047962	0.023217	0.061737	0.052397	0.059740	0.047452	0.056505	0.075612	0.059056	0.056418	0.070660	
5	0.029825	0.053993	0.033273	0.017307	0.055917	0.047458	0.054108	0.042979	0.051178	0.068485	0.053488	0.048929	0.061280	
6	0.045311	0.045523	0.029335	0.017729	0.046837	0.039751	0.045321	0.035999	0.042867	0.057363	0.044802	0.036603	0.045843	
7	0.054058	0.065727	0.052741	0.044322	0.042579	0.036137	0.041201	0.032727	0.038970	0.052148	0.040729	0.034074	0.042676	
8	0.062661	0.068834	0.058493	0.047699	0.046827	0.039743	0.045312	0.035992	0.042858	0.057351	0.044793	0.035809	0.044849	
9	0.064812	0.058347	0.052830	0.054031	0.053438	0.045353	0.051709	0.041073	0.048909	0.065448	0.051117	0.052629	0.065914	
10	0.056352	0.064049	0.063316	0.050232	0.053271	0.045212	0.051548	0.040945	0.048756	0.065244	0.050958	0.062452	0.078217	
11	0.047892	0.056037	0.061856	0.059519	0.040795	0.053620	0.041108	0.031356	0.039149	0.052388	0.030273	0.047826	0.059899	
12	0.062518	0.053003	0.060484	0.049388	0.033192	0.048994	0.038293	0.025512	0.029448	0.039407	0.046610	0.038913	0.048735	
13	0.050473	0.046128	0.055750	0.049599	0.027735	0.045609	0.033375	0.054598	0.031640	0.019477	0.029167	0.032515	0.046299	
14	0.040436	0.041416	0.051900	0.054031	0.036429	0.037775	0.043086	0.063266	0.036444	0.019469	0.034780	0.042708	0.046207	
15	0.029682	0.035467	0.047255	0.058041	0.028351	0.033295	0.021016	0.039565	0.035789	0.031185	0.033520	0.033237	0.030044	
16	0.032836	0.032341	0.047299	0.047066	0.023588	0.027913	0.025367	0.034157	0.025999	0.023020	0.023315	0.027654	0.023052	
17	0.024089	0.019966	0.033583	0.033347	0.017564	0.024497	0.020683	0.014635	0.019796	0.005226	0.020675	0.020591	0.013845	
18	0.020648	0.019324	0.040175	0.038413	0.020119	0.025048	0.026689	0.040196	0.019374	0.003721	0.015546	0.023587	0.010007	
19	0.019644	0.010459	0.020486	0.030393	0.022579	0.036661	0.030145	0.034228	0.022734	0.017578	0.020363	0.026470	0.009860	
20	0.018497	0.011541	0.024070	0.037358	0.022641	0.028197	0.017388	0.027008	0.028940	0.018387	0.026594	0.026543	0.009576	
21	0.013192	0.006087	0.018052	0.028704	0.021297	0.022441	0.020903	0.036743	0.025509	0.012162	0.023847	0.024967	0.008340	
22	0.013479	0.005051	0.012920	0.023639	0.022137	0.020761	0.021174	0.029424	0.021171	0.002921	0.023292	0.025952	0.002197	
23	0.008603	0.003163	0.006770	0.012241	0.018775	0.017685	0.018686	0.036737	0.025574	0.000660	0.017364	0.022011	0.002282	
24	0.007886	0.002906	0.006991	0.011397	0.016580	0.015344	0.016222	0.019537	0.018134	0.001323	0.018639	0.019438	0.002895	
25	0.007456	0.001815	0.004115	0.015407	0.013046	0.011961	0.012527	0.020286	0.010153	0.001326	0.018907	0.015295	0.001496	
26	0.006883	0.001971	0.004425	0.013719	0.005207	0.011471	0.004628	0.005879	0.015824	0.000000	0.012386	0.006104	0.000305	
27	0.006453	0.001146	0.002832	0.011397	0.004438	0.006255	0.003427	0.006619	0.008243	0.000585	0.007312	0.005202	0.000237	
28	0.007169	0.001274	0.001770	0.005910	0.003853	0.002715	0.004023	0.005865	0.007845	0.000422	0.004020	0.004518	0.000754	
29	0.011758	0.000843	0.001150	0.008020	0.005020	0.007381	0.003956	0.001470	0.008291	0.000000	0.000530	0.005885	0.000248	
30	0.127330	0.023586	0.021592	0.074926	0.004164	0.002547	0.004629	0.002149	0.009364	0.000597	0.006972	0.004882	0.000264	

Data Sources: SourceTypes 11, 21, 31, and 32 were obtained directly from Dec. 2014 Indiana BMV summary statistics for vehicle registration & license plate data by county. All other Source Types use MOVES defaults.

Table A-6: Vehicle Age Distribution for LaPorte County

Source TypeID														
AgeID	11	21	31	32	41	42	43	51	52	53	54	61	62	
0	0.001111	0.005958	0.002961	0.010617	0.064302	0.054574	0.062222	0.049424	0.058853	0.078754	0.061510	0.053563	0.067085	
1	0.020894	0.037845	0.025235	0.022561	0.062673	0.053191	0.060645	0.048172	0.057361	0.076759	0.059951	0.053563	0.067085	
2	0.024228	0.047465	0.026829	0.030524	0.062485	0.053032	0.060464	0.048028	0.057190	0.076529	0.059772	0.054105	0.067762	
3	0.033785	0.049478	0.030154	0.036496	0.062423	0.052979	0.060403	0.047980	0.057133	0.076453	0.059712	0.057558	0.072087	
4	0.026006	0.046586	0.035574	0.041141	0.061737	0.052397	0.059740	0.047452	0.056505	0.075612	0.059056	0.056418	0.070660	
5	0.021116	0.041844	0.026419	0.017253	0.055917	0.047458	0.054108	0.042979	0.051178	0.068485	0.053488	0.048929	0.061280	
6	0.041565	0.034521	0.019450	0.016589	0.046837	0.039751	0.045321	0.035999	0.042867	0.057363	0.044802	0.036603	0.045843	
7	0.052456	0.054490	0.040494	0.059721	0.042579	0.036137	0.041201	0.032727	0.038970	0.052148	0.040729	0.034074	0.042676	
8	0.055568	0.057422	0.042999	0.043796	0.046827	0.039743	0.045312	0.035992	0.042858	0.057351	0.044793	0.035809	0.044849	
9	0.071127	0.057247	0.045686	0.055740	0.053438	0.045353	0.051709	0.041073	0.048909	0.065448	0.051117	0.052629	0.065914	
10	0.058902	0.063908	0.052610	0.036496	0.053271	0.045212	0.051548	0.040945	0.048756	0.065244	0.050958	0.062452	0.078217	
11	0.052901	0.059922	0.059215	0.049104	0.040795	0.053620	0.041108	0.031356	0.039149	0.052388	0.030273	0.047826	0.059899	
12	0.065570	0.058165	0.054887	0.024552	0.033192	0.048994	0.038293	0.025512	0.029448	0.039407	0.046610	0.038913	0.048735	
13	0.054679	0.059354	0.058531	0.040478	0.027735	0.045609	0.033375	0.054598	0.031640	0.019477	0.029167	0.032515	0.046299	
14	0.043565	0.050802	0.055434	0.044459	0.036429	0.037775	0.043086	0.063266	0.036444	0.019469	0.034780	0.042708	0.046207	
15	0.040009	0.050951	0.059169	0.035833	0.028351	0.033295	0.021016	0.039565	0.035789	0.031185	0.033520	0.033237	0.030044	
16	0.029562	0.042128	0.052656	0.045123	0.023588	0.027913	0.025367	0.034157	0.025999	0.023020	0.023315	0.027654	0.023052	
17	0.028006	0.032737	0.049148	0.027870	0.017564	0.024497	0.020683	0.014635	0.019796	0.005226	0.020675	0.020591	0.013845	
18	0.021338	0.029279	0.045914	0.028534	0.020119	0.025048	0.026689	0.040196	0.019374	0.003721	0.015546	0.023587	0.010007	
19	0.023783	0.021375	0.033798	0.018580	0.022579	0.036661	0.030145	0.034228	0.022734	0.017578	0.020363	0.026470	0.009860	
20	0.013336	0.018429	0.035984	0.037160	0.022641	0.028197	0.017388	0.027008	0.028940	0.018387	0.026594	0.026543	0.009576	
21	0.013114	0.012363	0.032204	0.016589	0.021297	0.022441	0.020903	0.036743	0.025509	0.012162	0.023847	0.024967	0.008340	
22	0.014225	0.009242	0.020862	0.021898	0.022137	0.020761	0.021174	0.029424	0.021171	0.002921	0.023292	0.025952	0.002197	
23	0.008224	0.006377	0.014394	0.014599	0.018775	0.017685	0.018686	0.036737	0.025574	0.000660	0.017364	0.022011	0.002282	
24	0.007557	0.005175	0.009429	0.009290	0.016580	0.015344	0.016222	0.019537	0.018134	0.001323	0.018639	0.019438	0.002895	
25	0.006446	0.003932	0.009839	0.015926	0.013046	0.011961	0.012527	0.020286	0.010153	0.001326	0.018907	0.015295	0.001496	
26	0.006890	0.003797	0.009930	0.015926	0.005207	0.011471	0.004628	0.005879	0.015824	0.000000	0.012386	0.006104	0.000305	
27	0.006446	0.002756	0.007197	0.015926	0.004438	0.006255	0.003427	0.006619	0.008243	0.000585	0.007312	0.005202	0.000237	
28	0.010002	0.002351	0.005147	0.007299	0.003853	0.002715	0.004023	0.005865	0.007845	0.000422	0.004020	0.004518	0.000754	
29	0.016893	0.002283	0.004054	0.007963	0.005020	0.007381	0.003956	0.001470	0.008291	0.000000	0.000530	0.005885	0.000248	
30	0.130696	0.031819	0.033798	0.151958	0.004164	0.002547	0.004629	0.002149	0.009364	0.000597	0.006972	0.004882	0.000264	

Data Sources: SourceTypes 11, 21, 31, and 32 were obtained directly from Dec. 2014 Indiana BMV summary statistics for vehicle registration & license plate data by county. All other Source Types use MOVES defaults.

Table A-7: AVFT percentages for Light Duty Vehicles

Fuel Type and Vehicle Technology									
<i>Lake, Porter, and LaPorte Counties</i>			FuelType -->	1	2	5	1	9	X
			engTech -->	1	1	1	12	30	X
Data Source	Vehicle Type	Code	Year	Gasoline	Diesel	E-85	Hybrid	Electric	Other
BMV	Passenger Car	21	2015	90.55%	0.38%	7.93%	1.02%	0.02%	0.11%
BMV	Passenger Truck	31	2015	81.89%	4.19%	13.87%	0.01%	0.00%	0.04%
BMV	Light Commercial Truck	32	2015	68.26%	24.96%	6.73%	0.01%	0.00%	0.04%

Appendix B – Updated Hourly VMT Fractions Derived from INDOT Data

Table B-1: Hourly VMT Fraction: RoadType 1, Off Network

Hr	SourceTypeID												
	11	21	31	32	41	42	43	51	52	53	54	61	62
1	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
2	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
3	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
4	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
5	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
6	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018
7	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046
8	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
9	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061
10	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
11	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
12	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054
13	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058
14	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058
15	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062
16	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071
17	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077
18	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077
19	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060
20	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044
21	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035
22	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
23	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
24	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018

- RoadType1 uses default values

Table B-2: Hourly VMT Fraction: RoadType 2, Rural Restricted Access

Hr	SourceTypeID												
	11	21	31	32	41	42	43	51	52	53	54	61	62
1	0.017	0.010	0.008	0.008	0.017	0.017	0.017	0.010	0.010	0.007	0.007	0.038	0.027
2	0.012	0.006	0.005	0.005	0.019	0.019	0.019	0.008	0.008	0.010	0.010	0.019	0.024
3	0.010	0.004	0.004	0.004	0.026	0.026	0.026	0.008	0.008	0.006	0.006	0.023	0.025
4	0.010	0.004	0.004	0.004	0.019	0.019	0.019	0.009	0.009	0.008	0.008	0.036	0.023
5	0.010	0.006	0.007	0.007	0.033	0.033	0.033	0.012	0.012	0.013	0.013	0.025	0.026
6	0.012	0.016	0.021	0.021	0.036	0.036	0.036	0.032	0.032	0.025	0.025	0.028	0.031
7	0.028	0.035	0.042	0.042	0.064	0.064	0.064	0.065	0.065	0.046	0.046	0.039	0.036
8	0.052	0.050	0.049	0.049	0.044	0.044	0.044	0.073	0.073	0.056	0.056	0.047	0.037
9	0.055	0.046	0.048	0.048	0.060	0.060	0.060	0.056	0.056	0.057	0.057	0.048	0.041
10	0.055	0.046	0.049	0.049	0.052	0.052	0.052	0.050	0.050	0.058	0.058	0.043	0.050
11	0.055	0.053	0.057	0.057	0.067	0.067	0.067	0.051	0.051	0.060	0.060	0.061	0.056
12	0.051	0.058	0.061	0.061	0.057	0.057	0.057	0.049	0.049	0.060	0.060	0.065	0.061
13	0.059	0.059	0.063	0.063	0.074	0.074	0.074	0.053	0.053	0.069	0.069	0.063	0.062
14	0.060	0.061	0.062	0.062	0.050	0.050	0.050	0.052	0.052	0.063	0.063	0.057	0.059
15	0.064	0.064	0.066	0.066	0.052	0.052	0.052	0.055	0.055	0.065	0.065	0.048	0.057
16	0.064	0.074	0.074	0.074	0.075	0.075	0.075	0.063	0.063	0.073	0.073	0.051	0.057
17	0.069	0.084	0.083	0.083	0.071	0.071	0.071	0.075	0.075	0.073	0.073	0.051	0.055
18	0.069	0.090	0.083	0.083	0.036	0.036	0.036	0.076	0.076	0.066	0.066	0.041	0.049
19	0.066	0.073	0.066	0.066	0.026	0.026	0.026	0.065	0.065	0.053	0.053	0.032	0.043
20	0.059	0.052	0.049	0.049	0.034	0.034	0.034	0.046	0.046	0.043	0.043	0.033	0.038
21	0.038	0.041	0.037	0.037	0.030	0.030	0.030	0.034	0.034	0.036	0.036	0.034	0.035
22	0.036	0.031	0.028	0.028	0.024	0.024	0.024	0.024	0.024	0.023	0.023	0.033	0.040
23	0.025	0.023	0.021	0.021	0.020	0.020	0.020	0.020	0.020	0.016	0.016	0.047	0.036
24	0.023	0.015	0.013	0.013	0.014	0.014	0.014	0.014	0.014	0.013	0.013	0.038	0.033

Source: INDOT Selected Weigh in Motion and ATR site data

Table B-3: Hourly VMT Fraction: RoadType 3, Rural Unrestricted Access

Hr	SourceTypeID												
	11	21	31	32	41	42	43	51	52	53	54	61	62
1	0.009	0.005	0.005	0.005	0.002	0.002	0.002	0.003	0.003	0.005	0.005	0.010	0.006
2	0.005	0.003	0.002	0.002	0.002	0.002	0.002	0.020	0.020	0.007	0.007	0.007	0.004
3	0.004	0.003	0.002	0.002	0.002	0.002	0.002	0.014	0.014	0.007	0.007	0.005	0.003
4	0.004	0.004	0.003	0.003	0.002	0.002	0.002	0.008	0.008	0.008	0.008	0.005	0.004
5	0.018	0.010	0.008	0.008	0.004	0.004	0.004	0.003	0.003	0.011	0.011	0.009	0.009
6	0.016	0.017	0.023	0.023	0.015	0.015	0.015	0.034	0.034	0.030	0.030	0.021	0.021
7	0.009	0.023	0.032	0.032	0.025	0.025	0.025	0.062	0.062	0.063	0.063	0.033	0.033
8	0.009	0.040	0.044	0.044	0.088	0.088	0.088	0.096	0.096	0.051	0.051	0.038	0.046
9	0.036	0.044	0.050	0.050	0.077	0.077	0.077	0.073	0.073	0.047	0.047	0.047	0.044
10	0.018	0.055	0.066	0.066	0.053	0.053	0.053	0.084	0.084	0.072	0.072	0.058	0.054
11	0.027	0.065	0.074	0.074	0.134	0.134	0.134	0.073	0.073	0.072	0.072	0.067	0.067
12	0.091	0.075	0.088	0.088	0.108	0.108	0.108	0.107	0.107	0.083	0.083	0.069	0.077
13	0.118	0.077	0.084	0.084	0.050	0.050	0.050	0.067	0.067	0.076	0.076	0.071	0.079
14	0.132	0.075	0.071	0.071	0.093	0.093	0.093	0.062	0.062	0.065	0.065	0.072	0.079
15	0.146	0.076	0.072	0.072	0.105	0.105	0.105	0.076	0.076	0.049	0.049	0.072	0.083
16	0.036	0.086	0.085	0.085	0.015	0.015	0.015	0.059	0.059	0.050	0.050	0.065	0.088
17	0.064	0.089	0.081	0.081	0.066	0.066	0.066	0.076	0.076	0.042	0.042	0.065	0.085
18	0.046	0.083	0.071	0.071	0.034	0.034	0.034	0.037	0.037	0.055	0.055	0.074	0.072
19	0.073	0.056	0.053	0.053	0.056	0.056	0.056	0.011	0.011	0.063	0.063	0.068	0.049
20	0.046	0.041	0.034	0.034	0.031	0.031	0.031	0.008	0.008	0.055	0.055	0.052	0.034
21	0.027	0.028	0.023	0.023	0.005	0.005	0.005	0.008	0.008	0.037	0.037	0.037	0.025
22	0.028	0.022	0.014	0.014	0.028	0.028	0.028	0.003	0.003	0.025	0.025	0.027	0.017
23	0.018	0.014	0.011	0.011	0.002	0.002	0.002	0.011	0.011	0.017	0.017	0.016	0.012
24	0.018	0.008	0.005	0.005	0.002	0.002	0.002	0.006	0.006	0.010	0.010	0.013	0.008

Source: INDOT Selected Weigh in Motion and ATR site data

Table B-5: Hourly VMT Fraction: RoadType 4, Urban Restricted Access

Hr	SourceTypeID												
	11	21	31	32	41	42	43	51	52	53	54	61	62
1	0.003	0.014	0.012	0.012	0.018	0.018	0.018	0.010	0.010	0.018	0.018	0.017	0.026
2	0.004	0.008	0.007	0.007	0.017	0.017	0.017	0.007	0.007	0.012	0.012	0.013	0.024
3	0.004	0.005	0.005	0.005	0.013	0.013	0.013	0.005	0.005	0.009	0.009	0.011	0.024
4	0.007	0.005	0.005	0.005	0.013	0.013	0.013	0.006	0.006	0.008	0.008	0.012	0.024
5	0.012	0.006	0.009	0.009	0.015	0.015	0.015	0.009	0.009	0.011	0.011	0.015	0.027
6	0.007	0.014	0.023	0.023	0.027	0.027	0.027	0.020	0.020	0.017	0.017	0.018	0.033
7	0.009	0.029	0.049	0.049	0.038	0.038	0.038	0.040	0.040	0.027	0.027	0.032	0.040
8	0.016	0.046	0.058	0.058	0.042	0.042	0.042	0.053	0.053	0.051	0.051	0.062	0.045
9	0.112	0.061	0.058	0.058	0.058	0.058	0.058	0.057	0.057	0.080	0.080	0.079	0.049
10	0.214	0.056	0.054	0.054	0.076	0.076	0.076	0.059	0.059	0.058	0.058	0.055	0.048
11	0.109	0.049	0.052	0.052	0.071	0.071	0.071	0.057	0.057	0.059	0.059	0.058	0.053
12	0.029	0.050	0.051	0.051	0.061	0.061	0.061	0.058	0.058	0.055	0.055	0.055	0.056
13	0.030	0.052	0.053	0.053	0.061	0.061	0.061	0.059	0.059	0.058	0.058	0.054	0.057
14	0.033	0.056	0.056	0.056	0.065	0.065	0.065	0.060	0.060	0.058	0.058	0.053	0.056
15	0.040	0.060	0.060	0.060	0.067	0.067	0.067	0.065	0.065	0.058	0.058	0.051	0.058
16	0.040	0.066	0.067	0.067	0.068	0.068	0.068	0.072	0.072	0.062	0.062	0.055	0.056
17	0.029	0.076	0.079	0.079	0.058	0.058	0.058	0.080	0.080	0.064	0.064	0.068	0.055
18	0.147	0.081	0.078	0.078	0.052	0.052	0.052	0.075	0.075	0.055	0.055	0.066	0.049
19	0.085	0.076	0.067	0.067	0.048	0.048	0.048	0.063	0.063	0.068	0.068	0.065	0.045
20	0.022	0.058	0.049	0.049	0.039	0.039	0.039	0.047	0.047	0.057	0.057	0.051	0.042
21	0.016	0.043	0.036	0.036	0.028	0.028	0.028	0.035	0.035	0.039	0.039	0.036	0.039
22	0.012	0.035	0.029	0.029	0.023	0.023	0.023	0.026	0.026	0.028	0.028	0.029	0.035
23	0.007	0.030	0.025	0.025	0.021	0.021	0.021	0.020	0.020	0.024	0.024	0.025	0.031
24	0.012	0.022	0.018	0.018	0.019	0.019	0.019	0.015	0.015	0.023	0.023	0.022	0.029

Source: INDOT Selected Weigh in Motion and ATR site data

Table B-6: Hourly VMT Fraction: RoadType 5, Urban Unrestricted Access

Hr	SourceTypeID												
	11	21	31	32	41	42	43	51	52	53	54	61	62
1	0.009	0.009	0.006	0.006	0.013	0.013	0.013	0.004	0.004	0.004	0.004	0.011	0.011
2	0.006	0.005	0.004	0.004	0.010	0.010	0.010	0.004	0.004	0.004	0.004	0.012	0.012
3	0.005	0.004	0.003	0.003	0.007	0.007	0.007	0.004	0.004	0.004	0.004	0.012	0.012
4	0.005	0.004	0.004	0.004	0.011	0.011	0.011	0.006	0.006	0.006	0.006	0.014	0.014
5	0.008	0.008	0.009	0.009	0.015	0.015	0.015	0.009	0.009	0.009	0.009	0.021	0.021
6	0.023	0.020	0.024	0.024	0.026	0.026	0.026	0.019	0.019	0.019	0.019	0.030	0.030
7	0.044	0.048	0.054	0.054	0.045	0.045	0.045	0.042	0.042	0.042	0.042	0.044	0.044
8	0.060	0.072	0.068	0.068	0.069	0.069	0.069	0.073	0.073	0.073	0.073	0.059	0.059
9	0.056	0.057	0.064	0.064	0.075	0.075	0.075	0.088	0.088	0.088	0.088	0.064	0.064
10	0.049	0.047	0.060	0.060	0.080	0.080	0.080	0.092	0.092	0.092	0.092	0.068	0.068
11	0.050	0.047	0.059	0.059	0.077	0.077	0.077	0.094	0.094	0.094	0.094	0.070	0.070
12	0.057	0.052	0.062	0.062	0.075	0.075	0.075	0.091	0.091	0.091	0.091	0.070	0.070
13	0.061	0.056	0.063	0.063	0.074	0.074	0.074	0.090	0.090	0.090	0.090	0.069	0.069
14	0.061	0.056	0.063	0.063	0.078	0.078	0.078	0.091	0.091	0.091	0.091	0.067	0.067
15	0.065	0.061	0.067	0.067	0.076	0.076	0.076	0.091	0.091	0.091	0.091	0.065	0.065
16	0.072	0.072	0.075	0.075	0.073	0.073	0.073	0.078	0.078	0.078	0.078	0.061	0.061
17	0.077	0.080	0.076	0.076	0.053	0.053	0.053	0.046	0.046	0.046	0.046	0.056	0.056
18	0.077	0.083	0.068	0.068	0.035	0.035	0.035	0.026	0.026	0.026	0.026	0.051	0.051
19	0.064	0.064	0.053	0.053	0.029	0.029	0.029	0.017	0.017	0.017	0.017	0.040	0.040
20	0.048	0.046	0.037	0.037	0.022	0.022	0.022	0.011	0.011	0.011	0.011	0.031	0.031
21	0.038	0.039	0.029	0.029	0.017	0.017	0.017	0.008	0.008	0.008	0.008	0.027	0.027
22	0.031	0.033	0.024	0.024	0.014	0.014	0.014	0.006	0.006	0.006	0.006	0.023	0.023
23	0.021	0.024	0.017	0.017	0.014	0.014	0.014	0.005	0.005	0.005	0.005	0.019	0.019
24	0.015	0.016	0.011	0.011	0.012	0.012	0.012	0.005	0.005	0.005	0.005	0.016	0.016

Source: INDOT Selected Weigh in Motion and ATR site data

Appendix C – Inputs Carried Over from MOVES2010a Rate Development

Table C-1: Indiana Default VMT Distributions by Vehicle Type and Road Type

Road Type	Motorcycle	Passenger Car	Light Duty Truck	Bus	Single Unit Truck	Combination Truck
2	0.00703	0.50641	0.16379	0.00417	0.00777	0.31082
3	0.00173	0.65975	0.22577	0.00079	0.01096	0.10099
4	0.00397	0.56995	0.25420	0.00283	0.00908	0.15996
5	0.00279	0.70275	0.24524	0.00140	0.00976	0.03805

Source: Statewide averages developed from Indiana Department of Transportation traffic count data.

Table C-2: 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

Source: Statewide averages developed from Indiana Department of Transportation traffic count data

Table C-3: Lake, Porter, and LaPorte Counties Ramp Fractions

Road Type	Ramp Fraction
2	0.79%
4	6.66%

Source: Analysis of VHT from the CMAP travel demand model.

Table C-4: Indiana Default Monthly Distribution Factors

monthID	monthVMTFraction
1	0.07334
2	0.06937
3	0.08270
4	0.08318
5	0.08913
6	0.08882
7	0.09080
8	0.09185
9	0.08542
10	0.08752
11	0.08124
12	0.07664

Source: Statewide averages developed from Indiana Department of Transportation traffic count data.

Table C-5: Meteorology Assumptions, Lake, Porter, and LaPorte Counties

Ozone					PM 2.5				
monthID	zoneID	HourID	temperature	relHumidity	monthID	zoneID	HourID	temperature	relHumidity
7	180890	1	67.0	88.0	4	180890	1	43.7	100.0
7	180890	2	65.8	91.8	4	180890	2	42.5	100.0
7	180890	3	64.9	94.9	4	180890	3	41.6	100.0
7	180890	4	64.2	97.2	4	180890	4	41.0	100.0
7	180890	5	63.6	99.0	4	180890	5	40.5	100.0
7	180890	6	63.0	100.0	4	180890	6	39.9	100.0
7	180890	7	62.5	100.0	4	180890	7	39.4	100.0
7	180890	8	62.9	100.0	4	180890	8	39.8	100.0
7	180890	9	65.5	92.6	4	180890	9	42.3	100.0
7	180890	10	69.7	80.2	4	180890	10	46.2	97.2
7	180890	11	74.0	69.4	4	180890	11	50.3	83.5
7	180890	12	77.7	61.4	4	180890	12	53.8	73.5
7	180890	13	80.9	55.3	4	180890	13	56.8	65.8
7	180890	14	82.6	52.2	4	180890	14	58.5	62.0
7	180890	15	83.2	51.2	4	180890	15	59.0	60.7
7	180890	16	83.4	50.9	4	180890	16	59.2	60.3
7	180890	17	83.0	51.6	4	180890	17	58.8	61.2
7	180890	18	81.7	53.7	4	180890	18	57.6	63.8
7	180890	19	79.7	57.5	4	180890	19	55.7	68.6
7	180890	20	77.0	62.9	4	180890	20	53.1	75.3
7	180890	21	74.3	68.8	4	180890	21	50.5	82.7
7	180890	22	71.9	74.5	4	180890	22	48.3	89.9
7	180890	23	70.3	78.8	4	180890	23	46.7	95.4
7	180890	24	68.6	83.4	4	180890	24	45.2	100.0

Source: Mobile 6.2 reported meteorological data from Air Quality Conformity Determination Between the 2040 Regional Transportation Plan, the Fiscal Year 2012 to 2015 Transportation Improvement Program, and the Indiana State Implementation Plan for Air Quality, Appendix E, developed by NIRPC in June, 2011 converted using EPA data converter.

Table C-6: Fuel

countyID	fuelYearID	monthGroupID	fuelFormulationID	marketShare	marketShareCV
18089	2010	7	20011	1	0.5
18089	2010	7	3160	1	0.5

Source: MOVES defaults for this region.

Table C-7: Fuel Formulation

Fuel Formulation ID	Fuel Sub type ID	RVP	Sulfur Level	ETOH Volume	MTBE Volume	ETBE Volume	TAME Volume	Aromatic Content
20011	20	0	11	0	0	0	0	0
3160	12	6.983	30	10	0	0	0	19.443
Fuel Formulation ID	Fuel Sub type ID	Olefin Content	Benzene Content	e200	e300	BioDiesel EsterVol	Cetane Index	PAH Content
20011	20	0	0	0	0	0	0	0
3160	12	7.262	0.633	50.756	83.915	0	0	0

Source: MOVES defaults for this region.

Table C-8: Lake and Porter County Inspection and Maintenance Program

polProcessID	stateID	countyID	yearID	sourceTypeID	fuelTypeID	IMProgramID	inspectFreq	testStandardsID	begModelYearID	endModelYearID	uselMyn	complianceFactor
101	18	18089	2010	21	1	1	1	11	1976	1980	N	93.12
101	18	18089	2010	31	1	1	2	11	1976	1980	N	93.12
101	18	18089	2010	32	1	1	2	11	1976	1980	N	93.12
102	18	18089	2010	21	1	1	2	11	1976	1980	N	93.12
102	18	18089	2010	31	1	1	2	11	1976	1980	N	93.12
102	18	18089	2010	32	1	1	2	11	1976	1980	N	93.12
101	18	18089	2010	21	1	6	2	33	1981	1995	N	93.12
101	18	18089	2010	31	1	6	2	33	1981	1995	N	93.12
101	18	18089	2010	32	1	6	2	33	1981	1995	N	93.12
102	18	18089	2010	21	1	6	2	33	1981	1995	N	93.12
102	18	18089	2010	31	1	6	2	33	1981	1995	N	93.12
102	18	18089	2010	32	1	6	2	33	1981	1995	N	93.12
301	18	18089	2010	21	1	6	2	33	1981	1995	N	93.12
301	18	18089	2010	31	1	6	2	33	1981	1995	N	93.12
301	18	18089	2010	32	1	6	2	33	1981	1995	N	93.12
302	18	18089	2010	21	1	6	2	33	1981	1995	N	93.12
302	18	18089	2010	31	1	6	2	33	1981	1995	N	93.12
302	18	18089	2010	32	1	6	2	33	1981	1995	N	93.12
101	18	18089	2010	21	1	10	2	51	1996	2008	N	93.12
101	18	18089	2010	31	1	10	2	51	1996	2008	N	93.12
101	18	18089	2010	32	1	10	2	51	1996	2008	N	93.12
102	18	18089	2010	21	1	10	2	51	1996	2008	N	93.12
102	18	18089	2010	31	1	10	2	51	1996	2008	N	93.12
102	18	18089	2010	32	1	10	2	51	1996	2008	N	93.12
301	18	18089	2010	21	1	10	2	51	1996	2008	N	93.12
301	18	18089	2010	31	1	10	2	51	1996	2008	N	93.12
301	18	18089	2010	32	1	10	2	51	1996	2008	N	93.12
302	18	18089	2010	21	1	10	2	51	1996	2008	N	93.12
302	18	18089	2010	31	1	10	2	51	1996	2008	N	93.12
302	18	18089	2010	32	1	10	2	51	1996	2008	N	93.12
112	18	18089	2010	21	1	7	2	41	1976	1995	N	93.12
112	18	18089	2010	21	1	8	2	43	1996	2008	N	93.12
112	18	18089	2010	31	1	7	2	41	1976	1995	N	93.12
112	18	18089	2010	31	1	8	2	43	1996	2008	N	93.12
112	18	18089	2010	32	1	7	2	41	1976	1995	N	93.12
112	18	18089	2010	32	1	8	2	43	1996	2008	N	93.12
113	18	18089	2010	21	1	7	2	41	1976	1995	N	93.12
113	18	18089	2010	21	1	8	2	43	1996	2008	N	93.12
113	18	18089	2010	31	1	7	2	41	1976	1995	N	93.12
113	18	18089	2010	31	1	8	2	43	1996	2008	N	93.12
113	18	18089	2010	32	1	7	2	41	1976	1995	N	93.12
113	18	18089	2010	32	1	8	2	43	1996	2008	N	93.12
101	18	18089	2010	21	1	11	2	11	1976	1980	Y	95
101	18	18089	2010	31	1	11	2	11	1976	1980	Y	95
101	18	18089	2010	32	1	11	2	11	1976	1980	Y	95
102	18	18089	2010	21	1	11	2	11	1976	1980	Y	95
102	18	18089	2010	31	1	11	2	11	1976	1980	Y	95
102	18	18089	2010	32	1	11	2	11	1976	1980	Y	95
301	18	18089	2010	21	1	11	2	11	1976	1980	Y	95
301	18	18089	2010	31	1	11	2	11	1976	1980	Y	95
301	18	18089	2010	32	1	11	2	11	1976	1980	Y	95
302	18	18089	2010	21	1	11	2	11	1976	1980	Y	95
302	18	18089	2010	31	1	11	2	11	1976	1980	Y	95
302	18	18089	2010	32	1	11	2	11	1976	1980	Y	95
101	18	18089	2010	21	1	12	2	33	1981	1995	Y	95
101	18	18089	2010	31	1	12	2	33	1981	1995	Y	95
101	18	18089	2010	32	1	12	2	33	1981	1995	Y	95
102	18	18089	2010	21	1	12	2	33	1981	1995	Y	95
102	18	18089	2010	31	1	12	2	33	1981	1995	Y	95
102	18	18089	2010	32	1	12	2	33	1981	1995	Y	95
301	18	18089	2010	21	1	12	2	33	1981	1995	Y	95
301	18	18089	2010	31	1	12	2	33	1981	1995	Y	95
301	18	18089	2010	32	1	12	2	33	1981	1995	Y	95
302	18	18089	2010	21	1	12	2	33	1981	1995	Y	95
302	18	18089	2010	31	1	12	2	33	1981	1995	Y	95
302	18	18089	2010	32	1	12	2	33	1981	1995	Y	95
112	18	18089	2010	21	1	13	2	41	1976	1995	Y	95
112	18	18089	2010	31	1	13	2	41	1976	1995	Y	95
112	18	18089	2010	32	1	13	2	41	1976	1995	Y	95
113	18	18089	2010	21	1	13	2	41	1976	1995	Y	95
113	18	18089	2010	31	1	13	2	41	1976	1995	Y	95
113	18	18089	2010	32	1	13	2	41	1976	1995	Y	95
101	18	18089	2010	21	1	14	2	51	1996	2006	Y	95
101	18	18089	2010	31	1	14	2	51	1996	2006	Y	95
101	18	18089	2010	32	1	14	2	51	1996	2006	Y	95
102	18	18089	2010	21	1	14	2	51	1996	2006	Y	95
102	18	18089	2010	31	1	14	2	51	1996	2006	Y	95
102	18	18089	2010	32	1	14	2	51	1996	2006	Y	95
301	18	18089	2010	21	1	14	2	51	1996	2006	Y	95
301	18	18089	2010	31	1	14	2	51	1996	2006	Y	95
301	18	18089	2010	32	1	14	2	51	1996	2006	Y	95
302	18	18089	2010	21	1	14	2	51	1996	2006	Y	95
302	18	18089	2010	31	1	14	2	51	1996	2006	Y	95
302	18	18089	2010	32	1	14	2	51	1996	2006	Y	95
112	18	18089	2010	21	1	15	2	45	1996	2006	Y	95
112	18	18089	2010	31	1	15	2	45	1996	2006	Y	95
112	18	18089	2010	32	1	15	2	45	1996	2006	Y	95
113	18	18089	2010	21	1	15	2	45	1996	2006	Y	95
113	18	18089	2010	31	1	15	2	45	1996	2006	Y	95
113	18	18089	2010	32	1	15	2	45	1996	2006	Y	95

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Appendix 1C

Supplemental Onroad Data for Clark and Floyd Counties

- **Interpolated 2017 Emissions Calculated by MOVES2014**

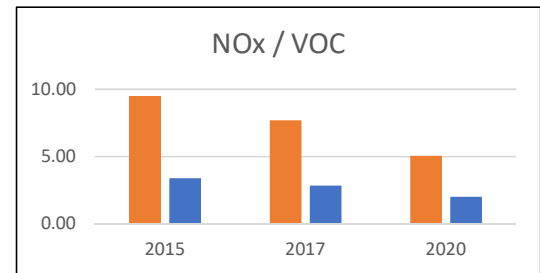
Kentuckiana Regional Planning and Development Agency (KIPDA) has provided onroad emissions data for 2017 for Clark and Floyd counties for the development of Indiana's base-year emissions inventory for the 2015 8-hour ozone National Ambient Air Quality Standards. KIPDA, with the assistance of Louisville Metro Air Pollution Control District, has MOVES runs using the "inventory mode" for the years 2015 and 2020, which has been interpolated to arrive at 2017 NO_x and VOC tons per summer day totals. Following is summary data and details concerning calculations. Complete MOVES Run specification (spec) files are available upon request.

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2017 emissions calculated using interpolation of runs made using MOVES 2014 in inventory mode with VMT provided by KIPDA. Supplied by Louisville Metro Air Pollution Control District to IDEM for 2015 Ozone SIP emissions inventory. -- Craig Butler, modeler 7/23/20

The summary data provides interpolated 2017 NOx and VOC tons per summer day totals for Clark and Floyd counties, Indiana, calculated by MOVES 2014 in inventory mode. The 2015 and 2020 year runs which the interpolations were calculated from made use of KIPDA supplied VMT by road type and speed bin for the fleet mix of each county in 2018 (data set with the most recent 2015 VMT data available). Indiana fleet mix data incorporated into the runs was provided by IDEM and developed by the Corrodino Group using 2014 Indiana VIN-decoded vehicle data in June 2015. Weekday and weekend days were both incorporated into the calculations by MOVES. Meteorology data represented worst-case summer temperatures and humidity from Louisville Standiford Field weather station (month of July only). Complete MOVES run spec files included separately.

Year	County	Tons per Summer Day	
		NOx	VOC
2015	Clark	9.47	3.41
2015	Floyd	5.71	3.57
2020	Clark	5.06	2.02
2020	Floyd	3.40	2.37
Interpolation			
2017	Clark	7.71	2.85
2017	Floyd	4.78	3.09



yearID	monthID	dayID	stateID	countyID	pollutantID	processID	emissionQuant
2015	7	2	18	18019	1	1	1116230
2015	7	5	18	18019	1	1	1344120
2015	7	2	18	18019	1	2	708084
2015	7	5	18	18019	1	2	824691
2015	7	2	18	18019	1	11	197244
2015	7	5	18	18019	1	11	197811
2015	7	2	18	18019	1	12	352023
2015	7	5	18	18019	1	12	390928
2015	7	2	18	18019	1	13	165962
2015	7	5	18	18019	1	13	181468
2015	7	2	18	18019	1	18	39281.8
2015	7	5	18	18019	1	18	46192
2015	7	2	18	18019	1	19	32356.5
2015	7	5	18	18019	1	19	38862.4
2015	7	2	18	18019	1	90	119942
2015	7	5	18	18019	1	90	124094
2015	7	2	18	18019	1	91	2755.85
2015	7	5	18	18019	1	91	2851.26
2015	7	2	18	18019	2	1	31300600
2015	7	5	18	18019	2	1	37199300
2015	7	2	18	18019	2	2	5151830
2015	7	5	18	18019	2	2	6095660
2015	7	2	18	18019	2	15	28984.2
2015	7	5	18	18019	2	15	34633
2015	7	2	18	18019	2	16	3353.84
2015	7	5	18	18019	2	16	4172.26
2015	7	2	18	18019	2	17	1018.85
2015	7	5	18	18019	2	17	1054.12
2015	7	2	18	18019	2	90	201420
2015	7	5	18	18019	2	90	208392
2015	7	2	18	18019	2	91	14775
2015	7	5	18	18019	2	91	15286.5
2015	7	2	18	18019	3	1	6562000
2015	7	5	18	18019	3	1	7893180
2015	7	2	18	18019	3	2	537487
2015	7	5	18	18019	3	2	623536
2015	7	2	18	18019	3	15	2616.61
2015	7	5	18	18019	3	15	3161.7
2015	7	2	18	18019	3	16	25.2922
2015	7	5	18	18019	3	16	29.8338
2015	7	2	18	18019	3	17	194.247
2015	7	5	18	18019	3	17	200.971
2015	7	2	18	18019	3	90	453740
2015	7	5	18	18019	3	90	469447
2015	7	2	18	18019	3	91	10969.5
2015	7	5	18	18019	3	91	11349.2

2015	7	2	18	18019	79	1	1057820		
2015	7	5	18	18019	79	1	1273660		
2015	7	2	18	18019	79	2	683719		
2015	7	5	18	18019	79	2	795967		
2015	7	2	18	18019	79	11	197244		
2015	7	5	18	18019	79	11	197811		
2015	7	2	18	18019	79	12	352023		
2015	7	5	18	18019	79	12	390928		
2015	7	2	18	18019	79	13	165962		
2015	7	5	18	18019	79	13	181468		
2015	7	2	18	18019	79	18	39281.8		
2015	7	5	18	18019	79	18	46191.9		
2015	7	2	18	18019	79	19	32356.4		
2015	7	5	18	18019	79	19	38862.4		
2015	7	2	18	18019	79	90	77915.2		
2015	7	5	18	18019	79	90	80612.5		
2015	7	2	18	18019	79	91	2747.59		
2015	7	5	18	18019	79	91	2842.7		
2015	7	2	18	18019	87	1	1089240		
2015	7	5	18	18019	87	1	1311520		
2015	7	2	18	18019	87	2	699864		
2015	7	5	18	18019	87	2	814850		
2015	7	2	18	18019	87	11	223395		
2015	7	5	18	18019	87	11	224036		
2015	7	2	18	18019	87	12	393398		
2015	7	5	18	18019	87	12	436876		
2015	7	2	18	18019	87	13	181307		
2015	7	5	18	18019	87	13	198247		
2015	7	2	18	18019	87	15	18258.1		
2015	7	5	18	18019	87	15	21995.9		
2015	7	2	18	18019	87	16	9342.94		
2015	7	5	18	18019	87	16	10893.5		
2015	7	2	18	18019	87	17	2002.82		
2015	7	5	18	18019	87	17	2072.16		3.35
2015	7	2	18	18019	87	18	43902.6	0.048394	0.054475
2015	7	5	18	18019	87	18	51625.8	0.056908	
2015	7	2	18	18019	87	19	33719.9		
2015	7	5	18	18019	87	19	40502.1		
2015	7	2	18	18019	87	90	93003.2		
2015	7	5	18	18019	87	90	96222.8		
2015	7	2	18	18019	87	91	3089.11		
2015	7	5	18	18019	87	91	3196.05		

yearID	monthID	dayID	stateID	countyID	pollutantID	emissionQuant
2020	7	2	18	18019	1	1689140
2020	7	5	18	18019	1	1922850
2020	7	2	18	18019	2	27391200
2020	7	5	18	18019	2	32559900
2020	7	2	18	18019	3	4071810
2020	7	5	18	18019	3	4800800
2020	7	2	18	18019	79	1555960
2020	7	5	18	18019	79	1773190
2020	7	2	18	18019	87	1668660
2020	7	5	18	18019	87	1897180

yearID	monthID	dayID	stateID	countyID	pollutantID	processID	emissionQuant
2015	7	2	18	18043	1	1	610115
2015	7	5	18	18043	1	1	753362
2015	7	2	18	18043	1	2	1160550
2015	7	5	18	18043	1	2	1348390
2015	7	2	18	18043	1	11	331158
2015	7	5	18	18043	1	11	332197
2015	7	2	18	18043	1	12	493172
2015	7	5	18	18043	1	12	534864
2015	7	2	18	18043	1	13	202653
2015	7	5	18	18043	1	13	213589
2015	7	2	18	18043	1	18	21422
2015	7	5	18	18043	1	18	25843.1
2015	7	2	18	18043	1	19	18057.6
2015	7	5	18	18043	1	19	22324.6
2015	7	2	18	18043	1	90	0
2015	7	5	18	18043	1	90	0
2015	7	2	18	18043	1	91	0
2015	7	5	18	18043	1	91	0
2015	7	2	18	18043	2	1	17517400
2015	7	5	18	18043	2	1	21361700
2015	7	2	18	18043	2	2	8337620
2015	7	5	18	18043	2	2	9862830
2015	7	2	18	18043	2	15	16107
2015	7	5	18	18043	2	15	19748.3
2015	7	2	18	18043	2	16	5418.73
2015	7	5	18	18043	2	16	6771
2015	7	2	18	18043	2	17	0
2015	7	5	18	18043	2	17	0
2015	7	2	18	18043	2	90	0
2015	7	5	18	18043	2	90	0
2015	7	2	18	18043	2	91	0
2015	7	5	18	18043	2	91	0
2015	7	2	18	18043	3	1	3577890
2015	7	5	18	18043	3	1	4429500
2015	7	2	18	18043	3	2	889208
2015	7	5	18	18043	3	2	1028480
2015	7	2	18	18043	3	15	1463.52
2015	7	5	18	18043	3	15	1819.07
2015	7	2	18	18043	3	16	41.5557
2015	7	5	18	18043	3	16	48.9513
2015	7	2	18	18043	3	17	0
2015	7	5	18	18043	3	17	0
2015	7	2	18	18043	3	90	0
2015	7	5	18	18043	3	90	0
2015	7	2	18	18043	3	91	0
2015	7	5	18	18043	3	91	0

2015	7	2	18	18043	79	1	576795
2015	7	5	18	18043	79	1	712162
2015	7	2	18	18043	79	2	1121440
2015	7	5	18	18043	79	2	1302340
2015	7	2	18	18043	79	11	331158
2015	7	5	18	18043	79	11	332197
2015	7	2	18	18043	79	12	493172
2015	7	5	18	18043	79	12	534864
2015	7	2	18	18043	79	13	202653
2015	7	5	18	18043	79	13	213589
2015	7	2	18	18043	79	18	21422
2015	7	5	18	18043	79	18	25843.1
2015	7	2	18	18043	79	19	18057.6
2015	7	5	18	18043	79	19	22324.6
2015	7	2	18	18043	79	90	0
2015	7	5	18	18043	79	90	0
2015	7	2	18	18043	79	91	0
2015	7	5	18	18043	79	91	0
2015	7	2	18	18043	87	1	593812
2015	7	5	18	18043	87	1	733156
2015	7	2	18	18043	87	2	1147560
2015	7	5	18	18043	87	2	1332820
2015	7	2	18	18043	87	11	375061
2015	7	5	18	18043	87	11	376238
2015	7	2	18	18043	87	12	551137
2015	7	5	18	18043	87	12	597731
2015	7	2	18	18043	87	13	221388
2015	7	5	18	18043	87	13	233336
2015	7	2	18	18043	87	15	9975.34
2015	7	5	18	18043	87	15	12320.5
2015	7	2	18	18043	87	16	15303.7
2015	7	5	18	18043	87	16	17807.5
2015	7	2	18	18043	87	17	0
2015	7	5	18	18043	87	17	0
2015	7	2	18	18043	87	18	23941.9
2015	7	5	18	18043	87	18	28883
2015	7	2	18	18043	87	19	18835.9
2015	7	5	18	18043	87	19	23285.9
2015	7	2	18	18043	87	90	0
2015	7	5	18	18043	87	90	0
2015	7	2	18	18043	87	91	0
2015	7	5	18	18043	87	91	0

yearID	monthID	dayID	stateID	countyID	pollutantID	emissionQuant
2020	7	2	18	18043	1	1909670
2020	7	5	18	18043	1	2154930
2020	7	2	18	18043	2	20262500
2020	7	5	18	18043	2	24572000
2020	7	2	18	18043	3	2664370
2020	7	5	18	18043	3	3254090
2020	7	2	18	18043	79	1845780
2020	7	5	18	18043	79	2077430
2020	7	2	18	18043	87	1975630
2020	7	5	18	18043	87	2218630

Enclosure 2

Certification of Indiana's Nonattainment
New Source Review (NNSR) Plan for the
2015 8-Hour Ozone National Ambient Air
Quality Standards (NAAQS)

Submitted by the Indiana Department of
Environmental Management

January 2021

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1.0 Introduction

Pursuant to the requirements of Title 40, Part 51.165 in the Code of Federal Regulations (40 CFR 51.165) and Section 172(c)(5) of the Clean Air Act (CAA), Indiana has thoroughly reviewed its nonattainment new source review (NNSR) rules and certifies that they are at least as stringent as the NNSR state implementation plan (SIP) requirements of 40 CFR 51.165 as amended by the rule, *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area State Implementation Plan Requirements* (83 FR 62998, December 6, 2018) (referred to hereafter as the 2015 ozone implementation rule). The following analysis provides a detailed discussion of the review.

2.0 Analysis

Indiana's nonattainment new source review (NNSR) rules are established in Title 326 of the Indiana Administrative Code, Article 2, Rule 3 (326 IAC 2-3) and have been fully approved by United States Environmental Protection Agency (U.S. EPA) as part of Indiana's SIP following all requirements for public participation. U.S. EPA approved the initial rules (94 FR 24837, October 7, 1994).¹ U.S. EPA approved amendments affecting 326 IAC 2-3-1, 326 IAC 2-3-2 and 326 IAC 2-3-3 to comply with federal rules for NSR Reform (67 FR 80186, December 31, 2002) (76 FR 40242, July 8, 2011)², which have not been subsequently amended. Table 1 provides a summary of the requirements in 40 CFR 51.165 and Indiana's applicable rules at 326 IAC 2-3. Complete rules are contained in Indiana's air permit rules at 326 IAC 2. The rules can be viewed in their entirety online at http://www.in.gov/legislative/iac/iac_title?iact=326&iaca=2&submit=+Go.

Table 1: 40 CFR 51.165 Requirements and Applicable NNSR Rules at 326 IAC 2-3

40 CFR 51.165	Applicable Indiana Regulation: 326 IAC 2-3	FR Approval of Indiana Regulation
<p>1. (a)(1)(iv)(A)(1)(i)-(iv) and (2): Major source thresholds for ozone – VOC and NOx.</p> <p><i>Note: Indiana has never had a nonattainment area classified as Extreme for ground-level ozone. Therefore, (a)(1)(iv)(A)(1)(iv) and 2(vi) do not apply in Indiana.</i></p>	<p>326 IAC 2-3-1(z)(1) and (2) p.70</p>	<p>94 FR 24837 Approved: 8/25/1994, Published: 10/7/1994, Effective: 12/6/1994 <i>And</i> 76 FR 40242 Approved: 6/28/2011,</p>

¹ <https://www.gpo.gov/fdsys/pkg/FR-1994-10-07/html/94-24837.htm>.

² <https://www.gpo.gov/fdsys/pkg/FR-2011-07-08/pdf/2011-17036.pdf>.

40 CFR 51.165	Applicable Indiana Regulation: 326 IAC 2-3	FR Approval of Indiana Regulation
2. (a)(1)(iv)(A)(3): Change constitutes a major source by itself.	326 IAC 2-3-1(z)(5) p.71	Published: 7/8/2011, Effective: 9/6/2011
3. (a)(1)(v)(E): Significant net emissions increase of NO _x is significant for ozone.	326 IAC 2-3-1(y)(1) p.70	
4. (a)(1)(v)(F): Any emissions change of VOC in Extreme area triggers NNSR.	Indiana has never had a nonattainment area classified as Extreme for ground-level ozone.	N/A
5. (a)(1)(x)(A)-(C) and (E): Significant emissions rates for VOC and NO _x as ozone precursors. <i>Note: Indiana has never had a nonattainment area classified as Extreme for ground-level ozone. Therefore, (a)(1)(x)(E) does not apply in Indiana.</i>	326 IAC 2-3-1(pp) p.73	94 FR 24837 Approved: 8/25/1994, Published: 10/7/1994, Effective: 12/6/1994 <i>And</i> 76 FR 40242 Approved: 6/28/2011, Published: 7/8/2011, Effective: 9/6/2011
6. (a)(3)(ii)(C)(1)-(2): Provisions for emissions reduction credits.	326 IAC 2-3-3(b)(5) p.78	94 FR 24837 Approved: 8/25/1994, Published: 10/7/1994, Effective: 12/6/1994
7. (a)(8): Requirements for VOC apply to NO _x as ozone precursors.	326 IAC 2-3-1(y) p.70 326 IAC 2-3-2(a) and (b) p.74	94 FR 24837 Approved: 8/25/1994, Published: 10/7/1994, Effective: 12/6/1994 <i>And</i> 76 FR 40242 Approved: 6/28/2011, Published: 7/8/2011, Effective: 9/6/2011
8. (a)(9)(i)-(iii): Offset ratios for VOC and NO _x for ozone nonattainment areas. <i>Note: Subparagraphs (a)(9)(i)-(iii) were changed to (a)(9)(ii)-(iv) when U.S. EPA added new subparagraph (a)(9)(i) under the 2008 PM_{2.5} NSR Implementation Rule).</i>	326 IAC 2-3-3(a)(5)(B) p.78	

40 CFR 51.165	Applicable Indiana Regulation: 326 IAC 2-3	FR Approval of Indiana Regulation
<p>9. a(12): Anti-backsliding provision(s), where applicable.</p> <p>40 CFR 51.165(a)(12) requires anti-backsliding requirements at 40 CFR 51.1105 to apply in any area designated nonattainment for the 2008 ozone NAAQS and designated nonattainment for the 1997 ozone NAAQS. Effective April 6, 2015, U.S. EPA revoked the 1997 8-hour ozone standard (80 FR 12264, March 6, 2015). There were no remaining nonattainment areas in Indiana under the standard at that time. Therefore, anti-backsliding requirements do not apply to Indiana for the 1997 8-hour ozone standard.</p> <p>In accordance with the 2015 ozone implementation rule, U.S. EPA intends to address any revocation of the 2008 8-hour ozone NAAQS, and any potential anti-backsliding requirements in a separate future rulemaking, which has yet to occur. Indiana's nonattainment NSR rules, codified at 326 IAC 2-3, remain consistent with federal ozone nonattainment NSR rules codified at 40 CFR 51.165 and CAA sections 172(c)(5), 173, 110(a)(2), 182(a)(4), 182(b)(5), and 182(c)(10). For a list of areas in Indiana that were designated nonattainment under the 2008 8-hour ozone NAAQS and dates associated with these classifications, please visit IDEM's website: https://www.in.gov/idem/airquality/files/nonattainment_o3_2008_8hour.pdf.</p>		

3.0 Certification of NNSR Rules and Request for SIP Approval

Based on a review of requirements in Indiana's rules at 326 IAC 2-3 and requirements of 40 CFR 51.165, Indiana's long standing and fully implemented NNSR program meets requirements for the implementation of the 2015 8-hour ozone NAAQS. As such, IDEM certifies that state rules at 326 IAC 2-3 comply with NNSR state implementation plan (SIP) requirements in 40 CFR 51.165 and requests U.S. EPA's review and approval of this NNSR plan as an amendment to Indiana's SIP.

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Enclosure 3

Certification of Indiana's Emissions
Reporting Rule, 326 IAC 2-6, for the 2015
8-Hour Ozone National Ambient Air Quality
Standards (NAAQS)

Submitted by the Indiana Department of
Environmental Management

January 2021

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1.0 Introduction

Under Section 182(a)(3)(B) of the federal Clean Air Act (CAA), states must submit state implementation plan (SIP) revisions for nonattainment areas classified as Marginal and above requiring that the owner or operator of each stationary source of oxides of nitrogen (NO_x) or volatile organic compounds (VOCs) “provide the State with a statement, in such form as the Administrator may prescribe (or accept an equivalent alternative developed by the State), for classes or categories of sources, showing the actual emissions of oxides of nitrogen and volatile organic compounds from that source. The first such statement shall be submitted within 3 years after November 15, 1990. Subsequent statements shall be submitted at least every year thereafter. The statement shall contain a certification that the information contained in the statement is accurate to the best knowledge of the individual certifying the statement.”¹ United States Environmental Protection Agency (U.S. EPA) has indicated that the source emission statement requirement applies to all areas designated as “nonattainment” for the 2015 8-hour ozone National Ambient Air Quality Standards (NAAQS).²

The purpose of this document is to certify that Indiana’s Emissions Reporting Rule at 326 Indiana Administrative Code (IAC) 2-6 meets the requirements of the CAA and the 2015 8-hour ozone NAAQS. Under the 2015 8-hour ozone NAAQS, U.S. EPA designated 74 of Indiana’s 92 counties as “attainment/unclassifiable” (82 FR 54232, November 16, 2017). Remaining areas of Indiana were designated as “attainment/unclassifiable” (83 FR 25776, June 4, 2018) with the exception of Calumet, Hobart, North, Ross, and Saint John townships in Lake County, which are part of the Chicago, IL-IN-WI Marginal Nonattainment Area, and Clark and Floyd counties, which are part of the Louisville, KY-IN Marginal Nonattainment Area.³ Indiana’s current Emissions Reporting Rule, 326 IAC 2-6, requires sources located in Lake, Clark and Floyd counties that emit either NO_x or VOCs equal to or greater than 25 tons per year to annually report their actual emissions to the Indiana Department of Environmental Management (IDEM). The rule can be viewed online at http://www.in.gov/legislative/iac/iac_title?iact=326&iaca=2&submit=+Go.

2.0 Background Information

Indiana has a long-standing Emissions Reporting Rule at 326 IAC 2-6. U.S. EPA initially determined that 326 IAC 2-6 satisfied CAA requirements and approved it into Indiana’s SIP (59 FR 29953, June 10, 1994). Since then, Indiana has continued to satisfy CAA Section 182(a)(3)(B) requirements by appropriately applying 326 IAC 2-6 to affected ozone nonattainment areas. Lake County is subject to the requirements in 326

¹ <https://www.govinfo.gov/content/pkg/USCODE-2013-title42/html/USCODE-2013-title42-chap85-subchapl-partD-subpart2-sec7511a.htm>.

² See Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area State Implementation Plan Requirements (83 FR 62998, December 6, 2018) at <https://www.govinfo.gov/content/pkg/FR-2018-12-06/pdf/2018-25424.pdf>.

³ https://www.in.gov/idem/airquality/files/nonattainment_ozone_2015_20180604_fr_notice.pdf.

IAC 2-6 under previous 8-hour ozone NAAQS and remains subject to requirements under the 2015 8-hour ozone NAAQS.⁴ An amendment to 326 IAC 2-6-1, effective April 24, 2020, extends applicability to Clark and Floyd counties.⁵

3.0 Certification and SIP Submittal

Indiana's long-standing Emissions Reporting Rule, 326 IAC 2-6, satisfies the state's obligation under Section 182(a)(3)(B) of the CAA. Lake County is subject to requirements in 326 IAC 2-6 under previous 8-hour ozone NAAQS and remains subject to requirements under the 2015 8-hour ozone NAAQS. Clark and Floyd counties are subject to requirements under the 2015 8-hour ozone NAAQS, and a portion of the rule at 326 IAC 2-6-1 has been amended, effective April 24, 2020, to extend applicability to Clark and Floyd counties for the 2015 8-hour ozone NAAQS. As such, Indiana's Emissions Reporting Rule, 326 IAC 2-6, requires sources located in Lake, Clark and Floyd counties that emit either NO_x or VOCs equal to or greater than 25 tons per year to annually report their actual emissions to IDEM. Indiana therefore certifies that 326 IAC 2-6 meets the emissions statement requirements of section 182(a)(3)(B) of the CAA, including requirements under the 2015 8-hour ozone NAAQS.

⁴ See Rule for Approval and Promulgation of Plan Revisions; Indiana, (69 FR 63069, October 29, 2004) <https://www.federalregister.gov/documents/2004/10/29/04-24238/approval-and-promulgation-of-plan-revisions-indiana>.

⁵ See LSA Document # 19-409(F) in the Indiana Register at <http://iac.iga.in.gov/iac/irtoc.htm?lsayear=19&lsadoc=409&view=list&ldn=Y>. This recent rule amendment is being submitted separately to U.S. EPA for approval as an amendment to Indiana's SIP.

Enclosure 4

Public Participation Process Documentation

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LEGAL NOTICE OF PUBLIC HEARING

2017 Base-Year Emissions Inventory for Indiana's Portions of the Chicago, Illinois-Indiana-Wisconsin (IL-IN-WI) and Louisville, Kentucky-Indiana (KY-IN) 2015 8-Hour Ozone "Marginal" Nonattainment Areas, Certification of Indiana's Nonattainment New Source Review (NNSR) Plan, and Certification of Indiana's Emissions Reporting Rule, 326 IAC 2-6

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:

<https://www.in.gov/idem/5474.htm>

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 *2017 Base-Year Emissions Inventory for Indiana's Portions of the Chicago, Illinois-Indiana-Wisconsin (IL-IN-WI) and Louisville, Kentucky-Indiana (KY-IN) 2015 8-Hour Ozone "Marginal" Nonattainment Areas, Certification of Indiana's Nonattainment New Source Review (NNSR) Plan, and Certification of Indiana's Emissions Reporting Rule, 326 IAC 2-6*. All interested persons are invited and will be given reasonable opportunity to express their views concerning this submittal.

Nonattainment areas designated by United States Environmental Protection Agency (U.S. EPA) under the 2015 8-hour ozone NAAQS include Calumet, Hobart, North, Ross, and Saint John townships in Lake County as part of the Chicago, IL-IN-WI Nonattainment Area, and Clark and Floyd counties as part of the Louisville, KY-IN Nonattainment Area. These areas have been classified as "Marginal" nonattainment areas and are subject to the requirements of Sections 172 and 182 of the Clean Air Act (CAA). The above documents are being drafted and submitted consistent with U.S. EPA guidance.

The draft documents will be available for review on or before September 25, 2020, on the following Web page:

<https://www.in.gov/idem/airquality/2433.htm>

Copies of the draft documents will be made available on or before September 25, 2020, 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 46204
- IDEM Northwest Regional Office, 330 West U.S. Highway 30, Suite F, Valparaiso, Indiana

- IDEM Southeast Regional Office, 820 West Sweet Street, Brownstown, 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.
- Whiting Public Library, 1735 Oliver Street, Whiting, Indiana.
- Clarksville Branch Library, 1312 Eastern Boulevard, Clarksville, Indiana
- Charlestown-Clark County Public Library, 51 Clark Road, Charlestown, Indiana
- New Albany-Floyd County Public Library, 180 West Spring Street, New Albany, Indiana

Any person may submit written comments on the *2017 Base-Year Emissions Inventory for Indiana's Portions of the Chicago, Illinois-Indiana-Wisconsin (IL-IN-WI) and Louisville, Kentucky-Indiana (KY-IN) 2015 8-Hour Ozone "Marginal" Nonattainment Areas and Certifications of Indiana's Nonattainment New Source Review and Emissions Statement Programs*. Written comments should be directed to: Ms. Amy Smith, 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 e-mail at amsmith@idem.IN.gov. Written comments must be submitted by October 26, 2020.

A virtual public hearing on the *2017 Base-Year Emissions Inventory for Indiana's Portions of the Chicago, Illinois-Indiana-Wisconsin (IL-IN-WI) and Louisville, Kentucky-Indiana (KY-IN) 2015 8-Hour Ozone "Marginal" Nonattainment Areas and Certifications of Indiana's Nonattainment New Source Review and Emissions Statement Programs* will be held if a request is received by October 26, 2020. If requested, the virtual hearing will be held on October 29, 2020, and the comment period will be extended to November 5, 2020. If held, the virtual hearing will convene at 6:00 p.m. Eastern Daylight Time (EDT), 5 p.m. Central Daylight Time (CDT). Interested parties may present oral or written comments at the virtual public hearing, if held. If a virtual hearing is held, oral statements will be heard, but for the accuracy of the record, a written copy of the statements should be submitted. If a request is not received by October 26, 2020, the virtual public hearing will be cancelled.

Interested parties can check the online IDEM calendar at <https://calendar.in.gov/site/idem/> or contact Ms. Amy Smith (317) 233-8211 or amsmith@idem.IN.gov after October 26, 2020, to see if the virtual public hearing has been canceled or for the link to join the public hearing, if it is convened.

If a virtual 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 Ms. Amy Smith 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 amsmith@idem.IN.gov, or via telephone at (317) 233-8211 (direct) or (800) 451-6027 (toll free in Indiana).

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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, or call (317) 233-1785 (voice) or (317) 233-6565 (TDD). Please provide a minimum of 72 hours notification.

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

September 25, 2020

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 2017 Base-Year Emissions Inventory for Indiana's Portions of the Chicago, Illinois-Indiana-Wisconsin (IL-IN-WI) and Louisville, Kentucky-Indiana (KY-IN) 2015 8-Hour Ozone "Marginal" Nonattainment Areas, Certification of Indiana's Nonattainment New Source Review (NNSR) Plan, and Certification of Indiana's Emissions Reporting Rule, 326 IAC 2-6

was published on IDEM's web site on September 24, 2020. It is expected that it will remain posted on the site until at least October 26, 2020.

The notice in full was available online at the following web address, under "Statewide":

<http://www.in.gov/idem/5474.htm>

The draft documents were posted online under "Lake, Clark and Floyd Counties/2015 8-hour Ozone Standard" on September 23, 2020 at the following web address:

<https://www.in.gov/idem/airquality/2433.htm>

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

By:

Mike Finklestein
IDEM Webmaster

Attachments:

Copy of web page as published.

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