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April 2, 2025

Cheryl Newton
 Acting Regional Administrator
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 77 West Jackson Blvd.
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Subject: Attainment State Implementation Plans (SIPs) for Wisconsin's 2015 Ozone National Ambient Air Quality Standard (NAAQS) Moderate Nonattainment Areas

Dear Ms. Newton:

In accordance with Section 182(c) of the Clean Air Act (CAA), the Wisconsin Department of Natural Resources (WDNR) is submitting three attainment plans as revisions to the Wisconsin SIP (enclosed). These plans fulfill moderate ozone attainment planning requirements prescribed by Sections 172 and 182(b) of the CAA for the Milwaukee, Kenosha, and Sheboygan, Wisconsin, 2015 ozone NAAQS nonattainment areas.

These areas were initially designated by the EPA as nonattainment of the 2015 ozone NAAQS on June 4, 2018. The areas were revised and expanded by EPA on June 14, 2021. On October 7, 2022, the EPA reclassified these areas to moderate ozone nonattainment. Due to this reclassification, the state of Wisconsin is required to develop plans to attain the NAAQS and meet the moderate area attainment planning requirements specified by the CAA.

On December 17, 2024, the EPA further reclassified these areas to serious ozone nonattainment. This reclassification renders moot several "leftover" SIP requirements associated with the previous classification of moderate.¹ As such, the WDNR is requesting that EPA act on all elements of these submittals with the exception of:

- The modeled attainment demonstrations
- Reasonably Available Control Measures (RACM) analyses

In addition, the WDNR requests that the EPA approve the 2017 base year emissions inventories contained in these submittals, as these inventories cover the nonattainment areas as revised by the EPA in 2021.² Approval of these inventories will satisfy marginal classification requirements for these areas.

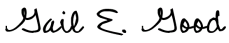
The WDNR has legal authority under ss. 285.11(6), Wis. Stats., to develop a SIP for the prevention, abatement, and control of air pollution. These SIP revisions meet the completeness requirements of 40 CFR § 51, Appendix V. Pursuant to the requirements of 40 CFR § 51.102, the WDNR provided public notice of these submittals and held a public hearing on January 16, 2025. The public comment period concluded on January 17, 2025. A summary of comments received, the WDNR's response to those comments, and documentation of the public notice and hearing process are included in the attached documents.

¹ See the EPA final rule "State Implementation Plan Submittal Deadlines and Implementation Requirements for Reclassified Nonattainment Areas Under the Ozone National Ambient Air Quality Standards" (90 FR 5651, Jan. 17, 2025).

² The WDNR submitted base year inventories on August 3, 2021 for these areas as they were initially designated. The inventories contained in the plans being submitted on this date supersede and replace those prior submittals.

These SIPs are being submitted electronically using the EPA's SPeCs system. If you have any questions regarding this submittal, please contact Emma Cleveland at emma.cleveland@wisconsin.gov.

Sincerely,

Signed by:
 4/2/2025 | 8:43 AM CDT
Gail E. Good
Director, Air Management Program

Enclosures (3)

cc: Brianna Denk – AM/7
Emma Cleveland – AM/7
David Bizot – AM/7
Phil Bower – LS/8

**Attainment Plan
for the
Milwaukee, Wisconsin
2015 Ozone National Ambient Air Quality Standard
Moderate Nonattainment Area**

**Milwaukee County, Ozaukee County, Racine County (Partial),
Washington County (Partial), Waukesha County (Partial)**

**Developed By:
The Wisconsin Department of Natural Resources**

April 2025



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List of Acronyms

AEI	WDNR's air emissions inventory
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CART	Classification and regression tree
CBL	Convective boundary layer
CSAPR	Cross-State Air Pollution Rule
CTG	Control techniques guideline
EGU	Electric generating unit
EPA	U.S. Environmental Protection Agency
FID	Facility identification number
I/M	Vehicle inspection and maintenance (emissions testing)
ICI	Industrial, commercial and institutional emissions sources
LADCO	Lake Michigan Air Directors Consortium
MOVES	EPA's MOtor Vehicle Emission Simulator model
MPO	Metropolitan planning organization
MVEB	Motor vehicle emissions budget
NAAQS	National Ambient Air Quality Standard
NAICS	North American Industrial Classification System
NEI	National Emissions Inventory
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO _x	Nitrogen oxides (NO and NO ₂)
NNSR	Nonattainment New Source Review (permitting program)
ppb	Parts per billion
ppm	Parts per million
RACM	Reasonably available control measures
RACT	Reasonably available control technology
RFP	Reasonable further progress
RTP	Regional transportation plan
SIP	State implementation plan
TIP	Transportation improvement program
tposd	Tons per ozone season day
tposwd	Tons per ozone season weekday
VMT	Vehicle miles traveled
VOC	Volatile organic compounds
WDNR	Wisconsin Department of Natural Resources
WDOT	Wisconsin Department of Transportation

1. INTRODUCTION

The Wisconsin Department of Natural Resources (WDNR) has prepared this attainment plan to fulfill the Clean Air Act (CAA) state implementation plan (SIP) requirements for the Milwaukee, Wisconsin moderate nonattainment area for the 2015 ozone National Ambient Air Quality Standard (NAAQS). This document was developed in accordance with the U.S. Environmental Protection Agency (EPA)'s implementation rule for the 2015 ozone NAAQS (83 FR 62998) and other applicable guidance and requirements. It addresses all required moderate-area attainment requirements for the 2015 ozone NAAQS as they apply to this nonattainment area.

1.1. Clean Air Act Requirements

The CAA requires an area not meeting a NAAQS for a specified criteria pollutant to develop or revise its SIP to expeditiously attain and maintain the NAAQS in that nonattainment area. For moderate nonattainment areas, these SIP requirements are:

- 1) An attainment plan (required under CAA section 182(b)).
- 2) Reasonably Available Control Technology (RACT) for volatile organic compounds (VOCs) and nitrogen oxides (NO_x)(CAA section 182(b)(2)).
- 3) Reasonably Available Control Measures (RACM)(CAA section 172(c)(1)).
- 4) Reasonable Further Progress (RFP) reductions in VOC and/or NO_x emissions in the area (CAA sections 172(c)(2) and 182(b)(1)).
- 5) Contingency measures to be implemented in the event of failure to attain the standard (CAA section 172(c)(9)).
- 6) A vehicle inspection and maintenance (I/M) program, as applicable (CAA section 181(b)(4)).
- 7) NO_x and VOC emission offsets at a ratio of 1.15 to 1 for major source permits (CAA section 182(b)(5)).

This plan addresses the first six of these requirements for the Milwaukee 2015 ozone NAAQS moderate nonattainment area. Wisconsin has an approved Nonattainment New Source Review (NNSR) permitting program that fulfills the seventh requirement.¹ Where existing rules implementing these requirements exist, by this submittal the WDNR certifies them as meeting the requirements for Moderate nonattainment areas for this NAAQS.

1.2. The Milwaukee 2015 Ozone NAAQS Nonattainment Area

Nonattainment History

Historically, exceedances of the federal ozone standards have been recorded in southeast Wisconsin and along the lakeshore of Lake Michigan, including all or parts of the Milwaukee area. Counties in the greater Milwaukee area have been designated nonattainment for several previous ozone NAAQS, but have subsequently been either redesignated to attainment for, or found to be attaining, each of these standards (Table 1.1).

¹ The EPA approved Wisconsin's NNSR SIP submittal for the 2015 ozone NAAQS on Jan. 19, 2022 (87 FR 2719).

Table 1.1. Milwaukee area ozone NAAQS nonattainment history.

NAAQS	1979	1997	2008	2015
Level	0.12 ppm	0.08 ppm	0.075 ppm	0.070 ppm
Averaging Period	1 hour	8 hour	8 hour	8 hour
Nonattainment Area	6-county Milwaukee-Racine area ^a	6-county Milwaukee-Racine area ^a	None	5-county Milwaukee area (partial) ^c
Most Recent Classification	Severe-17	Moderate	Attainment	Moderate
Redesignated to Attainment	NAAQS revoked ^b	7/31/2012 (77 FR 45252)	N/A	TBD

^a Kenosha, Racine, Milwaukee, Ozaukee, Washington, and Waukesha counties.

^b The EPA finalized a determination of attainment for the Milwaukee-Racine nonattainment area on Apr. 24, 2009 (74 FR 18641). This occurred after the 1979 ozone NAAQS was revoked, so the area was never formally redesignated to attainment of that standard.

^c Milwaukee and Ozaukee counties and parts of Racine, Washington, and Waukesha counties.

2015 Ozone NAAQS

In October 2015, the EPA finalized a revision to the 8-hour ozone NAAQS (80 FR 65291). The 2015 ozone NAAQS (0.070 parts per million; ppm) is more stringent than the previous 2008 ozone NAAQS (0.075 ppm). On June 4, 2018, the EPA published a final rulemaking that designated parts of Milwaukee and Ozaukee counties as marginal nonattainment for the 2015 ozone NAAQS (83 FR 25776).²

On June 14, 2021, in response to a July 10, 2020, decision by the D.C. Circuit Court, the EPA published a final rule revising the 2015 ozone NAAQS designations for 13 counties, including those counties located in the greater Milwaukee area (86 FR 31438). As part of this action, the EPA revised and expanded the nonattainment area in Milwaukee to include all of Milwaukee and Ozaukee counties and part of Racine, Washington, and Waukesha counties.³ This revised designation was effective July 14, 2021. This area retained the marginal area classification and attainment date of August 3, 2021 of the original nonattainment area.

Since the Milwaukee nonattainment area did not attain the 2015 ozone NAAQS by its marginal area due date, on October 7, 2022 the EPA reclassified the area from marginal to moderate nonattainment and set a new attainment date of August 3, 2024 (87 FR 60897). The WDNR has developed this submittal to fulfill moderate attainment planning requirements for this area as required by sections 172(c) and 182(c)(2) of the CAA.

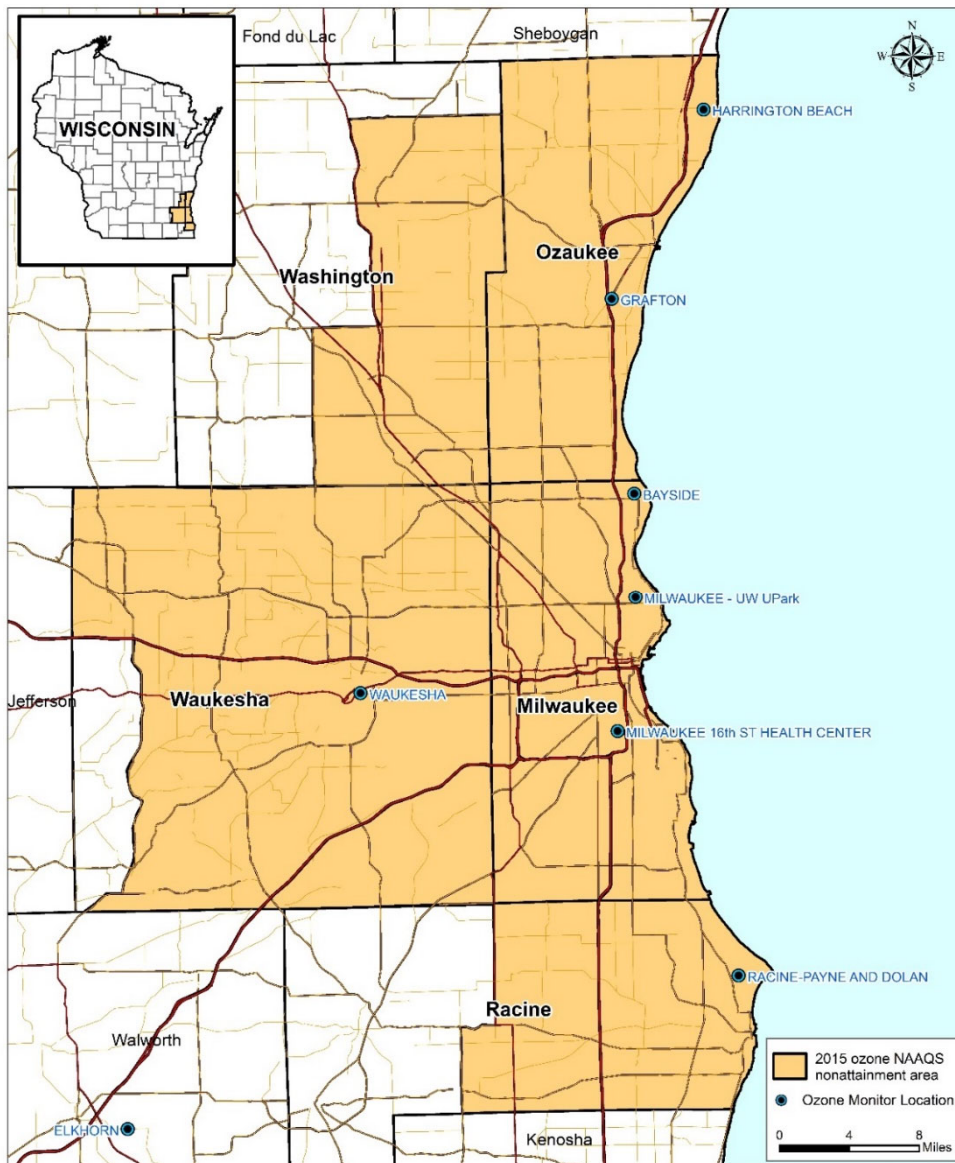
² This area was designated the “Northern Milwaukee/Ozaukee Shoreline, Wisconsin” nonattainment area.

³ This area was designated the “Milwaukee, Wisconsin” nonattainment area. This designation replaced the previous “Northern Milwaukee/Ozaukee Shoreline” area.

Description of the Nonattainment Area

The Milwaukee 2015 ozone NAAQS nonattainment area, as revised by the EPA in July 2021, consists of all of Milwaukee and Ozaukee counties and part of Racine, Washington, and Waukesha counties (Figure 1.1). The nonattainment area constitutes a large portion of the Milwaukee–Waukesha–West Allis (Milwaukee, Waukesha, Washington, and Ozaukee counties) and Racine (Racine County) metropolitan statistical areas. The 2020 population in the Milwaukee 2015 ozone nonattainment area was 1,702,222.

Figure 1.1. Map of the Milwaukee, Wisconsin 2015 ozone NAAQS nonattainment area, with locations of ozone monitors shown.



1.3. Overview of this Attainment Plan

The remainder of this attainment plan SIP submittal is structured as follows:

Section 2 provides the conceptual model for ozone formation in the Lake Michigan region, including the nonattainment area. This section describes how synoptic-scale and mesoscale meteorology combine to create high ozone along the Wisconsin lakeshore under certain conditions, which complicates state efforts to address nonattainment.

Section 3 presents base and future year inventories for the nonattainment area and describes how these inventories show that the state has met its requirements for reasonable future progress. This section also describes how permanent and enforceable emissions reduction measures have reduced ozone precursor emissions.

Section 4 summarizes the attainment modeling that was completed in support of this plan, as required by the CAA.

Section 5 presents air quality information and weight of evidence support. This includes analysis of trends in ozone and ozone precursor emissions, as well as meteorologically adjusted trends in ozone concentrations. This section also demonstrates the important roles that transport, meteorology and chemistry play in determining ozone concentrations in the nonattainment area.

Section 6 describes how the state has addressed all other moderate nonattainment area SIP requirements. These requirements include transportation conformity, RACT programs for NO_x and VOCs, RACM, a vehicle I/M program, and contingency measures.

Section 7 describes how the WDNR complied with the applicable public participation requirements.

Section 8 summarizes the conclusions of this submittal.

Collectively, this plan contains or otherwise addresses all moderate-area requirements required under the Clean Air Act for this nonattainment area.

2. OZONE DYNAMICS ALONG THE WISCONSIN LAKESHORE

2.1. Introduction

While ozone concentrations in the region have decreased dramatically due to implementation of an array of measures controlling emissions of ozone precursors, many states around Lake Michigan have areas that are in nonattainment of the 2015 ozone NAAQS. This discussion describes the complex dynamics that cause elevated ozone concentrations in the upper Midwest. These dynamics have been extensively studied for over three decades and are well documented.⁴

Wisconsin's lakeshore monitors most frequently measure ozone concentrations exceeding the ozone NAAQS from late May through early August. Ozone concentrations peak in the late spring and early summer because of the abundance of sunlight and heat, both of which drive ozone formation. In addition, strong land-lake temperature gradients in late spring and early summer drive lake breeze circulations, which contribute to high ozone concentrations, as discussed below.

The region's persistent ozone problems have been shown to be due to the unique meteorology of the Lake Michigan area. This meteorology causes transport of significant amounts of ozone and emissions of ozone precursors from upwind sources to lakeshore counties in Wisconsin and neighboring states. Two types of meteorological patterns have been shown to affect ozone concentrations in the region:

- 1) Synoptic scale meteorology⁵ transports high concentrations of ozone and ozone precursors northward from source regions to the south and southeast.
- 2) Mesoscale meteorology⁶ (via land-lake breeze circulation patterns) carries precursors over the lake, where they react to form ozone. Winds then shift to move the high ozone air onshore.

2.2. The Role of Synoptic-Scale Meteorology on High Ozone Days

Research has shown that high pressure systems can generate meteorological conditions favorable to elevated ozone as they move through the region from west to east during late May - early September. These systems are typified by hazy, sunny skies with generally weak, clockwise-rotating winds and relatively shallow mixing such that pollution concentrations are not diluted by mixing. These weather conditions contribute to the buildup of considerable amounts of ozone precursors and facilitate formation of ozone via photochemical reactions.

The location of surface high pressure systems is an important driver of ozone transport into the region. Research has shown that ozone episodes are generally associated with high pressure systems over the eastern U.S. that transport pollutants and precursors from the south and east

⁴ This discussion uses some vintage data to illustrate the science being described; however, the findings discussed in this section all still apply, as they have been extensively studied and documented over several decades.

⁵ Synoptic-scale meteorology refers to weather features of 24-48 hours' duration, whereas mesoscale meteorology refers to weather patterns of shorter duration.

into the region.^{6,7} One study estimated that 50% of Wisconsin's ozone exceedance days during 1980-1988 under the 1-hour ozone NAAQS occurred when the center of a high pressure system was situated southeast of the area (i.e., Ohio and east thereof).⁸ Under these circumstances, high ozone concentrations in the Lake Michigan region may result when polluted air from high emissions regions such as the Ohio River Valley is transported northward along the western side of a high pressure system.⁹ In addition, while emissions from the heavily industrialized Chicago and Milwaukee areas have decreased dramatically in recent decades, sources in these large metropolitan areas still generate significant ozone precursor emissions. Pollution from sources in these areas can add to the pool of pollution transported into the region.⁷

Figure 2.1 shows the synoptic scale weather pattern for one such episode, along with the resulting patterns in ozone concentrations. On this day, a high pressure system was located to the southeast, centered over Virginia. Southeasterly to southerly winds on the western side of this system carried pollutants from the Ohio River Valley to Lake Michigan. This episode shows a common pattern for ozone distributions on episode days: ozone concentrations were lowest in the regions with the highest emissions (in central Chicago and extending into northwestern Indiana) and the highest in rural coastal areas far downwind. During such classic transport episodes, peak ozone concentrations move northward over the course of the day. For example, on the day shown in Figure 2.2, ozone peaked at Wisconsin's southern Chiwaukee Prairie monitor between 11 a.m. and 1 p.m., at the Kohler Andrae monitor midway up the coast between 2 p.m. and 4 p.m., and at the northern Newport monitor between 4 p.m. and 6 p.m.

2.3. The Role of Mesoscale Meteorology on High Ozone Days

The synoptic meteorological conditions often work in combination with unique lake-induced mesoscale meteorological features to produce the highest ozone concentrations in this region. Wisconsin's ozone nonattainment areas are located along Lake Michigan. With a surface area of approximately 22,400 square miles, Lake Michigan acts as a huge heat sink during the warm months. Figure 2.2 highlights the considerable difference between the over-land air temperatures (measured at Racine, Wisconsin) and over-water air temperatures (measured at a buoy in southern Lake Michigan) during a 5-day ozone episode in June 2002. The strong daytime temperature contrast between the warm land and cold lake can lead to the formation of a thermally driven circulation cell called the lake breeze, which runs approximately perpendicular to the Lake Michigan shoreline (Figure 2.3). As this figure shows, the lake breeze is generally preceded by an early morning land breeze, driven by relatively warm temperatures over the lake. The land breeze can carry ozone precursors emitted from urban areas, primarily Chicago, out over the lake, where they can react to form ozone. The onshore flow of the lake breeze

⁶ Dye, T.S., P.T. Roberts, and M.E. Korc, 1995: Observations of transport processes for ozone and ozone precursors during the 1991 Lake Michigan Ozone Study. *J. App. Meteor.*, 34: 1877-1889.

⁷ Hanna, S.R., and J.C. Chang, 1995: Relations between meteorology and ozone in the Lake Michigan region. *J. Applied Meteorology*, 34: 670-678.

⁸ Haney, J.L., S.G. Douglas, L.R. Chinkin, D.R. Souten, C.S. Burton, and P.T. Roberts, 1989: Ozone Air Quality Scoping Study for the Lower Lake Michigan Air Quality Region, SAI report #SYSAPP-89/101, prepared for the EPA, August, 197 pp.

⁹ For example, Ragland, K. and P. Samson, 1977: Ozone and visibility reduction in the Midwest: evidence for large-scale transport. *J. Applied Meteorology*, 16: 1101-1106.

circulation then transports elevated ozone from over the lake onshore into southeastern Wisconsin.

Figure 2.1. Surface synoptic weather map for 6 a.m. CST (left) and MDA8 ozone concentrations (right) for the Lake Michigan region for June 19, 2016.

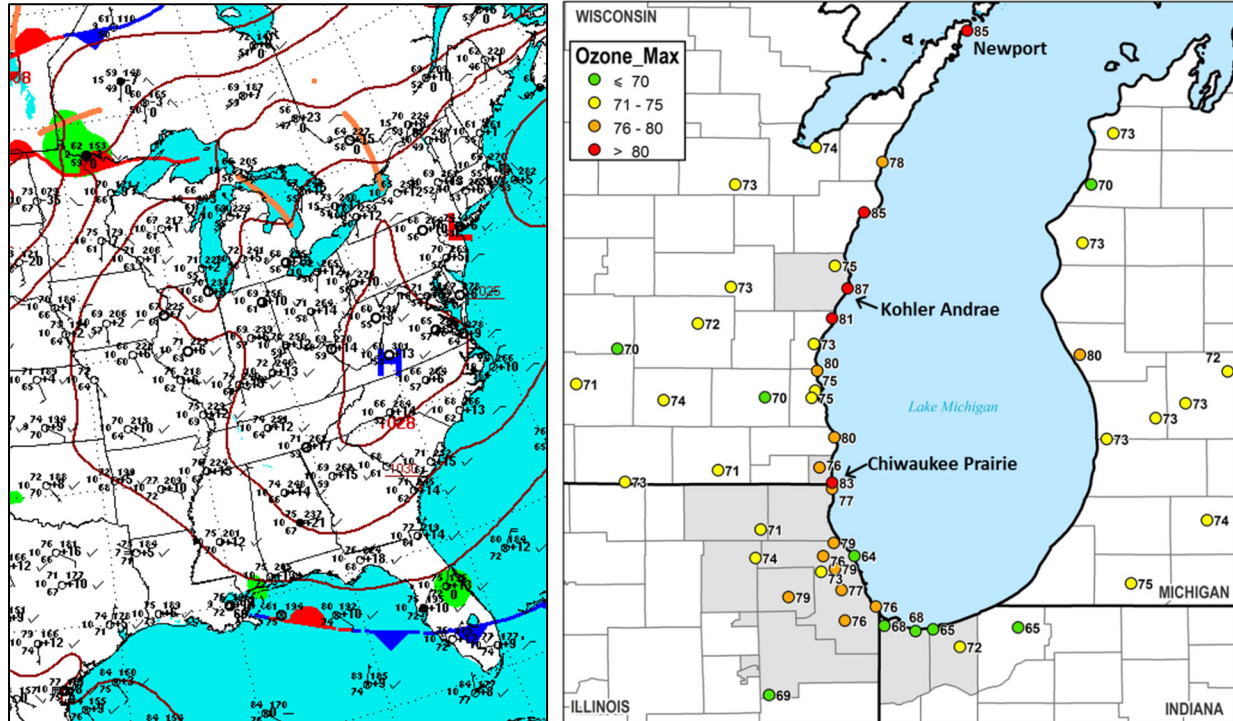


Figure 2.2. Hourly surface air temperatures at Racine, WI and the South Lake Michigan Buoy during June 20-25, 2002.

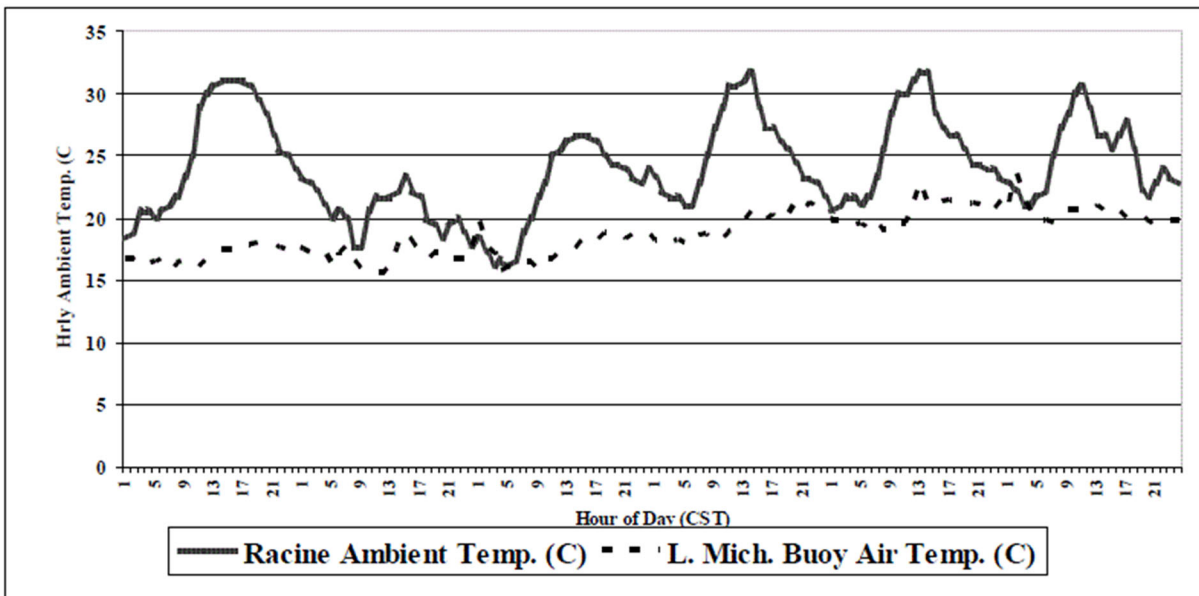
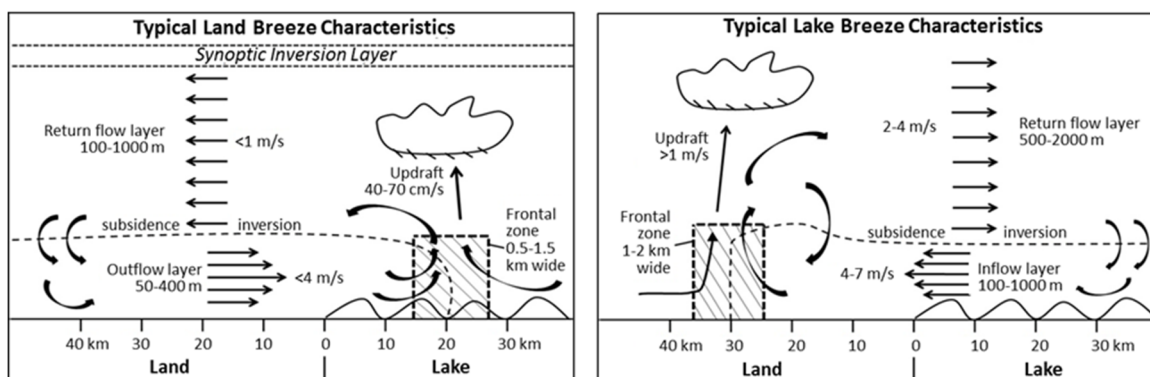


Figure 2.3. Diagrams of the early morning land breeze (left) and late morning/afternoon lake breeze circulations (right) responsible for enhanced ozone production along the Lake Michigan shoreline. Modified from Foley et al., 2011.¹⁰



2.4. Conceptual Model for Ozone Formation in the Lake Michigan Region

Synoptic and mesoscale meteorological patterns together drive ozone formation in the region, as described in a conceptual model in Dye et al. (1995).⁷ Dye et al. (1995) described this model with the following series of inter-related steps. This discussion focuses on the conditions impacting Wisconsin's shoreline:

- 1) A shallow but stable conduction inversion exists just above the relatively cold lake surface. During the early morning hours the land breeze and general offshore flow (i.e., southerly to west-southwesterly winds) transport ozone and fresh precursor emissions into the stable air in the conduction layer over Lake Michigan. A primary source region is the Chicago area, located at the southern edge of the lake.
- 2) By midmorning a sharp horizontal temperature gradient forms along the shoreline between the cold lake air and the increasingly warmer air over the land. This gradient effectively "cuts off" air in the conduction layer from additional injections of shore-emitted precursors. Strong stability in the conduction layer limits dispersion, creating high concentrations of ozone precursors, which can react in this layer.
- 3) By midmorning, the developing convective boundary layer (CBL) grows and the resulting convection mixes ozone vertically, where it combines with ozone transported from sources outside the region. Ozone concentrations in this air are lower due to the dilutive effects of convective mixing. As this air is transported lakeward, it is forced to flow up and over the conduction layer.
- 4) The ozone-rich air in both layers is transported northward over Lake Michigan by the prevailing winds. When a lake breeze is present, it produces southerly to south-

¹⁰ Foley, T., E. A. Betterton, P.E. R. Jacko, and J. Hillery, 2011: Lake Michigan air quality: The 1994-2003 LADCO Aircraft Project (LAP), Atmos. Env., 45: 3192-3202.

southeasterly winds along the western shore of Lake Michigan. This wind pattern transports the ozone originating from sources in the south to downwind receptor regions in eastern Wisconsin. On occasion, areas north of Ozaukee County experience elevated ozone levels as a southerly wind intercepts the shoreline where it extends into Lake Michigan.

- 5) When the ozone-laden air flows onshore in the downwind receptor regions, air with the highest ozone concentrations, located in the lowest 300 m, mixes down to the surface first. This causes the highest ozone concentrations to be found along the shoreline. Eventually, air from higher altitudes mixes down to the surface further inland, but ozone concentrations in this air are lower. This air mass is the remnant of the ozone-diluted CBL air that flowed up and over the conduction layer during the mid-morning hours.

This complex meteorology leads to the high ozone concentrations and persistent nonattainment issues faced by the counties along the Lake Michigan shoreline. The impact of this meteorology on the transport of ozone, NO_x, and VOCs to the Milwaukee area is discussed in more detail in Section 5.

3. EMISSIONS INVENTORIES AND DEMONSTRATION OF REASONABLE FURTHER PROGRESS

3.1. Introduction

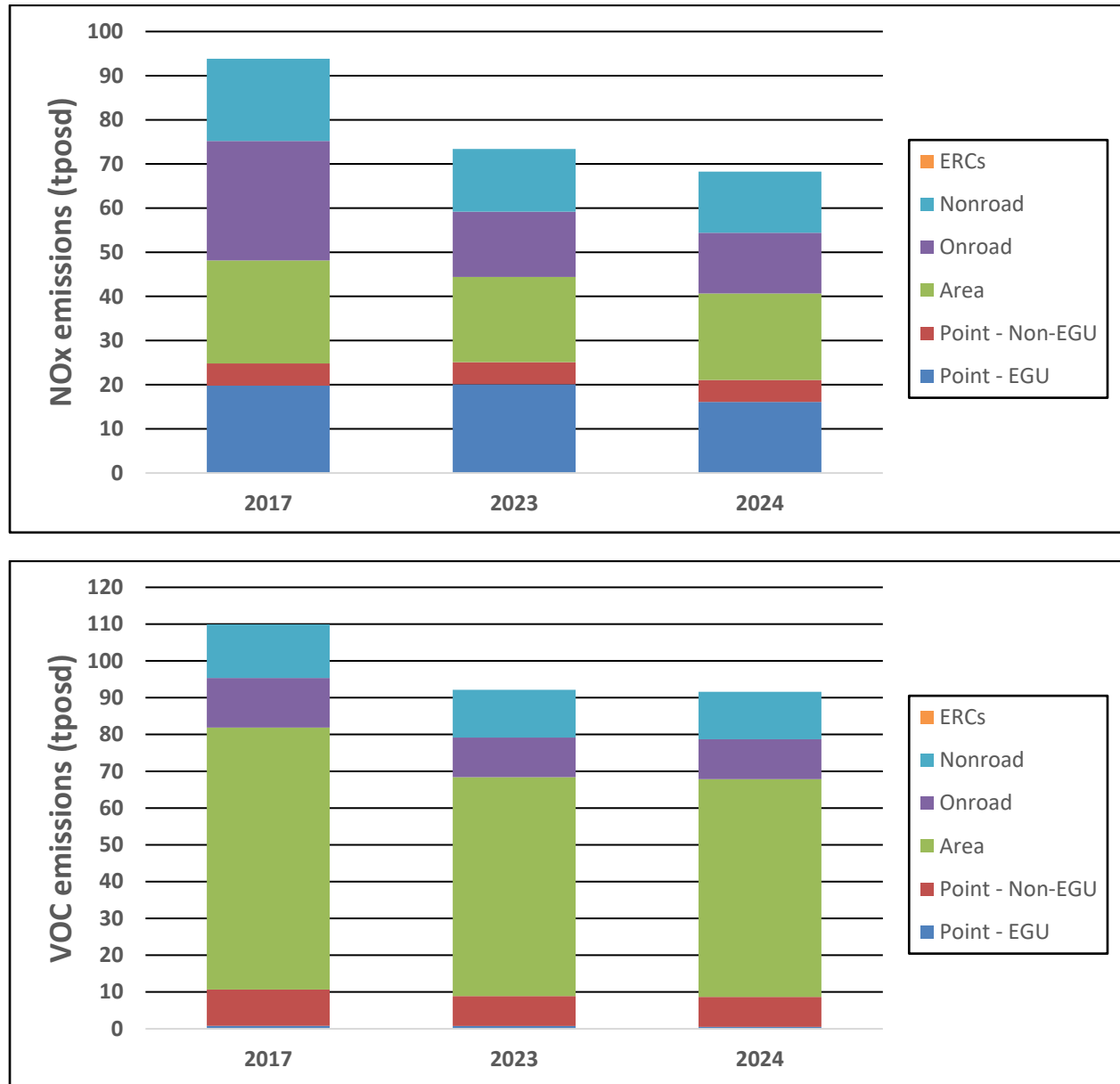
Sections 172(c)(2) and 182(b)(1) of the CAA require states with ozone nonattainment areas classified as moderate or higher to submit plans that show reasonable further progress (RFP) towards attaining the NAAQS. The EPA's SIP requirements rule for the 2015 ozone NAAQS defines RFP for moderate nonattainment areas as a demonstration that there has been at least a 15% emission reduction between the base year (2017) and the attainment year (2023). Because the Milwaukee nonattainment area has a previously approved 15% VOC rate of progress (ROP) plan (61 FR 11735), the 15% reduction requirement for the 2015 NAAQS can be satisfied with any combination of NO_x and VOC reductions. These reductions may come from any SIP-approved or federally promulgated measures implemented after the base year.

Table 3.1 and Figure 3.1 provide a summary of the emission inventories for NO_x and VOCs for the Milwaukee 2015 ozone NAAQS nonattainment area. Sections 3.2 and 3.3 present the emission inventories by emissions sector (i.e., point, area, onroad and nonroad) for this area for the base and projected years. These sections also include the supporting methodology used to develop the inventories. Sections 3.4 and 3.5 describe how the state has met its RFP and contingency emissions reduction requirements for the nonattainment area. Section 3.6 covers the enforceable control measures that led to the reductions in NO_x and VOC emissions.

Table 3.1. Summary of Milwaukee nonattainment area NO_x and VOC emissions, 2017-2024. Figures in tons per ozone season day.

Pollutant	2017	2023	2024
NO _x	93.84	73.41	68.28
VOC	109.93	92.16	91.59
TOTAL	203.77	165.57	159.87

Figure 3.1. Milwaukee nonattainment area NOx and VOC emissions by source type.



3.2. 2017 Base Year Inventory

The base year (2017) portion of the RFP requirement is a compilation of all anthropogenic sources of NOx and VOCs for an average ozone season day in 2017, incorporating all control programs in place at that time. The WDNR followed the EPA's requirements and guidance to prepare a comprehensive statewide emission inventory of NOx and VOC emissions for 2017. Appendix 1 includes a discussion of the methodology used to estimate sector-specific emissions for 2017 (shown in Table 3.2).

Table 3.2. Milwaukee nonattainment area NOx and VOC emissions for base year 2017.

Figures in tons per ozone season day.

County	Pollutant	Point EGU	Point Non-EGU	Area	Onroad	Nonroad	ERCs	Total
Milwaukee	NOx	18.74	2.05	10.78	13.26	7.38	0	52.21
Ozaukee	NOx	1.03	0.76	1.49	1.87	2.51	0	7.67
Racine (p)	NOx	0	0.63	2.40	2.49	1.90	0	7.42
Washington (p)	NOx	0	0.32	1.46	1.94	1.38	0	5.10
Waukesha (p)	NOx	0	1.29	7.18	7.49	5.49	0	21.44
TOTAL	NOx	19.77	5.05	23.31	27.06	18.65	0	93.84
Milwaukee	VOC	0.65	4.76	34.33	6.73	6.19	0	52.66
Ozaukee	VOC	0.16	0.47	4.72	0.88	1.08	0	7.31
Racine (p)	VOC	0	1.38	7.05	1.25	0.98	0	10.66
Washington (p)	VOC	0	0.49	6.04	0.89	1.02	0	8.42
Waukesha (p)	VOC	0	2.75	19.09	3.72	5.31	0	30.88
TOTAL	VOC	0.81	9.85	71.23	13.46	14.58	0	109.93

3.3. 2023 & 2024 Projected Inventories

The WDNR developed emissions information to satisfy requirements to submit an attainment year (2023) inventory for NOx and VOCs. Appendix 2 includes information on sector-specific emissions projection methodology. The same approaches were used to project emissions for 2024, which was used to assess attainment contingency requirements. Tables 3.3 and 3.4 show the projected NOx and VOC emissions (in tpsod) in 2023 and 2024 by sector.

Table 3.3. Milwaukee nonattainment area NOx and VOC emissions for attainment year 2023. Figures in tons per ozone season day.

County	Pollutant	Point EGU	Point Non-EGU	Area	Onroad	Nonroad	ERCs	Total
Milwaukee	NOx	19.15	1.93	9.29	7.21	5.64	0	43.21
Ozaukee	NOx	0.96	0.44	1.04	1.03	1.65	0	5.11
Racine (p)	NOx	0	0.69	1.86	1.41	1.44	0	5.39
Washington (p)	NOx	0	0.36	1.24	1.06	1.16	0	3.82
Waukesha (p)	NOx	0	1.56	5.89	4.10	4.32	0	15.88
TOTAL	NOx	20.11	4.97	19.31	14.80	14.21	0	73.41
Milwaukee	VOC	0.68	3.87	28.90	5.26	5.49	0	44.20
Ozaukee	VOC	0.06	0.25	4.17	0.72	0.95	0	6.15
Racine (p)	VOC	0	1.23	5.87	1.03	0.87	0	8.99
Washington (p)	VOC	0	0.45	5.28	0.73	0.95	0	7.42
Waukesha (p)	VOC	0	2.34	15.30	3.03	4.73	0	25.40
TOTAL	VOC	0.74	8.14	59.51	10.77	12.99	0	92.16

* Includes projections of emissions for both existing sources and new/modified sources.

Table 3.4. Milwaukee nonattainment area NOx and VOC emissions for contingency year 2024. Figures in tons per ozone season day.

County	Pollutant	Point EGU	Point Non-EGU	Area	Onroad	Nonroad	ERCs	Total
Milwaukee	NOx	15.15	1.93	9.46	6.68	5.54	0	38.75
Ozaukee	NOx	0.96	0.44	1.05	0.95	1.56	0	4.97
Racine (p)	NOx	0	0.69	1.87	1.31	1.41	0	5.27
Washington (p)	NOx	0	0.36	1.25	0.98	1.14	0	3.73
Waukesha (p)	NOx	0	1.56	5.96	3.81	4.21	0	15.55
TOTAL	NOx	16.10	4.97	19.60	13.74	13.86	0	68.28
Milwaukee	VOC	0.47	3.87	28.60	5.26	5.46	0	43.67
Ozaukee	VOC	0.06	0.25	4.19	0.72	0.94	0	6.16
Racine (p)	VOC	0	1.23	5.84	1.04	0.86	0	8.97
Washington (p)	VOC	0	0.45	5.27	0.74	0.94	0	7.41
Waukesha (p)	VOC	0	2.34	15.30	3.05	4.69	0	25.38
TOTAL	VOC	0.53	8.14	59.20	10.82	12.90	0	91.59

* Includes projections of emissions for both existing sources and new/modified sources.

3.4. Demonstration of Reasonable Further Progress

Because the Milwaukee 2015 ozone NAAQS nonattainment area already met the 15% VOC rate of progress requirement when addressing a prior ozone NAAQS, the required 15% RFP reduction for this plan can come from any combination of NOx and VOC reductions occurring between 2017 and 2023.

Table 3.5 compares actual emissions from 2017 to emission estimates for the attainment year (2023) for the Milwaukee 2015 ozone NAAQS nonattainment area. As shown in the table, NOx emissions are projected to decrease by 22% and VOC emissions are projected to decrease by 16%. The combined reductions exceed 15%, thereby satisfying RFP requirements for this area (line G).

3.5. Demonstration of Contingency Reduction

The state must also include contingency measures representing one year of emissions reduction progress, equivalent to 3% of base year VOC emissions. As with RFP, contingency measure reductions can come from any combination of NOx and VOC emissions. These measures must be implemented within one year of an area failing to attain the NAAQS by its attainment date (in this case, 2024). This requirement is discussed further in Section 6.7.

Tables 3.5 shows that, from 2023 to 2024, NOx and VOC emissions are expected to decrease an additional 5.75 tpsod, which exceeds the calculated 3% contingency amount (lines H through L). The contingency measure reduction target is therefore met for this area (line M).

Further, these contingency emission reductions are due to permanent and enforceable control measures enacted within the nonattainment area on point, area, and mobile source NOx and VOC emissions described in detail in Section 3.6, below.

Table 3.5. Demonstration of 15% RFP requirement and contingency measure reductions.
Figures in tons per ozone season day.

Step	Description	Formula	NO _x	VOC
A	2017 base year inventory		93.84	109.93
B	RFP reductions totaling 15%		12%	3%
C	Emissions reductions required between base and attainment year	$A * B$	11.26	3.30
D	RFP target level of 2023	$A - C$	82.58	106.63
E	2023 projected emissions		73.41	92.16
F	Percentage reduction from 2017		22%	16%
G	Compare RFP target with projected 2023 emissions. Are RFP requirements met?	$E < \text{or} = D?$	Yes	Yes
H	Contingency percentage (3% of base year VOCs)			3%
I	Contingency reduction amount	$A * H$	3.30	
J	2024 projected emissions		68.24	91.59
K	Emissions reductions between 2023 and 2024	$E - J$	5.17	0.57
L	Combined NO _x +VOC reductions between 2023 and 2024	Total of K	5.74	
M	Compare contingency measures target with projected 2024 emissions. Is contingency measure target met?	$L > \text{or} = I?$	Yes	Yes

3.6. Control Strategies for Ozone Precursor Emissions

This section documents the permanent and enforceable control measures that reduced NO_x and VOC emissions in the Milwaukee 2015 ozone NAAQS nonattainment area. Many of the control measures have been implemented under programs that began before 2017.¹¹ These measures will continue to contribute to emissions reductions that will support attainment of the NAAQS in this area. However, this discussion highlights those control measures and emission reductions that have occurred since 2017. Other federal control programs reducing emissions in both the larger nonattainment area and transport regions are also discussed.

3.6.1. Point Source Control Measures

NO_x Reasonably Available Control Measures (RACM) and Reasonably Available Control Technology (RACT)

Wisconsin implemented RACM for NO_x sources in the state's nonattainment areas for the 1997 ozone NAAQS. This area included the Milwaukee 2015 ozone NAAQS nonattainment area. The NO_x RACM requirements are codified under ss. NR 428.01 to 428.12, Wis. Adm. Code, and apply to new and existing NO_x emissions units located in southeastern Wisconsin. Section NR 428.04, Wis. Adm. Code, lists NO_x performance standards for the NO_x emissions units that are constructed or modified after February 1, 2001, and have design capacities greater than the capacity thresholds listed in this provision. Section NR 428.05 includes NO_x performance standards for NO_x emissions units constructed on or before February 1, 2001, that exceed the provision's capacity threshold. All emissions units subject to this section are required to install continuous emissions monitoring equipment to demonstrate compliance with the NO_x emissions limit specified in this rule.

Wisconsin has also implemented RACT for major NO_x sources in nonattainment areas in southeastern Wisconsin to meet requirements for the 1997 ozone NAAQS. This area is inclusive of the entire Milwaukee 2015 ozone NAAQS nonattainment area. Section 6.1 includes details about Wisconsin's NO_x RACT program.

In 2023 there were 3,833 tons of NO_x from EGUs, and 1,426 tons of NO_x from other (non-EGU) emission units in the Milwaukee 2015 ozone NAAQS nonattainment area (Table 3.6). There was a 12% reduction in point source annual NO_x emissions in the nonattainment area from 2017 to 2023, and annual point source NO_x emissions have decreased by 51% since 2008 (Table 3.6). These reductions are the result of abovementioned NO_x RACT and RACM programs, as well as federal emissions standards (e.g., new source performance standards), consent decrees, and NNSR permitting.

¹¹ Section 5.3 shows emission trends extending back to 2002, with reductions over that period due in part to these control measures.

Table 3.6. NO_x emissions and requirements for point sources in the Milwaukee nonattainment area, 2008-2023

Facility	Emissions/ Number of Units	2008	2017	2023	Change 2017 – 2023	Permanent and Enforceable Control Measures
We Energies – Oak Creek Power Plant (FID 241007690)	Annual NO _x Emissions (TPY)	4,979	3,988	3,303	-17%	Consent Decree No. 03-C-0371, NO _x RACT
We Energies – Valley Power Plant (FID 241007800)	Annual NO _x Emissions (TPY)	3,106	254	245	-3.7%	Consent Decree No. 03-C-0371, NO _x RACT
We Energies – Port Washington Power Plant (FID 246004000)	Annual NO _x Emissions (TPY)	129	229	287	25%	NO _x RACT
Other NO _x Emissions Units	Annual NO _x Emissions (TPY)	2,469	1,474	1,426	-3.3%	-NO _x RACM -Emissions units become subject to NO _x RACT if facilities exceed major source threshold
	Number of Units	1,128	982	881	-10%	
Total NO_x Emissions (TPY)		10,684	5,945	5,259	-12%	

Federal NO_x Transport Rules

EGUs in 23 states east of the Mississippi, including Wisconsin, have been subject to a series of federal ozone transport rules since 2009. These rules have included the Clean Air Interstate Rule, the Cross State Air Pollution Rule (CSAPR), the CSAPR Update Rule and the Revised CSAPR Update Rule. These rules have reduced NO_x emissions in and around the Milwaukee 2015 ozone NAAQS nonattainment area.

Beginning January 1, 2009, EGUs in 22 states (including Wisconsin) became subject to ozone season NO_x emission budgets under CAIR. CAIR addressed CAA transport requirements for the 1997 ozone NAAQS. For the three states contributing most to the Milwaukee 2015 ozone NAAQS nonattainment area ozone concentrations (Illinois, Indiana, and Wisconsin), CAIR resulted in a 35% reduction of total EGU NO_x emissions across the three states during the ozone season over the 2009-2014 period (Table 3.7).

Starting with the 2015 ozone season, CSAPR replaced CAIR to reduce interstate NO_x transport relative to the 1997 ozone NAAQS. CSAPR implemented NO_x budgets for the impacted states in two phases. Phase I limited NO_x emissions in 2015 and 2016.

The EPA published the CSAPR Update (81 FR 74504) in 2016 to address NO_x transport affecting the attainment and maintenance of the 2008 ozone NAAQS (79 FR 16436). The

CSAPR Update established Phase II NO_x budgets starting with the 2017 ozone season. On April 30, 2021, the EPA promulgated the Revised CSAPR Update rule in order to fully address 21 states' outstanding interstate pollution transport obligations for the 2008 ozone NAAQS (86 FR23054). This rule further reduced EGU NO_x emissions in 12 states starting in the 2021 ozone season. For the three-state area of Illinois, Indiana, and Wisconsin, these CSAPR rules (CSAPR, CSAPR Update and Revised CSAPR Update) resulted in a 39% reduction of total EGU NO_x emissions across the three states during the ozone season over the 2014-2017 period, and a 54% reduction over the 2017-2023 period (Table 3.7).

On June 5, 2023, the EPA published the Good Neighbor Plan (GNP) to address 23 states' interstate pollution transport obligations for the 2015 ozone NAAQS (88 FR 36654). On February 16, 2024, the EPA proposed a supplemental rule to address transport requirements for an additional five states (89 FR 12703). These rules are intended to reduce EGU NO_x emissions in starting in the 2023 ozone season and reduce non-EGU NO_x emissions in many states starting in the 2026 ozone season. Implementation of the GNP is currently stayed and no emissions reductions from any EPA transport rule for the 2015 NAAQS are reflected in this attainment plan.

Table 3.7. EGU NO_x emissions under the CAIR and CSAPR programs in Illinois, Indiana, and Wisconsin.

State	Ozone Season NO _x Emissions (Tons)				Percent Reduction		
	2008	2014	2017	2023	2008-2014	2014-2017	2017-2023
Illinois	31,106	18,489	13,039	5,365	41%	29%	59%
Indiana	53,016	40,247	20,396	8,694	24%	49%	57%
Wisconsin	19,951	9,087	8,103	5,198	55%	11%	36%
Total	104,073	67,823	41,538	19,257	35%	39%	54%

Source: EPA Clean Air Markets Program Data (CAMPD), database of reported emissions, for 2008-2023 ozone season emissions.

Point Source VOC Control Measures

In 2023, non-combustion processes accounted for the majority (83%) of total VOC emissions in the Milwaukee 2015 ozone NAAQS nonattainment area (Table 3.8). On a county level, non-combustion processes accounted for 75% to 94% of VOC emissions from within the five-county nonattainment area. Examples of non-combustion processes include printing, coating, painting, and storage tank emissions. Combustion processes related to boilers, process heaters, and reciprocating engines, accounted for the remaining 17% of the area's VOC emissions in 2023.

Sources of VOC emissions in the Milwaukee 2015 ozone NAAQS nonattainment area are subject to source-specific NESHAP requirements and/or VOC RACT rules, as applicable.¹²

Table 3.8. Process-level VOC emissions from the Milwaukee nonattainment area in 2023.

Area	Combustion Processes (2023 tons)	Non-Combustion Processes (2023 tons)
Milwaukee County	323	1,002
Ozaukee County	22	67
Racine County (p)	26	337
Washington County (p)	19	111
Waukesha County (p)	39	626
Total	429	2,142
Percent of total	17%	83%

VOC RACT Rules

Non-combustion activities or processes in the Milwaukee 2015 ozone NAAQS nonattainment area are subject to Wisconsin VOC RACT rules. Section 6.2 includes details about VOC RACT program implementation in this nonattainment area.

Federal NESHAP Rules

Several federal NESHAP rules have been implemented to control hazardous pollutants. These rules include requirements to control hazardous organic pollutants through ensuring complete combustion of fuels or implementing requirements for emissions of total hydrocarbons. Under either approach, the rules act to reduce total VOC emitted by the affected sources. These NESHAP rules apply to both major and area source facilities. Major sources are those facilities emitting more than 10 tons per year of a single hazardous air pollutant or more than 25 tons per year of all hazardous air pollutants in total. Area sources are those facilities that emit less than the major source thresholds for hazardous air pollutants.

NESHAP requirements apply to sources within the Milwaukee 2015 ozone NAAQS nonattainment area but also apply nationally, thereby reducing the transport of VOC emissions into the nonattainment area. The NESHAP rules that may have contributed to reductions in point source VOC emissions include:

- *Major Source ICI Boiler and Process Heater NESHAP* – On March 21, 2011, the EPA promulgated the “National Emission Standards for Hazardous Air Pollutants for Major

¹² Non-combustion and combustion processes are subject to either major source or area source NESHAP emission requirements based on size thresholds. The applicability of requirements and exemptions for each process has not been determined for purposes of this assessment. Natural gas-fired boilers and processes at area sources are not subject to NESHAP requirements.

Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters” under part 63 subpart DDDDD. This NESHAP requires all boilers and process heaters, including natural gas fired units, at major source facilities to perform an initial energy assessment and perform periodic tune-ups by January 31, 2016. This action is intended to ensure complete combustion.

- *Area Source (non-major point sources) ICI Boiler and Process Heater NESHAP* – On March 21, 2011, the EPA promulgated the “National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers” under part 63 subpart JJJJJ. This NESHAP requires solid fuel and oil fuel fired boilers operated by sources that are below the major source threshold to begin periodic combustion tuning by March 21, 2014.
- *Internal Combustion Engine Rules* – The EPA has promulgated three rules which limit the total amount of hydrocarbon emissions from internal combustion engines - the “National Emission Standards for Hazardous Pollutants for Reciprocating Internal Combustion Engines” (RICE MACT) was promulgated on June 15, 2004 under Part 63, subpart ZZZZ and revised in January 2008 and March 2010, with the two revisions impacting additional RICE units; the “Standards of Performance for Stationary Spark Ignition Internal Combustion Engines” promulgated on January 18, 2008 under Part 60, subpart JJJJ; and “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines” promulgated on July 11, 2006 under Part 60, subpart IIII. These rules implement hydrocarbon emission limitations prior to and after 2011 based on compliance dates. These rules also act to continuously reduce emissions as existing stationary engines are replaced by new, cleaner-burning engines.

3.6.2. Area Source Control Measures

As noted for point sources, Wisconsin has implemented VOC RACT rules under chs. NR 420 through 423, Wis. Adm. Code, that are aligned with the EPA’s CTGs. Wisconsin has also adopted VOC limits for source categories not covered by CTGs throughout chs. NR 419 through 424, Wis. Adm. Code. In addition, VOC emissions standards for consumer and commercial products also limited VOC emissions from area sources, as did NESHAPs for gasoline distribution (Stage I vapor recovery requirements) and area source ICI boilers.

Wisconsin previously had a Stage 2 vehicle refueling vapor recovery program in place. However, this program was removed from Wisconsin’s ozone SIP on November 4, 2013 (78 FR 65875) because the equipment was found to defeat onboard vapor recovery systems for some new vehicles.

There are also federal programs in place which reduce area source VOC emissions. VOC emission standards for consumer and commercial products were promulgated under 40 CFR Part 59. This program was implemented prior to 2017 and will continue to reduce VOCs emitted from this sector. Two other federal rules, the NESHAPs for gasoline distribution (Stage I vapor recovery requirements) and area source ICI boilers, also control area source VOC emissions associated with fuel storage and transfer activities.

3.6.3. Onroad Source Control Measures

Both NO_x and VOC emissions from onroad mobile sources are substantially controlled through federal new vehicle emissions standards programs and fuel standards. Although initial compliance dates in many cases were prior to 2017, these regulations have continued to reduce area-wide emissions as fleets turn over to newer vehicles. These programs apply nationally and have reduced emissions both within the Milwaukee 2015 ozone NAAQS nonattainment area and contributing ozone precursor transport areas. The federal programs contributing to attainment of the 2015 ozone NAAQS include those listed in Table 3.9.

The EPA has recently finalized a series of updated mobile source rules that will further reduce emissions from this sector. However, since those reductions will occur in the future and after the moderate attainment date for this NAAQS, no emissions reductions from those and other mobile source programs (e.g., from the Inflation Reduction Act) implemented after 2023 are reflected in this attainment plan.

Table 3.9. Federal onroad mobile source regulations contributing to attainment.

Onroad Control Program	Pollutants	Model Year ¹	Regulation
Passenger vehicles, SUVs, and light duty trucks – emissions and fuel standards	VOC & NO _x	2004 – 2009+ (Tier 2) 2017+ (Tier 3)	40 CFR Part 85 & 86
Light-duty trucks and medium duty passenger vehicle – evaporative standards	VOC	2004 – 2010	40 CFR Part 86
Heavy-duty highway compression engines	VOC & NO _x	2007+	40 CFR Part 86
Heavy-duty spark ignition engines	VOC & NO _x	2005 – 2008+	40 CFR Part 86
Motorcycles	VOC & NO _x	2006 – 2010 (Tier 1 & 2)	40 CFR Part 86
Mobile Source Air Toxics – fuel formulation, passenger vehicle emissions, and portable container emissions	Organic Toxics & VOC	2009 - 2015 ²	40 CFR Part 59, 80, 85, & 86
Light duty vehicle corporate average fuel economy (CAFE) standards	Fuel efficiency (VOC and NO _x)	2012-2016 & 2017-2025	40 CFR Part 600

¹ The range in model years affected can reflect phasing of requirements based on engine size or initial years for replacing earlier tier requirements.

² The range in model years reflects phased implementation of fuel, passenger vehicle, and portable container emissions requirements as well as the phasing by vehicle size and type.

The CAA has required the use of reformulated gasoline (RFG) in the southeast Wisconsin counties of Kenosha, Milwaukee, Ozaukee, Racine, Washington, Waukesha since 1995 (42 U.S.C. 7545(k)(10)(D)). RFG is blended to burn more cleanly than conventional gasoline and offers incremental emissions reductions as newer vehicles replace older vehicles. For example, in 2022, RFG reduced emissions of VOCs by 7.3% and NO_x by 6.0% from gasoline-powered onroad vehicles in this six-county area.¹³

¹³ When compared to conventional gasoline use. Calculated using MOVES3.0.3.

Wisconsin's enhanced I/M program also limits on-road VOC and NO_x emissions from onroad sources and is required within the Milwaukee 2015 ozone NAAQS nonattainment area. Section 6.5 includes a description of the I/M program.

3.6.4. Nonroad Source Control Measures

VOC and NO_x emitted by nonroad mobile sources are significantly controlled via federal standards for new engines. These programs therefore reduce ozone precursor emissions generated within the Milwaukee 2015 ozone NAAQS nonattainment area and in the broader regional areas contributing to ozone transport. Table 3.10 lists the nonroad source categories and applicable federal regulations. The nonroad regulations continue to slowly lower average unit and total sector emissions as equipment fleets are replaced each year (approximately 20 years for complete fleet turnover) pulling the highest emitting equipment out of circulation or substantially reducing its use. The new engine tier requirements are implemented in conjunction with fuel programs regulating fuel sulfur content. The fuel programs enable achievement of various new engine tier VOC and NO_x emission limits. The RFG program also contributes to lower NO_x and VOC emissions from the nonroad mobile sector.

Table 3.10. Federal nonroad mobile source regulations contributing to attainment.

Nonroad Control Program	Pollutants	Model Year ¹	Regulation
Aircraft	HC & NO _x	2000 – 2005+	40 CFR Part 87
Compression Ignition ²	NMHC & NO _x	2000 – 2015+ (Tier 4)	40 CFR Part 89 & 1039
Large Spark Ignition	HC & NO _x	2007+	40 CFR Part 1048
Locomotive Engines	HC & NO _x	2012 – 2014 (Tier 3) 2015+ (Tier 4)	40 CFR Part 1033
Marine Compression Ignition	HC & NO _x	2012 – 2018	40 CFR Part 1042
Marine Spark Ignition	HC & NO _x	2010+	40 CFR Part 1045
Recreational Vehicle ³	HC & NO _x	2006 – 2012 (Tier 1 – 3) (phasing dependent on vehicle type)	40 CFR Part 1051
Small Spark Ignition Engine ⁴ < 19d Kw – emission standards	HC & NO _x	2005 – 2012 (Tier 2 & 3)	

HC – Hydrocarbon (VOCs)

NMHC – Non-Methane Hydrocarbon (VOCs)

¹ The range in model years affected can reflect phasing of requirements based on engine size or initial years for replacing earlier tier requirements.

² Compression ignition applies to diesel non-road compression engines including engines operated in construction, agricultural, and mining equipment.

³ Recreational vehicles include snowmobiles, off-road motorcycles, and ATVs

⁴ Small spark ignition engines include engines operated in lawn and hand-held equipment.

4. ATTAINMENT MODELING

Section 182(j) of the CAA requires that photochemical grid modeling be used to demonstrate attainment in multistate ozone nonattainment areas. In this plan, the WDNR is including modeling conducted by the Lake Michigan Air Directors Consortium (LADCO) to satisfy this requirement for the Milwaukee 2015 ozone NAAQS moderate nonattainment area.

4.1. Overview

In 2022 LADCO completed air quality modeling to support the development of attainment demonstration SIPs for 2015 ozone NAAQS moderate nonattainment areas for its member states. The resulting technical support document (TSD) includes an ozone trends analysis, air quality modeling platform description, base and future year emissions summary, chemical transport modeling evaluation, attainment testing, and source apportionment analysis. The TSD is included as Appendix 9 to this document. This section summarizes the methods and results of that analysis.¹⁴

LADCO's modeling used the Comprehensive Air Quality Model with Extensions (CAMx) v7.10. Because the attainment deadline occurs during the 2024 ozone season, the effective year for attainment is the 2023 ozone season. Therefore, LADCO selected 2023 as the projection year for this modeling effort. LADCO used 2016 as the base modeling year from which it projected air quality for 2023.

The modeling's 2023 ozone air quality and attainment forecasts were based on meteorological modeling that was optimized for conditions around the Great Lakes. LADCO used the EPA's 2016fh_16j emissions modeling platform data (2016v1), and other CAMx modeling platform inputs released by the EPA in September 2019 for this application. LADCO replaced the EGU emissions in the EPA 2016fh_16j platform with 2023 EGU forecasts estimated with the ERTAC EGU Tool version 16.2 beta. Overall, both the NO_x and VOC ozone season emissions are projected to decrease in 2023 relative to 2016 in all LADCO states, including Wisconsin.

LADCO's modeling differs from contemporaneous EPA ozone modeling¹⁵ in that LADCO relies upon different emissions data and, especially, a photochemical modeling configuration optimized to best reflect ground-level ozone formation in the Great Lakes region. However, the LADCO and EPA modeling efforts are consistent in their core respects and give similar results. The LADCO TSD includes a full model performance evaluation and a discussion of the differences between the EPA and LADCO modeling.

¹⁴ All technical files associated with this modeling are publicly available on LADCO's website: <https://www.ladco.org/technical/ladco-internal/ladco-projects/ladco-2015-o3-naaqs-moderate-area-sip-technical-support-document/>.

¹⁵ See, for example, modeling completed by the EPA for both the proposed and final Good Neighbor Plan rule for the 2015 ozone NAAQS (2016v2 and 2016v3 platform modeling), available at: <https://www.epa.gov/Cross-State-Air-Pollution/good-neighbor-plan-2015-ozone-naaqs>.

4.2. Modeling Results

An attainment demonstration based on air quality modeling is used to determine whether identified emission reduction measures are enough to reduce projected pollutant concentrations to a level that meets the NAAQS by the statutory deadline established by the EPA.

LADCO estimated 2023 design values using version 1.6 of the Software for Modeled Attainment Test Community Edition (SMAT-CE) using the EPA’s recommended approach and guidance.¹⁶ This software computes the fractional changes, or relative response factors, of ozone concentrations at each monitor location based on a comparison of the modeled air quality in the base and future years. Meteorological conditions are assumed to be unchanged for the base and projection years. Modeled relative reduction factors are then applied to a weighted baseline 2017 design value, which is determined by averaging three successive three-year design values centered on 2017 (i.e., 2015-2017, 2016-2018, 2017-2019). The resulting estimates of design values in 2023 can then be compared to the level of the NAAQS to assess attainment.

Table 4.1 gives the results of this modeling for the attainment year of 2023 for all monitors in the Milwaukee 2015 ozone NAAQS nonattainment area. As indicated by the table, all monitoring locations in the nonattainment area were projected to meet the 2015 ozone NAAQS in 2023, with projected design values ranging from 60 ppb (Waukesha) to 69 ppb (Racine). This modeling therefore predicted that the Milwaukee area would attain the 2015 ozone NAAQS of 70 ppb by 2023.

Table 4.1. Modeled 2023 ozone design values for the Milwaukee nonattainment area.*

Site #	Monitor name	County	Modeled 2023 design value (ppb)
550790010	Milwaukee-16th St	Milwaukee	61.0
550790026	Milwaukee-SER DNR	Milwaukee	63.1
550790085	Bayside	Milwaukee	66.5
550890008	Grafton	Ozaukee	66.0
550890009	Harrington Beach	Ozaukee	68.7
551010020	Racine-Payne & Dolan	Racine	69.5
551330027	Waukesha	Waukesha	60.5

* From LADCO’s modeling TSD for the 2015 ozone standard, Table 6-1 (“2023 DVF Average” values), as well as LADCO’s attainment test results, which can be found on LADCO’s website (https://www.ladco.org/wp-content/uploads/Projects/Ozone/ModerateTSD/LADCO_2016bcc2_2023_O3_DVs_25May2022.xlsx). Design values are average 2023 values calculated from the LADCO 4-km CAMx modeling with water cells included in the 3x3 matrix surrounding each monitor. The TSD contains a complete explanation of results.

However, as will be discussed in Section 5, the area’s actual design values in 2023 exceeded the NAAQS (Table 5.1). The WDNR has included additional information in Section 5 describing

¹⁶ See https://www3.epa.gov/ttn/scram/guidance/guide/O3-PM-RH-Modeling_Guidance-2018.pdf. As discussed in Section 5, a design value is the three-year average of the annual fourth highest 8-hour averaged daily ozone value.

how ozone-causing emissions continue to decrease in Wisconsin but, due to emissions transported from out of state, the Milwaukee area has not yet attained the standard.

5. AIR QUALITY AND WEIGHT OF EVIDENCE ANALYSES

5.1. Introduction

The EPA recommends that states submit supplemental analyses in support of any attainment plan. These analyses are intended to provide additional support for the required modeled attainment assessment. Such supplemental analyses are part of a “weight of evidence” showing that an area will attain a standard. This section presents trends in ambient ozone and ozone precursor concentrations and forms the core of such a showing relative to the Milwaukee 2015 ozone NAAQS nonattainment area.

Ozone concentrations in the Milwaukee area are largely determined by a number of factors that are outside of the state’s control. Crucially, much of the ozone measured in Milwaukee comes from transported ozone and ozone precursors originating in upwind states. Wisconsin sources that impact the area are already well-controlled and contribute very little to the elevated ozone concentrations. Modeling conducted by both LADCO and the EPA confirms that Wisconsin has limited ability to further reduce ozone concentrations in this area.

5.2. Air Quality Data and Trends

5.2.1. Trends in Monitored Ozone Concentrations

Section 110(a)(2)(B) of the CAA requires a monitoring strategy for measuring, characterizing, and reporting ozone concentrations in the ambient air. The WDNR maintains a comprehensive network of air quality monitors throughout the state with the primary objective of being able to determine compliance with NAAQS.¹⁷ Wisconsin conducts seasonal monitoring of ambient ozone concentrations from April 1 through October 15.¹⁸

The current ozone monitoring network in the Milwaukee nonattainment area is depicted in Figure 1.1. There are seven monitors measuring ozone concentrations in the area, all of which are used to determine compliance with the 2015 ozone NAAQS.

An exceedance of an 8-hour ozone NAAQS occurs when a monitor measures ozone concentrations above the standard. A violation occurs when the three-year average of the annual fourth highest 8-hour averaged daily ozone level is greater than a standard. This three-year average is termed the “design value” for the monitor. The design value for a nonattainment area is derived from the monitor with the highest design value.

Table 5.1 shows ozone ambient air quality monitoring data for monitors in the Milwaukee area for the last six years, concluding with the most recent 2021-2023 design value period. This data

¹⁷ The latest state air quality monitoring network plan can be found at: <https://dnr.wisconsin.gov/topic/AirQuality/Monitor.html>.

¹⁸ Except for Kenosha County, which monitors ozone from March 1 through October 31 to align with monitoring requirements applicable to the tristate Chicago nonattainment area.

shows that the area continues to experience nonattainment levels, even if design values decreased in some locations before experiencing an uptick in values in 2021-2023.

Table 5.1. Ozone design values in the Milwaukee nonattainment area, 2018-2023.

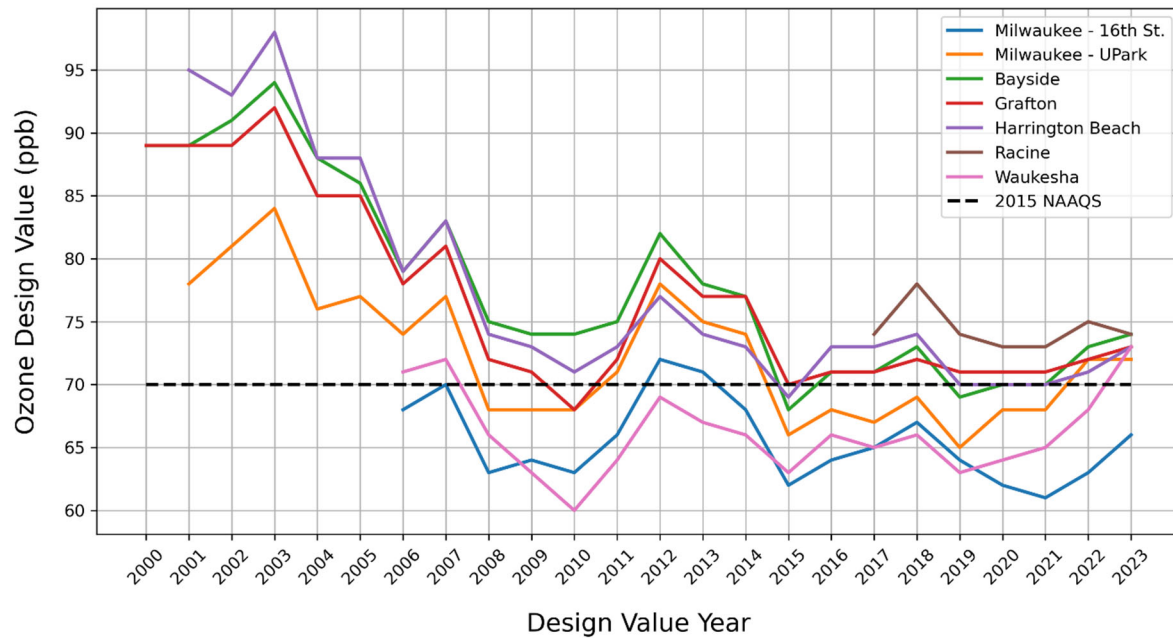
Site #	Monitor name	County	Design value (ppb)					
			2016-18	2017-19	2018-20	2019-21	2020-22	2021-23
550790010	Milwaukee-16th St	Milwaukee	67	64	*	61	63	66
550790026	Milwaukee-UWM UPark**	Milwaukee	69	65	68	68	72	72
550790085	Bayside	Milwaukee	73	69	70	70	73	74
550890008	Grafton	Ozaukee	72	71	71	71	72	73
550890009	Harrington Beach	Ozaukee	74	70	70	70	71	73
551010020	Racine-Payne & Dolan	Racine	78	74	73	73	75	74
551330027	Waukesha	Waukesha	66	63	64	65	68	73

* No data

** Milwaukee SER was replaced with Milwaukee UWM UPark on April 4th, 2021 - datasets are combined thereafter. Milwaukee-UPark site ID is changed from 55-079-0026 to 55-079-0068 in 2022.

Recent ozone measurements obscure the long-term air quality trends in the Milwaukee area, which show a significant decrease in ozone values since 2000 (Figure 5.1). Design values in this area decreased from 78-98 ppb before 2004 to 66-74 ppb in 2023. The largest reductions occurred during the early years of this period, with the average design value decreasing by 23 ppb from 2003 to 2009. Despite continuing reductions of regional emissions, a leveling out of ozone values has been observed in more recent years. The uptick in values in 2023 is due in part to the influence of Canadian wildfires that year.

Figure 5.1. Trends in ozone design values for monitors in the Milwaukee 2015 ozone NAAQS nonattainment area.



Meteorological variability significantly affects ozone concentrations and can obscure trends over shorter time periods. For example, 2012 had an extremely hot summer with a high frequency of elevated ozone concentrations, while 2008, 2009 and 2015 had relatively cool summers with a lower frequency of elevated ozone concentrations. The next two sections discuss the impact of meteorology on ozone concentrations and describe how ozone concentrations in this area have decreased even after considering the impacts of meteorology.

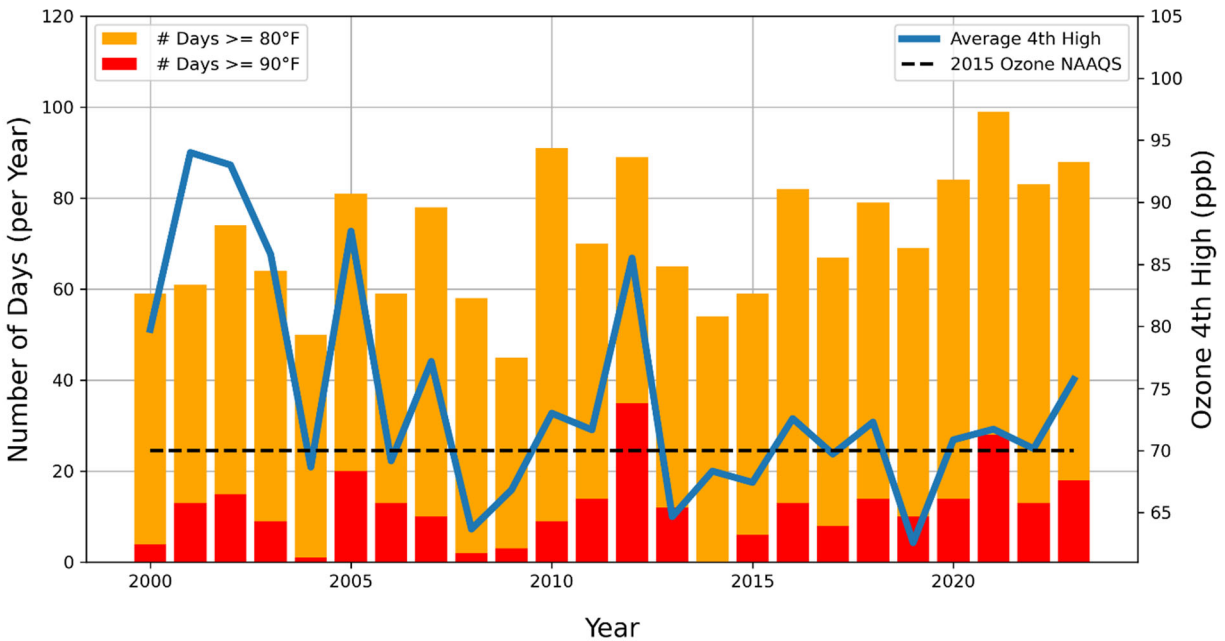
5.2.2. Influence of Temperature on Ozone Concentrations

Temperature is an important and well-known driver of ozone formation, with more ozone being produced at high temperatures than at low temperatures. Figure 5.2 compares annual fourth high MDA8 concentration averages across the Milwaukee 2015 ozone NAAQS nonattainment area with temperature measurements at the Milwaukee Mitchell Airport. The count of days in which maximum temperatures reached 80–90+°F indicate how often extreme temperatures occurred each year.

The correlations between ozone concentrations and elevated temperature are shown in Figure 5.2. While the highest ozone concentrations occurred in years with the highest temperatures, the amount of ozone produced for a given temperature level has decreased over time. For example, comparison of the years 2002, 2012, and 2021 shows that the average fourth high MDA8 value steadily decreased between decades (96.6 ppb, 86.1 ppb, and 71.7 ppb for 2002, 2012, and 2021, respectively) even though temperatures were similar in those years. These reductions are presumably due to reduced emissions of ozone precursors, analyzed further in the following section.

Figure 5.2. Comparison of Milwaukee area ozone values to temperature, 2000-2023.

Average annual fourth high maximum daily 8-hour average (MDA8) ozone concentrations plotted with the number of days with temperatures above 80 °F and 90 °F at Milwaukee Mitchell Airport.¹⁹



5.2.3. Ozone Trends Adjusted for Meteorology

Because of the large effect of meteorology, particularly temperature, on ozone concentrations, meteorologically driven variability in ozone concentrations often obscures trends in ozone due to factors such as permanently reduced rates of precursor emissions. For this reason, it is important to adjust ozone concentrations for meteorology to examine trends in ozone concentrations due to precursor emission reductions and other factors. The following analysis shows that when adjusted for meteorology, ozone concentrations in the Milwaukee 2015 ozone NAAQS nonattainment area are continuing to decrease.

LADCO CART Analysis

Classification and Regression Tree (CART) analysis allows ozone concentrations on days with similar meteorological conditions to be compared. This analysis partially controls for the influence of year-to-year meteorological variability on ozone concentrations. A CART analysis produces average ozone concentrations for several different classes of days (determined by meteorology) for each year being assessed. This analysis therefore allows examination of average ozone concentration trends over long periods resulting from non-meteorological factors, including permanent and enforceable reductions in emissions of ozone precursors impacting the area of interest.

¹⁹ Climatological data is from the Midwestern Regional Climate Center “cli-MATE” database (<https://mrcc.purdue.edu/CLIMATE/>).

In 2021, LADCO completed a CART analysis for regional nonattainment and maintenance areas to assess changes in ozone concentrations under different meteorological conditions from 2006-2020 (note that this timeframe incorporates a period predating the 2015 standard).²⁰

Results for the Milwaukee Area

From the LADCO CART analysis, Figure 5.3 shows average ozone concentrations for the five sets of meteorological conditions (“nodes”) that resulted in the highest ozone concentrations for five monitors in the Milwaukee 2015 ozone NAAQS nonattainment area.²¹

The data shown for each node are the average ozone concentrations on all days sharing a particular set of meteorological conditions.²² The analysis shows that high-ozone days in this area generally are associated with hot temperatures and southerly winds. The highest ozone node also has winds that are either weak from the west or from the east. Southerly transport- and temperature-related variables are the most important variables associated with ozone in this area. Mean ozone concentrations in all of the high-ozone nodes have decreased from 2005 to 2020.

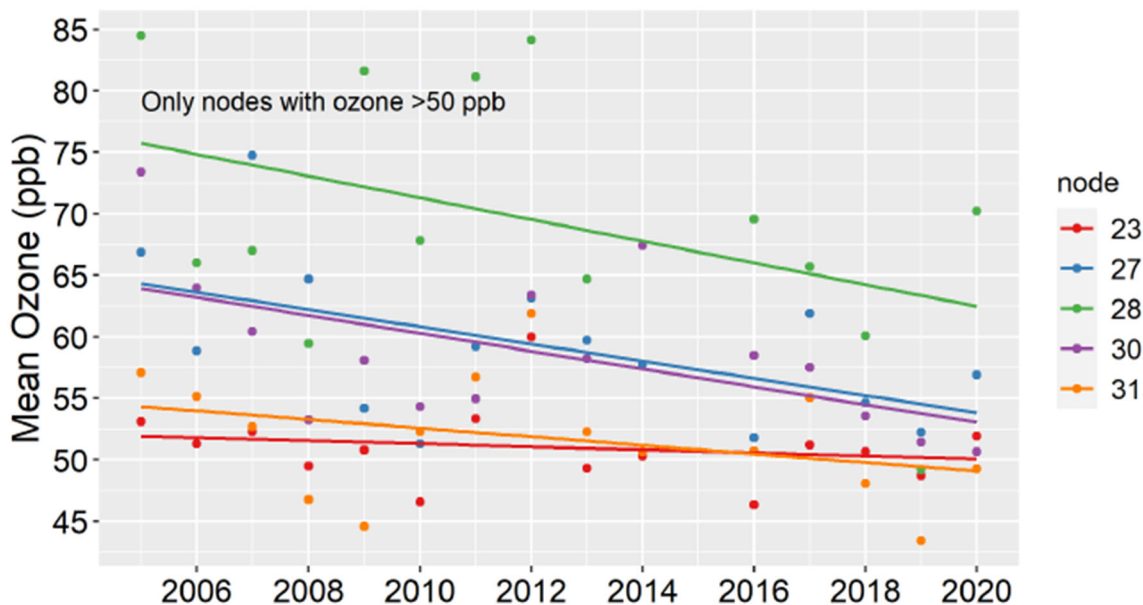
Critically, this analysis shows that average ozone concentrations decreased under all assessed meteorological conditions over this period. This suggests that the observed, long-term decreases in average ozone concentrations on days when meteorology favors ozone production are due, at least in part, to permanent and enforceable reductions in ozone precursors.

²⁰ LADCO. Classification and Regression Tree (CART) Analysis for LADCO Ozone Nonattainment Areas Memorandum (October 2021) available at: https://www.ladco.org/wp-content/uploads/Projects/Ozone/LADCO_O3_CART-Analysis_27Oct2021-FINAL-with-Appendices.pdf.

²¹ The Milwaukee-16th Street, Milwaukee SER/UWM UPark, and Bayside monitors in Milwaukee County, and the Grafton and Harrington Beach monitors in Ozaukee County.

²² For example, Node 28 in Figure 5.3 shows the average ozone concentrations for days characterized by maximum temperatures above 83 °F, average southerly winds greater than 3.1 m/s and average afternoon winds of less than 2.0 m/s from the west.

Figure 5.3. CART analysis results for the Milwaukee area, 2005-2020. Data points show the average ozone concentration for days sharing certain meteorological conditions (“nodes”). Node criteria are described below the figure. Only meteorological nodes with an average ozone concentration above 50 ppb are shown. Analysis included three Milwaukee County and two Ozaukee County monitors.²³



Node 28	Node 27	Node 30	Node 31	Node 23
72 ppb O ₃	60 ppb O ₃	59 ppb O ₃	51 ppb O ₃	51 ppb O ₃
Maximum Temp >83 °F	Maximum Temp >78 & <83 °F	Maximum Temp >78 °F	Maximum Temp >78 °F	Maximum Temp >82 °F
PM southerly winds >3.1 m/s	PM southerly winds >3.1 m/s	PM southerly winds >3.1 m/s	PM southerly winds >3.1 m/s	PM southerly winds <3.1 m/s
PM westerly winds <2.0 m/s	PM westerly winds <2.0 m/s	PM westerly winds >2.0 m/s Midday RH <48%	PM westerly winds >2.0 m/s Midday RH >48%	Average wind direction <234° (southwesterly to easterly)

5.3. Emissions Data and Trends

Ozone is formed from the reaction of NO_x and VOCs in the presence of sunlight. Ozone formation involves a number of different reactions. Partly because of the interactions between these different reactions, rates of ozone formation often respond non-linearly to reductions in ozone precursor concentrations. For example, under some circumstances, ozone formation may be NO_x-limited, such that reductions in NO_x emission cause reductions in ozone concentrations. Conversely, in some cases ozone formation may be VOC-limited, in which case additional VOC reductions will lower ozone.

²³ Taken from LADCO’s 2021 CART analysis memorandum, Appendix 8.

Ozone formation in most of the Midwest is currently understood to be NO_x-limited.²⁴ The primary exception to this is in large urban centers (such as Chicago), where the ozone chemistry is such that ozone formation is limited by the concentrations of VOCs. Recent analyses have indicated that Milwaukee may be a “transitional” area, meaning that both NO_x and VOC emissions reductions would result in lower ozone concentrations. Because of this complex chemistry and its impacts on specific geographic areas, approaches to decreasing ozone concentrations in the region have historically relied on reductions in both NO_x and VOC emissions.

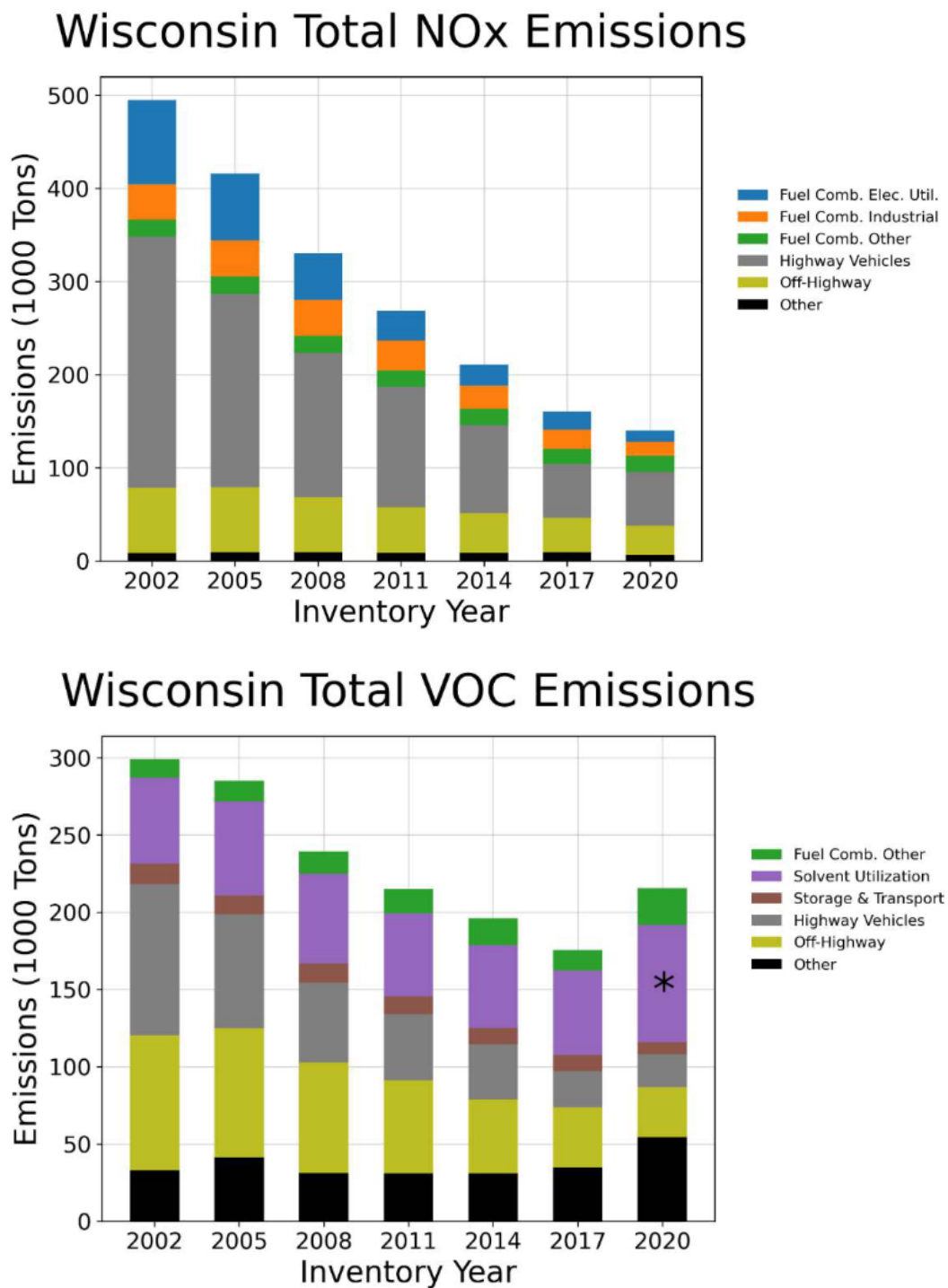
NO_x consists of nitric oxide (NO) and nitrogen dioxide (NO₂). Most NO_x is emitted as NO, which reacts fairly rapidly in the atmosphere to form NO₂, which has a longer lifetime in the atmosphere and can be transported longer distances. VOCs are a complex mixture of hundreds of different types of organic compounds, including compounds that contain only carbon and hydrogen (“hydrocarbons”) and compounds that also include oxygen, nitrogen, sulfur and/or other elements. Some VOCs are emitted directly by anthropogenic sources, including benzene and toluene, whereas others are emitted directly by biogenic sources, such as isoprene. In addition to direct emissions, VOCs are formed in the atmosphere from reaction of other VOCs. These “secondary VOCs” include formaldehyde and acetaldehyde, which are important “carbonyl” compounds.²⁵

Emissions of both NO_x and VOCs from Wisconsin sources have decreased significantly in the last few decades (Figure 5.4). Total NO_x emissions decreased 72% from 2002 through 2020, with the greatest reductions coming from highway vehicles and fuel combustion at electric utilities. VOC emissions decreased approximately 28% over this same period. Note that the apparent increase in VOC emissions in 2020 is due to significant changes in the EPA’s inventory methodology. Specifically, EPA added agricultural silage emissions to the inventory for the first time, a source category that was unaccounted for in previous versions of the NEI. Had this category been included in the earlier inventories, the statewide decrease in VOCs since 2002 would be significantly greater.

²⁴ For examples, see the LADCO NO_x/VOC Ozone Sensitivity contract reports. Task 1: https://widnr.widen.net/s/pprfxr5v5f/am_ladcotask1finalreport_20200930, Tasks 2 & 3: https://widnr.widen.net/s/xcfnfxmk8x/am_ladcotasks3and4finalreport_20201020

²⁵ Carbonyl compounds contain a carbon-oxygen double bond.

Figure 5.4. Wisconsin statewide annual NO_x (top) and VOC (bottom) emissions by sector, 2002-2020. Data from the EPA's National Emissions Inventory (NEI).²⁶



* This apparent increase in emissions is due to a methodology change, including addition of a new sector (see text).

²⁶ Data is from <https://www.epa.gov/air-emissions-inventories/air-pollutant-emissions-trends-data>.

5.4. Influence of Transport on Ozone Levels

The most important factor driving high ozone concentrations in Wisconsin's ozone nonattainment areas is the transport of ozone and ozone precursors from upwind areas. This section describes recent analyses of ozone transport and its impact on the Milwaukee 2015 ozone NAAQS nonattainment area. The transport of ozone and ozone precursors from areas outside Wisconsin significantly limits the state's ability to reduce high ozone concentrations within this nonattainment area.

5.4.1. LADCO modeling results

As described in Section 4, LADCO conducted photochemical modeling to support 2015 ozone NAAQS attainment planning for its member states. As part of this effort, LADCO used the CAMx Anthropogenic Precursor Culpability Assessment (APCA) tool to calculate emissions tracers for identifying upwind sources of ozone precursors at downwind monitoring sites. This allowed the model to quantify the impacts of inventory sectors and geographic source regions on ozone concentrations at specific monitor locations. These results are included in the files available on the LADCO 2015 ozone modeling website.²⁷

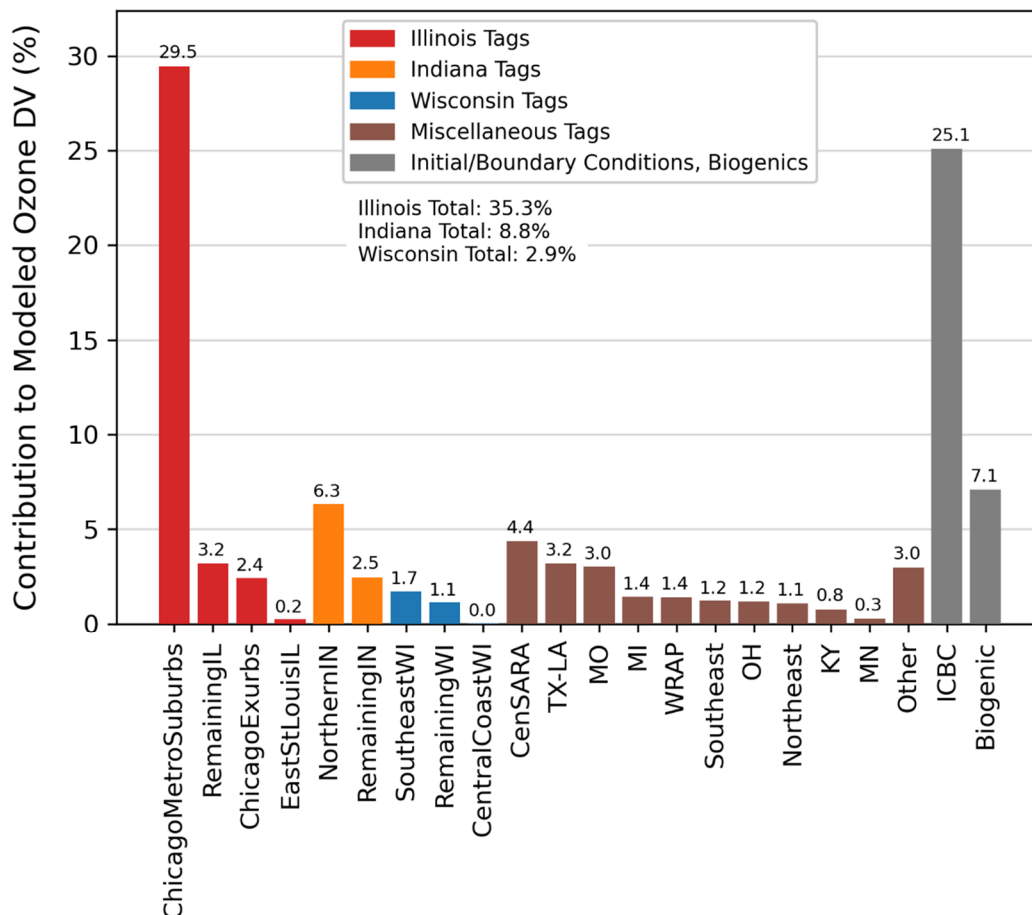
These source apportionment results allow one to identify the origins the ozone measured in the Milwaukee 2015 ozone NAAQS nonattainment area. As shown in Figure 5.5, Wisconsin sources contributed less than 3% of the ozone at the Racine-Payne and Dolan monitor, the monitor that historically measures the highest values in the Milwaukee 2015 ozone NAAQS nonattainment area.²⁸

In contrast, six upwind states together contributed about 47% of the ozone. Of these states, Illinois and Indiana were the largest contributors, being responsible for 35% and 9%, respectively, of the ozone at this location. LADCO's modeling similarly showed that out-of-state contributions dominate measured ozone concentrations at the other ozone monitors in the nonattainment area. These results are further confirmed the EPA photochemical modeling results, discussed next.

²⁷ <https://www.ladco.org/technical/ladco-internal/ladco-projects/ladco-2015-o3-naaqs-moderate-area-sip-technical-support-document/>. Data for individual receptors are available from this file: https://www.ladco.org/wp-content/uploads/Projects/Ozone/ModerateTSD/LADCO_2016_APCA_Tracers_27July2022.xlsx.

²⁸ The Bayfield monitor registered the same design value as Racine in 2023; however, this is a historic outlier. For projection purposes, regulatory agencies (including the WDNR and the EPA) use Racine as the bellwether ozone monitor for the Milwaukee area.

Figure 5.5. LADCO source apportionment modeling results for the Racine-Payne and Dolan monitor.²⁹



5.4.2. EPA modeling results

For its 2015 ozone NAAQS transport rule (the Good Neighbor Plan), the EPA also conducted photochemical modeling, which included state source apportionment results.³⁰ This modeling was used by the EPA to determine which upwind states are responsible for ozone measured in

²⁹ Total emissions from IL, IN and WI are obtained from summing the “sub-state” results in the figure. “Southeast WI” is Kenosha, Racine, Milwaukee, Washington, Waukesha and Ozaukee counties. “Central Coast WI” is Sheboygan, Manitowoc and Kewaunee counties. “Remaining WI” is the rest of WI. “CenSARA” is IA, KS, NE, OK, AR. “WRAP” is WA, OR, CA, NV, ID, MT, WY, UT, AZ, NM, CO, ND, SD. “Southeast” is FL, MS, AL, GA, SC, NC, TN, VA, WV. “Northeast” is CT, ME, MA, NH, NJ, NY, RI, VT, PA, MD, DE, DC. “ICBC” is initial/boundary conditions (including emissions from outside the U.S.). “Biogenic” is emissions from biogenic sources. Graphic by WDNR from LADCO modeling data.

³⁰ The EPA’s air quality modeling technical support document and data files are available at: <https://www.epa.gov/csapr/good-neighbor-plan-2015-ozone-naaqs>. Data cited in this discussion is for analysis year 2023 from the 2016v3 modeling conducted by the EPA for the final Good Neighbor Plan. The EPA’s 2016v2 modeling, used to support the draft Good Neighbor Plan, produced similar results.

downwind state nonattainment and maintenance areas. Consistent with LADCO's modeling, the EPA found that the ozone along Wisconsin's lakeshore is significantly influenced by upwind state emissions.

Specific to the Milwaukee area, the EPA found that Wisconsin sources are responsible for just 11% of the ozone at the Racine monitor, with other states responsible for 49% (with Illinois responsible for 20% and Indiana 14%).³¹

The difference in results between the EPA and LADCO modeling are due to the use of different emissions platforms, model configurations, analysis years, and other factors; as described in Section 4.1, LADCO's modeling is optimized for conditions in the Great Lakes region and the results are considered to be more accurate for monitors in this nonattainment area. However, both LADCO's and the EPA's modeling results are consistent in that they conclude that Wisconsin emissions contribute very little to the ozone measured in the Milwaukee 2015 ozone NAAQS nonattainment area, especially relative to other, upwind states. They both highlight that Wisconsin has very limited ability to reduce ozone values in this area further through unilateral action.

5.5. Conclusion

These analyses show that monitored ozone concentrations in the area have decreased since 2000. When adjusted to account for meteorological variability, ozone concentrations for equivalent meteorological conditions also show a decrease. Emissions of NO_x and VOCs from Wisconsin have decreased from 2002 through 2020. A critical limitation to attainment planning is that the area remains highly impacted by transport of out-of-state ozone and ozone precursors; this limits the state's ability to independently drive ozone values lower and attain the NAAQS.

³¹ Contributions data is for year 2023.

6. OTHER MODERATE AREA SIP REQUIREMENTS

6.1. Reasonably Available Control Technology (RACT) Program for NO_x

Wisconsin's NO_x RACT program was first adopted by the state in July 2007 as codified under subchapter IV of ch. NR 428 (s. NR 428.20 to 428.26), Wis. Adm. Code. The program was approved by the EPA into the SIP in October 2009 (75 FR 64155). This program was established to fulfill NO_x RACT requirements for southeast Wisconsin counties (including the Milwaukee area) designated moderate nonattainment for the 1997 ozone NAAQS.

The WDNR has determined that Wisconsin's current NO_x RACT program fulfills RACT requirements under the 2015 ozone NAAQS. The basis for this determination is:

- 1) In moderate ozone nonattainment areas, Wisconsin's NO_x RACT program applies to major sources with a potential-to-emit of 100 tons per year and thus meets the necessary applicability requirements.
- 2) A review of control technology indicates that a new assessment of control technology conducted for the 2015 ozone NAAQS would not change the determination of RACT under Wisconsin's existing program.

Details supporting this finding are described below.

6.1.1. Major Source Applicability

To ensure consistency with the CAA, ch. NR 428, Wis. Adm. Code, was revised in March 2022 so that the level of an area's ozone nonattainment classification determines the major source emission threshold in the area. The EPA set applicability of RACT for facilities in Moderate ozone nonattainment areas at a NO_x emissions threshold of 100 tons per year (TPY) or more based on a facility's PTE³². Under Wisconsin's revised NO_x RACT rule, the applicability threshold for NO_x emissions sources in the Milwaukee 2015 ozone nonattainment areas is 100 TPY (s. NR 428.20, Wis. Adm. Code).

6.1.2. Control Technology Assessment

The 2015 ozone implementation rule provides that states can show that existing NO_x RACT programs fulfill requirements for the 2015 NAAQS.³³ The EPA states this demonstration should be based on a review of RACT control technologies for conditions in 2015. If this review indicates there would be no incremental difference in control technologies between the existing program and the updated assessment, the existing program can be certified as meeting RACT under the 2015 NAAQS. Even in the case that an updated RACT could result in additional emission reductions, the EPA indicates that such an action would likely not be cost-effective, stating:

³² EPA, 1988, *Issues Relating to VOC Regulation Cutpoints, Deficiencies, and Deviations, Clarification to Appendix D of November 24, 1987 Federal Register*, May 25, 1988.

³³ EPA, 2015, *Implementation of the 2008 National Ambient Air Quality Standards for Ozone: Requirements for State Implementation Plans*, 80 FR 12279, March 6, 2015.

“In cases where controls were applied due to the 1-hour or 1997 NAAQS ozone RACT requirement, we expect any incremental emissions reductions from the application of a second round of RACT controls may be small and, therefore, the cost for advancing that small additional increment of reduction may not be reasonable.”

The WDNR relied on this provision from the 2008 ozone implementation rule to show that Wisconsin’s existing NO_x RACT programs also fulfill requirements for the 2015 NAAQS.³⁴ This demonstration should then be based on a review of RACT control technologies for conditions in 2015. Wisconsin’s NO_x RACT program was first implemented in 2007 based on an assessment of the control technologies and cost information available at that time. The WDNR expects little, if any, change in the assessment of RACT control technology between 2007 and 2015, since the RACT assessments would be based on essentially the same information.

To verify this conclusion, the WDNR reviewed the current Wisconsin RACT requirements that could apply for emission units operating in the Milwaukee 2015 ozone NAAQS nonattainment area in 2015. The RACT source categories and applicable control technologies are presented in Table 6.1. The WDNR’s review showed that six coal-fired boilers operating at the Elm Road and South Oak Creek power plants fall into the RACT source category of coal-fired boilers greater than 1,000 mmBtu/hr; four natural gas-fired boilers operating at the Valley power plant fall into the RACT source category of gas-fired boilers greater than 100 mmBtu/hr, and four natural gas-fired combustion turbines operating at the Port Washington power plant fall into the RACT source category of combined cycle combustion turbines greater than 25 megawatts. These power plant boilers and combustion turbines accounted for 64% of NO_x emissions in the Milwaukee nonattainment area in 2015.

After reviewing the identified source categories and applicable control technologies, the WDNR has concluded there would be no change in RACT if an updated assessment of control technology were performed based on 2015 information. Thus, based on equivalency in major source applicability and RACT control technology, the WDNR concludes that Wisconsin’s current NO_x RACT program under ss. NR 428.20 to 25 fulfills 2015 ozone NAAQS moderate-area RACT requirements.

³⁴ The 2015 ozone implementation rule references the 2008 ozone implementation rule for how air agencies can provide for RACT in their nonattainment SIPs (see 83 FR 63007).

Table 6.1. Control technologies required under Wisconsin’s NOx RACT program.

Source Category	RACT Control Technology
Coal-fired boilers > 1,000 mmBtu/hr ¹	SCR
Coal-fired boilers < 250 mmBtu/hr ²	SNCR
Natural gas-fired boilers > 100 mmBtu/hr	LNB/OFA/GR
Natural gas-fired combined cycle combustion turbines > 25 MW ³	DLNB
Glass furnaces > 50 mmBtu/hr ⁴	Oxy-firing
Metal furnaces > 75 mmBtu/hr	LNB

DLNB = Dry Low NOx Burner, GR = Gas Recirculation, LNB = Low NOx Burner, OFA = Overfire Air, SCR = Selective Catalytic Reduction, SNCR = Selective Non-Catalytic Reduction.

¹ Two of the six boilers retired in May 2024.

² These emission sources retired in 2016.

³ These emission sources also have SCR control installed.

⁴ These emission sources are also subject to an EPA consent decree with more stringent NOx emission limitation requirements than NOx RACT.

6.2. Reasonably Available Control Technology (RACT) Program for VOCs

Section 182(b)(2) of the CAA requires states with moderate nonattainment areas to implement VOC RACT under section 172(c)(1). Wisconsin’s VOC RACT requirements are codified under chapters NR 419 through 425, Wis. Adm. Code. A summary of Wisconsin’s VOC rules is included in Appendix 8. No additional measures are reasonably available that will advance the attainment date.

The EPA periodically issues Control Techniques Guidelines (CTGs) to establish VOC RACT requirements for specific source categories, and WDNR has incorporated most of those CTGs into Wisconsin’s VOC rules. Five CTGs have not been incorporated. Appendix 8 contains negative declarations for these five CTGs to certify that Wisconsin has determined that there are no identified sources in the Milwaukee 2015 ozone NAAQS nonattainment area that meet the applicability criteria of these CTGs.

Given these negative declarations, Wisconsin’s VOC RACT rules found in chapters NR 419 through 425, Wis. Adm. Code, satisfy Wisconsin’s obligations under section 182(b)(2) of the CAA for the Milwaukee 2015 ozone NAAQS nonattainment area.

6.3. Evaluation of Reasonably Available Control Measures (RACM)

CAA section 172(c)(1) requires that states implement any reasonably available control measures necessary for attainment of the NAAQS. As described in 40 CFR 51.1108(d), any control measures needed for attainment must be implemented by the beginning of the attainment year ozone season, which in this case is 2023 (to support the August 3, 2024, moderate attainment date).

However, additional control measures are required if it can advance the attainment date by a year or more. This means that any measures advancing the attainment date by a year would have needed to be in place for the 2022 ozone season (for Milwaukee, that season is April 1 to

October 15, 2022). Given the timing of this submittal, it is not possible to implement any new measures during that period that could advance attainment by one year. Accordingly, RACM requirements are satisfied for the Milwaukee 2015 ozone NAAQS nonattainment area.

6.4. Transportation Conformity

Transportation conformity is required by section 176(c) of the CAA (42 U.S.C. 7506(c)). Conformity to a SIP means that transportation activities will not produce new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS (CAA 176(c)(1)(B)).

The EPA's conformity rule in 40 CFR part 93 requires that transportation plans, programs and projects conform to SIPs and establish the criteria and procedures for determining whether they conform. The conformity rule generally requires a demonstration that emissions from the Regional Transportation Plan (RTP) and the Transportation Improvement Program (TIP) are consistent with the motor vehicle emissions budget (MVEB) contained in the control strategy SIP revision or maintenance plan (40 CFR 93.101, 93.118, and 93.124). A MVEB is defined as "that portion of the total allowable emissions defined in the submitted or approved control strategy implementation plan revision or maintenance plan for a certain date for the purpose of meeting reasonable further progress milestones or demonstrating attainment or maintenance of the NAAQS, for any criteria pollutant or its precursors, allocated to highway and transit vehicle use and emissions" (40 CFR 93.101). The WDNR is submitting MVEBs for the Milwaukee 2015 ozone NAAQS nonattainment area in this attainment plan.

6.4.1. Motor Vehicle Emissions Modeling

The MVEBs were developed using the latest version of the EPA's MOtor Vehicle Emission Simulator (MOVES) model available at the time of drafting, MOVES4.0.1, and a travel demand model. The MOVES4.0.1 model derives estimates of hot summer day emissions for ozone precursors of NO_x and VOCs. Numerous variables can affect these emissions, especially the size of the vehicle fleet (the number of vehicles on the road), the fleet's age, the distribution of vehicle types, and the vehicle miles of travel. The transportation information is derived from the travel demand model. Appendix 7 contains key data used to develop inputs to MOVES4.0.1.³⁵

6.4.2. Motor Vehicle Emissions Budgets

Table 6.2 shows the MVEBs developed by the WDNR for the Milwaukee 2015 ozone NAAQS nonattainment area for 2023. These budgets are identical to the corresponding projected emissions inventories presented in section 3. They include a margin of safety to account for uncertainties in future mobile source emissions. 40 CFR 93.101 defines this safety margin as the amount by which the total projected emissions from all sources of a given pollutant are less than the total emissions that would satisfy the applicable requirement for RFP, attainment, or maintenance. To provide a safety margin, the WDNR increased the emissions calculated by MOVES4.0.1 by 7.5% for 2023 for the Milwaukee 2015 ozone NAAQS area.

³⁵ The complete set of inputs to MOVES4.0.1 is too lengthy to include in this document. However, electronic copies of the inputs can be obtained from the WDNR upon request.

Table 6.2. Motor vehicle emissions budgets for the Milwaukee 2015 ozone NAAQS area for 2023.

Year	Emissions (tons per hot summer day)	
	VOC	NO _x
2023	10.77	14.80

6.5. Motor Vehicle Inspection and Maintenance (I/M) Program

The purpose of motor vehicle I/M programs is to reduce emissions from in-use motor vehicles in need of repairs and thereby contribute to state and local efforts to improve air quality and attain the NAAQS. Wisconsin's I/M program has been in operation since 1984. It was originally implemented in accordance with the 1977 CAA Amendments and operated in the six counties of Kenosha, Milwaukee, Ozaukee, Racine, Washington, and Waukesha. Sheboygan County was added to the program in July 1993, resulting in a seven-county program area that has remained to the present. Vehicles were originally tested by measuring tailpipe emissions using a steady-state idle test. Tampering inspections were added in 1989.

The 1990 CAA Amendments set additional requirements for I/M programs. For moderate areas, a "basic" program was required under section 182(b)(4). For serious or worse areas, an "enhanced" program was required under section 182(c)(3). The EPA's requirements for basic and enhanced I/M programs are found in 40 CFR part 51, subpart S.

Wisconsin's I/M program transitioned to an enhanced program in December 1995. The major enhancement involved adding new test procedures to more effectively identify high-emitting vehicles. These new test procedures included a transient emissions test in which tailpipe emissions were measured while the vehicle was driven on a dynamometer (a treadmill-type device). Improving repairs and public convenience were also major focuses of the enhancement effort.

Since July 2001, all model year (MY) 1996 and later cars and light trucks have been inspected by scanning the vehicle's computerized second-generation on-board diagnostic (OBDII) system instead of measuring tailpipe emissions. As of July 2008, the program dropped tailpipe testing entirely and has inspected all vehicles by scanning the OBDII system. This change was the result of statutory changes in the State's 2007-2009 biennial budget which exempted model years of vehicles not federally required to be equipped with the OBDII technology (MY 1995 and earlier cars and light trucks and MY 2006 and earlier heavy trucks). To help offset the emissions reductions lost from exempting the pre-OBDII vehicles, the program increased the testable fleet for MYs 2007 and later by adding gasoline-powered vehicles between 10,001 to 14,000 pounds gross vehicle weight rating (GVWR) and diesel-powered vehicles of all weights up to 14,000 pounds GVWR.

The EPA fully approved Wisconsin's enhanced I/M program on August 16, 2001 (66 FR 42949), including the program's legal authority and administrative requirements in the Wisconsin Statutes and Wisconsin Administrative Code. On June 7, 2012, the WDNR submitted a SIP

revision to the EPA covering all the changes to the program since the EPA approved the program in 2001. This submittal included a demonstration under section 110(l) of the CAA addressing emission reductions associated with the program changes. The EPA approved this SIP revision on September 19, 2013 (78 FR 57501).

A modeled demonstration that Wisconsin's current I/M program meets the EPA's enhanced I/M program performance standard was completed as part of this attainment plan (see Appendix 11). This assessment confirms that the program continues to meet enhanced I/M program performance requirements.

Wisconsin's I/M program is jointly administered by the WDNR and the Wisconsin Department of Transportation. Legal authority and administrative requirements for the Wisconsin I/M program are found in sections 110.20 and 285.30 of the Wisconsin Statutes and Chapters NR 485 and Trans 131 of the Wisconsin Administrative Code.

6.6. Section 110(l) Noninterference Requirements

When revising rules and regulations in the SIP, the state is responsible for demonstrating that such a change will not interfere with any applicable requirement concerning attainment and reasonable further progress, or any other applicable CAA requirements for any of the criteria pollutants. This attainment plan does not remove or relax any control programs or requirements currently approved in the SIP. Therefore, all requirements related to section 110(l) noninterference are fulfilled. The WDNR has the legal authority and necessary resources to actively enforce any violations of its rules or permit provisions. Removal of any control program from the SIP will be subject to a public hearing process, a demonstration of noninterference, and approval by the EPA.

6.7. Section 172(c)(9) Contingency Measures

Contingency measures required by CAA section 172(c)(9) are fully adopted rules or measures that can take effect without further action by the state or the EPA upon failure to meet milestones (like RFP) or attain by the attainment deadline. The purpose of contingency measures is to provide continued emissions reductions while the SIP is being revised to meet the missed milestone or attainment date. Reductions are to be achieved as soon as possible but should generally occur within one year of the triggering event. Contingency measures must be in excess of what is needed to meet any other nonattainment plan requirement in the CAA, such as RACT/RACM or RFP.³⁶

The 2015 ozone NAAQS SIP requirements rule states that contingency measures should provide one year's worth of emissions reductions, which generally equates to 3% of the baseline emissions inventory.

³⁶ The EPA described how states are to address contingency measure requirements for the 2015 ozone NAAQS in its final SIP requirements rule for the NAAQS (83 FR 62998). In response to several court decisions, on December 3, 2024 the EPA released new, nonbinding guidance on this requirement. However, this guidance was released too late to be considered in the development of this submittal.

As described in Section 3.3, the WDNR has identified and quantified permanent and enforceable NO_x and VOC emissions reductions in the nonattainment area equivalent to an additional 3% reduction in emissions. These reductions are based on an extensive range of point, area, and mobile source rules that are permanent, enforceable, and in excess of those otherwise needed to meet attainment planning requirements in 2023 (Section 3.6). These rules are fully adopted and need no further action by the state or the EPA in order to take effect. The CAA contingency measure requirements for this area are therefore satisfied.

7. PUBLIC PARTICIPATION

To comply with section 110(a)(2) of the CAA, on December 16, 2024, the WDNR published a notice of availability for this proposed SIP revision on its website, making this document available for public comment through January 17, 2025. The WDNR also held a public hearing on this proposed SIP revision on January 16, 2025. A summary of the public comments received, and the WDNR's responses to those comments, are included in Appendix 10.

Staff from EPA Region 5 were also given the opportunity to review the proposed submittal. Based on the feedback received, the WDNR also made the following changes in the final document:

- Modified the presentation of reasonable further progress figures (Section 3.4)
- Expanded the VOC RACT discussion (Section 6.2)
- Removed the transportation conformity budgets for year 2024 (Section 6.4)
- Included an updated modeled performance standard demonstration for the vehicle I/M program (Appendix 11)

8. CONCLUSION

This plan is submitted to fulfill the CAA moderate-area attainment requirements for the Milwaukee 2015 ozone NAAQS nonattainment area. This SIP describes how ozone precursor emissions have decreased in both the nonattainment area and the state and are projected to continue to decrease in the future. Air quality monitoring data indicates that ozone concentrations have declined in the nonattainment area over the long-term, with smaller reductions observed in more recent years. The area has met the required RFP emission reductions due to an array of permanent and enforceable emissions control measures, and has satisfied all other moderate area nonattainment area requirements required under sections 172 and 182 of the CAA.

APPENDIX 1

2017 Emission Inventories Methodology

1. Introduction

This appendix provides additional information for the sector-specific nitrogen oxides (NO_x) and volatile organic compounds (VOC) tons per ozone season day (tposd) emission estimates in the Wisconsin Department of Natural Resources (WDNR) Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area.

2. Emissions Calculation Methodologies

2.1. Point Sources

Point sources are industrial, commercial or institutional stationary facilities which are normally located in permanent sites, and which emit specific air pollutants in great enough quantities to warrant individual quantification. To better enable detailed control evaluations, the point source emission inventories include all reporting sources at that facility regardless of the magnitude of reported emissions. For this attainment demonstration, portable point sources, such as asphalt plants and rock crushers, were reported under nonpoint sources to be consistent with other states. The 2017 point source emission inventory was created using annually reported point source emissions, the EPA's Clean Air Markets Division (CAMD) database and approved EPA techniques for emissions calculation (e.g., emission factors).

Whenever feasible, federal, state and local controls were factored into the emission calculations. Emissions were estimated by collecting process-level information from each facility that qualifies for inclusion into the state's point source database. In Wisconsin, this information is normally collected from facilities using web-based software and subsequently loaded into the point source database. Process, boiler, fugitive, and tank emissions are typically calculated using throughput information multiplied by an emission factor for that process. Emission factor sources included mass balance, stack testing, continuous emissions monitors, engineering judgment and the EPA's WebFIRE database.¹ Missing data elements such as Source Classification Codes (SCC), North American Industrial Classification System (NAICS) codes and seasonal throughput percentages were added into the state's point source database. Process level confidential data were removed while retaining any associated emissions.

There are four electric generating unit (EGU) point source facilities located in the Milwaukee 2015 ozone NAAQS nonattainment area: We Energies-Elm Road, We Energies-Port Washington, We Energies-South Oak Creek, and We Energies-Valley. Appendix 3 provides the methodology used to calculate EGU ozone season day emissions.

The 2017 emissions inventory for non-EGU point sources were tabulated using the emissions data reported annually by each facility operator to the WDNR's air emissions inventory (AEI) system. The AEI calculates emissions for each individual emissions unit or process line by multiplying fuel or process throughput by the appropriate emission factor that is derived from mass balance analysis, stack testing, continuous emissions monitoring, engineering analysis, or

¹ WebFIRE is the EPA's online emissions factor repository, retrieval, and development tool, found online at: <https://www.epa.gov/electronic-reporting-air-emissions/webfire>.

the EPA's WebFIRE database. Appendix 4 provides a list of non-EGU point source emissions by facility identification number (FID) and facility name for 2017.

The following procedure was used to determine an average day's emissions for a typical ozone season work weekday for non-EGU point sources. The WDNR obtained the quarterly operation schedule and the normal operating days per week information for each facility as collected by the WDNR AEI. The WDNR used emissions from the third quarter of the calendar year (i.e., July 1 to September 30) to represent the typical ozone season day emissions for these sources. The equation below was then used to calculate the emissions from typical ozone season days for each emission unit and process line. The emissions from each unit/process line at a facility were then summed to arrive at the total tons per ozone season day emissions for that facility.

$$EM = (Annual \times Third \text{ Quarter Percentage}) / (DPW \times N_{weeks})$$

Where:

EM = Typical ozone season day emissions in tons per day

Annual = Annual emissions of VOC or NO_x in tons

Third Quarter Percentage = the percentage of time that the unit is in operation for the third quarter of the calendar year, compared to the total time the unit is in operation for the entire calendar year, as reported to the WDNR

DPW = Days per week the facility operates, as reported to the WDNR

N_{weeks} = Number of weeks (13) from July 1 to September 30

This equation inherently accounts for ozone season work weekday emissions being higher if a facility only operates during the work week (i.e., five days) instead of the entire week (i.e., seven days), consistent with EPA guidance. This method is also consistent with that used by the WDNR in its 2017 baseline emissions inventory for 2015 ozone NAAQS nonattainment areas.

2.2. Nonpoint (Area) Sources

Nonpoint sources are stationary sources that are too small and/or too numerous to be tracked individually in the point source inventory. These sources include commercial/institutional, industrial and residential sources such as gasoline stations, dry cleaners, consumer and commercial products, industrial solvent use, auto refinishing and wood combustion. The nonpoint inventory quantifies these emissions collectively.

For the 2017 nonattainment year, nonpoint source emissions inventory estimates were based on the 2017 National Emissions Inventory (NEI), except for agriculture silage, selected categories of solvent utilization and the Stage II refueling category, as described below. The selected solvent utilization categories were graphic arts and miscellaneous non-industrial consumer and commercial categories with source classification code (SCC) 246xxxxxxx except agricultural pesticide application. The selected categories of consumer and commercial solvent utilization were graphic arts, personal care, household, automotive aftermarket, coatings and related, FIFRA related and miscellaneous products, adhesive and sealants, cutback and emulsified asphalt, hot and warm mix asphalt paving, volatile chemical products such as lighter fluids, fire starter and other fuels. For agricultural silage and these selected categories of solvent utilization,

the 2017 nonpoint source emissions estimates were adjusted by back calculations based on the data from 2020 NEI and 2022 version 1 emissions modeling platform. Emission calculation methodologies used in developing 2017 nonpoint emissions inventory are available in the EPA's 2017 NEI Technical Support Document (TSD).²

The WDNR updated the EPA's nonpoint emissions estimates for stationary nonpoint sources for the following sectors: fuel combustion for the industrial, commercial and institutional (ICI) sectors; degreasing; dry-cleaning; graphic arts; and most of the solvent utilization for industrial surface coating categories except industrial maintenance, traffic markings and other special purpose categories. The WDNR adopted the EPA's nonpoint estimates for commercial cooking, solvent utilization for non-industrial surface coating, miscellaneous non-industrial consumer and commercial solvent utilization, residential and commercial portable fuel containers, bulk gasoline terminals and gas stations, waste disposal categories, and miscellaneous non-industrial not elsewhere classified (NEC) categories.

For the WDNR-updated nonpoint fuel combustion sectors, the EPA provided an SCC crosswalk between nonpoint and corresponding point source SCCs. These adjustments were made by subtracting the activity assigned for point sources from the total activity to estimate the adjusted nonpoint source activity. Energy consumption of these sectors for Wisconsin was obtained from the U.S. Department of Energy (DOE)'s Energy Information Administration (EIA). This survey data is the source of activity data for ICI fuel combustion. EIA's State Energy Data System (SEDS) data, as reported in EIA's most recent State Energy Consumption Estimates report, was used to determine total consumption for most fuel oil and kerosene.³

To update emission estimates for most of the solvent utilization for industrial surface coating categories, business pattern data from the U.S. Census Bureau's employment and county were used.⁴

To obtain area source emissions for the portions of Washington, Waukesha and Racine counties located in the Milwaukee 2015 ozone NAAQS nonattainment area, emission estimates from the entire county were allocated to the partial county based on population data. Each county's population for 2017 was estimated by interpolating between 2015 and 2020 population data from the Wisconsin Department of Administration. The partial county population was identified based on the relative population of the Minor Civil Divisions (MCDs) in the nonattainment area as compared to the entire county. Using this methodology, for 2017, 57%, 98% and 78% of each county's population was estimated to live in the Washington, Waukesha and Racine county portions of the Milwaukee 2015 ozone NAAQS nonattainment area, respectively. Appendix 5 includes a table of area source emissions by source category.

Gasoline Service Stations, Stage II: Total Refueling

The WDNR estimated emissions from vehicle refueling at gasoline stations (Stage II refueling) using the EPA's MOVES4.0.1 model using the same inputs used for onroad modeling.

² https://www.epa.gov/sites/production/files/2020-04/documents/nei2017_tsd_full_30apr2020.pdf.

³ https://www.eia.gov/state/seds/sep_use/notes/use_print.pdf.

⁴ <https://www.census.gov/programs-surveys/cbp/data.html>.

Beginning in the 1990s, a Stage II vapor recovery program (vapor recovery nozzles at gas pumps) was in effect in nine Wisconsin counties, including the entire Milwaukee 2015 ozone NAAQS nonattainment area. This program was effective in reducing refueling emissions in older vehicles, but was redundant or even counter-productive in reducing emissions for newer vehicles, because the newer vehicles controlled refueling emissions through on-board refueling vapor recovery (ORVR) systems.⁵ Wisconsin submitted a state implementation plan (SIP) revision removing Stage II requirements, which the EPA approved in November 2013. By 2017, most gasoline stations in the nine Wisconsin counties had removed or decommissioned their Stage II vapor recovery systems. To reflect this, the WDNr input zero emissions reductions from a Stage II program in its MOVES runs for year 2017.

Since the MOVES modeling for onroad emissions used ozone season weekday (oswd) travel activity, whereas the nonpoint emissions are based on the average of all seven days of the week (osd), the WDNr used travel data developed by the Wisconsin Department of Transportation (WDOT) to adjust the MOVES oswd output emissions for Stage II refueling to osd emissions, based on the ratio of average day (weekdays and weekends) to weekday travel during the ozone season. The WDNr calculated adjustment for each of the five counties, which ranged from 0.9318 to 0.9673 for 2017.

2.3. Onroad Mobile Sources

Onroad mobile sources are motorized mobile equipment that are primarily used on public roadways. Examples of onroad mobile sources are cars, trucks, buses and road motorcycles. The emissions reported in this document were estimated using the MOtor Vehicle Emission Simulator (MOVES), the EPA's recommended mobile source model. The model was run in inventory mode. The version used was MOVES4.0.1, the most recent version of the model, released in January 2024. All estimates were made in accordance with the following EPA technical guidance:

- MOVES4 Technical Guidance: Using MOVES to Prepare Emission Inventories for State Implementation Plans and Transportation Conformity (94 pp, August 2023, EPA-420-B-23-011).

The onroad mobile NO_x and VOC emissions for each of the five counties in the Milwaukee 2015 ozone NAAQS nonattainment area for 2017 (as well as the 2023 and 2024 projections) are presented in Appendix 7, separated by source type (vehicle class), fuel type and road type. Tables summarizing vehicle activity data are presented in Appendix 7 after the emissions tables.⁶

⁵ The federally required phase in for ORVR systems started with model year 1998 and was required for all light-duty vehicles by model year 2006.

⁶ The complete set of inputs to MOVES4.0.1 is too lengthy to include in this document. However, electronic copies of the input files can be obtained from the WDNr upon request.

2.3.1. Transportation Data

The modeling inputs to MOVES include detailed transportation data (e.g., vehicle-miles of travel by vehicle class, road class and hour of day, and average speed distributions), requiring support from the metropolitan planning organization (MPO) covering the nonattainment area.

The designated MPO for the Milwaukee area is the Southeastern Wisconsin Regional Planning Commission (SEWRPC). Under state law the SEWRPC is responsible for preparing travel and traffic estimates and forecasts within its seven-county region, which includes the entire Milwaukee 2015 ozone NAAQS nonattainment area. The SEWRPC maintains transportation network inventory data, including traffic counts by WDOT and local agencies. The SEWRPC has developed and validated travel simulation models to estimate and forecast vehicle-miles of travel (VMT) and average speed distributions for their region. The SEWRPC also runs the MOVES model for transportation planning and conformity analyses.

On July 11, 2024, the SEWRPC provided to the WDNR MOVES input files for each of the five full or partial counties in the Milwaukee 2015 ozone NAAQS nonattainment area for 2017 (as well as projections to 2023 and 2024) for the following data:

- Annual VMT by five vehicle classes
- Vehicle population by 13 vehicle classes
- Average speed distributions
- VMT distributions by roadway type and vehicle class
- Temporal VMT distributions by:
 - Hour of day
 - Day of week (weekday vs. weekend-day)
 - Month of year

2.3.2. Descriptions of MOVES Modeling Inputs

The MOVES modeling inputs are described in the following 10 subsections.

2.3.2.1. Vehicle-Miles of Travel (VMT)

The SEWRPC provided the WDNR annual VMT data for 2017 (as well as projections to 2023 and 2024), broken down by five Highway Performance Monitoring System (HPMS) vehicle classes for all travel in each of the five full or partial counties in the Milwaukee 2015 ozone NAAQS nonattainment area. The data were obtained from their transportation network inventory data and travel demand model. The WDNR then input those data into MOVES4.0.1 (see Table A1.1).

Table A1.1. Annual VMT for 2017 Provided by SEWRPC and Input into MOVES4.0.1.

HPMS Vehicle Class	County				
	Milwaukee	Ozaukee	Racine	Washington	Waukesha
Motorcycles	38,987,457	5,454,471	8,260,368	5,465,266	24,142,990
Light Duty Vehicles	6,011,980,781	850,796,934	1,177,586,833	876,291,854	3,525,388,663
Buses	16,750,962	2,367,529	3,353,144	2,389,466	9,958,318
Single Unit Trucks	296,238,407	42,027,431	57,614,885	42,920,532	172,685,791
Combination Trucks	237,710,571	34,218,009	41,068,571	36,410,969	128,042,631
TOTAL	6,601,668,178	934,864,374	1,287,883,801	963,478,087	3,860,218,393

As specified in the EPA technical guidance, the onroad inventories for ozone SIPs should be based on ozone season *weekday* VMT, where “weekday” includes all five of the weekdays. Following historical practice, the WDNR defined “ozone season” for the mobile sector as the months of June, July and August. To determine ozone season weekday VMT, the WDNR input into MOVES temporal VMT distributions for month-of-year and weekday-vs.-weekend provided by the SEWRPC. (The SEWRPC developed these distributions from WDOT statewide data.) MOVES4.0.1 then calculated the ozone season weekday VMT and furthermore subdivided the VMT from the five HPMS vehicle classes into 13 vehicle classes, using default vehicle class distributions. The resulting VMT output by MOVES4.0.1 is shown in Table A1.2.

Table A1.2. Ozone Season Weekday VMT for 2017 Output by MOVES4.0.1.

MOVES Vehicle Class	County				
	Milwaukee	Ozaukee	Racine	Washington	Waukesha
Motorcycles	120,715	17,050	25,920	17,170	75,075
Passenger Cars	9,006,015	1,283,949	1,776,964	1,325,583	5,304,520
Passenger Trucks	8,518,270	1,225,050	1,700,819	1,270,490	5,026,560
Light Commercial Trucks	1,007,929	134,347	181,296	133,753	585,513
Other Buses	28,352	4,003	5,651	3,991	16,936
Transit Buses	9,023	1,198	1,714	1,222	5,308
School Buses	14,317	2,163	3,076	2,242	8,624
Refuse Trucks	8,897	1,260	1,702	1,281	5,190
Single Unit Short-haul Trucks	820,138	117,218	160,501	120,029	480,100
Single Unit Long-haul Trucks	53,702	7,543	10,349	7,610	31,445
Motor Homes	30,007	4,414	6,188	4,603	17,725
Combination Short-haul Trucks	141,736	17,819	19,717	17,197	75,786
Combination Long-haul Trucks	586,263	87,535	105,533	94,884	317,882
TOTAL	20,345,365	2,903,549	3,999,430	3,000,056	11,950,665
Annual / (Ozone Season Weekday)	324.5	322.0	322.0	321.2	323.0

As indicated in the above table, annual VMT divided by ozone season weekday VMT ranges from 321.2 to 324.5, depending on the county.

2.3.2.2. VMT by Hour of Day

The SEWRPC provided hourly VMT fractions based on output from their travel demand model.

2.3.2.3. Vehicle Population

The SEWRPC provided vehicle populations for each of the 13 MOVES vehicle classes.

Table A1.3. Vehicle Populations for 2017 Provided by SEWRPC and Output by MOVES4.0.1.

MOVES Vehicle Class	County				
	Milwaukee	Ozaukee	Racine	Washington	Waukesha
Motorcycles	16,810	2,272	3,459	2,254	10,187
Passenger Cars	265,761	36,183	50,061	36,755	152,346
Passenger Trucks	228,082	31,325	43,477	31,964	130,991
Light Commercial Trucks	29,193	3,716	5,013	3,640	16,505
Other Buses	325	44	62	43	189
Transit Buses	110	14	20	14	63
School Buses	428	62	88	63	251
Refuse Trucks	148	20	27	20	84
Single Unit Short-haul Trucks	20,564	2,805	3,838	2,824	11,713
Single Unit Long-haul Trucks	925	124	170	123	527
Motor Homes	1,973	277	388	284	1,134
Combination Short-haul Trucks	1,615	194	214	184	839
Combination Long-haul Trucks	2,257	322	387	343	1,189
TOTAL	568,191	77,358	107,204	78,511	326,018

2.3.2.4. Vehicle Age Distribution

Using two datasets provided by the WDOT listing all vehicles registered in Wisconsin, the first providing registrations as of January 2018 and the second providing registrations as of November 2021, the WDNR calculated vehicle age distributions for those two periods and used those distributions to backcast a distribution to July 2017. The WDNR did these calculations in the year 2022. The WDNR calculated age distributions for all 13 MOVES vehicle classes except the two long-haul truck classes (MOVES classes 53 and 62), for which the WDNR used the MOVES3 default distributions. The WDNR calculated two July 2017 distributions: one for the seven-county vehicle inspection and maintenance (I/M) program region (Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha counties) and the other for the remaining 65 Wisconsin counties. Since the Milwaukee 2015 ozone NAAQS nonattainment area is entirely within the I/M program region, the WDNR used the seven-county distribution for modeling the nonattainment area.

Table A1.4 presents the resulting average vehicle ages for July 2017.

Table A1.4. Average Vehicle Ages (years old).

MOVES Vehicle Class	July 2017
11 - Motorcycle	13.9
21 - Passenger Car	9.6
31 - Passenger Truck	7.8
32 - Light Commercial Truck	10.6
41 - Other Bus	11.5
42 - Transit Bus	13.8
43 - School Bus	7.8
51 - Refuse Truck	11.0
52 - Single Unit Short-haul Truck	11.3
53 - Single Unit Long-haul Truck	12.0
54 - Motor Home	15.5
61 - Combination Short-haul Truck	13.8
62 - Combination Long-haul Truck	10.5

2.3.2.5. Road Type Distribution

MOVES requires that VMT for each of the 13 source types be allocated to the following four roadway classes:

- Rural – Restricted Access
- Rural – Unrestricted Access
- Urban – Restricted Access
- Urban – Unrestricted Access

The SEWRPC provided road type distributions developed from their transportation inventory data for each of the five full or partial counties in the Milwaukee 2015 ozone NAAQS nonattainment area.

A detailed breakdown of VMT by roadway class by MOVES source type is provided in Appendix 7. The proportion of heavy-duty truck travel is significantly higher on restricted access roadways than on unrestricted access roadways.

2.3.2.6. Average Speed Distribution

The SEWRPC provided speed distributions, in MOVES input format, developed from their transportation inventory data and travel simulation models for each of the five full or partial counties in the Milwaukee 2015 ozone NAAQS nonattainment area.

2.3.2.7. Fuel Supply, Formulation and Usage Fraction

The MOVES4.0.1 defaults currently provide the best available fuel data and therefore were used.

2.3.2.8. Alternate Vehicle Fuel and Technology (AVFT) Fractions

A required input for the MOVES model is the fraction of vehicles that are designed to run on each of the following fuel types:

- Gasoline
- Diesel
- 85% Ethanol blends (E-85)
- Compressed Natural Gas (CNG)
- Battery electric
- Fuel cell electric,

where these fractions are individually specified for each model year within each of the 13 MOVES vehicle classes. These fractions sum to 1 for each model year of each vehicle class.

The WDNR developed a table of AVFT fractions by retrieving data from a listing, provided by the WDOT, of all vehicles registered in Wisconsin as of July 2024. The WDOT registration database included a field for fuel type. The AVFT table the WDNR developed covers the seven-county vehicle inspection and maintenance (I/M) program region (Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha counties).

A detailed breakdown of vehicle population and VMT by fuel type is included in Appendix 7.

2.3.2.9. Vehicle Inspection and Maintenance Program

The entire Milwaukee 2015 ozone NAAQS nonattainment area is within the seven-county southeastern Wisconsin vehicle inspection program (I/M program) region. On-Board Diagnostic (OBD) checks were assumed for most model year 1996 and newer passenger cars, passenger trucks and light commercial trucks.

2.3.2.10. Meteorology Data

Temperatures conducive to peak ozone formation were assumed for the ozone season weekday modeling. To ensure consistent emission estimates over time, the WDNR has consistently used the same minimum and maximum temperatures for onroad modeling for ozone SIPs since the early 1990s. The temperatures were developed from an analysis of peak ozone days and have minimum/maximum values of 70/94 degrees Fahrenheit for the Milwaukee 2015 ozone NAAQS nonattainment area.

2.4. Nonroad Mobile Sources

Nonroad mobile sources are motorized mobile equipment and other small and large engines that are primarily used off public roadways. Examples of nonroad mobile sources include commercial marine vessels, construction equipment, lawn and garden equipment, locomotives and agricultural equipment.

For purposes of inventory calculation, nonroad mobile sources are divided into two major groups:

- Commercial Marine, Aircraft and Rail Locomotive (MAR)
- All other nonroad categories

Nonroad categories other than MAR include:

- Recreational vehicles
- Construction equipment
- Industrial equipment
- Lawn and garden equipment
- Agricultural equipment
- Commercial equipment
- Logging equipment
- Underground mining equipment
- Oil field equipment
- Pleasure craft
- Railway maintenance equipment

A detailed listing of the nonroad emissions for each of the over 200 nonroad source subcategories, which include both the MAR and non-MAR groups, is presented in Appendix 6.

2.4.1. Non-MAR Sources

The 2017 nonroad emissions for the non-MAR categories were developed using the nonroad component of the EPA's MOVES4.0.1 model.

The only change the WDNR made to the MOVES4.0.1 nonroad defaults was an updated monthly distribution of agricultural activity, developed by the Lake Michigan Air Directors Consortium (LADCO) for Wisconsin and other Midwest states. The EPA also used these updated distributions for each Midwest state for the 2016 emission modeling platform and the 2017 and 2020 NEIs.

The model was run for each of the five full counties covering the Milwaukee 2015 ozone NAAQS nonattainment area for the months of June, July and August, using the same hot ozone season day temperatures used for the onroad modeling.⁷ For each of the five counties, the countywide hot ozone season day emissions were then calculated by dividing the total emissions over these three months by 92 (the number of days in the three months).

For the three counties not fully within the nonattainment area (Racine, Washington, and Waukesha counties), the WDNR allocated the countywide hot ozone season day emissions to the portion of the county within the nonattainment area based on surrogates such as population, land area and water area, depending on the category, as described below in section 2.4.3

⁷ The nonroad component of MOVES does not model areas smaller than full counties.

2.4.2. MAR Sources

To estimate emissions for commercial marine vessels, aircraft, and rail locomotive the WDNR first obtained *annual* 2017 emissions from the EPA's 2017 NEI.⁸ Then to estimate ozone season day emissions, the WDNR developed ratios of annual emissions to ozone season day emissions, as described in section 2.4.2.1 below, and divided the annual emissions by these ratio values. Finally, for the three counties not fully within the nonattainment area (Racine, Washington, and Waukesha counties), the WDNR allocated the countywide emissions to the portion of the county within the nonattainment area, as described in section 2.4.3.

2.4.2.1 Annual Emissions to Ozone Season Day Emissions

The WDNR developed ratios of annual emissions to ozone season day emissions from monthly emissions estimates in the EPA's 2016 emissions modeling platform, version 2.⁹ This platform includes monthly emissions for the MAR categories for the years 2016, 2023 and 2026. For each of these three years the WDNR calculated ratio values by dividing the annual emissions by the ozone season day emissions (the sum of the emissions for the months of June, July and August divided by 92 – the total number of days in those three months). For each of these three years the calculated ratio values were the same, so the same ratio values were used for each of the three inventory years, 2017, 2023 and 2024. These ratio values are:

- Aircraft: 339.7, which covers for both NO_x and VOC for all five counties
- Rail Locomotive: ranges from 361.4 to 361.8, which covers both NO_x and VOC for all five counties
- Commercial Marine Vessels:
 - For category C1 and C2 engines:
 - Milwaukee County: 223.4 for NO_x and 223.9 for VOC
 - Ozaukee County: 344.9 for NO_x and 319.7 for VOC
 - Racine County: 240.4 for NO_x and 240.0 for VOC
 - For category C3 engines:
 - Milwaukee County: 241.2 for NO_x and 233.8 for VOC
 - Ozaukee County: 556.0 for NO_x and 572.8 for VOC
 - Racine County: 362.4 for NO_x and 358.6 for VOC

Note: Washington and Waukesha Counties did not have any activity from commercial marine vessels

⁸ <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data>

⁹ <https://www.epa.gov/air-emissions-modeling/2016v2-platform>

2.4.3. Allocation of Emissions to the Milwaukee 2015 Ozone NAAQS Nonattainment Area for Racine, Washington, and Waukesha Counties

The Milwaukee 2015 ozone NAAQS nonattainment area includes all or part of five counties. Two of those counties are entirely within the nonattainment area (Milwaukee and Ozaukee). The other three counties (Racine, Washington, and Waukesha) are only partially within the Milwaukee 2015 ozone NAAQS nonattainment area, requiring surrogates to estimate the proportion of countywide emissions in the nonattainment area. Given the wide range of nonroad mobile sources, several surrogates were employed. They are described below.

2.4.3.1. Land Area

Using U.S. Census Bureau land area data for each minor civil division (MCD) in the three counties, the WDNR calculated that for Racine, Washington, and Waukesha counties, the land area within the Milwaukee 2015 ozone NAAQS nonattainment area comprises 57.1%, 42.7% and 90.6%, respectively, of the total county land area. But excluding the MCDs classified as cities, where no significant agricultural activity occurs, these percentages are 55.3%, 42.1% and 86.9%, respectively.

The nonroad categories allocated to the Milwaukee 2015 ozone NAAQS nonattainment area based on land area are **agriculture, logging, oilfields, recreational, and underground mining**. The percentages excluding cities were used for agriculture and the percentages including all MCDs were used for the other categories. It should be noted that the nonattainment area has no emissions from oilfields or underground mining.

2.4.3.2. Population

As described in section 2.2 (Nonpoint (Area) Sources), for Racine, Washington, and Waukesha counties, the percentage of each county's population estimated to live in the Milwaukee 2015 ozone NAAQS nonattainment area are 77.6%, 56.5% and 97.5%, respectively, for 2017.

The nonroad categories allocated to the nonattainment area based on these population percentages are **commercial, construction, industrial, and lawn & garden**.

2.4.3.3. Water Area

Inland Water Area (excluding Lake Michigan)

Using U.S. Census Bureau water area data for each minor civil division (MCD) in the three counties, the WDNR calculated that for Racine, Washington, and Waukesha counties, the inland water area within the Milwaukee 2015 ozone NAAQS nonattainment area comprises 5.7%, 19.0% and 94.0%, respectively, of the total county inland water area.

Inland Water Area Combined with Lake Michigan Water Area

One of the three counties partially within the Milwaukee 2015 ozone NAAQS nonattainment area (Racine County) also has water area along the Lake Michigan shoreline, of which all (100%) is in the nonattainment area. To estimate the combined percentage of water area within the nonattainment area for Racine County, the WDNR used the above inland water area percentage for Racine County (5.7%) as well as water area data from two tables in the MOVES4.0.1 nonroad data files: WI WIB.ALO, which provides the water area in each Wisconsin county applicable to pleasure craft having inboard engines, and WI WOB.ALO, which provides water area in each Wisconsin county applicable to pleasure craft having outboard engines. The difference between these two tables is that WI WIB.ALO includes water area along the Lake Michigan shore as well as inland water area, while WI WOB.ALO only includes the inland water area.

For Racine County, WI WIB.ALO has 89 square kilometers of water area and WI WOB.ALO has 27 square kilometers of water area. The 89 square kilometer value for inboard engines contains Lake Michigan waters (62 square kilometers) and 27 square kilometers of water from several inland lakes. The 27 square kilometer value for outboard engines contains only the water from the inland lakes. Thus, for pleasure craft with inboard engines $(62 \times 100.0\% + 27 \times 5.7\%) / 89 = 71.4\%$ of the associated water area is in the Milwaukee 2015 ozone NAAQS nonattainment area and for pleasure craft with outboard engines $(27 \times 5.7\%) / 27 = 5.7\%$ of the associated water area is in the nonattainment area.

Final Allocation Percentages

The nonroad category allocated to the nonattainment area based on water area is **pleasure craft**. For pleasure craft with inboard engines, the full county emissions allocated to the Milwaukee 2015 ozone NAAQS nonattainment area for Racine, Washington, and Waukesha counties are 71.4%, 19.0% and 94.0%, respectively. And for pleasure craft with outboard engines, the full county emissions allocated to the nonattainment area for Racine, Washington and Waukesha counties are 5.7%, 19.0% and 94.0%, respectively.

2.4.3.4. Lake Michigan Shoreline

One of the three counties partially within the Milwaukee 2015 ozone NAAQS nonattainment area (Racine County) has water area along the Lake Michigan shoreline, of which all (100%) is in the nonattainment area. The nonroad category allocated to the nonattainment area based on Lake Michigan shoreline is **commercial marine**, since all commercial marine emissions attributable to Racine County come from vessels traveling on Lake Michigan past the county. Racine County does not have any ports, inland lakes or inland rivers with commercial marine activity.

2.4.3.5. Airport Location

The WDNR obtained countywide annual aircraft emissions for the five counties covering the Milwaukee 2015 ozone NAAQS nonattainment area from the EPA's 2017 NEI point source

inventory (data downloaded May 14, 2022). These summaries include the longitude and latitude of the airport associated with the emissions, allowing one to determine which of the airports are in the nonattainment area. The WDNR calculated the percentages for countywide aircraft emissions in the nonattainment area to be as follows:

- Racine County: 33.9% of NO_x and 46.0% of VOC
- Washington County: 98.0% of NO_x and 95.2% of VOC
- Waukesha County: 99.7% of NO_x and 99.5% of VOC

Thus, **aircraft** emissions in the nonattainment area are those percentages of the total countywide aircraft emissions.

2.4.3.6. Railroad Track Miles

For each of three counties partially within the Milwaukee 2015 ozone NAAQS nonattainment area, the WDNR estimated, using WDOT official county maps, the number of railroad track miles in the full county and in the nonattainment portion of the county as follows:

- Racine County: 64 total miles, with 48.5 miles (76%) in the nonattainment area
- Washington County: 57 total miles, with 34 miles (60%) in the nonattainment area
- Waukesha County: 100.5 total miles, with 97 miles (97%) in the nonattainment area

The WDNR used these percentages to allocate both **rail locomotive** and **railroad maintenance** emissions to the nonattainment area.

APPENDIX 2

2023 and 2024 Emissions Projections Methodology

This appendix provides information for the sector-specific NO_x and VOC tons per ozone season day (tposd) emission estimates used in the Wisconsin Department of Natural Resources (WDNR) Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area. As part of this plan, the WDNR provides a projection of emissions for 2023 and 2024.

1. EGU Inventory Methodology for 2023 and 2024

See Appendix 3 for the projection methodology related to electric generating units (EGUs).

2. Non-EGU Point Source Inventory Methodology for 2023 and 2024

Non-EGU point source emissions are projected for 2023 by using 2023 reported emissions. Emissions are projected for 2024 by applying a growth factor of 1.0 to the 2023 inventory. A list of sources with the 2023 and 2024 emissions is provided in Appendix 4.

3. Area Source Inventory Methodology for 2023 and 2024

The EPA's 2022 Emissions Modeling Platform, Version 1 includes base year 2022.¹ Emissions for 2023 and 2024 were estimated by extrapolating the EPA's 2017 and 2020 NEIs and 2022 base year emissions from the EPA's 2022 Emissions Modeling Platform. Year 2023 area source emissions were sourced primarily from the 2022 Emissions Modeling Platform, Version 1, which incorporates area source emissions based on the 2020 NEI nonpoint inventory for both anthropogenic and biogenic emissions.

Methodologies used to develop 2022 emissions modeling platform projection data are available in the EPA's 2022 Version 1 document.² According to this document, the 2022 Version 1 nonpoint solvent emissions, except asphalt paving, are projected from the 2020 NEI, including state submitted emissions. Using 2021 data, a SCC-specific ratio was derived and applied to 2020 NEI emissions. This ensures state-submitted emissions magnitudes are preserved. For asphalt paving, 2020 NEI emissions are carried forward. Due to methodology changes for some solvent utilization categories and introducing a new category of agriculture silage for 2020 NEI, 2023 and 2024 projections for a number of individual SCCs that fall under "246xxxxxxx" (solvent utilization) showed a significant increase between 2017 and the projection years. To be conservative, the WDNR used the projection years estimates based on the 2020 NEI to back calculate 2017 emissions for these SCCs. The WDNR also projected emissions from vehicle refueling at gasoline stations (Stage II refueling) using the EPA's MOVES4.0.1 model with the same inputs used for the onroad modeling, as explained below.

For the Stage II refueling emissions, as was done for 2017, the WDNR adjusted weekday emissions to average day (weekdays and weekends) emissions, based on the ratio of average day to weekday travel, resulting in adjustment factors for 2023 and 2024 of 0.9314 to 0.9587, depending on the year and the county. Also, as was done for 2017, no Stage II vapor recovery

¹ <https://www.epa.gov/air-emissions-modeling/2022v1-emissions-modeling-platform>.

² https://gaftp.epa.gov/Air/emismod/2022/v1/2022v1_emissions_docn.pdf.

program was modeled for 2023 and 2024. Owing to most vehicles now having their own vapor recovery system, Stage II controls at the pump are largely redundant or even counterproductive. Wisconsin submitted a SIP revision removing Stage II requirements, and the EPA approved the revision in November 2013. Even without a Stage II program, emissions from Stage II refueling decreased by about 25% from 2017 to 2024, owing to the larger percentage of vehicles with onboard vapor recovery.

To obtain area source emissions for the portions of Washington, Waukesha and Racine counties located in the Milwaukee 2015 ozone NAAQS nonattainment area, emission estimates from the entire county were allocated to the partial county based on population data. The partial county population was identified based on the relative population of the Minor Civil Divisions (MCDs) in the nonattainment area as compared to the entire county. Using this methodology, for both 2023 and 2024, 57%, 97% and 77% of each county's population was estimated to live in the Washington, Waukesha and Racine county portions of the Milwaukee 2015 ozone NAAQS nonattainment area, respectively. Appendix 5 includes a table of area source emissions by source category.

4. Onroad Inventory Methodology for 2023 and 2024

As was done for the 2017 emissions, projected onroad emissions for 2023 and 2024 were developed using the MOVES4.0.1 model. Unless otherwise stated in this section, the methodology the WDNR used for 2023 and 2024 is identical to the methodology used for year 2017, as described in Appendix 1, section 2.3.

SEWRPC provided the WDNR the same suite of MOVES inputs they provided for 2017 for the two projection years of 2023 and 2024.

The resulting annual vehicle-miles of travel (VMT) that the WDNR used in MOVES4.0.1 and the ozone season weekday VMTs output by MOVES4.0.1 are shown in the Table A2.1 and Table A2.2. Although separate MOVES runs were done for each of the five counties, these tables show data for the entire Milwaukee nonattainment area (all five counties combined). More detailed VMT data for the individual counties are provided in Appendix 7.

Table A2.1. Annual VMT for Milwaukee Nonattainment Area Provided by SEWRPC and Input into MOVES4.0.1.

HPMS Vehicle Class	Year		
	2017	2023	2024
Motorcycles	82,310,552	84,047,758	84,232,248
Light Duty Vehicles	12,442,045,065	12,949,127,325	12,972,120,140
Buses	34,819,420	36,254,137	36,323,343
Single Unit Trucks	611,487,046	644,336,294	645,464,561
Combination Trucks	477,450,751	503,977,576	504,549,990
TOTAL	13,648,112,833	14,217,743,088	14,242,690,281
Change from 2017 (for Total)		+4.17%	+4.36%

Table A2.2. Ozone Season Weekday VMT for Milwaukee Nonattainment Area Output by MOVES4.0.1.

MOVES Vehicle Class	Year		
	2017	2023	2024
Motorcycles	255,931	261,098	261,676
Passenger Cars	18,697,031	18,820,330	18,810,337
Passenger Trucks	17,741,190	18,987,061	19,061,613
Light Commercial Trucks	2,042,837	2,228,082	2,233,897
Other Buses	58,933	59,303	60,131
Transit Buses	18,464	19,811	19,660
School Buses	30,422	33,097	32,635
Refuse Trucks	18,330	10,659	10,563
Single Unit Short-haul Trucks	1,697,986	1,810,339	1,809,763
Single Unit Long-haul Trucks	110,649	107,203	110,230
Motor Homes	62,938	62,632	63,740
Combination Short-haul Trucks	272,255	320,290	317,811
Combination Long-haul Trucks	1,192,097	1,226,029	1,230,202
TOTAL	42,199,065	43,945,933	44,022,257
Change from 2017 (for Total)		+4.14%	+4.32%
Annual/(Ozone Season Weekday)	323.4	323.5	323.5

The total ozone season weekday VMT increases by 4.14% from 2017 to 2023 and increases a further 0.17% from 2023 to 2024. In terms of annual VMT growth rates, these rates are 0.68% per year from 2017 to 2023 and 0.17% per year from 2023 to 2024.

Annual VMT divided by ozone season weekday VMT equals 323.4 for 2017 and 323.5 for both 2023 and 2024.

The vehicle populations for the entire Milwaukee 2015 ozone NAAQS nonattainment area for each of the inventory years are shown in the Table A2.3. Detailed vehicle population data for the individual counties are provided in Appendix 7.

Table A2.3. Vehicle Populations for the Milwaukee 2015 Ozone NAAQS Nonattainment Area Provided by SEWRPC and Output by MOVES4.0.1.

MOVES Vehicle Class	Year		
	2017	2023	2024
Motorcycles	34,982	35,217	35,471
Passenger Cars	541,106	546,811	549,357
Passenger Trucks	465,839	475,659	478,156
Light Commercial Trucks	58,067	59,251	59,559
Other Buses	663	655	654
Transit Buses	221	217	217
School Buses	892	881	880
Refuse Trucks	299	307	306
Single Unit Short-haul Trucks	41,744	42,689	42,623
Single Unit Long-haul Trucks	1,869	1,911	1,908
Motor Homes	4,056	4,147	4,143
Combination Short-haul Trucks	3,046	2,911	2,884
Combination Long-haul Trucks	4,498	4,304	4,266
TOTAL	1,157,282	1,174,960	1,180,423
Change from 2017 (for Total)		+1.53%	+2.00%

The total vehicle population increases by 1.53% from 2017 to 2023 and increases a further 0.46% from 2023 to 2024. In terms of annual population growth rates, these rates are 0.25% per year from 2017 to 2023 and 0.46% per year from 2023 to 2024.

Using a dataset provided by the Wisconsin Department of Transportation (WDOT) listing all vehicles registered in Wisconsin as of July 2024, the WDNR calculated vehicle age distributions for all 13 MOVES vehicle classes except the two long-haul truck classes (MOVES classes 53 and 62), for which the WDNR used the MOVES4 default distributions. The distribution calculated by the WDNR covered the seven southeastern Wisconsin counties in the vehicle inspection and maintenance program region (Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha counties). The WDNR used this distribution for calendar year 2024. To approximate a distribution for calendar year 2023, the WDNR adjusted the 2024 distribution by removing the age fraction for model year 2024 for each vehicle class and then normalized the remaining age fractions for each vehicle class so that they would sum to 1. Table A2.4 presents the resulting average vehicle ages for all three inventory years.

Table A2.4. Average Vehicle Ages (years old).

MOVES Vehicle Class	Year		
	2017	2023	2024
Motorcycle	13.9	15.1	15.6
Passenger Car	9.6	10.9	11.7
Passenger Truck	7.8	7.4	8.0
Light Commercial Truck	10.6	9.6	10.2
Other Bus	11.5	13.4	13.3
Transit Bus	13.8	13.7	14.2
School Bus	7.8	7.1	7.7
Refuse Truck	11.0	18.8	19.2
Single Unit Short-haul Truck	11.3	10.6	11.0
Single Unit Long-haul Truck	12.0	12.9	12.9
Motor Home	15.5	14.5	14.8
Combination Short-haul Truck	13.8	13.2	13.4
Combination Long-haul Truck	10.5	10.6	10.7

Emissions for 2023 and 2024 were increased by a 7.5% safety margin, as agreed through the interagency transportation conformity consultative process.

The motor vehicle inspection and maintenance (I/M) program was presumed to remain in effect for 2023 and 2024.

Detailed listing of the projected onroad emissions and activity data are provided in Appendix 7.

5. Nonroad Inventory Methodology for 2023 and 2024

Unless otherwise stated in this section, the methodology for determining 2023 and 2024 projected nonroad emissions is identical to the methodology used to determine the 2017 estimates, as described in Appendix 1, section 2.4.

For all source categories except commercial marine, aircraft and rail locomotive (MAR), the nonroad component of the MOVES4.0.1 model was run for each of the five full counties at hot ozone season day temperatures. As was done for 2017, the only change made to the MOVES4.0.1 nonroad defaults was an updated monthly distribution of agricultural activity, developed by the Lake Michigan Air Directors Consortium (LADCO). The MOVES4.0.1 model's default growth projections were assumed.

For the MAR categories, the WDNR obtained emissions for year 2022 from the EPA's 2022 Emissions Modeling Platform, Version 1.³ Then to project emissions to years 2023 and 2024, the WDNR linearly extrapolated from the year 2017 emissions (documented in Appendix 1, section 2.4) and the year 2022 modeling platform emissions, with the constraint that if the 2022 emissions were less than the 2017 emissions, the 2023 and 2024 emissions were set equal to the

³ <https://www.epa.gov/air-emissions-modeling/2022v1-emissions-modeling-platform>.

2022 emissions. The intent of this constraint is to avoid an underestimation of 2023 and 2024 emissions.

In allocating emissions to the Milwaukee 2015 ozone NAAQS nonattainment area for the three counties not fully within the nonattainment area (Racine, Washington, and Waukesha counties), the only adjustment factors that changed from those used for 2017 are the estimated population proportions for Racine County. Consistent with the allocation done for area sources, the WDNR estimated the percentage of the full Racine County population in the Milwaukee 2015 ozone NAAQS nonattainment area to be 77.6% in 2017, 77.2% in 2023 and 77.1% in 2024.

Detailed listings of the projected nonroad emissions for over 200 subcategories are provided in Appendix 6.

APPENDIX 3

EGU Point Source Emissions for 2017, 2023 and 2024

This appendix provides the methodology for electric generating unit (EGU) sector NO_x and VOC tons per ozone season day (tposd) emission estimates found in sections 3.2 and 3.3 of the Wisconsin Department of Natural Resources (WDNR) Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area.

Wisconsin Electric Power Company (We Energies) has four point-source facilities with EGUs located in the Milwaukee 2015 ozone NAAQS nonattainment area – Elm Road, Port Washington, South Oak Creek, and Valley. Three of these facilities are in Milwaukee County; the Port Washington facility is in Ozaukee County. Elm Road and South Oak Creek are coal-fired plants, while Port Washington and Valley are natural gas-fired plants.

1. 2017 Emissions

The 2017 NO_x emissions, emission rates and fuel consumption for the generating units at these facilities were derived from data reported by the utility to the EPA’s Clean Air Markets Division (CAMD) database. The WDNR used the ozone season (i.e., May 1 through September 30) day with the 99th percentile highest heat input for each unit during the ozone season to represent ozone season day operations during the 2017 ozone season. Using this 99th percentile value provides a conservative, but reasonable, representation of maximum ozone season day operation. The ozone season day emissions were then calculated by multiplying the maximum ozone season day heat inputs in 2017 by the average emission rates for the 2017 ozone season. The NO_x emission rates were derived from the CAMD emissions data for the 2017 ozone season. This base data and the resulting tposd emissions are provided in Table A3.1. The total NO_x emissions were 19.77 tposd in 2017.

The 2017 VOC ozone season day emissions are also derived by multiplying the maximum day heat inputs by average VOC emission rates. The base data used in the calculation and the resulting emissions are provided in Table A3.1. In this case, however, VOC emissions are not monitored by continuous emissions monitors and reported to the CAMD database, as is done for NO_x. Therefore, the VOC emission rates were derived by dividing the annual VOC emissions reported to the WDNR Air Emissions Inventory system by the annual heat input reported to the CAMD database for 2017. The data applied to derive the VOC emission rates are shown in Table A3.2. Multiplying these VOC emission rates by the maximum day heat inputs resulted in 0.81 tposd of VOC in 2017.

Note: emissions from non-electric generating emission units at the plants (i.e., units other than the coal boilers and combined cycle units) are not included because they are insignificant (less than 5 tons per year) compared to the EGU emissions.

Table A3.1. Ozone Season Day Operation and Emissions in 2017 for EGUs.

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Variable	Unit Number			
Elm Road	B18	B19	-	-
<i>Ozone Season Day Heat Input (mmBtu)¹</i>	147,094	145,644	-	-
<i>NOx Rate (lbs/mmBtu)²</i>	0.060	0.061	-	-
<i>NOx (tposd)</i>	4.44	4.45	-	-
<i>NOx Control</i>			-	-
<i>VOC Rate (lbs/mmBtu)³</i>	0.0001	0.0003	-	-
<i>VOC (tposd)</i>	0.011	0.021	-	-
Port Washington	P11	P12	P21	P22
<i>Ozone Season Day Heat Input (mmBtu)¹</i>	46,350	46,485	47,259	47,484
<i>NOx Rate (lbs/mmBtu)²</i>	0.010	0.012	0.010	0.012
<i>NOx (tposd)</i>	0.24	0.28	0.25	0.27
<i>NOx Control</i>	SCR	SCR	SCR	SCR
<i>VOC Rate (lbs/mmBtu)³</i>	0.0009	0.0011	0.0022	0.0026
<i>VOC (tposd)</i>	0.021	0.025	0.051	0.061
South Oak Creek	B25	B26	B27	B28
<i>Ozone Season Day Heat Input (mmBtu)¹</i>	55,841	58,907	72,411	71,941
<i>NOx Rate (lbs/mmBtu)²</i>	0.066	0.066	0.060	0.060
<i>NOx (tposd)</i>	1.83	1.96	2.16	2.17
<i>NOx Control</i>	SCR	SCR	SCR	SCR
<i>VOC Rate (lbs/mmBtu)³</i>	0.0038	0.0037	0.0036	0.0036
<i>VOC (tposd)</i>	0.106	0.108	0.129	0.13
Valley	B21	B22	B23	B24
<i>Ozone Season Day Heat Input (mmBtu)¹</i>	14,866	12,255	13,169	12,623
<i>NOx Rate (lbs/mmBtu)²</i>	0.066	0.066	0.065	0.065
<i>NOx (tposd)</i>	0.49	0.41	0.43	0.41
<i>NOx Control</i>	LNB	LNB	LNB	LNB
<i>VOC Rate (lbs/mmBtu)³</i>	0.0058	0.0058	0.0052	0.0052
<i>VOC (tposd)</i>	0.043	0.035	0.034	0.033

LNB = Low NOx burner; SCR = Selective catalytic reduction

¹ Heat input is for the day with the 99th percentile highest heat input during the 2017 ozone season. "Ozone Season" is defined here as May 1 through September 30.

² Emission rate derived from EPA CAMD ozone season NOx emissions and heat input.

³ Calculated in Table A3.2.

Table A3.2. EGU VOC Annual Emissions and Emission Rates in 2017.

Variable	Unit Number			
Elm Road	B18	B19	-	-
<i>Annual VOC (tons)¹</i>	2.88	5.57	-	-
<i>Annual Heat Input (mmBtu)²</i>	39,953,673	38,080,327	-	-
<i>VOC Rate (lbs/mmBtu)</i>	0.0001	0.0003	-	-
Port Washington	P11	P12	P21	P22
<i>Annual VOC (tons)¹</i>	4.99	5.76	8.89	10.01
<i>Annual Heat Input (mmBtu)²</i>	10,759,382	10,765,909	8,180,143	7,743,282
<i>VOC Rate (lbs/mmBtu)</i>	0.0009	0.0011	0.0022	0.0026
South Oak Creek	B25	B26	B27	B28
<i>Annual VOC (tons)¹</i>	27.67	24.46	26.63	20.20
<i>Annual Heat Input (mmBtu)²</i>	14,605,924	13,399,914	15,003,778	11,159,628
<i>VOC Rate (lbs/mmBtu)</i>	0.0038	0.0037	0.0036	0.0036
Valley	B21	B22	B23	B24
<i>Annual VOC (tons)¹</i>	7.92	5.53	3.93	4.19
<i>Annual Heat Input (mmBtu)²</i>	2,747,797	1,920,453	1,502,620	1,603,993
<i>VOC Rate (lbs/mmBtu)</i>	0.0058	0.0058	0.0052	0.0052

¹ Emissions reported to the WDNR Air Emissions Inventory.

² Heat input reported to the CAMD database.

2. 2023 and 2024 Emissions

Following the same methodology used to calculate 2017 emissions, the WDNR estimated ozone season day emissions in 2023 for the Milwaukee nonattainment area EGUs by multiplying the maximum daily heat input by the average ozone season emission rate. The data used in this calculation and resulting emissions are summarized in Table A3.3.

The South Oak Creek power plant retired boilers B25 and B26 before the start of the 2024 ozone season; therefore, those units have an ozone season day heat input value of “0” for that period. The NO_x and VOC tpsod emissions from the Milwaukee area EGUs for 2024, except for South Oak Creek boilers B25 and B26 which have a value of “0”, are based on the 2023 tpsod emissions and using no growth factor from 2023 to 2024.

Based on the information in Tables A3.3 and A3.4, the total emissions from the Milwaukee area EGUs are calculated to be 20.11 tpsod for NO_x and 0.74 tpsod for VOC for 2023, and 20.11 tpsod for NO_x and 0.53 tpsod for VOC for 2024.

Table A3.3. Ozone Season Day Operation and Emissions in 2023 for EGUs.

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Variable	Unit Number			
Elm Road	B18	B19	-	-
<i>Ozone Season Day Heat Input (mmBtu)¹</i>	144,597	132,850	-	-
<i>NOx Rate (lbs/mmBtu)²</i>	0.063	0.064	-	-
<i>NOx (tposd)</i>	4.57	4.24	-	-
<i>NOx Control</i>	SCR	SCR	-	-
<i>VOC Rate (lbs/mmBtu)³</i>	0.0002	0.0002	-	-
<i>VOC (tposd)</i>	0.016	0.018	-	-
Port Washington	P11	P12	P21	P22
<i>Ozone Season Day Heat Input (mmBtu)¹</i>	49,966	49,962	49,223	49,298
<i>NOx Rate (lbs/mmBtu)²</i>	0.010	0.009	0.010	0.010
<i>NOx (tposd)</i>	0.25	0.23	0.24	0.24
<i>NOx Control</i>	SCR	SCR	SCR	SCR
<i>VOC Rate (lbs/mmBtu)³</i>	0.0006	0.0004	0.0005	0.0007
<i>VOC (tposd)</i>	0.016	0.010	0.013	0.018
South Oak Creek	B25	B26	B27	B28
<i>Ozone Season Day Heat Input (mmBtu)¹</i>	59,541	57,869	72,850	73,527
<i>NOx Rate (lbs/mmBtu)²</i>	0.068	0.068	0.062	0.063
<i>NOx (tposd)</i>	2.03	1.98	2.27	2.30
<i>NOx Control</i>	SCR	SCR	SCR	SCR
<i>VOC Rate (lbs/mmBtu)³</i>	0.0036	0.0035	0.0036	0.0036
<i>VOC (tposd)</i>	0.109	0.102	0.132	0.132
Valley	B21	B22	B23	B24
<i>Ozone Season Day Heat Input (mmBtu)¹</i>	14,042	12,904	15,202	15,293
<i>NOx Rate (lbs/mmBtu)²</i>	0.061	0.061	0.062	0.062
<i>NOx (tposd)</i>	0.43	0.39	0.47	0.47
<i>NOx Control</i>	LNB	LNB	LNB	LNB
<i>VOC Rate (lbs/mmBtu)³</i>	0.0055	0.0055	0.0055	0.0055
<i>VOC (tposd)</i>	0.039	0.035	0.042	0.042

LNB = Low NOx burner; SCR = Selective catalytic reduction

¹ Heat input is for the day with the highest 99th percentile daily value for the 2023 ozone season. “Ozone Season” is defined here as May 1 through September 30.

² Emission rate derived from EPA CAMD ozone season NOx emissions and heat input for 2023.

³ Calculated in Table A3.4.

Table A3.4. EGU VOC Annual Emissions and Emission Rates in 2023.

Variable	Unit Number			
Elm Road	B18	B19	-	-
<i>Annual VOC (tons)¹</i>	5.55	5.59	-	-
<i>Annual Heat Input (mmBtu)²</i>	28,351,024	33,120,412	-	-
<i>VOC Rate (lbs/mmBtu)</i>	0.0004	0.0003	-	-
Port Washington	P11	P12	P21	P22
<i>Annual VOC (tons)¹</i>	4.60	2.98	3.88	5.09
<i>Annual Heat Input (mmBtu)²</i>	14,688,849	15,015,752	14,456,858	14,265,030
<i>VOC Rate (lbs/mmBtu)</i>	0.0006	0.0004	0.0005	0.0007
South Oak Creek	B25	B26	B27	B28
<i>Annual VOC (tons)¹</i>	13.08	15.69	24.86	20.84
<i>Annual Heat Input (mmBtu)²</i>	7,170,407	8,862,365	13,717,506	11,585,107
<i>VOC Rate (lbs/mmBtu)</i>	0.0036	0.0035	0.0036	0.0036
Valley	B21	B22	B23	B24
<i>Annual VOC (tons)¹</i>	6.49	6.95	3.82	4.03
<i>Annual Heat Input (mmBtu)²</i>	2,361,452	2,529,943	1,388,971	1,465,150
<i>VOC Rate (lbs/mmBtu)</i>	0.0055	0.0055	0.0055	0.0055

¹ Emissions reported to the WDNR Air Emissions Inventory.

² Heat input reported to the CAMD database.

3. Summary of EGU Point Source Emissions

Based on the information above, the total ozone season day emissions from the sources with EGUs located in the Milwaukee 2015 ozone NAAQS nonattainment area are summarized in Table A3.5.

Table A3.5. Total 2017, 2023, and 2024 Emissions from EGUs.

Facility Name (FID #)	Pollutant	2017 (tposd)	2023 (tposd)	2024 (tposd)
Elm Road (241007690)	NO _x	8.88	8.81	8.81
	VOC	0.032	0.051	0.051
Port Washington (246004000)	NO _x	1.03	0.96	0.96
	VOC	0.159	0.056	0.056
South Oak Creek (241007690)	NO _x	8.12	8.58	4.57
	VOC	0.47	0.48	0.26
Valley (241007800)	NO _x	1.74	1.77	1.77
	VOC	0.15	0.16	0.16
Total EGU	NO_x	19.77	20.11	16.10
	VOC	0.81	0.74	0.53

APPENDIX 4

Non-EGU Point Source Emissions for 2017, 2023 and 2024

This appendix provides a list of the Milwaukee, WI 2015 ozone NAAQS nonattainment area non-electric generating unit (non-EGU) point source tons per ozone season day (tposd) emissions by facility identification number (FID) and facility name for 2017, 2023 and 2024. The sums of NO_x and VOC emissions from these facilities were used for the non-EGU sector NO_x and VOC tposd emission estimates found in sections 3.2 (Baseline Year Inventory) and 3.3 (Attainment Year Inventories) of the Wisconsin Department of Natural Resources (WDNR) Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Nonattainment Area.

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Table A4.1. 2017 Point Non-EGU Emissions for the Milwaukee, WI 2015 Ozone NAAQS Nonattainment Area^{1,2}

FID	Facility Name	County	NAICS	Pollutant	2017 (tposd)	2017 (tons)
241005710	MAYNARD STEEL CASTING CO INC	Milwaukee	331513	NOx	0.04	10.41
241006810	STRATTEC SECURITY CORP	Milwaukee	33639	NOx	0.01	2.18
241006920	ATI LADISH LLC	Milwaukee	332112	NOx	0.13	40.44
241007030	Molson Coors USA LLC	Milwaukee	312120	NOx	0.05	15.71
241008240	REXNORD INDUSTRIES LLC GEAR GROUP	Milwaukee	333613	NOx	0.02	7.91
241008680	MOTOR CASTINGS CO PLANT 1 (FORMER)	Milwaukee	331511	NOx	0.02	3.75
241009670	SMITHFIELD PACKAGED MEATS CORP	Milwaukee	311991	NOx	0.06	19.43
241010770	TREAT ALL METALS INC	Milwaukee	332812	NOx	0.03	7.86
241010990	JOY GLOBAL SURFACE MINING INC	Milwaukee	333131	NOx	0.02	7.34
241011100	MALTEUROP NORTH AMERICA	Milwaukee	311213	NOx	0.07	24.36
241011760	UNIT DROP FORGE COMPANY INC	Milwaukee	332111	NOx	0.05	12.58
241011870	BRIGGS & STRATTON, LLC	Milwaukee	333611	NOx	0.05	16.68
241012200	REXNORD INDUSTRIES INC	Milwaukee	333613	NOx	0.01	4.32
241012310	GREDE LLC - LIBERTY	Milwaukee	331511	NOx	0.02	7.49
241013080	CHR HANSEN INC	Milwaukee	311999	NOx	0.01	3.11
241014180	GE Medical Systems LLC	Milwaukee	334517	NOx	0.01	2.17
241014620	PPG INDUSTRIES	Milwaukee	325510	NOx	0.04	15.71
241014730	ALDRICH CHEMICAL CO LLC	Milwaukee	325199	NOx	0.01	4.97
241015390	APPLETON GROUP LLC	Milwaukee	331511	NOx	0.01	4.97
241017590	HENTZEN COATINGS INC	Milwaukee	325510	NOx	0.00	0.54
241019350	STAINLESS FOUNDRY & ENGINEERING INC	Milwaukee	331513	NOx	0.00	1.72
241019460	WEST SHORE PIPE LINE CO GRANVILLE STATION	Milwaukee	486910	NOx	0.00	0.00
241019900	WI DOA / UW-MILWAUKEE	Milwaukee	611310	NOx	0.03	28.87
241020780	ALSCO AMERICAN INDUSTRIAL DIVISION	Milwaukee	812331	NOx	0.00	0.01
241021220	CLCM OAK CREEK	Milwaukee	811310	NOx	0.01	2.01
241022760	Highline-Warren LLC	Milwaukee	423120	NOx	0.00	0.15
241023640	The Newark Group, Inc.	Milwaukee	322130	NOx	0.11	42.07
241024300	Aurora St Lukes Medical Center	Milwaukee	622110	NOx	0.03	7.89
241026500	SUPER STEEL LLC	Milwaukee	332312	NOx	0.00	1.10

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FID	Facility Name	County	NAICS	Pollutant	2017 (tposd)	2017 (tons)
241027050	MILWAUKEE REGIONAL MEDICAL CENTER THERMAL SERVICES INC	Milwaukee	221330	NOx	0.06	31.70
241027160	Stark Pavement Corp	Milwaukee	324121	NOx	0.04	7.94
241027930	MILWAUKEE FORGE	Milwaukee	332111	NOx	0.02	5.04
241028810	Milwaukee Plant, LLC	Milwaukee	332431	NOx	0.01	6.34
241029030	BRADY WORLDWIDE - FLORIST AVE PLT	Milwaukee	322291	NOx	0.03	7.37
241029250	MMSD-JONES ISLAND WATER RECLAMATION FACILITY	Milwaukee	221320	NOx	0.22	80.06
241029800	MID CITY FOUNDRY CO	Milwaukee	331511	NOx	0.00	0.67
241031120	USVA ZABLOCKI MEDICAL CENTER	Milwaukee	622110	NOx	0.06	8.79
241031450	SHERWIN INDUSTRIES INC	Milwaukee	324121	NOx	0.00	0.22
241033210	ASCENSION SE WISCONSIN HOSPITAL ST JOSEPH CAMPUS	Milwaukee	622110	NOx	0.02	7.00
241033430	ABX SOLUTIONS, LLC	Milwaukee	326112	NOx	0.01	2.11
241034200	ROCKWELL AUTOMATION INC	Milwaukee	335311	NOx	0.00	0.29
241036840	MILWAUKEE PLATING CO	Milwaukee	332813	NOx	0.00	0.75
241036950	AZZ Galvanizing and Plating - Milwaukee	Milwaukee	332812	NOx	0.01	2.23
241038820	MASTER LOCK CO LLC	Milwaukee	332510	NOx	0.01	3.83
241040690	SPIC AND SPAN INC	Milwaukee	812332	NOx	0.00	1.03
241041900	SOLENIS LLC	Milwaukee	325211	NOx	0.00	2.13
241042670	THIELE TANNING CO	Milwaukee	316110	NOx	0.00	1.27
241045420	Reyes Coca-Cola Bottling	Milwaukee	312112	NOx	0.00	2.48
241046630	Advanced Plating Technologies	Milwaukee	332813	NOx	0.00	0.41
241051250	LUCAS MILHAUPT INC	Milwaukee	332999	NOx	0.00	0.16
241052680	CAMPBELL SOUP SUPPLY CO LLC	Milwaukee	311991	NOx	0.01	4.13
241053010	SUPREME CORES INC	Milwaukee	332999	NOx	0.00	1.50
241094700	EVERBRITE LLC	Milwaukee	339950	NOx	0.00	1.30
241095910	PAYNE & DOLAN-FRANKLIN AGGR	Milwaukee	212312	NOx	0.01	2.16
241165210	HENKEL CORP	Milwaukee	325520	NOx	0.00	0.35
241167630	AMERICAS BEST QUALITY COATINGS CORP	Milwaukee	332812	NOx	0.00	0.391
241168070	SNAP ON TOOLS MFG CO	Milwaukee	33281	NOx	0.00	0.91
241168180	AURORA WEST ALLIS MEDICAL CENTER	Milwaukee	622110	NOx	0.01	5.67

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FID	Facility Name	County	NAICS	Pollutant	2017 (tposd)	2017 (tons)
241168510	PACKAGING CORPORATION OF AMERICA	Milwaukee	322211	NOx	0.01	2.66
241168620	WMWI - METRO RECYCLING & DISPOSAL	Milwaukee	562212	NOx	0.26	78.76
241189520	KRONES INC	Milwaukee	333993	NOx	0.00	0.63
241222410	ALDRICH CHEMICAL CO LLC	Milwaukee	325130	NOx	0.00	0.60
241228350	MMSD-SOUTHSHORE WASTEWATER TREATMENT PLANT	Milwaukee	221320	NOx	0.07	42.94
241231760	HYDRO-PLATERS INC	Milwaukee	332813	NOx	0.00	0.19
241232640	BANTA SPECIALTY CONVERTING	Milwaukee	323111	NOx	0.00	0.07
241251670	Suedpack Oak Creek Corporation	Milwaukee	323111	NOx	0.00	0.07
241254310	THERMO FISHER SCIENTIFIC (MILWAUKEE) LLC	Milwaukee	325199	NOx	0.00	2.29
241266740	SEIDEL TANNING CO	Milwaukee	316110	NOx	0.01	2.50
241267180	RITUS CORP	Milwaukee	326299	NOx	0.00	0.38
241276750	FREDMAN BAG CO	Milwaukee	323111	NOx	0.00	0.48
241308870	SYMET INC	Milwaukee	332812	NOx	0.00	0.17
241334060	Tekni-Plex Flexibles LLC	Milwaukee	322220	NOx	0.00	1.14
241348030	DINGS CO	Milwaukee	335314	NOx	0.00	0.09
241370140	HELWIG CARBON PRODUCTS INC	Milwaukee	332813	NOx	0.00	0.44
241372120	BADGER ALLOYS	Milwaukee	331511	NOx	0.00	0.72
241413810	CENTRAL AQUATICS PLANTS 1 AND 2	Milwaukee	327211	NOx	0.00	1.08
241442630	WESTERN BUILDING PRODUCTS INC	Milwaukee	321918	NOx	0.00	0.41
241450440	ASCENSION COLUMBIA ST MARY'S HOSPITAL MILWAU	Milwaukee	622110	NOx	0.04	9.73
241454290	MCADAMS GRAPHICS INC	Milwaukee	323111	NOx	0.00	0.47
241455500	STEELWIND INDUSTRIES	Milwaukee	332312	NOx	0.01	3.92
241462980	SELLARS ABSORBENT MATERIALS INC	Milwaukee	322291	NOx	0.01	4.10
241472770	FRANTZ COMPANY INC	Milwaukee	321920	NOx	0.03	7.65
241480910	BRADY U S A INC - GOOD HOPE RD FACILITY	Milwaukee	323111	NOx	0.00	0.73
241514570	ADAMS INDUSTRIES INC	Milwaukee	811310	NOx	0.00	0.59
241709930	XYMOX TECHNOLOGIES INC	Milwaukee	334419	NOx	0.00	0.21
241723240	SNYDERS - LANCE INC	Milwaukee	311919	NOx	0.05	14.97
241757340	QUAD/GRAPHICS INC	Milwaukee	323111	NOx	0.01	3.76
241789350	LAW TANNING CO LLC	Milwaukee	316110	NOx	0.00	0.72

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FID	Facility Name	County	NAICS	Pollutant	2017 (tposd)	2017 (tons)
241879550	JOY-MARK INC	Milwaukee	333511	NOx	0.01	1.36
241964580	API HEAT TRANSFER	Milwaukee	332410	NOx	0.00	0.93
268237970	WACKER NEUSON PRODUCTION AMERICAS LLC	Milwaukee	333120	NOx	0.01	4.04
341018810	DIC IMAGING PRODUCTS USA INC	Milwaukee	325211	NOx	0.00	0.10
341024420	FPM LLC	Milwaukee	332812	NOx	0.02	5.03
341062260	BHP, Inc.	Milwaukee	332311	NOx	0.00	0.31
341092510	HARLEY-DAVIDSON MOTOR CO PROD DEV CTR	Milwaukee	541380	NOx	0.01	2.47
341158070	CLCM ST FRANCIS	Milwaukee	811310	NOx	0.00	1.19
341201300	STEELE SOLUTIONS INC	Milwaukee	332312	NOx	0.01	2.89
341209220	FCPC RENEWABLE GENERATION LLC'S BIODIGESTER FACILITY	Milwaukee	221118	NOx	0.02	16.31
341209880	MILWAUKEE COMPOSITES INC	Milwaukee	336510	NOx	0.00	0.24
341224620	WPC TECHNOLOGIES INC	Milwaukee	325130	NOx	0.00	0.59
341228910	Angelic Bakehouse, Inc. (OH)	Milwaukee	311812	NOx	0.00	0.24
399024230	MILWAUKEE MATERIALS LLC	Milwaukee	212312	NOx	0.00	0.16
399046780	GENESEE AGGREGATE CORP	Milwaukee	212319	NOx	0.00	0.67
399063060	Stark Pavement Corp	Milwaukee	324121	NOx	0.02	2.71
399089790	Stark Pavement Corp- SN 413380	Milwaukee	212312	NOx	0.00	0.04
399092980	Stark Pavement Corp - ULTRA 135-85577-00-NA	Milwaukee	324121	NOx	0.02	2.75
246003890	LAKESIDE FOODS INC	Ozaukee	311421	NOx	0.01	1.85
246004110	PACE INDUSTRIES EST DIVISION	Ozaukee	331523	NOx	0.06	21.61
246005760	OZAUKEE COUNTY HIGHWAY DEPT	Ozaukee	324121	NOx	0.02	0.96
246008620	MID-CITY FOUNDRY CORP - UNITED DIV	Ozaukee	331511	NOx	0.00	0.29
246013350	Super Steel LLC	Ozaukee	333120	NOx	0.00	1.48
246044700	CHARTER STEEL - SAUKVILLE	Ozaukee	331110	NOx	0.46	124.13
246059220	CALIBRE INC	Ozaukee	332812	NOx	0.00	0.31
246076820	CALIBRE INC	Ozaukee	332812	NOx	0.00	0.74
246128960	CALIBRE INC -- DAKOTA DR	Ozaukee	332812	NOx	0.00	1.07
246139190	JBT CORPORATION	Ozaukee	32799	NOx	0.00	0.18
246150850	CONSTRUCTION FORMS INC	Ozaukee	332999	NOx	0.00	0.49
346001480	KOHLER POWER SYSTEMS-SAUKVILLE	Ozaukee	332420	NOx	0.00	0.37

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FID	Facility Name	County	NAICS	Pollutant	2017 (tposd)	2017 (tons)
998296420	HARTMANN SAND & GRAVEL COMPANY - LIPPMAN 21X42	Ozaukee	212321	NOx	0.06	1.84
998296530	HARTMANN SAND & GRAVEL INC - PIONEER 358 CRUSHER	Ozaukee	212321	NOx	0.04	1.27
998369680	HARTMANN SAND & GRAVEL - LIPPMAN #790102	Ozaukee	212321	NOx	0.10	1.72
252003400	RACINE WASTEWATER TREATMENT FACILITY	Racine	221320	NOx	0.28	66.05
252004280	PAYNE AND DOLAN INC - RACINE QUARRY	Racine	212312	NOx	0.01	1.33
252004940	INSINKERATOR	Racine	335210	NOx	0.01	2.60
252005820	SC JOHNSON HOWE ST CAMPUS	Racine	561110	NOx	0.01	5.16
252006370	S C JOHNSON & SON INC	Racine	325611	NOx	0.09	42.47
252007030	TWIN DISC INC PLANT 1 (RACINE ST)	Racine	333611	NOx	0.00	0.77
252007140	TWIN DISC INC - PLT 3	Racine	333611	NOx	0.04	10.37
252007690	CNH AMERICA LLC	Racine	333111	NOx	0.01	1.91
252009780	E C STYBERG ENGINEERING CO	Racine	332119	NOx	0.00	0.95
252012090	MODINE MFG CO	Racine	33639	NOx	0.02	5.57
252013190	PAYNE & DOLAN INC #31	Racine	324121	NOx	0.01	1.40
252013630	AMERICAN ROLLER CO LLC	Racine	326299	NOx	0.00	1.02
252019900	WI DOA / SOUTHERN WISCONSIN CENTER	Racine	623990	NOx	0.01	6.70
252075340	SHURPAC INC	Racine	332812	NOx	0.00	0.97
252076990	KESTREL HAWK LANDFILL	Racine	562212	NOx	0.01	2.21
252077760	FEDERAL HEATH SIGN CO LLC	Racine	323111	NOx	0.00	0.17
252091070	THERMAL TRANSFER PRODUCTS LTD	Racine	332410	NOx	0.00	0.43
252103940	Ascension All Saints Hospital	Racine	622110	NOx	0.03	8.17
252126380	GREAT NORTHERN CORPORATION - RACINE DIVISION	Racine	322211	NOx	0.00	0.42
252135950	Ideal Industries Lighting LLC dba Cree Lighting	Racine	332812	NOx	0.01	2.96
252194140	PUTZMEISTER INC	Racine	333922	NOx	0.05	12.60
252229670	RETAIL FIXTURE LLC	Racine	337110	NOx	0.00	0.18
252237260	SPECIALTY TAPES LLC	Racine	322220	NOx	0.00	0.51
252247820	Kerry Inc.	Racine	311999	NOx	0.00	0.30
252276970	Real Alloy Recycling, Inc. - Racine Plant	Racine	331314	NOx	0.01	3.36

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FID	Facility Name	County	NAICS	Pollutant	2017 (tposd)	2017 (tons)
252280600	Seda North America	Racine	326112	NOx	0.01	3.44
399097050	Cornerstone Pavers LLC - FT4250CC 413975	Racine	212312	NOx	0.03	5.44
267005640	PAYNE & DOLAN INC RUGBY JUNCTION CONTROL #11	Washington	324121	NOx	0.01	1.88
267058660	WMWI Omega Hills Landfill	Washington	562212	NOx	0.26	87.18
267064270	KERRY INGREDIENTS - JACKSON	Washington	311511	NOx	0.02	8.70
267065260	SERIGRAPH INC PLANT 2	Washington	323111	NOx	0.00	1.97
267067900	REGAL WARE INC - WEST BEND	Washington	332215	NOx	0.01	1.97
267073290	SYSTEMS INC	Washington	333921	NOx	0.00	0.18
267076810	SERIGRAPH INC - PLANT 3	Washington	323111	NOx	0.00	0.20
267077470	ADVANCED COATINGS	Washington	332812	NOx	0.00	1.34
267085830	WestRock CP LLC	Washington	322211	NOx	0.01	3.48
267110470	Sterling Wisconsin LLC	Washington	325412	NOx	0.00	2.72
267141710	AVALON PRECISION CASTING COMPANY LLC	Washington	331512	NOx	0.00	0.30
267155570	Rytec Corp	Washington	332321	NOx	0.01	2.24
268013790	GKN SINTER METALS	Washington	332117	NOx	0.00	1.70
268005430	RENAISSANCE MFG GROUP- WAUKESHA FOUNDRY	Waukesha	331511	NOx	0.02	5.38
268006310	WAUKESHA FOUNDRY	Waukesha	331511	NOx	0.01	1.55
268006750	INNIO Waukesha Gas Engines, Inc.	Waukesha	333618	NOx	0.03	17.83
268006970	METALTEK INTL WIS CENTRIFUGAL DIV	Waukesha	331513	NOx	0.05	12.11
268008400	SILGAN CONTAINERS MFG CORP	Waukesha	332439	NOx	0.02	7.50
268008510	SILGAN CONTAINERS MFG CORP	Waukesha	332439	NOx	0.00	1.29
268008730	WAUKESHA LIME & STONE	Waukesha	212312	NOx	0.01	1.72
268009500	FIBERESIN INDUSTRIES INC	Waukesha	337110	NOx	0.00	1.10
268010710	HUSCO INTERNATIONAL INC	Waukesha	332912	NOx	0.00	0.95
268012030	CASTALLOY INC	Waukesha	331511	NOx	0.01	3.41
268012250	QUAD/GRAPHICS MARKETING LLC	Waukesha	323111	NOx	0.01	2.39
268012360	ARANDELL CORPORATION	Waukesha	323111	NOx	0.01	4.08
268012580	SCHAWK MILWAUKEE, A SAUERESSIG COMPANY, DIV OF MATTHEWS INTERNATIONAL	Waukesha	323120	NOx	0.00	0.14
268012800	COOPER POWER SYSTEMS -PEWAUKEE - HICKORY STREET	Waukesha	326291	NOx	0.00	0.71

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FID	Facility Name	County	NAICS	Pollutant	2017 (tposd)	2017 (tons)
268012910	PAYNE AND DOLAN - #2	Waukesha	324121	NOx	0.02	3.79
268014560	HENSCHEL COATING & LAMINATING INC	Waukesha	322220	NOx	0.00	0.16
268014670	GENERAC POWER SYSTEMS-WAUKESHA	Waukesha	335312	NOx	0.10	24.67
268014780	DYNEX-RIVETT INC	Waukesha	333996	NOx	0.00	0.22
268015330	BIMBO BAKERIES USA INC	Waukesha	311811	NOx	0.01	2.94
268016100	ITU ABSORBTECH INC	Waukesha	812332	NOx	0.00	1.43
268016210	Vorteq Coil Finishers	Waukesha	332812	NOx	0.00	0.53
268017200	COOPER POWER SYSTEMS LLC	Waukesha	335311	NOx	0.00	0.77
268028200	PAYNE & DOLAN -#12	Waukesha	324121	NOx	0.01	1.54
268028420	AMERICAN ASPHALT MATERIALS	Waukesha	324121	NOx	0.00	0.14
268088700	Lannon Stone Products â€œ West Quarry	Waukesha	212312	NOx	0.02	3.52
268088920	VALMET INC	Waukesha	331513	NOx	0.00	1.27
268090240	PROHEALTH CARE WAUKESHA MEMORIAL HOSPITAL	Waukesha	622110	NOx	0.04	6.64
268140070	Hubbell Gas Utility Solutions Inc.	Waukesha	334514	NOx	0.00	0.38
268142270	WENTHE-DAVIDSON ENGINEERING CO	Waukesha	332439	NOx	0.00	0.65
268152500	WMWI MUSKEGO SANITARY LANDFILL	Waukesha	562212	NOx	0.00	0.53
268154260	TEKRA LLC	Waukesha	32221	NOx	0.00	0.19
268157890	BODYCOTE THERMAL PROCESSING	Waukesha	332812	NOx	0.01	3.85
268159210	Lincoln Industries of Wisconsin, LLC	Waukesha	332813	NOx	0.00	1.53
268162730	DYNATECT MANUFACTURING INC	Waukesha	326299	NOx	0.00	0.52
268165370	PRIME LEATHER FINISHES CO	Waukesha	325510	NOx	0.00	0.16
268168460	PROCESS RETAIL GROUP	Waukesha	339950	NOx	0.00	0.15
268168560	Wolf Industries Inc - Genesse Plant	Waukesha	324121	NOx	0.02	3.45
268171310	GE Medical Systems LLC - Waukesha	Waukesha	334517	NOx	0.03	2.96
268173290	WAUSAU EQUIPMENT COMPANY INC	Waukesha	333120	NOx	0.00	0.01
268175270	Pregis Sharp Systems, LLC (DBA Sharp Packaging Systems by Pregis)	Waukesha	326199	NOx	0.00	1.47
268183080	QUAD/GRAPHICS INC	Waukesha	323111	NOx	0.03	10.85
268185610	PAYNE AND DOLAN - #1	Waukesha	324121	NOx	0.03	3.35
268186160	WILDECK MEZZANINES INC	Waukesha	332312	NOx	0.00	0.02
268203430	VALSPAR SPECIALITY PAINTS LC	Waukesha	325510	NOx	0.00	1.05
268204090	Multi-Color Corporation	Waukesha	323111	NOx	0.00	0.62
268219490	T J HALE COMPANY LLC	Waukesha	337211	NOx	0.00	0.36

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FID	Facility Name	County	NAICS	Pollutant	2017 (tposd)	2017 (tons)
268220700	WAUKESHA COUNTY TECHNICAL COLLEGE	Waukesha	611310	NOx	0.00	0.07
268221360	COOPER POWER SYSTEMS LLC	Waukesha	335311	NOx	0.01	5.37
268227850	MILWAUKEE ELECTRIC TOOL CORPORATION D/B/A EMPIRE LEVEL	Waukesha	33221	NOx	0.00	0.27
268239290	AMERICAN PRINTPAK	Waukesha	322220	NOx	0.00	0.22
268244130	Emerald Park Landfill, LLC	Waukesha	562212	NOx	0.03	3.76
268336090	VERIZON WIRELESS	Waukesha	517210	NOx	0.01	0.75
268457970	GENERAC POWER SYSTEMS INC - EAGLE	Waukesha	335311	NOx	0.02	6.44
268523970	HARLEY DAVIDSON - PILGRIM RD	Waukesha	336991	NOx	0.01	5.31
268555650	Payne and Dolan Inc - Control 20 Waukesha	Waukesha	324121	NOx	0.01	0.87
268605700	NATURE'S PATH FOODS USA LLC	Waukesha	311230	NOx	0.01	3.47
268620770	KG MARKETING AND BAG CO INC	Waukesha	323111	NOx	0.00	0.01
268635180	McDermott Cue Mfg LLC	Waukesha	321999	NOx	0.00	1.21
268658170	MULTI-COLOR CORPORATION	Waukesha	323111	NOx	0.00	0.21
268669500	ABX INNOVATIVE PACKAGING	Waukesha	32311	NOx	0.00	0.47
399003880	NORTHEAST ASPHALT #67	Waukesha	324121	NOx	0.01	1.97
399018620	NORTHEAST ASPHALT INC #35	Waukesha	324121	NOx	0.01	1.25
399031710	NORTHEAST ASPHALT INC - PC #12	Waukesha	212312	NOx	0.02	3.86
399036660	NORTHEAST ASPHALT INC CONTROL 64	Waukesha	324121	NOx	0.03	4.29
399041500	PAYNE AND DOLAN-PC 1	Waukesha	212312	NOx	0.04	8.48
399041610	PAYNE AND DOLAN - PC09	Waukesha	212312	NOx	0.05	10.80
399042710	PAYNE AND DOLAN # 7	Waukesha	212312	NOx	0.03	7.40
399044580	NORTHEAST ASPHALT INC #36	Waukesha	324121	NOx	0.01	1.59
399045570	NORTHEAST ASPHALT INC - PC #14	Waukesha	212319	NOx	0.06	14.71
399052500	NORTHEAST ASPHALT INC #66	Waukesha	324121	NOx	0.01	1.32
399063170	NORTHEAST ASPHALT INC - CONTROL 37	Waukesha	324121	NOx	0.02	2.77
998215240	PAYNE & DOLAN - CEDAR LAKE #8	Waukesha	324121	NOx	0.01	1.41
998303460	PAYNE AND DOLAN - PC10	Waukesha	327991	NOx	0.04	10.11
998303680	NORTHEAST ASPHALT INC -- PC#3	Waukesha	212312	NOx	0.06	14.65
998348780	JOHNSON SAND AND GRAVEL	Waukesha	212321	NOx	0.03	6.18
998356810	PAYNE & DOLAN CONTROL #33	Waukesha	324121	NOx	0.02	2.67
998375510	NORTHEAST ASPHALT #65	Waukesha	324121	NOx	0.02	3.42

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999010760	NORTHEAST ASPHALT INC #25	Waukesha	324121	NOx	0.04	5.84
999011310	NORTHEAST ASPHALT -#30	Waukesha	324121	NOx	0.01	2.06
999011640	PAYNE & DOLAN #23	Waukesha	324121	NOx	0.02	2.42
999460440	NORTHEAST ASPHALT #26	Waukesha	324121	NOx	0.02	2.43
999516760	NORTHEAST ASPHALT #27	Waukesha	324121	NOx	0.05	8.23
999902420	PAYNE & DOLAN - #7	Waukesha	324121	NOx	0.02	3.75
999905280	PAYNE & DOLAN INC - 15	Waukesha	324121	NOx	0.02	2.41
999958850	JOHNSON SAND & GRAVEL PORTABLE PLANT #2	Waukesha	212321	NOx	0.02	3.65
241005710	MAYNARD STEEL CASTING CO INC	Milwaukee	331513	VOC	0.040	9.41
241006810	STRATTEC SECURITY CORP	Milwaukee	33639	VOC	0.020	7.60
241006920	ATI LADISH LLC	Milwaukee	332112	VOC	0.202	52.10
241007030	Molson Coors USA LLC	Milwaukee	312120	VOC	0.205	77.05
241008240	REXNORD INDUSTRIES LLC GEAR GROUP	Milwaukee	333613	VOC	0.036	9.83
241009670	SMITHFIELD PACKAGED MEATS CORP	Milwaukee	311991	VOC	0.017	5.18
241010770	TREAT ALL METALS INC	Milwaukee	332812	VOC	0.002	0.61
241010990	JOY GLOBAL SURFACE MINING INC	Milwaukee	333131	VOC	0.019	6.85
241011100	MALTEUROP NORTH AMERICA	Milwaukee	311213	VOC	0.017	6.08
241011760	UNIT DROP FORGE COMPANY INC	Milwaukee	332111	VOC	0.031	6.70
241011870	BRIGGS & STRATTON, LLC	Milwaukee	333611	VOC	0.042	15.02
241012200	REXNORD INDUSTRIES INC	Milwaukee	333613	VOC	0.014	4.31
241012310	GREDE LLC - LIBERTY	Milwaukee	331511	VOC	0.105	32.88
241013080	CHR HANSEN INC	Milwaukee	311999	VOC	0.000	0.17
241014180	GE Medical Systems LLC	Milwaukee	334517	VOC	0.022	6.16
241014620	PPG INDUSTRIES	Milwaukee	325510	VOC	0.458	166.66
241014730	ALDRICH CHEMICAL CO LLC	Milwaukee	325199	VOC	0.004	1.12
241015390	APPLETON GROUP LLC	Milwaukee	331511	VOC	0.052	13.19
241017590	HENTZEN COATINGS INC	Milwaukee	325510	VOC	0.020	5.16
241017700	U S VENTURE INC MILWAUKEE NORTH TERMINAL	Milwaukee	424710	VOC	0.082	16.81
241019350	STAINLESS FOUNDRY & ENGINEERING INC	Milwaukee	331513	VOC	0.025	5.96
241019460	WEST SHORE PIPE LINE CO GRANVILLE STATION	Milwaukee	486910	VOC	0.099	28.79
241019900	WI DOA / UW-MILWAUKEE	Milwaukee	611310	VOC	0.002	2.13

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241020780	ALSCO AMERICAN INDUSTRIAL DIVISION	Milwaukee	812331	VOC	0.050	13.06
241021220	CLCM OAK CREEK	Milwaukee	811310	VOC	0.098	26.49
241022760	Highline-Warren LLC	Milwaukee	423120	VOC	0.009	3.38
241023640	The Newark Group, Inc.	Milwaukee	322130	VOC	0.175	61.46
241024300	Aurora St Lukes Medical Center	Milwaukee	622110	VOC	0.005	1.63
241026500	SUPER STEEL LLC	Milwaukee	332312	VOC	0.043	11.65
241027050	MILWAUKEE REGIONAL MEDICAL CENTER THERMAL SERVICES INC	Milwaukee	221330	VOC	0.004	2.15
241027160	Stark Pavement Corp	Milwaukee	324121	VOC	0.002	0.31
241027930	MILWAUKEE FORGE	Milwaukee	332111	VOC	0.000	0.10
241028810	Milwaukee Plant, LLC	Milwaukee	332431	VOC	0.203	73.97
241029030	BRADY WORLDWIDE - FLORIST AVE PLT	Milwaukee	322291	VOC	0.072	22.15
241029250	MMSD-JONES ISLAND WATER RECLAMATION FACILITY	Milwaukee	221320	VOC	0.250	84.83
241029800	MID CITY FOUNDRY CO	Milwaukee	331511	VOC	0.044	10.00
241031120	USVA ZABLOCKI MEDICAL CENTER	Milwaukee	622110	VOC	0.005	0.87
241031450	SHERWIN INDUSTRIES INC	Milwaukee	324121	VOC	0.000	0.01
241033210	ASCENSION SE WISCONSIN HOSPITAL ST JOSEPH CAMPUS	Milwaukee	622110	VOC	0.001	0.37
241033430	ABX SOLUTIONS, LLC	Milwaukee	326112	VOC	0.048	12.29
241033760	U S VENTURE INC MILWAUKEE CENTRAL TERMINAL	Milwaukee	424710	VOC	0.070	25.28
241034200	ROCKWELL AUTOMATION INC	Milwaukee	335311	VOC	0.002	0.27
241036840	MILWAUKEE PLATING CO	Milwaukee	332813	VOC	0.003	1.24
241036950	AZZ Galvanizing and Plating - Milwaukee	Milwaukee	332812	VOC	0.000	0.11
241037280	MATERION ADVANCED CHEMICALS INC	Milwaukee	325180	VOC	0.002	0.12
241038820	MASTER LOCK CO LLC	Milwaukee	332510	VOC	0.022	6.86
241041900	SOLENIS LLC	Milwaukee	325211	VOC	0.000	0.17
241042670	THIELE TANNING CO	Milwaukee	316110	VOC	0.038	9.88
241045420	Reyes Coca-Cola Bottling	Milwaukee	312112	VOC	0.000	0.14
241046630	Advanced Plating Technologies	Milwaukee	332813	VOC	0.029	7.59
241051250	LUCAS MILHAUPT INC	Milwaukee	332999	VOC	0.025	7.19
241052680	CAMPBELL SOUP SUPPLY CO LLC	Milwaukee	311991	VOC	0.005	1.85

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241053010	SUPREME CORES INC	Milwaukee	332999	VOC	0.000	0.01
241053560	US OIL MILWAUKEE SOUTH TERMINAL	Milwaukee	424710	VOC	0.042	15.00
241078640	U S VENTURE INC MILWAUKEE WEST TERMINAL	Milwaukee	424710	VOC	0.067	24.20
241094700	EVERBRITE LLC	Milwaukee	339950	VOC	0.004	1.08
241095910	PAYNE & DOLAN-FRANKLIN AGGR	Milwaukee	212312	VOC	0.001	0.16
241164770	BUCKEYE TERMINALS LLC	Milwaukee	493190	VOC	0.067	21.81
241165210	HENKEL CORP	Milwaukee	325520	VOC	0.000	0.02
241168070	SNAP ON TOOLS MFG CO	Milwaukee	33281	VOC	0.012	3.39
241168180	AURORA WEST ALLIS MEDICAL CENTER	Milwaukee	622110	VOC	0.016	5.97
241168510	PACKAGING CORPORATION OF AMERICA	Milwaukee	322211	VOC	0.003	1.19
241168620	WMWI - METRO RECYCLING & DISPOSAL	Milwaukee	562212	VOC	0.020	7.09
241174560	FLINT HILLS RESOURCES PINE BEND LLC - MILWAUKEE FACILITY	Milwaukee	424710	VOC	0.065	27.20
241189520	KRONES INC	Milwaukee	333993	VOC	0.004	0.99
241197990	ZENAR CORP	Milwaukee	333923	VOC	0.008	2.18
241213720	MILLER COMPRESSING CO	Milwaukee	423930	VOC	0.009	2.12
241222410	ALDRICH CHEMICAL CO LLC	Milwaukee	325130	VOC	0.002	0.58
241228350	MMSD-SOUTHSHORE WASTEWATER TREATMENT PLANT	Milwaukee	221320	VOC	0.091	46.50
241231760	HYDRO-PLATERS INC	Milwaukee	332813	VOC	0.000	0.01
241232640	BANTA SPECIALTY CONVERTING	Milwaukee	323111	VOC	0.009	3.33
241251670	Suedpack Oak Creek Corporation	Milwaukee	323111	VOC	0.015	3.82
241254310	THERMO FISHER SCIENTIFIC (MILWAUKEE) LLC	Milwaukee	325199	VOC	0.000	0.13
241266740	SEIDEL TANNING CO	Milwaukee	316110	VOC	0.126	32.88
241267180	RITUS CORP	Milwaukee	326299	VOC	0.013	4.15
241276750	FREDMAN BAG CO	Milwaukee	323111	VOC	0.077	20.12
241308870	SYMET INC	Milwaukee	332812	VOC	0.029	7.62
241309090	CITGO PETROLEUM CORP	Milwaukee	424710	VOC	0.078	28.24
241325590	BAY VIEW INDUSTRIES INC	Milwaukee	337127	VOC	0.054	13.99
241334060	Tekni-Plex Flexibles LLC	Milwaukee	322220	VOC	0.018	5.60
241348030	DINGS CO	Milwaukee	335314	VOC	0.001	0.35

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241362660	COOPER POWER SYSTEMS LLC	Milwaukee	335313	VOC	0.018	4.57
241370140	HELWIG CARBON PRODUCTS INC	Milwaukee	332813	VOC	0.018	4.63
241372120	BADGER ALLOYS	Milwaukee	331511	VOC	0.044	11.35
241413810	CENTRAL AQUATICS PLANTS 1 AND 2	Milwaukee	327211	VOC	0.020	4.77
241435260	KUBIN NICHOLSON CORP	Milwaukee	323111	VOC	0.024	6.25
241442630	WESTERN BUILDING PRODUCTS INC	Milwaukee	321918	VOC	0.056	14.56
241450440	ASCENSION COLUMBIA ST MARY'S HOSPITAL MILWAU	Milwaukee	622110	VOC	0.002	0.51
241454290	MCADAMS GRAPHICS INC	Milwaukee	323111	VOC	0.024	6.27
241455500	STEELWIND INDUSTRIES	Milwaukee	332312	VOC	0.015	4.83
241462980	SELLARS ABSORBENT MATERIALS INC	Milwaukee	322291	VOC	0.009	3.15
241472770	FRANTZ COMPANY INC	Milwaukee	321920	VOC	0.027	7.14
241480910	BRADY U S A INC - GOOD HOPE RD FACILITY	Milwaukee	323111	VOC	0.012	3.36
241514570	ADAMS INDUSTRIES INC	Milwaukee	811310	VOC	0.005	1.36
241653830	RAPHAEL INDUSTRIES INC	Milwaukee	332812	VOC	0.024	6.36
241709930	XYMOX TECHNOLOGIES INC	Milwaukee	334419	VOC	0.006	1.62
241714000	HM GRAPHICS INC	Milwaukee	323111	VOC	0.016	4.99
241723240	SNYDERS - LANCE INC	Milwaukee	311919	VOC	0.039	9.19
241741940	KOPFMANN CO INC	Milwaukee	339991	VOC	0.015	3.89
241757340	QUAD/GRAPHICS INC	Milwaukee	323111	VOC	0.075	27.32
241789350	LAW TANNING CO LLC	Milwaukee	316110	VOC	0.033	8.52
241805300	WS PACKAGING - OAK CREEK DIVISION	Milwaukee	323111	VOC	0.016	4.15
241879550	JOY-MARK INC	Milwaukee	333511	VOC	0.008	1.57
241961720	SENIOR FLEXONICS - GA PRECISION	Milwaukee	332721	VOC	0.036	10.28
241964580	API HEAT TRANSFER	Milwaukee	332410	VOC	0.023	5.73
268237970	WACKER NEUSON PRODUCTION AMERICAS LLC	Milwaukee	333120	VOC	0.001	0.18
341027170	VISA LIGHTING AN OLDENBURG GROUP CO	Milwaukee	335121	VOC	0.005	1.30
341039270	WETZEL BROTHERS	Milwaukee	323111	VOC	0.027	8.57
341092510	HARLEY-DAVIDSON MOTOR CO PROD DEV CTR	Milwaukee	541380	VOC	0.002	0.58
341112860	GREAT LAKES FRICTION PRODUCTS	Milwaukee	335314	VOC	0.003	0.90
341158070	CLCM ST FRANCIS	Milwaukee	811310	VOC	0.192	49.84

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341173800	Charter Wire, LLC	Milwaukee	3312	VOC	0.091	33.60
341201300	STEELE SOLUTIONS INC	Milwaukee	332312	VOC	0.004	1.37
341209220	FCPC Renewable Generation LLC's Biodigester Facility	Milwaukee	221118	VOC	0.003	2.28
341209880	MILWAUKEE COMPOSITES INC	Milwaukee	336510	VOC	0.038	9.93
341224620	WPC TECHNOLOGIES INC	Milwaukee	325130	VOC	0.000	0.03
341228910	Angelic Bakehouse, Inc. (OH)	Milwaukee	311812	VOC	0.035	6.92
341259050	TJM Innovations, LLC	Milwaukee	423330	VOC	0.040	4.14
341281050	Quad Packaging Inc	Milwaukee	322211	VOC	0.027	9.98
399024230	MILWAUKEE MATERIALS LLC	Milwaukee	212312	VOC	0.000	0.00
399046780	GENESEE AGGREGATE CORP	Milwaukee	212319	VOC	0.000	0.01
399063060	Stark Pavement Corp	Milwaukee	324121	VOC	0.001	0.15
399089790	Stark Pavement Corp- SN 413380	Milwaukee	212312	VOC	0.000	0.00
399092980	Stark Pavement Corp - ULTRA 135-85577- 00-NA	Milwaukee	324121	VOC	0.013	2.14
241008680	MOTOR CASTINGS CO PLANT 1 (FORMER)	Milwaukee	331511	VOC	0.065	13.44
241040690	SPIC AND SPAN INC	Milwaukee	812332	VOC	0.000	0.06
241167630	AMERICAS BEST QUALITY COATINGS CORP	Milwaukee	332812	VOC	0.000	0.02
241256290	The GUND Co	Milwaukee	335931	VOC	0.029	6.27
241316020	GLENN RIEDER INC	Milwaukee	321918	VOC	0.009	3.31
341018810	DIC IMAGING PRODUCTS USA INC	Milwaukee	325211	VOC	0.019	4.86
341024420	FPM LLC	Milwaukee	332812	VOC	0.028	8.82
341062260	BHP, Inc.	Milwaukee	332311	VOC	0.014	3.63
246003890	LAKESIDE FOODS INC	Ozaukee	311421	VOC	0.00	0.10
246004110	PACE INDUSTRIES EST DIVISION	Ozaukee	331523	VOC	0.01	2.34
246005760	OZAUKEE COUNTY HIGHWAY DEPT	Ozaukee	324121	VOC	0.00	0.03
246008620	MID-CITY FOUNDRY CORP - UNITED DIV	Ozaukee	331511	VOC	0.01	4.29
246013350	Super Steel LLC	Ozaukee	333120	VOC	0.10	26.94
246044700	CHARTER STEEL - SAUKVILLE	Ozaukee	331110	VOC	0.05	18.06
246052400	PHILIPP LITHOGRAPHING CO	Ozaukee	323111	VOC	0.03	8.83
246059220	CALIBRE INC	Ozaukee	332812	VOC	0.01	2.68
246068900	Kleen Test Products - Port Washington	Ozaukee	313320	VOC	0.02	4.76
246076820	CALIBRE INC	Ozaukee	332812	VOC	0.05	13.44

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246128960	CALIBRE INC -- DAKOTA DR	Ozaukee	332812	VOC	0.06	18.16
246139190	JBT CORPORATION	Ozaukee	32799	VOC	0.02	3.43
246150850	CONSTRUCTION FORMS INC	Ozaukee	332999	VOC	0.07	19.47
346001480	KOHLER POWER SYSTEMS-SAUKVILLE	Ozaukee	332420	VOC	0.02	4.86
998296420	HARTMANN SAND & GRAVEL COMPANY - LIPPMAN 21X42	Ozaukee	212321	VOC	0.00	0.15
998296530	HARTMANN SAND & GRAVEL INC - PIONEER 358 CRUSHER	Ozaukee	212321	VOC	0.00	0.10
998369680	HARTMANN SAND & GRAVEL - LIPPMAN #790102	Ozaukee	212321	VOC	0.01	0.14
252003400	RACINE WASTEWATER TREATMENT FACILITY	Racine	221320	VOC	0.048	11.57
252004280	PAYNE AND DOLAN INC - RACINE QUARRY	Racine	212312	VOC	0.000	0.08
252004940	INSINKERATOR	Racine	335210	VOC	0.108	27.06
252005820	SC JOHNSON HOWE ST CAMPUS	Racine	561110	VOC	0.000	0.28
252006370	S C JOHNSON & SON INC	Racine	325611	VOC	0.607	161.27
252007030	TWIN DISC INC PLANT 1 (RACINE ST)	Racine	333611	VOC	0.000	0.08
252007140	TWIN DISC INC - PLT 3	Racine	333611	VOC	0.006	1.53
252007690	CNH AMERICA LLC	Racine	333111	VOC	0.029	9.65
252009780	E C STYBERG ENGINEERING CO	Racine	332119	VOC	0.051	13.17
252012090	MODINE MFG CO	Racine	33639	VOC	0.002	0.49
252013190	PAYNE & DOLAN INC #31	Racine	324121	VOC	0.000	0.06
252013630	AMERICAN ROLLER CO LLC	Racine	326299	VOC	0.023	6.37
252019900	WI DOA / SOUTHERN WISCONSIN CENTER	Racine	623990	VOC	0.001	0.37
252075340	SHURPAC INC	Racine	332812	VOC	0.036	9.39
252076990	KESTREL HAWK LANDFILL	Racine	562212	VOC	0.004	1.29
252077760	FEDERAL HEATH SIGN CO LLC	Racine	323111	VOC	0.006	1.41
252091070	THERMAL TRANSFER PRODUCTS LTD	Racine	332410	VOC	0.008	2.10
252103940	Ascension All Saints Hospital	Racine	622110	VOC	0.001	0.42
252109550	BURLINGTON GRAPHIC SYSTEMS INC ESOT	Racine	323113	VOC	0.111	24.96
252126380	GREAT NORTHERN CORPORATION - RACINE DIVISION	Racine	322211	VOC	0.017	4.40

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FID	Facility Name	County	NAICS	Pollutant	2017 (tposd)	2017 (tons)
252135950	Ideal Industries Lighting LLC dba Cree Lighting	Racine	332812	VOC	0.001	0.29
252173680	FIBER TECH INC	Racine	326199	VOC	0.051	18.58
252194140	PUTZMEISTER INC	Racine	333922	VOC	0.119	27.75
252195350	WM WASTE INC	Racine	562211	VOC	0.002	0.61
252229670	RETAIL FIXTURE LLC	Racine	337110	VOC	0.027	4.92
252237260	SPECIALTY TAPES LLC	Racine	322220	VOC	0.015	3.97
252237810	BWAY CORPORATION-MIDWEST AEROSOL PLANT	Racine	332431	VOC	0.045	16.25
252247820	Kerry Inc.	Racine	311999	VOC	0.003	0.87
252248700	QURE-MEDICAL	Racine	326299	VOC	0.034	8.93
252280600	Seda North America	Racine	326112	VOC	0.013	4.64
399097050	Cornerstone Pavers LLC - FT4250CC 413975	Racine	212312	VOC	0.002	0.44
252276970	Real Alloy Recycling, Inc. - Racine Plant	Racine	331314	VOC	0.009	3.16
267005640	PAYNE & DOLAN INC RUGBY JUNCTION CONTROL #11	Washington	324121	VOC	0.00	0.10
267058660	WMWI Omega Hills Landfill	Washington	562212	VOC	0.05	19.59
267064270	KERRY INGREDIENTS - JACKSON	Washington	311511	VOC	0.00	0.40
267065260	SERIGRAPH INC PLANT 2	Washington	323111	VOC	0.06	18.48
267067900	REGAL WARE INC - WEST BEND	Washington	332215	VOC	0.00	0.95
267073290	SYSTEMS INC	Washington	333921	VOC	0.07	17.98
267076810	SERIGRAPH INC - PLANT 3	Washington	323111	VOC	0.01	3.05
267077470	ADVANCED COATINGS	Washington	332812	VOC	0.11	39.69
267082640	SUNLITE PLASTICS INC	Washington	326199	VOC	0.04	11.36
267085830	WestRock CP LLC	Washington	322211	VOC	0.01	1.93
267110470	Sterling Wisconsin LLC	Washington	325412	VOC	0.02	5.84
267131700	RR DONNELLEY-WEST BEND	Washington	323111	VOC	0.01	1.99
267141710	AVALON PRECISION CASTING COMPANY LLC	Washington	331512	VOC	0.00	0.02
267155570	Rytec Corp	Washington	332321	VOC	0.04	10.58
267170200	SPECIALTY GRAPHICS GROUP (SERIGRAPH INC)	Washington	323111	VOC	0.02	5.54
268013790	GKN SINTER METALS	Washington	332117	VOC	0.04	15.76
268006310	WAUKESHA FOUNDRY	Waukesha	331511	VOC	0.02	4.80
268006750	INNIO Waukesha Gas Engines, Inc.	Waukesha	333618	VOC	0.02	8.16

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FID	Facility Name	County	NAICS	Pollutant	2017 (tposd)	2017 (tons)
268006970	METALTEK INTL WIS CENTRIFUGAL DIV	Waukesha	331513	VOC	0.01	1.12
268007410	MOLDED RUBBER & PLASTICS CORP	Waukesha	326291	VOC	0.02	4.10
268008400	SILGAN CONTAINERS MFG CORP	Waukesha	332439	VOC	0.03	11.37
268008510	SILGAN CONTAINERS MFG CORP	Waukesha	332439	VOC	0.09	20.09
268008620	WESTERN STATES ENVELOPE CO	Waukesha	322230	VOC	0.11	38.60
268008730	WAUKESHA LIME & STONE	Waukesha	212312	VOC	0.00	0.07
268009500	FIBERESIN INDUSTRIES INC	Waukesha	337110	VOC	0.00	1.62
268010710	HUSCO INTERNATIONAL INC	Waukesha	332912	VOC	0.01	3.66
268012030	CASTALLOY INC	Waukesha	331511	VOC	0.10	26.43
268012250	QUAD/GRAPHICS MARKETING LLC	Waukesha	323111	VOC	0.04	13.47
268012360	ARANDELL CORPORATION	Waukesha	323111	VOC	0.08	28.47
268012580	SCHAWK MILWAUKEE, A SAUERESSIG COMPANY, DIV OF MATTHEWS INTERNATIONAL	Waukesha	323120	VOC	0.02	4.70
268014560	HENSCHEL COATING & LAMINATING INC	Waukesha	322220	VOC	0.02	3.89
268014670	GENERAC POWER SYSTEMS-WAUKESHA	Waukesha	335312	VOC	0.02	5.31
268014780	DYNEX-RIVETT INC	Waukesha	333996	VOC	0.00	1.01
268015330	BIMBO BAKERIES USA INC	Waukesha	311811	VOC	0.07	26.98
268016100	ITU ABSORBTECH INC	Waukesha	812332	VOC	0.14	37.35
268016210	Vorteq Coil Finishers	Waukesha	332812	VOC	0.04	10.98
268017200	COOPER POWER SYSTEMS LLC	Waukesha	335311	VOC	0.04	10.60
268017640	EGA PRODUCTS INC	Waukesha	333921	VOC	0.01	3.68
268028200	PAYNE & DOLAN -#12	Waukesha	324121	VOC	0.00	0.08
268088920	VALMET INC	Waukesha	331513	VOC	0.06	14.58
268090240	PROHEALTH CARE WAUKESHA MEMORIAL HOSPITAL	Waukesha	622110	VOC	0.00	0.40
268140070	Hubbell Gas Utility Solutions Inc.	Waukesha	334514	VOC	0.06	16.09
268142270	WENTHE-DAVIDSON ENGINEERING CO	Waukesha	332439	VOC	0.04	10.19
268152500	WMWI MUSKEGO SANITARY LANDFILL	Waukesha	562212	VOC	0.00	1.12
268154260	TEKRA LLC	Waukesha	32221	VOC	0.01	2.55
268155250	CL&D GRAPHICS INC	Waukesha	323111	VOC	0.04	13.33
268155470	QUAD/GRAPHICS COMMERCIAL & SPECIALITY LLC	Waukesha	323111	VOC	0.05	12.15

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FID	Facility Name	County	NAICS	Pollutant	2017 (tposd)	2017 (tons)
268157450	PROFILE FINISHING SYSTEMS LLC	Waukesha	332812	VOC	0.02	4.33
268157890	BODYCOTE THERMAL PROCESSING	Waukesha	332812	VOC	0.00	0.08
268158660	GLENROY INC	Waukesha	326112	VOC	0.02	7.00
268159210	Lincoln Industries of Wisconsin, LLC	Waukesha	332813	VOC	0.00	0.08
268162730	DYNATECT MANUFACTURING INC	Waukesha	326299	VOC	0.06	14.74
268164160	DELZER LITHOGRAPH CO	Waukesha	323111	VOC	0.01	1.56
268165370	PRIME LEATHER FINISHES CO	Waukesha	325510	VOC	0.01	1.71
268168460	PROCESS RETAIL GROUP	Waukesha	339950	VOC	0.00	0.24
268168560	Wolf Industries Inc - Genesee Plant	Waukesha	324121	VOC	0.00	0.16
268170760	KDV LABEL CO INC	Waukesha	323111	VOC	0.02	5.95
268171310	GE Medical Systems LLC - Waukesha	Waukesha	334517	VOC	0.01	2.12
268173290	WAUSAU EQUIPMENT COMPANY INC	Waukesha	333120	VOC	0.01	2.42
268183080	QUAD/GRAPHICS INC	Waukesha	323111	VOC	0.18	66.16
268185610	PAYNE AND DOLAN - #1	Waukesha	324121	VOC	0.00	0.18
268186160	WILDECK MEZZANINES INC	Waukesha	332312	VOC	0.07	15.09
268198260	ACCURATE SPECIALTIES INC	Waukesha	331529	VOC	0.00	0.01
268203430	VALSPAR SPECIALITY PAINTS LC	Waukesha	325510	VOC	0.04	9.28
268204090	Multi-Color Corporation	Waukesha	323111	VOC	0.03	14.33
268219490	T J HALE COMPANY LLC	Waukesha	337211	VOC	0.03	7.22
268220700	WAUKESHA COUNTY TECHNICAL COLLEGE	Waukesha	611310	VOC	0.00	0.00
268221360	COOPER POWER SYSTEMS LLC	Waukesha	335311	VOC	0.07	23.63
268227850	MILWAUKEE ELECTRIC TOOL CORPORATION D/B/A EMPIRE LEVEL	Waukesha	33221	VOC	0.03	7.30
268239290	AMERICAN PRINTPAK	Waukesha	322220	VOC	0.05	16.79
268244130	Emerald Park Landfill, LLC	Waukesha	562212	VOC	0.01	2.10
268284280	NEW BERLIN PLASTICS INC	Waukesha	326199	VOC	0.00	0.80
268298250	BERCO OF AMERICA	Waukesha	333120	VOC	0.06	20.95
268306280	RIES GRAPHICS LTD	Waukesha	323111	VOC	0.03	10.04
268337080	CROSSMARK GRAPHICS INC	Waukesha	323111	VOC	0.01	3.27
268342470	THE MAREK GROUP	Waukesha	323111	VOC	0.03	6.64
268382620	COLOR INK INC	Waukesha	323111	VOC	0.01	3.40
268383500	INPRO CORPORATION	Waukesha	326121	VOC	0.01	2.78
268393620	JTS DIRECT LLC	Waukesha	323111	VOC	0.02	6.77
268457970	GENERAC POWER SYSTEMS INC - EAGLE	Waukesha	335311	VOC	0.00	0.00

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FID	Facility Name	County	NAICS	Pollutant	2017 (tposd)	2017 (tons)
268523970	HARLEY DAVIDSON - PILGRIM RD	Waukesha	336991	VOC	0.00	0.39
268529360	ONE TOUCH POINT	Waukesha	323111	VOC	0.02	6.00
268555650	Payne and Dolan Inc - Control 20 Waukesha	Waukesha	324121	VOC	0.00	0.05
268560380	ATWATER - GENERAL CORP	Waukesha	327999	VOC	0.29	74.18
268605700	NATURE'S PATH FOODS USA LLC	Waukesha	311230	VOC	0.00	0.19
268620770	KG MARKETING AND BAG CO INC	Waukesha	323111	VOC	0.10	25.25
268621540	CL&D GRAPHICS	Waukesha	323111	VOC	0.03	12.02
268635180	McDermott Cue Mfg LLC	Waukesha	321999	VOC	0.02	4.53
268658170	Fort Dearborn Company	Waukesha	323111	VOC	0.07	18.42
268669500	ABX INNOVATIVE PACKAGING	Waukesha	32311	VOC	0.02	7.79
368011050	PREMOLD CORP	Waukesha	326199	VOC	0.01	2.52
399003880	NORTHEAST ASPHALT #67	Waukesha	324121	VOC	0.00	0.11
399018620	NORTHEAST ASPHALT INC #35	Waukesha	324121	VOC	0.00	0.01
399031710	NORTHEAST ASPHALT INC - PC #12	Waukesha	212312	VOC	0.00	0.32
399036660	NORTHEAST ASPHALT INC CONTROL 64	Waukesha	324121	VOC	0.00	0.24
399041500	PAYNE AND DOLAN-PC 1	Waukesha	212312	VOC	0.00	0.69
399041610	PAYNE AND DOLAN - PC09	Waukesha	212312	VOC	0.00	0.88
399042710	PAYNE AND DOLAN # 7	Waukesha	212312	VOC	0.00	0.60
399044580	NORTHEAST ASPHALT INC #36	Waukesha	324121	VOC	0.00	0.04
399045570	NORTHEAST ASPHALT INC - PC #14	Waukesha	212319	VOC	0.01	1.20
399052500	NORTHEAST ASPHALT INC #66	Waukesha	324121	VOC	0.00	0.07
399063170	NORTHEAST ASPHALT INC - CONTROL 37	Waukesha	324121	VOC	0.00	0.03
998215240	PAYNE & DOLAN - CEDAR LAKE #8	Waukesha	324121	VOC	0.00	0.08
998303460	PAYNE AND DOLAN - PC10	Waukesha	327991	VOC	0.00	0.83
998303680	NORTHEAST ASPHALT INC -- PC#3	Waukesha	212312	VOC	0.01	1.20
998348780	JOHNSON SAND AND GRAVEL	Waukesha	212321	VOC	0.00	0.50
268005430	RENAISSANCE MFG GROUP- WAUKESHA FOUNDRY	Waukesha	324121	VOC	0.00	0.05
268011150	THE PRINTER	Waukesha	324121	VOC	0.001	0.19
268012800	COOPER POWER SYSTEMS -PEWAUKEE - HICKORY STREET	Waukesha	324121	VOC	0.002	0.36
268012910	PAYNE AND DOLAN - #2	Waukesha	324121	VOC	0.001	0.11
268175270	Pregis Sharp Systems, LLC (DBA Sharp Packaging Systems by Pregis)	Waukesha	324121	VOC	0.001	0.13

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FID	Facility Name	County	NAICS	Pollutant	2017 (tposd)	2017 (tons)
268312770	BURTON & MAYER INC	Waukesha	324121	VOC	0.001	0.13
998356810	PAYNE & DOLAN CONTROL #33	Waukesha	324121	VOC	0.00	0.70
998375510	NORTHEAST ASPHALT #65	Waukesha	324121	VOC	0.00	2.41
999010760	NORTHEAST ASPHALT INC #25	Waukesha	324121	VOC	0.00	4.62
999011310	NORTHEAST ASPHALT -#30	Waukesha	324121	VOC	0.00	1.45
999011640	PAYNE & DOLAN #23	Waukesha	324121	VOC	0.00	1.71
999460440	NORTHEAST ASPHALT #26	Waukesha	324121	VOC	0.00	1.72
999516760	NORTHEAST ASPHALT #27	Waukesha	324121	VOC	0.00	6.01
999902420	PAYNE & DOLAN - #7	Waukesha	324121	VOC	0.00	2.65
999905280	PAYNE & DOLAN INC - 15	Waukesha	324121	VOC	0.00	1.70
999958850	JOHNSON SAND & GRAVEL PORTABLE PLANT #2	Waukesha	212321	VOC	0.00	3.66
TOTAL				NOx	5.05	1,464.09
				VOC	9.85	2,918.43

¹ Tons per ozone season day (tposd) emissions were calculated by the WDNR AEI using the 3rd quarter operation information.

² According to Wisconsin Administrative Code Chapter NR 438.03(a), facilities that emit less than 3 tons of VOC or less than 5 tons of NOx per year are not required to submit annual emission inventory reports. Sources that chose not to report NOx and/or VOC for a certain year are thus listed as “Not Reporting” for that year.

Table A4.2. 2023 and 2024 Point Non-EGU Emissions for the Milwaukee, WI 2015 Ozone NAAQS Nonattainment Area^{1,2}

FID	Facility Name	County	NAICS	Pollutant	2023 (tposd)	2024 (tposd)	2023 (tons)	2024 (tons)
241005710	MAYNARD STEEL CASTING CO INC	Milwaukee	331513	NOx	0.03	0.03	10.21	10.21
241006810	STRATTEC SECURITY CORP	Milwaukee	336390	NOx	0.01	0.01	4.29	4.29
241006920	ATI LADISH LLC	Milwaukee	332112	NOx	0.17	0.17	63.26	63.26
241007030	Molson Coors USA LLC	Milwaukee	312120	NOx	0.04	0.04	14.18	14.18
241008240	REXNORD INDUSTRIES LLC GEAR GROUP	Milwaukee	333613	NOx	0.01	0.01	7.10	7.10
241009670	SMITHFIELD PACKAGED MEATS CORP	Milwaukee	311991	NOx	0.06	0.06	20.24	20.24
241010990	JOY GLOBAL SURFACE MINING INC	Milwaukee	333131	NOx	0.01	0.01	4.97	4.97
241011760	UNIT DROP FORGE COMPANY INC	Milwaukee	332111	NOx	0.05	0.05	14.47	14.47
241011870	BRIGGS & STRATTON, LLC	Milwaukee	333611	NOx	0.03	0.03	10.62	10.62

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FID	Facility Name	County	NAICS	Pollutant	2023 (tposd)	2024 (tposd)	2023 (tons)	2024 (tons)
241012200	Regal Rexnord Industries Corporation	Milwaukee	333613	NOx	0.01	0.01	7.55	7.55
241012310	GREDE LLC - LIBERTY	Milwaukee	331511	NOx	0.02	0.02	4.64	4.64
241014180	GE HEALTHCARE	Milwaukee	334517	NOx	0.01	0.01	2.44	2.44
241014620	PPG INDUSTRIES	Milwaukee	325510	NOx	0.04	0.04	16.33	16.33
241014730	ALDRICH CHEMICAL CO LLC	Milwaukee	325199	NOx	0.02	0.02	5.69	5.69
241015390	APPLETON GROUP LLC	Milwaukee	331511	NOx	0.01	0.01	4.11	4.11
241017370	PERLICK CORPORATION	Milwaukee	333415	NOx	0.00	0.00	0.61	0.61
241017590	HENTZEN COATINGS INC	Milwaukee	325510	NOx	0.00	0.00	0.80	0.80
241017700	U.S. Energy Milwaukee North Terminal	Milwaukee	424710	NOx	0.00	0.00	0.02	0.02
241019350	STAINLESS FOUNDRY & ENGINEERING INC	Milwaukee	331513	NOx	0.00	0.00	2.27	2.27
241019460	WEST SHORE - GRANVILLE STATION (GT)	Milwaukee	486910	NOx	0.00	0.00	0.00	0.00
241019900	WI DOA / UW-MILWAUKEE	Milwaukee	611310	NOx	0.03	0.03	24.88	24.88
241020780	ALSCO AMERICAN INDUSTRIAL DIVISION	Milwaukee	812331	NOx	0.00	0.00	0.01	0.01
241021220	CLCM OAK CREEK	Milwaukee	811310	NOx	0.01	0.01	1.91	1.91
241022760	Highline-Warren LLC	Milwaukee	423120	NOx	0.00	0.00	0.26	0.26
241023640	The Newark Group, Inc.	Milwaukee	322130	NOx	0.08	0.08	31.80	31.80
241024300	Aurora St Lukes Medical Center	Milwaukee	622110	NOx	0.03	0.03	3.78	3.78
241026060	MILWAUKEE COUNTY TRANSIT SYSTEM- FLEET MAINTENANCE	Milwaukee	485119	NOx	0.00	0.00	1.18	1.18
241027050	MILWAUKEE REGIONAL MEDICAL CENTER THERMAL SERVICES INC	Milwaukee	221330	NOx	0.09	0.09	15.90	15.90
241027160	Stark Pavement Corp	Milwaukee	324121	NOx	0.04	0.04	6.81	6.81
241027930	MILWAUKEE FORGE	Milwaukee	332111	NOx	0.01	0.01	3.49	3.49
241028810	SONOCO METAL PACKAGING LLC	Milwaukee	332431	NOx	0.02	0.02	8.33	8.33
241029030	BRADY WORLDWIDE - FLORIST AVE PLT	Milwaukee	322220	NOx	0.02	0.02	6.42	6.42
241029250	MMSD-JONES ISLAND WATER RECLAMATION FACILITY	Milwaukee	221320	NOx	0.24	0.24	77.28	77.28
241029800	MID CITY FOUNDRY CO	Milwaukee	331511	NOx	0.00	0.00	0.44	0.44
241031120	USVA ZABLOCKI MEDICAL CENTER	Milwaukee	622110	NOx	0.04	0.04	6.76	6.76

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FID	Facility Name	County	NAICS	Pollutant	2023 (tposd)	2024 (tposd)	2023 (tons)	2024 (tons)
241031450	SHERWIN INDUSTRIES INC	Milwaukee	324121	NOx	0.00	0.00	0.13	0.13
241033210	ASCENSION SE WISCONSIN HOSPITAL ST JOSEPH CAMPUS	Milwaukee	622110	NOx	0.03	0.03	7.50	7.50
241033760	U.S. Energy Milwaukee Central Terminal	Milwaukee	424710	NOx	0.00	0.00	0.04	0.04
241036840	MILWAUKEE PLATING CO	Milwaukee	332813	NOx	0.00	0.00	0.96	0.96
241036950	AZZ GALVANIZING AND PLATING - MILWAUKEE LLC	Milwaukee	332812	NOx	0.01	0.01	2.38	2.38
241038820	MASTER LOCK CO LLC	Milwaukee	332510	NOx	0.01	0.01	3.74	3.74
241041900	SOLENIS	Milwaukee	325211	NOx	0.01	0.01	2.15	2.15
241042670	THIELE TANNING CO	Milwaukee	316110	NOx	0.00	0.00	0.92	0.92
241045420	Reyes Coca-Cola Bottling	Milwaukee	312112	NOx	0.00	0.00	2.42	2.42
241046630	Advanced Plating Technologies	Milwaukee	332813	NOx	0.00	0.00	0.42	0.42
241051250	LUCAS MILHAUPT INC	Milwaukee	332999	NOx	0.00	0.00	0.12	0.12
241052680	CAMPBELL SOUP SUPPLY CO LLC	Milwaukee	311991	NOx	0.01	0.01	3.62	3.62
241095910	PAYNE & DOLAN-FRANKLIN AGGR	Milwaukee	212312	NOx	0.03	0.03	7.07	7.07
241165210	HENKEL CORP	Milwaukee	325520	NOx	0.00	0.00	0.39	0.39
241168070	SNAP ON TOOLS MFG CO	Milwaukee	332812	NOx	0.00	0.00	0.86	0.86
241168180	AURORA WEST ALLIS MEDICAL CENTER	Milwaukee	622110	NOx	0.01	0.01	4.92	4.92
241168510	PACKAGING CORPORATION OF AMERICA	Milwaukee	322211	NOx	0.01	0.01	2.65	2.65
241168620	WMWI - METRO RECYCLING & DISPOSAL	Milwaukee	562212	NOx	0.31	0.31	83.22	83.22
241189520	KRONES INC	Milwaukee	333993	NOx	0.00	0.00	0.83	0.83
241228350	MMSD-SOUTHSHORE WASTEWATER TREATMENT PLANT	Milwaukee	221320	NOx	0.12	0.12	42.95	42.95
241232640	BANTA SPECIALTY CONVERTING	Milwaukee	323111	NOx	0.00	0.00	0.11	0.11
241251670	Suedpack Oak Creek Corporation	Milwaukee	323111	NOx	0.01	0.01	1.74	1.74
241254310	THERMO FISHER SCIENTIFIC (MILWAUKEE) LLC	Milwaukee	325199	NOx	0.00	0.00	1.60	1.60
241256730	BHP Inc. d.b.a. Global Power Components	Milwaukee	332311	NOx	0.00	0.00	1.54	1.54
241266740	SEIDEL TANNING CO	Milwaukee	316110	NOx	0.00	0.00	1.26	1.26
241267180	RITUS CORP	Milwaukee	326299	NOx	0.00	0.00	0.49	0.49

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

FID	Facility Name	County	NAICS	Pollutant	2023 (tposd)	2024 (tposd)	2023 (tons)	2024 (tons)
241276750	Fredman Packaging	Milwaukee	323111	NOx	0.00	0.00	0.56	0.56
241308870	SYMET INC	Milwaukee	332812	NOx	0.00	0.00	0.13	0.13
241321960	CHROME TECH OF WISCONSIN INC	Milwaukee	332813	NOx	0.00	0.00	0.69	0.69
241334060	Tekni-Plex Flexibles LLC	Milwaukee	322220	NOx	0.00	0.00	0.31	0.31
241348030	DINGS CO	Milwaukee	335314	NOx	0.00	0.00	0.19	0.19
241370140	HELWIG CARBON PRODUCTS	Milwaukee	332813	NOx	0.00	0.00	0.71	0.71
241372120	BADGER ALLOYS	Milwaukee	331511	NOx	0.00	0.00	0.84	0.84
241450440	ASCENSION COLUMBIA ST MARY'S HOSPITAL MILWAUKEE	Milwaukee	622110	NOx	0.05	0.05	11.07	11.07
241454290	MCADAMS GRAPHICS INC	Milwaukee	323111	NOx	0.00	0.00	0.19	0.19
241455500	STEELWIND INDUSTRIES	Milwaukee	332312	NOx	0.00	0.00	3.32	3.32
241462980	SELLARS ABSORBENT MATERIALS INC	Milwaukee	322291	NOx	0.01	0.01	3.96	3.96
241472770	FRANTZ COMPANY INC	Milwaukee	321920	NOx	0.02	0.02	6.40	6.40
241480910	BRADY U S A INC - GOOD HOPE RD FACILITY	Milwaukee	323111	NOx	0.00	0.00	0.62	0.62
241489270	Western Building Products, Inc	Milwaukee	321912	NOx	0.00	0.00	0.36	0.36
241514570	ADAMS INDUSTRIES INC	Milwaukee	811310	NOx	0.00	0.00	0.55	0.55
241723240	SNYDERS - LANCE INC	Milwaukee	311919	NOx	0.05	0.05	15.53	15.53
241757340	QUAD/GRAPHICS INC	Milwaukee	323111	NOx	0.00	0.00	1.96	1.96
241789350	LAW TANNING CO LLC	Milwaukee	316110	NOx	0.00	0.00	0.59	0.59
241879550	JOY-MARK INC	Milwaukee	333511	NOx	0.00	0.00	1.18	1.18
241964580	API HEAT TRANSFER	Milwaukee	332410	NOx	0.00	0.00	0.80	0.80
341084700	Fred Usinger, Inc.	Milwaukee	424470	NOx	0.00	0.00	0.57	0.57
341092510	HARLEY-DAVIDSON MOTOR CO PROD DEV CTR	Milwaukee	541380	NOx	0.01	0.01	2.02	2.02
341158070	CLCM ST FRANCIS	Milwaukee	811310	NOx	0.01	0.01	2.50	2.50
341166430	CINTAS #184	Milwaukee	812332	NOx	0.00	0.00	1.10	1.10
341185570	BADGER RAILING	Milwaukee	332323	NOx	0.00	0.00	0.21	0.21
341206360	RAPHAEL INDUSTRIES INC	Milwaukee	339112	NOx	0.00	0.00	0.04	0.04
341209770	INGETEAM INC	Milwaukee	335312	NOx	0.00	0.00	0.45	0.45
341209880	MILWAUKEE COMPOSITES INC	Milwaukee	336510	NOx	0.00	0.00	0.30	0.30

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FID	Facility Name	County	NAICS	Pollutant	2023 (tposd)	2024 (tposd)	2023 (tons)	2024 (tons)
341224620	WPC TECHNOLOGIES INC	Milwaukee	325130	NOx	0.00	0.00	0.61	0.61
341228910	Angelic Bakehouse, Inc. (OH)	Milwaukee	311812	NOx	0.00	0.00	0.26	0.26
341291610	Glenn Rieder, LLC	Milwaukee	321918	NOx	0.00	0.00	0.41	0.41
341292050	CATERPILLAR GLOBAL MINING - NORTH OF RAWSON	Milwaukee	333131	NOx	0.00	0.00	1.34	1.34
341318120	Sientra	Milwaukee	334514	NOx	0.00	0.00	0.17	0.17
341347710	1547 - CSR Milwaukee, LLC	Milwaukee	518210	NOx	0.00	0.00	0.15	0.15
399024230	MILWAUKEE MATERIALS LLC	Milwaukee	212312	NOx	0.00	0.00	0.09	0.09
399046780	GENESEE AGGREGATE CORP	Milwaukee	212319	NOx	0.00	0.00	0.67	0.67
399089790	Stark Pavement Corp- SN 413380	Milwaukee	212312	NOx	0.00	0.00	0.11	0.11
399092980	Stark Pavement Corp - ULTRA 135-85577- 00-NA	Milwaukee	324121	NOx	0.01	0.01	2.29	2.29
246003890	LAKESIDE FOODS INC	Ozaukee	311421	NOx	0.01	0.01	4.35	4.35
246004110	PACE INDUSTRIES EST DIVISION	Ozaukee	331523	NOx	0.04	0.04	13.10	13.10
246005760	OZAUKEE COUNTY HIGHWAY DEPT	Ozaukee	324121	NOx	0.01	0.01	0.78	0.78
246008620	MID-CITY FOUNDRY CORP - UNITED DIV	Ozaukee	331511	NOx	0.00	0.00	0.25	0.25
246013350	Super Steel LLC	Ozaukee	333120	NOx	0.00	0.00	1.54	1.54
246044700	CHARTER STEEL - SAUKVILLE	Ozaukee	331110	NOx	0.30	0.30	113.60	113.60
246139190	JBT CORPORATION	Ozaukee	327999	NOx	0.00	0.00	0.59	0.59
246150850	CONSTRUCTION FORMS INC	Ozaukee	332999	NOx	0.00	0.00	0.33	0.33
346001480	Discovery Energy LLC	Ozaukee	332420	NOx	0.00	0.00	0.04	0.04
998296420	HARTMANN SAND & GRAVEL COMPANY - LIPPMAN 21X42	Ozaukee	212321	NOx	0.03	0.03	2.23	2.23
998296530	HARTMANN SAND & GRAVEL INC - PIONEER 358 CRUSHER	Ozaukee	212321	NOx	0.00	0.00	0.65	0.65
998369680	HARTMANN SAND & GRAVEL - LIPPMAN #790102	Ozaukee	212321	NOx	0.04	0.04	3.79	3.79
252003400	RACINE WASTEWATER TREATMENT FACILITY	Racine	221320	NOx	0.41	0.41	83.10	83.10
252004280	PAYNE AND DOLAN INC - RACINE QUARRY	Racine	212312	NOx	0.02	0.02	3.32	3.32
252004940	InSinkErator LLC	Racine	335220	NOx	0.00	0.00	0.79	0.79
252005820	SC JOHNSON HOWE ST CAMPUS	Racine	561110	NOx	0.01	0.01	2.93	2.93

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FID	Facility Name	County	NAICS	Pollutant	2023 (tposd)	2024 (tposd)	2023 (tons)	2024 (tons)
252006370	S C JOHNSON & SON INC	Racine	325611	NOx	0.08	0.08	36.99	36.99
252007030	TWIN DISC INC PLANT 1 (RACINE ST)	Racine	333611	NOx	0.00	0.00	0.58	0.58
252007140	TWIN DISC INC - PLT 3	Racine	333611	NOx	0.01	0.01	3.79	3.79
252007690	CNH INDUSTRIAL RACINE PLANT	Racine	333111	NOx	0.01	0.01	1.79	1.79
252009780	E C STYBERG ENGINEERING CO	Racine	332119	NOx	0.00	0.00	1.07	1.07
252013190	PAYNE & DOLAN INC #31	Racine	324121	NOx	0.01	0.01	2.32	2.32
252013630	AMERICAN ROLLER CO LLC	Racine	326299	NOx	0.00	0.00	0.82	0.82
252019900	WI DOA / SOUTHERN WISCONSIN CENTER	Racine	623990	NOx	0.01	0.01	5.22	5.22
252075340	SHURPAC INC	Racine	332812	NOx	0.01	0.01	1.39	1.39
252076990	KESTREL HAWK LANDFILL	Racine	562212	NOx	0.01	0.01	2.35	2.35
252077760	FEDERAL HEATH SIGN CO LLC	Racine	323111	NOx	0.00	0.00	0.15	0.15
252103940	ASCENSION ALL SAINTS HOSPITAL - SPRING STREET CAMPUS	Racine	622110	NOx	0.02	0.02	10.12	10.12
252126380	GREAT NORTHERN CORPORATION - RACINE DIVISION	Racine	322211	NOx	0.00	0.00	0.46	0.46
252194140	PUTZMEISTER INC	Racine	333922	NOx	0.05	0.05	13.43	13.43
252217020	BRP US INC	Racine	333618	NOx	0.01	0.01	4.42	4.42
252229670	RETAIL FIXTURE, LLC	Racine	337110	NOx	0.00	0.00	0.17	0.17
252237260	SPECIALTY TAPES LLC	Racine	322220	NOx	0.00	0.00	0.45	0.45
252247820	Kerry Inc.	Racine	311999	NOx	0.00	0.00	0.29	0.29
252272570	MERZ NORTH AMERICA INC	Racine	339113	NOx	0.01	0.01	2.98	2.98
252280600	Seda North America	Racine	326112	NOx	0.00	0.00	1.37	1.37
252286430	The DeLong Co.,Inc - Colony Ave.	Racine	424510	NOx	0.00	0.00	0.50	0.50
267005090	Gehl Foods Inc. - Main St	Washington	311513	NOx	0.05	0.05	18.98	18.98
267005640	PAYNE & DOLAN INC RUGBY JUNCTION CONTROL #11	Washington	324121	NOx	0.01	0.01	1.42	1.42
267058660	WMWI Omega Hills Landfill	Washington	562212	NOx	0.23	0.23	81.21	81.21
267064270	KERRY INGREDIENTS - JACKSON	Washington	311511	NOx	0.01	0.01	5.77	5.77
267065260	SERIGRAPH INC PLANT 2	Washington	323111	NOx	0.00	0.00	0.19	0.19
267067900	REGAL WARE INC - WEST BEND	Washington	332215	NOx	0.01	0.01	2.63	2.63
267073290	SYSTEMS INC	Washington	333922	NOx	0.00	0.00	0.23	0.23

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FID	Facility Name	County	NAICS	Pollutant	2023 (tposd)	2024 (tposd)	2023 (tons)	2024 (tons)
267077470	ADVANCED COATINGS INC	Washington	332812	NOx	0.01	0.01	1.69	1.69
267085830	WestRock CP LLC	Washington	322211	NOx	0.01	0.01	3.84	3.84
267098810	LANNON STONE PRODUCTS- JACKSON QUARRY	Washington	212312	NOx	0.01	0.01	2.57	2.57
267110470	Sterling Wisconsin LLC	Washington	325412	NOx	0.01	0.01	3.51	3.51
267155570	Rytec Corp	Washington	332321	NOx	0.00	0.00	0.33	0.33
267209800	Briggs & Stratton, LLC	Washington	335312	NOx	0.00	0.00	0.70	0.70
268013790	GKN SINTER METALS	Washington	332117	NOx	0.00	0.00	1.76	1.76
268006310	WAUKESHA FOUNDRY	Waukesha	331511	NOx	0.00	0.00	0.48	0.48
268006750	INNIO Waukesha Gas Engines, Inc.	Waukesha	333618	NOx	0.04	0.04	14.33	14.33
268006970	METALTEK INTL WIS CENTRIFUGAL DIV	Waukesha	331513	NOx	0.05	0.05	12.71	12.71
268008400	SILGAN CONTAINERS MFG CORP	Waukesha	332439	NOx	0.02	0.02	6.94	6.94
268008510	SILGAN CONTAINERS MFG CORP	Waukesha	332439	NOx	0.00	0.00	0.81	0.81
268008730	WAUKESHA LIME & STONE	Waukesha	212312	NOx	0.02	0.02	3.95	3.95
268009500	Abet USA, Inc.	Waukesha	337110	NOx	0.00	0.00	0.71	0.71
268010710	HUSCO INTERNATIONAL INC	Waukesha	332912	NOx	0.00	0.00	0.36	0.36
268012030	CASTALLOY INC	Waukesha	331511	NOx	0.02	0.02	4.22	4.22
268012250	QUAD/GRAPHICS MARKETING LLC	Waukesha	323111	NOx	0.00	0.00	0.76	0.76
268014670	GENERAC POWER SYSTEMS- WAUKESHA	Waukesha	335312	NOx	0.18	0.18	44.85	44.85
268014780	DYNEX-RIVETT INC	Waukesha	333996	NOx	0.00	0.00	0.19	0.19
268015330	BIMBO BAKERIES USA INC	Waukesha	311811	NOx	0.01	0.01	2.85	2.85
268016100	ITU ABSORBTECH INC	Waukesha	812332	NOx	0.01	0.01	1.63	1.63
268016210	Vorteq Coil Finishers	Waukesha	332812	NOx	0.00	0.00	0.48	0.48
268017200	COOPER POWER SYSTEMS LLC	Waukesha	335311	NOx	0.00	0.00	0.60	0.60
268028200	PAYNE & DOLAN -#12	Waukesha	324121	NOx	0.01	0.01	1.23	1.23
268028420	Wolf Paving Co., Inc.	Waukesha	324121	NOx	0.03	0.03	6.19	6.19
268088920	VALMET INC	Waukesha	331513	NOx	0.00	0.00	1.17	1.17
268090240	PROHEALTH CARE WAUKESHA MEMORIAL HOSPITAL	Waukesha	622110	NOx	0.03	0.03	6.23	6.23
268142270	WENTHE-DAVIDSON ENGINEERING CO	Waukesha	332439	NOx	0.00	0.00	0.66	0.66

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FID	Facility Name	County	NAICS	Pollutant	2023 (tposd)	2024 (tposd)	2023 (tons)	2024 (tons)
268152500	WMWI MUSKEGO SANITARY LANDFILL	Waukesha	562212	NOx	0.01	0.01	2.91	2.91
268154260	Mativ Conwed LLC	Waukesha	322212	NOx	0.00	0.00	0.59	0.59
268154370	QUIKRETE WISCONSIN INC	Waukesha	327390	NOx	0.00	0.00	1.00	1.00
268157890	BODYCOTE THERMAL PROCESSING	Waukesha	332812	NOx	0.01	0.01	3.89	3.89
268158660	GLENROY INC	Waukesha	326112	NOx	0.00	0.00	2.57	2.57
268159210	Lincoln Industries of Wisconsin, LLC	Waukesha	332813	NOx	0.00	0.00	1.14	1.14
268162730	DYNATECT MANUFACTURING INC	Waukesha	326299	NOx	0.00	0.00	0.36	0.36
268165370	PRIME LEATHER FINISHES CO	Waukesha	325510	NOx	0.00	0.00	0.24	0.24
268168560	Wolf Industries Inc - Genesse Plant	Waukesha	324121	NOx	0.02	0.02	3.91	3.91
268171310	GE Medical Systems LLC - Waukesha	Waukesha	334517	NOx	0.06	0.06	3.96	3.96
268183080	QUAD/GRAPHICS INC	Waukesha	323111	NOx	0.04	0.04	13.71	13.71
268185610	PAYNE AND DOLAN - #1	Waukesha	324121	NOx	0.01	0.01	1.01	1.01
268203430	Diamond Vogel, Inc.	Waukesha	325510	NOx	0.00	0.00	0.68	0.68
268204090	Multi-Color Corporation	Waukesha	323111	NOx	0.00	0.00	0.34	0.34
268219490	T J HALE COMPANY LLC	Waukesha	337211	NOx	0.00	0.00	0.25	0.25
268221360	COOPER POWER SYSTEMS LLC	Waukesha	335311	NOx	0.01	0.01	5.45	5.45
268227850	MILWAUKEE ELECTRIC TOOL - MUKWONAGO OPERATIONS	Waukesha	332216	NOx	0.00	0.00	0.17	0.17
268232030	THERM TECH OF WAUKESHA INC	Waukesha	332811	NOx	0.02	0.02	7.50	7.50
268239290	AMERICAN PRINTPAK	Waukesha	322220	NOx	0.00	0.00	0.29	0.29
268244130	Emerald Park Landfill, LLC	Waukesha	562212	NOx	0.02	0.02	5.14	5.14
268321900	NORTHERN STAINLESS CORP	Waukesha	331513	NOx	0.00	0.00	0.01	0.01
268423870	PROLEC-GE WAUKESHA INC	Waukesha	335311	NOx	0.00	0.00	1.50	1.50
268457970	GENERAC POWER SYSTEMS INC - EAGLE	Waukesha	335311	NOx	0.04	0.04	10.81	10.81
268523970	Harley Davidson Powertrain Operations - Menomonee Falls	Waukesha	336991	NOx	0.01	0.01	5.85	5.85
268555650	Payne and Dolan Inc - Control 20 Waukesha	Waukesha	324121	NOx	0.03	0.03	5.24	5.24
268600310	Holcim Solutions and Products US LLC	Waukesha	326140	NOx	0.00	0.00	0.67	0.67
268605700	NATURE'S PATH FOODS USA LLC	Waukesha	311230	NOx	0.01	0.01	3.70	3.70
268635180	McDermott Cue Mfg LLC	Waukesha	321999	NOx	0.00	0.00	0.95	0.95

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FID	Facility Name	County	NAICS	Pollutant	2023 (tposd)	2024 (tposd)	2023 (tons)	2024 (tons)
268660920	PREGIS SHARP SYSTEMS LLC	Waukesha	326199	NOx	0.00	0.00	1.96	1.96
268669500	ABX INNOVATIVE PACKAGING	Waukesha	323111	NOx	0.00	0.00	0.00	0.00
399003880	NORTHEAST ASPHALT #67	Waukesha	324121	NOx	0.01	0.01	2.04	2.04
399018620	NORTHEAST ASPHALT INC #35	Waukesha	324121	NOx	0.01	0.01	1.46	1.46
399031710	NORTHEAST ASPHALT INC - PC #12	Waukesha	212312	NOx	0.07	0.07	16.19	16.19
399036660	NORTHEAST ASPHALT INC CONTROL 64	Waukesha	324121	NOx	0.02	0.02	3.67	3.67
399041500	PAYNE AND DOLAN-PC 1	Waukesha	212312	NOx	0.08	0.08	15.43	15.43
399041610	PAYNE AND DOLAN - PC09	Waukesha	212312	NOx	0.05	0.05	12.70	12.70
399044580	NORTHEAST ASPHALT INC #36	Waukesha	324121	NOx	0.02	0.02	2.47	2.47
399045570	NORTHEAST ASPHALT INC - PC #14	Waukesha	212319	NOx	0.09	0.09	15.79	15.79
399052500	NORTHEAST ASPHALT INC #66	Waukesha	324121	NOx	0.01	0.01	1.63	1.63
399063170	NORTHEAST ASPHALT INC - CONTROL 37	Waukesha	324121	NOx	0.03	0.03	7.01	7.01
998215240	PAYNE & DOLAN - CEDAR LAKE #8	Waukesha	324121	NOx	0.00	0.00	0.54	0.54
998303460	PAYNE AND DOLAN - PC10	Waukesha	327991	NOx	0.07	0.07	16.39	16.39
998303680	NORTHEAST ASPHALT INC -- PC#3	Waukesha	212312	NOx	0.07	0.07	15.39	15.39
998348780	JOHNSON SAND AND GRAVEL	Waukesha	212321	NOx	0.03	0.03	4.23	4.23
998356810	PAYNE & DOLAN CONTROL #33	Waukesha	324121	NOx	0.01	0.01	1.56	1.56
998375510	NORTHEAST ASPHALT #65	Waukesha	324121	NOx	0.02	0.02	5.42	5.42
999010760	NORTHEAST ASPHALT INC #25	Waukesha	324121	NOx	0.03	0.03	4.42	4.42
999011310	NORTHEAST ASPHALT -#30	Waukesha	324121	NOx	0.01	0.01	1.83	1.83
999011640	PAYNE & DOLAN #23	Waukesha	324121	NOx	0.01	0.01	2.70	2.70
999199960	NORTHEAST ASPHALT #63 - LARSEN PLANT	Waukesha	324121	NOx	0.01	0.01	2.06	2.06
999460440	NORTHEAST ASPHALT #26	Waukesha	324121	NOx	0.01	0.01	2.00	2.00
999516760	NORTHEAST ASPHALT #27	Waukesha	324121	NOx	0.08	0.08	11.94	11.94
999792090	PAYNE & DOLAN #29	Waukesha	324121	NOx	0.04	0.04	6.75	6.75
999902420	PAYNE & DOLAN - #7	Waukesha	324121	NOx	0.01	0.01	3.23	3.23
999905280	PAYNE & DOLAN INC - 15	Waukesha	324121	NOx	0.02	0.02	2.70	2.70
999958850	JOHNSON SAND & GRAVEL PORTABLE PLANT #2	Waukesha	212321	NOx	0.01	0.01	1.67	1.67

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

FID	Facility Name	County	NAICS	Pollutant	2023 (tposd)	2024 (tposd)	2023 (tons)	2024 (tons)
241005490	U.S. Energy Milwaukee Jones Island Terminal	Milwaukee	493190	VOC	0.00	0.00	1.56	1.56
241005710	MAYNARD STEEL CASTING CO INC	Milwaukee	331513	VOC	0.03	0.03	8.70	8.70
241006810	STRATTEC SECURITY CORP	Milwaukee	336390	VOC	0.01	0.01	3.70	3.70
241006920	ATI LADISH LLC	Milwaukee	332112	VOC	0.02	0.02	6.61	6.61
241007030	Molson Coors USA LLC	Milwaukee	312120	VOC	0.18	0.18	61.65	61.65
241008240	REXNORD INDUSTRIES LLC GEAR GROUP	Milwaukee	333613	VOC	0.02	0.02	5.29	5.29
241009670	SMITHFIELD PACKAGED MEATS CORP	Milwaukee	311991	VOC	0.01	0.01	3.66	3.66
241010990	JOY GLOBAL SURFACE MINING INC	Milwaukee	333131	VOC	0.01	0.01	2.48	2.48
241011760	UNIT DROP FORGE COMPANY INC	Milwaukee	332111	VOC	0.02	0.02	4.02	4.02
241011870	BRIGGS & STRATTON, LLC	Milwaukee	333611	VOC	0.02	0.02	7.70	7.70
241012200	Regal Rexnord Industries Corporation	Milwaukee	333613	VOC	0.01	0.01	4.41	4.41
241012310	GREDE LLC - LIBERTY	Milwaukee	331511	VOC	0.07	0.07	15.71	15.71
241014180	GE HEALTHCARE	Milwaukee	334517	VOC	0.02	0.02	7.11	7.11
241014620	PPG INDUSTRIES	Milwaukee	325510	VOC	0.43	0.43	156.62	156.62
241014730	ALDRICH CHEMICAL CO LLC	Milwaukee	325199	VOC	0.00	0.00	0.34	0.34
241015390	APPLETON GROUP LLC	Milwaukee	331511	VOC	0.04	0.04	11.65	11.65
241017370	PERLICK CORPORATION	Milwaukee	333415	VOC	0.01	0.01	2.60	2.60
241017590	HENTZEN COATINGS INC	Milwaukee	325510	VOC	0.02	0.02	4.28	4.28
241017700	U.S. Energy Milwaukee North Terminal	Milwaukee	424710	VOC	0.04	0.04	15.52	15.52
241019350	STAINLESS FOUNDRY & ENGINEERING INC	Milwaukee	331513	VOC	0.01	0.01	3.73	3.73
241019460	WEST SHORE - GRANVILLE STATION (GT)	Milwaukee	486910	VOC	0.05	0.05	18.51	18.51
241019900	WI DOA / UW-MILWAUKEE	Milwaukee	611310	VOC	0.00	0.00	1.84	1.84
241020780	ALSCO AMERICAN INDUSTRIAL DIVISION	Milwaukee	812331	VOC	0.03	0.03	9.07	9.07
241021220	CLCM OAK CREEK	Milwaukee	811310	VOC	0.06	0.06	15.82	15.82
241022760	Highline-Warren LLC	Milwaukee	423120	VOC	0.01	0.01	4.97	4.97
241023640	The Newark Group, Inc.	Milwaukee	322130	VOC	0.12	0.12	43.45	43.45
241024300	Aurora St Lukes Medical Center	Milwaukee	622110	VOC	0.01	0.01	1.28	1.28

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241026060	MILWAUKEE COUNTY TRANSIT SYSTEM- FLEET MAINTENANCE	Milwaukee	485119	VOC	0.00	0.00	0.05	0.05
241027050	MILWAUKEE REGIONAL MEDICAL CENTER THERMAL SERVICES INC	Milwaukee	221330	VOC	0.01	0.01	2.15	2.15
241027160	Stark Pavement Corp	Milwaukee	324121	VOC	0.00	0.00	0.27	0.27
241027930	MILWAUKEE FORGE	Milwaukee	332111	VOC	0.00	0.00	0.07	0.07
241028810	SONOCO METAL PACKAGING LLC	Milwaukee	332431	VOC	0.11	0.11	41.26	41.26
241029030	BRADY WORLDWIDE - FLORIST AVE PLT	Milwaukee	322220	VOC	0.04	0.04	11.23	11.23
241029250	MMSD-JONES ISLAND WATER RECLAMATION FACILITY	Milwaukee	221320	VOC	0.34	0.34	129.31	129.31
241029800	MID CITY FOUNDRY CO	Milwaukee	331511	VOC	0.06	0.06	15.57	15.57
241031120	USVA ZABLOCKI MEDICAL CENTER	Milwaukee	622110	VOC	0.00	0.00	0.71	0.71
241031450	SHERWIN INDUSTRIES INC	Milwaukee	324121	VOC	0.00	0.00	0.01	0.01
241033210	ASCENSION SE WISCONSIN HOSPITAL ST JOSEPH CAMPUS	Milwaukee	622110	VOC	0.00	0.00	0.39	0.39
241033430	ABX SOLUTIONS, LLC	Milwaukee	326112	VOC	0.02	0.02	5.75	5.75
241033760	U.S. Energy Milwaukee Central Terminal	Milwaukee	424710	VOC	0.04	0.04	15.12	15.12
241036840	MILWAUKEE PLATING CO	Milwaukee	332813	VOC	0.00	0.00	0.36	0.36
241036950	AZZ GALVANIZING AND PLATING - MILWAUKEE LLC	Milwaukee	332812	VOC	0.00	0.00	0.09	0.09
241037280	MATERION ADVANCED CHEMICALS INC	Milwaukee	325180	VOC	0.07	0.07	9.04	9.04
241038820	MASTER LOCK CO LLC	Milwaukee	332510	VOC	0.01	0.01	3.90	3.90
241041900	SOLENIS	Milwaukee	325211	VOC	0.00	0.00	0.12	0.12
241042670	THIELE TANNING CO	Milwaukee	316110	VOC	0.03	0.03	7.85	7.85
241045420	Reyes Coca-Cola Bottling	Milwaukee	312112	VOC	0.00	0.00	0.13	0.13
241046630	Advanced Plating Technologies	Milwaukee	332813	VOC	0.02	0.02	4.09	4.09
241051250	LUCAS MILHAUPT INC	Milwaukee	332999	VOC	0.03	0.03	5.53	5.53
241052680	CAMPBELL SOUP SUPPLY CO LLC	Milwaukee	311991	VOC	0.01	0.01	5.80	5.80
241053560	U.S. Energy Milwaukee South Terminal	Milwaukee	424710	VOC	0.05	0.05	16.10	16.10
241078640	U.S. Energy Milwaukee West Terminal	Milwaukee	424710	VOC	0.07	0.07	25.98	25.98
241095910	PAYNE & DOLAN-FRANKLIN AGGR	Milwaukee	212312	VOC	0.00	0.00	0.25	0.25

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241164770	BUCKEYE TERMINALS LLC	Milwaukee	493190	VOC	0.07	0.07	22.96	22.96
241165210	HENKEL CORP	Milwaukee	325520	VOC	0.00	0.00	0.02	0.02
241168070	SNAP ON TOOLS MFG CO	Milwaukee	332812	VOC	0.03	0.03	11.15	11.15
241168180	AURORA WEST ALLIS MEDICAL CENTER	Milwaukee	622110	VOC	0.01	0.01	3.86	3.86
241168510	PACKAGING CORPORATION OF AMERICA	Milwaukee	322211	VOC	0.00	0.00	1.22	1.22
241168620	WMWI - METRO RECYCLING & DISPOSAL	Milwaukee	562212	VOC	0.03	0.03	11.58	11.58
241174560	FLINT HILLS RESOURCES PINE BEND LLC - MILWAUKEE FACILITY	Milwaukee	424710	VOC	0.09	0.09	25.47	25.47
241189520	KRONES INC	Milwaukee	333993	VOC	0.00	0.00	1.32	1.32
241197990	ZENAR CORP	Milwaukee	333923	VOC	0.01	0.01	3.47	3.47
241213720	MILLER COMPRESSING CO	Milwaukee	423930	VOC	0.01	0.01	3.24	3.24
241228350	MMSD-SOUTHSHORE WASTEWATER TREATMENT PLANT	Milwaukee	221320	VOC	0.14	0.14	48.19	48.19
241232640	BANTA SPECIALTY CONVERTING	Milwaukee	323111	VOC	0.04	0.04	11.29	11.29
241251670	Suedpack Oak Creek Corporation	Milwaukee	323111	VOC	0.01	0.01	1.70	1.70
241254310	THERMO FISHER SCIENTIFIC (MILWAUKEE) LLC	Milwaukee	325199	VOC	0.00	0.00	0.43	0.43
241256730	BHP Inc. d.b.a. Global Power Components	Milwaukee	332311	VOC	0.09	0.09	22.96	22.96
241266740	SEIDEL TANNING CO	Milwaukee	316110	VOC	0.08	0.08	23.12	23.12
241267180	RITUS CORP	Milwaukee	326299	VOC	0.00	0.00	0.83	0.83
241276750	Fredman Packaging	Milwaukee	323111	VOC	0.06	0.06	15.03	15.03
241308870	SYMET INC	Milwaukee	332812	VOC	0.01	0.01	1.71	1.71
241309090	CITGO PETROLEUM CORP	Milwaukee	424710	VOC	0.10	0.10	35.96	35.96
241321960	CHROME TECH OF WISCONSIN INC	Milwaukee	332813	VOC	0.00	0.00	0.04	0.04
241325590	BAY VIEW INDUSTRIES INC	Milwaukee	337127	VOC	0.04	0.04	11.08	11.08
241334060	Tekni-Plex Flexibles LLC	Milwaukee	322220	VOC	0.03	0.03	9.98	9.98
241348030	DINGS CO	Milwaukee	335314	VOC	0.00	0.00	0.36	0.36
241362660	COOPER POWER SYSTEMS LLC	Milwaukee	335313	VOC	0.02	0.02	5.21	5.21
241370140	HELWIG CARBON PRODUCTS	Milwaukee	332813	VOC	0.01	0.01	3.40	3.40
241372120	BADGER ALLOYS	Milwaukee	331511	VOC	0.04	0.04	11.49	11.49

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241435260	Marketing.com	Milwaukee	323111	VOC	0.02	0.02	5.44	5.44
241450440	ASCENSION COLUMBIA ST MARY'S HOSPITAL MILWAUKEE	Milwaukee	622110	VOC	0.00	0.00	0.57	0.57
241454290	MCADAMS GRAPHICS INC	Milwaukee	323111	VOC	0.04	0.04	9.63	9.63
241455500	STEELWIND INDUSTRIES	Milwaukee	332312	VOC	0.03	0.03	8.15	8.15
241462980	SELLARS ABSORBENT MATERIALS INC	Milwaukee	322291	VOC	0.01	0.01	5.13	5.13
241472770	FRANTZ COMPANY INC	Milwaukee	321920	VOC	0.02	0.02	5.98	5.98
241480910	BRADY U S A INC - GOOD HOPE RD FACILITY	Milwaukee	323111	VOC	0.01	0.01	2.09	2.09
241485640	LUBRIZOL LIFE SCIENCES INC	Milwaukee	334514	VOC	0.09	0.09	22.57	22.57
241489270	Western Building Products, Inc	Milwaukee	321912	VOC	0.05	0.05	18.40	18.40
241514570	ADAMS INDUSTRIES INC	Milwaukee	811310	VOC	0.00	0.00	1.11	1.11
241665490	ALLIS ROLLER, LLC	Milwaukee	332999	VOC	0.00	0.00	0.67	0.67
241723240	SNYDERS - LANCE INC	Milwaukee	311919	VOC	0.01	0.01	2.61	2.61
241741940	KOPFMANN CO INC	Milwaukee	339991	VOC	0.01	0.01	2.47	2.47
241757340	QUAD/GRAPHICS INC	Milwaukee	323111	VOC	0.02	0.02	5.55	5.55
241789350	LAW TANNING CO LLC	Milwaukee	316110	VOC	0.01	0.01	3.33	3.33
241805300	WS PACKAGING - OAK CREEK DIVISION	Milwaukee	323111	VOC	0.00	0.00	1.16	1.16
241879550	JOY-MARK INC	Milwaukee	333511	VOC	0.01	0.01	2.43	2.43
241961720	SENIOR FLEXONICS - GA PRECISION	Milwaukee	332721	VOC	0.02	0.02	5.20	5.20
241964580	API HEAT TRANSFER	Milwaukee	332410	VOC	0.00	0.00	0.29	0.29
341027170	VISA LIGHTING AN OLDENBURG GROUP CO	Milwaukee	335121	VOC	0.00	0.00	1.16	1.16
341039270	WETZEL BROTHERS	Milwaukee	323111	VOC	0.03	0.03	9.65	9.65
341084700	Fred Usinger, Inc.	Milwaukee	424470	VOC	0.01	0.01	2.56	2.56
341092510	HARLEY-DAVIDSON MOTOR CO PROD DEV CTR	Milwaukee	541380	VOC	0.00	0.00	0.79	0.79
341112860	GREAT LAKES FRICTION PRODUCTS	Milwaukee	335314	VOC	0.00	0.00	0.57	0.57
341158070	CLCM ST FRANCIS	Milwaukee	811310	VOC	0.02	0.02	5.12	5.12
341166430	CINTAS #184	Milwaukee	812332	VOC	0.01	0.01	1.64	1.64
341173800	Charter Wire, LLC	Milwaukee	331210	VOC	0.06	0.06	22.19	22.19

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341185570	BADGER RAILING	Milwaukee	332323	VOC	0.03	0.03	7.15	7.15
341206360	RAPHAEL INDUSTRIES INC	Milwaukee	339112	VOC	0.01	0.01	2.29	2.29
341209770	INGETEA INC	Milwaukee	335312	VOC	0.01	0.01	2.37	2.37
341209880	MILWAUKEE COMPOSITES INC	Milwaukee	336510	VOC	0.04	0.04	9.56	9.56
341224620	WPC TECHNOLOGIES INC	Milwaukee	325130	VOC	0.00	0.00	0.03	0.03
341228910	Angelic Bakehouse, Inc. (OH)	Milwaukee	311812	VOC	0.03	0.03	5.93	5.93
341259050	TJM Innovations, LLC	Milwaukee	423330	VOC	0.01	0.01	1.23	1.23
341281050	Quad Packaging Inc	Milwaukee	322211	VOC	0.01	0.01	5.36	5.36
341291610	Glenn Rieder, LLC	Milwaukee	321918	VOC	0.01	0.01	4.11	4.11
341292050	CATERPILLAR GLOBAL MINING - NORTH OF RAWSON	Milwaukee	333131	VOC	0.01	0.01	3.22	3.22
341318120	Sientra	Milwaukee	334514	VOC	0.07	0.07	18.45	18.45
341347710	1547 - CSR Milwaukee, LLC	Milwaukee	518210	VOC	0.00	0.00	0.01	0.01
399024230	MILWAUKEE MATERIALS LLC	Milwaukee	212312	VOC	0.00	0.00	0.00	0.00
399046780	GENESEE AGGREGATE CORP	Milwaukee	212319	VOC	0.00	0.00	0.01	0.01
399089790	Stark Pavement Corp- SN 413380	Milwaukee	212312	VOC	0.00	0.00	0.00	0.00
399092980	Stark Pavement Corp - ULTRA 135-85577- 00-NA	Milwaukee	324121	VOC	0.00	0.00	0.14	0.14
246003890	LAKESIDE FOODS INC	Ozaukee	311421	VOC	0.00	0.00	0.24	0.24
246004110	PACE INDUSTRIES EST DIVISION	Ozaukee	331523	VOC	0.02	0.02	6.68	6.68
246005760	OZAUKEE COUNTY HIGHWAY DEPT	Ozaukee	324121	VOC	0.00	0.00	0.03	0.03
246008620	MID-CITY FOUNDRY CORP - UNITED DIV	Ozaukee	331511	VOC	0.02	0.02	4.82	4.82
246013350	Super Steel LLC	Ozaukee	333120	VOC	0.03	0.03	7.32	7.32
246044700	CHARTER STEEL - SAUKVILLE	Ozaukee	331110	VOC	0.05	0.05	17.52	17.52
246052400	PHILIPP LITHOGRAPHING CO	Ozaukee	323111	VOC	0.04	0.04	9.79	9.79
246068900	Kleen Test Products - Port Washington	Ozaukee	313320	VOC	0.02	0.02	6.28	6.28
246139190	JBT CORPORATION	Ozaukee	327999	VOC	0.02	0.02	4.18	4.18
246150850	CONSTRUCTION FORMS INC	Ozaukee	332999	VOC	0.05	0.05	11.75	11.75
246156350	COSTCO WHOLESALE #628	Ozaukee	452311	VOC	0.01	0.01	2.74	2.74
346001480	Discovery Energy LLC	Ozaukee	332420	VOC	0.00	0.00	0.32	0.32

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998296420	HARTMANN SAND & GRAVEL COMPANY - LIPPMAN 21X42	Ozaukee	212321	VOC	0.00	0.00	0.18	0.18
998296530	HARTMANN SAND & GRAVEL INC - PIONEER 358 CRUSHER	Ozaukee	212321	VOC	0.00	0.00	0.05	0.05
998369680	HARTMANN SAND & GRAVEL - LIPPMAN #790102	Ozaukee	212321	VOC	0.00	0.00	0.31	0.31
252003400	RACINE WASTEWATER TREATMENT FACILITY	Racine	221320	VOC	0.07	0.07	13.69	13.69
252004280	PAYNE AND DOLAN INC - RACINE QUARRY	Racine	212312	VOC	0.00	0.00	0.11	0.11
252004940	InSinkErator LLC	Racine	335220	VOC	0.04	0.04	14.49	14.49
252005820	SC JOHNSON HOWE ST CAMPUS	Racine	561110	VOC	0.00	0.00	0.15	0.15
252006370	S C JOHNSON & SON INC	Racine	325611	VOC	0.47	0.47	149.22	149.22
252007030	TWIN DISC INC PLANT 1 (RACINE ST)	Racine	333611	VOC	0.00	0.00	0.03	0.03
252007140	TWIN DISC INC - PLT 3	Racine	333611	VOC	0.00	0.00	0.78	0.78
252007690	CNH INDUSTRIAL RACINE PLANT	Racine	333111	VOC	0.06	0.06	19.23	19.23
252009780	E C STYBERG ENGINEERING CO	Racine	332119	VOC	0.05	0.05	12.43	12.43
252013190	PAYNE & DOLAN INC #31	Racine	324121	VOC	0.00	0.00	0.09	0.09
252013630	AMERICAN ROLLER CO LLC	Racine	326299	VOC	0.01	0.01	5.30	5.30
252019900	WI DOA / SOUTHERN WISCONSIN CENTER	Racine	623990	VOC	0.00	0.00	0.29	0.29
252075340	SHURPAC INC	Racine	332812	VOC	0.07	0.07	18.60	18.60
252076990	KESTREL HAWK LANDFILL	Racine	562212	VOC	0.02	0.02	6.54	6.54
252077760	FEDERAL HEATH SIGN CO LLC	Racine	323111	VOC	0.01	0.01	1.41	1.41
252103940	ASCENSION ALL SAINTS HOSPITAL - SPRING STREET CAMPUS	Racine	622110	VOC	0.00	0.00	0.51	0.51
252109550	BURLINGTON GRAPHIC SYSTEMS INC ESOT	Racine	323113	VOC	0.11	0.11	24.06	24.06
252126380	GREAT NORTHERN CORPORATION - RACINE DIVISION	Racine	322211	VOC	0.02	0.02	4.78	4.78
252173680	FIBER-TECH INC	Racine	326199	VOC	0.06	0.06	22.63	22.63
252194140	PUTZMEISTER INC	Racine	333922	VOC	0.09	0.09	28.58	28.58
252217020	BRP US INC	Racine	333618	VOC	0.01	0.01	2.06	2.06
252229670	RETAIL FIXTURE, LLC	Racine	337110	VOC	0.01	0.01	3.31	3.31

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252237260	SPECIALTY TAPES LLC	Racine	322220	VOC	0.01	0.01	2.95	2.95
252237810	BWAY CORPORATION-MIDWEST AEROSOL PLANT	Racine	332431	VOC	0.02	0.02	8.90	8.90
252247820	Kerry Inc.	Racine	311999	VOC	0.01	0.01	1.94	1.94
252248700	Cirtec Medical Corporation	Racine	326299	VOC	0.02	0.02	6.20	6.20
252272570	MERZ NORTH AMERICA INC	Racine	339113	VOC	0.01	0.01	1.55	1.55
252280600	Seda North America	Racine	326112	VOC	0.00	0.00	0.10	0.10
252286430	The DeLong Co.,Inc - Colony Ave.	Racine	424510	VOC	0.00	0.00	0.03	0.03
252291490	Fii Smart Manufacturing Center	Racine	334413	VOC	0.04	0.04	11.44	11.44
267005090	Gehl Foods Inc. - Main St	Washington	311513	VOC	0.00	0.00	1.04	1.04
267005640	PAYNE & DOLAN INC RUGBY JUNCTION CONTROL #11	Washington	324121	VOC	0.00	0.00	0.08	0.08
267058660	WMWI Omega Hills Landfill	Washington	562212	VOC	0.05	0.05	16.70	16.70
267064270	KERRY INGREDIENTS - JACKSON	Washington	311511	VOC	0.00	0.00	0.28	0.28
267065260	SERIGRAPH INC PLANT 2	Washington	323111	VOC	0.00	0.00	0.01	0.01
267067900	REGAL WARE INC - WEST BEND	Washington	332215	VOC	0.01	0.01	1.77	1.77
267073290	SYSTEMS INC	Washington	333922	VOC	0.12	0.12	31.51	31.51
267077470	ADVANCED COATINGS INC	Washington	332812	VOC	0.07	0.07	26.29	26.29
267082640	SUNLITE PLASTICS INC	Washington	326199	VOC	0.03	0.03	7.13	7.13
267085830	WestRock CP LLC	Washington	322211	VOC	0.01	0.01	2.26	2.26
267110470	Sterling Wisconsin LLC	Washington	325412	VOC	0.05	0.05	12.05	12.05
267131700	RR DONNELLEY-WEST BEND	Washington	323111	VOC	0.00	0.00	1.16	1.16
267148640	FAUSTEL INC	Washington	333244	VOC	0.00	0.00	0.06	0.06
267155570	Rytec Corp	Washington	332321	VOC	0.03	0.03	6.78	6.78
267209800	Briggs & Stratton, LLC	Washington	335312	VOC	0.00	0.00	0.04	0.04
267212000	HAWK RESEARCH LABORATORIES LLC	Washington	325510	VOC	0.05	0.05	9.98	9.98
268013790	GKN SINTER METALS	Washington	332117	VOC	0.02	0.02	7.27	7.27
268626820	MGS GROUP NORTH AMERICA INC GERMANTOWN DIVISION	Washington	356199	VOC	0.02	0.02	5.33	5.33
268006310	WAUKESHA FOUNDRY	Waukesha	331511	VOC	0.01	0.01	2.84	2.84
268006750	INNIO Waukesha Gas Engines, Inc.	Waukesha	333618	VOC	0.02	0.02	6.93	6.93

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FID	Facility Name	County	NAICS	Pollutant	2023 (tposd)	2024 (tposd)	2023 (tons)	2024 (tons)
268006970	METALTEK INTL WIS CENTRIFUGAL DIV	Waukesha	331513	VOC	0.00	0.00	0.99	0.99
268007410	MOLDED RUBBER AND PLASTIC CORP	Waukesha	326291	VOC	0.02	0.02	4.19	4.19
268008400	SILGAN CONTAINERS MFG CORP	Waukesha	332439	VOC	0.02	0.02	10.36	10.36
268008510	SILGAN CONTAINERS MFG CORP	Waukesha	332439	VOC	0.03	0.03	11.70	11.70
268008730	WAUKESHA LIME & STONE	Waukesha	212312	VOC	0.00	0.00	0.11	0.11
268009500	Abet USA, Inc.	Waukesha	337110	VOC	0.00	0.00	0.50	0.50
268010710	HUSCO INTERNATIONAL INC	Waukesha	332912	VOC	0.00	0.00	0.94	0.94
268012030	CASTALLOY INC	Waukesha	331511	VOC	0.07	0.07	18.50	18.50
268012250	QUAD/GRAPHICS MARKETING LLC	Waukesha	323111	VOC	0.02	0.02	6.01	6.01
268014670	GENERAC POWER SYSTEMS- WAUKESHA	Waukesha	335312	VOC	0.01	0.01	2.42	2.42
268014780	DYNEX-RIVETT INC	Waukesha	333996	VOC	0.00	0.00	0.01	0.01
268015330	BIMBO BAKERIES USA INC	Waukesha	311811	VOC	0.10	0.10	26.17	26.17
268016100	ITU ABSORBTECH INC	Waukesha	812332	VOC	0.21	0.21	59.21	59.21
268016210	Vorteq Coil Finishers	Waukesha	332812	VOC	0.02	0.02	7.22	7.22
268017200	COOPER POWER SYSTEMS LLC	Waukesha	335311	VOC	0.03	0.03	7.42	7.42
268028200	PAYNE & DOLAN -#12	Waukesha	324121	VOC	0.00	0.00	0.07	0.07
268028420	Wolf Paving Co., Inc.	Waukesha	324121	VOC	0.00	0.00	0.17	0.17
268088920	VALMET INC	Waukesha	331513	VOC	0.03	0.03	7.72	7.72
268090240	PROHEALTH CARE WAUKESHA MEMORIAL HOSPITAL	Waukesha	622110	VOC	0.00	0.00	0.37	0.37
268103880	Techniplas	Waukesha	326199	VOC	0.01	0.01	2.12	2.12
268137980	PERFORMANCE COATINGS	Waukesha	332813	VOC	0.00	0.00	0.63	0.63
268140070	HUBBELL GAS UTILITY SOLUTIONS	Waukesha	334514	VOC	0.00	0.00	0.44	0.44
268142270	WENTHE-DAVIDSON ENGINEERING CO	Waukesha	332439	VOC	0.03	0.03	8.06	8.06
268152500	WMWI MUSKEGO SANITARY LANDFILL	Waukesha	562212	VOC	0.00	0.00	1.52	1.52
268154260	Mativ Conwed LLC	Waukesha	322212	VOC	0.01	0.01	3.23	3.23
268154370	QUIKRETE WISCONSIN INC	Waukesha	327390	VOC	0.00	0.00	0.05	0.05
268155250	CL&D GRAPHICS	Waukesha	323111	VOC	0.02	0.02	3.26	3.26

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FID	Facility Name	County	NAICS	Pollutant	2023 (tposd)	2024 (tposd)	2023 (tons)	2024 (tons)
268155470	QUAD/GRAPHICS COMMERCIAL & SPECIALITY LLC	Waukesha	323111	VOC	0.06	0.06	14.39	14.39
268157450	PROFILE FINISHING SYSTEMS LLC	Waukesha	332812	VOC	0.08	0.08	28.26	28.26
268157890	BODYCOTE THERMAL PROCESSING	Waukesha	332812	VOC	0.00	0.00	0.08	0.08
268158660	GLENROY INC	Waukesha	326112	VOC	0.02	0.02	6.95	6.95
268159210	Lincoln Industries of Wisconsin, LLC	Waukesha	332813	VOC	0.01	0.01	3.54	3.54
268162730	DYNATECT MANUFACTURING INC	Waukesha	326299	VOC	0.05	0.05	12.45	12.45
268164160	DELZER LITHOGRAPH CO	Waukesha	323111	VOC	0.00	0.00	1.15	1.15
268165370	PRIME LEATHER FINISHES CO	Waukesha	325510	VOC	0.01	0.01	1.66	1.66
268170760	KDV LABEL CO INC	Waukesha	323111	VOC	0.03	0.03	7.94	7.94
268171310	GE Medical Systems LLC - Waukesha	Waukesha	334517	VOC	0.01	0.01	1.54	1.54
268173290	WAUSAU EQUIPMENT COMPANY INC	Waukesha	333120	VOC	0.01	0.01	2.63	2.63
268183080	QUAD/GRAPHICS INC	Waukesha	323111	VOC	0.09	0.09	32.58	32.58
268185610	PAYNE AND DOLAN - #1	Waukesha	324121	VOC	0.00	0.00	0.06	0.06
268198260	ACCURATE SPECIALTIES INC	Waukesha	331529	VOC	0.00	0.00	0.02	0.02
268203430	Diamond Vogel, Inc.	Waukesha	325510	VOC	0.02	0.02	5.53	5.53
268204090	Multi-Color Corporation	Waukesha	323111	VOC	0.06	0.06	22.36	22.36
268219490	T J HALE COMPANY LLC	Waukesha	337211	VOC	0.06	0.06	6.86	6.86
268221360	COOPER POWER SYSTEMS LLC	Waukesha	335311	VOC	0.05	0.05	24.63	24.63
268227850	MILWAUKEE ELECTRIC TOOL - MUKWONAGO OPERATIONS	Waukesha	332216	VOC	0.02	0.02	5.25	5.25
268232030	THERM TECH OF WAUKESHA INC	Waukesha	332811	VOC	0.00	0.00	0.41	0.41
268239290	AMERICAN PRINTPAK	Waukesha	322220	VOC	0.03	0.03	9.72	9.72
268244130	Emerald Park Landfill, LLC	Waukesha	562212	VOC	0.03	0.03	11.66	11.66
268266020	SAFETY KLEEN SYSTEMS INC	Waukesha	332999	VOC	0.02	0.02	5.20	5.20
268284280	NEW BERLIN PLASTICS INC	Waukesha	326199	VOC	0.01	0.01	2.16	2.16
268298250	BERCO OF AMERICA	Waukesha	333120	VOC	0.03	0.03	10.23	10.23
268321900	NORTHERN STAINLESS CORP	Waukesha	331513	VOC	0.01	0.01	3.06	3.06
268342470	THE MAREK GROUP	Waukesha	323111	VOC	0.01	0.01	3.70	3.70
268382620	COLOR INK INC	Waukesha	323111	VOC	0.01	0.01	1.46	1.46
268383500	INPRO CORPORATION	Waukesha	326121	VOC	0.01	0.01	2.23	2.23
268393620	JTS DIRECT LLC	Waukesha	323111	VOC	0.01	0.01	4.81	4.81

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FID	Facility Name	County	NAICS	Pollutant	2023 (tposd)	2024 (tposd)	2023 (tons)	2024 (tons)
268423870	PROLEC-GE WAUKESHA INC	Waukesha	335311	VOC	0.02	0.02	4.99	4.99
268424750	The Gund Co	Waukesha	335932	VOC	0.11	0.11	29.90	29.90
268457970	GENERAC POWER SYSTEMS INC - EAGLE	Waukesha	335311	VOC	0.05	0.05	12.68	12.68
268508680	WAUKESHA IRON & METAL INC	Waukesha	423990	VOC	0.04	0.04	13.35	13.35
268523970	Harley Davidson Powertrain Operations - Menomonee Falls	Waukesha	336991	VOC	0.00	0.00	0.51	0.51
268529360	ONE TOUCH POINT	Waukesha	323111	VOC	0.02	0.02	4.65	4.65
268555650	Payne and Dolan Inc - Control 20 Waukesha	Waukesha	324121	VOC	0.00	0.00	0.29	0.29
268560380	ATWATER - GENERAL CORP	Waukesha	327999	VOC	0.28	0.28	71.74	71.74
268600310	Holcim Solutions and Products US LLC	Waukesha	326140	VOC	0.00	0.00	0.09	0.09
268605700	NATURE'S PATH FOODS USA LLC	Waukesha	311230	VOC	0.00	0.00	0.20	0.20
268620770	KG MARKETING & BAG CO	Waukesha	323111	VOC	0.09	0.09	24.55	24.55
268621540	CL&D GRAPHICS	Waukesha	323111	VOC	0.07	0.07	21.59	21.59
268623960	COSTCO WHOLESALE #1101	Waukesha	452311	VOC	0.02	0.02	6.36	6.36
268635180	McDermott Cue Mfg LLC	Waukesha	321999	VOC	0.01	0.01	2.87	2.87
268658500	COSTCO WHOLESALE #1212	Waukesha	452311	VOC	0.02	0.02	5.64	5.64
268659600	Costco Fuel #1209	Waukesha	447110	VOC	0.02	0.02	5.81	5.81
268660920	PREGIS SHARP SYSTEMS LLC	Waukesha	326199	VOC	0.04	0.04	3.94	3.94
268669500	ABX INNOVATIVE PACKAGING	Waukesha	323111	VOC	0.00	0.00	0.50	0.50
268689960	WIKOFF COLOR CORPORATION - LISBON FACILITY	Waukesha	325910	VOC	0.06	0.06	16.27	16.27
368011050	PREMOLD CORP	Waukesha	326199	VOC	0.01	0.01	1.70	1.70
399003880	NORTHEAST ASPHALT #67	Waukesha	324121	VOC	0.00	0.00	0.11	0.11
399018620	NORTHEAST ASPHALT INC #35	Waukesha	324121	VOC	0.00	0.00	0.02	0.02
399031710	NORTHEAST ASPHALT INC - PC #12	Waukesha	212312	VOC	0.01	0.01	1.32	1.32
399036660	NORTHEAST ASPHALT INC CONTROL 64	Waukesha	324121	VOC	0.00	0.00	0.20	0.20
399041500	PAYNE AND DOLAN-PC 1	Waukesha	212312	VOC	0.01	0.01	1.26	1.26
399041610	PAYNE AND DOLAN - PC09	Waukesha	212312	VOC	0.00	0.00	1.04	1.04
399044580	NORTHEAST ASPHALT INC #36	Waukesha	324121	VOC	0.00	0.00	0.05	0.05
399045570	NORTHEAST ASPHALT INC - PC #14	Waukesha	212319	VOC	0.01	0.01	1.29	1.29

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FID	Facility Name	County	NAICS	Pollutant	2023 (tposd)	2024 (tposd)	2023 (tons)	2024 (tons)
399052500	NORTHEAST ASPHALT INC #66	Waukesha	324121	VOC	0.00	0.00	0.09	0.09
399063170	NORTHEAST ASPHALT INC - CONTROL 37	Waukesha	324121	VOC	0.00	0.00	0.37	0.37
998215240	PAYNE & DOLAN - CEDAR LAKE #8	Waukesha	324121	VOC	0.00	0.00	0.03	0.03
998303460	PAYNE AND DOLAN - PC10	Waukesha	327991	VOC	0.01	0.01	1.34	1.34
998303680	NORTHEAST ASPHALT INC -- PC#3	Waukesha	212312	VOC	0.01	0.01	1.26	1.26
998348780	JOHNSON SAND AND GRAVEL	Waukesha	212321	VOC	0.00	0.00	0.35	0.35
998356810	PAYNE & DOLAN CONTROL #33	Waukesha	324121	VOC	0.00	0.00	0.09	0.09
998375510	NORTHEAST ASPHALT #65	Waukesha	324121	VOC	0.00	0.00	0.30	0.30
999010760	NORTHEAST ASPHALT INC #25	Waukesha	324121	VOC	0.00	0.00	0.25	0.25
999011310	NORTHEAST ASPHALT -#30	Waukesha	324121	VOC	0.00	0.00	0.10	0.10
999011640	PAYNE & DOLAN #23	Waukesha	324121	VOC	0.00	0.00	0.15	0.15
999199960	NORTHEAST ASPHALT #63 - LARSEN PLANT	Waukesha	324121	VOC	0.00	0.00	0.11	0.11
999460440	NORTHEAST ASPHALT #26	Waukesha	324121	VOC	0.00	0.00	0.11	0.11
999516760	NORTHEAST ASPHALT #27	Waukesha	324121	VOC	0.00	0.00	0.76	0.76
999792090	PAYNE & DOLAN #29	Waukesha	324121	VOC	0.00	0.00	0.38	0.38
999902420	PAYNE & DOLAN - #7	Waukesha	324121	VOC	0.00	0.00	0.18	0.18
999905280	PAYNE & DOLAN INC - 15	Waukesha	324121	VOC	0.00	0.00	0.15	0.15
999958850	JOHNSON SAND & GRAVEL PORTABLE PLANT #2	Waukesha	212321	VOC	0.00	0.00	0.14	0.14
TOTAL					NOx	4.97	4.97	1,425.55
					VOC	8.14	8.14	2,443.23

¹ Tons per ozone season day (tposd) emissions for 2023 were calculated by the WDNR AEI using the 3rd quarter operation information. 2024 emission estimates are based on assuming no growth from 2023 emissions.

² According to Wisconsin Administrative Code Chapter NR 438.03(a), facilities that emit less than 3 tons of VOC or less than 5 tons of NOx per year are not required to submit annual emission inventory reports. Sources that chose not to report NOx and/or VOC for a certain year are thus listed as “Not Reporting” for that year.

APPENDIX 5

Area Source Emissions for 2017, 2023 and 2024

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

This appendix provides a list of the Milwaukee, WI 2015 ozone NAAQS nonattainment area nonpoint source tons per ozone season day (tposd) emissions by county and source classification code (SCC) for 2017, 2023 and 2024. The sums of NOx and VOC emissions from these nonpoint sources were used for the nonpoint sector NOx and VOC tposd emission estimates found in sections 3.2 (Baseline Year Inventory) and 3.3 (Attainment Year Inventories) of the Wisconsin Department of Natural Resources (WDNR) Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area.

fips code	County	Pollutant	SCC	2017 (tposd)	2023 (tposd)	2024 (tposd)
55079	Milwaukee	NOx	2102001000	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2102002000	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2102004001	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2102004002	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2102005000	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2102006000	1.78E+00	2.31E-01	2.31E-01
55079	Milwaukee	NOx	2102007000	1.98E-02	1.18E-02	1.06E-02
55079	Milwaukee	NOx	2102008000	1.10E+00	9.99E-01	9.78E-01
55079	Milwaukee	NOx	2102011000	6.40E-04	2.22E-04	1.60E-04
55079	Milwaukee	NOx	2103001000	2.60E-04	3.46E-05	3.46E-05
55079	Milwaukee	NOx	2103002000	3.51E-02	4.66E-03	4.66E-03
55079	Milwaukee	NOx	2103004001	1.54E-02	2.06E-02	2.17E-02
55079	Milwaukee	NOx	2103004002	2.45E-02	3.28E-02	3.44E-02
55079	Milwaukee	NOx	2103005000	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2103006000	2.37E+00	2.53E+00	2.58E+00
55079	Milwaukee	NOx	2103007000	1.25E-01	3.08E-01	3.38E-01
55079	Milwaukee	NOx	2103008000	1.47E-01	2.75E-01	2.93E-01
55079	Milwaukee	NOx	2103011000	1.15E-03	3.93E-04	2.90E-04
55079	Milwaukee	NOx	2104001000	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2104002000	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2104004000	6.62E-02	7.65E-02	7.91E-02
55079	Milwaukee	NOx	2104006000	3.36E+00	3.83E+00	3.92E+00
55079	Milwaukee	NOx	2104007000	8.86E-02	1.03E-01	1.06E-01
55079	Milwaukee	NOx	2104008100	1.82E-02	3.21E-02	3.41E-02
55079	Milwaukee	NOx	2104008210	2.14E-03	3.76E-03	3.99E-03
55079	Milwaukee	NOx	2104008220	5.69E-03	1.00E-02	1.06E-02
55079	Milwaukee	NOx	2104008230	3.32E-03	8.19E-03	8.89E-03
55079	Milwaukee	NOx	2104008310	6.80E-03	1.20E-02	1.27E-02
55079	Milwaukee	NOx	2104008320	1.81E-02	3.19E-02	3.38E-02
55079	Milwaukee	NOx	2104008330	1.06E-02	2.61E-02	2.83E-02
55079	Milwaukee	NOx	2104008400	1.16E-01	1.84E-01	1.94E-01
55079	Milwaukee	NOx	2104008510	3.00E-07	5.95E-07	6.38E-07
55079	Milwaukee	NOx	2104008530	6.33E-07	8.93E-08	8.93E-08
55079	Milwaukee	NOx	2104008610	3.24E-07	6.44E-07	6.89E-07
55079	Milwaukee	NOx	2104008620	2.07E-07	4.11E-07	4.40E-07
55079	Milwaukee	NOx	2104008630	1.71E-08	3.40E-08	3.64E-08
55079	Milwaukee	NOx	2104008700	8.51E-07	9.58E-07	9.73E-07
55079	Milwaukee	NOx	2104009000	2.95E-02	2.85E-02	2.83E-02
55079	Milwaukee	NOx	2104011000	1.25E-03	8.32E-04	7.60E-04
55079	Milwaukee	NOx	2201000062	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2280002101	6.49E-03	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2280002102	1.08E-01	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2280002103	4.16E-02	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2280002104	2.68E-02	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2280002201	2.69E-01	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2280002202	1.49E-01	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2280002203	1.37E-01	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2280002204	1.87E-02	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2285002006	5.88E-01	4.42E-01	4.24E-01

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

fips code	County	Pollutant	SCC	2017 (tposd)	2023 (tposd)	2024 (tposd)
55079	Milwaukee	NOx	2285002007	4.06E-02	3.89E-02	3.89E-02
55079	Milwaukee	NOx	2285002008	3.40E-02	2.52E-02	2.39E-02
55079	Milwaukee	NOx	2610000100	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2610000400	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2610000500	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	NOx	2610030000	1.51E-03	1.48E-03	1.48E-03
55079	Milwaukee	NOx	2810025000	1.50E-02	1.43E-02	1.42E-02
55079	Milwaukee	NOx	2810060100	2.06E-03	2.87E-03	2.98E-03
55079	Milwaukee	NOx	2810060200	4.65E-07	4.53E-07	4.51E-07
55089	Ozaukee	NOx	2102001000	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2102002000	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2102004001	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2102004002	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2102005000	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2102006000	3.31E-01	4.47E-02	4.47E-02
55089	Ozaukee	NOx	2102007000	3.70E-03	2.32E-03	2.11E-03
55089	Ozaukee	NOx	2102008000	2.05E-01	1.95E-01	1.93E-01
55089	Ozaukee	NOx	2102011000	1.19E-04	4.42E-05	3.32E-05
55089	Ozaukee	NOx	2103001000	2.04E-05	2.67E-06	2.67E-06
55089	Ozaukee	NOx	2103002000	2.75E-03	3.60E-04	3.60E-04
55089	Ozaukee	NOx	2103004001	1.21E-03	1.58E-03	1.66E-03
55089	Ozaukee	NOx	2103004002	1.92E-03	2.52E-03	2.64E-03
55089	Ozaukee	NOx	2103005000	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2103006000	1.86E-01	1.94E-01	1.98E-01
55089	Ozaukee	NOx	2103007000	9.85E-03	2.37E-02	2.60E-02
55089	Ozaukee	NOx	2103008000	1.16E-02	2.12E-02	2.25E-02
55089	Ozaukee	NOx	2103011000	9.01E-05	2.98E-05	2.16E-05
55089	Ozaukee	NOx	2104001000	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2104002000	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2104004000	1.10E-02	1.45E-02	1.52E-02
55089	Ozaukee	NOx	2104006000	2.88E-01	3.50E-01	3.60E-01
55089	Ozaukee	NOx	2104007000	4.33E-02	3.03E-02	2.85E-02
55089	Ozaukee	NOx	2104008100	5.96E-03	1.08E-02	1.14E-02
55089	Ozaukee	NOx	2104008210	3.48E-04	6.29E-04	6.69E-04
55089	Ozaukee	NOx	2104008220	9.27E-04	1.67E-03	1.78E-03
55089	Ozaukee	NOx	2104008230	5.41E-04	1.37E-03	1.49E-03
55089	Ozaukee	NOx	2104008310	2.30E-03	4.15E-03	4.41E-03
55089	Ozaukee	NOx	2104008320	6.11E-03	1.10E-02	1.17E-02
55089	Ozaukee	NOx	2104008330	3.57E-03	9.02E-03	9.80E-03
55089	Ozaukee	NOx	2104008400	3.29E-03	5.40E-03	5.70E-03
55089	Ozaukee	NOx	2104008510	2.13E-03	4.27E-03	4.58E-03
55089	Ozaukee	NOx	2104008530	4.49E-03	6.39E-04	6.39E-04
55089	Ozaukee	NOx	2104008610	2.30E-03	4.62E-03	4.95E-03
55089	Ozaukee	NOx	2104008620	1.47E-03	2.95E-03	3.16E-03
55089	Ozaukee	NOx	2104008630	1.21E-04	2.44E-04	2.61E-04
55089	Ozaukee	NOx	2104008700	6.34E-03	7.33E-03	7.48E-03
55089	Ozaukee	NOx	2104009000	3.93E-03	3.93E-03	3.92E-03
55089	Ozaukee	NOx	2104011000	2.08E-04	1.61E-04	1.52E-04
55089	Ozaukee	NOx	2201000062	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2280002201	8.13E-02	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2280002202	1.58E-02	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2280002203	1.20E-01	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2280002204	1.49E-02	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2285002006	3.60E-02	1.61E-02	1.33E-02
55089	Ozaukee	NOx	2285002007	4.54E-02	4.35E-02	4.35E-02
55089	Ozaukee	NOx	2610000100	3.50E-04	3.45E-04	3.44E-04
55089	Ozaukee	NOx	2610000400	3.50E-04	2.57E-04	2.44E-04
55089	Ozaukee	NOx	2610000500	1.13E-02	1.08E-02	1.08E-02

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55089	Ozaukee	NOx	2610030000	1.78E-02	1.75E-02	1.75E-02
55089	Ozaukee	NOx	2801500000	3.81E-04	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2801500171	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2810025000	1.55E-03	1.56E-03	1.56E-03
55089	Ozaukee	NOx	2810060100	1.85E-04	2.80E-04	2.95E-04
55089	Ozaukee	NOx	2810060200	4.31E-08	4.35E-08	4.36E-08
55089	Ozaukee	NOx	2811015001	3.28E-04	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2811015002	7.86E-03	0.00E+00	0.00E+00
55089	Ozaukee	NOx	2811020002	0.00E+00	0.00E+00	0.00E+00
55101	Racine	NOx	2102001000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	NOx	2102002000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	NOx	2102004001	0.00E+00	0.00E+00	0.00E+00
55101	Racine	NOx	2102004002	0.00E+00	0.00E+00	0.00E+00
55101	Racine	NOx	2102005000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	NOx	2102006000	4.52E-01	6.00E-02	6.00E-02
55101	Racine	NOx	2102007000	5.04E-03	3.09E-03	2.80E-03
55101	Racine	NOx	2102008000	2.79E-01	2.62E-01	2.57E-01
55101	Racine	NOx	2102011000	1.63E-04	5.88E-05	4.36E-05
55101	Racine	NOx	2103001000	2.50E-05	3.37E-06	3.37E-06
55101	Racine	NOx	2103002000	3.37E-03	4.54E-04	4.54E-04
55101	Racine	NOx	2103004001	1.48E-03	2.02E-03	2.12E-03
55101	Racine	NOx	2103004002	2.35E-03	3.20E-03	3.37E-03
55101	Racine	NOx	2103005000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	NOx	2103006000	2.28E-01	2.48E-01	2.54E-01
55101	Racine	NOx	2103007000	1.21E-02	3.00E-02	3.30E-02
55101	Racine	NOx	2103008000	1.42E-02	2.69E-02	2.87E-02
55101	Racine	NOx	2103011000	1.10E-04	3.89E-05	2.92E-05
55101	Racine	NOx	2104001000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	NOx	2104002000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	NOx	2104004000	1.40E-02	1.90E-02	2.00E-02
55101	Racine	NOx	2104006000	5.25E-01	5.81E-01	5.91E-01
55101	Racine	NOx	2104007000	7.88E-02	2.75E-02	2.02E-02
55101	Racine	NOx	2104008100	9.57E-03	1.73E-02	1.84E-02
55101	Racine	NOx	2104008210	5.46E-04	9.85E-04	1.05E-03
55101	Racine	NOx	2104008220	1.45E-03	2.62E-03	2.79E-03
55101	Racine	NOx	2104008230	8.47E-04	2.14E-03	2.33E-03
55101	Racine	NOx	2104008310	3.20E-03	5.78E-03	6.15E-03
55101	Racine	NOx	2104008320	8.52E-03	1.54E-02	1.64E-02
55101	Racine	NOx	2104008330	4.97E-03	1.26E-02	1.37E-02
55101	Racine	NOx	2104008400	5.02E-03	8.14E-03	8.58E-03
55101	Racine	NOx	2104008510	2.83E-03	5.51E-03	5.89E-03
55101	Racine	NOx	2104008530	5.97E-03	8.28E-04	8.27E-04
55101	Racine	NOx	2104008610	3.06E-03	5.95E-03	6.36E-03
55101	Racine	NOx	2104008620	1.95E-03	3.80E-03	4.07E-03
55101	Racine	NOx	2104008630	1.61E-04	3.14E-04	3.36E-04
55101	Racine	NOx	2104008700	1.05E-02	1.21E-02	1.24E-02
55101	Racine	NOx	2104009000	3.31E-04	3.28E-04	3.26E-04
55101	Racine	NOx	2104011000	2.66E-04	2.11E-04	2.01E-04
55101	Racine	NOx	2201000062	0.00E+00	0.00E+00	0.00E+00
55101	Racine	NOx	2280002201	4.13E-02	0.00E+00	0.00E+00
55101	Racine	NOx	2280002202	7.62E-03	0.00E+00	0.00E+00
55101	Racine	NOx	2280002203	9.77E-02	0.00E+00	0.00E+00
55101	Racine	NOx	2280002204	8.39E-03	0.00E+00	0.00E+00
55101	Racine	NOx	2285002006	5.18E-01	4.54E-01	4.48E-01
55101	Racine	NOx	2285002008	1.42E-02	1.37E-02	1.37E-02
55101	Racine	NOx	2610000100	3.03E-04	2.97E-04	2.96E-04
55101	Racine	NOx	2610000400	3.03E-04	2.22E-04	2.10E-04
55101	Racine	NOx	2610000500	1.74E-02	1.36E-02	1.30E-02

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55101	Racine	NOx	2610030000	1.54E-02	1.51E-02	1.50E-02
55101	Racine	NOx	2801500000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	NOx	2801500262	0.00E+00	0.00E+00	0.00E+00
55101	Racine	NOx	2810001002	0.00E+00	0.00E+00	0.00E+00
55101	Racine	NOx	2810025000	2.61E-03	2.57E-03	2.57E-03
55101	Racine	NOx	2810060100	3.57E-04	5.21E-04	5.46E-04
55101	Racine	NOx	2810060200	7.42E-08	7.26E-08	7.23E-08
55101	Racine	NOx	2811015001	0.00E+00	0.00E+00	0.00E+00
55101	Racine	NOx	2811015002	9.70E-05	0.00E+00	0.00E+00
55131	Washington	NOx	2102001000	0.00E+00	0.00E+00	0.00E+00
55131	Washington	NOx	2102002000	0.00E+00	0.00E+00	0.00E+00
55131	Washington	NOx	2102004001	0.00E+00	0.00E+00	0.00E+00
55131	Washington	NOx	2102004002	0.00E+00	0.00E+00	0.00E+00
55131	Washington	NOx	2102005000	0.00E+00	0.00E+00	0.00E+00
55131	Washington	NOx	2102006000	3.03E-01	3.98E-02	3.98E-02
55131	Washington	NOx	2102007000	3.39E-03	2.03E-03	1.83E-03
55131	Washington	NOx	2102008000	1.87E-01	1.72E-01	1.69E-01
55131	Washington	NOx	2102011000	1.09E-04	3.84E-05	2.80E-05
55131	Washington	NOx	2103001000	1.31E-05	1.78E-06	1.78E-06
55131	Washington	NOx	2103002000	1.76E-03	2.39E-04	2.39E-04
55131	Washington	NOx	2103004001	7.75E-04	1.06E-03	1.12E-03
55131	Washington	NOx	2103004002	1.23E-03	1.69E-03	1.78E-03
55131	Washington	NOx	2103005000	0.00E+00	0.00E+00	0.00E+00
55131	Washington	NOx	2103006000	1.19E-01	1.30E-01	1.34E-01
55131	Washington	NOx	2103007000	6.32E-03	1.58E-02	1.74E-02
55131	Washington	NOx	2103008000	7.42E-03	1.42E-02	1.51E-02
55131	Washington	NOx	2103011000	5.78E-05	2.05E-05	1.54E-05
55131	Washington	NOx	2104001000	0.00E+00	0.00E+00	0.00E+00
55131	Washington	NOx	2104002000	0.00E+00	0.00E+00	0.00E+00
55131	Washington	NOx	2104004000	1.14E-02	1.47E-02	1.54E-02
55131	Washington	NOx	2104006000	2.43E-01	2.73E-01	2.78E-01
55131	Washington	NOx	2104007000	4.15E-02	5.22E-02	5.40E-02
55131	Washington	NOx	2104008100	5.85E-03	1.05E-02	1.12E-02
55131	Washington	NOx	2104008210	3.66E-04	6.59E-04	7.00E-04
55131	Washington	NOx	2104008220	9.73E-04	1.75E-03	1.86E-03
55131	Washington	NOx	2104008230	5.68E-04	1.43E-03	1.56E-03
55131	Washington	NOx	2104008310	2.33E-03	4.19E-03	4.46E-03
55131	Washington	NOx	2104008320	6.20E-03	1.12E-02	1.19E-02
55131	Washington	NOx	2104008330	3.61E-03	9.12E-03	9.91E-03
55131	Washington	NOx	2104008400	3.30E-03	5.33E-03	5.62E-03
55131	Washington	NOx	2104008510	2.19E-03	4.37E-03	4.69E-03
55131	Washington	NOx	2104008530	4.63E-03	6.56E-04	6.56E-04
55131	Washington	NOx	2104008610	2.37E-03	4.73E-03	5.07E-03
55131	Washington	NOx	2104008620	1.51E-03	3.02E-03	3.24E-03
55131	Washington	NOx	2104008630	1.25E-04	2.50E-04	2.67E-04
55131	Washington	NOx	2104008700	5.78E-03	6.67E-03	6.80E-03
55131	Washington	NOx	2104009000	3.41E-03	3.35E-03	3.34E-03
55131	Washington	NOx	2104011000	2.16E-04	1.63E-04	1.53E-04
55131	Washington	NOx	2201000062	0.00E+00	0.00E+00	0.00E+00
55131	Washington	NOx	2285002006	4.04E-01	3.75E-01	3.73E-01
55131	Washington	NOx	2285002007	3.62E-02	3.47E-02	3.47E-02
55131	Washington	NOx	2610000100	3.74E-04	3.68E-04	3.67E-04
55131	Washington	NOx	2610000400	3.74E-04	2.75E-04	2.60E-04
55131	Washington	NOx	2610000500	2.25E-02	2.61E-02	2.66E-02
55131	Washington	NOx	2610030000	1.90E-02	1.87E-02	1.87E-02
55131	Washington	NOx	2801500000	2.15E-04	0.00E+00	0.00E+00
55131	Washington	NOx	2810001001	2.75E-06	0.00E+00	0.00E+00
55131	Washington	NOx	2810001002	3.96E-05	0.00E+00	0.00E+00

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55131	Washington	NOx	2810025000	1.36E-03	1.33E-03	1.33E-03
55131	Washington	NOx	2810060100	1.68E-04	2.31E-04	2.41E-04
55131	Washington	NOx	2810060200	3.73E-08	3.72E-08	3.72E-08
55131	Washington	NOx	2811015001	1.85E-04	0.00E+00	0.00E+00
55131	Washington	NOx	2811015002	6.59E-03	0.00E+00	0.00E+00
55131	Washington	NOx	2811020002	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	NOx	2102001000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	NOx	2102002000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	NOx	2102004001	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	NOx	2102004002	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	NOx	2102005000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	NOx	2102006000	1.79E+00	2.18E-01	2.18E-01
55133	Waukesha	NOx	2102007000	2.00E-02	1.07E-02	9.34E-03
55133	Waukesha	NOx	2102008000	1.10E+00	9.21E-01	8.88E-01
55133	Waukesha	NOx	2102011000	6.43E-04	1.97E-04	1.31E-04
55133	Waukesha	NOx	2103001000	1.18E-04	1.65E-05	1.65E-05
55133	Waukesha	NOx	2103002000	1.59E-02	2.22E-03	2.22E-03
55133	Waukesha	NOx	2103004001	7.00E-03	9.92E-03	1.05E-02
55133	Waukesha	NOx	2103004002	1.11E-02	1.58E-02	1.67E-02
55133	Waukesha	NOx	2103005000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	NOx	2103006000	1.08E+00	1.22E+00	1.26E+00
55133	Waukesha	NOx	2103007000	5.71E-02	1.47E-01	1.62E-01
55133	Waukesha	NOx	2103008000	6.70E-02	1.32E-01	1.41E-01
55133	Waukesha	NOx	2103011000	5.22E-04	1.95E-04	1.50E-04
55133	Waukesha	NOx	2104001000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	NOx	2104002000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	NOx	2104004000	4.53E-02	4.48E-02	4.53E-02
55133	Waukesha	NOx	2104006000	1.36E+00	1.55E+00	1.58E+00
55133	Waukesha	NOx	2104007000	1.51E-04	8.55E-02	9.83E-02
55133	Waukesha	NOx	2104008100	2.57E-02	4.92E-02	5.26E-02
55133	Waukesha	NOx	2104008210	1.61E-03	3.08E-03	3.29E-03
55133	Waukesha	NOx	2104008220	4.28E-03	8.19E-03	8.74E-03
55133	Waukesha	NOx	2104008230	2.50E-03	6.67E-03	7.27E-03
55133	Waukesha	NOx	2104008310	7.57E-03	1.45E-02	1.55E-02
55133	Waukesha	NOx	2104008320	2.01E-02	3.85E-02	4.11E-02
55133	Waukesha	NOx	2104008330	1.17E-02	3.14E-02	3.42E-02
55133	Waukesha	NOx	2104008400	1.53E-02	2.46E-02	2.60E-02
55133	Waukesha	NOx	2104008510	6.85E-03	1.44E-02	1.55E-02
55133	Waukesha	NOx	2104008530	1.45E-02	2.14E-03	2.14E-03
55133	Waukesha	NOx	2104008610	7.41E-03	1.56E-02	1.67E-02
55133	Waukesha	NOx	2104008620	4.73E-03	9.95E-03	1.07E-02
55133	Waukesha	NOx	2104008630	3.91E-04	8.22E-04	8.84E-04
55133	Waukesha	NOx	2104008700	2.60E-02	3.20E-02	3.28E-02
55133	Waukesha	NOx	2104009000	1.72E-02	1.68E-02	1.68E-02
55133	Waukesha	NOx	2104011000	8.57E-04	4.73E-04	4.11E-04
55133	Waukesha	NOx	2201000062	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	NOx	2285002006	1.21E+00	1.07E+00	1.06E+00
55133	Waukesha	NOx	2285002007	6.07E-02	5.81E-02	5.81E-02
55133	Waukesha	NOx	2285002008	4.33E-02	1.50E-02	1.08E-02
55133	Waukesha	NOx	2610000100	6.11E-04	6.01E-04	6.00E-04
55133	Waukesha	NOx	2610000400	6.11E-04	4.49E-04	4.25E-04
55133	Waukesha	NOx	2610000500	8.48E-02	7.85E-02	7.76E-02
55133	Waukesha	NOx	2610030000	3.10E-02	3.05E-02	3.05E-02
55133	Waukesha	NOx	2801500000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	NOx	2801500171	4.89E-04	0.00E+00	0.00E+00
55133	Waukesha	NOx	2810001002	1.90E-05	0.00E+00	0.00E+00
55133	Waukesha	NOx	2810025000	6.62E-03	6.48E-03	6.45E-03
55133	Waukesha	NOx	2810060100	8.27E-04	1.17E-03	1.21E-03

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55133	Waukesha	NOx	2810060200	1.91E-07	1.91E-07	1.91E-07
55133	Waukesha	NOx	2811015001	1.29E-04	0.00E+00	0.00E+00
55133	Waukesha	NOx	2811015002	1.66E-02	0.00E+00	0.00E+00
55133	Waukesha	NOx	2811020002	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2102001000	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2102002000	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2102004001	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2102004002	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2102005000	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2102006000	9.76E-02	1.27E-02	1.27E-02
55079	Milwaukee	VOC	2102007000	7.25E-04	4.30E-04	3.86E-04
55079	Milwaukee	VOC	2102008000	8.48E-02	7.72E-02	7.56E-02
55079	Milwaukee	VOC	2102011000	6.30E-06	2.18E-06	1.58E-06
55079	Milwaukee	VOC	2103001000	8.68E-06	1.15E-06	1.15E-06
55079	Milwaukee	VOC	2103002000	1.59E-04	2.12E-05	2.12E-05
55079	Milwaukee	VOC	2103004001	2.62E-04	3.50E-04	3.68E-04
55079	Milwaukee	VOC	2103004002	1.70E-03	2.28E-03	2.39E-03
55079	Milwaukee	VOC	2103005000	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2103006000	1.30E-01	1.39E-01	1.42E-01
55079	Milwaukee	VOC	2103007000	4.59E-03	1.12E-02	1.24E-02
55079	Milwaukee	VOC	2103008000	1.14E-02	2.13E-02	2.27E-02
55079	Milwaukee	VOC	2103011000	1.95E-05	6.68E-06	4.92E-06
55079	Milwaukee	VOC	2104001000	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2104002000	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2104004000	2.62E-03	3.03E-03	3.13E-03
55079	Milwaukee	VOC	2104006000	1.97E-01	2.24E-01	2.29E-01
55079	Milwaukee	VOC	2104007000	3.45E-03	4.01E-03	4.11E-03
55079	Milwaukee	VOC	2104008100	1.33E-01	2.33E-01	2.48E-01
55079	Milwaukee	VOC	2104008210	4.05E-02	7.12E-02	7.56E-02
55079	Milwaukee	VOC	2104008220	2.99E-02	7.44E-02	8.08E-02
55079	Milwaukee	VOC	2104008230	2.49E-02	6.14E-02	6.66E-02
55079	Milwaukee	VOC	2104008310	1.29E-01	2.27E-01	2.41E-01
55079	Milwaukee	VOC	2104008320	9.53E-02	2.37E-01	2.57E-01
55079	Milwaukee	VOC	2104008330	7.92E-02	1.95E-01	2.12E-01
55079	Milwaukee	VOC	2104008400	6.70E-02	1.06E-01	1.12E-01
55079	Milwaukee	VOC	2104008510	1.95E-06	3.87E-06	4.14E-06
55079	Milwaukee	VOC	2104008530	3.66E-07	5.16E-08	5.16E-08
55079	Milwaukee	VOC	2104008610	1.09E-05	2.17E-05	2.32E-05
55079	Milwaukee	VOC	2104008620	6.98E-06	1.39E-05	1.48E-05
55079	Milwaukee	VOC	2104008630	9.89E-09	1.96E-08	2.10E-08
55079	Milwaukee	VOC	2104008700	6.19E-06	6.96E-06	7.08E-06
55079	Milwaukee	VOC	2104009000	1.52E-01	1.47E-01	1.46E-01
55079	Milwaukee	VOC	2104011000	4.87E-05	3.24E-05	2.96E-05
55079	Milwaukee	VOC	2201000062	1.01E+00	7.36E-01	7.39E-01
55079	Milwaukee	VOC	2280002101	7.15E-04	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2280002102	3.12E-03	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2280002103	7.46E-03	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2280002104	1.12E-03	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2280002201	8.47E-03	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2280002202	4.36E-03	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2280002203	7.94E-03	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2280002204	7.71E-04	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2285002006	2.71E-02	1.67E-02	1.53E-02
55079	Milwaukee	VOC	2285002007	1.88E-03	1.87E-03	1.88E-03
55079	Milwaukee	VOC	2285002008	1.90E-03	1.33E-03	1.25E-03
55079	Milwaukee	VOC	2302002100	2.93E-02	4.11E-02	4.28E-02
55079	Milwaukee	VOC	2302002200	9.07E-02	1.40E-01	1.48E-01
55079	Milwaukee	VOC	2302003000	1.99E-02	2.51E-02	2.59E-02

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55079	Milwaukee	VOC	2302003100	1.20E-02	1.85E-02	1.95E-02
55079	Milwaukee	VOC	2302003200	6.45E-04	8.91E-04	9.28E-04
55079	Milwaukee	VOC	2401001000	3.08E+00	1.80E+00	1.63E+00
55079	Milwaukee	VOC	2401005000	5.12E-01	1.32E-01	7.67E-02
55079	Milwaukee	VOC	2401008000	5.27E-01	2.01E-01	1.53E-01
55079	Milwaukee	VOC	2401015000	1.99E-02	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2401020000	2.86E-01	2.46E-02	2.46E-02
55079	Milwaukee	VOC	2401025000	4.93E-02	3.03E-02	2.70E-02
55079	Milwaukee	VOC	2401030000	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2401055000	1.57E-01	1.85E-02	1.85E-02
55079	Milwaukee	VOC	2401060000	3.23E-02	3.70E-03	3.70E-03
55079	Milwaukee	VOC	2401065000	2.20E-03	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2401070000	1.71E-01	7.95E-03	7.95E-03
55079	Milwaukee	VOC	2401075000	1.01E-03	1.68E-03	1.76E-03
55079	Milwaukee	VOC	2401080000	3.12E-03	1.12E-03	7.66E-04
55079	Milwaukee	VOC	2401085000	7.47E-02	9.74E-03	9.74E-03
55079	Milwaukee	VOC	2401090000	1.75E-01	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2401100000	4.75E-01	6.27E-01	6.51E-01
55079	Milwaukee	VOC	2401200000	7.67E-03	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2415000000	1.97E+00	1.39E-01	1.39E-01
55079	Milwaukee	VOC	2420000000	8.10E-03	3.47E-03	2.77E-03
55079	Milwaukee	VOC	2425000000	2.84E+00	2.50E+00	2.45E+00
55079	Milwaukee	VOC	2460030999	5.18E-02	5.18E-02	5.18E-02
55079	Milwaukee	VOC	2460100000	3.81E+00	3.57E+00	3.53E+00
55079	Milwaukee	VOC	2460200000	3.34E+00	2.23E+00	2.05E+00
55079	Milwaukee	VOC	2460400000	4.36E-01	3.15E-01	2.95E-01
55079	Milwaukee	VOC	2460500000	3.99E+00	3.39E+00	3.29E+00
55079	Milwaukee	VOC	2460600000	1.72E+00	3.01E+00	3.22E+00
55079	Milwaukee	VOC	2460800000	6.98E-02	1.37E-01	1.49E-01
55079	Milwaukee	VOC	2460900000	5.18E-02	5.18E-02	5.18E-02
55079	Milwaukee	VOC	2461021000	2.26E+00	2.26E+00	2.26E+00
55079	Milwaukee	VOC	2461022000	2.75E+00	2.75E+00	2.75E+00
55079	Milwaukee	VOC	2461025100	8.09E-01	8.09E-01	8.09E-01
55079	Milwaukee	VOC	2461025200	7.28E-02	7.28E-02	7.28E-02
55079	Milwaukee	VOC	2461850000	3.89E-03	4.29E-03	4.38E-03
55079	Milwaukee	VOC	2501011011	7.03E-02	3.58E-02	3.07E-02
55079	Milwaukee	VOC	2501011012	7.89E-02	4.01E-02	3.44E-02
55079	Milwaukee	VOC	2501011013	1.01E-01	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2501011014	1.47E-02	7.47E-03	6.41E-03
55079	Milwaukee	VOC	2501011015	2.78E-03	2.11E-03	2.17E-03
55079	Milwaukee	VOC	2501012011	3.07E-03	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2501012012	2.52E-03	2.28E-03	2.24E-03
55079	Milwaukee	VOC	2501012013	1.37E-01	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2501012014	4.23E-02	3.82E-02	3.76E-02
55079	Milwaukee	VOC	2501012015	5.34E-03	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2501050120	5.18E-01	1.42E-01	8.73E-02
55079	Milwaukee	VOC	2501055120	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2501060051	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2501060052	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2501060053	8.15E-02	2.65E-01	2.93E-01
55079	Milwaukee	VOC	2501060201	9.46E-02	3.30E-01	3.65E-01
55079	Milwaukee	VOC	2501080050	5.69E-02	5.41E-02	5.42E-02
55079	Milwaukee	VOC	2501080100	8.19E-05	7.40E-05	7.35E-05
55079	Milwaukee	VOC	2505030120	6.19E-03	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2505040120	3.08E-01	2.70E-01	2.66E-01
55079	Milwaukee	VOC	2610000100	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2610000400	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2610000500	0.00E+00	0.00E+00	0.00E+00

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fips code	County	Pollutant	SCC	2017 (tposd)	2023 (tposd)	2024 (tposd)
55079	Milwaukee	VOC	2610030000	1.57E-03	1.55E-03	1.54E-03
55079	Milwaukee	VOC	2630020000	0.00E+00	0.00E+00	0.00E+00
55079	Milwaukee	VOC	2680003000	3.77E-01	5.31E-01	5.54E-01
55079	Milwaukee	VOC	2802004001	6.22E-02	6.22E-02	6.22E-02
55079	Milwaukee	VOC	2802004002	4.66E-03	4.66E-03	4.66E-03
55079	Milwaukee	VOC	2802004003	4.54E-02	4.54E-02	4.54E-02
55079	Milwaukee	VOC	2805002000	3.72E-04	1.61E-03	1.79E-03
55079	Milwaukee	VOC	2805007100	2.02E-05	1.94E-05	1.77E-05
55079	Milwaukee	VOC	2805009100	6.14E-04	2.95E-04	2.49E-04
55079	Milwaukee	VOC	2805010100	6.76E-03	3.29E-03	2.77E-03
55079	Milwaukee	VOC	2805018000	1.84E-04	1.35E-02	1.55E-02
55079	Milwaukee	VOC	2805025000	0.00E+00	2.00E-05	2.30E-05
55079	Milwaukee	VOC	2805035000	1.98E-05	2.48E-02	2.82E-02
55079	Milwaukee	VOC	2805040000	1.00E-05	3.22E-05	3.54E-05
55079	Milwaukee	VOC	2805045000	4.43E-04	4.00E-03	4.53E-03
55079	Milwaukee	VOC	2810025000	3.97E-02	3.88E-02	3.87E-02
55079	Milwaukee	VOC	2810060100	1.73E-04	2.41E-04	2.51E-04
55079	Milwaukee	VOC	2810060200	3.90E-08	3.80E-08	3.79E-08
55089	Ozaukee	VOC	2102001000	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2102002000	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2102004001	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2102004002	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2102005000	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2102006000	1.82E-02	2.46E-03	2.46E-03
55089	Ozaukee	VOC	2102007000	1.35E-04	8.46E-05	7.71E-05
55089	Ozaukee	VOC	2102008000	1.58E-02	1.51E-02	1.49E-02
55089	Ozaukee	VOC	2102011000	1.17E-06	4.35E-07	3.27E-07
55089	Ozaukee	VOC	2103001000	6.82E-07	8.91E-08	8.91E-08
55089	Ozaukee	VOC	2103002000	1.25E-05	1.64E-06	1.64E-06
55089	Ozaukee	VOC	2103004001	2.05E-05	2.69E-05	2.82E-05
55089	Ozaukee	VOC	2103004002	1.34E-04	1.75E-04	1.84E-04
55089	Ozaukee	VOC	2103005000	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2103006000	1.02E-02	1.07E-02	1.09E-02
55089	Ozaukee	VOC	2103007000	3.60E-04	8.66E-04	9.50E-04
55089	Ozaukee	VOC	2103008000	8.94E-04	1.64E-03	1.74E-03
55089	Ozaukee	VOC	2103011000	1.53E-06	5.07E-07	3.67E-07
55089	Ozaukee	VOC	2104001000	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2104002000	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2104004000	4.35E-04	5.76E-04	6.03E-04
55089	Ozaukee	VOC	2104006000	1.69E-02	2.05E-02	2.11E-02
55089	Ozaukee	VOC	2104007000	1.69E-03	1.18E-03	1.11E-03
55089	Ozaukee	VOC	2104008100	4.33E-02	7.83E-02	8.32E-02
55089	Ozaukee	VOC	2104008210	6.60E-03	1.19E-02	1.27E-02
55089	Ozaukee	VOC	2104008220	4.88E-03	1.24E-02	1.35E-02
55089	Ozaukee	VOC	2104008230	4.06E-03	1.03E-02	1.11E-02
55089	Ozaukee	VOC	2104008310	4.35E-02	7.85E-02	8.35E-02
55089	Ozaukee	VOC	2104008320	3.22E-02	8.20E-02	8.92E-02
55089	Ozaukee	VOC	2104008330	2.68E-02	6.76E-02	7.35E-02
55089	Ozaukee	VOC	2104008400	1.90E-03	3.12E-03	3.30E-03
55089	Ozaukee	VOC	2104008510	1.38E-02	2.77E-02	2.97E-02
55089	Ozaukee	VOC	2104008530	2.60E-03	3.70E-04	3.70E-04
55089	Ozaukee	VOC	2104008610	7.74E-02	1.56E-01	1.67E-01
55089	Ozaukee	VOC	2104008620	4.95E-02	9.94E-02	1.07E-01
55089	Ozaukee	VOC	2104008630	7.01E-05	1.41E-04	1.51E-04
55089	Ozaukee	VOC	2104008700	4.61E-02	5.33E-02	5.43E-02
55089	Ozaukee	VOC	2104009000	2.02E-02	2.02E-02	2.02E-02
55089	Ozaukee	VOC	2104011000	8.09E-06	6.27E-06	5.93E-06
55089	Ozaukee	VOC	2201000062	1.41E-01	1.07E-01	1.08E-01

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fips code	County	Pollutant	SCC	2017 (tposd)	2023 (tposd)	2024 (tposd)
55089	Ozaukee	VOC	2280002201	2.49E-03	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2280002202	4.68E-04	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2280002203	5.21E-03	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2280002204	6.68E-04	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2285002006	1.66E-03	5.84E-04	4.30E-04
55089	Ozaukee	VOC	2285002007	2.10E-03	2.09E-03	2.10E-03
55089	Ozaukee	VOC	2302002100	2.83E-03	2.90E-03	2.91E-03
55089	Ozaukee	VOC	2302002200	8.06E-03	9.46E-03	9.66E-03
55089	Ozaukee	VOC	2302003000	1.85E-03	1.85E-03	1.85E-03
55089	Ozaukee	VOC	2302003100	1.09E-03	1.20E-03	1.21E-03
55089	Ozaukee	VOC	2302003200	5.99E-05	7.12E-05	7.29E-05
55089	Ozaukee	VOC	2401001000	2.86E-01	1.74E-01	1.59E-01
55089	Ozaukee	VOC	2401005000	7.43E-02	1.18E-02	2.61E-03
55089	Ozaukee	VOC	2401008000	4.90E-02	3.40E-02	3.19E-02
55089	Ozaukee	VOC	2401015000	4.90E-04	1.49E-05	1.49E-05
55089	Ozaukee	VOC	2401020000	1.32E-02	2.66E-03	2.66E-03
55089	Ozaukee	VOC	2401055000	2.53E-02	1.32E-02	1.12E-02
55089	Ozaukee	VOC	2401060000	1.85E-03	2.12E-04	2.12E-04
55089	Ozaukee	VOC	2401065000	2.36E-04	4.51E-04	4.77E-04
55089	Ozaukee	VOC	2401070000	4.49E-02	6.01E-04	6.01E-04
55089	Ozaukee	VOC	2401080000	1.03E-03	1.74E-02	2.07E-02
55089	Ozaukee	VOC	2401090000	3.73E-02	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2401100000	4.42E-02	6.01E-02	6.26E-02
55089	Ozaukee	VOC	2401200000	7.12E-04	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2415000000	3.51E-01	3.52E-04	3.52E-04
55089	Ozaukee	VOC	2420000000	6.43E-04	8.78E-05	5.27E-06
55089	Ozaukee	VOC	2425000000	8.07E-02	7.11E-02	6.95E-02
55089	Ozaukee	VOC	2460030999	4.93E-03	4.93E-03	4.93E-03
55089	Ozaukee	VOC	2460100000	3.63E-01	3.40E-01	3.36E-01
55089	Ozaukee	VOC	2460200000	3.18E-01	2.12E-01	1.95E-01
55089	Ozaukee	VOC	2460400000	4.15E-02	3.00E-02	2.81E-02
55089	Ozaukee	VOC	2460500000	3.80E-01	3.23E-01	3.14E-01
55089	Ozaukee	VOC	2460600000	1.65E-01	2.89E-01	3.09E-01
55089	Ozaukee	VOC	2460800000	6.65E-03	1.31E-02	1.42E-02
55089	Ozaukee	VOC	2460900000	4.93E-03	4.93E-03	4.93E-03
55089	Ozaukee	VOC	2461021000	3.24E-01	3.24E-01	3.24E-01
55089	Ozaukee	VOC	2461022000	3.95E-01	3.95E-01	3.95E-01
55089	Ozaukee	VOC	2461025100	1.16E-01	1.16E-01	1.16E-01
55089	Ozaukee	VOC	2461025200	1.05E-02	1.05E-02	1.05E-02
55089	Ozaukee	VOC	2461850000	3.76E-02	2.89E-02	2.79E-02
55089	Ozaukee	VOC	2501011011	9.22E-03	4.69E-03	4.02E-03
55089	Ozaukee	VOC	2501011012	1.03E-02	5.26E-03	4.51E-03
55089	Ozaukee	VOC	2501011013	1.32E-02	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2501011014	1.92E-03	9.79E-04	8.40E-04
55089	Ozaukee	VOC	2501011015	3.64E-04	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2501012011	4.03E-04	3.64E-04	3.58E-04
55089	Ozaukee	VOC	2501012012	3.30E-04	2.98E-04	2.94E-04
55089	Ozaukee	VOC	2501012013	1.80E-02	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2501012014	5.55E-03	5.01E-03	4.93E-03
55089	Ozaukee	VOC	2501012015	7.00E-04	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2501060051	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2501060052	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2501060053	1.27E-02	3.60E-02	3.96E-02
55089	Ozaukee	VOC	2501060201	1.42E-02	4.62E-02	5.09E-02
55089	Ozaukee	VOC	2501080050	3.09E-03	2.87E-03	2.86E-03
55089	Ozaukee	VOC	2501080100	4.45E-06	3.92E-06	3.88E-06
55089	Ozaukee	VOC	2505030120	9.28E-04	3.03E-03	3.34E-03
55089	Ozaukee	VOC	2610000100	1.58E-03	1.56E-03	1.55E-03

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

fips code	County	Pollutant	SCC	2017 (tposd)	2023 (tposd)	2024 (tposd)
55089	Ozaukee	VOC	2610000400	1.58E-03	9.01E-04	8.01E-04
55089	Ozaukee	VOC	2610000500	3.20E-02	3.06E-02	3.04E-02
55089	Ozaukee	VOC	2610030000	1.85E-02	1.83E-02	1.82E-02
55089	Ozaukee	VOC	2630020000	3.31E-03	3.39E-03	3.40E-03
55089	Ozaukee	VOC	2680003000	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2801500000	1.64E-03	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2801500171	0.00E+00	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2802004001	3.30E-01	3.30E-01	3.30E-01
55089	Ozaukee	VOC	2802004002	2.47E-02	2.47E-02	2.47E-02
55089	Ozaukee	VOC	2802004003	2.40E-01	2.40E-01	2.40E-01
55089	Ozaukee	VOC	2805002000	2.76E-03	2.98E-02	3.49E-02
55089	Ozaukee	VOC	2805007100	2.23E-02	7.67E-05	7.67E-05
55089	Ozaukee	VOC	2805009100	4.27E-06	4.76E-04	5.47E-04
55089	Ozaukee	VOC	2805010100	6.76E-03	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2805018000	5.28E-02	2.19E-02	1.58E-02
55089	Ozaukee	VOC	2805025000	2.20E-04	4.73E-05	4.35E-06
55089	Ozaukee	VOC	2805035000	2.09E-03	3.29E-04	7.67E-05
55089	Ozaukee	VOC	2805040000	1.15E-04	1.95E-04	2.08E-04
55089	Ozaukee	VOC	2805045000	6.65E-04	3.28E-03	3.62E-03
55089	Ozaukee	VOC	2810025000	4.10E-03	4.23E-03	4.25E-03
55089	Ozaukee	VOC	2810060100	1.55E-05	2.35E-05	2.48E-05
55089	Ozaukee	VOC	2810060200	3.62E-09	3.65E-09	3.66E-09
55089	Ozaukee	VOC	2811015001	1.77E-02	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2811015002	8.22E-02	0.00E+00	0.00E+00
55089	Ozaukee	VOC	2811020002	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2102001000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2102002000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2102004001	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2102004002	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2102005000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2102006000	2.48E-02	3.30E-03	3.30E-03
55101	Racine	VOC	2102007000	1.84E-04	1.13E-04	1.02E-04
55101	Racine	VOC	2102008000	2.16E-02	2.02E-02	1.99E-02
55101	Racine	VOC	2102011000	1.60E-06	5.79E-07	4.29E-07
55101	Racine	VOC	2103001000	8.34E-07	1.12E-07	1.12E-07
55101	Racine	VOC	2103002000	1.53E-05	2.06E-06	2.06E-06
55101	Racine	VOC	2103004001	2.51E-05	3.43E-05	3.61E-05
55101	Racine	VOC	2103004002	1.63E-04	2.23E-04	2.34E-04
55101	Racine	VOC	2103005000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2103006000	1.25E-02	1.36E-02	1.39E-02
55101	Racine	VOC	2103007000	4.40E-04	1.10E-03	1.21E-03
55101	Racine	VOC	2103008000	1.09E-03	2.08E-03	2.22E-03
55101	Racine	VOC	2103011000	1.88E-06	6.61E-07	4.97E-07
55101	Racine	VOC	2104001000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2104002000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2104004000	5.56E-04	7.53E-04	7.91E-04
55101	Racine	VOC	2104006000	3.07E-02	3.40E-02	3.46E-02
55101	Racine	VOC	2104007000	3.07E-03	1.07E-03	7.85E-04
55101	Racine	VOC	2104008100	6.96E-02	1.26E-01	1.34E-01
55101	Racine	VOC	2104008210	1.03E-02	1.87E-02	1.98E-02
55101	Racine	VOC	2104008220	7.64E-03	1.95E-02	2.12E-02
55101	Racine	VOC	2104008230	6.35E-03	1.61E-02	1.74E-02
55101	Racine	VOC	2104008310	6.06E-02	1.09E-01	1.16E-01
55101	Racine	VOC	2104008320	4.49E-02	1.14E-01	1.24E-01
55101	Racine	VOC	2104008330	3.73E-02	9.43E-02	1.02E-01
55101	Racine	VOC	2104008400	2.91E-03	4.71E-03	4.96E-03
55101	Racine	VOC	2104008510	1.84E-02	3.58E-02	3.83E-02
55101	Racine	VOC	2104008530	3.46E-03	4.79E-04	4.78E-04

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55101	Racine	VOC	2104008610	1.03E-01	2.01E-01	2.14E-01
55101	Racine	VOC	2104008620	6.59E-02	1.28E-01	1.37E-01
55101	Racine	VOC	2104008630	9.34E-05	1.82E-04	1.94E-04
55101	Racine	VOC	2104008700	7.62E-02	8.82E-02	8.99E-02
55101	Racine	VOC	2104009000	1.71E-03	1.69E-03	1.68E-03
55101	Racine	VOC	2104011000	1.03E-05	8.23E-06	7.82E-06
55101	Racine	VOC	2201000062	1.98E-01	1.53E-01	1.55E-01
55101	Racine	VOC	2280002201	1.28E-03	0.00E+00	0.00E+00
55101	Racine	VOC	2280002202	2.27E-04	0.00E+00	0.00E+00
55101	Racine	VOC	2280002203	4.00E-03	0.00E+00	0.00E+00
55101	Racine	VOC	2280002204	3.49E-04	0.00E+00	0.00E+00
55101	Racine	VOC	2285002006	2.39E-02	1.73E-02	1.65E-02
55101	Racine	VOC	2285002008	7.91E-04	7.30E-04	7.21E-04
55101	Racine	VOC	2302002100	4.28E-03	5.44E-03	5.61E-03
55101	Racine	VOC	2302002200	1.28E-02	1.72E-02	1.79E-02
55101	Racine	VOC	2302003000	2.80E-03	3.34E-03	3.42E-03
55101	Racine	VOC	2302003100	1.74E-03	2.26E-03	2.34E-03
55101	Racine	VOC	2302003200	8.71E-05	1.20E-04	1.25E-04
55101	Racine	VOC	2401001000	4.92E-01	2.88E-01	2.62E-01
55101	Racine	VOC	2401005000	9.78E-02	2.78E-02	1.76E-02
55101	Racine	VOC	2401008000	8.42E-02	3.83E-02	3.17E-02
55101	Racine	VOC	2401015000	3.09E-03	5.22E-04	5.22E-04
55101	Racine	VOC	2401020000	6.06E-02	4.30E-03	4.30E-03
55101	Racine	VOC	2401025000	6.50E-02	1.79E-02	1.06E-02
55101	Racine	VOC	2401030000	0.00E+00	5.68E-03	6.45E-03
55101	Racine	VOC	2401040000	1.28E-01	8.93E-03	8.92E-03
55101	Racine	VOC	2401055000	5.21E-02	1.98E-02	1.46E-02
55101	Racine	VOC	2401060000	2.51E-01	6.42E-03	6.42E-03
55101	Racine	VOC	2401065000	2.39E-03	2.94E-03	2.98E-03
55101	Racine	VOC	2401070000	4.90E-02	8.63E-03	8.62E-03
55101	Racine	VOC	2401075000	1.64E-03	2.94E-04	2.94E-04
55101	Racine	VOC	2401090000	4.26E-02	1.02E-02	5.23E-03
55101	Racine	VOC	2401100000	7.60E-02	1.00E-01	1.04E-01
55101	Racine	VOC	2401200000	1.23E-03	0.00E+00	0.00E+00
55101	Racine	VOC	2415000000	4.96E-01	6.50E-02	6.50E-02
55101	Racine	VOC	2420000000	2.47E-03	0.00E+00	0.00E+00
55101	Racine	VOC	2425000000	5.55E-01	4.86E-01	4.75E-01
55101	Racine	VOC	2460030999	8.32E-03	8.28E-03	8.28E-03
55101	Racine	VOC	2460100000	6.13E-01	5.71E-01	5.64E-01
55101	Racine	VOC	2460200000	5.36E-01	3.57E-01	3.27E-01
55101	Racine	VOC	2460400000	7.01E-02	5.04E-02	4.71E-02
55101	Racine	VOC	2460500000	6.41E-01	5.42E-01	5.26E-01
55101	Racine	VOC	2460600000	1.34E-01	2.33E-01	2.50E-01
55101	Racine	VOC	2460800000	1.12E-02	2.20E-02	2.38E-02
55101	Racine	VOC	2460900000	8.32E-03	8.28E-03	8.28E-03
55101	Racine	VOC	2461021000	4.09E-01	4.07E-01	4.07E-01
55101	Racine	VOC	2461022000	4.98E-01	4.96E-01	4.95E-01
55101	Racine	VOC	2461025100	1.47E-01	1.46E-01	1.46E-01
55101	Racine	VOC	2461025200	1.32E-02	1.31E-02	1.31E-02
55101	Racine	VOC	2461850000	6.65E-02	6.94E-02	7.03E-02
55101	Racine	VOC	2501011011	9.77E-03	4.94E-03	4.24E-03
55101	Racine	VOC	2501011012	1.10E-02	5.55E-03	4.75E-03
55101	Racine	VOC	2501011013	1.40E-02	0.00E+00	0.00E+00
55101	Racine	VOC	2501011014	2.04E-03	1.03E-03	8.85E-04
55101	Racine	VOC	2501011015	3.86E-04	0.00E+00	0.00E+00
55101	Racine	VOC	2501012011	4.27E-04	3.83E-04	3.77E-04
55101	Racine	VOC	2501012012	3.50E-04	3.14E-04	3.09E-04
55101	Racine	VOC	2501012013	1.91E-02	0.00E+00	0.00E+00

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55101	Racine	VOC	2501012014	5.88E-03	5.28E-03	5.19E-03
55101	Racine	VOC	2501012015	7.42E-04	0.00E+00	0.00E+00
55101	Racine	VOC	2501050120	1.98E-02	5.77E-03	3.75E-03
55101	Racine	VOC	2501055120	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2501060051	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2501060052	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2501060053	1.51E-02	5.11E-02	5.66E-02
55101	Racine	VOC	2501060201	1.72E-02	6.40E-02	7.09E-02
55101	Racine	VOC	2501080050	1.05E-01	1.27E-01	1.32E-01
55101	Racine	VOC	2501080100	1.52E-04	1.74E-04	1.79E-04
55101	Racine	VOC	2505030120	1.12E-03	4.19E-03	4.64E-03
55101	Racine	VOC	2505040120	1.18E-02	1.08E-02	1.07E-02
55101	Racine	VOC	2610000100	1.37E-03	1.34E-03	1.34E-03
55101	Racine	VOC	2610000400	1.37E-03	7.76E-04	6.89E-04
55101	Racine	VOC	2610000500	4.93E-02	3.84E-02	3.68E-02
55101	Racine	VOC	2610030000	1.61E-02	1.57E-02	1.57E-02
55101	Racine	VOC	2630020000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2680003000	4.88E-02	4.42E-02	4.36E-02
55101	Racine	VOC	2801500000	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2801500262	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2802004001	1.10E-01	1.09E-01	1.09E-01
55101	Racine	VOC	2802004002	8.21E-03	8.16E-03	8.16E-03
55101	Racine	VOC	2802004003	7.99E-02	7.95E-02	7.94E-02
55101	Racine	VOC	2805002000	2.36E-03	1.56E-02	1.81E-02
55101	Racine	VOC	2805007100	1.00E-04	1.95E-04	2.08E-04
55101	Racine	VOC	2805009100	4.27E-05	1.09E-04	1.20E-04
55101	Racine	VOC	2805010100	1.36E-05	2.07E-05	2.18E-05
55101	Racine	VOC	2805018000	1.81E-02	6.44E-03	4.11E-03
55101	Racine	VOC	2805025000	2.76E-03	6.67E-03	7.39E-03
55101	Racine	VOC	2805035000	1.88E-03	1.01E-03	8.95E-04
55101	Racine	VOC	2805040000	2.38E-04	7.92E-04	8.80E-04
55101	Racine	VOC	2805045000	3.44E-04	4.09E-04	4.14E-04
55101	Racine	VOC	2810001002	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2810025000	6.92E-03	6.99E-03	7.00E-03
55101	Racine	VOC	2810060100	3.00E-05	4.38E-05	4.59E-05
55101	Racine	VOC	2810060200	6.23E-09	6.10E-09	6.08E-09
55101	Racine	VOC	2811015001	0.00E+00	0.00E+00	0.00E+00
55101	Racine	VOC	2811015002	7.84E-04	0.00E+00	0.00E+00
55131	Washington	VOC	2102001000	0.00E+00	0.00E+00	0.00E+00
55131	Washington	VOC	2102002000	0.00E+00	0.00E+00	0.00E+00
55131	Washington	VOC	2102004001	0.00E+00	0.00E+00	0.00E+00
55131	Washington	VOC	2102004002	0.00E+00	0.00E+00	0.00E+00
55131	Washington	VOC	2102005000	0.00E+00	0.00E+00	0.00E+00
55131	Washington	VOC	2102006000	1.67E-02	2.19E-03	2.19E-03
55131	Washington	VOC	2102007000	1.24E-04	7.42E-05	6.68E-05
55131	Washington	VOC	2102008000	1.45E-02	1.33E-02	1.31E-02
55131	Washington	VOC	2102011000	1.08E-06	3.78E-07	2.75E-07
55131	Washington	VOC	2103001000	4.37E-07	5.92E-08	5.92E-08
55131	Washington	VOC	2103002000	8.02E-06	1.09E-06	1.09E-06
55131	Washington	VOC	2103004001	1.32E-05	1.81E-05	1.90E-05
55131	Washington	VOC	2103004002	8.56E-05	1.17E-04	1.24E-04
55131	Washington	VOC	2103005000	0.00E+00	0.00E+00	0.00E+00
55131	Washington	VOC	2103006000	6.56E-03	7.17E-03	7.35E-03
55131	Washington	VOC	2103007000	2.31E-04	5.78E-04	6.36E-04
55131	Washington	VOC	2103008000	5.73E-04	1.09E-03	1.17E-03
55131	Washington	VOC	2103011000	9.82E-07	3.48E-07	2.62E-07
55131	Washington	VOC	2104001000	0.00E+00	0.00E+00	0.00E+00
55131	Washington	VOC	2104002000	0.00E+00	0.00E+00	0.00E+00

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55131	Washington	VOC	2104004000	4.53E-04	5.84E-04	6.11E-04
55131	Washington	VOC	2104006000	1.42E-02	1.60E-02	1.63E-02
55131	Washington	VOC	2104007000	1.62E-03	2.03E-03	2.10E-03
55131	Washington	VOC	2104008100	4.25E-02	7.66E-02	8.14E-02
55131	Washington	VOC	2104008210	6.92E-03	1.25E-02	1.33E-02
55131	Washington	VOC	2104008220	5.12E-03	1.30E-02	1.42E-02
55131	Washington	VOC	2104008230	4.26E-03	1.07E-02	1.17E-02
55131	Washington	VOC	2104008310	4.41E-02	7.94E-02	8.44E-02
55131	Washington	VOC	2104008320	3.26E-02	8.29E-02	9.02E-02
55131	Washington	VOC	2104008330	2.71E-02	6.84E-02	7.43E-02
55131	Washington	VOC	2104008400	1.91E-03	3.08E-03	3.25E-03
55131	Washington	VOC	2104008510	1.42E-02	2.84E-02	3.05E-02
55131	Washington	VOC	2104008530	2.68E-03	3.79E-04	3.79E-04
55131	Washington	VOC	2104008610	7.99E-02	1.59E-01	1.71E-01
55131	Washington	VOC	2104008620	5.10E-02	1.02E-01	1.09E-01
55131	Washington	VOC	2104008630	7.23E-05	1.44E-04	1.55E-04
55131	Washington	VOC	2104008700	4.20E-02	4.85E-02	4.95E-02
55131	Washington	VOC	2104009000	1.75E-02	1.73E-02	1.72E-02
55131	Washington	VOC	2104011000	8.43E-06	6.34E-06	5.96E-06
55131	Washington	VOC	2201000062	1.46E-01	1.10E-01	1.11E-01
55131	Washington	VOC	2285002006	1.86E-02	1.43E-02	1.38E-02
55131	Washington	VOC	2285002007	1.68E-03	1.67E-03	1.68E-03
55131	Washington	VOC	2302002100	2.14E-03	2.54E-03	2.60E-03
55131	Washington	VOC	2302002200	5.33E-03	7.36E-03	7.66E-03
55131	Washington	VOC	2302003000	1.40E-03	1.50E-03	1.51E-03
55131	Washington	VOC	2302003100	7.04E-04	9.78E-04	1.02E-03
55131	Washington	VOC	2302003200	4.90E-05	5.59E-05	5.69E-05
55131	Washington	VOC	2401001000	2.47E-01	1.48E-01	1.35E-01
55131	Washington	VOC	2401005000	5.01E-02	1.26E-02	7.08E-03
55131	Washington	VOC	2401008000	4.23E-02	2.91E-02	2.73E-02
55131	Washington	VOC	2401015000	5.44E-03	8.62E-04	8.62E-04
55131	Washington	VOC	2401020000	2.30E-02	3.75E-03	7.86E-04
55131	Washington	VOC	2401025000	2.69E-03	9.09E-04	6.26E-04
55131	Washington	VOC	2401030000	0.00E+00	4.16E-03	4.73E-03
55131	Washington	VOC	2401040000	9.30E-02	1.33E-02	1.33E-02
55131	Washington	VOC	2401055000	2.94E-02	0.00E+00	0.00E+00
55131	Washington	VOC	2401060000	3.92E-02	6.18E-04	6.18E-04
55131	Washington	VOC	2401070000	9.16E-02	1.42E-02	1.42E-02
55131	Washington	VOC	2401080000	5.81E-04	0.00E+00	0.00E+00
55131	Washington	VOC	2401090000	9.11E-03	8.28E-04	8.28E-04
55131	Washington	VOC	2401100000	3.82E-02	5.14E-02	5.35E-02
55131	Washington	VOC	2401200000	6.15E-04	0.00E+00	0.00E+00
55131	Washington	VOC	2415000000	3.00E-01	2.72E-02	2.72E-02
55131	Washington	VOC	2420000000	8.38E-04	4.41E-04	3.81E-04
55131	Washington	VOC	2425000000	1.38E+00	1.21E+00	1.19E+00
55131	Washington	VOC	2460030999	4.23E-03	4.23E-03	4.23E-03
55131	Washington	VOC	2460100000	3.11E-01	2.91E-01	2.88E-01
55131	Washington	VOC	2460200000	2.72E-01	1.82E-01	1.67E-01
55131	Washington	VOC	2460400000	3.56E-02	2.57E-02	2.41E-02
55131	Washington	VOC	2460500000	3.26E-01	2.77E-01	2.69E-01
55131	Washington	VOC	2460600000	1.40E-01	2.45E-01	2.63E-01
55131	Washington	VOC	2460800000	5.70E-03	1.12E-02	1.21E-02
55131	Washington	VOC	2460900000	4.23E-03	4.23E-03	4.23E-03
55131	Washington	VOC	2461021000	2.99E-01	2.99E-01	2.99E-01
55131	Washington	VOC	2461022000	3.63E-01	3.63E-01	3.63E-01
55131	Washington	VOC	2461025100	1.07E-01	1.07E-01	1.07E-01
55131	Washington	VOC	2461025200	9.63E-03	9.63E-03	9.63E-03
55131	Washington	VOC	2461850000	3.41E-02	4.60E-02	4.81E-02

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fips code	County	Pollutant	SCC	2017 (tposd)	2023 (tposd)	2024 (tposd)
55131	Washington	VOC	2501011011	9.72E-03	4.94E-03	4.24E-03
55131	Washington	VOC	2501011012	1.09E-02	5.55E-03	4.76E-03
55131	Washington	VOC	2501011013	1.39E-02	0.00E+00	0.00E+00
55131	Washington	VOC	2501011014	2.03E-03	1.03E-03	8.86E-04
55131	Washington	VOC	2501011015	3.84E-04	0.00E+00	0.00E+00
55131	Washington	VOC	2501012011	4.25E-04	3.84E-04	3.77E-04
55131	Washington	VOC	2501012012	3.48E-04	3.15E-04	3.10E-04
55131	Washington	VOC	2501012013	1.90E-02	0.00E+00	0.00E+00
55131	Washington	VOC	2501012014	5.85E-03	5.28E-03	5.20E-03
55131	Washington	VOC	2501012015	7.39E-04	0.00E+00	0.00E+00
55131	Washington	VOC	2501050120	1.31E-01	4.28E-02	3.00E-02
55131	Washington	VOC	2501055120	7.56E-05	7.75E-05	7.82E-05
55131	Washington	VOC	2501060051	0.00E+00	0.00E+00	0.00E+00
55131	Washington	VOC	2501060052	0.00E+00	0.00E+00	0.00E+00
55131	Washington	VOC	2501060053	1.11E-02	3.31E-02	3.65E-02
55131	Washington	VOC	2501060201	1.27E-02	4.14E-02	4.57E-02
55131	Washington	VOC	2501080050	2.73E-02	3.24E-02	3.35E-02
55131	Washington	VOC	2501080100	3.93E-05	4.45E-05	4.56E-05
55131	Washington	VOC	2505030120	8.27E-04	2.71E-03	2.99E-03
55131	Washington	VOC	2505040120	7.80E-02	7.69E-02	7.71E-02
55131	Washington	VOC	2610000100	1.69E-03	1.66E-03	1.66E-03
55131	Washington	VOC	2610000400	1.69E-03	9.62E-04	8.55E-04
55131	Washington	VOC	2610000500	6.36E-02	7.37E-02	7.52E-02
55131	Washington	VOC	2610030000	1.98E-02	1.95E-02	1.95E-02
55131	Washington	VOC	2630020000	2.12E-03	2.15E-03	2.15E-03
55131	Washington	VOC	2680003000	3.56E-02	3.24E-02	3.19E-02
55131	Washington	VOC	2801500000	9.25E-04	0.00E+00	0.00E+00
55131	Washington	VOC	2802004001	3.16E-01	3.16E-01	3.16E-01
55131	Washington	VOC	2802004002	2.37E-02	2.37E-02	2.37E-02
55131	Washington	VOC	2802004003	2.31E-01	2.31E-01	2.31E-01
55131	Washington	VOC	2805002000	4.00E-03	3.41E-02	3.98E-02
55131	Washington	VOC	2805007100	1.26E-02	1.88E-03	1.88E-03
55131	Washington	VOC	2805009100	5.54E-06	1.85E-05	2.04E-05
55131	Washington	VOC	2805010100	1.17E-06	5.50E-06	6.14E-06
55131	Washington	VOC	2805018000	5.08E-02	2.13E-02	1.58E-02
55131	Washington	VOC	2805025000	3.12E-04	1.91E-04	1.72E-04
55131	Washington	VOC	2805035000	1.91E-03	5.57E-04	3.66E-04
55131	Washington	VOC	2805040000	1.33E-04	3.02E-04	3.28E-04
55131	Washington	VOC	2805045000	1.24E-04	1.93E-03	2.17E-03
55131	Washington	VOC	2810001001	1.48E-04	0.00E+00	0.00E+00
55131	Washington	VOC	2810001002	6.39E-04	0.00E+00	0.00E+00
55131	Washington	VOC	2810025000	3.61E-03	3.61E-03	3.61E-03
55131	Washington	VOC	2810060100	1.41E-05	1.94E-05	2.02E-05
55131	Washington	VOC	2810060200	3.13E-09	3.12E-09	3.12E-09
55131	Washington	VOC	2811015001	1.00E-02	0.00E+00	0.00E+00
55131	Washington	VOC	2811015002	6.38E-02	0.00E+00	0.00E+00
55131	Washington	VOC	2811020002	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	VOC	2102001000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	VOC	2102002000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	VOC	2102004001	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	VOC	2102004002	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	VOC	2102005000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	VOC	2102006000	9.82E-02	1.20E-02	1.20E-02
55133	Waukesha	VOC	2102007000	7.29E-04	3.92E-04	3.41E-04
55133	Waukesha	VOC	2102008000	8.53E-02	7.12E-02	6.86E-02
55133	Waukesha	VOC	2102011000	6.34E-06	1.94E-06	1.29E-06
55133	Waukesha	VOC	2103001000	3.95E-06	5.50E-07	5.50E-07
55133	Waukesha	VOC	2103002000	7.24E-05	1.01E-05	1.01E-05

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fips code	County	Pollutant	SCC	2017 (tposd)	2023 (tposd)	2024 (tposd)
55133	Waukesha	VOC	2103004001	1.19E-04	1.69E-04	1.78E-04
55133	Waukesha	VOC	2103004002	7.73E-04	1.10E-03	1.16E-03
55133	Waukesha	VOC	2103005000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	VOC	2103006000	5.93E-02	6.71E-02	6.91E-02
55133	Waukesha	VOC	2103007000	2.08E-03	5.39E-03	5.93E-03
55133	Waukesha	VOC	2103008000	5.18E-03	1.02E-02	1.09E-02
55133	Waukesha	VOC	2103011000	8.88E-06	3.31E-06	2.56E-06
55133	Waukesha	VOC	2104001000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	VOC	2104002000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	VOC	2104004000	1.80E-03	1.77E-03	1.79E-03
55133	Waukesha	VOC	2104006000	7.97E-02	9.07E-02	9.27E-02
55133	Waukesha	VOC	2104007000	5.87E-06	3.33E-03	3.83E-03
55133	Waukesha	VOC	2104008100	1.87E-01	3.58E-01	3.82E-01
55133	Waukesha	VOC	2104008210	3.04E-02	5.82E-02	6.22E-02
55133	Waukesha	VOC	2104008220	2.25E-02	6.07E-02	6.62E-02
55133	Waukesha	VOC	2104008230	1.87E-02	5.00E-02	5.45E-02
55133	Waukesha	VOC	2104008310	1.43E-01	2.74E-01	2.93E-01
55133	Waukesha	VOC	2104008320	1.06E-01	2.85E-01	3.11E-01
55133	Waukesha	VOC	2104008330	8.81E-02	2.35E-01	2.57E-01
55133	Waukesha	VOC	2104008400	8.84E-03	1.42E-02	1.50E-02
55133	Waukesha	VOC	2104008510	4.46E-02	9.36E-02	1.01E-01
55133	Waukesha	VOC	2104008530	8.37E-03	1.24E-03	1.24E-03
55133	Waukesha	VOC	2104008610	2.50E-01	5.25E-01	5.64E-01
55133	Waukesha	VOC	2104008620	1.60E-01	3.35E-01	3.60E-01
55133	Waukesha	VOC	2104008630	2.26E-04	4.75E-04	5.11E-04
55133	Waukesha	VOC	2104008700	1.89E-01	2.32E-01	2.39E-01
55133	Waukesha	VOC	2104009000	8.83E-02	8.67E-02	8.63E-02
55133	Waukesha	VOC	2104011000	3.34E-05	1.84E-05	1.60E-05
55133	Waukesha	VOC	2201000062	5.81E-01	4.38E-01	4.42E-01
55133	Waukesha	VOC	2285002006	5.57E-02	4.10E-02	3.91E-02
55133	Waukesha	VOC	2285002007	2.81E-03	2.79E-03	2.81E-03
55133	Waukesha	VOC	2285002008	2.42E-03	7.78E-04	5.36E-04
55133	Waukesha	VOC	2302002100	1.18E-02	1.72E-02	1.79E-02
55133	Waukesha	VOC	2302002200	3.52E-02	5.20E-02	5.44E-02
55133	Waukesha	VOC	2302003000	8.00E-03	1.03E-02	1.06E-02
55133	Waukesha	VOC	2302003100	4.66E-03	6.85E-03	7.18E-03
55133	Waukesha	VOC	2302003200	2.63E-04	3.86E-04	4.04E-04
55133	Waukesha	VOC	2401001000	1.26E+00	7.61E-01	6.96E-01
55133	Waukesha	VOC	2401005000	3.34E-01	8.90E-02	5.32E-02
55133	Waukesha	VOC	2401008000	2.16E-01	1.43E-01	1.33E-01
55133	Waukesha	VOC	2401015000	8.42E-03	1.60E-03	1.60E-03
55133	Waukesha	VOC	2401020000	1.57E-01	2.30E-02	2.45E-03
55133	Waukesha	VOC	2401025000	1.39E-01	9.43E-02	8.61E-02
55133	Waukesha	VOC	2401030000	8.26E-01	2.47E-02	2.47E-02
55133	Waukesha	VOC	2401040000	4.68E-01	6.00E-03	6.00E-03
55133	Waukesha	VOC	2401055000	8.29E-02	0.00E+00	0.00E+00
55133	Waukesha	VOC	2401060000	1.80E-03	2.45E-04	2.45E-04
55133	Waukesha	VOC	2401065000	2.70E-02	0.00E+00	0.00E+00
55133	Waukesha	VOC	2401070000	2.52E-01	8.26E-02	5.58E-02
55133	Waukesha	VOC	2401075000	4.55E-03	8.06E-04	8.06E-04
55133	Waukesha	VOC	2401090000	2.84E-01	0.00E+00	0.00E+00
55133	Waukesha	VOC	2401100000	1.95E-01	2.64E-01	2.75E-01
55133	Waukesha	VOC	2401200000	3.15E-03	0.00E+00	0.00E+00
55133	Waukesha	VOC	2415000000	1.65E+00	3.12E-01	3.12E-01
55133	Waukesha	VOC	2420000000	6.84E-03	0.00E+00	0.00E+00
55133	Waukesha	VOC	2425000000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	VOC	2460030999	2.17E-02	2.17E-02	2.17E-02
55133	Waukesha	VOC	2460100000	1.60E+00	1.50E+00	1.48E+00

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fips code	County	Pollutant	SCC	2017 (tposd)	2023 (tposd)	2024 (tposd)
55133	Waukesha	VOC	2460200000	1.40E+00	9.34E-01	8.57E-01
55133	Waukesha	VOC	2460400000	1.83E-01	1.32E-01	1.23E-01
55133	Waukesha	VOC	2460500000	1.67E+00	1.42E+00	1.38E+00
55133	Waukesha	VOC	2460600000	7.18E-01	1.25E+00	1.34E+00
55133	Waukesha	VOC	2460800000	2.92E-02	5.75E-02	6.23E-02
55133	Waukesha	VOC	2460900000	2.17E-02	2.17E-02	2.17E-02
55133	Waukesha	VOC	2461021000	1.28E+00	1.28E+00	1.28E+00
55133	Waukesha	VOC	2461022000	1.56E+00	1.56E+00	1.55E+00
55133	Waukesha	VOC	2461025100	4.58E-01	4.58E-01	4.58E-01
55133	Waukesha	VOC	2461025200	4.12E-02	4.12E-02	4.12E-02
55133	Waukesha	VOC	2461850000	6.73E-02	4.59E-02	4.31E-02
55133	Waukesha	VOC	2501011011	5.38E-02	2.73E-02	2.34E-02
55133	Waukesha	VOC	2501011012	6.03E-02	3.07E-02	2.63E-02
55133	Waukesha	VOC	2501011013	7.69E-02	0.00E+00	0.00E+00
55133	Waukesha	VOC	2501011014	1.12E-02	5.71E-03	4.89E-03
55133	Waukesha	VOC	2501011015	2.12E-03	0.00E+00	0.00E+00
55133	Waukesha	VOC	2501012011	2.35E-03	2.12E-03	2.09E-03
55133	Waukesha	VOC	2501012012	1.93E-03	1.74E-03	1.71E-03
55133	Waukesha	VOC	2501012013	1.05E-01	0.00E+00	0.00E+00
55133	Waukesha	VOC	2501012014	3.23E-02	2.92E-02	2.87E-02
55133	Waukesha	VOC	2501012015	4.09E-03	0.00E+00	0.00E+00
55133	Waukesha	VOC	2501050120	1.46E-01	0.00E+00	0.00E+00
55133	Waukesha	VOC	2501055120	8.42E-05	0.00E+00	0.00E+00
55133	Waukesha	VOC	2501060051	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	VOC	2501060052	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	VOC	2501060053	5.37E-02	1.57E-01	1.73E-01
55133	Waukesha	VOC	2501060201	6.10E-02	2.03E-01	2.24E-01
55133	Waukesha	VOC	2501080050	5.25E-02	7.52E-02	7.91E-02
55133	Waukesha	VOC	2501080100	7.56E-05	1.03E-04	1.08E-04
55133	Waukesha	VOC	2505030120	3.99E-03	1.33E-02	1.47E-02
55133	Waukesha	VOC	2505040120	8.69E-02	0.00E+00	0.00E+00
55133	Waukesha	VOC	2610000100	2.76E-03	2.72E-03	2.71E-03
55133	Waukesha	VOC	2610000400	2.76E-03	1.57E-03	1.40E-03
55133	Waukesha	VOC	2610000500	2.39E-01	2.22E-01	2.19E-01
55133	Waukesha	VOC	2610030000	3.23E-02	3.18E-02	3.17E-02
55133	Waukesha	VOC	2630020000	1.12E-02	1.14E-02	1.14E-02
55133	Waukesha	VOC	2680003000	3.68E-01	3.35E-01	3.30E-01
55133	Waukesha	VOC	2801500000	0.00E+00	0.00E+00	0.00E+00
55133	Waukesha	VOC	2801500171	1.61E-03	0.00E+00	0.00E+00
55133	Waukesha	VOC	2802004001	8.11E-02	8.11E-02	8.11E-02
55133	Waukesha	VOC	2802004002	6.08E-03	6.07E-03	6.07E-03
55133	Waukesha	VOC	2802004003	5.92E-02	5.91E-02	5.91E-02
55133	Waukesha	VOC	2805002000	1.71E-03	1.00E-02	1.15E-02
55133	Waukesha	VOC	2805007100	1.17E-04	1.86E-04	1.96E-04
55133	Waukesha	VOC	2805009100	6.63E-06	1.24E-05	1.33E-05
55133	Waukesha	VOC	2805010100	1.58E-05	6.25E-06	4.84E-06
55133	Waukesha	VOC	2805018000	1.62E-02	4.24E-03	2.05E-03
55133	Waukesha	VOC	2805025000	1.07E-03	4.48E-03	4.25E-03
55133	Waukesha	VOC	2805035000	4.77E-03	2.23E-03	1.86E-03
55133	Waukesha	VOC	2805040000	3.51E-04	8.03E-04	8.60E-04
55133	Waukesha	VOC	2805045000	4.32E-04	1.96E-04	1.64E-04
55133	Waukesha	VOC	2810001002	1.54E-04	0.00E+00	0.00E+00
55133	Waukesha	VOC	2810025000	1.76E-02	1.76E-02	1.76E-02
55133	Waukesha	VOC	2810060100	6.94E-05	9.79E-05	1.02E-04
55133	Waukesha	VOC	2810060200	1.60E-08	1.60E-08	1.61E-08
55133	Waukesha	VOC	2811015001	6.98E-03	0.00E+00	0.00E+00
55133	Waukesha	VOC	2811015002	1.41E-01	0.00E+00	0.00E+00
55133	Waukesha	VOC	2811020002	0.00E+00	0.00E+00	0.00E+00

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fips code	County	Pollutant	SCC	2017 (tposd)	2023 (tposd)	2024 (tposd)
TOTAL			NOx	23.31	19.31	19.60
			VOC	71.23	59.51	59.20

APPENDIX 6

Nonroad Emissions for 2017, 2023 and 2024

This appendix provides detailed listings of the estimated nonroad emissions for over 200 subcategories for each of the five full counties covering the Milwaukee, WI 2015 ozone NAAQS nonattainment area as well as for the portion of each county within the nonattainment area. These estimated emissions are provided for nitrogen oxides (NO_x) and volatile organic compounds (VOC) for the years 2017, 2023 and 2024. The sums of NO_x and VOC emissions within the nonattainment area were used for the nonroad sector NO_x and VOC tons per ozone season day (tposd) emission estimates in Section 3 of the Wisconsin Department of Natural Resources (WDNR) Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area.

These inventories are based on three primary sources of data:

MOVES model estimates¹

EPA's MOVES4.0.1 model was used for most source categories, with exceptions listed below.

EPA's 2017 National Emissions Inventory (NEI)²

Emissions for year 2017 for commercial marine, aircraft and rail locomotive were derived from EPA's 2017 NEI.

EPA's 2022 Emissions Modeling Platform: version 1³

Emissions for years 2023 and 2024 for commercial marine, aircraft and rail locomotive were developed from the base year 2022 emissions in the 2022 platform, version 1.

¹ <https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves>.

² <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data>

³ [2022v1 webpage](#)

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

**Table A6.1. 2017 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Milwaukee County**

SCC	Segment Description	SCC Description	Emissions from	Milwaukee Co. 2017 Emissions		% in NAA		Allocate by	Milw. Co. NAA 2017 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0008	0.0768	100.0%	100.0%	land area	0.0008	0.0768
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0004	0.0204	100.0%	100.0%	land area	0.0004	0.0204
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0012	100.0%	100.0%	land area	0.0003	0.0012
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0007	0.0267	100.0%	100.0%	population	0.0007	0.0267
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0009	100.0%	100.0%	population	0.0000	0.0009
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0001	0.0011	100.0%	100.0%	population	0.0001	0.0011
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0017	0.0682	100.0%	100.0%	population	0.0017	0.0682
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0002	100.0%	100.0%	population	0.0000	0.0002
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0001	0.0017	100.0%	100.0%	population	0.0001	0.0017
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0004	0.0092	100.0%	100.0%	population	0.0004	0.0092
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0017	0.0353	100.0%	100.0%	population	0.0017	0.0353
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0026	0.0904	100.0%	100.0%	population	0.0026	0.0904
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0090	0.4012	100.0%	100.0%	population	0.0090	0.4012
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0073	0.1813	100.0%	100.0%	population	0.0073	0.1813
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0158	0.4017	100.0%	100.0%	population	0.0158	0.4017
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0047	0.1116	100.0%	100.0%	population	0.0047	0.1116
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0146	0.4021	100.0%	100.0%	population	0.0146	0.4021
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0074	100.0%	100.0%	population	0.0000	0.0074
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0009	100.0%	100.0%	population	0.0000	0.0009
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0003	0.0085	100.0%	100.0%	population	0.0003	0.0085
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0022	0.0598	100.0%	100.0%	population	0.0022	0.0598
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0004	100.0%	100.0%	population	0.0000	0.0004
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0001	100.0%	100.0%	land area	0.0000	0.0001
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0005	0.0035	100.0%	100.0%	land area	0.0005	0.0035
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0034	0.0358	100.0%	100.0%	land area	0.0034	0.0358
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0063	0.0215	100.0%	100.0%	land area	0.0063	0.0215
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0004	0.0015	100.0%	100.0%	land area	0.0004	0.0015
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0005	0.0013	100.0%	100.0%	population	0.0005	0.0013
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0008	0.0032	100.0%	100.0%	population	0.0008	0.0032
2265002015	Construction	4-Stroke Rollers	MOVES	0.0008	0.0022	100.0%	100.0%	population	0.0008	0.0022

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SCC	Segment Description	SCC Description	Emissions from	Milwaukee Co. 2017 Emissions		% in NAA		Allocate by	Milw. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0016	0.0060	100.0%	100.0%	population	0.0016	0.0060
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0007	0.0023	100.0%	100.0%	population	0.0007	0.0023
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0015	0.0041	100.0%	100.0%	population	0.0015	0.0041
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0009	0.0020	100.0%	100.0%	population	0.0009	0.0020
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0029	0.0089	100.0%	100.0%	population	0.0029	0.0089
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0015	0.0075	100.0%	100.0%	population	0.0015	0.0075
2265002045	Construction	4-Stroke Cranes	MOVES	0.0003	0.0003	100.0%	100.0%	population	0.0003	0.0003
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0002	0.0006	100.0%	100.0%	population	0.0002	0.0006
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0003	0.0002	100.0%	100.0%	population	0.0003	0.0002
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0004	0.0003	100.0%	100.0%	population	0.0004	0.0003
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0009	0.0028	100.0%	100.0%	population	0.0009	0.0028
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0014	0.0018	100.0%	100.0%	population	0.0014	0.0018
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0003	0.0013	100.0%	100.0%	population	0.0003	0.0013
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0006	0.0004	100.0%	100.0%	population	0.0006	0.0004
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0117	0.0133	100.0%	100.0%	population	0.0117	0.0133
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0211	0.0128	100.0%	100.0%	population	0.0211	0.0128
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0044	0.0085	100.0%	100.0%	population	0.0044	0.0085
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0089	0.0332	100.0%	100.0%	population	0.0089	0.0332
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0007	0.0009	100.0%	100.0%	population	0.0007	0.0009
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0001	0.0004	100.0%	100.0%	population	0.0001	0.0004
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0016	0.0009	100.0%	100.0%	population	0.0016	0.0009
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0505	0.4412	100.0%	100.0%	population	0.0505	0.4412
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0330	0.2080	100.0%	100.0%	population	0.0330	0.2080
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0044	0.0395	100.0%	100.0%	population	0.0044	0.0395
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0177	0.1292	100.0%	100.0%	population	0.0177	0.1292
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0003	0.0028	100.0%	100.0%	population	0.0003	0.0028
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0008	0.0056	100.0%	100.0%	population	0.0008	0.0056
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0005	0.0037	100.0%	100.0%	population	0.0005	0.0037
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0346	0.1317	100.0%	100.0%	population	0.0346	0.1317
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0173	100.0%	100.0%	population	0.0000	0.0173
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0022	100.0%	100.0%	population	0.0000	0.0022
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0106	0.0585	100.0%	100.0%	population	0.0106	0.0585
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0037	0.0130	100.0%	100.0%	population	0.0037	0.0130
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0057	0.0195	100.0%	100.0%	population	0.0057	0.0195
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0021	0.0151	100.0%	100.0%	population	0.0021	0.0151
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.1416	0.6253	100.0%	100.0%	population	0.1416	0.6253
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0500	0.1685	100.0%	100.0%	population	0.0500	0.1685
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0084	0.0179	100.0%	100.0%	population	0.0084	0.0179
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.1603	0.4927	100.0%	100.0%	population	0.1603	0.4927

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

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				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0059	0.0307	100.0%	100.0%	population	0.0059	0.0307
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0064	0.0323	100.0%	100.0%	population	0.0064	0.0323
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0000	0.0002	100.0%	100.0%	land area (1)	0.0000	0.0002
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0532	0.2389	100.0%	100.0%	population	0.0532	0.2389
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0139	0.0492	100.0%	100.0%	population	0.0139	0.0492
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0070	0.0203	100.0%	100.0%	population	0.0070	0.0203
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0143	0.0458	100.0%	100.0%	population	0.0143	0.0458
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0216	0.0964	100.0%	100.0%	population	0.0216	0.0964
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0010	0.0035	100.0%	100.0%	population	0.0010	0.0035
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0001	0.0000	100.0%	100.0%	land area	0.0001	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0004	0.0001	100.0%	100.0%	population	0.0004	0.0001
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0005	0.0001	100.0%	100.0%	population	0.0005	0.0001
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0004	0.0001	100.0%	100.0%	population	0.0004	0.0001
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0003	0.0001	100.0%	100.0%	population	0.0003	0.0001
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0004	0.0001	100.0%	100.0%	population	0.0004	0.0001
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0012	0.0003	100.0%	100.0%	population	0.0012	0.0003
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0006	0.0001	100.0%	100.0%	population	0.0006	0.0001
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0107	0.0023	100.0%	100.0%	population	0.0107	0.0023
2267003020	Industrial	LPG Forklifts	MOVES	0.3476	0.0516	100.0%	100.0%	population	0.3476	0.0516
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0024	0.0003	100.0%	100.0%	population	0.0024	0.0003
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0008	0.0001	100.0%	100.0%	population	0.0008	0.0001
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0005	0.0001	100.0%	100.0%	population	0.0005	0.0001

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				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0013	0.0002	100.0%	100.0%	population	0.0013	0.0002
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0034	0.0005	100.0%	100.0%	population	0.0034	0.0005
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0270	0.0045	100.0%	100.0%	population	0.0270	0.0045
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0034	0.0005	100.0%	100.0%	population	0.0034	0.0005
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0021	0.0003	100.0%	100.0%	population	0.0021	0.0003
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0028	0.0005	100.0%	100.0%	population	0.0028	0.0005
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0280	0.0149	100.0%	100.0%	population	0.0280	0.0149
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0107	0.0064	100.0%	100.0%	population	0.0107	0.0064
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0004	0.0002	100.0%	100.0%	population	0.0004	0.0002
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0002	0.0001	100.0%	100.0%	population	0.0002	0.0001
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0045	0.0022	100.0%	100.0%	population	0.0045	0.0022
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0011	0.0003	100.0%	100.0%	land area	0.0011	0.0003
2270002003	Construction	Diesel Pavers	MOVES	0.0204	0.0011	100.0%	100.0%	population	0.0204	0.0011
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0012	0.0002	100.0%	100.0%	population	0.0012	0.0002
2270002015	Construction	Diesel Rollers	MOVES	0.0575	0.0035	100.0%	100.0%	population	0.0575	0.0035
2270002018	Construction	Diesel Scrapers	MOVES	0.0517	0.0026	100.0%	100.0%	population	0.0517	0.0026
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0039	0.0003	100.0%	100.0%	population	0.0039	0.0003
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0037	0.0003	100.0%	100.0%	population	0.0037	0.0003
2270002027	Construction	Diesel Signal Boards	MOVES	0.0109	0.0011	100.0%	100.0%	population	0.0109	0.0011
2270002030	Construction	Diesel Trenchers	MOVES	0.0382	0.0029	100.0%	100.0%	population	0.0382	0.0029
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0518	0.0038	100.0%	100.0%	population	0.0518	0.0038
2270002036	Construction	Diesel Excavators	MOVES	0.1699	0.0086	100.0%	100.0%	population	0.1699	0.0086
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0027	0.0002	100.0%	100.0%	population	0.0027	0.0002
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0021	0.0002	100.0%	100.0%	population	0.0021	0.0002
2270002045	Construction	Diesel Cranes	MOVES	0.0575	0.0031	100.0%	100.0%	population	0.0575	0.0031
2270002048	Construction	Diesel Graders	MOVES	0.0395	0.0022	100.0%	100.0%	population	0.0395	0.0022
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.2080	0.0087	100.0%	100.0%	population	0.2080	0.0087
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0127	0.0007	100.0%	100.0%	population	0.0127	0.0007

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SCC	Segment Description	SCC Description	Emissions from	Milwaukee Co. 2017 Emissions		% in NAA		Allocate by	Milw. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0821	0.0055	100.0%	100.0%	population	0.0821	0.0055
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.2847	0.0158	100.0%	100.0%	population	0.2847	0.0158
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.2722	0.0506	100.0%	100.0%	population	0.2722	0.0506
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.2092	0.0105	100.0%	100.0%	population	0.2092	0.0105
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.2079	0.0470	100.0%	100.0%	population	0.2079	0.0470
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0349	0.0018	100.0%	100.0%	population	0.0349	0.0018
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0007	0.0002	100.0%	100.0%	population	0.0007	0.0002
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0369	0.0022	100.0%	100.0%	population	0.0369	0.0022
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0253	0.0058	100.0%	100.0%	population	0.0253	0.0058
2270003020	Industrial	Diesel Forklifts	MOVES	0.1522	0.0065	100.0%	100.0%	population	0.1522	0.0065
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0775	0.0046	100.0%	100.0%	population	0.0775	0.0046
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0973	0.0069	100.0%	100.0%	population	0.0973	0.0069
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0063	0.0011	100.0%	100.0%	population	0.0063	0.0011
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.2494	0.0147	100.0%	100.0%	population	0.2494	0.0147
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0710	0.0038	100.0%	100.0%	population	0.0710	0.0038
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0995	0.0104	100.0%	100.0%	population	0.0995	0.0104
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0198	0.0022	100.0%	100.0%	population	0.0198	0.0022
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.1518	0.0129	100.0%	100.0%	population	0.1518	0.0129
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0110	0.0008	100.0%	100.0%	population	0.0110	0.0008
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0004	0.0000	100.0%	100.0%	population	0.0004	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0049	0.0004	100.0%	100.0%	land area (1)	0.0049	0.0004
2270005020	Agriculture	Diesel Combines	MOVES	0.0007	0.0001	100.0%	100.0%	land area (1)	0.0007	0.0001
2270005025	Agriculture	Diesel Balers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0001	0.0000	100.0%	100.0%	land area (1)	0.0001	0.0000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0001	0.0000	100.0%	100.0%	land area (1)	0.0001	0.0000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0001	0.0000	100.0%	100.0%	land area (1)	0.0001	0.0000
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.1650	0.0174	100.0%	100.0%	population	0.1650	0.0174
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0392	0.0041	100.0%	100.0%	population	0.0392	0.0041
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0785	0.0059	100.0%	100.0%	population	0.0785	0.0059
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0515	0.0115	100.0%	100.0%	population	0.0515	0.0115
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0055	0.0006	100.0%	100.0%	population	0.0055	0.0006
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0035	0.0003	100.0%	100.0%	population	0.0035	0.0003
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0002	0.0000	100.0%	100.0%	land area	0.0002	0.0000
2275000000	Airport	All Airport	2017NEI	0.7507	0.3327	100.0%	100.0%	airport location	0.7507	0.3327

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SCC	Segment Description	SCC Description	Emissions from	Milwaukee Co. 2017 Emissions		% in NAA		Allocate by	Milw. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2017NEI	0.8693	0.0272	100.0%	100.0%	Lk. Mich. Shoreline	0.8693	0.0272
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2017NEI	0.3393	0.0270	100.0%	100.0%	Lk. Mich. Shoreline	0.3393	0.0270
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0349	0.2226	100.0%	100.0%	water area	0.0349	0.2226
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0155	0.0402	100.0%	100.0%	water area	0.0155	0.0402
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.1467	0.1410	100.0%	100.0%	water area	0.1467	0.1410
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.1401	0.0072	100.0%	100.0%	water area	0.1401	0.0072
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0001	0.0000	100.0%	100.0%	water area	0.0001	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2017NEI	0.6682	0.0311	100.0%	100.0%	track miles	0.6682	0.0311
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0032	0.0005	100.0%	100.0%	track miles	0.0032	0.0005
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0002	100.0%	100.0%	track miles	0.0000	0.0002
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	100.0%	100.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		7.3756	6.1925	100.0%	100.0%		7.3756	6.1925
22xx005xxx	Agriculture	All	MOVES	0.0061	0.0008	100.0%	100.0%	land area (1)	0.0061	0.0008
22750xxxxx	Airport	All	2017NEI	0.7507	0.3327	100.0%	100.0%	airport location	0.7507	0.3327
22xx006xxx	Commercial	All	MOVES	0.5078	0.5774	100.0%	100.0%	population	0.5078	0.5774
2280002xxx	Comm. Mar	All	2017NEI	1.2086	0.0542	100.0%	100.0%	Lk. Mich. Shoreline	1.2086	0.0542
22xx002xxx	Construction	All	MOVES	1.8827	0.3163	100.0%	100.0%	population	1.8827	0.3163
22xx003xxx	Industrial	All	MOVES	1.1191	0.1847	100.0%	100.0%	population	1.1191	0.1847
22xx004xxx	Lawn/Garden	All	MOVES	0.8783	4.1225	100.0%	100.0%	population	0.8783	4.1225
22xx007xxx	Logging	All	MOVES	0.0002	0.0001	100.0%	100.0%	land area	0.0002	0.0001
22820xxxxx	Pleasure Craft	All	MOVES	0.3374	0.4110	100.0%	100.0%	water area	0.3374	0.4110
228500200x	Railroad	All	2017NEI	0.6682	0.0311	100.0%	100.0%	track miles	0.6682	0.0311
228500x015	Railway Maint.	All	MOVES	0.0033	0.0007	100.0%	100.0%	track miles	0.0033	0.0007
22xx001xxx	Recreational	All	MOVES	0.0133	0.1610	100.0%	100.0%	land area	0.0133	0.1610
ALL (Total)	ALL (Total)	ALL (Total)		7.3756	6.1925	100.0%	100.0%		7.3756	6.1925

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

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**Table A6.2. 2017 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Ozaukee County**

SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2017 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2017 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0006	0.0245	100.0%	100.0%	population	0.0006	0.0245
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0009	100.0%	100.0%	population	0.0000	0.0009
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0010	100.0%	100.0%	population	0.0000	0.0010
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0016	0.0627	100.0%	100.0%	population	0.0016	0.0627
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0002	100.0%	100.0%	population	0.0000	0.0002
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0003	100.0%	100.0%	population	0.0000	0.0003
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0000	0.0008	100.0%	100.0%	population	0.0000	0.0008
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0003	0.0057	100.0%	100.0%	population	0.0003	0.0057
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0002	0.0075	100.0%	100.0%	population	0.0002	0.0075
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0015	0.0651	100.0%	100.0%	population	0.0015	0.0651
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0006	0.0150	100.0%	100.0%	population	0.0006	0.0150
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0026	0.0652	100.0%	100.0%	population	0.0026	0.0652
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0004	0.0093	100.0%	100.0%	population	0.0004	0.0093
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0024	0.0653	100.0%	100.0%	population	0.0024	0.0653
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0006	100.0%	100.0%	population	0.0000	0.0006
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0001	100.0%	100.0%	land area (1)	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0001	0.0015	100.0%	100.0%	population	0.0001	0.0015
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0004	0.0102	100.0%	100.0%	population	0.0004	0.0102
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0001	100.0%	100.0%	land area	0.0000	0.0001
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0049	0.0167	100.0%	100.0%	land area	0.0049	0.0167
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0004	0.0012	100.0%	100.0%	population	0.0004	0.0012
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0007	0.0029	100.0%	100.0%	population	0.0007	0.0029
2265002015	Construction	4-Stroke Rollers	MOVES	0.0007	0.0020	100.0%	100.0%	population	0.0007	0.0020

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2017 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0015	0.0055	100.0%	100.0%	population	0.0015	0.0055
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0006	0.0021	100.0%	100.0%	population	0.0006	0.0021
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0014	0.0038	100.0%	100.0%	population	0.0014	0.0038
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0008	0.0018	100.0%	100.0%	population	0.0008	0.0018
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0026	0.0082	100.0%	100.0%	population	0.0026	0.0082
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0014	0.0069	100.0%	100.0%	population	0.0014	0.0069
2265002045	Construction	4-Stroke Cranes	MOVES	0.0003	0.0003	100.0%	100.0%	population	0.0003	0.0003
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0002	0.0006	100.0%	100.0%	population	0.0002	0.0006
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0003	0.0002	100.0%	100.0%	population	0.0003	0.0002
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0004	0.0002	100.0%	100.0%	population	0.0004	0.0002
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0008	0.0026	100.0%	100.0%	population	0.0008	0.0026
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0013	0.0016	100.0%	100.0%	population	0.0013	0.0016
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0003	0.0012	100.0%	100.0%	population	0.0003	0.0012
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0006	0.0004	100.0%	100.0%	population	0.0006	0.0004
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0020	0.0023	100.0%	100.0%	population	0.0020	0.0023
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0037	0.0022	100.0%	100.0%	population	0.0037	0.0022
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0008	0.0015	100.0%	100.0%	population	0.0008	0.0015
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0016	0.0058	100.0%	100.0%	population	0.0016	0.0058
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0001	0.0002	100.0%	100.0%	population	0.0001	0.0002
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0003	0.0002	100.0%	100.0%	population	0.0003	0.0002
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0042	0.0366	100.0%	100.0%	population	0.0042	0.0366
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0054	0.0338	100.0%	100.0%	population	0.0054	0.0338
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0004	0.0033	100.0%	100.0%	population	0.0004	0.0033
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0029	0.0210	100.0%	100.0%	population	0.0029	0.0210
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0000	0.0002	100.0%	100.0%	population	0.0000	0.0002
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0001	0.0009	100.0%	100.0%	population	0.0001	0.0009
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0000	0.0003	100.0%	100.0%	population	0.0000	0.0003
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0056	0.0214	100.0%	100.0%	population	0.0056	0.0214
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0014	100.0%	100.0%	population	0.0000	0.0014
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0004	100.0%	100.0%	population	0.0000	0.0004
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0009	0.0048	100.0%	100.0%	population	0.0009	0.0048
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0006	0.0021	100.0%	100.0%	population	0.0006	0.0021
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0009	0.0032	100.0%	100.0%	population	0.0009	0.0032
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0003	0.0025	100.0%	100.0%	population	0.0003	0.0025
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0117	0.0519	100.0%	100.0%	population	0.0117	0.0519
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0081	0.0274	100.0%	100.0%	population	0.0081	0.0274
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0014	0.0029	100.0%	100.0%	population	0.0014	0.0029
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0260	0.0800	100.0%	100.0%	population	0.0260	0.0800

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2017 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0005	0.0025	100.0%	100.0%	population	0.0005	0.0025
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0010	0.0052	100.0%	100.0%	population	0.0010	0.0052
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0002	0.0003	100.0%	100.0%	land area (1)	0.0002	0.0003
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0003	0.0005	100.0%	100.0%	land area (1)	0.0003	0.0005
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0005	0.0025	100.0%	100.0%	land area (1)	0.0005	0.0025
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0004	0.0004	100.0%	100.0%	land area (1)	0.0004	0.0004
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0004	0.0004	100.0%	100.0%	land area (1)	0.0004	0.0004
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0090	0.0406	100.0%	100.0%	population	0.0090	0.0406
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0024	0.0084	100.0%	100.0%	population	0.0024	0.0084
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0012	0.0035	100.0%	100.0%	population	0.0012	0.0035
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0024	0.0078	100.0%	100.0%	population	0.0024	0.0078
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0037	0.0164	100.0%	100.0%	population	0.0037	0.0164
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0002	0.0006	100.0%	100.0%	population	0.0002	0.0006
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0004	0.0001	100.0%	100.0%	population	0.0004	0.0001
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0005	0.0001	100.0%	100.0%	population	0.0005	0.0001
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0003	0.0001	100.0%	100.0%	population	0.0003	0.0001
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0003	0.0001	100.0%	100.0%	population	0.0003	0.0001
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0004	0.0001	100.0%	100.0%	population	0.0004	0.0001
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0011	0.0002	100.0%	100.0%	population	0.0011	0.0002
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0006	0.0001	100.0%	100.0%	population	0.0006	0.0001
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0019	0.0004	100.0%	100.0%	population	0.0019	0.0004
2267003020	Industrial	LPG Forklifts	MOVES	0.0605	0.0090	100.0%	100.0%	population	0.0605	0.0090
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0004	0.0001	100.0%	100.0%	population	0.0004	0.0001
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000

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SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2017 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0006	0.0001	100.0%	100.0%	population	0.0006	0.0001
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0046	0.0008	100.0%	100.0%	population	0.0046	0.0008
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0006	0.0001	100.0%	100.0%	population	0.0006	0.0001
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0004	0.0001	100.0%	100.0%	population	0.0004	0.0001
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0005	0.0001	100.0%	100.0%	population	0.0005	0.0001
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0049	0.0026	100.0%	100.0%	population	0.0049	0.0026
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0001	0.0000	100.0%	100.0%	land area (1)	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0018	0.0011	100.0%	100.0%	population	0.0018	0.0011
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0008	0.0004	100.0%	100.0%	population	0.0008	0.0004
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2270002003	Construction	Diesel Pavers	MOVES	0.0187	0.0011	100.0%	100.0%	population	0.0187	0.0011
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0011	0.0002	100.0%	100.0%	population	0.0011	0.0002
2270002015	Construction	Diesel Rollers	MOVES	0.0528	0.0032	100.0%	100.0%	population	0.0528	0.0032
2270002018	Construction	Diesel Scrapers	MOVES	0.0475	0.0024	100.0%	100.0%	population	0.0475	0.0024
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0036	0.0003	100.0%	100.0%	population	0.0036	0.0003
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0034	0.0002	100.0%	100.0%	population	0.0034	0.0002
2270002027	Construction	Diesel Signal Boards	MOVES	0.0100	0.0010	100.0%	100.0%	population	0.0100	0.0010
2270002030	Construction	Diesel Trenchers	MOVES	0.0351	0.0027	100.0%	100.0%	population	0.0351	0.0027
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0476	0.0035	100.0%	100.0%	population	0.0476	0.0035
2270002036	Construction	Diesel Excavators	MOVES	0.1561	0.0079	100.0%	100.0%	population	0.1561	0.0079
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0025	0.0002	100.0%	100.0%	population	0.0025	0.0002
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0019	0.0002	100.0%	100.0%	population	0.0019	0.0002
2270002045	Construction	Diesel Cranes	MOVES	0.0528	0.0029	100.0%	100.0%	population	0.0528	0.0029
2270002048	Construction	Diesel Graders	MOVES	0.0363	0.0020	100.0%	100.0%	population	0.0363	0.0020
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.1911	0.0080	100.0%	100.0%	population	0.1911	0.0080
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0117	0.0006	100.0%	100.0%	population	0.0117	0.0006

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SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2017 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0755	0.0051	100.0%	100.0%	population	0.0755	0.0051
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.2616	0.0145	100.0%	100.0%	population	0.2616	0.0145
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.2502	0.0465	100.0%	100.0%	population	0.2502	0.0465
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.1923	0.0097	100.0%	100.0%	population	0.1923	0.0097
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.1911	0.0432	100.0%	100.0%	population	0.1911	0.0432
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0321	0.0016	100.0%	100.0%	population	0.0321	0.0016
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0006	0.0002	100.0%	100.0%	population	0.0006	0.0002
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0339	0.0020	100.0%	100.0%	population	0.0339	0.0020
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0044	0.0010	100.0%	100.0%	population	0.0044	0.0010
2270003020	Industrial	Diesel Forklifts	MOVES	0.0265	0.0011	100.0%	100.0%	population	0.0265	0.0011
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0135	0.0008	100.0%	100.0%	population	0.0135	0.0008
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0169	0.0012	100.0%	100.0%	population	0.0169	0.0012
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0011	0.0002	100.0%	100.0%	population	0.0011	0.0002
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0224	0.0013	100.0%	100.0%	population	0.0224	0.0013
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0124	0.0007	100.0%	100.0%	population	0.0124	0.0007
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0162	0.0017	100.0%	100.0%	population	0.0162	0.0017
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0032	0.0004	100.0%	100.0%	population	0.0032	0.0004
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0246	0.0021	100.0%	100.0%	population	0.0246	0.0021
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0018	0.0001	100.0%	100.0%	population	0.0018	0.0001
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0723	0.0058	100.0%	100.0%	land area (1)	0.0723	0.0058
2270005020	Agriculture	Diesel Combines	MOVES	0.0110	0.0009	100.0%	100.0%	land area (1)	0.0110	0.0009
2270005025	Agriculture	Diesel Balers	MOVES	0.0001	0.0000	100.0%	100.0%	land area (1)	0.0001	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0009	0.0001	100.0%	100.0%	land area (1)	0.0009	0.0001
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0008	0.0001	100.0%	100.0%	land area (1)	0.0008	0.0001
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0019	0.0002	100.0%	100.0%	land area (1)	0.0019	0.0002
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0007	0.0000	100.0%	100.0%	land area (1)	0.0007	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0281	0.0030	100.0%	100.0%	population	0.0281	0.0030
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0067	0.0007	100.0%	100.0%	population	0.0067	0.0007
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0134	0.0010	100.0%	100.0%	population	0.0134	0.0010
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0088	0.0020	100.0%	100.0%	population	0.0088	0.0020
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0009	0.0001	100.0%	100.0%	population	0.0009	0.0001
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0006	0.0000	100.0%	100.0%	population	0.0006	0.0000
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0002	0.0000	100.0%	100.0%	land area	0.0002	0.0000
2275000000	Airport	All Airport	2017NEI	0.0003	0.0007	100.0%	100.0%	airport location	0.0003	0.0007

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SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2017 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2017NEI	0.1028	0.0034	100.0%	100.0%	Lk. Mich. Shoreline	0.1028	0.0034
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2017NEI	0.0888	0.0037	100.0%	100.0%	Lk. Mich. Shoreline	0.0888	0.0037
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0100	0.0636	100.0%	100.0%	water area	0.0100	0.0636
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0044	0.0115	100.0%	100.0%	water area	0.0044	0.0115
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0062	0.0060	100.0%	100.0%	water area	0.0062	0.0060
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0059	0.0003	100.0%	100.0%	water area	0.0059	0.0003
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0000	0.0000	100.0%	100.0%	water area	0.0000	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2017NEI	0.0822	0.0038	100.0%	100.0%	track miles	0.0822	0.0038
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0004	0.0001	100.0%	100.0%	track miles	0.0004	0.0001
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0000	100.0%	100.0%	track miles	0.0000	0.0000
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	100.0%	100.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		2.5109	1.0818	100.0%	100.0%		2.5109	1.0818
22xx005xxx	Agriculture	All	MOVES	0.0896	0.0114	100.0%	100.0%	land area (1)	0.0896	0.0114
22750xxxxx	Airport	All	2017NEI	0.0003	0.0007	100.0%	100.0%	airport location	0.0003	0.0007
22xx006xxx	Commercial	All	MOVES	0.0864	0.0982	100.0%	100.0%	population	0.0864	0.0982
2280002xxx	Comm. Mar	All	2017NEI	0.1917	0.0071	100.0%	100.0%	Lk. Mich. Shoreline	0.1917	0.0071
22xx002xxx	Construction	All	MOVES	1.7304	0.2908	100.0%	100.0%	population	1.7304	0.2908
22xx003xxx	Industrial	All	MOVES	0.1739	0.0309	100.0%	100.0%	population	0.1739	0.0309
22xx004xxx	Lawn/Garden	All	MOVES	0.1244	0.5407	100.0%	100.0%	population	0.1244	0.5407
22xx007xxx	Logging	All	MOVES	0.0002	0.0001	100.0%	100.0%	land area	0.0002	0.0001
22820xxxxx	Pleasure Craft	All	MOVES	0.0266	0.0813	100.0%	100.0%	water area	0.0266	0.0813
228500200x	Railroad	All	2017NEI	0.0822	0.0038	100.0%	100.0%	track miles	0.0822	0.0038
228500x015	Railway Maint.	All	MOVES	0.0004	0.0001	100.0%	100.0%	track miles	0.0004	0.0001
22xx001xxx	Recreational	All	MOVES	0.0049	0.0167	100.0%	100.0%	land area	0.0049	0.0167
ALL (Total)	ALL (Total)	ALL (Total)		2.5109	1.0818	100.0%	100.0%		2.5109	1.0818

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

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**Table A6.3. 2017 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Racine County and the Portion of the County within the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA)**

SCC	Segment Description	SCC Description	Emissions from	Racine Co. 2017 Emissions		% in NAA		Allocate by	Rac. Co. NAA 2017 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0005	0.0512	57.1%	57.1%	land area	0.0003	0.0292
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0003	0.0136	57.1%	57.1%	land area	0.0002	0.0078
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0002	0.0008	57.1%	57.1%	land area	0.0001	0.0005
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0002	0.0087	77.6%	77.6%	population	0.0002	0.0068
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0003	77.6%	77.6%	population	0.0000	0.0002
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0004	77.6%	77.6%	population	0.0000	0.0003
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0006	0.0223	77.6%	77.6%	population	0.0004	0.0173
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0001	77.6%	77.6%	population	0.0000	0.0001
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0004	77.6%	77.6%	population	0.0000	0.0003
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0001	0.0017	77.6%	77.6%	population	0.0001	0.0014
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0003	0.0053	77.6%	77.6%	population	0.0002	0.0041
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0005	0.0172	77.6%	77.6%	population	0.0004	0.0133
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0014	0.0606	77.6%	77.6%	population	0.0011	0.0470
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0014	0.0344	77.6%	77.6%	population	0.0011	0.0267
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0024	0.0607	77.6%	77.6%	population	0.0019	0.0471
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0009	0.0212	77.6%	77.6%	population	0.0007	0.0164
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0022	0.0607	77.6%	77.6%	population	0.0017	0.0471
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0014	77.6%	77.6%	population	0.0000	0.0011
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0001	77.6%	77.6%	population	0.0000	0.0001
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0002	55.3%	55.3%	land area (1)	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0001	0.0016	77.6%	77.6%	population	0.0000	0.0012
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0004	0.0111	77.6%	77.6%	population	0.0003	0.0086
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0001	77.6%	77.6%	population	0.0000	0.0001
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0003	0.0023	57.1%	57.1%	land area	0.0002	0.0013
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0023	0.0239	57.1%	57.1%	land area	0.0013	0.0136
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0070	0.0239	57.1%	57.1%	land area	0.0040	0.0136
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0010	57.1%	57.1%	land area	0.0002	0.0006
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0002	0.0004	77.6%	77.6%	population	0.0001	0.0003
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0003	0.0010	77.6%	77.6%	population	0.0002	0.0008
2265002015	Construction	4-Stroke Rollers	MOVES	0.0003	0.0007	77.6%	77.6%	population	0.0002	0.0006

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				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0005	0.0020	77.6%	77.6%	population	0.0004	0.0015
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0002	0.0008	77.6%	77.6%	population	0.0002	0.0006
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0005	0.0013	77.6%	77.6%	population	0.0004	0.0010
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0003	0.0007	77.6%	77.6%	population	0.0002	0.0005
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0009	0.0029	77.6%	77.6%	population	0.0007	0.0023
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0005	0.0025	77.6%	77.6%	population	0.0004	0.0019
2265002045	Construction	4-Stroke Cranes	MOVES	0.0001	0.0001	77.6%	77.6%	population	0.0001	0.0001
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0001	0.0002	77.6%	77.6%	population	0.0001	0.0002
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0001	0.0001	77.6%	77.6%	population	0.0001	0.0001
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0001	0.0001	77.6%	77.6%	population	0.0001	0.0001
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0003	0.0009	77.6%	77.6%	population	0.0002	0.0007
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0005	0.0006	77.6%	77.6%	population	0.0004	0.0005
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0001	0.0004	77.6%	77.6%	population	0.0001	0.0003
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0002	0.0001	77.6%	77.6%	population	0.0002	0.0001
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0031	0.0035	77.6%	77.6%	population	0.0024	0.0027
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0055	0.0034	77.6%	77.6%	population	0.0043	0.0026
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0012	0.0022	77.6%	77.6%	population	0.0009	0.0017
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0023	0.0087	77.6%	77.6%	population	0.0018	0.0067
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0002	0.0002	77.6%	77.6%	population	0.0001	0.0002
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	77.6%	77.6%	population	0.0000	0.0001
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0004	0.0002	77.6%	77.6%	population	0.0003	0.0002
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0096	0.0837	77.6%	77.6%	population	0.0074	0.0650
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0050	0.0314	77.6%	77.6%	population	0.0039	0.0244
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0008	0.0075	77.6%	77.6%	population	0.0006	0.0058
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0027	0.0195	77.6%	77.6%	population	0.0021	0.0151
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0001	0.0005	77.6%	77.6%	population	0.0000	0.0004
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0001	0.0008	77.6%	77.6%	population	0.0001	0.0007
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0001	0.0007	77.6%	77.6%	population	0.0001	0.0005
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0052	0.0199	77.6%	77.6%	population	0.0041	0.0154
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0033	77.6%	77.6%	population	0.0000	0.0025
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0003	77.6%	77.6%	population	0.0000	0.0003
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0020	0.0111	77.6%	77.6%	population	0.0016	0.0086
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0006	0.0020	77.6%	77.6%	population	0.0004	0.0015
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0009	0.0029	77.6%	77.6%	population	0.0007	0.0023
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0003	0.0023	77.6%	77.6%	population	0.0002	0.0018
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0269	0.1187	77.6%	77.6%	population	0.0209	0.0921
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0076	0.0255	77.6%	77.6%	population	0.0059	0.0198
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0013	0.0027	77.6%	77.6%	population	0.0010	0.0021
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0242	0.0744	77.6%	77.6%	population	0.0188	0.0578

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				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0011	0.0058	77.6%	77.6%	population	0.0009	0.0045
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0010	0.0049	77.6%	77.6%	population	0.0008	0.0038
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0001	55.3%	55.3%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0001	0.0001	55.3%	55.3%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0005	0.0005	55.3%	55.3%	land area (1)	0.0003	0.0003
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0001	55.3%	55.3%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0006	0.0010	55.3%	55.3%	land area (1)	0.0003	0.0006
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0009	0.0049	55.3%	55.3%	land area (1)	0.0005	0.0027
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0007	0.0007	55.3%	55.3%	land area (1)	0.0004	0.0004
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0008	0.0007	55.3%	55.3%	land area (1)	0.0005	0.0004
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0001	0.0001	55.3%	55.3%	land area (1)	0.0001	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0099	0.0444	77.6%	77.6%	population	0.0077	0.0345
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0026	0.0092	77.6%	77.6%	population	0.0020	0.0071
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0013	0.0038	77.6%	77.6%	population	0.0010	0.0029
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0027	0.0085	77.6%	77.6%	population	0.0021	0.0066
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0040	0.0179	77.6%	77.6%	population	0.0031	0.0139
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0002	0.0006	77.6%	77.6%	population	0.0001	0.0005
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0001	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0001	0.0000	77.6%	77.6%	population	0.0001	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0002	0.0000	77.6%	77.6%	population	0.0001	0.0000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0001	0.0000	77.6%	77.6%	population	0.0000	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0001	0.0000	77.6%	77.6%	population	0.0001	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0001	0.0000	77.6%	77.6%	population	0.0001	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0001	0.0000	77.6%	77.6%	population	0.0001	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0004	0.0001	77.6%	77.6%	population	0.0003	0.0001
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0002	0.0000	77.6%	77.6%	population	0.0002	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0028	0.0006	77.6%	77.6%	population	0.0022	0.0005
2267003020	Industrial	LPG Forklifts	MOVES	0.0910	0.0135	77.6%	77.6%	population	0.0706	0.0105
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0006	0.0001	77.6%	77.6%	population	0.0005	0.0001
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0002	0.0000	77.6%	77.6%	population	0.0002	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0001	0.0000	77.6%	77.6%	population	0.0001	0.0000

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				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0003	0.0000	77.6%	77.6%	population	0.0003	0.0000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0005	0.0001	77.6%	77.6%	population	0.0004	0.0001
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0050	0.0008	77.6%	77.6%	population	0.0039	0.0007
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0006	0.0001	77.6%	77.6%	population	0.0005	0.0001
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0004	0.0001	77.6%	77.6%	population	0.0003	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0005	0.0001	77.6%	77.6%	population	0.0004	0.0001
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0073	0.0039	77.6%	77.6%	population	0.0057	0.0030
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0002	0.0001	55.3%	55.3%	land area (1)	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0020	0.0012	77.6%	77.6%	population	0.0015	0.0009
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0001	0.0000	77.6%	77.6%	population	0.0001	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0008	0.0004	77.6%	77.6%	population	0.0007	0.0003
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0007	0.0002	57.1%	57.1%	land area	0.0004	0.0001
2270002003	Construction	Diesel Pavers	MOVES	0.0067	0.0004	77.6%	77.6%	population	0.0052	0.0003
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0004	0.0001	77.6%	77.6%	population	0.0003	0.0000
2270002015	Construction	Diesel Rollers	MOVES	0.0188	0.0011	77.6%	77.6%	population	0.0146	0.0009
2270002018	Construction	Diesel Scrapers	MOVES	0.0169	0.0009	77.6%	77.6%	population	0.0131	0.0007
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0013	0.0001	77.6%	77.6%	population	0.0010	0.0001
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0012	0.0001	77.6%	77.6%	population	0.0009	0.0001
2270002027	Construction	Diesel Signal Boards	MOVES	0.0036	0.0004	77.6%	77.6%	population	0.0028	0.0003
2270002030	Construction	Diesel Trenchers	MOVES	0.0125	0.0009	77.6%	77.6%	population	0.0097	0.0007
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0169	0.0012	77.6%	77.6%	population	0.0131	0.0010
2270002036	Construction	Diesel Excavators	MOVES	0.0555	0.0028	77.6%	77.6%	population	0.0431	0.0022
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0009	0.0001	77.6%	77.6%	population	0.0007	0.0001
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0007	0.0001	77.6%	77.6%	population	0.0005	0.0001
2270002045	Construction	Diesel Cranes	MOVES	0.0188	0.0010	77.6%	77.6%	population	0.0146	0.0008
2270002048	Construction	Diesel Graders	MOVES	0.0129	0.0007	77.6%	77.6%	population	0.0100	0.0005
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.0680	0.0028	77.6%	77.6%	population	0.0528	0.0022
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0042	0.0002	77.6%	77.6%	population	0.0032	0.0002

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				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0269	0.0018	77.6%	77.6%	population	0.0208	0.0014
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.0931	0.0052	77.6%	77.6%	population	0.0722	0.0040
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.0890	0.0165	77.6%	77.6%	population	0.0691	0.0128
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0684	0.0034	77.6%	77.6%	population	0.0531	0.0027
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.0680	0.0154	77.6%	77.6%	population	0.0528	0.0119
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0114	0.0006	77.6%	77.6%	population	0.0089	0.0004
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0002	0.0001	77.6%	77.6%	population	0.0002	0.0000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0121	0.0007	77.6%	77.6%	population	0.0094	0.0005
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0066	0.0015	77.6%	77.6%	population	0.0051	0.0012
2270003020	Industrial	Diesel Forklifts	MOVES	0.0398	0.0017	77.6%	77.6%	population	0.0309	0.0013
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0203	0.0012	77.6%	77.6%	population	0.0157	0.0009
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0255	0.0018	77.6%	77.6%	population	0.0198	0.0014
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0016	0.0003	77.6%	77.6%	population	0.0013	0.0002
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0510	0.0030	77.6%	77.6%	population	0.0395	0.0023
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0186	0.0010	77.6%	77.6%	population	0.0144	0.0008
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	77.6%	77.6%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0150	0.0016	77.6%	77.6%	population	0.0117	0.0012
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0030	0.0003	77.6%	77.6%	population	0.0023	0.0003
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0229	0.0019	77.6%	77.6%	population	0.0178	0.0015
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0017	0.0001	77.6%	77.6%	population	0.0013	0.0001
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0001	0.0000	77.6%	77.6%	population	0.0001	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.1416	0.0113	55.3%	55.3%	land area (1)	0.0783	0.0063
2270005020	Agriculture	Diesel Combines	MOVES	0.0215	0.0018	55.3%	55.3%	land area (1)	0.0119	0.0010
2270005025	Agriculture	Diesel Balers	MOVES	0.0001	0.0000	55.3%	55.3%	land area (1)	0.0001	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0017	0.0002	55.3%	55.3%	land area (1)	0.0010	0.0001
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0015	0.0002	55.3%	55.3%	land area (1)	0.0008	0.0001
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0038	0.0003	55.3%	55.3%	land area (1)	0.0021	0.0002
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0013	0.0001	55.3%	55.3%	land area (1)	0.0007	0.0001
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0307	0.0032	77.6%	77.6%	population	0.0238	0.0025
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0073	0.0008	77.6%	77.6%	population	0.0057	0.0006
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0146	0.0011	77.6%	77.6%	population	0.0113	0.0008
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0096	0.0021	77.6%	77.6%	population	0.0074	0.0017
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0010	0.0001	77.6%	77.6%	population	0.0008	0.0001
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0007	0.0001	77.6%	77.6%	population	0.0005	0.0000
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2275000000	Airport	All Airport	2017NEI	0.0232	0.0357	33.9%	46.0%	airport location	0.0079	0.0164

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SCC	Segment Description	SCC Description	Emissions from	Racine Co. 2017 Emissions		% in NAA		Allocate by	Rac. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2017NEI	0.0958	0.0029	100.0%	100.0%	Lk. Mich. Shoreline	0.0958	0.0029
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2017NEI	0.1377	0.0057	100.0%	100.0%	Lk. Mich. Shoreline	0.1377	0.0057
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0449	0.2862	5.7%	5.7%	water area	0.0026	0.0163
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0200	0.0517	71.4%	71.4%	water area	0.0143	0.0369
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0919	0.0884	71.4%	71.4%	water area	0.0657	0.0631
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0878	0.0045	71.4%	71.4%	water area	0.0627	0.0032
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0001	0.0000	5.7%	5.7%	water area	0.0000	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2017NEI	0.6928	0.0321	76.0%	76.0%	track miles	0.5265	0.0244
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0019	0.0003	76.0%	76.0%	track miles	0.0014	0.0002
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0001	76.0%	76.0%	track miles	0.0000	0.0001
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	76.0%	76.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		2.5135	1.5906	75.4%	61.7%		1.8953	0.9808
22xx005xxx	Agriculture	All	MOVES	0.1755	0.0223	55.3%	55.3%	land area (1)	0.0970	0.0123
22750xxxxx	Airport	All	2017NEI	0.0232	0.0357	33.9%	46.0%	airport location	0.0079	0.0164
22xx006xxx	Commercial	All	MOVES	0.0944	0.1073	77.6%	77.6%	population	0.0732	0.0833
2280002xxx	Comm. Mar	All	2017NEI	0.2335	0.0087	100.0%	100.0%	Lk. Mich. Shoreline	0.2335	0.0087
22xx002xxx	Construction	All	MOVES	0.6157	0.1035	77.6%	77.6%	population	0.4778	0.0803
22xx003xxx	Industrial	All	MOVES	0.2786	0.0475	77.6%	77.6%	population	0.2162	0.0368
22xx004xxx	Lawn/Garden	All	MOVES	0.1415	0.6855	77.6%	77.6%	population	0.1098	0.5320
22xx007xxx	Logging	All	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
22820xxxxx	Pleasure Craft	All	MOVES	0.2448	0.4308	59.3%	27.7%	water area	0.1452	0.1195
228500200x	Railroad	All	2017NEI	0.6928	0.0321	76.0%	76.0%	track miles	0.5265	0.0244
228500x015	Railway Maint.	All	MOVES	0.0019	0.0004	76.0%	76.0%	track miles	0.0015	0.0003
22xx001xxx	Recreational	All	MOVES	0.0117	0.1169	57.1%	57.1%	land area	0.0067	0.0667
ALL (Total)	ALL (Total)	ALL (Total)		2.5135	1.5906	75.4%	61.7%		1.8953	0.9808

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

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**Table A6.4. 2017 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Washington County and the Portion of the County within the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA)**

SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2017 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2017 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0008	0.0768	42.7%	42.7%	land area	0.0003	0.0328
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	42.7%	42.7%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0004	0.0204	42.7%	42.7%	land area	0.0002	0.0087
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0012	42.7%	42.7%	land area	0.0001	0.0005
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0002	0.0078	56.5%	56.5%	population	0.0001	0.0044
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0003	56.5%	56.5%	population	0.0000	0.0002
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0003	56.5%	56.5%	population	0.0000	0.0002
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0005	0.0199	56.5%	56.5%	population	0.0003	0.0112
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0001	56.5%	56.5%	population	0.0000	0.0000
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0004	56.5%	56.5%	population	0.0000	0.0002
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0000	0.0011	56.5%	56.5%	population	0.0000	0.0006
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0007	0.0138	56.5%	56.5%	population	0.0004	0.0078
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0003	0.0107	56.5%	56.5%	population	0.0002	0.0061
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0035	0.1569	56.5%	56.5%	population	0.0020	0.0887
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0009	0.0215	56.5%	56.5%	population	0.0005	0.0122
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0062	0.1571	56.5%	56.5%	population	0.0035	0.0888
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0006	0.0133	56.5%	56.5%	population	0.0003	0.0075
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0057	0.1573	56.5%	56.5%	population	0.0032	0.0889
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0009	56.5%	56.5%	population	0.0000	0.0005
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0004	56.5%	56.5%	population	0.0000	0.0002
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0001	56.5%	56.5%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0002	42.1%	42.1%	land area (1)	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0001	0.0014	56.5%	56.5%	population	0.0000	0.0008
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0004	0.0097	56.5%	56.5%	population	0.0002	0.0055
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0001	56.5%	56.5%	population	0.0000	0.0000
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0002	42.7%	42.7%	land area	0.0000	0.0001
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0005	0.0035	42.7%	42.7%	land area	0.0002	0.0015
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0034	0.0358	42.7%	42.7%	land area	0.0014	0.0153
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0077	0.0263	42.7%	42.7%	land area	0.0033	0.0112
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0004	0.0015	42.7%	42.7%	land area	0.0002	0.0006
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0001	0.0004	56.5%	56.5%	population	0.0001	0.0002
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0002	0.0009	56.5%	56.5%	population	0.0001	0.0005
2265002015	Construction	4-Stroke Rollers	MOVES	0.0002	0.0006	56.5%	56.5%	population	0.0001	0.0004

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SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2017 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0005	0.0018	56.5%	56.5%	population	0.0003	0.0010
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0002	0.0007	56.5%	56.5%	population	0.0001	0.0004
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0004	0.0012	56.5%	56.5%	population	0.0002	0.0007
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0003	0.0006	56.5%	56.5%	population	0.0001	0.0003
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0008	0.0026	56.5%	56.5%	population	0.0005	0.0015
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0004	0.0022	56.5%	56.5%	population	0.0002	0.0012
2265002045	Construction	4-Stroke Cranes	MOVES	0.0001	0.0001	56.5%	56.5%	population	0.0001	0.0000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0001	0.0002	56.5%	56.5%	population	0.0000	0.0001
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0001	0.0001	56.5%	56.5%	population	0.0000	0.0000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0001	0.0001	56.5%	56.5%	population	0.0001	0.0000
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0003	0.0008	56.5%	56.5%	population	0.0001	0.0005
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0004	0.0005	56.5%	56.5%	population	0.0002	0.0003
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0001	0.0004	56.5%	56.5%	population	0.0000	0.0002
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0002	0.0001	56.5%	56.5%	population	0.0001	0.0001
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0027	0.0031	56.5%	56.5%	population	0.0015	0.0018
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0049	0.0030	56.5%	56.5%	population	0.0028	0.0017
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0010	0.0020	56.5%	56.5%	population	0.0006	0.0011
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0021	0.0078	56.5%	56.5%	population	0.0012	0.0044
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0002	0.0002	56.5%	56.5%	population	0.0001	0.0001
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	56.5%	56.5%	population	0.0000	0.0000
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0004	0.0002	56.5%	56.5%	population	0.0002	0.0001
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0060	0.0524	56.5%	56.5%	population	0.0034	0.0296
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0129	0.0814	56.5%	56.5%	population	0.0073	0.0460
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0005	0.0047	56.5%	56.5%	population	0.0003	0.0027
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0069	0.0506	56.5%	56.5%	population	0.0039	0.0286
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0000	0.0003	56.5%	56.5%	population	0.0000	0.0002
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0003	0.0022	56.5%	56.5%	population	0.0002	0.0012
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0001	0.0004	56.5%	56.5%	population	0.0000	0.0002
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0135	0.0515	56.5%	56.5%	population	0.0076	0.0291
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0021	56.5%	56.5%	population	0.0000	0.0012
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0008	56.5%	56.5%	population	0.0000	0.0005
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0013	0.0069	56.5%	56.5%	population	0.0007	0.0039
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0014	0.0051	56.5%	56.5%	population	0.0008	0.0029
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0022	0.0076	56.5%	56.5%	population	0.0013	0.0043
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0008	0.0059	56.5%	56.5%	population	0.0005	0.0033
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0168	0.0743	56.5%	56.5%	population	0.0095	0.0420
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0196	0.0659	56.5%	56.5%	population	0.0111	0.0372
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0033	0.0070	56.5%	56.5%	population	0.0019	0.0040
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0627	0.1927	56.5%	56.5%	population	0.0354	0.1089

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SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2017 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0007	0.0036	56.5%	56.5%	population	0.0004	0.0021
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0025	0.0126	56.5%	56.5%	population	0.0014	0.0071
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0001	42.1%	42.1%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0001	0.0001	42.1%	42.1%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0004	0.0005	42.1%	42.1%	land area (1)	0.0002	0.0002
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0001	42.1%	42.1%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0005	0.0010	42.1%	42.1%	land area (1)	0.0002	0.0004
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0009	0.0047	42.1%	42.1%	land area (1)	0.0004	0.0020
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0007	0.0007	42.1%	42.1%	land area (1)	0.0003	0.0003
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0008	0.0007	42.1%	42.1%	land area (1)	0.0003	0.0003
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0001	0.0001	42.1%	42.1%	land area (1)	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0086	0.0387	56.5%	56.5%	population	0.0049	0.0218
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0023	0.0080	56.5%	56.5%	population	0.0013	0.0045
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0011	0.0033	56.5%	56.5%	population	0.0006	0.0019
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0023	0.0074	56.5%	56.5%	population	0.0013	0.0042
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0035	0.0156	56.5%	56.5%	population	0.0020	0.0088
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0002	0.0006	56.5%	56.5%	population	0.0001	0.0003
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0001	42.7%	42.7%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	42.7%	42.7%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0001	0.0000	42.7%	42.7%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0002	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0004	0.0001	56.5%	56.5%	population	0.0002	0.0000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0002	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0025	0.0005	56.5%	56.5%	population	0.0014	0.0003
2267003020	Industrial	LPG Forklifts	MOVES	0.0814	0.0121	56.5%	56.5%	population	0.0460	0.0068
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0006	0.0001	56.5%	56.5%	population	0.0003	0.0000
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0002	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0001	0.0000

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SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2017 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0003	0.0000	56.5%	56.5%	population	0.0002	0.0000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0013	0.0002	56.5%	56.5%	population	0.0008	0.0001
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0044	0.0007	56.5%	56.5%	population	0.0025	0.0004
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0006	0.0001	56.5%	56.5%	population	0.0003	0.0001
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0003	0.0000	56.5%	56.5%	population	0.0002	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0004	0.0001	56.5%	56.5%	population	0.0003	0.0000
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0065	0.0035	56.5%	56.5%	population	0.0037	0.0020
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0002	0.0001	42.1%	42.1%	land area (1)	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0017	0.0010	56.5%	56.5%	population	0.0010	0.0006
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0007	0.0004	56.5%	56.5%	population	0.0004	0.0002
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0011	0.0003	42.7%	42.7%	land area	0.0005	0.0001
2270002003	Construction	Diesel Pavers	MOVES	0.0059	0.0003	56.5%	56.5%	population	0.0034	0.0002
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0003	0.0001	56.5%	56.5%	population	0.0002	0.0000
2270002015	Construction	Diesel Rollers	MOVES	0.0167	0.0010	56.5%	56.5%	population	0.0095	0.0006
2270002018	Construction	Diesel Scrapers	MOVES	0.0150	0.0008	56.5%	56.5%	population	0.0085	0.0004
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0011	0.0001	56.5%	56.5%	population	0.0006	0.0001
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0011	0.0001	56.5%	56.5%	population	0.0006	0.0000
2270002027	Construction	Diesel Signal Boards	MOVES	0.0032	0.0003	56.5%	56.5%	population	0.0018	0.0002
2270002030	Construction	Diesel Trenchers	MOVES	0.0111	0.0008	56.5%	56.5%	population	0.0063	0.0005
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0151	0.0011	56.5%	56.5%	population	0.0085	0.0006
2270002036	Construction	Diesel Excavators	MOVES	0.0495	0.0025	56.5%	56.5%	population	0.0279	0.0014
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0008	0.0001	56.5%	56.5%	population	0.0004	0.0000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0006	0.0001	56.5%	56.5%	population	0.0003	0.0000
2270002045	Construction	Diesel Cranes	MOVES	0.0167	0.0009	56.5%	56.5%	population	0.0095	0.0005
2270002048	Construction	Diesel Graders	MOVES	0.0115	0.0006	56.5%	56.5%	population	0.0065	0.0004
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.0606	0.0025	56.5%	56.5%	population	0.0342	0.0014
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0037	0.0002	56.5%	56.5%	population	0.0021	0.0001

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SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2017 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0239	0.0016	56.5%	56.5%	population	0.0135	0.0009
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.0829	0.0046	56.5%	56.5%	population	0.0468	0.0026
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.0793	0.0147	56.5%	56.5%	population	0.0448	0.0083
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0609	0.0031	56.5%	56.5%	population	0.0344	0.0017
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.0605	0.0137	56.5%	56.5%	population	0.0342	0.0077
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0102	0.0005	56.5%	56.5%	population	0.0057	0.0003
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0002	0.0000	56.5%	56.5%	population	0.0001	0.0000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0107	0.0006	56.5%	56.5%	population	0.0061	0.0004
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0059	0.0014	56.5%	56.5%	population	0.0034	0.0008
2270003020	Industrial	Diesel Forklifts	MOVES	0.0356	0.0015	56.5%	56.5%	population	0.0201	0.0009
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0181	0.0011	56.5%	56.5%	population	0.0102	0.0006
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0228	0.0016	56.5%	56.5%	population	0.0129	0.0009
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0015	0.0002	56.5%	56.5%	population	0.0008	0.0001
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0323	0.0019	56.5%	56.5%	population	0.0182	0.0011
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0166	0.0009	56.5%	56.5%	population	0.0094	0.0005
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0389	0.0041	56.5%	56.5%	population	0.0220	0.0023
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0078	0.0009	56.5%	56.5%	population	0.0044	0.0005
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0594	0.0050	56.5%	56.5%	population	0.0336	0.0028
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0043	0.0003	56.5%	56.5%	population	0.0024	0.0002
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0002	0.0000	56.5%	56.5%	population	0.0001	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.1359	0.0109	42.1%	42.1%	land area (1)	0.0572	0.0046
2270005020	Agriculture	Diesel Combines	MOVES	0.0207	0.0017	42.1%	42.1%	land area (1)	0.0087	0.0007
2270005025	Agriculture	Diesel Balers	MOVES	0.0001	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0017	0.0002	42.1%	42.1%	land area (1)	0.0007	0.0001
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0015	0.0002	42.1%	42.1%	land area (1)	0.0006	0.0001
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0036	0.0003	42.1%	42.1%	land area (1)	0.0015	0.0001
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0012	0.0001	42.1%	42.1%	land area (1)	0.0005	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0267	0.0028	56.5%	56.5%	population	0.0151	0.0016
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0063	0.0007	56.5%	56.5%	population	0.0036	0.0004
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0127	0.0009	56.5%	56.5%	population	0.0072	0.0005
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0083	0.0019	56.5%	56.5%	population	0.0047	0.0010
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0009	0.0001	56.5%	56.5%	population	0.0005	0.0001
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0006	0.0000	56.5%	56.5%	population	0.0003	0.0000
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0005	0.0000	42.7%	42.7%	land area	0.0002	0.0000
2275000000	Airport	All Airport	2017NEI	0.1739	0.0951	98.0%	95.2%	airport location	0.1704	0.0905

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SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2017 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2017NEI	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2017NEI	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0216	0.1378	19.0%	19.0%	water area	0.0041	0.0262
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0096	0.0249	19.0%	19.0%	water area	0.0018	0.0047
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0134	0.0129	19.0%	19.0%	water area	0.0026	0.0025
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0128	0.0007	19.0%	19.0%	water area	0.0024	0.0001
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0000	0.0000	19.0%	19.0%	water area	0.0000	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2017NEI	0.7867	0.0363	60.0%	60.0%	track miles	0.4720	0.0218
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0000	0.0000	60.0%	60.0%	track miles	0.0000	0.0000
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0000	60.0%	60.0%	track miles	0.0000	0.0000
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	60.0%	60.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		2.3494	1.8941	58.7%	53.6%		1.3791	1.0161
22xx005xxx	Agriculture	All	MOVES	0.1685	0.0214	42.1%	42.1%	land area (1)	0.0709	0.0090
22750xxxxx	Airport	All	2017NEI	0.1739	0.0951	98.0%	95.2%	airport location	0.1704	0.0905
22xx006xxx	Commercial	All	MOVES	0.0822	0.0934	56.5%	56.5%	population	0.0464	0.0528
2280002xxx	Comm. Mar	All	2017NEI	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
22xx002xxx	Construction	All	MOVES	0.5482	0.0921	56.5%	56.5%	population	0.3097	0.0520
22xx003xxx	Industrial	All	MOVES	0.2359	0.0416	56.5%	56.5%	population	0.1333	0.0235
22xx004xxx	Lawn/Garden	All	MOVES	0.2813	1.1717	56.5%	56.5%	population	0.1589	0.6620
22xx007xxx	Logging	All	MOVES	0.0006	0.0003	42.7%	42.7%	land area	0.0002	0.0001
22820xxxxx	Pleasure Craft	All	MOVES	0.0575	0.1763	19.0%	19.0%	water area	0.0109	0.0335
228500200x	Railroad	All	2017NEI	0.7867	0.0363	60.0%	60.0%	track miles	0.4720	0.0218
228500x015	Railway Maint.	All	MOVES	0.0000	0.0000	60.0%	60.0%	track miles	0.0000	0.0000
22xx001xxx	Recreational	All	MOVES	0.0147	0.1658	42.7%	42.7%	land area	0.0063	0.0708
ALL (Total)	ALL (Total)	ALL (Total)		2.3494	1.8941	58.7%	53.6%		1.3791	1.0161

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

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**Table A6.5. 2017 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Waukesha County and the Portion of the County within the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA)**

SCC	Segment Description	SCC Description	Emissions from	Waukesha Co. 2017 Emissions		% in NAA		Allocate by	Wauk. Co. NAA 2017 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0008	0.0768	90.6%	90.6%	land area	0.0007	0.0696
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	90.6%	90.6%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0004	0.0204	90.6%	90.6%	land area	0.0004	0.0185
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0012	90.6%	90.6%	land area	0.0003	0.0011
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0006	0.0260	97.5%	97.5%	population	0.0006	0.0253
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0009	97.5%	97.5%	population	0.0000	0.0009
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0001	0.0011	97.5%	97.5%	population	0.0001	0.0011
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0017	0.0665	97.5%	97.5%	population	0.0017	0.0648
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0002	97.5%	97.5%	population	0.0000	0.0002
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0001	0.0012	97.5%	97.5%	population	0.0000	0.0011
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0001	97.5%	97.5%	population	0.0000	0.0001
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0001	0.0033	97.5%	97.5%	population	0.0001	0.0033
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0018	0.0381	97.5%	97.5%	population	0.0018	0.0372
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0009	0.0328	97.5%	97.5%	population	0.0009	0.0320
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0097	0.4333	97.5%	97.5%	population	0.0094	0.4225
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0027	0.0658	97.5%	97.5%	population	0.0026	0.0642
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0170	0.4338	97.5%	97.5%	population	0.0166	0.4230
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0017	0.0405	97.5%	97.5%	population	0.0017	0.0395
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0158	0.4343	97.5%	97.5%	population	0.0154	0.4234
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0027	97.5%	97.5%	population	0.0000	0.0026
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0010	97.5%	97.5%	population	0.0000	0.0010
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0001	97.5%	97.5%	population	0.0000	0.0001
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0001	86.9%	86.9%	land area (1)	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0003	0.0087	97.5%	97.5%	population	0.0003	0.0085
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0022	0.0611	97.5%	97.5%	population	0.0022	0.0595
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0004	97.5%	97.5%	population	0.0000	0.0004
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0002	90.6%	90.6%	land area	0.0000	0.0002
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0005	0.0035	90.6%	90.6%	land area	0.0004	0.0032
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0034	0.0358	90.6%	90.6%	land area	0.0031	0.0324
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0189	0.0645	90.6%	90.6%	land area	0.0171	0.0584
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0004	0.0015	90.6%	90.6%	land area	0.0004	0.0014
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0005	0.0012	97.5%	97.5%	population	0.0005	0.0012
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0008	0.0031	97.5%	97.5%	population	0.0008	0.0030
2265002015	Construction	4-Stroke Rollers	MOVES	0.0007	0.0021	97.5%	97.5%	population	0.0007	0.0021

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SCC	Segment Description	SCC Description	Emissions from	Waukesha Co. 2017 Emissions		% in NAA		Allocate by	Wauk. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0016	0.0059	97.5%	97.5%	population	0.0015	0.0057
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0006	0.0022	97.5%	97.5%	population	0.0006	0.0022
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0001	97.5%	97.5%	population	0.0000	0.0001
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0015	0.0040	97.5%	97.5%	population	0.0014	0.0039
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0008	0.0020	97.5%	97.5%	population	0.0008	0.0019
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0028	0.0087	97.5%	97.5%	population	0.0027	0.0084
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0015	0.0073	97.5%	97.5%	population	0.0014	0.0071
2265002045	Construction	4-Stroke Cranes	MOVES	0.0003	0.0003	97.5%	97.5%	population	0.0003	0.0003
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0002	0.0006	97.5%	97.5%	population	0.0002	0.0006
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0003	0.0002	97.5%	97.5%	population	0.0003	0.0002
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0004	0.0003	97.5%	97.5%	population	0.0004	0.0002
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0009	0.0028	97.5%	97.5%	population	0.0009	0.0027
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0014	0.0017	97.5%	97.5%	population	0.0013	0.0017
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0003	0.0012	97.5%	97.5%	population	0.0003	0.0012
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0006	0.0004	97.5%	97.5%	population	0.0006	0.0004
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0082	0.0093	97.5%	97.5%	population	0.0080	0.0091
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0149	0.0090	97.5%	97.5%	population	0.0145	0.0088
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0031	0.0060	97.5%	97.5%	population	0.0030	0.0058
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0063	0.0234	97.5%	97.5%	population	0.0061	0.0228
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0005	0.0006	97.5%	97.5%	population	0.0005	0.0006
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0001	0.0002	97.5%	97.5%	population	0.0000	0.0002
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0011	0.0007	97.5%	97.5%	population	0.0011	0.0006
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0183	0.1602	97.5%	97.5%	population	0.0179	0.1562
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0356	0.2246	97.5%	97.5%	population	0.0347	0.2190
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0016	0.0143	97.5%	97.5%	population	0.0015	0.0140
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0191	0.1396	97.5%	97.5%	population	0.0186	0.1361
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0001	0.0010	97.5%	97.5%	population	0.0001	0.0010
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0008	0.0060	97.5%	97.5%	population	0.0008	0.0059
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0002	0.0013	97.5%	97.5%	population	0.0002	0.0013
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0373	0.1423	97.5%	97.5%	population	0.0364	0.1387
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0063	97.5%	97.5%	population	0.0000	0.0061
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0023	97.5%	97.5%	population	0.0000	0.0023
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0038	0.0212	97.5%	97.5%	population	0.0037	0.0207
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0040	0.0140	97.5%	97.5%	population	0.0039	0.0137
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0062	0.0210	97.5%	97.5%	population	0.0060	0.0205
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0022	0.0163	97.5%	97.5%	population	0.0022	0.0159
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0514	0.2270	97.5%	97.5%	population	0.0501	0.2214
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0540	0.1820	97.5%	97.5%	population	0.0527	0.1774
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0091	0.0193	97.5%	97.5%	population	0.0089	0.0188
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.1731	0.5321	97.5%	97.5%	population	0.1688	0.5188

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				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0021	0.0111	97.5%	97.5%	population	0.0021	0.0109
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0069	0.0349	97.5%	97.5%	population	0.0067	0.0340
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0000	0.0001	86.9%	86.9%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0003	0.0004	86.9%	86.9%	land area (1)	0.0003	0.0003
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0004	0.0007	86.9%	86.9%	land area (1)	0.0003	0.0006
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0007	0.0034	86.9%	86.9%	land area (1)	0.0006	0.0030
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0005	0.0005	86.9%	86.9%	land area (1)	0.0004	0.0004
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0006	0.0005	86.9%	86.9%	land area (1)	0.0005	0.0004
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0001	0.0001	86.9%	86.9%	land area (1)	0.0001	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0543	0.2441	97.5%	97.5%	population	0.0529	0.2380
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0142	0.0503	97.5%	97.5%	population	0.0139	0.0490
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0071	0.0208	97.5%	97.5%	population	0.0070	0.0202
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0146	0.0468	97.5%	97.5%	population	0.0142	0.0457
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0220	0.0985	97.5%	97.5%	population	0.0215	0.0960
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0010	0.0035	97.5%	97.5%	population	0.0010	0.0034
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0001	90.6%	90.6%	land area	0.0000	0.0001
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	90.6%	90.6%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0001	0.0000	90.6%	90.6%	land area	0.0001	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0004	0.0001	97.5%	97.5%	population	0.0004	0.0001
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0005	0.0001	97.5%	97.5%	population	0.0005	0.0001
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0002	0.0000	97.5%	97.5%	population	0.0002	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0003	0.0001	97.5%	97.5%	population	0.0003	0.0001
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0003	0.0001	97.5%	97.5%	population	0.0003	0.0001
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0004	0.0001	97.5%	97.5%	population	0.0004	0.0001
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0012	0.0003	97.5%	97.5%	population	0.0011	0.0003
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0006	0.0001	97.5%	97.5%	population	0.0006	0.0001
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0076	0.0016	97.5%	97.5%	population	0.0074	0.0016
2267003020	Industrial	LPG Forklifts	MOVES	0.2444	0.0363	97.5%	97.5%	population	0.2383	0.0354
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0017	0.0002	97.5%	97.5%	population	0.0016	0.0002
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0005	0.0001	97.5%	97.5%	population	0.0005	0.0001
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0003	0.0001	97.5%	97.5%	population	0.0003	0.0001

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				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0009	0.0001	97.5%	97.5%	population	0.0009	0.0001
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0037	0.0005	97.5%	97.5%	population	0.0036	0.0005
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0276	0.0046	97.5%	97.5%	population	0.0269	0.0045
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0035	0.0006	97.5%	97.5%	population	0.0034	0.0005
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0022	0.0003	97.5%	97.5%	population	0.0021	0.0003
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0028	0.0005	97.5%	97.5%	population	0.0027	0.0005
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0197	0.0105	97.5%	97.5%	population	0.0192	0.0102
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0001	0.0001	86.9%	86.9%	land area (1)	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0109	0.0065	97.5%	97.5%	population	0.0106	0.0064
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0004	0.0002	97.5%	97.5%	population	0.0004	0.0002
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0002	0.0001	97.5%	97.5%	population	0.0002	0.0001
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0046	0.0022	97.5%	97.5%	population	0.0045	0.0022
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0011	0.0003	90.6%	90.6%	land area	0.0010	0.0002
2270002003	Construction	Diesel Pavers	MOVES	0.0199	0.0011	97.5%	97.5%	population	0.0194	0.0011
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0012	0.0002	97.5%	97.5%	population	0.0011	0.0002
2270002015	Construction	Diesel Rollers	MOVES	0.0560	0.0034	97.5%	97.5%	population	0.0546	0.0033
2270002018	Construction	Diesel Scrapers	MOVES	0.0503	0.0026	97.5%	97.5%	population	0.0491	0.0025
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0038	0.0003	97.5%	97.5%	population	0.0037	0.0003
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0036	0.0002	97.5%	97.5%	population	0.0035	0.0002
2270002027	Construction	Diesel Signal Boards	MOVES	0.0106	0.0010	97.5%	97.5%	population	0.0104	0.0010
2270002030	Construction	Diesel Trenchers	MOVES	0.0372	0.0028	97.5%	97.5%	population	0.0363	0.0027
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0505	0.0037	97.5%	97.5%	population	0.0492	0.0036
2270002036	Construction	Diesel Excavators	MOVES	0.1655	0.0083	97.5%	97.5%	population	0.1614	0.0081
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0026	0.0002	97.5%	97.5%	population	0.0026	0.0002
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0021	0.0002	97.5%	97.5%	population	0.0020	0.0002
2270002045	Construction	Diesel Cranes	MOVES	0.0560	0.0030	97.5%	97.5%	population	0.0546	0.0030
2270002048	Construction	Diesel Graders	MOVES	0.0385	0.0021	97.5%	97.5%	population	0.0375	0.0020
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.2026	0.0085	97.5%	97.5%	population	0.1976	0.0083
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0124	0.0007	97.5%	97.5%	population	0.0121	0.0007

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SCC	Segment Description	SCC Description	Emissions from	Waukesha Co. 2017 Emissions		% in NAA		Allocate by	Wauk. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0800	0.0054	97.5%	97.5%	population	0.0780	0.0052
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.2773	0.0154	97.5%	97.5%	population	0.2704	0.0150
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.2652	0.0493	97.5%	97.5%	population	0.2586	0.0481
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.2038	0.0103	97.5%	97.5%	population	0.1987	0.0100
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.2026	0.0458	97.5%	97.5%	population	0.1975	0.0446
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0340	0.0017	97.5%	97.5%	population	0.0331	0.0017
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0006	0.0002	97.5%	97.5%	population	0.0006	0.0002
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0360	0.0021	97.5%	97.5%	population	0.0351	0.0021
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0178	0.0041	97.5%	97.5%	population	0.0174	0.0040
2270003020	Industrial	Diesel Forklifts	MOVES	0.1070	0.0045	97.5%	97.5%	population	0.1044	0.0044
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0545	0.0032	97.5%	97.5%	population	0.0531	0.0032
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0684	0.0048	97.5%	97.5%	population	0.0667	0.0047
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0044	0.0007	97.5%	97.5%	population	0.0043	0.0007
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0988	0.0058	97.5%	97.5%	population	0.0964	0.0057
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0499	0.0027	97.5%	97.5%	population	0.0487	0.0026
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.1075	0.0112	97.5%	97.5%	population	0.1048	0.0109
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0214	0.0024	97.5%	97.5%	population	0.0209	0.0023
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.1640	0.0139	97.5%	97.5%	population	0.1599	0.0136
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0118	0.0008	97.5%	97.5%	population	0.0115	0.0008
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0005	0.0001	97.5%	97.5%	population	0.0005	0.0001
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0991	0.0079	86.9%	86.9%	land area (1)	0.0862	0.0069
2270005020	Agriculture	Diesel Combines	MOVES	0.0151	0.0012	86.9%	86.9%	land area (1)	0.0131	0.0011
2270005025	Agriculture	Diesel Balers	MOVES	0.0001	0.0000	86.9%	86.9%	land area (1)	0.0001	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0012	0.0001	86.9%	86.9%	land area (1)	0.0011	0.0001
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0011	0.0001	86.9%	86.9%	land area (1)	0.0009	0.0001
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0026	0.0002	86.9%	86.9%	land area (1)	0.0023	0.0002
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0009	0.0001	86.9%	86.9%	land area (1)	0.0008	0.0001
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.1685	0.0178	97.5%	97.5%	population	0.1643	0.0173
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0400	0.0042	97.5%	97.5%	population	0.0390	0.0041
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0802	0.0060	97.5%	97.5%	population	0.0782	0.0058
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0526	0.0117	97.5%	97.5%	population	0.0513	0.0114
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0056	0.0006	97.5%	97.5%	population	0.0054	0.0006
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0036	0.0003	97.5%	97.5%	population	0.0035	0.0003
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0007	0.0000	90.6%	90.6%	land area	0.0006	0.0000
2275000000	Airport	All Airport	2017NEI	0.0121	0.0161	99.7%	99.5%	airport location	0.0121	0.0160

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

SCC	Segment Description	SCC Description	Emissions from	Waukesha Co. 2017 Emissions		% in NAA		Allocate by	Wauk. Co. NAA 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2017NEI	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2017NEI	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.1081	0.6890	94.0%	94.0%	water area	0.1016	0.6476
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0481	0.1244	94.0%	94.0%	water area	0.0452	0.1170
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0672	0.0646	94.0%	94.0%	water area	0.0631	0.0607
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0642	0.0033	94.0%	94.0%	water area	0.0603	0.0031
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0002	0.0000	94.0%	94.0%	water area	0.0002	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2017NEI	1.3590	0.0631	97.0%	97.0%	track miles	1.3182	0.0612
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0017	0.0003	97.0%	97.0%	track miles	0.0017	0.0003
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0001	97.0%	97.0%	track miles	0.0000	0.0001
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	97.0%	97.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		5.6583	5.4959	96.9%	96.7%		5.4853	5.3119
22xx005xxx	Agriculture	All	MOVES	0.1229	0.0156	86.9%	86.9%	land area (1)	0.1068	0.0136
22750xxxxx	Airport	All	2017NEI	0.0121	0.0161	99.7%	99.5%	airport location	0.0121	0.0160
22xx006xxx	Commercial	All	MOVES	0.5187	0.5899	97.5%	97.5%	population	0.5058	0.5751
2280002xxx	Comm. Mar	All	2017NEI	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
22xx002xxx	Construction	All	MOVES	1.8343	0.3082	97.5%	97.5%	population	1.7885	0.3005
22xx003xxx	Industrial	All	MOVES	0.7104	0.1252	97.5%	97.5%	population	0.6926	0.1221
22xx004xxx	Lawn/Garden	All	MOVES	0.7847	3.2918	97.5%	97.5%	population	0.7651	3.2095
22xx007xxx	Logging	All	MOVES	0.0007	0.0004	90.6%	90.6%	land area	0.0006	0.0003
22820xxxxx	Pleasure Craft	All	MOVES	0.2877	0.8813	94.0%	94.0%	water area	0.2705	0.8284
228500200x	Railroad	All	2017NEI	1.3590	0.0631	97.0%	97.0%	track miles	1.3182	0.0612
228500x015	Railway Maint.	All	MOVES	0.0018	0.0004	97.0%	97.0%	track miles	0.0017	0.0004
22xx001xxx	Recreational	All	MOVES	0.0259	0.2040	90.6%	90.6%	land area	0.0235	0.1848
ALL (Total)	ALL (Total)	ALL (Total)		5.6583	5.4959	96.9%	96.7%		5.4853	5.3119

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

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Table A6.6. 2023 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Milwaukee County

SCC	Segment Description	SCC Description	Emissions from	Milwaukee Co. 2023 Emissions		% in NAA		Allocate by	Milw. Co. NAA 2023 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0009	0.0652	100.0%	100.0%	land area	0.0009	0.0652
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0004	0.0074	100.0%	100.0%	land area	0.0004	0.0074
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0011	100.0%	100.0%	land area	0.0003	0.0011
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0008	0.0306	100.0%	100.0%	population	0.0008	0.0306
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0001	0.0011	100.0%	100.0%	population	0.0001	0.0011
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0001	0.0013	100.0%	100.0%	population	0.0001	0.0013
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0020	0.0779	100.0%	100.0%	population	0.0020	0.0779
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0003	100.0%	100.0%	population	0.0000	0.0003
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0001	0.0021	100.0%	100.0%	population	0.0001	0.0021
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0002	100.0%	100.0%	population	0.0000	0.0002
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0004	0.0090	100.0%	100.0%	population	0.0004	0.0090
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0017	0.0351	100.0%	100.0%	population	0.0017	0.0351
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0026	0.0899	100.0%	100.0%	population	0.0026	0.0899
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0089	0.3990	100.0%	100.0%	population	0.0089	0.3990
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0073	0.1790	100.0%	100.0%	population	0.0073	0.1790
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0157	0.3998	100.0%	100.0%	population	0.0157	0.3998
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0047	0.1102	100.0%	100.0%	population	0.0047	0.1102
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0146	0.4002	100.0%	100.0%	population	0.0146	0.4002
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0066	100.0%	100.0%	population	0.0000	0.0066
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0008	100.0%	100.0%	population	0.0000	0.0008
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0004	0.0095	100.0%	100.0%	population	0.0004	0.0095
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0024	0.0662	100.0%	100.0%	population	0.0024	0.0662
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0004	100.0%	100.0%	population	0.0000	0.0004
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0001	100.0%	100.0%	land area	0.0000	0.0001
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0004	0.0031	100.0%	100.0%	land area	0.0004	0.0031
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0031	0.0320	100.0%	100.0%	land area	0.0031	0.0320
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0063	0.0214	100.0%	100.0%	land area	0.0063	0.0214
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0011	100.0%	100.0%	land area	0.0003	0.0011
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0005	0.0014	100.0%	100.0%	population	0.0005	0.0014
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0009	0.0036	100.0%	100.0%	population	0.0009	0.0036
2265002015	Construction	4-Stroke Rollers	MOVES	0.0009	0.0025	100.0%	100.0%	population	0.0009	0.0025

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SCC	Segment Description	SCC Description	Emissions from	Milwaukee Co. 2023 Emissions		% in NAA		Allocate by	Milw. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0017	0.0066	100.0%	100.0%	population	0.0017	0.0066
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0007	0.0026	100.0%	100.0%	population	0.0007	0.0026
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0015	0.0046	100.0%	100.0%	population	0.0015	0.0046
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0008	0.0021	100.0%	100.0%	population	0.0008	0.0021
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0033	0.0102	100.0%	100.0%	population	0.0033	0.0102
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0015	0.0074	100.0%	100.0%	population	0.0015	0.0074
2265002045	Construction	4-Stroke Cranes	MOVES	0.0002	0.0002	100.0%	100.0%	population	0.0002	0.0002
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0002	0.0007	100.0%	100.0%	population	0.0002	0.0007
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0002	0.0001	100.0%	100.0%	population	0.0002	0.0001
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0004	0.0002	100.0%	100.0%	population	0.0004	0.0002
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0010	0.0032	100.0%	100.0%	population	0.0010	0.0032
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0009	0.0015	100.0%	100.0%	population	0.0009	0.0015
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0002	0.0012	100.0%	100.0%	population	0.0002	0.0012
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0003	0.0002	100.0%	100.0%	population	0.0003	0.0002
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0085	0.0118	100.0%	100.0%	population	0.0085	0.0118
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0220	0.0134	100.0%	100.0%	population	0.0220	0.0134
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0053	0.0105	100.0%	100.0%	population	0.0053	0.0105
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0111	0.0415	100.0%	100.0%	population	0.0111	0.0415
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0005	0.0009	100.0%	100.0%	population	0.0005	0.0009
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0002	0.0006	100.0%	100.0%	population	0.0002	0.0006
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0020	0.0012	100.0%	100.0%	population	0.0020	0.0012
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0456	0.3695	100.0%	100.0%	population	0.0456	0.3695
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0328	0.2069	100.0%	100.0%	population	0.0328	0.2069
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0039	0.0337	100.0%	100.0%	population	0.0039	0.0337
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0169	0.1215	100.0%	100.0%	population	0.0169	0.1215
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0003	0.0027	100.0%	100.0%	population	0.0003	0.0027
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0008	0.0055	100.0%	100.0%	population	0.0008	0.0055
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0005	0.0034	100.0%	100.0%	population	0.0005	0.0034
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0305	0.1285	100.0%	100.0%	population	0.0305	0.1285
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0150	100.0%	100.0%	population	0.0000	0.0150
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0019	100.0%	100.0%	population	0.0000	0.0019
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0092	0.0519	100.0%	100.0%	population	0.0092	0.0519
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0036	0.0128	100.0%	100.0%	population	0.0036	0.0128
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0044	0.0157	100.0%	100.0%	population	0.0044	0.0157
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0019	0.0139	100.0%	100.0%	population	0.0019	0.0139
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.1230	0.5637	100.0%	100.0%	population	0.1230	0.5637
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0490	0.1665	100.0%	100.0%	population	0.0490	0.1665
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0079	0.0175	100.0%	100.0%	population	0.0079	0.0175
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.1586	0.4886	100.0%	100.0%	population	0.1586	0.4886

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

SCC	Segment Description	SCC Description	Emissions from	Milwaukee Co. 2023 Emissions		% in NAA		Allocate by	Milw. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0046	0.0239	100.0%	100.0%	population	0.0046	0.0239
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0051	0.0251	100.0%	100.0%	population	0.0051	0.0251
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0000	0.0001	100.0%	100.0%	land area (1)	0.0000	0.0001
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0509	0.2338	100.0%	100.0%	population	0.0509	0.2338
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0136	0.0534	100.0%	100.0%	population	0.0136	0.0534
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0069	0.0220	100.0%	100.0%	population	0.0069	0.0220
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0147	0.0501	100.0%	100.0%	population	0.0147	0.0501
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0230	0.1043	100.0%	100.0%	population	0.0230	0.1043
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0011	0.0038	100.0%	100.0%	population	0.0011	0.0038
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0001	0.0000	100.0%	100.0%	land area	0.0001	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0003	0.0000	100.0%	100.0%	population	0.0003	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0004	0.0001	100.0%	100.0%	population	0.0004	0.0001
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0004	0.0000	100.0%	100.0%	population	0.0004	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0006	0.0001	100.0%	100.0%	population	0.0006	0.0001
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0003	0.0001	100.0%	100.0%	population	0.0003	0.0001
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0066	0.0012	100.0%	100.0%	population	0.0066	0.0012
2267003020	Industrial	LPG Forklifts	MOVES	0.3482	0.0408	100.0%	100.0%	population	0.3482	0.0408
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0027	0.0003	100.0%	100.0%	population	0.0027	0.0003
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0008	0.0001	100.0%	100.0%	population	0.0008	0.0001
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0003	0.0000	100.0%	100.0%	population	0.0003	0.0000

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SCC	Segment Description	SCC Description	Emissions from	Milwaukee Co. 2023 Emissions		% in NAA		Allocate by	Milw. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0016	0.0002	100.0%	100.0%	population	0.0016	0.0002
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0029	0.0003	100.0%	100.0%	population	0.0029	0.0003
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0169	0.0027	100.0%	100.0%	population	0.0169	0.0027
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0020	0.0003	100.0%	100.0%	population	0.0020	0.0003
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0014	0.0002	100.0%	100.0%	population	0.0014	0.0002
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0018	0.0002	100.0%	100.0%	population	0.0018	0.0002
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0283	0.0121	100.0%	100.0%	population	0.0283	0.0121
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0001	0.0001	100.0%	100.0%	population	0.0001	0.0001
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0069	0.0040	100.0%	100.0%	population	0.0069	0.0040
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0002	0.0001	100.0%	100.0%	population	0.0002	0.0001
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0001	0.0001	100.0%	100.0%	population	0.0001	0.0001
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0050	0.0024	100.0%	100.0%	population	0.0050	0.0024
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0008	0.0002	100.0%	100.0%	land area	0.0008	0.0002
2270002003	Construction	Diesel Pavers	MOVES	0.0114	0.0005	100.0%	100.0%	population	0.0114	0.0005
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0013	0.0002	100.0%	100.0%	population	0.0013	0.0002
2270002015	Construction	Diesel Rollers	MOVES	0.0369	0.0017	100.0%	100.0%	population	0.0369	0.0017
2270002018	Construction	Diesel Scrapers	MOVES	0.0207	0.0011	100.0%	100.0%	population	0.0207	0.0011
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0026	0.0002	100.0%	100.0%	population	0.0026	0.0002
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0025	0.0001	100.0%	100.0%	population	0.0025	0.0001
2270002027	Construction	Diesel Signal Boards	MOVES	0.0110	0.0010	100.0%	100.0%	population	0.0110	0.0010
2270002030	Construction	Diesel Trenchers	MOVES	0.0286	0.0013	100.0%	100.0%	population	0.0286	0.0013
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0380	0.0025	100.0%	100.0%	population	0.0380	0.0025
2270002036	Construction	Diesel Excavators	MOVES	0.0652	0.0030	100.0%	100.0%	population	0.0652	0.0030
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0021	0.0001	100.0%	100.0%	population	0.0021	0.0001
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0017	0.0002	100.0%	100.0%	population	0.0017	0.0002
2270002045	Construction	Diesel Cranes	MOVES	0.0249	0.0013	100.0%	100.0%	population	0.0249	0.0013
2270002048	Construction	Diesel Graders	MOVES	0.0123	0.0007	100.0%	100.0%	population	0.0123	0.0007
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.1628	0.0039	100.0%	100.0%	population	0.1628	0.0039
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0069	0.0003	100.0%	100.0%	population	0.0069	0.0003

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SCC	Segment Description	SCC Description	Emissions from	Milwaukee Co. 2023 Emissions		% in NAA		Allocate by	Milw. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0544	0.0024	100.0%	100.0%	population	0.0544	0.0024
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.1408	0.0065	100.0%	100.0%	population	0.1408	0.0065
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.1640	0.0250	100.0%	100.0%	population	0.1640	0.0250
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.1037	0.0044	100.0%	100.0%	population	0.1037	0.0044
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.1755	0.0303	100.0%	100.0%	population	0.1755	0.0303
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0221	0.0008	100.0%	100.0%	population	0.0221	0.0008
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0006	0.0001	100.0%	100.0%	population	0.0006	0.0001
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0189	0.0011	100.0%	100.0%	population	0.0189	0.0011
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0228	0.0037	100.0%	100.0%	population	0.0228	0.0037
2270003020	Industrial	Diesel Forklifts	MOVES	0.1105	0.0022	100.0%	100.0%	population	0.1105	0.0022
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0426	0.0017	100.0%	100.0%	population	0.0426	0.0017
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0524	0.0027	100.0%	100.0%	population	0.0524	0.0027
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0045	0.0007	100.0%	100.0%	population	0.0045	0.0007
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.2660	0.0092	100.0%	100.0%	population	0.2660	0.0092
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0246	0.0010	100.0%	100.0%	population	0.0246	0.0010
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0837	0.0070	100.0%	100.0%	population	0.0837	0.0070
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0181	0.0017	100.0%	100.0%	population	0.0181	0.0017
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.1100	0.0084	100.0%	100.0%	population	0.1100	0.0084
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0073	0.0004	100.0%	100.0%	population	0.0073	0.0004
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0004	0.0000	100.0%	100.0%	population	0.0004	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0027	0.0002	100.0%	100.0%	land area (1)	0.0027	0.0002
2270005020	Agriculture	Diesel Combines	MOVES	0.0005	0.0000	100.0%	100.0%	land area (1)	0.0005	0.0000
2270005025	Agriculture	Diesel Balers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0001	0.0000	100.0%	100.0%	land area (1)	0.0001	0.0000
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.1336	0.0119	100.0%	100.0%	population	0.1336	0.0119
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0315	0.0028	100.0%	100.0%	population	0.0315	0.0028
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0533	0.0026	100.0%	100.0%	population	0.0533	0.0026
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0444	0.0069	100.0%	100.0%	population	0.0444	0.0069
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0044	0.0004	100.0%	100.0%	population	0.0044	0.0004
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0025	0.0001	100.0%	100.0%	population	0.0025	0.0001
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2275000000	Airport	All Airport	2022EMP	0.7231	0.1478	100.0%	100.0%	airport location	0.7231	0.1478

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SCC	Segment Description	SCC Description	Emissions from	Milwaukee Co. 2023 Emissions		% in NAA		Allocate by	Milw. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2022EMP	0.5795	0.0183	100.0%	100.0%	Lk. Mich. Shoreline	0.5795	0.0183
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2022EMP	0.1880	0.0085	100.0%	100.0%	Lk. Mich. Shoreline	0.1880	0.0085
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0366	0.1208	100.0%	100.0%	water area	0.0366	0.1208
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0174	0.0218	100.0%	100.0%	water area	0.0174	0.0218
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.1042	0.1097	100.0%	100.0%	water area	0.1042	0.1097
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.1323	0.0081	100.0%	100.0%	water area	0.1323	0.0081
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0001	0.0000	100.0%	100.0%	water area	0.0001	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2022EMP	0.5559	0.0229	100.0%	100.0%	track miles	0.5559	0.0229
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0022	0.0003	100.0%	100.0%	track miles	0.0022	0.0003
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0002	100.0%	100.0%	track miles	0.0000	0.0002
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	100.0%	100.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		5.6408	5.4911	100.0%	100.0%		5.6408	5.4911
22xx005xxx	Agriculture	All	MOVES	0.0034	0.0004	100.0%	100.0%	land area (1)	0.0034	0.0004
22750xxxxx	Airport	All	2022EMP	0.7231	0.1478	100.0%	100.0%	airport location	0.7231	0.1478
22xx006xxx	Commercial	All	MOVES	0.4173	0.5784	100.0%	100.0%	population	0.4173	0.5784
2280002xxx	Comm. Mar	All	2022EMP	0.7674	0.0269	100.0%	100.0%	Lk. Mich. Shoreline	0.7674	0.0269
22xx002xxx	Construction	All	MOVES	1.1297	0.2486	100.0%	100.0%	population	1.1297	0.2486
22xx003xxx	Industrial	All	MOVES	0.9618	0.1580	100.0%	100.0%	population	0.9618	0.1580
22xx004xxx	Lawn/Garden	All	MOVES	0.7768	3.9157	100.0%	100.0%	population	0.7768	3.9157
22xx007xxx	Logging	All	MOVES	0.0000	0.0001	100.0%	100.0%	land area	0.0000	0.0001
22820xxxxx	Pleasure Craft	All	MOVES	0.2906	0.2604	100.0%	100.0%	water area	0.2906	0.2604
228500200x	Railroad	All	2022EMP	0.5559	0.0229	100.0%	100.0%	track miles	0.5559	0.0229
228500x015	Railway Maint.	All	MOVES	0.0023	0.0005	100.0%	100.0%	track miles	0.0023	0.0005
22xx001xxx	Recreational	All	MOVES	0.0125	0.1314	100.0%	100.0%	land area	0.0125	0.1314
ALL (Total)	ALL (Total)	ALL (Total)		5.6408	5.4911	100.0%	100.0%		5.6408	5.4911

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

**Table A6.7. 2023 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Ozaukee County**

SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2023 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2023 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0007	0.0282	100.0%	100.0%	population	0.0007	0.0282
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0010	100.0%	100.0%	population	0.0000	0.0010
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0001	0.0012	100.0%	100.0%	population	0.0001	0.0012
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0018	0.0716	100.0%	100.0%	population	0.0018	0.0716
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0002	100.0%	100.0%	population	0.0000	0.0002
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0004	100.0%	100.0%	population	0.0000	0.0004
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0000	0.0007	100.0%	100.0%	population	0.0000	0.0007
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0003	0.0057	100.0%	100.0%	population	0.0003	0.0057
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0002	0.0075	100.0%	100.0%	population	0.0002	0.0075
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0014	0.0648	100.0%	100.0%	population	0.0014	0.0648
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0006	0.0148	100.0%	100.0%	population	0.0006	0.0148
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0025	0.0649	100.0%	100.0%	population	0.0025	0.0649
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0004	0.0091	100.0%	100.0%	population	0.0004	0.0091
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0024	0.0650	100.0%	100.0%	population	0.0024	0.0650
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0006	100.0%	100.0%	population	0.0000	0.0006
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0001	100.0%	100.0%	land area (1)	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0001	0.0016	100.0%	100.0%	population	0.0001	0.0016
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0004	0.0113	100.0%	100.0%	population	0.0004	0.0113
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0001	100.0%	100.0%	land area	0.0000	0.0001
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0049	0.0166	100.0%	100.0%	land area	0.0049	0.0166
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0004	0.0013	100.0%	100.0%	population	0.0004	0.0013
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0008	0.0033	100.0%	100.0%	population	0.0008	0.0033
2265002015	Construction	4-Stroke Rollers	MOVES	0.0008	0.0023	100.0%	100.0%	population	0.0008	0.0023

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				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0016	0.0060	100.0%	100.0%	population	0.0016	0.0060
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0007	0.0024	100.0%	100.0%	population	0.0007	0.0024
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0014	0.0042	100.0%	100.0%	population	0.0014	0.0042
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0007	0.0019	100.0%	100.0%	population	0.0007	0.0019
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0030	0.0094	100.0%	100.0%	population	0.0030	0.0094
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0014	0.0068	100.0%	100.0%	population	0.0014	0.0068
2265002045	Construction	4-Stroke Cranes	MOVES	0.0002	0.0001	100.0%	100.0%	population	0.0002	0.0001
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0002	0.0006	100.0%	100.0%	population	0.0002	0.0006
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0002	0.0001	100.0%	100.0%	population	0.0002	0.0001
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0003	0.0002	100.0%	100.0%	population	0.0003	0.0002
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0010	0.0030	100.0%	100.0%	population	0.0010	0.0030
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0008	0.0014	100.0%	100.0%	population	0.0008	0.0014
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0002	0.0011	100.0%	100.0%	population	0.0002	0.0011
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0003	0.0002	100.0%	100.0%	population	0.0003	0.0002
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0015	0.0021	100.0%	100.0%	population	0.0015	0.0021
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0038	0.0023	100.0%	100.0%	population	0.0038	0.0023
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0009	0.0018	100.0%	100.0%	population	0.0009	0.0018
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0019	0.0072	100.0%	100.0%	population	0.0019	0.0072
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0001	0.0001	100.0%	100.0%	population	0.0001	0.0001
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0003	0.0002	100.0%	100.0%	population	0.0003	0.0002
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0038	0.0306	100.0%	100.0%	population	0.0038	0.0306
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0053	0.0336	100.0%	100.0%	population	0.0053	0.0336
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0003	0.0028	100.0%	100.0%	population	0.0003	0.0028
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0027	0.0197	100.0%	100.0%	population	0.0027	0.0197
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0000	0.0002	100.0%	100.0%	population	0.0000	0.0002
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0001	0.0009	100.0%	100.0%	population	0.0001	0.0009
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0000	0.0003	100.0%	100.0%	population	0.0000	0.0003
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0050	0.0209	100.0%	100.0%	population	0.0050	0.0209
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0012	100.0%	100.0%	population	0.0000	0.0012
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0003	100.0%	100.0%	population	0.0000	0.0003
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0008	0.0043	100.0%	100.0%	population	0.0008	0.0043
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0006	0.0021	100.0%	100.0%	population	0.0006	0.0021
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0007	0.0025	100.0%	100.0%	population	0.0007	0.0025
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0003	0.0023	100.0%	100.0%	population	0.0003	0.0023
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0102	0.0468	100.0%	100.0%	population	0.0102	0.0468
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0080	0.0270	100.0%	100.0%	population	0.0080	0.0270
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0013	0.0028	100.0%	100.0%	population	0.0013	0.0028
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0257	0.0793	100.0%	100.0%	population	0.0257	0.0793

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				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0004	0.0020	100.0%	100.0%	population	0.0004	0.0020
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0008	0.0041	100.0%	100.0%	population	0.0008	0.0041
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0002	0.0002	100.0%	100.0%	land area (1)	0.0002	0.0002
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0002	0.0004	100.0%	100.0%	land area (1)	0.0002	0.0004
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0004	0.0017	100.0%	100.0%	land area (1)	0.0004	0.0017
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0002	0.0002	100.0%	100.0%	land area (1)	0.0002	0.0002
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0003	0.0003	100.0%	100.0%	land area (1)	0.0003	0.0003
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0087	0.0398	100.0%	100.0%	population	0.0087	0.0398
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0023	0.0091	100.0%	100.0%	population	0.0023	0.0091
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0012	0.0037	100.0%	100.0%	population	0.0012	0.0037
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0025	0.0085	100.0%	100.0%	population	0.0025	0.0085
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0039	0.0177	100.0%	100.0%	population	0.0039	0.0177
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0002	0.0007	100.0%	100.0%	population	0.0002	0.0007
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0004	0.0001	100.0%	100.0%	population	0.0004	0.0001
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0003	0.0000	100.0%	100.0%	population	0.0003	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0005	0.0001	100.0%	100.0%	population	0.0005	0.0001
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0003	0.0000	100.0%	100.0%	population	0.0003	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0011	0.0002	100.0%	100.0%	population	0.0011	0.0002
2267003020	Industrial	LPG Forklifts	MOVES	0.0606	0.0071	100.0%	100.0%	population	0.0606	0.0071
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0005	0.0001	100.0%	100.0%	population	0.0005	0.0001
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000

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				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0003	0.0000	100.0%	100.0%	population	0.0003	0.0000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0005	0.0001	100.0%	100.0%	population	0.0005	0.0001
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0029	0.0005	100.0%	100.0%	population	0.0029	0.0005
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0003	0.0000	100.0%	100.0%	population	0.0003	0.0000
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0003	0.0000	100.0%	100.0%	population	0.0003	0.0000
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0049	0.0021	100.0%	100.0%	population	0.0049	0.0021
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0001	0.0000	100.0%	100.0%	land area (1)	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0012	0.0007	100.0%	100.0%	population	0.0012	0.0007
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0009	0.0004	100.0%	100.0%	population	0.0009	0.0004
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2270002003	Construction	Diesel Pavers	MOVES	0.0105	0.0004	100.0%	100.0%	population	0.0105	0.0004
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0012	0.0002	100.0%	100.0%	population	0.0012	0.0002
2270002015	Construction	Diesel Rollers	MOVES	0.0339	0.0015	100.0%	100.0%	population	0.0339	0.0015
2270002018	Construction	Diesel Scrapers	MOVES	0.0190	0.0010	100.0%	100.0%	population	0.0190	0.0010
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0023	0.0001	100.0%	100.0%	population	0.0023	0.0001
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0023	0.0001	100.0%	100.0%	population	0.0023	0.0001
2270002027	Construction	Diesel Signal Boards	MOVES	0.0101	0.0009	100.0%	100.0%	population	0.0101	0.0009
2270002030	Construction	Diesel Trenchers	MOVES	0.0263	0.0012	100.0%	100.0%	population	0.0263	0.0012
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0349	0.0023	100.0%	100.0%	population	0.0349	0.0023
2270002036	Construction	Diesel Excavators	MOVES	0.0599	0.0028	100.0%	100.0%	population	0.0599	0.0028
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0020	0.0001	100.0%	100.0%	population	0.0020	0.0001
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0016	0.0002	100.0%	100.0%	population	0.0016	0.0002
2270002045	Construction	Diesel Cranes	MOVES	0.0229	0.0012	100.0%	100.0%	population	0.0229	0.0012
2270002048	Construction	Diesel Graders	MOVES	0.0113	0.0006	100.0%	100.0%	population	0.0113	0.0006
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.1496	0.0036	100.0%	100.0%	population	0.1496	0.0036
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0064	0.0003	100.0%	100.0%	population	0.0064	0.0003

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2023 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0500	0.0022	100.0%	100.0%	population	0.0500	0.0022
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.1294	0.0059	100.0%	100.0%	population	0.1294	0.0059
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.1507	0.0230	100.0%	100.0%	population	0.1507	0.0230
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0953	0.0040	100.0%	100.0%	population	0.0953	0.0040
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.1613	0.0279	100.0%	100.0%	population	0.1613	0.0279
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0203	0.0008	100.0%	100.0%	population	0.0203	0.0008
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0005	0.0001	100.0%	100.0%	population	0.0005	0.0001
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0174	0.0010	100.0%	100.0%	population	0.0174	0.0010
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0040	0.0006	100.0%	100.0%	population	0.0040	0.0006
2270003020	Industrial	Diesel Forklifts	MOVES	0.0192	0.0004	100.0%	100.0%	population	0.0192	0.0004
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0074	0.0003	100.0%	100.0%	population	0.0074	0.0003
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0091	0.0005	100.0%	100.0%	population	0.0091	0.0005
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0008	0.0001	100.0%	100.0%	population	0.0008	0.0001
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0239	0.0008	100.0%	100.0%	population	0.0239	0.0008
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0043	0.0002	100.0%	100.0%	population	0.0043	0.0002
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0136	0.0011	100.0%	100.0%	population	0.0136	0.0011
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0029	0.0003	100.0%	100.0%	population	0.0029	0.0003
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0179	0.0014	100.0%	100.0%	population	0.0179	0.0014
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0012	0.0001	100.0%	100.0%	population	0.0012	0.0001
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0397	0.0026	100.0%	100.0%	land area (1)	0.0397	0.0026
2270005020	Agriculture	Diesel Combines	MOVES	0.0066	0.0005	100.0%	100.0%	land area (1)	0.0066	0.0005
2270005025	Agriculture	Diesel Balers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0005	0.0001	100.0%	100.0%	land area (1)	0.0005	0.0001
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0005	0.0001	100.0%	100.0%	land area (1)	0.0005	0.0001
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0009	0.0001	100.0%	100.0%	land area (1)	0.0009	0.0001
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0004	0.0000	100.0%	100.0%	land area (1)	0.0004	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0227	0.0020	100.0%	100.0%	population	0.0227	0.0020
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0054	0.0005	100.0%	100.0%	population	0.0054	0.0005
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0091	0.0004	100.0%	100.0%	population	0.0091	0.0004
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0076	0.0012	100.0%	100.0%	population	0.0076	0.0012
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0007	0.0001	100.0%	100.0%	population	0.0007	0.0001
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0004	0.0000	100.0%	100.0%	population	0.0004	0.0000
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2275000000	Airport	All Airport	2022EMP	0.0003	0.0007	100.0%	100.0%	airport location	0.0003	0.0007

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SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2023 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2022EMP	0.0945	0.0031	100.0%	100.0%	Lk. Mich. Shoreline	0.0945	0.0031
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2022EMP	0.0423	0.0017	100.0%	100.0%	Lk. Mich. Shoreline	0.0423	0.0017
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0105	0.0345	100.0%	100.0%	water area	0.0105	0.0345
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0050	0.0062	100.0%	100.0%	water area	0.0050	0.0062
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0044	0.0046	100.0%	100.0%	water area	0.0044	0.0046
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0056	0.0003	100.0%	100.0%	water area	0.0056	0.0003
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0000	0.0000	100.0%	100.0%	water area	0.0000	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2022EMP	0.0666	0.0030	100.0%	100.0%	track miles	0.0666	0.0030
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0003	0.0000	100.0%	100.0%	track miles	0.0003	0.0000
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0000	100.0%	100.0%	track miles	0.0000	0.0000
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	100.0%	100.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		1.6488	0.9507	100.0%	100.0%		1.6488	0.9507
22xx005xxx	Agriculture	All	MOVES	0.0501	0.0063	100.0%	100.0%	land area (1)	0.0501	0.0063
22750xxxxx	Airport	All	2022EMP	0.0003	0.0007	100.0%	100.0%	airport location	0.0003	0.0007
22xx006xxx	Commercial	All	MOVES	0.0710	0.0984	100.0%	100.0%	population	0.0710	0.0984
2280002xxx	Comm. Mar	All	2022EMP	0.1368	0.0048	100.0%	100.0%	Lk. Mich. Shoreline	0.1368	0.0048
22xx002xxx	Construction	All	MOVES	1.0383	0.2285	100.0%	100.0%	population	1.0383	0.2285
22xx003xxx	Industrial	All	MOVES	0.1451	0.0267	100.0%	100.0%	population	0.1451	0.0267
22xx004xxx	Lawn/Garden	All	MOVES	0.1101	0.5199	100.0%	100.0%	population	0.1101	0.5199
22xx007xxx	Logging	All	MOVES	0.0000	0.0001	100.0%	100.0%	land area	0.0000	0.0001
22820xxxxx	Pleasure Craft	All	MOVES	0.0254	0.0457	100.0%	100.0%	water area	0.0254	0.0457
228500200x	Railroad	All	2022EMP	0.0666	0.0030	100.0%	100.0%	track miles	0.0666	0.0030
228500x015	Railway Maint.	All	MOVES	0.0003	0.0001	100.0%	100.0%	track miles	0.0003	0.0001
22xx001xxx	Recreational	All	MOVES	0.0049	0.0166	100.0%	100.0%	land area	0.0049	0.0166
ALL (Total)	ALL (Total)	ALL (Total)		1.6488	0.9507	100.0%	100.0%		1.6488	0.9507

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

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**Table A6.8. 2023 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Racine County and the Portion of the County within the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA)**

SCC	Segment Description	SCC Description	Emissions from	Racine Co. 2023 Emissions		% in NAA		Allocate by	Rac. Co. NAA 2023 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0006	0.0435	57.1%	57.1%	land area	0.0003	0.0248
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0003	0.0049	57.1%	57.1%	land area	0.0002	0.0028
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0002	0.0007	57.1%	57.1%	land area	0.0001	0.0004
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0002	0.0100	77.2%	77.2%	population	0.0002	0.0077
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0004	77.2%	77.2%	population	0.0000	0.0003
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0004	77.2%	77.2%	population	0.0000	0.0003
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0007	0.0255	77.2%	77.2%	population	0.0005	0.0197
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0001	77.2%	77.2%	population	0.0000	0.0001
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0005	77.2%	77.2%	population	0.0000	0.0004
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0001	0.0017	77.2%	77.2%	population	0.0001	0.0013
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0003	0.0053	77.2%	77.2%	population	0.0002	0.0041
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0005	0.0171	77.2%	77.2%	population	0.0004	0.0132
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0013	0.0603	77.2%	77.2%	population	0.0010	0.0465
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0014	0.0340	77.2%	77.2%	population	0.0011	0.0262
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0024	0.0604	77.2%	77.2%	population	0.0018	0.0466
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0009	0.0209	77.2%	77.2%	population	0.0007	0.0162
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0022	0.0605	77.2%	77.2%	population	0.0017	0.0467
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0013	77.2%	77.2%	population	0.0000	0.0010
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0001	77.2%	77.2%	population	0.0000	0.0001
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0002	55.3%	55.3%	land area (1)	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0001	0.0018	77.2%	77.2%	population	0.0001	0.0014
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0005	0.0123	77.2%	77.2%	population	0.0004	0.0095
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0001	77.2%	77.2%	population	0.0000	0.0001
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0003	0.0021	57.1%	57.1%	land area	0.0002	0.0012
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0021	0.0214	57.1%	57.1%	land area	0.0012	0.0122
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0070	0.0238	57.1%	57.1%	land area	0.0040	0.0136
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0002	0.0007	57.1%	57.1%	land area	0.0001	0.0004
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0002	0.0005	77.2%	77.2%	population	0.0001	0.0004
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0003	0.0012	77.2%	77.2%	population	0.0002	0.0009
2265002015	Construction	4-Stroke Rollers	MOVES	0.0003	0.0008	77.2%	77.2%	population	0.0002	0.0006

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SCC	Segment Description	SCC Description	Emissions from	Racine Co. 2023 Emissions		% in NAA		Allocate by	Rac. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0006	0.0021	77.2%	77.2%	population	0.0004	0.0017
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0002	0.0009	77.2%	77.2%	population	0.0002	0.0007
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0005	0.0015	77.2%	77.2%	population	0.0004	0.0012
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0003	0.0007	77.2%	77.2%	population	0.0002	0.0005
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0011	0.0033	77.2%	77.2%	population	0.0008	0.0026
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0005	0.0024	77.2%	77.2%	population	0.0004	0.0019
2265002045	Construction	4-Stroke Cranes	MOVES	0.0001	0.0001	77.2%	77.2%	population	0.0000	0.0000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0001	0.0002	77.2%	77.2%	population	0.0001	0.0002
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0001	0.0000	77.2%	77.2%	population	0.0000	0.0000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0001	0.0001	77.2%	77.2%	population	0.0001	0.0001
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0003	0.0011	77.2%	77.2%	population	0.0003	0.0008
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0003	0.0005	77.2%	77.2%	population	0.0002	0.0004
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0001	0.0004	77.2%	77.2%	population	0.0001	0.0003
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0001	0.0001	77.2%	77.2%	population	0.0001	0.0000
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0022	0.0031	77.2%	77.2%	population	0.0017	0.0024
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0058	0.0035	77.2%	77.2%	population	0.0044	0.0027
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0014	0.0027	77.2%	77.2%	population	0.0011	0.0021
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0029	0.0109	77.2%	77.2%	population	0.0022	0.0084
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0001	0.0002	77.2%	77.2%	population	0.0001	0.0002
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	77.2%	77.2%	population	0.0000	0.0001
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0005	0.0003	77.2%	77.2%	population	0.0004	0.0002
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0087	0.0701	77.2%	77.2%	population	0.0067	0.0542
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0050	0.0313	77.2%	77.2%	population	0.0038	0.0241
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0007	0.0064	77.2%	77.2%	population	0.0006	0.0049
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0025	0.0184	77.2%	77.2%	population	0.0020	0.0142
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0000	0.0005	77.2%	77.2%	population	0.0000	0.0004
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0001	0.0008	77.2%	77.2%	population	0.0001	0.0006
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0001	0.0006	77.2%	77.2%	population	0.0001	0.0005
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0046	0.0194	77.2%	77.2%	population	0.0036	0.0150
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0028	77.2%	77.2%	population	0.0000	0.0022
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0003	77.2%	77.2%	population	0.0000	0.0002
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0017	0.0098	77.2%	77.2%	population	0.0013	0.0076
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0005	0.0019	77.2%	77.2%	population	0.0004	0.0015
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0007	0.0024	77.2%	77.2%	population	0.0005	0.0018
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0003	0.0021	77.2%	77.2%	population	0.0002	0.0016
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0233	0.1070	77.2%	77.2%	population	0.0180	0.0826
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0074	0.0251	77.2%	77.2%	population	0.0057	0.0194
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0012	0.0026	77.2%	77.2%	population	0.0009	0.0020
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0240	0.0738	77.2%	77.2%	population	0.0185	0.0570

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

SCC	Segment Description	SCC Description	Emissions from	Racine Co. 2023 Emissions		% in NAA		Allocate by	Rac. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0009	0.0045	77.2%	77.2%	population	0.0007	0.0035
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0008	0.0038	77.2%	77.2%	population	0.0006	0.0029
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0001	55.3%	55.3%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0001	0.0001	55.3%	55.3%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0003	0.0003	55.3%	55.3%	land area (1)	0.0002	0.0002
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0004	0.0008	55.3%	55.3%	land area (1)	0.0002	0.0004
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0007	0.0033	55.3%	55.3%	land area (1)	0.0004	0.0018
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0005	0.0005	55.3%	55.3%	land area (1)	0.0003	0.0003
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0005	0.0005	55.3%	55.3%	land area (1)	0.0003	0.0003
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0001	0.0001	55.3%	55.3%	land area (1)	0.0001	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0095	0.0435	77.2%	77.2%	population	0.0073	0.0336
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0025	0.0099	77.2%	77.2%	population	0.0020	0.0077
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0013	0.0041	77.2%	77.2%	population	0.0010	0.0032
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0027	0.0093	77.2%	77.2%	population	0.0021	0.0072
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0043	0.0194	77.2%	77.2%	population	0.0033	0.0150
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0002	0.0007	77.2%	77.2%	population	0.0002	0.0005
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0001	0.0000	77.2%	77.2%	population	0.0001	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0001	0.0000	77.2%	77.2%	population	0.0001	0.0000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0001	0.0000	77.2%	77.2%	population	0.0001	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0001	0.0000	77.2%	77.2%	population	0.0000	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0001	0.0000	77.2%	77.2%	population	0.0000	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0001	0.0000	77.2%	77.2%	population	0.0001	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0002	0.0000	77.2%	77.2%	population	0.0001	0.0000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0001	0.0000	77.2%	77.2%	population	0.0001	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0017	0.0003	77.2%	77.2%	population	0.0013	0.0002
2267003020	Industrial	LPG Forklifts	MOVES	0.0911	0.0107	77.2%	77.2%	population	0.0704	0.0082
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0007	0.0001	77.2%	77.2%	population	0.0005	0.0001
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0002	0.0000	77.2%	77.2%	population	0.0002	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0001	0.0000	77.2%	77.2%	population	0.0001	0.0000

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SCC	Segment Description	SCC Description	Emissions from	Racine Co. 2023 Emissions		% in NAA		Allocate by	Rac. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0004	0.0001	77.2%	77.2%	population	0.0003	0.0000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0004	0.0001	77.2%	77.2%	population	0.0003	0.0000
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0031	0.0005	77.2%	77.2%	population	0.0024	0.0004
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0004	0.0001	77.2%	77.2%	population	0.0003	0.0000
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0003	0.0000	77.2%	77.2%	population	0.0002	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0003	0.0000	77.2%	77.2%	population	0.0003	0.0000
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0074	0.0032	77.2%	77.2%	population	0.0057	0.0024
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0002	0.0001	55.3%	55.3%	land area (1)	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0013	0.0007	77.2%	77.2%	population	0.0010	0.0006
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0009	0.0005	77.2%	77.2%	population	0.0007	0.0003
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0005	0.0001	57.1%	57.1%	land area	0.0003	0.0001
2270002003	Construction	Diesel Pavers	MOVES	0.0037	0.0002	77.2%	77.2%	population	0.0029	0.0001
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0004	0.0001	77.2%	77.2%	population	0.0003	0.0001
2270002015	Construction	Diesel Rollers	MOVES	0.0121	0.0005	77.2%	77.2%	population	0.0093	0.0004
2270002018	Construction	Diesel Scrapers	MOVES	0.0068	0.0004	77.2%	77.2%	population	0.0052	0.0003
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0008	0.0001	77.2%	77.2%	population	0.0006	0.0000
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0008	0.0000	77.2%	77.2%	population	0.0006	0.0000
2270002027	Construction	Diesel Signal Boards	MOVES	0.0036	0.0003	77.2%	77.2%	population	0.0028	0.0002
2270002030	Construction	Diesel Trenchers	MOVES	0.0093	0.0004	77.2%	77.2%	population	0.0072	0.0003
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0124	0.0008	77.2%	77.2%	population	0.0096	0.0006
2270002036	Construction	Diesel Excavators	MOVES	0.0213	0.0010	77.2%	77.2%	population	0.0165	0.0008
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0007	0.0000	77.2%	77.2%	population	0.0005	0.0000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0006	0.0001	77.2%	77.2%	population	0.0004	0.0000
2270002045	Construction	Diesel Cranes	MOVES	0.0082	0.0004	77.2%	77.2%	population	0.0063	0.0003
2270002048	Construction	Diesel Graders	MOVES	0.0040	0.0002	77.2%	77.2%	population	0.0031	0.0002
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.0532	0.0013	77.2%	77.2%	population	0.0411	0.0010
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0023	0.0001	77.2%	77.2%	population	0.0018	0.0001

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SCC	Segment Description	SCC Description	Emissions from	Racine Co. 2023 Emissions		% in NAA		Allocate by	Rac. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0178	0.0008	77.2%	77.2%	population	0.0137	0.0006
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.0460	0.0021	77.2%	77.2%	population	0.0355	0.0016
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.0536	0.0082	77.2%	77.2%	population	0.0414	0.0063
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0339	0.0014	77.2%	77.2%	population	0.0262	0.0011
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.0574	0.0099	77.2%	77.2%	population	0.0443	0.0077
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0072	0.0003	77.2%	77.2%	population	0.0056	0.0002
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0002	0.0000	77.2%	77.2%	population	0.0001	0.0000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0062	0.0003	77.2%	77.2%	population	0.0048	0.0003
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0060	0.0010	77.2%	77.2%	population	0.0046	0.0007
2270003020	Industrial	Diesel Forklifts	MOVES	0.0289	0.0006	77.2%	77.2%	population	0.0223	0.0004
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0112	0.0005	77.2%	77.2%	population	0.0086	0.0003
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0137	0.0007	77.2%	77.2%	population	0.0106	0.0005
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0012	0.0002	77.2%	77.2%	population	0.0009	0.0001
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0544	0.0019	77.2%	77.2%	population	0.0420	0.0014
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0064	0.0003	77.2%	77.2%	population	0.0050	0.0002
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	77.2%	77.2%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0126	0.0011	77.2%	77.2%	population	0.0098	0.0008
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0027	0.0003	77.2%	77.2%	population	0.0021	0.0002
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0166	0.0013	77.2%	77.2%	population	0.0128	0.0010
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0011	0.0001	77.2%	77.2%	population	0.0008	0.0000
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0001	0.0000	77.2%	77.2%	population	0.0000	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0777	0.0051	55.3%	55.3%	land area (1)	0.0430	0.0028
2270005020	Agriculture	Diesel Combines	MOVES	0.0130	0.0010	55.3%	55.3%	land area (1)	0.0072	0.0006
2270005025	Agriculture	Diesel Balers	MOVES	0.0001	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0011	0.0001	55.3%	55.3%	land area (1)	0.0006	0.0001
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0010	0.0001	55.3%	55.3%	land area (1)	0.0005	0.0001
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0018	0.0001	55.3%	55.3%	land area (1)	0.0010	0.0001
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0008	0.0000	55.3%	55.3%	land area (1)	0.0004	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0248	0.0022	77.2%	77.2%	population	0.0192	0.0017
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0059	0.0005	77.2%	77.2%	population	0.0045	0.0004
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0099	0.0005	77.2%	77.2%	population	0.0076	0.0004
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0083	0.0013	77.2%	77.2%	population	0.0064	0.0010
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0008	0.0001	77.2%	77.2%	population	0.0006	0.0001
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0005	0.0000	77.2%	77.2%	population	0.0004	0.0000
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2275000000	Airport	All Airport	2022EMP	0.0271	0.0439	36.3%	47.0%	airport location	0.0099	0.0206

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SCC	Segment Description	SCC Description	Emissions from	Racine Co. 2023 Emissions		% in NAA		Allocate by	Rac. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2022EMP	0.0780	0.0024	100.0%	100.0%	Lk. Mich. Shoreline	0.0780	0.0024
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2022EMP	0.0586	0.0024	100.0%	100.0%	Lk. Mich. Shoreline	0.0586	0.0024
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0471	0.1553	5.7%	5.7%	water area	0.0027	0.0088
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0223	0.0280	71.4%	71.4%	water area	0.0159	0.0200
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0653	0.0688	71.4%	71.4%	water area	0.0466	0.0491
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0829	0.0051	71.4%	71.4%	water area	0.0592	0.0036
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0001	0.0000	5.7%	5.7%	water area	0.0000	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2022EMP	0.6410	0.0259	76.0%	76.0%	track miles	0.4872	0.0197
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0013	0.0002	76.0%	76.0%	track miles	0.0010	0.0001
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0001	76.0%	76.0%	track miles	0.0000	0.0001
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	76.0%	76.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		1.9417	1.3193	74.4%	65.7%		1.4440	0.8668
22xx005xxx	Agriculture	All	MOVES	0.0982	0.0124	55.3%	55.3%	land area (1)	0.0543	0.0069
22750xxxxx	Airport	All	2022EMP	0.0271	0.0439	36.3%	47.0%	airport location	0.0099	0.0206
22xx006xxx	Commercial	All	MOVES	0.0776	0.1075	77.2%	77.2%	population	0.0599	0.0830
2280002xxx	Comm. Mar	All	2022EMP	0.1366	0.0048	100.0%	100.0%	Lk. Mich. Shoreline	0.1366	0.0048
22xx002xxx	Construction	All	MOVES	0.3694	0.0813	77.2%	77.2%	population	0.2852	0.0628
22xx003xxx	Industrial	All	MOVES	0.2364	0.0408	77.2%	77.2%	population	0.1825	0.0315
22xx004xxx	Lawn/Garden	All	MOVES	0.1252	0.6481	77.2%	77.2%	population	0.0966	0.5003
22xx007xxx	Logging	All	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
22820xxxxx	Pleasure Craft	All	MOVES	0.2177	0.2572	57.2%	31.7%	water area	0.1245	0.0816
228500200x	Railroad	All	2022EMP	0.6410	0.0259	76.0%	76.0%	track miles	0.4872	0.0197
228500x015	Railway Maint.	All	MOVES	0.0013	0.0003	76.0%	76.0%	track miles	0.0010	0.0002
22xx001xxx	Recreational	All	MOVES	0.0111	0.0971	57.1%	57.1%	land area	0.0064	0.0555
ALL (Total)	ALL (Total)	ALL (Total)		1.9417	1.3193	74.4%	65.7%		1.4440	0.8668

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

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**Table A6.9. 2023 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Washington County and the Portion of the County within the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA)**

SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2023 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2023 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0009	0.0652	42.7%	42.7%	land area	0.0004	0.0278
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	42.7%	42.7%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0004	0.0074	42.7%	42.7%	land area	0.0002	0.0031
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0011	42.7%	42.7%	land area	0.0001	0.0005
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0002	0.0089	56.5%	56.5%	population	0.0001	0.0050
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0003	56.5%	56.5%	population	0.0000	0.0002
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0004	56.5%	56.5%	population	0.0000	0.0002
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0006	0.0227	56.5%	56.5%	population	0.0003	0.0128
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0001	56.5%	56.5%	population	0.0000	0.0000
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0005	56.5%	56.5%	population	0.0000	0.0003
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0000	0.0011	56.5%	56.5%	population	0.0000	0.0006
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0007	0.0137	56.5%	56.5%	population	0.0004	0.0077
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0003	0.0107	56.5%	56.5%	population	0.0002	0.0060
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0035	0.1561	56.5%	56.5%	population	0.0020	0.0882
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0009	0.0213	56.5%	56.5%	population	0.0005	0.0120
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0061	0.1564	56.5%	56.5%	population	0.0035	0.0884
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0006	0.0131	56.5%	56.5%	population	0.0003	0.0074
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0057	0.1566	56.5%	56.5%	population	0.0032	0.0885
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0008	56.5%	56.5%	population	0.0000	0.0004
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0003	56.5%	56.5%	population	0.0000	0.0002
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0001	56.5%	56.5%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0002	42.1%	42.1%	land area (1)	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0001	0.0015	56.5%	56.5%	population	0.0000	0.0009
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0004	0.0107	56.5%	56.5%	population	0.0002	0.0061
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0001	56.5%	56.5%	population	0.0000	0.0000
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0002	42.7%	42.7%	land area	0.0000	0.0001
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0004	0.0031	42.7%	42.7%	land area	0.0002	0.0013
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0031	0.0320	42.7%	42.7%	land area	0.0013	0.0137
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0077	0.0261	42.7%	42.7%	land area	0.0033	0.0112
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0011	42.7%	42.7%	land area	0.0001	0.0005
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0001	0.0004	56.5%	56.5%	population	0.0001	0.0002
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0003	0.0011	56.5%	56.5%	population	0.0001	0.0006
2265002015	Construction	4-Stroke Rollers	MOVES	0.0003	0.0007	56.5%	56.5%	population	0.0001	0.0004

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				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0005	0.0019	56.5%	56.5%	population	0.0003	0.0011
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0002	0.0008	56.5%	56.5%	population	0.0001	0.0004
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0004	0.0013	56.5%	56.5%	population	0.0003	0.0008
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0002	0.0006	56.5%	56.5%	population	0.0001	0.0003
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0009	0.0030	56.5%	56.5%	population	0.0005	0.0017
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0004	0.0022	56.5%	56.5%	population	0.0002	0.0012
2265002045	Construction	4-Stroke Cranes	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0001	0.0002	56.5%	56.5%	population	0.0000	0.0001
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0000	0.0000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0001	0.0001	56.5%	56.5%	population	0.0001	0.0000
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0003	0.0009	56.5%	56.5%	population	0.0002	0.0005
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0003	0.0004	56.5%	56.5%	population	0.0001	0.0002
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0001	0.0003	56.5%	56.5%	population	0.0000	0.0002
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0001	0.0001	56.5%	56.5%	population	0.0000	0.0000
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0020	0.0028	56.5%	56.5%	population	0.0011	0.0016
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0052	0.0031	56.5%	56.5%	population	0.0029	0.0018
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0012	0.0025	56.5%	56.5%	population	0.0007	0.0014
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0026	0.0097	56.5%	56.5%	population	0.0015	0.0055
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0001	0.0002	56.5%	56.5%	population	0.0001	0.0001
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	56.5%	56.5%	population	0.0000	0.0000
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0005	0.0003	56.5%	56.5%	population	0.0003	0.0002
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0054	0.0439	56.5%	56.5%	population	0.0031	0.0248
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0128	0.0809	56.5%	56.5%	population	0.0073	0.0457
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0005	0.0040	56.5%	56.5%	population	0.0003	0.0023
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0066	0.0475	56.5%	56.5%	population	0.0037	0.0268
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0000	0.0003	56.5%	56.5%	population	0.0000	0.0002
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0003	0.0022	56.5%	56.5%	population	0.0002	0.0012
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0001	0.0004	56.5%	56.5%	population	0.0000	0.0002
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0119	0.0503	56.5%	56.5%	population	0.0067	0.0284
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0018	56.5%	56.5%	population	0.0000	0.0010
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0007	56.5%	56.5%	population	0.0000	0.0004
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0011	0.0062	56.5%	56.5%	population	0.0006	0.0035
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0014	0.0050	56.5%	56.5%	population	0.0008	0.0028
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0017	0.0061	56.5%	56.5%	population	0.0010	0.0035
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0008	0.0054	56.5%	56.5%	population	0.0004	0.0031
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0146	0.0670	56.5%	56.5%	population	0.0083	0.0378
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0192	0.0651	56.5%	56.5%	population	0.0108	0.0368
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0031	0.0069	56.5%	56.5%	population	0.0018	0.0039
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0620	0.1912	56.5%	56.5%	population	0.0351	0.1080

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				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0006	0.0028	56.5%	56.5%	population	0.0003	0.0016
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0020	0.0098	56.5%	56.5%	population	0.0011	0.0056
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0001	42.1%	42.1%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0001	0.0001	42.1%	42.1%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0003	0.0003	42.1%	42.1%	land area (1)	0.0001	0.0001
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0004	0.0007	42.1%	42.1%	land area (1)	0.0002	0.0003
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0007	0.0031	42.1%	42.1%	land area (1)	0.0003	0.0013
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0005	0.0004	42.1%	42.1%	land area (1)	0.0002	0.0002
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0005	0.0005	42.1%	42.1%	land area (1)	0.0002	0.0002
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0001	0.0001	42.1%	42.1%	land area (1)	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0082	0.0378	56.5%	56.5%	population	0.0047	0.0214
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0022	0.0086	56.5%	56.5%	population	0.0012	0.0049
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0011	0.0036	56.5%	56.5%	population	0.0006	0.0020
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0024	0.0081	56.5%	56.5%	population	0.0013	0.0046
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0037	0.0169	56.5%	56.5%	population	0.0021	0.0095
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0002	0.0006	56.5%	56.5%	population	0.0001	0.0003
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0000	42.7%	42.7%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	42.7%	42.7%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0001	0.0000	42.7%	42.7%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0002	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0015	0.0003	56.5%	56.5%	population	0.0009	0.0002
2267003020	Industrial	LPG Forklifts	MOVES	0.0815	0.0095	56.5%	56.5%	population	0.0461	0.0054
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0006	0.0001	56.5%	56.5%	population	0.0004	0.0000
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0002	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0000	0.0000

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				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0004	0.0000	56.5%	56.5%	population	0.0002	0.0000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0011	0.0001	56.5%	56.5%	population	0.0006	0.0001
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0027	0.0004	56.5%	56.5%	population	0.0015	0.0002
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0003	0.0000	56.5%	56.5%	population	0.0002	0.0000
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0002	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0003	0.0000	56.5%	56.5%	population	0.0002	0.0000
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0066	0.0028	56.5%	56.5%	population	0.0037	0.0016
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0002	0.0001	42.1%	42.1%	land area (1)	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0011	0.0007	56.5%	56.5%	population	0.0006	0.0004
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0008	0.0004	56.5%	56.5%	population	0.0005	0.0002
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0008	0.0002	42.7%	42.7%	land area	0.0003	0.0001
2270002003	Construction	Diesel Pavers	MOVES	0.0033	0.0001	56.5%	56.5%	population	0.0019	0.0001
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0004	0.0001	56.5%	56.5%	population	0.0002	0.0000
2270002015	Construction	Diesel Rollers	MOVES	0.0107	0.0005	56.5%	56.5%	population	0.0061	0.0003
2270002018	Construction	Diesel Scrapers	MOVES	0.0060	0.0003	56.5%	56.5%	population	0.0034	0.0002
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0007	0.0000	56.5%	56.5%	population	0.0004	0.0000
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0007	0.0000	56.5%	56.5%	population	0.0004	0.0000
2270002027	Construction	Diesel Signal Boards	MOVES	0.0032	0.0003	56.5%	56.5%	population	0.0018	0.0002
2270002030	Construction	Diesel Trenchers	MOVES	0.0083	0.0004	56.5%	56.5%	population	0.0047	0.0002
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0111	0.0007	56.5%	56.5%	population	0.0062	0.0004
2270002036	Construction	Diesel Excavators	MOVES	0.0190	0.0009	56.5%	56.5%	population	0.0107	0.0005
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0006	0.0000	56.5%	56.5%	population	0.0004	0.0000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0005	0.0001	56.5%	56.5%	population	0.0003	0.0000
2270002045	Construction	Diesel Cranes	MOVES	0.0073	0.0004	56.5%	56.5%	population	0.0041	0.0002
2270002048	Construction	Diesel Graders	MOVES	0.0036	0.0002	56.5%	56.5%	population	0.0020	0.0001
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.0474	0.0011	56.5%	56.5%	population	0.0268	0.0006
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0020	0.0001	56.5%	56.5%	population	0.0011	0.0001

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SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2023 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0158	0.0007	56.5%	56.5%	population	0.0090	0.0004
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.0410	0.0019	56.5%	56.5%	population	0.0232	0.0011
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.0477	0.0073	56.5%	56.5%	population	0.0270	0.0041
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0302	0.0013	56.5%	56.5%	population	0.0171	0.0007
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.0511	0.0088	56.5%	56.5%	population	0.0289	0.0050
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0064	0.0002	56.5%	56.5%	population	0.0036	0.0001
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0002	0.0000	56.5%	56.5%	population	0.0001	0.0000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0055	0.0003	56.5%	56.5%	population	0.0031	0.0002
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0053	0.0009	56.5%	56.5%	population	0.0030	0.0005
2270003020	Industrial	Diesel Forklifts	MOVES	0.0259	0.0005	56.5%	56.5%	population	0.0146	0.0003
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0100	0.0004	56.5%	56.5%	population	0.0056	0.0002
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0123	0.0006	56.5%	56.5%	population	0.0069	0.0004
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0011	0.0002	56.5%	56.5%	population	0.0006	0.0001
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0344	0.0012	56.5%	56.5%	population	0.0195	0.0007
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0057	0.0002	56.5%	56.5%	population	0.0032	0.0001
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0327	0.0027	56.5%	56.5%	population	0.0185	0.0015
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0071	0.0007	56.5%	56.5%	population	0.0040	0.0004
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0431	0.0033	56.5%	56.5%	population	0.0243	0.0019
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0029	0.0001	56.5%	56.5%	population	0.0016	0.0001
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0001	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0746	0.0049	42.1%	42.1%	land area (1)	0.0314	0.0021
2270005020	Agriculture	Diesel Combines	MOVES	0.0125	0.0010	42.1%	42.1%	land area (1)	0.0053	0.0004
2270005025	Agriculture	Diesel Balers	MOVES	0.0001	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0010	0.0001	42.1%	42.1%	land area (1)	0.0004	0.0000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0009	0.0001	42.1%	42.1%	land area (1)	0.0004	0.0000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0017	0.0001	42.1%	42.1%	land area (1)	0.0007	0.0001
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0007	0.0000	42.1%	42.1%	land area (1)	0.0003	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0216	0.0019	56.5%	56.5%	population	0.0122	0.0011
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0051	0.0005	56.5%	56.5%	population	0.0029	0.0003
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0086	0.0004	56.5%	56.5%	population	0.0049	0.0002
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0072	0.0011	56.5%	56.5%	population	0.0041	0.0006
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0007	0.0001	56.5%	56.5%	population	0.0004	0.0000
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0004	0.0000	56.5%	56.5%	population	0.0002	0.0000
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0001	0.0000	42.7%	42.7%	land area	0.0000	0.0000
2275000000	Airport	All Airport	2022EMP	0.1756	0.0985	97.9%	94.7%	airport location	0.1718	0.0933

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SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2023 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2022EMP	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2022EMP	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0227	0.0748	19.0%	19.0%	water area	0.0043	0.0142
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0108	0.0135	19.0%	19.0%	water area	0.0020	0.0026
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0095	0.0100	19.0%	19.0%	water area	0.0018	0.0019
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0121	0.0007	19.0%	19.0%	water area	0.0023	0.0001
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0000	0.0000	19.0%	19.0%	water area	0.0000	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2022EMP	0.7574	0.0308	60.0%	60.0%	track miles	0.4545	0.0185
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0000	0.0000	60.0%	60.0%	track miles	0.0000	0.0000
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0000	60.0%	60.0%	track miles	0.0000	0.0000
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	60.0%	60.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		1.9390	1.7132	59.7%	55.4%		1.1585	0.9490
22xx005xxx	Agriculture	All	MOVES	0.0942	0.0119	42.1%	42.1%	land area (1)	0.0397	0.0050
22750xxxxx	Airport	All	2022EMP	0.1756	0.0985	97.9%	94.7%	airport location	0.1718	0.0933
22xx006xxx	Commercial	All	MOVES	0.0675	0.0936	56.5%	56.5%	population	0.0382	0.0529
2280002xxx	Comm. Mar	All	2022EMP	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
22xx002xxx	Construction	All	MOVES	0.3289	0.0724	56.5%	56.5%	population	0.1858	0.0409
22xx003xxx	Industrial	All	MOVES	0.1973	0.0360	56.5%	56.5%	population	0.1115	0.0203
22xx004xxx	Lawn/Garden	All	MOVES	0.2489	1.1345	56.5%	56.5%	population	0.1406	0.6410
22xx007xxx	Logging	All	MOVES	0.0001	0.0002	42.7%	42.7%	land area	0.0001	0.0001
22820xxxxx	Pleasure Craft	All	MOVES	0.0551	0.0990	19.0%	19.0%	water area	0.0105	0.0188
228500200x	Railroad	All	2022EMP	0.7574	0.0308	60.0%	60.0%	track miles	0.4545	0.0185
228500x015	Railway Maint.	All	MOVES	0.0000	0.0000	60.0%	60.0%	track miles	0.0000	0.0000
22xx001xxx	Recreational	All	MOVES	0.0139	0.1362	42.7%	42.7%	land area	0.0059	0.0582
ALL (Total)	ALL (Total)	ALL (Total)		1.9390	1.7132	59.7%	55.4%		1.1585	0.9490

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

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**Table A6.10. 2023 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Waukesha County and the Portion of the County within the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA)**

SCC	Segment Description	SCC Description	Emissions from	Waukesha Co. 2023 Emissions		% in NAA		Allocate by	Wauk. Co. NAA 2023 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0009	0.0652	90.6%	90.6%	land area	0.0008	0.0591
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	90.6%	90.6%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0004	0.0074	90.6%	90.6%	land area	0.0004	0.0067
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0011	90.6%	90.6%	land area	0.0002	0.0010
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0007	0.0298	97.5%	97.5%	population	0.0007	0.0291
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0011	97.5%	97.5%	population	0.0000	0.0010
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0001	0.0013	97.5%	97.5%	population	0.0001	0.0012
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0019	0.0759	97.5%	97.5%	population	0.0019	0.0740
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0003	97.5%	97.5%	population	0.0000	0.0002
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0001	0.0015	97.5%	97.5%	population	0.0001	0.0014
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0001	97.5%	97.5%	population	0.0000	0.0001
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0001	0.0033	97.5%	97.5%	population	0.0001	0.0032
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0018	0.0379	97.5%	97.5%	population	0.0017	0.0369
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0009	0.0327	97.5%	97.5%	population	0.0009	0.0318
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0096	0.4309	97.5%	97.5%	population	0.0094	0.4201
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0026	0.0650	97.5%	97.5%	population	0.0026	0.0634
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0170	0.4318	97.5%	97.5%	population	0.0165	0.4210
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0017	0.0400	97.5%	97.5%	population	0.0016	0.0390
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0157	0.4323	97.5%	97.5%	population	0.0153	0.4214
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0024	97.5%	97.5%	population	0.0000	0.0023
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0009	97.5%	97.5%	population	0.0000	0.0009
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0001	97.5%	97.5%	population	0.0000	0.0001
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0001	86.9%	86.9%	land area (1)	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0004	0.0097	97.5%	97.5%	population	0.0004	0.0095
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0025	0.0676	97.5%	97.5%	population	0.0024	0.0659
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0004	97.5%	97.5%	population	0.0000	0.0004
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0002	90.6%	90.6%	land area	0.0000	0.0002
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0004	0.0031	90.6%	90.6%	land area	0.0004	0.0028
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0031	0.0320	90.6%	90.6%	land area	0.0028	0.0290
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0188	0.0641	90.6%	90.6%	land area	0.0170	0.0581
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0011	90.6%	90.6%	land area	0.0003	0.0010
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0005	0.0014	97.5%	97.5%	population	0.0005	0.0013
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0009	0.0035	97.5%	97.5%	population	0.0009	0.0034
2265002015	Construction	4-Stroke Rollers	MOVES	0.0008	0.0024	97.5%	97.5%	population	0.0008	0.0024

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SCC	Segment Description	SCC Description	Emissions from	Waukesha Co. 2023 Emissions		% in NAA		Allocate by	Wauk. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0017	0.0064	97.5%	97.5%	population	0.0016	0.0062
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0007	0.0026	97.5%	97.5%	population	0.0007	0.0025
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0001	97.5%	97.5%	population	0.0000	0.0001
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0015	0.0044	97.5%	97.5%	population	0.0015	0.0043
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0008	0.0021	97.5%	97.5%	population	0.0007	0.0020
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0032	0.0099	97.5%	97.5%	population	0.0031	0.0097
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0014	0.0072	97.5%	97.5%	population	0.0014	0.0070
2265002045	Construction	4-Stroke Cranes	MOVES	0.0002	0.0002	97.5%	97.5%	population	0.0002	0.0002
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0002	0.0007	97.5%	97.5%	population	0.0002	0.0006
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0002	0.0001	97.5%	97.5%	population	0.0002	0.0001
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0004	0.0002	97.5%	97.5%	population	0.0004	0.0002
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0010	0.0032	97.5%	97.5%	population	0.0010	0.0031
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0008	0.0014	97.5%	97.5%	population	0.0008	0.0014
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0002	0.0011	97.5%	97.5%	population	0.0002	0.0011
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0003	0.0002	97.5%	97.5%	population	0.0003	0.0002
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0059	0.0083	97.5%	97.5%	population	0.0058	0.0081
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0155	0.0094	97.5%	97.5%	population	0.0151	0.0092
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0037	0.0074	97.5%	97.5%	population	0.0036	0.0072
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0078	0.0292	97.5%	97.5%	population	0.0076	0.0285
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0004	0.0006	97.5%	97.5%	population	0.0004	0.0006
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0001	0.0002	97.5%	97.5%	population	0.0001	0.0002
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0014	0.0008	97.5%	97.5%	population	0.0014	0.0008
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0165	0.1342	97.5%	97.5%	population	0.0161	0.1308
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0354	0.2234	97.5%	97.5%	population	0.0345	0.2178
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0014	0.0122	97.5%	97.5%	population	0.0014	0.0119
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0182	0.1312	97.5%	97.5%	population	0.0178	0.1279
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0001	0.0010	97.5%	97.5%	population	0.0001	0.0009
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0008	0.0060	97.5%	97.5%	population	0.0008	0.0058
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0002	0.0012	97.5%	97.5%	population	0.0002	0.0012
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0329	0.1388	97.5%	97.5%	population	0.0321	0.1353
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0054	97.5%	97.5%	population	0.0000	0.0053
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0020	97.5%	97.5%	population	0.0000	0.0020
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0033	0.0188	97.5%	97.5%	population	0.0033	0.0184
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0039	0.0139	97.5%	97.5%	population	0.0038	0.0135
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0047	0.0170	97.5%	97.5%	population	0.0046	0.0165
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0021	0.0150	97.5%	97.5%	population	0.0020	0.0146
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0446	0.2046	97.5%	97.5%	population	0.0435	0.1995
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0530	0.1798	97.5%	97.5%	population	0.0516	0.1753
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0086	0.0189	97.5%	97.5%	population	0.0084	0.0184
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.1713	0.5278	97.5%	97.5%	population	0.1670	0.5146

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SCC	Segment Description	SCC Description	Emissions from	Waukesha Co. 2023 Emissions		% in NAA		Allocate by	Wauk. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0017	0.0087	97.5%	97.5%	population	0.0016	0.0085
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0055	0.0271	97.5%	97.5%	population	0.0054	0.0264
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0002	0.0002	86.9%	86.9%	land area (1)	0.0002	0.0002
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0003	0.0005	86.9%	86.9%	land area (1)	0.0002	0.0005
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0005	0.0023	86.9%	86.9%	land area (1)	0.0004	0.0020
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0003	0.0003	86.9%	86.9%	land area (1)	0.0003	0.0003
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0004	0.0003	86.9%	86.9%	land area (1)	0.0003	0.0003
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0001	0.0001	86.9%	86.9%	land area (1)	0.0001	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0520	0.2389	97.5%	97.5%	population	0.0507	0.2329
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0139	0.0546	97.5%	97.5%	population	0.0136	0.0532
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0070	0.0225	97.5%	97.5%	population	0.0068	0.0220
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0150	0.0512	97.5%	97.5%	population	0.0147	0.0499
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0235	0.1065	97.5%	97.5%	population	0.0230	0.1039
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0011	0.0039	97.5%	97.5%	population	0.0011	0.0038
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0001	90.6%	90.6%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	90.6%	90.6%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0001	0.0000	90.6%	90.6%	land area	0.0001	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0003	0.0000	97.5%	97.5%	population	0.0003	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0004	0.0001	97.5%	97.5%	population	0.0004	0.0001
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0002	0.0000	97.5%	97.5%	population	0.0002	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0002	0.0000	97.5%	97.5%	population	0.0002	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0003	0.0000	97.5%	97.5%	population	0.0003	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0005	0.0001	97.5%	97.5%	population	0.0005	0.0001
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0003	0.0001	97.5%	97.5%	population	0.0003	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0046	0.0008	97.5%	97.5%	population	0.0045	0.0008
2267003020	Industrial	LPG Forklifts	MOVES	0.2449	0.0287	97.5%	97.5%	population	0.2388	0.0279
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0019	0.0002	97.5%	97.5%	population	0.0018	0.0002
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0006	0.0001	97.5%	97.5%	population	0.0006	0.0001
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0002	0.0000	97.5%	97.5%	population	0.0002	0.0000

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SCC	Segment Description	SCC Description	Emissions from	Waukesha Co. 2023 Emissions		% in NAA		Allocate by	Wauk. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0012	0.0001	97.5%	97.5%	population	0.0011	0.0001
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0031	0.0004	97.5%	97.5%	population	0.0031	0.0004
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0172	0.0028	97.5%	97.5%	population	0.0168	0.0027
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0020	0.0003	97.5%	97.5%	population	0.0020	0.0003
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0015	0.0002	97.5%	97.5%	population	0.0014	0.0002
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0018	0.0002	97.5%	97.5%	population	0.0018	0.0002
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0199	0.0085	97.5%	97.5%	population	0.0194	0.0083
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0001	0.0000	86.9%	86.9%	land area (1)	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0071	0.0041	97.5%	97.5%	population	0.0069	0.0040
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0002	0.0001	97.5%	97.5%	population	0.0002	0.0001
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0001	0.0001	97.5%	97.5%	population	0.0001	0.0001
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0051	0.0025	97.5%	97.5%	population	0.0050	0.0024
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0008	0.0002	90.6%	90.6%	land area	0.0007	0.0001
2270002003	Construction	Diesel Pavers	MOVES	0.0111	0.0004	97.5%	97.5%	population	0.0108	0.0004
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0012	0.0002	97.5%	97.5%	population	0.0012	0.0002
2270002015	Construction	Diesel Rollers	MOVES	0.0360	0.0016	97.5%	97.5%	population	0.0351	0.0016
2270002018	Construction	Diesel Scrapers	MOVES	0.0202	0.0011	97.5%	97.5%	population	0.0197	0.0011
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0025	0.0002	97.5%	97.5%	population	0.0024	0.0002
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0024	0.0001	97.5%	97.5%	population	0.0024	0.0001
2270002027	Construction	Diesel Signal Boards	MOVES	0.0107	0.0009	97.5%	97.5%	population	0.0104	0.0009
2270002030	Construction	Diesel Trenchers	MOVES	0.0278	0.0013	97.5%	97.5%	population	0.0271	0.0012
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0370	0.0025	97.5%	97.5%	population	0.0361	0.0024
2270002036	Construction	Diesel Excavators	MOVES	0.0635	0.0029	97.5%	97.5%	population	0.0619	0.0029
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0021	0.0001	97.5%	97.5%	population	0.0020	0.0001
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0017	0.0002	97.5%	97.5%	population	0.0016	0.0002
2270002045	Construction	Diesel Cranes	MOVES	0.0243	0.0012	97.5%	97.5%	population	0.0237	0.0012
2270002048	Construction	Diesel Graders	MOVES	0.0120	0.0007	97.5%	97.5%	population	0.0117	0.0007
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.1586	0.0038	97.5%	97.5%	population	0.1546	0.0037
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0068	0.0003	97.5%	97.5%	population	0.0066	0.0003

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SCC	Segment Description	SCC Description	Emissions from	Waukesha Co. 2023 Emissions		% in NAA		Allocate by	Wauk. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0530	0.0023	97.5%	97.5%	population	0.0517	0.0022
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.1372	0.0063	97.5%	97.5%	population	0.1338	0.0061
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.1598	0.0244	97.5%	97.5%	population	0.1558	0.0238
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.1010	0.0042	97.5%	97.5%	population	0.0985	0.0041
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.1710	0.0296	97.5%	97.5%	population	0.1668	0.0288
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0216	0.0008	97.5%	97.5%	population	0.0210	0.0008
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0005	0.0001	97.5%	97.5%	population	0.0005	0.0001
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0184	0.0010	97.5%	97.5%	population	0.0179	0.0010
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0160	0.0026	97.5%	97.5%	population	0.0156	0.0025
2270003020	Industrial	Diesel Forklifts	MOVES	0.0777	0.0016	97.5%	97.5%	population	0.0757	0.0015
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0300	0.0012	97.5%	97.5%	population	0.0292	0.0012
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0369	0.0019	97.5%	97.5%	population	0.0359	0.0019
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0032	0.0005	97.5%	97.5%	population	0.0031	0.0005
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.1054	0.0036	97.5%	97.5%	population	0.1028	0.0035
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0173	0.0007	97.5%	97.5%	population	0.0168	0.0007
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0904	0.0075	97.5%	97.5%	population	0.0881	0.0073
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0196	0.0019	97.5%	97.5%	population	0.0191	0.0018
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.1189	0.0091	97.5%	97.5%	population	0.1159	0.0088
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0079	0.0004	97.5%	97.5%	population	0.0077	0.0004
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0004	0.0000	97.5%	97.5%	population	0.0004	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0544	0.0036	86.9%	86.9%	land area (1)	0.0473	0.0031
2270005020	Agriculture	Diesel Combines	MOVES	0.0091	0.0007	86.9%	86.9%	land area (1)	0.0079	0.0006
2270005025	Agriculture	Diesel Balers	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0007	0.0001	86.9%	86.9%	land area (1)	0.0006	0.0001
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0007	0.0001	86.9%	86.9%	land area (1)	0.0006	0.0001
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0012	0.0001	86.9%	86.9%	land area (1)	0.0011	0.0001
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0005	0.0000	86.9%	86.9%	land area (1)	0.0005	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.1365	0.0121	97.5%	97.5%	population	0.1331	0.0118
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0322	0.0029	97.5%	97.5%	population	0.0314	0.0028
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0544	0.0026	97.5%	97.5%	population	0.0531	0.0026
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0454	0.0071	97.5%	97.5%	population	0.0442	0.0069
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0044	0.0004	97.5%	97.5%	population	0.0043	0.0004
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0026	0.0001	97.5%	97.5%	population	0.0025	0.0001
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0001	0.0000	90.6%	90.6%	land area	0.0001	0.0000
2275000000	Airport	All Airport	2022EMP	0.0186	0.0294	100.0%	100.0%	airport location	0.0186	0.0294

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SCC	Segment Description	SCC Description	Emissions from	Waukesha Co. 2023 Emissions		% in NAA		Allocate by	Wauk. Co. NAA 2023 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2022EMP	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2022EMP	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.1134	0.3738	94.0%	94.0%	water area	0.1066	0.3513
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0538	0.0675	94.0%	94.0%	water area	0.0505	0.0634
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0477	0.0502	94.0%	94.0%	water area	0.0448	0.0472
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0606	0.0037	94.0%	94.0%	water area	0.0569	0.0035
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0002	0.0000	94.0%	94.0%	water area	0.0002	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2022EMP	1.2489	0.0508	97.0%	97.0%	track miles	1.2114	0.0493
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0012	0.0002	97.0%	97.0%	track miles	0.0012	0.0002
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0001	97.0%	97.0%	track miles	0.0000	0.0001
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	97.0%	97.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		4.4540	4.8836	97.0%	96.9%		4.3182	4.7317
22xx005xxx	Agriculture	All	MOVES	0.0687	0.0087	86.9%	86.9%	land area (1)	0.0597	0.0076
22750xxxxx	Airport	All	2022EMP	0.0186	0.0294	100.0%	100.0%	airport location	0.0186	0.0294
22xx006xxx	Commercial	All	MOVES	0.4263	0.5909	97.5%	97.5%	population	0.4156	0.5761
2280002xxx	Comm. Mar	All	2022EMP	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
22xx002xxx	Construction	All	MOVES	1.1006	0.2422	97.5%	97.5%	population	1.0731	0.2362
22xx003xxx	Industrial	All	MOVES	0.5947	0.1081	97.5%	97.5%	population	0.5798	0.1054
22xx004xxx	Lawn/Garden	All	MOVES	0.6942	3.1834	97.5%	97.5%	population	0.6768	3.1038
22xx007xxx	Logging	All	MOVES	0.0001	0.0003	90.6%	90.6%	land area	0.0001	0.0003
22820xxxxx	Pleasure Craft	All	MOVES	0.2756	0.4952	94.0%	94.0%	water area	0.2590	0.4655
228500200x	Railroad	All	2022EMP	1.2489	0.0508	97.0%	97.0%	track miles	1.2114	0.0493
228500x015	Railway Maint.	All	MOVES	0.0012	0.0003	97.0%	97.0%	track miles	0.0012	0.0003
22xx001xxx	Recreational	All	MOVES	0.0251	0.1742	90.6%	90.6%	land area	0.0227	0.1578
ALL (Total)	ALL (Total)	ALL (Total)		4.4540	4.8836	97.0%	96.9%		4.3182	4.7317

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Table A6.11. 2024 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Milwaukee County

SCC	Segment Description	SCC Description	Emissions from	Milwaukee Co. 2024 Emissions		% in NAA		Allocate by	Milw. Co. NAA 2024 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0009	0.0643	100.0%	100.0%	land area	0.0009	0.0643
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0004	0.0065	100.0%	100.0%	land area	0.0004	0.0065
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0011	100.0%	100.0%	land area	0.0003	0.0011
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0008	0.0308	100.0%	100.0%	population	0.0008	0.0308
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0001	0.0011	100.0%	100.0%	population	0.0001	0.0011
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0001	0.0013	100.0%	100.0%	population	0.0001	0.0013
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0020	0.0783	100.0%	100.0%	population	0.0020	0.0783
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0003	100.0%	100.0%	population	0.0000	0.0003
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0001	0.0022	100.0%	100.0%	population	0.0001	0.0022
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0002	100.0%	100.0%	population	0.0000	0.0002
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0004	0.0089	100.0%	100.0%	population	0.0004	0.0089
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0017	0.0350	100.0%	100.0%	population	0.0017	0.0350
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0026	0.0898	100.0%	100.0%	population	0.0026	0.0898
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0089	0.3985	100.0%	100.0%	population	0.0089	0.3985
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0073	0.1787	100.0%	100.0%	population	0.0073	0.1787
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0157	0.3994	100.0%	100.0%	population	0.0157	0.3994
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0046	0.1100	100.0%	100.0%	population	0.0046	0.1100
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0145	0.3999	100.0%	100.0%	population	0.0145	0.3999
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0066	100.0%	100.0%	population	0.0000	0.0066
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0008	100.0%	100.0%	population	0.0000	0.0008
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0004	0.0097	100.0%	100.0%	population	0.0004	0.0097
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0025	0.0673	100.0%	100.0%	population	0.0025	0.0673
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0004	100.0%	100.0%	population	0.0000	0.0004
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0001	100.0%	100.0%	land area	0.0000	0.0001
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0004	0.0031	100.0%	100.0%	land area	0.0004	0.0031
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0031	0.0318	100.0%	100.0%	land area	0.0031	0.0318
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0063	0.0213	100.0%	100.0%	land area	0.0063	0.0213
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0010	100.0%	100.0%	land area	0.0003	0.0010
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0005	0.0014	100.0%	100.0%	population	0.0005	0.0014
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0009	0.0036	100.0%	100.0%	population	0.0009	0.0036
2265002015	Construction	4-Stroke Rollers	MOVES	0.0009	0.0025	100.0%	100.0%	population	0.0009	0.0025

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SCC	Segment Description	SCC Description	Emissions from	Milwaukee Co. 2024 Emissions		% in NAA		Allocate by	Milw. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0017	0.0066	100.0%	100.0%	population	0.0017	0.0066
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0007	0.0026	100.0%	100.0%	population	0.0007	0.0026
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0015	0.0046	100.0%	100.0%	population	0.0015	0.0046
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0008	0.0021	100.0%	100.0%	population	0.0008	0.0021
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0033	0.0102	100.0%	100.0%	population	0.0033	0.0102
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0015	0.0074	100.0%	100.0%	population	0.0015	0.0074
2265002045	Construction	4-Stroke Cranes	MOVES	0.0002	0.0002	100.0%	100.0%	population	0.0002	0.0002
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0002	0.0007	100.0%	100.0%	population	0.0002	0.0007
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0002	0.0001	100.0%	100.0%	population	0.0002	0.0001
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0004	0.0002	100.0%	100.0%	population	0.0004	0.0002
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0010	0.0033	100.0%	100.0%	population	0.0010	0.0033
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0008	0.0015	100.0%	100.0%	population	0.0008	0.0015
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0002	0.0011	100.0%	100.0%	population	0.0002	0.0011
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0003	0.0002	100.0%	100.0%	population	0.0003	0.0002
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0082	0.0118	100.0%	100.0%	population	0.0082	0.0118
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0228	0.0138	100.0%	100.0%	population	0.0228	0.0138
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0055	0.0109	100.0%	100.0%	population	0.0055	0.0109
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0115	0.0430	100.0%	100.0%	population	0.0115	0.0430
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0005	0.0009	100.0%	100.0%	population	0.0005	0.0009
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0002	0.0006	100.0%	100.0%	population	0.0002	0.0006
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0020	0.0012	100.0%	100.0%	population	0.0020	0.0012
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0455	0.3687	100.0%	100.0%	population	0.0455	0.3687
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0328	0.2066	100.0%	100.0%	population	0.0328	0.2066
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0039	0.0336	100.0%	100.0%	population	0.0039	0.0336
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0168	0.1213	100.0%	100.0%	population	0.0168	0.1213
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0003	0.0027	100.0%	100.0%	population	0.0003	0.0027
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0008	0.0055	100.0%	100.0%	population	0.0008	0.0055
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0005	0.0034	100.0%	100.0%	population	0.0005	0.0034
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0302	0.1282	100.0%	100.0%	population	0.0302	0.1282
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0150	100.0%	100.0%	population	0.0000	0.0150
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0019	100.0%	100.0%	population	0.0000	0.0019
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0092	0.0517	100.0%	100.0%	population	0.0092	0.0517
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0036	0.0128	100.0%	100.0%	population	0.0036	0.0128
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0043	0.0155	100.0%	100.0%	population	0.0043	0.0155
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0019	0.0138	100.0%	100.0%	population	0.0019	0.0138
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.1226	0.5621	100.0%	100.0%	population	0.1226	0.5621
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0490	0.1663	100.0%	100.0%	population	0.0490	0.1663
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0079	0.0175	100.0%	100.0%	population	0.0079	0.0175
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.1584	0.4881	100.0%	100.0%	population	0.1584	0.4881

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				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0046	0.0236	100.0%	100.0%	population	0.0046	0.0236
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0051	0.0248	100.0%	100.0%	population	0.0051	0.0248
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0000	0.0001	100.0%	100.0%	land area (1)	0.0000	0.0001
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0515	0.2363	100.0%	100.0%	population	0.0515	0.2363
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0137	0.0542	100.0%	100.0%	population	0.0137	0.0542
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0069	0.0224	100.0%	100.0%	population	0.0069	0.0224
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0149	0.0509	100.0%	100.0%	population	0.0149	0.0509
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0234	0.1060	100.0%	100.0%	population	0.0234	0.1060
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0011	0.0039	100.0%	100.0%	population	0.0011	0.0039
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0001	0.0000	100.0%	100.0%	land area	0.0001	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0004	0.0001	100.0%	100.0%	population	0.0004	0.0001
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0004	0.0000	100.0%	100.0%	population	0.0004	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0005	0.0001	100.0%	100.0%	population	0.0005	0.0001
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0003	0.0000	100.0%	100.0%	population	0.0003	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0062	0.0010	100.0%	100.0%	population	0.0062	0.0010
2267003020	Industrial	LPG Forklifts	MOVES	0.3607	0.0423	100.0%	100.0%	population	0.3607	0.0423
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0028	0.0003	100.0%	100.0%	population	0.0028	0.0003
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0009	0.0001	100.0%	100.0%	population	0.0009	0.0001
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0003	0.0000	100.0%	100.0%	population	0.0003	0.0000

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				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0017	0.0002	100.0%	100.0%	population	0.0017	0.0002
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0029	0.0003	100.0%	100.0%	population	0.0029	0.0003
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0154	0.0025	100.0%	100.0%	population	0.0154	0.0025
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0019	0.0003	100.0%	100.0%	population	0.0019	0.0003
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0014	0.0002	100.0%	100.0%	population	0.0014	0.0002
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0018	0.0002	100.0%	100.0%	population	0.0018	0.0002
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0294	0.0125	100.0%	100.0%	population	0.0294	0.0125
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0001	0.0001	100.0%	100.0%	population	0.0001	0.0001
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0063	0.0036	100.0%	100.0%	population	0.0063	0.0036
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0002	0.0001	100.0%	100.0%	population	0.0002	0.0001
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0001	0.0001	100.0%	100.0%	population	0.0001	0.0001
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0051	0.0025	100.0%	100.0%	population	0.0051	0.0025
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0008	0.0001	100.0%	100.0%	land area	0.0008	0.0001
2270002003	Construction	Diesel Pavers	MOVES	0.0100	0.0004	100.0%	100.0%	population	0.0100	0.0004
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0013	0.0002	100.0%	100.0%	population	0.0013	0.0002
2270002015	Construction	Diesel Rollers	MOVES	0.0333	0.0015	100.0%	100.0%	population	0.0333	0.0015
2270002018	Construction	Diesel Scrapers	MOVES	0.0183	0.0010	100.0%	100.0%	population	0.0183	0.0010
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0024	0.0002	100.0%	100.0%	population	0.0024	0.0002
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0023	0.0001	100.0%	100.0%	population	0.0023	0.0001
2270002027	Construction	Diesel Signal Boards	MOVES	0.0108	0.0009	100.0%	100.0%	population	0.0108	0.0009
2270002030	Construction	Diesel Trenchers	MOVES	0.0275	0.0012	100.0%	100.0%	population	0.0275	0.0012
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0354	0.0023	100.0%	100.0%	population	0.0354	0.0023
2270002036	Construction	Diesel Excavators	MOVES	0.0567	0.0026	100.0%	100.0%	population	0.0567	0.0026
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0021	0.0001	100.0%	100.0%	population	0.0021	0.0001
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0016	0.0002	100.0%	100.0%	population	0.0016	0.0002
2270002045	Construction	Diesel Cranes	MOVES	0.0212	0.0011	100.0%	100.0%	population	0.0212	0.0011
2270002048	Construction	Diesel Graders	MOVES	0.0104	0.0006	100.0%	100.0%	population	0.0104	0.0006
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.1589	0.0035	100.0%	100.0%	population	0.1589	0.0035
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0063	0.0003	100.0%	100.0%	population	0.0063	0.0003

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

SCC	Segment Description	SCC Description	Emissions from	Milwaukee Co. 2024 Emissions		% in NAA		Allocate by	Milw. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0498	0.0020	100.0%	100.0%	population	0.0498	0.0020
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.1257	0.0056	100.0%	100.0%	population	0.1257	0.0056
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.1433	0.0203	100.0%	100.0%	population	0.1433	0.0203
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0953	0.0039	100.0%	100.0%	population	0.0953	0.0039
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.1699	0.0283	100.0%	100.0%	population	0.1699	0.0283
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0212	0.0008	100.0%	100.0%	population	0.0212	0.0008
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0005	0.0001	100.0%	100.0%	population	0.0005	0.0001
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0159	0.0009	100.0%	100.0%	population	0.0159	0.0009
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0226	0.0034	100.0%	100.0%	population	0.0226	0.0034
2270003020	Industrial	Diesel Forklifts	MOVES	0.1130	0.0022	100.0%	100.0%	population	0.1130	0.0022
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0401	0.0015	100.0%	100.0%	population	0.0401	0.0015
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0478	0.0024	100.0%	100.0%	population	0.0478	0.0024
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0043	0.0006	100.0%	100.0%	population	0.0043	0.0006
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.2737	0.0091	100.0%	100.0%	population	0.2737	0.0091
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0231	0.0009	100.0%	100.0%	population	0.0231	0.0009
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0815	0.0065	100.0%	100.0%	population	0.0815	0.0065
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0179	0.0017	100.0%	100.0%	population	0.0179	0.0017
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.1031	0.0077	100.0%	100.0%	population	0.1031	0.0077
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0069	0.0003	100.0%	100.0%	population	0.0069	0.0003
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0004	0.0000	100.0%	100.0%	population	0.0004	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0024	0.0002	100.0%	100.0%	land area (1)	0.0024	0.0002
2270005020	Agriculture	Diesel Combines	MOVES	0.0004	0.0000	100.0%	100.0%	land area (1)	0.0004	0.0000
2270005025	Agriculture	Diesel Balers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0001	0.0000	100.0%	100.0%	land area (1)	0.0001	0.0000
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.1294	0.0112	100.0%	100.0%	population	0.1294	0.0112
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0306	0.0027	100.0%	100.0%	population	0.0306	0.0027
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0503	0.0022	100.0%	100.0%	population	0.0503	0.0022
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0435	0.0064	100.0%	100.0%	population	0.0435	0.0064
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0042	0.0004	100.0%	100.0%	population	0.0042	0.0004
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0024	0.0001	100.0%	100.0%	population	0.0024	0.0001
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2275000000	Airport	All Airport	2022EMP	0.7231	0.1478	100.0%	100.0%	airport location	0.7231	0.1478

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

SCC	Segment Description	SCC Description	Emissions from	Milwaukee Co. 2024 Emissions		% in NAA		Allocate by	Milw. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2022EMP	0.5795	0.0183	100.0%	100.0%	Lk. Mich. Shoreline	0.5795	0.0183
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2022EMP	0.1880	0.0085	100.0%	100.0%	Lk. Mich. Shoreline	0.1880	0.0085
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0368	0.1106	100.0%	100.0%	water area	0.0368	0.1106
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0175	0.0211	100.0%	100.0%	water area	0.0175	0.0211
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0968	0.1050	100.0%	100.0%	water area	0.0968	0.1050
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.1313	0.0083	100.0%	100.0%	water area	0.1313	0.0083
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0001	0.0000	100.0%	100.0%	water area	0.0001	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2022EMP	0.5559	0.0229	100.0%	100.0%	track miles	0.5559	0.0229
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0021	0.0003	100.0%	100.0%	track miles	0.0021	0.0003
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0002	100.0%	100.0%	track miles	0.0000	0.0002
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	100.0%	100.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		5.5380	5.4639	100.0%	100.0%		5.5380	5.4639
22xx005xxx	Agriculture	All	MOVES	0.0031	0.0004	100.0%	100.0%	land area (1)	0.0031	0.0004
22750xxxxx	Airport	All	2022EMP	0.7231	0.1478	100.0%	100.0%	airport location	0.7231	0.1478
22xx006xxx	Commercial	All	MOVES	0.4072	0.5836	100.0%	100.0%	population	0.4072	0.5836
2280002xxx	Comm. Mar	All	2022EMP	0.7674	0.0269	100.0%	100.0%	Lk. Mich. Shoreline	0.7674	0.0269
22xx002xxx	Construction	All	MOVES	1.0412	0.2387	100.0%	100.0%	population	1.0412	0.2387
22xx003xxx	Industrial	All	MOVES	0.9774	0.1613	100.0%	100.0%	population	0.9774	0.1613
22xx004xxx	Lawn/Garden	All	MOVES	0.7656	3.9075	100.0%	100.0%	population	0.7656	3.9075
22xx007xxx	Logging	All	MOVES	0.0000	0.0001	100.0%	100.0%	land area	0.0000	0.0001
22820xxxxx	Pleasure Craft	All	MOVES	0.2825	0.2450	100.0%	100.0%	water area	0.2825	0.2450
228500200x	Railroad	All	2022EMP	0.5559	0.0229	100.0%	100.0%	track miles	0.5559	0.0229
228500x015	Railway Maint.	All	MOVES	0.0021	0.0005	100.0%	100.0%	track miles	0.0021	0.0005
22xx001xxx	Recreational	All	MOVES	0.0124	0.1294	100.0%	100.0%	land area	0.0124	0.1294
ALL (Total)	ALL (Total)	ALL (Total)		5.5380	5.4639	100.0%	100.0%		5.5380	5.4639

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Table A6.12. 2024 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Ozaukee County

SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2024 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2024 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0007	0.0283	100.0%	100.0%	population	0.0007	0.0283
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0010	100.0%	100.0%	population	0.0000	0.0010
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0001	0.0012	100.0%	100.0%	population	0.0001	0.0012
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0018	0.0720	100.0%	100.0%	population	0.0018	0.0720
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0002	100.0%	100.0%	population	0.0000	0.0002
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0004	100.0%	100.0%	population	0.0000	0.0004
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0000	0.0007	100.0%	100.0%	population	0.0000	0.0007
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0003	0.0057	100.0%	100.0%	population	0.0003	0.0057
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0002	0.0074	100.0%	100.0%	population	0.0002	0.0074
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0014	0.0647	100.0%	100.0%	population	0.0014	0.0647
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0006	0.0148	100.0%	100.0%	population	0.0006	0.0148
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0025	0.0648	100.0%	100.0%	population	0.0025	0.0648
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0004	0.0091	100.0%	100.0%	population	0.0004	0.0091
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0024	0.0649	100.0%	100.0%	population	0.0024	0.0649
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0005	100.0%	100.0%	population	0.0000	0.0005
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0001	100.0%	100.0%	land area (1)	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0001	0.0016	100.0%	100.0%	population	0.0001	0.0016
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0004	0.0114	100.0%	100.0%	population	0.0004	0.0114
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0001	100.0%	100.0%	land area	0.0000	0.0001
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0049	0.0166	100.0%	100.0%	land area	0.0049	0.0166
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0004	0.0013	100.0%	100.0%	population	0.0004	0.0013
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0008	0.0034	100.0%	100.0%	population	0.0008	0.0034
2265002015	Construction	4-Stroke Rollers	MOVES	0.0008	0.0023	100.0%	100.0%	population	0.0008	0.0023

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2024 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0016	0.0061	100.0%	100.0%	population	0.0016	0.0061
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0007	0.0024	100.0%	100.0%	population	0.0007	0.0024
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0014	0.0042	100.0%	100.0%	population	0.0014	0.0042
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0007	0.0019	100.0%	100.0%	population	0.0007	0.0019
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0030	0.0094	100.0%	100.0%	population	0.0030	0.0094
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0014	0.0068	100.0%	100.0%	population	0.0014	0.0068
2265002045	Construction	4-Stroke Cranes	MOVES	0.0001	0.0001	100.0%	100.0%	population	0.0001	0.0001
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0002	0.0006	100.0%	100.0%	population	0.0002	0.0006
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0002	0.0001	100.0%	100.0%	population	0.0002	0.0001
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0003	0.0002	100.0%	100.0%	population	0.0003	0.0002
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0010	0.0030	100.0%	100.0%	population	0.0010	0.0030
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0008	0.0013	100.0%	100.0%	population	0.0008	0.0013
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0002	0.0011	100.0%	100.0%	population	0.0002	0.0011
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0002	0.0002	100.0%	100.0%	population	0.0002	0.0002
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0014	0.0021	100.0%	100.0%	population	0.0014	0.0021
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0040	0.0024	100.0%	100.0%	population	0.0040	0.0024
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0010	0.0019	100.0%	100.0%	population	0.0010	0.0019
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0020	0.0075	100.0%	100.0%	population	0.0020	0.0075
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0001	0.0002	100.0%	100.0%	population	0.0001	0.0002
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	100.0%	100.0%	population	0.0000	0.0001
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0004	0.0002	100.0%	100.0%	population	0.0004	0.0002
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0038	0.0306	100.0%	100.0%	population	0.0038	0.0306
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0053	0.0335	100.0%	100.0%	population	0.0053	0.0335
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0003	0.0028	100.0%	100.0%	population	0.0003	0.0028
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0027	0.0197	100.0%	100.0%	population	0.0027	0.0197
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0000	0.0002	100.0%	100.0%	population	0.0000	0.0002
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0001	0.0009	100.0%	100.0%	population	0.0001	0.0009
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0000	0.0003	100.0%	100.0%	population	0.0000	0.0003
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0049	0.0208	100.0%	100.0%	population	0.0049	0.0208
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0012	100.0%	100.0%	population	0.0000	0.0012
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0003	100.0%	100.0%	population	0.0000	0.0003
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0008	0.0043	100.0%	100.0%	population	0.0008	0.0043
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0006	0.0021	100.0%	100.0%	population	0.0006	0.0021
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0007	0.0025	100.0%	100.0%	population	0.0007	0.0025
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0003	0.0022	100.0%	100.0%	population	0.0003	0.0022
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0102	0.0466	100.0%	100.0%	population	0.0102	0.0466
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0080	0.0270	100.0%	100.0%	population	0.0080	0.0270
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0013	0.0028	100.0%	100.0%	population	0.0013	0.0028
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0257	0.0792	100.0%	100.0%	population	0.0257	0.0792

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2024 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0004	0.0020	100.0%	100.0%	population	0.0004	0.0020
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0008	0.0040	100.0%	100.0%	population	0.0008	0.0040
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0001	0.0002	100.0%	100.0%	land area (1)	0.0001	0.0002
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0002	0.0004	100.0%	100.0%	land area (1)	0.0002	0.0004
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0003	0.0016	100.0%	100.0%	land area (1)	0.0003	0.0016
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0002	0.0002	100.0%	100.0%	land area (1)	0.0002	0.0002
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0002	0.0002	100.0%	100.0%	land area (1)	0.0002	0.0002
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0088	0.0402	100.0%	100.0%	population	0.0088	0.0402
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0023	0.0092	100.0%	100.0%	population	0.0023	0.0092
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0012	0.0038	100.0%	100.0%	population	0.0012	0.0038
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0025	0.0087	100.0%	100.0%	population	0.0025	0.0087
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0040	0.0180	100.0%	100.0%	population	0.0040	0.0180
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0002	0.0007	100.0%	100.0%	population	0.0002	0.0007
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0003	0.0001	100.0%	100.0%	population	0.0003	0.0001
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0003	0.0000	100.0%	100.0%	population	0.0003	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0005	0.0001	100.0%	100.0%	population	0.0005	0.0001
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0011	0.0002	100.0%	100.0%	population	0.0011	0.0002
2267003020	Industrial	LPG Forklifts	MOVES	0.0628	0.0074	100.0%	100.0%	population	0.0628	0.0074
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0005	0.0001	100.0%	100.0%	population	0.0005	0.0001
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000

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SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2024 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0003	0.0000	100.0%	100.0%	population	0.0003	0.0000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0005	0.0001	100.0%	100.0%	population	0.0005	0.0001
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0026	0.0004	100.0%	100.0%	population	0.0026	0.0004
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0003	0.0000	100.0%	100.0%	population	0.0003	0.0000
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0002	0.0000	100.0%	100.0%	population	0.0002	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0003	0.0000	100.0%	100.0%	population	0.0003	0.0000
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0051	0.0022	100.0%	100.0%	population	0.0051	0.0022
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0001	0.0000	100.0%	100.0%	land area (1)	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0011	0.0006	100.0%	100.0%	population	0.0011	0.0006
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0009	0.0004	100.0%	100.0%	population	0.0009	0.0004
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2270002003	Construction	Diesel Pavers	MOVES	0.0092	0.0004	100.0%	100.0%	population	0.0092	0.0004
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0012	0.0002	100.0%	100.0%	population	0.0012	0.0002
2270002015	Construction	Diesel Rollers	MOVES	0.0306	0.0013	100.0%	100.0%	population	0.0306	0.0013
2270002018	Construction	Diesel Scrapers	MOVES	0.0168	0.0009	100.0%	100.0%	population	0.0168	0.0009
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0022	0.0001	100.0%	100.0%	population	0.0022	0.0001
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0021	0.0001	100.0%	100.0%	population	0.0021	0.0001
2270002027	Construction	Diesel Signal Boards	MOVES	0.0099	0.0009	100.0%	100.0%	population	0.0099	0.0009
2270002030	Construction	Diesel Trenchers	MOVES	0.0253	0.0011	100.0%	100.0%	population	0.0253	0.0011
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0326	0.0021	100.0%	100.0%	population	0.0326	0.0021
2270002036	Construction	Diesel Excavators	MOVES	0.0521	0.0024	100.0%	100.0%	population	0.0521	0.0024
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0019	0.0001	100.0%	100.0%	population	0.0019	0.0001
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0015	0.0002	100.0%	100.0%	population	0.0015	0.0002
2270002045	Construction	Diesel Cranes	MOVES	0.0195	0.0010	100.0%	100.0%	population	0.0195	0.0010
2270002048	Construction	Diesel Graders	MOVES	0.0096	0.0005	100.0%	100.0%	population	0.0096	0.0005
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.1461	0.0032	100.0%	100.0%	population	0.1461	0.0032
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0058	0.0003	100.0%	100.0%	population	0.0058	0.0003

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SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2024 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0458	0.0018	100.0%	100.0%	population	0.0458	0.0018
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.1156	0.0052	100.0%	100.0%	population	0.1156	0.0052
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.1317	0.0187	100.0%	100.0%	population	0.1317	0.0187
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0876	0.0036	100.0%	100.0%	population	0.0876	0.0036
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.1562	0.0260	100.0%	100.0%	population	0.1562	0.0260
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0195	0.0007	100.0%	100.0%	population	0.0195	0.0007
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0005	0.0001	100.0%	100.0%	population	0.0005	0.0001
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0146	0.0008	100.0%	100.0%	population	0.0146	0.0008
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0039	0.0006	100.0%	100.0%	population	0.0039	0.0006
2270003020	Industrial	Diesel Forklifts	MOVES	0.0197	0.0004	100.0%	100.0%	population	0.0197	0.0004
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0070	0.0003	100.0%	100.0%	population	0.0070	0.0003
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0083	0.0004	100.0%	100.0%	population	0.0083	0.0004
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0007	0.0001	100.0%	100.0%	population	0.0007	0.0001
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0246	0.0008	100.0%	100.0%	population	0.0246	0.0008
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0040	0.0002	100.0%	100.0%	population	0.0040	0.0002
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	100.0%	100.0%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0132	0.0011	100.0%	100.0%	population	0.0132	0.0011
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0029	0.0003	100.0%	100.0%	population	0.0029	0.0003
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0167	0.0013	100.0%	100.0%	population	0.0167	0.0013
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0011	0.0001	100.0%	100.0%	population	0.0011	0.0001
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0001	0.0000	100.0%	100.0%	population	0.0001	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0359	0.0023	100.0%	100.0%	land area (1)	0.0359	0.0023
2270005020	Agriculture	Diesel Combines	MOVES	0.0060	0.0005	100.0%	100.0%	land area (1)	0.0060	0.0005
2270005025	Agriculture	Diesel Balers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0005	0.0000	100.0%	100.0%	land area (1)	0.0005	0.0000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	100.0%	100.0%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0004	0.0000	100.0%	100.0%	land area (1)	0.0004	0.0000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0008	0.0001	100.0%	100.0%	land area (1)	0.0008	0.0001
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0004	0.0000	100.0%	100.0%	land area (1)	0.0004	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0220	0.0019	100.0%	100.0%	population	0.0220	0.0019
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0052	0.0005	100.0%	100.0%	population	0.0052	0.0005
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0086	0.0004	100.0%	100.0%	population	0.0086	0.0004
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0074	0.0011	100.0%	100.0%	population	0.0074	0.0011
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0007	0.0001	100.0%	100.0%	population	0.0007	0.0001
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0004	0.0000	100.0%	100.0%	population	0.0004	0.0000
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0000	0.0000	100.0%	100.0%	land area	0.0000	0.0000
2275000000	Airport	All Airport	2022EMP	0.0003	0.0007	100.0%	100.0%	airport location	0.0003	0.0007

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SCC	Segment Description	SCC Description	Emissions from	Ozaukee Co. 2024 Emissions		% in NAA		Allocate by	Ozau. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2022EMP	0.0945	0.0031	100.0%	100.0%	Lk. Mich. Shoreline	0.0945	0.0031
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2022EMP	0.0423	0.0017	100.0%	100.0%	Lk. Mich. Shoreline	0.0423	0.0017
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0105	0.0316	100.0%	100.0%	water area	0.0105	0.0316
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0050	0.0060	100.0%	100.0%	water area	0.0050	0.0060
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0041	0.0044	100.0%	100.0%	water area	0.0041	0.0044
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0055	0.0004	100.0%	100.0%	water area	0.0055	0.0004
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0000	0.0000	100.0%	100.0%	water area	0.0000	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2022EMP	0.0666	0.0030	100.0%	100.0%	track miles	0.0666	0.0030
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0002	0.0000	100.0%	100.0%	track miles	0.0002	0.0000
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0000	100.0%	100.0%	track miles	0.0000	0.0000
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	100.0%	100.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		1.5609	0.9381	100.0%	100.0%		1.5609	0.9381
22xx005xxx	Agriculture	All	MOVES	0.0453	0.0058	100.0%	100.0%	land area (1)	0.0453	0.0058
22750xxxxx	Airport	All	2022EMP	0.0003	0.0007	100.0%	100.0%	airport location	0.0003	0.0007
22xx006xxx	Commercial	All	MOVES	0.0693	0.0993	100.0%	100.0%	population	0.0693	0.0993
2280002xxx	Comm. Mar	All	2022EMP	0.1368	0.0048	100.0%	100.0%	Lk. Mich. Shoreline	0.1368	0.0048
22xx002xxx	Construction	All	MOVES	0.9569	0.2194	100.0%	100.0%	population	0.9569	0.2194
22xx003xxx	Industrial	All	MOVES	0.1471	0.0273	100.0%	100.0%	population	0.1471	0.0273
22xx004xxx	Lawn/Garden	All	MOVES	0.1083	0.5188	100.0%	100.0%	population	0.1083	0.5188
22xx007xxx	Logging	All	MOVES	0.0000	0.0001	100.0%	100.0%	land area	0.0000	0.0001
22820xxxxx	Pleasure Craft	All	MOVES	0.0252	0.0424	100.0%	100.0%	water area	0.0252	0.0424
228500200x	Railroad	All	2022EMP	0.0666	0.0030	100.0%	100.0%	track miles	0.0666	0.0030
228500x015	Railway Maint.	All	MOVES	0.0002	0.0001	100.0%	100.0%	track miles	0.0002	0.0001
22xx001xxx	Recreational	All	MOVES	0.0049	0.0166	100.0%	100.0%	land area	0.0049	0.0166
ALL (Total)	ALL (Total)	ALL (Total)		1.5609	0.9381	100.0%	100.0%		1.5609	0.9381

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

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**Table A6.13. 2024 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Racine County and the Portion of the County within the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA)**

SCC	Segment Description	SCC Description	Emissions from	Racine Co. 2024 Emissions		% in NAA		Allocate by	Rac. Co. NAA 2024 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0006	0.0429	57.1%	57.1%	land area	0.0003	0.0245
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0003	0.0044	57.1%	57.1%	land area	0.0002	0.0025
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0002	0.0007	57.1%	57.1%	land area	0.0001	0.0004
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0002	0.0101	77.1%	77.1%	population	0.0002	0.0078
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0004	77.1%	77.1%	population	0.0000	0.0003
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0004	77.1%	77.1%	population	0.0000	0.0003
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0007	0.0256	77.1%	77.1%	population	0.0005	0.0197
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0001	77.1%	77.1%	population	0.0000	0.0001
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0006	77.1%	77.1%	population	0.0000	0.0004
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0001	0.0017	77.1%	77.1%	population	0.0001	0.0013
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0003	0.0053	77.1%	77.1%	population	0.0002	0.0041
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0005	0.0170	77.1%	77.1%	population	0.0004	0.0131
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0013	0.0602	77.1%	77.1%	population	0.0010	0.0464
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0014	0.0339	77.1%	77.1%	population	0.0011	0.0262
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0024	0.0603	77.1%	77.1%	population	0.0018	0.0465
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0009	0.0209	77.1%	77.1%	population	0.0007	0.0161
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0022	0.0604	77.1%	77.1%	population	0.0017	0.0466
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0013	77.1%	77.1%	population	0.0000	0.0010
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0001	77.1%	77.1%	population	0.0000	0.0001
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0002	55.3%	55.3%	land area (1)	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0001	0.0018	77.1%	77.1%	population	0.0001	0.0014
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0005	0.0125	77.1%	77.1%	population	0.0004	0.0096
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0001	77.1%	77.1%	population	0.0000	0.0001
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0003	0.0021	57.1%	57.1%	land area	0.0002	0.0012
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0020	0.0212	57.1%	57.1%	land area	0.0012	0.0121
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0070	0.0237	57.1%	57.1%	land area	0.0040	0.0135
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0002	0.0007	57.1%	57.1%	land area	0.0001	0.0004
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0002	0.0005	77.1%	77.1%	population	0.0001	0.0004
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0003	0.0012	77.1%	77.1%	population	0.0002	0.0009
2265002015	Construction	4-Stroke Rollers	MOVES	0.0003	0.0008	77.1%	77.1%	population	0.0002	0.0006

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				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0006	0.0022	77.1%	77.1%	population	0.0004	0.0017
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0002	0.0009	77.1%	77.1%	population	0.0002	0.0007
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0005	0.0015	77.1%	77.1%	population	0.0004	0.0012
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0003	0.0007	77.1%	77.1%	population	0.0002	0.0005
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0011	0.0033	77.1%	77.1%	population	0.0008	0.0026
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0005	0.0024	77.1%	77.1%	population	0.0004	0.0019
2265002045	Construction	4-Stroke Cranes	MOVES	0.0001	0.0001	77.1%	77.1%	population	0.0000	0.0000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0001	0.0002	77.1%	77.1%	population	0.0001	0.0002
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0001	0.0000	77.1%	77.1%	population	0.0000	0.0000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0001	0.0001	77.1%	77.1%	population	0.0001	0.0001
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0003	0.0011	77.1%	77.1%	population	0.0003	0.0008
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0003	0.0005	77.1%	77.1%	population	0.0002	0.0004
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0001	0.0004	77.1%	77.1%	population	0.0001	0.0003
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0001	0.0001	77.1%	77.1%	population	0.0001	0.0000
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0022	0.0031	77.1%	77.1%	population	0.0017	0.0024
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0060	0.0036	77.1%	77.1%	population	0.0046	0.0028
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0014	0.0028	77.1%	77.1%	population	0.0011	0.0022
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0030	0.0113	77.1%	77.1%	population	0.0023	0.0087
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0001	0.0002	77.1%	77.1%	population	0.0001	0.0002
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	77.1%	77.1%	population	0.0000	0.0001
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0005	0.0003	77.1%	77.1%	population	0.0004	0.0002
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0086	0.0700	77.1%	77.1%	population	0.0067	0.0540
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0050	0.0312	77.1%	77.1%	population	0.0038	0.0241
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0007	0.0064	77.1%	77.1%	population	0.0006	0.0049
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0025	0.0183	77.1%	77.1%	population	0.0020	0.0141
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0000	0.0005	77.1%	77.1%	population	0.0000	0.0004
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0001	0.0008	77.1%	77.1%	population	0.0001	0.0006
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0001	0.0006	77.1%	77.1%	population	0.0001	0.0005
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0046	0.0194	77.1%	77.1%	population	0.0035	0.0149
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0028	77.1%	77.1%	population	0.0000	0.0022
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0003	77.1%	77.1%	population	0.0000	0.0002
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0017	0.0098	77.1%	77.1%	population	0.0013	0.0076
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0005	0.0019	77.1%	77.1%	population	0.0004	0.0015
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0006	0.0023	77.1%	77.1%	population	0.0005	0.0018
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0003	0.0021	77.1%	77.1%	population	0.0002	0.0016
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0233	0.1067	77.1%	77.1%	population	0.0179	0.0823
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0074	0.0251	77.1%	77.1%	population	0.0057	0.0194
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0012	0.0026	77.1%	77.1%	population	0.0009	0.0020
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0239	0.0737	77.1%	77.1%	population	0.0185	0.0569

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				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0009	0.0045	77.1%	77.1%	population	0.0007	0.0035
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0008	0.0037	77.1%	77.1%	population	0.0006	0.0029
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0001	55.3%	55.3%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0001	0.0001	55.3%	55.3%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0003	0.0003	55.3%	55.3%	land area (1)	0.0002	0.0002
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0004	0.0007	55.3%	55.3%	land area (1)	0.0002	0.0004
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0007	0.0030	55.3%	55.3%	land area (1)	0.0004	0.0017
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0004	0.0004	55.3%	55.3%	land area (1)	0.0002	0.0002
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0005	0.0005	55.3%	55.3%	land area (1)	0.0003	0.0003
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0001	0.0001	55.3%	55.3%	land area (1)	0.0001	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0096	0.0439	77.1%	77.1%	population	0.0074	0.0339
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0026	0.0101	77.1%	77.1%	population	0.0020	0.0078
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0013	0.0042	77.1%	77.1%	population	0.0010	0.0032
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0028	0.0095	77.1%	77.1%	population	0.0021	0.0073
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0044	0.0197	77.1%	77.1%	population	0.0034	0.0152
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0002	0.0007	77.1%	77.1%	population	0.0002	0.0006
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0001	0.0000	77.1%	77.1%	population	0.0001	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0001	0.0000	77.1%	77.1%	population	0.0001	0.0000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0001	0.0000	77.1%	77.1%	population	0.0001	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0001	0.0000	77.1%	77.1%	population	0.0000	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0001	0.0000	77.1%	77.1%	population	0.0001	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0002	0.0000	77.1%	77.1%	population	0.0001	0.0000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0001	0.0000	77.1%	77.1%	population	0.0001	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0016	0.0003	77.1%	77.1%	population	0.0012	0.0002
2267003020	Industrial	LPG Forklifts	MOVES	0.0944	0.0111	77.1%	77.1%	population	0.0728	0.0085
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0007	0.0001	77.1%	77.1%	population	0.0006	0.0001
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0002	0.0000	77.1%	77.1%	population	0.0002	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0001	0.0000	77.1%	77.1%	population	0.0001	0.0000

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				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0004	0.0001	77.1%	77.1%	population	0.0003	0.0000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0004	0.0001	77.1%	77.1%	population	0.0003	0.0000
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0029	0.0005	77.1%	77.1%	population	0.0022	0.0004
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0003	0.0000	77.1%	77.1%	population	0.0003	0.0000
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0003	0.0000	77.1%	77.1%	population	0.0002	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0003	0.0000	77.1%	77.1%	population	0.0003	0.0000
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0077	0.0033	77.1%	77.1%	population	0.0059	0.0025
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0002	0.0001	55.3%	55.3%	land area (1)	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0012	0.0007	77.1%	77.1%	population	0.0009	0.0005
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0010	0.0005	77.1%	77.1%	population	0.0007	0.0004
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0005	0.0001	57.1%	57.1%	land area	0.0003	0.0001
2270002003	Construction	Diesel Pavers	MOVES	0.0033	0.0001	77.1%	77.1%	population	0.0025	0.0001
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0004	0.0001	77.1%	77.1%	population	0.0003	0.0001
2270002015	Construction	Diesel Rollers	MOVES	0.0109	0.0005	77.1%	77.1%	population	0.0084	0.0004
2270002018	Construction	Diesel Scrapers	MOVES	0.0060	0.0003	77.1%	77.1%	population	0.0046	0.0003
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0008	0.0000	77.1%	77.1%	population	0.0006	0.0000
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0008	0.0000	77.1%	77.1%	population	0.0006	0.0000
2270002027	Construction	Diesel Signal Boards	MOVES	0.0035	0.0003	77.1%	77.1%	population	0.0027	0.0002
2270002030	Construction	Diesel Trenchers	MOVES	0.0090	0.0004	77.1%	77.1%	population	0.0069	0.0003
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0116	0.0008	77.1%	77.1%	population	0.0089	0.0006
2270002036	Construction	Diesel Excavators	MOVES	0.0185	0.0008	77.1%	77.1%	population	0.0143	0.0007
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0007	0.0000	77.1%	77.1%	population	0.0005	0.0000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0005	0.0001	77.1%	77.1%	population	0.0004	0.0000
2270002045	Construction	Diesel Cranes	MOVES	0.0069	0.0004	77.1%	77.1%	population	0.0054	0.0003
2270002048	Construction	Diesel Graders	MOVES	0.0034	0.0002	77.1%	77.1%	population	0.0026	0.0001
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.0520	0.0011	77.1%	77.1%	population	0.0401	0.0009
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0021	0.0001	77.1%	77.1%	population	0.0016	0.0001

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

SCC	Segment Description	SCC Description	Emissions from	Racine Co. 2024 Emissions		% in NAA		Allocate by	Rac. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0163	0.0006	77.1%	77.1%	population	0.0126	0.0005
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.0411	0.0018	77.1%	77.1%	population	0.0317	0.0014
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.0469	0.0066	77.1%	77.1%	population	0.0361	0.0051
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0312	0.0013	77.1%	77.1%	population	0.0240	0.0010
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.0556	0.0092	77.1%	77.1%	population	0.0428	0.0071
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0069	0.0002	77.1%	77.1%	population	0.0053	0.0002
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0002	0.0000	77.1%	77.1%	population	0.0001	0.0000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0052	0.0003	77.1%	77.1%	population	0.0040	0.0002
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0059	0.0009	77.1%	77.1%	population	0.0046	0.0007
2270003020	Industrial	Diesel Forklifts	MOVES	0.0296	0.0006	77.1%	77.1%	population	0.0228	0.0004
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0105	0.0004	77.1%	77.1%	population	0.0081	0.0003
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0125	0.0006	77.1%	77.1%	population	0.0096	0.0005
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0011	0.0002	77.1%	77.1%	population	0.0009	0.0001
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0559	0.0019	77.1%	77.1%	population	0.0431	0.0014
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0060	0.0002	77.1%	77.1%	population	0.0047	0.0002
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	77.1%	77.1%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0123	0.0010	77.1%	77.1%	population	0.0095	0.0008
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0027	0.0003	77.1%	77.1%	population	0.0021	0.0002
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0156	0.0012	77.1%	77.1%	population	0.0120	0.0009
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0010	0.0001	77.1%	77.1%	population	0.0008	0.0000
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0001	0.0000	77.1%	77.1%	population	0.0000	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0702	0.0045	55.3%	55.3%	land area (1)	0.0388	0.0025
2270005020	Agriculture	Diesel Combines	MOVES	0.0117	0.0009	55.3%	55.3%	land area (1)	0.0064	0.0005
2270005025	Agriculture	Diesel Balers	MOVES	0.0001	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0010	0.0001	55.3%	55.3%	land area (1)	0.0005	0.0000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	55.3%	55.3%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0009	0.0001	55.3%	55.3%	land area (1)	0.0005	0.0001
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0016	0.0001	55.3%	55.3%	land area (1)	0.0009	0.0001
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0007	0.0000	55.3%	55.3%	land area (1)	0.0004	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0241	0.0021	77.1%	77.1%	population	0.0186	0.0016
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0057	0.0005	77.1%	77.1%	population	0.0044	0.0004
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0094	0.0004	77.1%	77.1%	population	0.0072	0.0003
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0081	0.0012	77.1%	77.1%	population	0.0062	0.0009
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0008	0.0001	77.1%	77.1%	population	0.0006	0.0001
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0004	0.0000	77.1%	77.1%	population	0.0003	0.0000
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
2275000000	Airport	All Airport	2022EMP	0.0278	0.0452	36.3%	47.0%	airport location	0.0101	0.0213

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SCC	Segment Description	SCC Description	Emissions from	Racine Co. 2024 Emissions		% in NAA		Allocate by	Rac. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2022EMP	0.0780	0.0024	100.0%	100.0%	Lk. Mich. Shoreline	0.0780	0.0024
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2022EMP	0.0586	0.0024	100.0%	100.0%	Lk. Mich. Shoreline	0.0586	0.0024
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0473	0.1422	5.7%	5.7%	water area	0.0027	0.0081
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0225	0.0271	71.4%	71.4%	water area	0.0161	0.0194
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0607	0.0658	71.4%	71.4%	water area	0.0433	0.0470
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0823	0.0052	71.4%	71.4%	water area	0.0588	0.0037
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0001	0.0000	5.7%	5.7%	water area	0.0000	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2022EMP	0.6410	0.0259	76.0%	76.0%	track miles	0.4872	0.0197
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0012	0.0002	76.0%	76.0%	track miles	0.0009	0.0001
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0001	76.0%	76.0%	track miles	0.0000	0.0001
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	76.0%	76.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		1.8989	1.2984	74.4%	65.7%		1.4121	0.8596
22xx005xxx	Agriculture	All	MOVES	0.0887	0.0113	55.3%	55.3%	land area (1)	0.0490	0.0062
22750xxxxx	Airport	All	2022EMP	0.0278	0.0452	36.3%	47.0%	airport location	0.0101	0.0213
22xx006xxx	Commercial	All	MOVES	0.0757	0.1085	77.1%	77.2%	population	0.0584	0.0836
2280002xxx	Comm. Mar	All	2022EMP	0.1366	0.0048	100.0%	100.0%	Lk. Mich. Shoreline	0.1366	0.0048
22xx002xxx	Construction	All	MOVES	0.3405	0.0781	77.1%	77.2%	population	0.2625	0.0602
22xx003xxx	Industrial	All	MOVES	0.2401	0.0417	77.1%	77.2%	population	0.1851	0.0321
22xx004xxx	Lawn/Garden	All	MOVES	0.1235	0.6467	77.1%	77.2%	population	0.0952	0.4986
22xx007xxx	Logging	All	MOVES	0.0000	0.0000	57.1%	57.1%	land area	0.0000	0.0000
22820xxxxx	Pleasure Craft	All	MOVES	0.2129	0.2403	56.8%	31.7%	water area	0.1209	0.0782
228500200x	Railroad	All	2022EMP	0.6410	0.0259	76.0%	76.0%	track miles	0.4872	0.0197
228500x015	Railway Maint.	All	MOVES	0.0012	0.0003	76.0%	76.0%	track miles	0.0009	0.0002
22xx001xxx	Recreational	All	MOVES	0.0111	0.0957	57.1%	57.1%	land area	0.0063	0.0547
ALL (Total)	ALL (Total)	ALL (Total)		1.8989	1.2984	74.4%	65.7%		1.4121	0.8596

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

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**Table A6.14. 2024 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Washington County and the Portion of the County within the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA)**

SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2024 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2024 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0009	0.0643	42.7%	42.7%	land area	0.0004	0.0275
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	42.7%	42.7%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0004	0.0065	42.7%	42.7%	land area	0.0002	0.0028
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0011	42.7%	42.7%	land area	0.0001	0.0005
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0002	0.0090	56.5%	56.5%	population	0.0001	0.0051
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0003	56.5%	56.5%	population	0.0000	0.0002
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0004	56.5%	56.5%	population	0.0000	0.0002
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0006	0.0228	56.5%	56.5%	population	0.0003	0.0129
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0001	56.5%	56.5%	population	0.0000	0.0000
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0005	56.5%	56.5%	population	0.0000	0.0003
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0000	0.0011	56.5%	56.5%	population	0.0000	0.0006
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0006	0.0137	56.5%	56.5%	population	0.0004	0.0077
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0003	0.0107	56.5%	56.5%	population	0.0002	0.0060
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0035	0.1559	56.5%	56.5%	population	0.0020	0.0881
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0009	0.0212	56.5%	56.5%	population	0.0005	0.0120
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0061	0.1563	56.5%	56.5%	population	0.0035	0.0883
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0006	0.0131	56.5%	56.5%	population	0.0003	0.0074
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0057	0.1564	56.5%	56.5%	population	0.0032	0.0884
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0008	56.5%	56.5%	population	0.0000	0.0004
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0003	56.5%	56.5%	population	0.0000	0.0002
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0001	56.5%	56.5%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0002	42.1%	42.1%	land area (1)	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0001	0.0016	56.5%	56.5%	population	0.0000	0.0009
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0004	0.0109	56.5%	56.5%	population	0.0002	0.0062
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0001	56.5%	56.5%	population	0.0000	0.0000
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0002	42.7%	42.7%	land area	0.0000	0.0001
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0004	0.0031	42.7%	42.7%	land area	0.0002	0.0013
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0031	0.0318	42.7%	42.7%	land area	0.0013	0.0136
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0077	0.0261	42.7%	42.7%	land area	0.0033	0.0111
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0010	42.7%	42.7%	land area	0.0001	0.0004
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0001	0.0004	56.5%	56.5%	population	0.0001	0.0002
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0003	0.0011	56.5%	56.5%	population	0.0002	0.0006
2265002015	Construction	4-Stroke Rollers	MOVES	0.0003	0.0007	56.5%	56.5%	population	0.0001	0.0004

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SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2024 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0005	0.0019	56.5%	56.5%	population	0.0003	0.0011
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0002	0.0008	56.5%	56.5%	population	0.0001	0.0004
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0004	0.0013	56.5%	56.5%	population	0.0003	0.0008
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0002	0.0006	56.5%	56.5%	population	0.0001	0.0003
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0010	0.0030	56.5%	56.5%	population	0.0005	0.0017
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0004	0.0022	56.5%	56.5%	population	0.0002	0.0012
2265002045	Construction	4-Stroke Cranes	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0001	0.0002	56.5%	56.5%	population	0.0000	0.0001
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0000	0.0000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0001	0.0001	56.5%	56.5%	population	0.0001	0.0000
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0003	0.0009	56.5%	56.5%	population	0.0002	0.0005
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0002	0.0004	56.5%	56.5%	population	0.0001	0.0002
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0001	0.0003	56.5%	56.5%	population	0.0000	0.0002
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0001	0.0001	56.5%	56.5%	population	0.0000	0.0000
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0019	0.0028	56.5%	56.5%	population	0.0011	0.0016
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0053	0.0032	56.5%	56.5%	population	0.0030	0.0018
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0013	0.0025	56.5%	56.5%	population	0.0007	0.0014
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0027	0.0101	56.5%	56.5%	population	0.0015	0.0057
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0001	0.0002	56.5%	56.5%	population	0.0001	0.0001
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	56.5%	56.5%	population	0.0000	0.0000
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0005	0.0003	56.5%	56.5%	population	0.0003	0.0002
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0054	0.0438	56.5%	56.5%	population	0.0031	0.0247
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0128	0.0808	56.5%	56.5%	population	0.0072	0.0457
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0005	0.0040	56.5%	56.5%	population	0.0003	0.0023
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0066	0.0474	56.5%	56.5%	population	0.0037	0.0268
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0000	0.0003	56.5%	56.5%	population	0.0000	0.0002
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0003	0.0022	56.5%	56.5%	population	0.0002	0.0012
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0001	0.0004	56.5%	56.5%	population	0.0000	0.0002
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0118	0.0501	56.5%	56.5%	population	0.0067	0.0283
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0018	56.5%	56.5%	population	0.0000	0.0010
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0007	56.5%	56.5%	population	0.0000	0.0004
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0011	0.0061	56.5%	56.5%	population	0.0006	0.0035
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0014	0.0050	56.5%	56.5%	population	0.0008	0.0028
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0017	0.0060	56.5%	56.5%	population	0.0009	0.0034
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0008	0.0054	56.5%	56.5%	population	0.0004	0.0031
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0146	0.0668	56.5%	56.5%	population	0.0082	0.0377
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0192	0.0650	56.5%	56.5%	population	0.0108	0.0368
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0031	0.0068	56.5%	56.5%	population	0.0018	0.0039
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0620	0.1910	56.5%	56.5%	population	0.0350	0.1079

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2024 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0005	0.0028	56.5%	56.5%	population	0.0003	0.0016
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0020	0.0097	56.5%	56.5%	population	0.0011	0.0055
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0001	42.1%	42.1%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0001	0.0001	42.1%	42.1%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0003	0.0003	42.1%	42.1%	land area (1)	0.0001	0.0001
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0003	0.0007	42.1%	42.1%	land area (1)	0.0001	0.0003
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0006	0.0029	42.1%	42.1%	land area (1)	0.0003	0.0012
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0004	0.0004	42.1%	42.1%	land area (1)	0.0002	0.0002
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0005	0.0004	42.1%	42.1%	land area (1)	0.0002	0.0002
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0001	0.0001	42.1%	42.1%	land area (1)	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0083	0.0382	56.5%	56.5%	population	0.0047	0.0216
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0022	0.0088	56.5%	56.5%	population	0.0013	0.0050
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0011	0.0036	56.5%	56.5%	population	0.0006	0.0020
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0024	0.0082	56.5%	56.5%	population	0.0014	0.0047
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0038	0.0172	56.5%	56.5%	population	0.0021	0.0097
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0002	0.0006	56.5%	56.5%	population	0.0001	0.0004
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0000	42.7%	42.7%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	42.7%	42.7%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0001	0.0000	42.7%	42.7%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0002	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0014	0.0002	56.5%	56.5%	population	0.0008	0.0001
2267003020	Industrial	LPG Forklifts	MOVES	0.0844	0.0099	56.5%	56.5%	population	0.0477	0.0056
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0007	0.0001	56.5%	56.5%	population	0.0004	0.0000
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0002	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0000	0.0000

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SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2024 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0004	0.0000	56.5%	56.5%	population	0.0002	0.0000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0011	0.0001	56.5%	56.5%	population	0.0006	0.0001
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0025	0.0004	56.5%	56.5%	population	0.0014	0.0002
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0003	0.0000	56.5%	56.5%	population	0.0002	0.0000
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0002	0.0000	56.5%	56.5%	population	0.0001	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0003	0.0000	56.5%	56.5%	population	0.0002	0.0000
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0069	0.0029	56.5%	56.5%	population	0.0039	0.0017
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0002	0.0001	42.1%	42.1%	land area (1)	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0010	0.0006	56.5%	56.5%	population	0.0006	0.0003
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0008	0.0004	56.5%	56.5%	population	0.0005	0.0002
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0008	0.0001	42.7%	42.7%	land area	0.0003	0.0001
2270002003	Construction	Diesel Pavers	MOVES	0.0029	0.0001	56.5%	56.5%	population	0.0016	0.0001
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0004	0.0001	56.5%	56.5%	population	0.0002	0.0000
2270002015	Construction	Diesel Rollers	MOVES	0.0097	0.0004	56.5%	56.5%	population	0.0055	0.0002
2270002018	Construction	Diesel Scrapers	MOVES	0.0053	0.0003	56.5%	56.5%	population	0.0030	0.0002
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0007	0.0000	56.5%	56.5%	population	0.0004	0.0000
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0007	0.0000	56.5%	56.5%	population	0.0004	0.0000
2270002027	Construction	Diesel Signal Boards	MOVES	0.0031	0.0003	56.5%	56.5%	population	0.0018	0.0002
2270002030	Construction	Diesel Trenchers	MOVES	0.0080	0.0003	56.5%	56.5%	population	0.0045	0.0002
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0103	0.0007	56.5%	56.5%	population	0.0058	0.0004
2270002036	Construction	Diesel Excavators	MOVES	0.0165	0.0008	56.5%	56.5%	population	0.0093	0.0004
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0006	0.0000	56.5%	56.5%	population	0.0003	0.0000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0005	0.0000	56.5%	56.5%	population	0.0003	0.0000
2270002045	Construction	Diesel Cranes	MOVES	0.0062	0.0003	56.5%	56.5%	population	0.0035	0.0002
2270002048	Construction	Diesel Graders	MOVES	0.0030	0.0002	56.5%	56.5%	population	0.0017	0.0001
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.0463	0.0010	56.5%	56.5%	population	0.0261	0.0006
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0018	0.0001	56.5%	56.5%	population	0.0010	0.0000

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SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2024 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0145	0.0006	56.5%	56.5%	population	0.0082	0.0003
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.0366	0.0016	56.5%	56.5%	population	0.0207	0.0009
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.0417	0.0059	56.5%	56.5%	population	0.0236	0.0033
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0278	0.0011	56.5%	56.5%	population	0.0157	0.0006
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.0495	0.0082	56.5%	56.5%	population	0.0279	0.0046
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0062	0.0002	56.5%	56.5%	population	0.0035	0.0001
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0002	0.0000	56.5%	56.5%	population	0.0001	0.0000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0046	0.0003	56.5%	56.5%	population	0.0026	0.0001
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0053	0.0008	56.5%	56.5%	population	0.0030	0.0005
2270003020	Industrial	Diesel Forklifts	MOVES	0.0265	0.0005	56.5%	56.5%	population	0.0149	0.0003
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0094	0.0004	56.5%	56.5%	population	0.0053	0.0002
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0112	0.0006	56.5%	56.5%	population	0.0063	0.0003
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0010	0.0001	56.5%	56.5%	population	0.0006	0.0001
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0354	0.0012	56.5%	56.5%	population	0.0200	0.0007
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0054	0.0002	56.5%	56.5%	population	0.0031	0.0001
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	56.5%	56.5%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0319	0.0026	56.5%	56.5%	population	0.0180	0.0014
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0070	0.0007	56.5%	56.5%	population	0.0040	0.0004
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0403	0.0030	56.5%	56.5%	population	0.0228	0.0017
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0027	0.0001	56.5%	56.5%	population	0.0015	0.0001
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0001	0.0000	56.5%	56.5%	population	0.0001	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0674	0.0044	42.1%	42.1%	land area (1)	0.0284	0.0018
2270005020	Agriculture	Diesel Combines	MOVES	0.0112	0.0009	42.1%	42.1%	land area (1)	0.0047	0.0004
2270005025	Agriculture	Diesel Balers	MOVES	0.0001	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0009	0.0001	42.1%	42.1%	land area (1)	0.0004	0.0000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	42.1%	42.1%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0008	0.0001	42.1%	42.1%	land area (1)	0.0004	0.0000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0015	0.0001	42.1%	42.1%	land area (1)	0.0006	0.0000
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0007	0.0000	42.1%	42.1%	land area (1)	0.0003	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0209	0.0018	56.5%	56.5%	population	0.0118	0.0010
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0049	0.0004	56.5%	56.5%	population	0.0028	0.0002
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0081	0.0004	56.5%	56.5%	population	0.0046	0.0002
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0070	0.0010	56.5%	56.5%	population	0.0040	0.0006
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0007	0.0001	56.5%	56.5%	population	0.0004	0.0000
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0004	0.0000	56.5%	56.5%	population	0.0002	0.0000
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0001	0.0000	42.7%	42.7%	land area	0.0000	0.0000
2275000000	Airport	All Airport	2022EMP	0.1759	0.0991	97.9%	94.7%	airport location	0.1721	0.0939

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SCC	Segment Description	SCC Description	Emissions from	Washington Co. 2024 Emissions		% in NAA		Allocate by	Wash. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2022EMP	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2022EMP	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0228	0.0685	19.0%	19.0%	water area	0.0043	0.0130
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0108	0.0130	19.0%	19.0%	water area	0.0021	0.0025
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0089	0.0096	19.0%	19.0%	water area	0.0017	0.0018
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0120	0.0008	19.0%	19.0%	water area	0.0023	0.0001
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0000	0.0000	19.0%	19.0%	water area	0.0000	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2022EMP	0.7574	0.0308	60.0%	60.0%	track miles	0.4545	0.0185
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0000	0.0000	60.0%	60.0%	track miles	0.0000	0.0000
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0000	60.0%	60.0%	track miles	0.0000	0.0000
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	60.0%	60.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		1.9007	1.6999	59.9%	55.6%		1.1385	0.9449
22xx005xxx	Agriculture	All	MOVES	0.0851	0.0108	42.1%	42.1%	land area (1)	0.0358	0.0046
22750xxxxx	Airport	All	2022EMP	0.1759	0.0991	97.9%	94.7%	airport location	0.1721	0.0939
22xx006xxx	Commercial	All	MOVES	0.0659	0.0944	56.5%	56.5%	population	0.0372	0.0534
2280002xxx	Comm. Mar	All	2022EMP	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
22xx002xxx	Construction	All	MOVES	0.3031	0.0695	56.5%	56.5%	population	0.1713	0.0393
22xx003xxx	Industrial	All	MOVES	0.2002	0.0367	56.5%	56.5%	population	0.1131	0.0208
22xx004xxx	Lawn/Garden	All	MOVES	0.2447	1.1323	56.5%	56.5%	population	0.1382	0.6397
22xx007xxx	Logging	All	MOVES	0.0001	0.0002	42.7%	42.7%	land area	0.0000	0.0001
22820xxxxx	Pleasure Craft	All	MOVES	0.0546	0.0919	19.0%	19.0%	water area	0.0104	0.0175
228500200x	Railroad	All	2022EMP	0.7574	0.0308	60.0%	60.0%	track miles	0.4545	0.0185
228500x015	Railway Maint.	All	MOVES	0.0000	0.0000	60.0%	60.0%	track miles	0.0000	0.0000
22xx001xxx	Recreational	All	MOVES	0.0138	0.1341	42.7%	42.7%	land area	0.0059	0.0573
ALL (Total)	ALL (Total)	ALL (Total)		1.9007	1.6999	59.9%	55.6%		1.1385	0.9449

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

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**Table A6.15. 2024 Nonroad NO_x and VOC Emissions: tons per ozone season day (tposd)
Waukesha County and the Portion of the County within the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA)**

SCC	Segment Description	SCC Description	Emissions from	Waukesha Co. 2024 Emissions		% in NAA		Allocate by	Wauk. Co. NAA 2024 Emissions	
				NO _x	VOC	NO _x	VOC		NO _x	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0009	0.0643	90.6%	90.6%	land area	0.0008	0.0583
2260001020	Recreational	Snowmobiles	MOVES	0.0000	0.0000	90.6%	90.6%	land area	0.0000	0.0000
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0004	0.0065	90.6%	90.6%	land area	0.0004	0.0059
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0011	90.6%	90.6%	land area	0.0002	0.0010
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0007	0.0300	97.5%	97.5%	population	0.0007	0.0293
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0011	97.5%	97.5%	population	0.0000	0.0010
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0001	0.0013	97.5%	97.5%	population	0.0001	0.0012
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0020	0.0763	97.5%	97.5%	population	0.0019	0.0744
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0003	97.5%	97.5%	population	0.0000	0.0002
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0001	0.0015	97.5%	97.5%	population	0.0001	0.0015
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0001	97.5%	97.5%	population	0.0000	0.0001
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0001	0.0032	97.5%	97.5%	population	0.0001	0.0032
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0018	0.0378	97.5%	97.5%	population	0.0017	0.0368
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0009	0.0326	97.5%	97.5%	population	0.0009	0.0318
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0096	0.4304	97.5%	97.5%	population	0.0094	0.4196
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0026	0.0649	97.5%	97.5%	population	0.0026	0.0633
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0169	0.4314	97.5%	97.5%	population	0.0165	0.4206
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0017	0.0399	97.5%	97.5%	population	0.0016	0.0389
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0157	0.4319	97.5%	97.5%	population	0.0153	0.4211
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0024	97.5%	97.5%	population	0.0000	0.0023
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0009	97.5%	97.5%	population	0.0000	0.0009
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0001	97.5%	97.5%	population	0.0000	0.0001
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0001	86.9%	86.9%	land area (1)	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0004	0.0099	97.5%	97.5%	population	0.0004	0.0096
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0025	0.0687	97.5%	97.5%	population	0.0025	0.0670
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0004	97.5%	97.5%	population	0.0000	0.0004
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0002	90.6%	90.6%	land area	0.0000	0.0002
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0004	0.0031	90.6%	90.6%	land area	0.0004	0.0028
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0031	0.0318	90.6%	90.6%	land area	0.0028	0.0288
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0188	0.0640	90.6%	90.6%	land area	0.0170	0.0580
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0010	90.6%	90.6%	land area	0.0003	0.0009
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0005	0.0014	97.5%	97.5%	population	0.0005	0.0013
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0009	0.0036	97.5%	97.5%	population	0.0009	0.0035
2265002015	Construction	4-Stroke Rollers	MOVES	0.0008	0.0025	97.5%	97.5%	population	0.0008	0.0024

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SCC	Segment Description	SCC Description	Emissions from	Waukesha Co. 2024 Emissions		% in NAA		Allocate by	Wauk. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0017	0.0064	97.5%	97.5%	population	0.0016	0.0063
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0007	0.0026	97.5%	97.5%	population	0.0007	0.0025
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0001	97.5%	97.5%	population	0.0000	0.0001
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0015	0.0045	97.5%	97.5%	population	0.0014	0.0043
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0007	0.0021	97.5%	97.5%	population	0.0007	0.0020
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0032	0.0100	97.5%	97.5%	population	0.0031	0.0097
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0015	0.0072	97.5%	97.5%	population	0.0014	0.0071
2265002045	Construction	4-Stroke Cranes	MOVES	0.0002	0.0002	97.5%	97.5%	population	0.0001	0.0001
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0002	0.0007	97.5%	97.5%	population	0.0002	0.0007
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0002	0.0001	97.5%	97.5%	population	0.0002	0.0001
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0004	0.0002	97.5%	97.5%	population	0.0004	0.0002
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0010	0.0032	97.5%	97.5%	population	0.0010	0.0031
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0008	0.0014	97.5%	97.5%	population	0.0008	0.0014
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0002	0.0011	97.5%	97.5%	population	0.0002	0.0011
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0002	0.0002	97.5%	97.5%	population	0.0002	0.0002
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0058	0.0083	97.5%	97.5%	population	0.0056	0.0081
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0160	0.0097	97.5%	97.5%	population	0.0156	0.0095
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0039	0.0076	97.5%	97.5%	population	0.0038	0.0074
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0081	0.0302	97.5%	97.5%	population	0.0079	0.0295
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0004	0.0006	97.5%	97.5%	population	0.0004	0.0006
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0001	0.0002	97.5%	97.5%	population	0.0001	0.0002
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0014	0.0009	97.5%	97.5%	population	0.0014	0.0008
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0165	0.1339	97.5%	97.5%	population	0.0161	0.1305
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0354	0.2232	97.5%	97.5%	population	0.0345	0.2176
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0014	0.0122	97.5%	97.5%	population	0.0014	0.0119
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0182	0.1310	97.5%	97.5%	population	0.0177	0.1277
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0001	0.0010	97.5%	97.5%	population	0.0001	0.0009
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0008	0.0060	97.5%	97.5%	population	0.0008	0.0058
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0002	0.0012	97.5%	97.5%	population	0.0002	0.0012
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0326	0.1384	97.5%	97.5%	population	0.0318	0.1350
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0054	97.5%	97.5%	population	0.0000	0.0053
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0020	97.5%	97.5%	population	0.0000	0.0020
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0033	0.0188	97.5%	97.5%	population	0.0032	0.0183
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0039	0.0139	97.5%	97.5%	population	0.0038	0.0135
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0046	0.0167	97.5%	97.5%	population	0.0045	0.0163
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0021	0.0150	97.5%	97.5%	population	0.0020	0.0146
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0445	0.2041	97.5%	97.5%	population	0.0434	0.1990
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0529	0.1796	97.5%	97.5%	population	0.0516	0.1751
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0086	0.0189	97.5%	97.5%	population	0.0084	0.0184
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.1711	0.5272	97.5%	97.5%	population	0.1668	0.5140

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				NOx	VOC	NOx	VOC		NOx	VOC
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0017	0.0086	97.5%	97.5%	population	0.0016	0.0084
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0055	0.0268	97.5%	97.5%	population	0.0053	0.0261
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0002	0.0002	86.9%	86.9%	land area (1)	0.0002	0.0002
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0003	0.0005	86.9%	86.9%	land area (1)	0.0002	0.0005
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0005	0.0021	86.9%	86.9%	land area (1)	0.0004	0.0018
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0003	0.0003	86.9%	86.9%	land area (1)	0.0003	0.0003
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0003	0.0003	86.9%	86.9%	land area (1)	0.0003	0.0003
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0001	0.0001	86.9%	86.9%	land area (1)	0.0001	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0526	0.2414	97.5%	97.5%	population	0.0513	0.2354
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0140	0.0554	97.5%	97.5%	population	0.0137	0.0540
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0071	0.0229	97.5%	97.5%	population	0.0069	0.0223
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0152	0.0520	97.5%	97.5%	population	0.0149	0.0507
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0239	0.1083	97.5%	97.5%	population	0.0233	0.1056
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0011	0.0040	97.5%	97.5%	population	0.0011	0.0039
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0001	90.6%	90.6%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	90.6%	90.6%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0001	0.0000	90.6%	90.6%	land area	0.0001	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0002	0.0000	97.5%	97.5%	population	0.0002	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0004	0.0001	97.5%	97.5%	population	0.0004	0.0001
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0002	0.0000	97.5%	97.5%	population	0.0002	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0002	0.0000	97.5%	97.5%	population	0.0002	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0004	0.0000	97.5%	97.5%	population	0.0003	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0005	0.0001	97.5%	97.5%	population	0.0005	0.0001
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0002	0.0000	97.5%	97.5%	population	0.0002	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0043	0.0007	97.5%	97.5%	population	0.0042	0.0007
2267003020	Industrial	LPG Forklifts	MOVES	0.2537	0.0297	97.5%	97.5%	population	0.2473	0.0290
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0020	0.0002	97.5%	97.5%	population	0.0019	0.0002
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0006	0.0001	97.5%	97.5%	population	0.0006	0.0001
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0002	0.0000	97.5%	97.5%	population	0.0002	0.0000

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				NOx	VOC	NOx	VOC		NOx	VOC
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0012	0.0001	97.5%	97.5%	population	0.0012	0.0001
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0031	0.0004	97.5%	97.5%	population	0.0031	0.0004
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0157	0.0025	97.5%	97.5%	population	0.0154	0.0024
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0019	0.0003	97.5%	97.5%	population	0.0019	0.0003
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0014	0.0002	97.5%	97.5%	population	0.0014	0.0002
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0018	0.0002	97.5%	97.5%	population	0.0017	0.0002
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0206	0.0088	97.5%	97.5%	population	0.0201	0.0086
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0001	0.0000	86.9%	86.9%	land area (1)	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0065	0.0037	97.5%	97.5%	population	0.0063	0.0036
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0002	0.0001	97.5%	97.5%	population	0.0002	0.0001
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0001	0.0001	97.5%	97.5%	population	0.0001	0.0001
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0052	0.0025	97.5%	97.5%	population	0.0051	0.0025
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0008	0.0001	90.6%	90.6%	land area	0.0007	0.0001
2270002003	Construction	Diesel Pavers	MOVES	0.0097	0.0004	97.5%	97.5%	population	0.0095	0.0004
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0001	0.0000	97.5%	97.5%	population	0.0001	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0012	0.0002	97.5%	97.5%	population	0.0012	0.0002
2270002015	Construction	Diesel Rollers	MOVES	0.0324	0.0014	97.5%	97.5%	population	0.0316	0.0014
2270002018	Construction	Diesel Scrapers	MOVES	0.0179	0.0010	97.5%	97.5%	population	0.0174	0.0010
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0024	0.0001	97.5%	97.5%	population	0.0023	0.0001
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0023	0.0001	97.5%	97.5%	population	0.0022	0.0001
2270002027	Construction	Diesel Signal Boards	MOVES	0.0105	0.0009	97.5%	97.5%	population	0.0103	0.0009
2270002030	Construction	Diesel Trenchers	MOVES	0.0268	0.0011	97.5%	97.5%	population	0.0262	0.0011
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0345	0.0023	97.5%	97.5%	population	0.0336	0.0022
2270002036	Construction	Diesel Excavators	MOVES	0.0552	0.0025	97.5%	97.5%	population	0.0539	0.0025
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0020	0.0001	97.5%	97.5%	population	0.0020	0.0001
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0016	0.0002	97.5%	97.5%	population	0.0015	0.0002
2270002045	Construction	Diesel Cranes	MOVES	0.0207	0.0011	97.5%	97.5%	population	0.0202	0.0010
2270002048	Construction	Diesel Graders	MOVES	0.0102	0.0006	97.5%	97.5%	population	0.0099	0.0006
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.1548	0.0034	97.5%	97.5%	population	0.1510	0.0033
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0062	0.0003	97.5%	97.5%	population	0.0060	0.0003

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SCC	Segment Description	SCC Description	Emissions from	Waukesha Co. 2024 Emissions		% in NAA		Allocate by	Wauk. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0485	0.0019	97.5%	97.5%	population	0.0473	0.0019
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.1225	0.0055	97.5%	97.5%	population	0.1194	0.0054
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.1396	0.0198	97.5%	97.5%	population	0.1361	0.0193
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0929	0.0038	97.5%	97.5%	population	0.0906	0.0037
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.1655	0.0275	97.5%	97.5%	population	0.1614	0.0268
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0207	0.0007	97.5%	97.5%	population	0.0201	0.0007
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0005	0.0001	97.5%	97.5%	population	0.0005	0.0001
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0155	0.0009	97.5%	97.5%	population	0.0151	0.0008
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0159	0.0024	97.5%	97.5%	population	0.0155	0.0024
2270003020	Industrial	Diesel Forklifts	MOVES	0.0795	0.0015	97.5%	97.5%	population	0.0775	0.0015
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0282	0.0011	97.5%	97.5%	population	0.0275	0.0010
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0336	0.0017	97.5%	97.5%	population	0.0327	0.0016
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0030	0.0004	97.5%	97.5%	population	0.0030	0.0004
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.1085	0.0036	97.5%	97.5%	population	0.1058	0.0035
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0162	0.0007	97.5%	97.5%	population	0.0158	0.0006
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	97.5%	97.5%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0880	0.0071	97.5%	97.5%	population	0.0858	0.0069
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0194	0.0018	97.5%	97.5%	population	0.0189	0.0018
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.1114	0.0084	97.5%	97.5%	population	0.1086	0.0082
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0075	0.0004	97.5%	97.5%	population	0.0073	0.0004
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0004	0.0000	97.5%	97.5%	population	0.0004	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0492	0.0032	86.9%	86.9%	land area (1)	0.0427	0.0028
2270005020	Agriculture	Diesel Combines	MOVES	0.0082	0.0006	86.9%	86.9%	land area (1)	0.0071	0.0006
2270005025	Agriculture	Diesel Balers	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0007	0.0001	86.9%	86.9%	land area (1)	0.0006	0.0001
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	86.9%	86.9%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0006	0.0001	86.9%	86.9%	land area (1)	0.0005	0.0001
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0011	0.0001	86.9%	86.9%	land area (1)	0.0010	0.0001
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0005	0.0000	86.9%	86.9%	land area (1)	0.0004	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.1322	0.0114	97.5%	97.5%	population	0.1289	0.0112
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0312	0.0028	97.5%	97.5%	population	0.0304	0.0027
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0514	0.0023	97.5%	97.5%	population	0.0501	0.0022
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0444	0.0065	97.5%	97.5%	population	0.0433	0.0064
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0043	0.0004	97.5%	97.5%	population	0.0042	0.0004
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0025	0.0001	97.5%	97.5%	population	0.0024	0.0001
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidlers	MOVES	0.0001	0.0000	90.6%	90.6%	land area	0.0001	0.0000
2275000000	Airport	All Airport	2022EMP	0.0197	0.0317	100.0%	100.0%	airport location	0.0197	0.0317

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SCC	Segment Description	SCC Description	Emissions from	Waukesha Co. 2024 Emissions		% in NAA		Allocate by	Wauk. Co. NAA 2024 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002x01/2	Comm. Mar.	CM Vessels, Diesel, C1&C2	2022EMP	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
2280002x03/4	Comm. Mar.	CM Vessels, Diesel, C3	2022EMP	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.1140	0.3423	94.0%	94.0%	water area	0.1071	0.3217
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0542	0.0652	94.0%	94.0%	water area	0.0509	0.0613
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0443	0.0481	94.0%	94.0%	water area	0.0416	0.0452
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0601	0.0038	94.0%	94.0%	water area	0.0565	0.0036
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0002	0.0000	94.0%	94.0%	water area	0.0002	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	2022EMP	1.2489	0.0508	97.0%	97.0%	track miles	1.2114	0.0493
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0011	0.0002	97.0%	97.0%	track miles	0.0011	0.0002
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0001	97.0%	97.0%	track miles	0.0000	0.0001
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	97.0%	97.0%	track miles	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)		4.3459	4.8388	97.0%	96.9%		4.2136	4.6895
22xx005xxx	Agriculture	All	MOVES	0.0621	0.0079	86.9%	86.9%	land area (1)	0.0540	0.0069
22750xxxxx	Airport	All	2022EMP	0.0197	0.0317	100.0%	100.0%	airport location	0.0197	0.0317
22xx006xxx	Commercial	All	MOVES	0.4159	0.5962	97.5%	97.5%	population	0.4055	0.5813
2280002xxx	Comm. Mar	All	2022EMP	0.0000	0.0000	0.0%	0.0%	Lk. Mich. Shoreline	0.0000	0.0000
22xx002xxx	Construction	All	MOVES	1.0144	0.2325	97.5%	97.5%	population	0.9890	0.2267
22xx003xxx	Industrial	All	MOVES	0.6033	0.1105	97.5%	97.5%	population	0.5882	0.1077
22xx004xxx	Lawn/Garden	All	MOVES	0.6826	3.1772	97.5%	97.5%	population	0.6655	3.0977
22xx007xxx	Logging	All	MOVES	0.0001	0.0003	90.6%	90.6%	land area	0.0001	0.0003
22820xxxxx	Pleasure Craft	All	MOVES	0.2728	0.4594	94.0%	94.0%	water area	0.2564	0.4319
228500200x	Railroad	All	2022EMP	1.2489	0.0508	97.0%	97.0%	track miles	1.2114	0.0493
228500x015	Railway Maint.	All	MOVES	0.0011	0.0003	97.0%	97.0%	track miles	0.0011	0.0002
22xx001xxx	Recreational	All	MOVES	0.0250	0.1720	90.6%	90.6%	land area	0.0226	0.1559
ALL (Total)	ALL (Total)	ALL (Total)		4.3459	4.8388	97.0%	96.9%		4.2136	4.6895

(1) Excludes land area in minor civil divisions (MCDs) classified as cities.

APPENDIX 7

Onroad Emissions for 2017, 2023 and 2024

This appendix provides detailed listings of onroad tons per ozone season weekday (tposwd) emissions and activity data by source type, fuel type and road type for the individual county portions of the Milwaukee, WI 2015 ozone NAAQS nonattainment area for the years 2017, 2023 and 2024. The sums of nitrogen oxides (NO_x) and volatile organic compounds (VOC) emissions from these onroad categories were used for the onroad sector NO_x and VOC tposwd emissions estimates in Section 3 of the Wisconsin Department of Natural Resources (WDNR) Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area.

EPA's MOVES4.0.1¹ model was used to estimate these emissions.

¹ <https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves>.

Table A7.1. 2017 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Milwaukee County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0003	0.0015	0.2089	0.2104
Motorcycle	Gasoline	Rural Restricted	0.0004	0.0004	0.0001	0.0006
Motorcycle	Gasoline	Rural Unrestricted	0.0010	0.0015	0.0006	0.0021
Motorcycle	Gasoline	Urban Restricted	0.0132	0.0173	0.0064	0.0237
Motorcycle	Gasoline	Urban Unrestricted	0.0441	0.1090	0.0608	0.1698
Passenger Car	Gasoline	Off-Network	0.4298	0.5298	1.5511	2.0809
Passenger Car	Gasoline	Rural Restricted	0.0173	0.0038	0.0017	0.0055
Passenger Car	Gasoline	Rural Unrestricted	0.0151	0.0044	0.0026	0.0070
Passenger Car	Gasoline	Urban Restricted	0.5570	0.1391	0.0773	0.2164
Passenger Car	Gasoline	Urban Unrestricted	0.9275	0.3537	0.2459	0.5996
Passenger Car	Diesel	Off-Network	0.0040	0.0051	0.0000	0.0051
Passenger Car	Diesel	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Passenger Car	Diesel	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
Passenger Car	Diesel	Urban Restricted	0.0063	0.0019	0.0000	0.0019
Passenger Car	Diesel	Urban Unrestricted	0.0103	0.0047	0.0000	0.0047
Passenger Car	Ethanol (E-85)	Off-Network	0.0002	0.0003	0.0005	0.0008
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0001	0.0000	0.0000	0.0001
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0001	0.0001	0.0001
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.5304	0.4964	0.8163	1.3126
Passenger Truck	Gasoline	Rural Restricted	0.0175	0.0028	0.0010	0.0038
Passenger Truck	Gasoline	Rural Unrestricted	0.0146	0.0033	0.0015	0.0048
Passenger Truck	Gasoline	Urban Restricted	0.5571	0.1040	0.0453	0.1493
Passenger Truck	Gasoline	Urban Unrestricted	0.8484	0.2744	0.1441	0.4185
Passenger Truck	Diesel	Off-Network	0.0544	0.0042	0.0000	0.0042
Passenger Truck	Diesel	Rural Restricted	0.0012	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Rural Unrestricted	0.0014	0.0003	0.0000	0.0003
Passenger Truck	Diesel	Urban Restricted	0.0450	0.0094	0.0000	0.0094
Passenger Truck	Diesel	Urban Unrestricted	0.1227	0.0226	0.0000	0.0226
Passenger Truck	Ethanol (E-85)	Off-Network	0.0009	0.0010	0.0017	0.0027
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0005	0.0001	0.0001	0.0002
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0008	0.0003	0.0003	0.0006
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.1570	0.1263	0.1766	0.3029
Light Commercial Truck	Gasoline	Rural Restricted	0.0053	0.0009	0.0002	0.0011
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0048	0.0013	0.0003	0.0016
Light Commercial Truck	Gasoline	Urban Restricted	0.1799	0.0364	0.0103	0.0467

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Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.2936	0.1196	0.0327	0.1523
Light Commercial Truck	Diesel	Off-Network	0.1258	0.0101	0.0000	0.0101
Light Commercial Truck	Diesel	Rural Restricted	0.0030	0.0005	0.0000	0.0005
Light Commercial Truck	Diesel	Rural Unrestricted	0.0035	0.0007	0.0000	0.0007
Light Commercial Truck	Diesel	Urban Restricted	0.1109	0.0224	0.0000	0.0224
Light Commercial Truck	Diesel	Urban Unrestricted	0.2925	0.0539	0.0000	0.0539
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0002	0.0002	0.0003	0.0005
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0000	0.0001
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0044	0.0053	0.0021	0.0074
Other Buses	Gasoline	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Other Buses	Gasoline	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
Other Buses	Gasoline	Urban Restricted	0.0066	0.0021	0.0002	0.0023
Other Buses	Gasoline	Urban Unrestricted	0.0126	0.0092	0.0007	0.0100
Other Buses	Diesel	Off-Network	0.0107	0.0015	0.0000	0.0015
Other Buses	Diesel	Rural Restricted	0.0008	0.0000	0.0000	0.0000
Other Buses	Diesel	Rural Unrestricted	0.0010	0.0001	0.0000	0.0001
Other Buses	Diesel	Urban Restricted	0.0274	0.0015	0.0000	0.0015
Other Buses	Diesel	Urban Unrestricted	0.0618	0.0041	0.0000	0.0041
Other Buses	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0010	0.0012	0.0003	0.0015
Transit Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Restricted	0.0010	0.0003	0.0000	0.0003
Transit Bus	Gasoline	Urban Unrestricted	0.0019	0.0012	0.0001	0.0013
Transit Bus	Diesel	Off-Network	0.0079	0.0008	0.0000	0.0008
Transit Bus	Diesel	Rural Restricted	0.0005	0.0000	0.0000	0.0000
Transit Bus	Diesel	Rural Unrestricted	0.0007	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Restricted	0.0177	0.0012	0.0000	0.0012
Transit Bus	Diesel	Urban Unrestricted	0.0477	0.0031	0.0000	0.0031
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

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Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0005	0.0007	0.0003	0.0010
School Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Restricted	0.0004	0.0001	0.0000	0.0001
School Bus	Gasoline	Urban Unrestricted	0.0009	0.0006	0.0001	0.0007
School Bus	Diesel	Off-Network	0.0030	0.0004	0.0000	0.0004
School Bus	Diesel	Rural Restricted	0.0003	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Unrestricted	0.0004	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Restricted	0.0095	0.0011	0.0000	0.0011
School Bus	Diesel	Urban Unrestricted	0.0294	0.0036	0.0000	0.0036
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0001	0.0001	0.0000	0.0001
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0002	0.0001	0.0000	0.0001
Refuse Truck	Gasoline	Urban Unrestricted	0.0003	0.0003	0.0000	0.0003
Refuse Truck	Diesel	Off-Network	0.0095	0.0016	0.0000	0.0016
Refuse Truck	Diesel	Rural Restricted	0.0006	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Unrestricted	0.0006	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Restricted	0.0215	0.0015	0.0000	0.0015
Refuse Truck	Diesel	Urban Unrestricted	0.0400	0.0036	0.0000	0.0036
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.1005	0.0738	0.0859	0.1597
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0013	0.0003	0.0000	0.0004
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0012	0.0005	0.0001	0.0006
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0476	0.0126	0.0022	0.0147
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0675	0.0493	0.0060	0.0553
Single Unit Short-haul Truck	Diesel	Off-Network	0.3099	0.0449	0.0000	0.0449
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0164	0.0014	0.0000	0.0014
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0164	0.0018	0.0000	0.0018
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.5746	0.0603	0.0000	0.0603
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	1.1998	0.1361	0.0000	0.1361
Single Unit Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0002	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0005	0.0006	0.0037	0.0043
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0028	0.0007	0.0001	0.0009
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0039	0.0028	0.0004	0.0032
Single Unit Long-haul Truck	Diesel	Off-Network	0.0141	0.0024	0.0000	0.0024
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0010	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0010	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0346	0.0034	0.0000	0.0034
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0772	0.0077	0.0000	0.0077
Single Unit Long-haul Truck	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0002	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0032	0.0051	0.0251	0.0303
Motor Home	Gasoline	Rural Restricted	0.0005	0.0001	0.0000	0.0001
Motor Home	Gasoline	Rural Unrestricted	0.0005	0.0002	0.0000	0.0002
Motor Home	Gasoline	Urban Restricted	0.0200	0.0048	0.0009	0.0057
Motor Home	Gasoline	Urban Unrestricted	0.0282	0.0168	0.0025	0.0193
Motor Home	Diesel	Off-Network	0.0002	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0006	0.0001	0.0000	0.0001
Motor Home	Diesel	Rural Unrestricted	0.0006	0.0001	0.0000	0.0001
Motor Home	Diesel	Urban Restricted	0.0197	0.0024	0.0000	0.0024
Motor Home	Diesel	Urban Unrestricted	0.0423	0.0058	0.0000	0.0058
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0001	0.0001	0.0005	0.0006
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0008	0.0002	0.0000	0.0002
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0003	0.0002	0.0000	0.0002
Combination Short-haul Truck	Diesel	Off-Network	0.0772	0.0083	0.0000	0.0083

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.0170	0.0007	0.0000	0.0007
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0042	0.0002	0.0000	0.0002
Combination Short-haul Truck	Diesel	Urban Restricted	0.5532	0.0285	0.0000	0.0285
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.2922	0.0173	0.0000	0.0173
Combination Short-haul Truck	CNG	Off-Network	0.0006	0.0003	0.0000	0.0003
Combination Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Urban Restricted	0.0010	0.0008	0.0000	0.0008
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0008	0.0006	0.0000	0.0006
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.2874	0.0359	0.0000	0.0359
Combination Long-haul Truck	Diesel	Rural Restricted	0.0723	0.0027	0.0000	0.0027
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0180	0.0008	0.0000	0.0008
Combination Long-haul Truck	Diesel	Urban Restricted	2.3589	0.1040	0.0000	0.1040
Combination Long-haul Truck	Diesel	Urban Unrestricted	1.2724	0.0612	0.0000	0.0612
Combination Long-haul Truck	CNG	Off-Network	0.0003	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Restricted	0.0005	0.0005	0.0000	0.0005
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0004	0.0004	0.0000	0.0004
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	13.2649	3.2072	3.5183	6.7256
Motorcycle	ALL	ALL	0.0590	0.1298	0.2768	0.4065
Passenger Car	ALL	ALL	1.9682	1.0430	1.8792	2.9223
Passenger Truck	ALL	ALL	2.1949	0.9190	1.0103	1.9294
Light Commercial Truck	ALL	ALL	1.1767	0.3724	0.2205	0.5928
Other Buses	ALL	ALL	0.1259	0.0240	0.0030	0.0271
Transit Bus	ALL	ALL	0.0785	0.0078	0.0005	0.0083
School Bus	ALL	ALL	0.0444	0.0067	0.0004	0.0071
Refuse Truck	ALL	ALL	0.0728	0.0071	0.0001	0.0072
Single Unit Short-haul Truck	ALL	ALL	2.3356	0.3811	0.0942	0.4752
Single Unit Long-haul Truck	ALL	ALL	0.1355	0.0180	0.0043	0.0223
Motor Home	ALL	ALL	0.1157	0.0355	0.0285	0.0640
Combination Short-haul Truck	ALL	ALL	0.9475	0.0573	0.0005	0.0579
Combination Long-haul Truck	ALL	ALL	4.0102	0.2055	0.0000	0.2055
ALL (Total)	ALL (Total)	ALL (Total)	13.2649	3.2072	3.5183	6.7256
ALL	Gasoline	ALL	4.9238	2.5155	3.5153	6.0308
ALL	Diesel	ALL	8.3338	0.6867	0.0000	0.6867
ALL	CNG	ALL	0.0044	0.0030	0.0000	0.0030
ALL	Ethanol (E-85)	ALL	0.0029	0.0020	0.0031	0.0051
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	13.2649	3.2072	3.5183	6.7256
ALL	ALL	Off-Network	2.1343	1.3583	2.8734	4.2317
ALL	ALL	Rural Restricted	0.1569	0.0144	0.0032	0.0176
ALL	ALL	Rural Unrestricted	0.0855	0.0156	0.0052	0.0207
ALL	ALL	Urban Restricted	5.1682	0.5567	0.1429	0.6996
ALL	ALL	Urban Unrestricted	5.7200	1.2623	0.4937	1.7560
ALL (Total)	ALL (Total)	ALL (Total)	13.2649	3.2072	3.5183	6.7256

Table A7.2. 2017 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Ozaukee County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0000	0.0002	0.0283	0.0285
Motorcycle	Gasoline	Rural Restricted	0.0012	0.0014	0.0004	0.0018
Motorcycle	Gasoline	Rural Unrestricted	0.0042	0.0060	0.0025	0.0085
Motorcycle	Gasoline	Urban Restricted	0.0008	0.0010	0.0003	0.0013
Motorcycle	Gasoline	Urban Unrestricted	0.0034	0.0082	0.0045	0.0127
Passenger Car	Gasoline	Off-Network	0.0577	0.0718	0.2118	0.2836
Passenger Car	Gasoline	Rural Restricted	0.0561	0.0123	0.0055	0.0179
Passenger Car	Gasoline	Rural Unrestricted	0.0617	0.0175	0.0101	0.0276
Passenger Car	Gasoline	Urban Restricted	0.0361	0.0081	0.0038	0.0120
Passenger Car	Gasoline	Urban Unrestricted	0.0693	0.0260	0.0185	0.0444
Passenger Car	Diesel	Off-Network	0.0005	0.0007	0.0000	0.0007
Passenger Car	Diesel	Rural Restricted	0.0006	0.0002	0.0000	0.0002
Passenger Car	Diesel	Rural Unrestricted	0.0007	0.0002	0.0000	0.0002
Passenger Car	Diesel	Urban Restricted	0.0004	0.0001	0.0000	0.0001
Passenger Car	Diesel	Urban Unrestricted	0.0008	0.0003	0.0000	0.0003
Passenger Car	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0001	0.0001
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.0723	0.0680	0.1125	0.1806
Passenger Truck	Gasoline	Rural Restricted	0.0571	0.0092	0.0033	0.0125
Passenger Truck	Gasoline	Rural Unrestricted	0.0605	0.0133	0.0060	0.0193
Passenger Truck	Gasoline	Urban Restricted	0.0367	0.0061	0.0023	0.0084
Passenger Truck	Gasoline	Urban Unrestricted	0.0643	0.0202	0.0109	0.0311
Passenger Truck	Diesel	Off-Network	0.0068	0.0005	0.0000	0.0005
Passenger Truck	Diesel	Rural Restricted	0.0040	0.0007	0.0000	0.0007
Passenger Truck	Diesel	Rural Unrestricted	0.0058	0.0011	0.0000	0.0011
Passenger Truck	Diesel	Urban Restricted	0.0026	0.0005	0.0000	0.0005
Passenger Truck	Diesel	Urban Unrestricted	0.0093	0.0017	0.0000	0.0017
Passenger Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0002	0.0004
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0197	0.0160	0.0225	0.0385
Light Commercial Truck	Gasoline	Rural Restricted	0.0161	0.0026	0.0007	0.0033
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0185	0.0047	0.0013	0.0059
Light Commercial Truck	Gasoline	Urban Restricted	0.0104	0.0018	0.0005	0.0023

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0206	0.0082	0.0023	0.0105
Light Commercial Truck	Diesel	Off-Network	0.0147	0.0012	0.0000	0.0012
Light Commercial Truck	Diesel	Rural Restricted	0.0091	0.0016	0.0000	0.0016
Light Commercial Truck	Diesel	Rural Unrestricted	0.0131	0.0025	0.0000	0.0025
Light Commercial Truck	Diesel	Urban Restricted	0.0060	0.0011	0.0000	0.0011
Light Commercial Truck	Diesel	Urban Unrestricted	0.0206	0.0038	0.0000	0.0038
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0000	0.0001
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0006	0.0007	0.0003	0.0010
Other Buses	Gasoline	Rural Restricted	0.0006	0.0002	0.0000	0.0002
Other Buses	Gasoline	Rural Unrestricted	0.0009	0.0004	0.0000	0.0004
Other Buses	Gasoline	Urban Restricted	0.0004	0.0001	0.0000	0.0001
Other Buses	Gasoline	Urban Unrestricted	0.0009	0.0006	0.0000	0.0007
Other Buses	Diesel	Off-Network	0.0013	0.0002	0.0000	0.0002
Other Buses	Diesel	Rural Restricted	0.0027	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Unrestricted	0.0038	0.0002	0.0000	0.0002
Other Buses	Diesel	Urban Restricted	0.0017	0.0001	0.0000	0.0001
Other Buses	Diesel	Urban Unrestricted	0.0043	0.0003	0.0000	0.0003
Other Buses	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0001	0.0002	0.0000	0.0002
Transit Bus	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Rural Unrestricted	0.0001	0.0000	0.0000	0.0001
Transit Bus	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Transit Bus	Diesel	Off-Network	0.0010	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Restricted	0.0016	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Unrestricted	0.0025	0.0002	0.0000	0.0002
Transit Bus	Diesel	Urban Restricted	0.0011	0.0001	0.0000	0.0001
Transit Bus	Diesel	Urban Unrestricted	0.0032	0.0002	0.0000	0.0002
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0001	0.0001	0.0000	0.0001
School Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
School Bus	Diesel	Off-Network	0.0005	0.0001	0.0000	0.0001
School Bus	Diesel	Rural Restricted	0.0010	0.0001	0.0000	0.0001
School Bus	Diesel	Rural Unrestricted	0.0016	0.0002	0.0000	0.0002
School Bus	Diesel	Urban Restricted	0.0006	0.0001	0.0000	0.0001
School Bus	Diesel	Urban Unrestricted	0.0022	0.0003	0.0000	0.0003
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Off-Network	0.0011	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Rural Restricted	0.0020	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Rural Unrestricted	0.0023	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Urban Restricted	0.0013	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Urban Unrestricted	0.0028	0.0003	0.0000	0.0003
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0136	0.0100	0.0117	0.0216
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0043	0.0011	0.0002	0.0012
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0047	0.0018	0.0003	0.0021
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0028	0.0007	0.0001	0.0008
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0049	0.0034	0.0004	0.0039
Single Unit Short-haul Truck	Diesel	Off-Network	0.0395	0.0055	0.0000	0.0055
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0534	0.0045	0.0000	0.0045
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0644	0.0070	0.0000	0.0070
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0349	0.0030	0.0000	0.0030
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.0847	0.0098	0.0000	0.0098
Single Unit Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0001	0.0001	0.0005	0.0006
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0003	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0002	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0003	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Off-Network	0.0017	0.0003	0.0000	0.0003
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0031	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0039	0.0004	0.0000	0.0004
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0021	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0053	0.0005	0.0000	0.0005
Single Unit Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0005	0.0007	0.0035	0.0043
Motor Home	Gasoline	Rural Restricted	0.0018	0.0004	0.0001	0.0005
Motor Home	Gasoline	Rural Unrestricted	0.0020	0.0007	0.0001	0.0008
Motor Home	Gasoline	Urban Restricted	0.0012	0.0003	0.0000	0.0003
Motor Home	Gasoline	Urban Unrestricted	0.0021	0.0012	0.0002	0.0014
Motor Home	Diesel	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0020	0.0002	0.0000	0.0002
Motor Home	Diesel	Rural Unrestricted	0.0023	0.0003	0.0000	0.0003
Motor Home	Diesel	Urban Restricted	0.0013	0.0001	0.0000	0.0001
Motor Home	Diesel	Urban Unrestricted	0.0031	0.0004	0.0000	0.0004
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0001	0.0001
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Off-Network	0.0083	0.0009	0.0000	0.0009

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.0483	0.0020	0.0000	0.0020
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0142	0.0008	0.0000	0.0008
Combination Short-haul Truck	Diesel	Urban Restricted	0.0308	0.0013	0.0000	0.0013
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0180	0.0011	0.0000	0.0011
Combination Short-haul Truck	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.0415	0.0052	0.0000	0.0052
Combination Long-haul Truck	Diesel	Rural Restricted	0.2438	0.0089	0.0000	0.0089
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0727	0.0033	0.0000	0.0033
Combination Long-haul Truck	Diesel	Urban Restricted	0.1558	0.0058	0.0000	0.0058
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.0932	0.0046	0.0000	0.0046
Combination Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	1.8738	0.4126	0.4661	0.8787
Motorcycle	ALL	ALL	0.0096	0.0168	0.0361	0.0528
Passenger Car	ALL	ALL	0.2841	0.1374	0.2498	0.3872
Passenger Truck	ALL	ALL	0.3198	0.1217	0.1353	0.2570
Light Commercial Truck	ALL	ALL	0.1490	0.0435	0.0273	0.0707
Other Buses	ALL	ALL	0.0172	0.0029	0.0004	0.0033
Transit Bus	ALL	ALL	0.0099	0.0009	0.0001	0.0010
School Bus	ALL	ALL	0.0062	0.0009	0.0001	0.0009
Refuse Truck	ALL	ALL	0.0097	0.0008	0.0000	0.0009
Single Unit Short-haul Truck	ALL	ALL	0.3074	0.0469	0.0126	0.0595
Single Unit Long-haul Truck	ALL	ALL	0.0172	0.0021	0.0006	0.0027
Motor Home	ALL	ALL	0.0162	0.0043	0.0039	0.0082
Combination Short-haul Truck	ALL	ALL	0.1202	0.0063	0.0001	0.0064
Combination Long-haul Truck	ALL	ALL	0.6072	0.0280	0.0000	0.0280
ALL (Total)	ALL (Total)	ALL (Total)	1.8738	0.4126	0.4661	0.8787
ALL	Gasoline	ALL	0.7104	0.3261	0.4657	0.7918
ALL	Diesel	ALL	1.1625	0.0859	0.0000	0.0859
ALL	CNG	ALL	0.0005	0.0003	0.0000	0.0003
ALL	Ethanol (E-85)	ALL	0.0004	0.0003	0.0004	0.0007
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	1.8738	0.4126	0.4661	0.8787
ALL	ALL	Off-Network	0.2820	0.1831	0.3916	0.5747
ALL	ALL	Rural Restricted	0.5095	0.0462	0.0102	0.0564
ALL	ALL	Rural Unrestricted	0.3408	0.0611	0.0203	0.0815
ALL	ALL	Urban Restricted	0.3275	0.0307	0.0070	0.0378
ALL	ALL	Urban Unrestricted	0.4139	0.0915	0.0370	0.1284
ALL (Total)	ALL (Total)	ALL (Total)	1.8738	0.4126	0.4661	0.8787

Table A7.3. 2017 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Racine County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0001	0.0003	0.0430	0.0433
Motorcycle	Gasoline	Rural Restricted	0.0020	0.0024	0.0008	0.0032
Motorcycle	Gasoline	Rural Unrestricted	0.0051	0.0071	0.0029	0.0099
Motorcycle	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motorcycle	Gasoline	Urban Unrestricted	0.0068	0.0164	0.0091	0.0255
Passenger Car	Gasoline	Off-Network	0.0804	0.0996	0.2924	0.3920
Passenger Car	Gasoline	Rural Restricted	0.0933	0.0207	0.0095	0.0302
Passenger Car	Gasoline	Rural Unrestricted	0.0734	0.0204	0.0117	0.0321
Passenger Car	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Gasoline	Urban Unrestricted	0.1407	0.0531	0.0371	0.0902
Passenger Car	Diesel	Off-Network	0.0007	0.0010	0.0000	0.0010
Passenger Car	Diesel	Rural Restricted	0.0010	0.0003	0.0000	0.0003
Passenger Car	Diesel	Rural Unrestricted	0.0008	0.0003	0.0000	0.0003
Passenger Car	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Unrestricted	0.0016	0.0007	0.0000	0.0007
Passenger Car	Ethanol (E-85)	Off-Network	0.0000	0.0001	0.0001	0.0001
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.1007	0.0945	0.1558	0.2503
Passenger Truck	Gasoline	Rural Restricted	0.0952	0.0156	0.0056	0.0212
Passenger Truck	Gasoline	Rural Unrestricted	0.0725	0.0154	0.0069	0.0224
Passenger Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Urban Unrestricted	0.1307	0.0415	0.0220	0.0635
Passenger Truck	Diesel	Off-Network	0.0099	0.0008	0.0000	0.0008
Passenger Truck	Diesel	Rural Restricted	0.0067	0.0012	0.0000	0.0012
Passenger Truck	Diesel	Rural Unrestricted	0.0068	0.0013	0.0000	0.0013
Passenger Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Diesel	Urban Unrestricted	0.0188	0.0035	0.0000	0.0035
Passenger Truck	Ethanol (E-85)	Off-Network	0.0002	0.0002	0.0003	0.0005
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0000	0.0001
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0267	0.0216	0.0303	0.0520
Light Commercial Truck	Gasoline	Rural Restricted	0.0262	0.0044	0.0011	0.0055
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0215	0.0052	0.0014	0.0066
Light Commercial Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0407	0.0163	0.0045	0.0208
Light Commercial Truck	Diesel	Off-Network	0.0207	0.0017	0.0000	0.0017
Light Commercial Truck	Diesel	Rural Restricted	0.0149	0.0027	0.0000	0.0027
Light Commercial Truck	Diesel	Rural Unrestricted	0.0150	0.0029	0.0000	0.0029
Light Commercial Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Diesel	Urban Unrestricted	0.0403	0.0074	0.0000	0.0074
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0000	0.0001
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0008	0.0010	0.0004	0.0014
Other Buses	Gasoline	Rural Restricted	0.0010	0.0003	0.0000	0.0004
Other Buses	Gasoline	Rural Unrestricted	0.0011	0.0004	0.0000	0.0005
Other Buses	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Urban Unrestricted	0.0019	0.0013	0.0001	0.0014
Other Buses	Diesel	Off-Network	0.0020	0.0003	0.0000	0.0003
Other Buses	Diesel	Rural Restricted	0.0044	0.0002	0.0000	0.0002
Other Buses	Diesel	Rural Unrestricted	0.0045	0.0003	0.0000	0.0003
Other Buses	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Unrestricted	0.0090	0.0006	0.0000	0.0006
Other Buses	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0002	0.0002	0.0001	0.0003
Transit Bus	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Unrestricted	0.0003	0.0002	0.0000	0.0002
Transit Bus	Diesel	Off-Network	0.0015	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Restricted	0.0027	0.0002	0.0000	0.0002
Transit Bus	Diesel	Rural Unrestricted	0.0030	0.0002	0.0000	0.0002
Transit Bus	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Unrestricted	0.0066	0.0004	0.0000	0.0004
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0001	0.0001	0.0001	0.0002
School Bus	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
School Bus	Diesel	Off-Network	0.0007	0.0001	0.0000	0.0001
School Bus	Diesel	Rural Restricted	0.0016	0.0002	0.0000	0.0002
School Bus	Diesel	Rural Unrestricted	0.0019	0.0002	0.0000	0.0002
School Bus	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Unrestricted	0.0045	0.0006	0.0000	0.0006
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Off-Network	0.0017	0.0003	0.0000	0.0003
Refuse Truck	Diesel	Rural Restricted	0.0034	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Rural Unrestricted	0.0026	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Unrestricted	0.0058	0.0005	0.0000	0.0005
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0187	0.0137	0.0160	0.0298
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0072	0.0019	0.0003	0.0021
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0057	0.0021	0.0003	0.0024
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0101	0.0071	0.0009	0.0080
Single Unit Short-haul Truck	Diesel	Off-Network	0.0568	0.0081	0.0000	0.0081
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0897	0.0076	0.0000	0.0076
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0761	0.0083	0.0000	0.0083
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.1762	0.0199	0.0000	0.0199
Single Unit Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0001	0.0001	0.0007	0.0008
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0004	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0003	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0006	0.0004	0.0001	0.0005
Single Unit Long-haul Truck	Diesel	Off-Network	0.0025	0.0004	0.0000	0.0004
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0053	0.0004	0.0000	0.0004
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0046	0.0005	0.0000	0.0005
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0111	0.0011	0.0000	0.0011
Single Unit Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0006	0.0010	0.0049	0.0059
Motor Home	Gasoline	Rural Restricted	0.0031	0.0007	0.0001	0.0008
Motor Home	Gasoline	Rural Unrestricted	0.0025	0.0008	0.0001	0.0009
Motor Home	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Urban Unrestricted	0.0044	0.0026	0.0004	0.0029
Motor Home	Diesel	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0034	0.0003	0.0000	0.0003
Motor Home	Diesel	Rural Unrestricted	0.0028	0.0004	0.0000	0.0004
Motor Home	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Diesel	Urban Unrestricted	0.0065	0.0009	0.0000	0.0009
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0001	0.0001
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Off-Network	0.0099	0.0011	0.0000	0.0011

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.0756	0.0031	0.0000	0.0031
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0159	0.0009	0.0000	0.0009
Combination Short-haul Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0354	0.0021	0.0000	0.0021
Combination Short-haul Truck	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.0458	0.0057	0.0000	0.0057
Combination Long-haul Truck	Diesel	Rural Restricted	0.4156	0.0152	0.0000	0.0152
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0884	0.0040	0.0000	0.0040
Combination Long-haul Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.1994	0.0096	0.0000	0.0096
Combination Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	2.4913	0.5876	0.6593	1.2469
Motorcycle	ALL	ALL	0.0140	0.0262	0.0557	0.0819
Passenger Car	ALL	ALL	0.3920	0.1961	0.3508	0.5468
Passenger Truck	ALL	ALL	0.4416	0.1742	0.1907	0.3649
Light Commercial Truck	ALL	ALL	0.2061	0.0622	0.0375	0.0996
Other Buses	ALL	ALL	0.0246	0.0044	0.0006	0.0050
Transit Bus	ALL	ALL	0.0145	0.0014	0.0001	0.0015
School Bus	ALL	ALL	0.0091	0.0013	0.0001	0.0014
Refuse Truck	ALL	ALL	0.0136	0.0012	0.0000	0.0012
Single Unit Short-haul Truck	ALL	ALL	0.4405	0.0687	0.0175	0.0862
Single Unit Long-haul Truck	ALL	ALL	0.0250	0.0032	0.0008	0.0040
Motor Home	ALL	ALL	0.0234	0.0066	0.0056	0.0122
Combination Short-haul Truck	ALL	ALL	0.1373	0.0074	0.0001	0.0075
Combination Long-haul Truck	ALL	ALL	0.7494	0.0346	0.0000	0.0346
ALL (Total)	ALL (Total)	ALL (Total)	2.4913	0.5876	0.6593	1.2469
ALL	Gasoline	ALL	0.9759	0.4691	0.6587	1.1278
ALL	Diesel	ALL	1.5142	0.1178	0.0000	0.1178
ALL	CNG	ALL	0.0006	0.0004	0.0000	0.0004
ALL	Ethanol (E-85)	ALL	0.0006	0.0004	0.0006	0.0010
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	2.4913	0.5876	0.6593	1.2469
ALL	ALL	Off-Network	0.3810	0.2522	0.5442	0.7965
ALL	ALL	Rural Restricted	0.8532	0.0778	0.0174	0.0953
ALL	ALL	Rural Unrestricted	0.4051	0.0711	0.0235	0.0946
ALL	ALL	Urban Restricted	0.0000	0.0000	0.0000	0.0000
ALL	ALL	Urban Unrestricted	0.8520	0.1865	0.0742	0.2606
ALL (Total)	ALL (Total)	ALL (Total)	2.4913	0.5876	0.6593	1.2469

Table A7.4. 2017 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Washington County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0000	0.0002	0.0281	0.0283
Motorcycle	Gasoline	Rural Restricted	0.0018	0.0022	0.0007	0.0029
Motorcycle	Gasoline	Rural Unrestricted	0.0052	0.0072	0.0029	0.0102
Motorcycle	Gasoline	Urban Restricted	0.0003	0.0004	0.0001	0.0005
Motorcycle	Gasoline	Urban Unrestricted	0.0026	0.0066	0.0038	0.0104
Passenger Car	Gasoline	Off-Network	0.0586	0.0729	0.2153	0.2882
Passenger Car	Gasoline	Rural Restricted	0.0886	0.0195	0.0088	0.0283
Passenger Car	Gasoline	Rural Unrestricted	0.0746	0.0207	0.0120	0.0327
Passenger Car	Gasoline	Urban Restricted	0.0126	0.0029	0.0014	0.0043
Passenger Car	Gasoline	Urban Unrestricted	0.0553	0.0213	0.0155	0.0368
Passenger Car	Diesel	Off-Network	0.0005	0.0007	0.0000	0.0007
Passenger Car	Diesel	Rural Restricted	0.0010	0.0003	0.0000	0.0003
Passenger Car	Diesel	Rural Unrestricted	0.0008	0.0003	0.0000	0.0003
Passenger Car	Diesel	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Unrestricted	0.0006	0.0003	0.0000	0.0003
Passenger Car	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0001	0.0001
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.0737	0.0694	0.1149	0.1843
Passenger Truck	Gasoline	Rural Restricted	0.0906	0.0147	0.0052	0.0199
Passenger Truck	Gasoline	Rural Unrestricted	0.0737	0.0158	0.0071	0.0229
Passenger Truck	Gasoline	Urban Restricted	0.0128	0.0022	0.0008	0.0030
Passenger Truck	Gasoline	Urban Unrestricted	0.0511	0.0167	0.0092	0.0259
Passenger Truck	Diesel	Off-Network	0.0070	0.0005	0.0000	0.0005
Passenger Truck	Diesel	Rural Restricted	0.0063	0.0012	0.0000	0.0012
Passenger Truck	Diesel	Rural Unrestricted	0.0070	0.0014	0.0000	0.0014
Passenger Truck	Diesel	Urban Restricted	0.0009	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Urban Unrestricted	0.0078	0.0014	0.0000	0.0014
Passenger Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0002	0.0004
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0193	0.0157	0.0221	0.0377
Light Commercial Truck	Gasoline	Rural Restricted	0.0245	0.0040	0.0010	0.0051
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0216	0.0053	0.0014	0.0067
Light Commercial Truck	Gasoline	Urban Restricted	0.0035	0.0006	0.0002	0.0008

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0159	0.0065	0.0019	0.0084
Light Commercial Truck	Diesel	Off-Network	0.0143	0.0012	0.0000	0.0012
Light Commercial Truck	Diesel	Rural Restricted	0.0139	0.0025	0.0000	0.0025
Light Commercial Truck	Diesel	Rural Unrestricted	0.0151	0.0029	0.0000	0.0029
Light Commercial Truck	Diesel	Urban Restricted	0.0021	0.0004	0.0000	0.0004
Light Commercial Truck	Diesel	Urban Unrestricted	0.0165	0.0030	0.0000	0.0030
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0000	0.0001
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0006	0.0007	0.0003	0.0010
Other Buses	Gasoline	Rural Restricted	0.0009	0.0003	0.0000	0.0003
Other Buses	Gasoline	Rural Unrestricted	0.0011	0.0004	0.0000	0.0005
Other Buses	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0001
Other Buses	Gasoline	Urban Unrestricted	0.0007	0.0005	0.0000	0.0006
Other Buses	Diesel	Off-Network	0.0013	0.0002	0.0000	0.0002
Other Buses	Diesel	Rural Restricted	0.0041	0.0002	0.0000	0.0002
Other Buses	Diesel	Rural Unrestricted	0.0044	0.0003	0.0000	0.0003
Other Buses	Diesel	Urban Restricted	0.0006	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Unrestricted	0.0034	0.0002	0.0000	0.0002
Other Buses	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0001	0.0002	0.0000	0.0002
Transit Bus	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Transit Bus	Diesel	Off-Network	0.0011	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Restricted	0.0026	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Unrestricted	0.0029	0.0002	0.0000	0.0002
Transit Bus	Diesel	Urban Restricted	0.0004	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Unrestricted	0.0025	0.0002	0.0000	0.0002
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0001	0.0001	0.0000	0.0001
School Bus	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
School Bus	Diesel	Off-Network	0.0005	0.0001	0.0000	0.0001
School Bus	Diesel	Rural Restricted	0.0015	0.0001	0.0000	0.0001
School Bus	Diesel	Rural Unrestricted	0.0019	0.0002	0.0000	0.0002
School Bus	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Unrestricted	0.0018	0.0002	0.0000	0.0002
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Off-Network	0.0011	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Rural Restricted	0.0032	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Rural Unrestricted	0.0026	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Urban Restricted	0.0005	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Unrestricted	0.0022	0.0002	0.0000	0.0002
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0137	0.0100	0.0117	0.0218
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0068	0.0017	0.0002	0.0020
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0056	0.0020	0.0003	0.0023
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0010	0.0003	0.0000	0.0003
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0038	0.0028	0.0003	0.0032
Single Unit Short-haul Truck	Diesel	Off-Network	0.0393	0.0055	0.0000	0.0055
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0839	0.0071	0.0000	0.0071
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0747	0.0081	0.0000	0.0081
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0125	0.0011	0.0000	0.0011
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.0677	0.0079	0.0000	0.0079
Single Unit Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0001	0.0001	0.0005	0.0006
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0004	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0003	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0002	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Off-Network	0.0017	0.0003	0.0000	0.0003
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0048	0.0004	0.0000	0.0004
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0045	0.0004	0.0000	0.0004
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0007	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0042	0.0004	0.0000	0.0004
Single Unit Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0005	0.0007	0.0036	0.0044
Motor Home	Gasoline	Rural Restricted	0.0029	0.0006	0.0001	0.0007
Motor Home	Gasoline	Rural Unrestricted	0.0024	0.0008	0.0001	0.0009
Motor Home	Gasoline	Urban Restricted	0.0004	0.0001	0.0000	0.0001
Motor Home	Gasoline	Urban Unrestricted	0.0017	0.0010	0.0002	0.0011
Motor Home	Diesel	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0032	0.0003	0.0000	0.0003
Motor Home	Diesel	Rural Unrestricted	0.0027	0.0004	0.0000	0.0004
Motor Home	Diesel	Urban Restricted	0.0005	0.0000	0.0000	0.0000
Motor Home	Diesel	Urban Unrestricted	0.0025	0.0004	0.0000	0.0004
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0001	0.0001
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Off-Network	0.0078	0.0008	0.0000	0.0008

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.0690	0.0028	0.0000	0.0028
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0151	0.0008	0.0000	0.0008
Combination Short-haul Truck	Diesel	Urban Restricted	0.0098	0.0004	0.0000	0.0004
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0131	0.0008	0.0000	0.0008
Combination Short-haul Truck	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.0456	0.0058	0.0000	0.0058
Combination Long-haul Truck	Diesel	Rural Restricted	0.3910	0.0143	0.0000	0.0143
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0863	0.0040	0.0000	0.0040
Combination Long-haul Truck	Diesel	Urban Restricted	0.0559	0.0021	0.0000	0.0021
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.0759	0.0037	0.0000	0.0037
Combination Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	1.9368	0.4157	0.4705	0.8861
Motorcycle	ALL	ALL	0.0099	0.0166	0.0356	0.0522
Passenger Car	ALL	ALL	0.2930	0.1391	0.2529	0.3920
Passenger Truck	ALL	ALL	0.3314	0.1236	0.1375	0.2611
Light Commercial Truck	ALL	ALL	0.1468	0.0420	0.0266	0.0686
Other Buses	ALL	ALL	0.0170	0.0028	0.0004	0.0032
Transit Bus	ALL	ALL	0.0100	0.0009	0.0001	0.0010
School Bus	ALL	ALL	0.0063	0.0009	0.0001	0.0010
Refuse Truck	ALL	ALL	0.0097	0.0008	0.0000	0.0008
Single Unit Short-haul Truck	ALL	ALL	0.3090	0.0465	0.0127	0.0592
Single Unit Long-haul Truck	ALL	ALL	0.0170	0.0021	0.0005	0.0026
Motor Home	ALL	ALL	0.0167	0.0043	0.0040	0.0083
Combination Short-haul Truck	ALL	ALL	0.1152	0.0059	0.0001	0.0060
Combination Long-haul Truck	ALL	ALL	0.6548	0.0300	0.0000	0.0300
ALL (Total)	ALL (Total)	ALL (Total)	1.9368	0.4157	0.4705	0.8861
ALL	Gasoline	ALL	0.7307	0.3281	0.4701	0.7981
ALL	Diesel	ALL	1.2051	0.0870	0.0000	0.0870
ALL	CNG	ALL	0.0005	0.0003	0.0000	0.0003
ALL	Ethanol (E-85)	ALL	0.0004	0.0003	0.0004	0.0007
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	1.9368	0.4157	0.4705	0.8861
ALL	ALL	Off-Network	0.2871	0.1857	0.3969	0.5826
ALL	ALL	Rural Restricted	0.8015	0.0728	0.0161	0.0889
ALL	ALL	Rural Unrestricted	0.4031	0.0717	0.0239	0.0956
ALL	ALL	Urban Restricted	0.1152	0.0110	0.0026	0.0136
ALL	ALL	Urban Unrestricted	0.3298	0.0745	0.0309	0.1054
ALL (Total)	ALL (Total)	ALL (Total)	1.9368	0.4157	0.4705	0.8861

Table A7.5. 2017 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Waukesha County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0002	0.0009	0.1268	0.1277
Motorcycle	Gasoline	Rural Restricted	0.0024	0.0029	0.0009	0.0038
Motorcycle	Gasoline	Rural Unrestricted	0.0129	0.0187	0.0079	0.0266
Motorcycle	Gasoline	Urban Restricted	0.0045	0.0057	0.0019	0.0076
Motorcycle	Gasoline	Urban Unrestricted	0.0218	0.0458	0.0241	0.0699
Passenger Car	Gasoline	Off-Network	0.2449	0.3031	0.8923	1.1953
Passenger Car	Gasoline	Rural Restricted	0.1138	0.0252	0.0114	0.0366
Passenger Car	Gasoline	Rural Unrestricted	0.1898	0.0545	0.0318	0.0864
Passenger Car	Gasoline	Urban Restricted	0.2057	0.0473	0.0227	0.0700
Passenger Car	Gasoline	Urban Unrestricted	0.4002	0.1420	0.0975	0.2395
Passenger Car	Diesel	Off-Network	0.0023	0.0029	0.0000	0.0029
Passenger Car	Diesel	Rural Restricted	0.0013	0.0003	0.0000	0.0003
Passenger Car	Diesel	Rural Unrestricted	0.0021	0.0007	0.0000	0.0007
Passenger Car	Diesel	Urban Restricted	0.0023	0.0006	0.0000	0.0006
Passenger Car	Diesel	Urban Unrestricted	0.0045	0.0019	0.0000	0.0019
Passenger Car	Ethanol (E-85)	Off-Network	0.0001	0.0002	0.0003	0.0005
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0000	0.0001
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.3035	0.2848	0.4708	0.7556
Passenger Truck	Gasoline	Rural Restricted	0.1150	0.0187	0.0067	0.0254
Passenger Truck	Gasoline	Rural Unrestricted	0.1843	0.0412	0.0187	0.0599
Passenger Truck	Gasoline	Urban Restricted	0.2073	0.0353	0.0133	0.0486
Passenger Truck	Gasoline	Urban Unrestricted	0.3746	0.1095	0.0573	0.1667
Passenger Truck	Diesel	Off-Network	0.0301	0.0023	0.0000	0.0023
Passenger Truck	Diesel	Rural Restricted	0.0080	0.0015	0.0000	0.0015
Passenger Truck	Diesel	Rural Unrestricted	0.0181	0.0035	0.0000	0.0035
Passenger Truck	Diesel	Urban Restricted	0.0151	0.0029	0.0000	0.0029
Passenger Truck	Diesel	Urban Unrestricted	0.0495	0.0093	0.0000	0.0093
Passenger Truck	Ethanol (E-85)	Off-Network	0.0005	0.0006	0.0010	0.0016
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0002	0.0000	0.0000	0.0001
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0002	0.0000	0.0000	0.0001
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0003	0.0001	0.0001	0.0002
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0881	0.0712	0.1001	0.1713
Light Commercial Truck	Gasoline	Rural Restricted	0.0345	0.0057	0.0015	0.0072
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0601	0.0155	0.0042	0.0196
Light Commercial Truck	Gasoline	Urban Restricted	0.0629	0.0111	0.0030	0.0141

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
				Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.1265	0.0458	0.0128	0.0586
Light Commercial Truck	Diesel	Off-Network	0.0684	0.0055	0.0000	0.0055
Light Commercial Truck	Diesel	Rural Restricted	0.0197	0.0035	0.0000	0.0035
Light Commercial Truck	Diesel	Rural Unrestricted	0.0432	0.0083	0.0000	0.0083
Light Commercial Truck	Diesel	Urban Restricted	0.0369	0.0067	0.0000	0.0067
Light Commercial Truck	Diesel	Urban Unrestricted	0.1166	0.0219	0.0000	0.0219
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0002	0.0003
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0025	0.0030	0.0012	0.0043
Other Buses	Gasoline	Rural Restricted	0.0012	0.0004	0.0000	0.0004
Other Buses	Gasoline	Rural Unrestricted	0.0027	0.0012	0.0001	0.0013
Other Buses	Gasoline	Urban Restricted	0.0022	0.0008	0.0001	0.0008
Other Buses	Gasoline	Urban Unrestricted	0.0056	0.0035	0.0003	0.0038
Other Buses	Diesel	Off-Network	0.0057	0.0008	0.0000	0.0008
Other Buses	Diesel	Rural Restricted	0.0054	0.0002	0.0000	0.0002
Other Buses	Diesel	Rural Unrestricted	0.0115	0.0007	0.0000	0.0007
Other Buses	Diesel	Urban Restricted	0.0100	0.0005	0.0000	0.0005
Other Buses	Diesel	Urban Unrestricted	0.0256	0.0017	0.0000	0.0017
Other Buses	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0006	0.0007	0.0002	0.0009
Transit Bus	Gasoline	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Rural Unrestricted	0.0004	0.0002	0.0000	0.0002
Transit Bus	Gasoline	Urban Restricted	0.0003	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Urban Unrestricted	0.0008	0.0005	0.0000	0.0005
Transit Bus	Diesel	Off-Network	0.0047	0.0004	0.0000	0.0004
Transit Bus	Diesel	Rural Restricted	0.0035	0.0002	0.0000	0.0002
Transit Bus	Diesel	Rural Unrestricted	0.0080	0.0005	0.0000	0.0005
Transit Bus	Diesel	Urban Restricted	0.0064	0.0004	0.0000	0.0004
Transit Bus	Diesel	Urban Unrestricted	0.0193	0.0013	0.0000	0.0013
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0003	0.0004	0.0002	0.0006
School Bus	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
School Bus	Gasoline	Urban Restricted	0.0001	0.0001	0.0000	0.0001
School Bus	Gasoline	Urban Unrestricted	0.0004	0.0002	0.0000	0.0003
School Bus	Diesel	Off-Network	0.0020	0.0003	0.0000	0.0003
School Bus	Diesel	Rural Restricted	0.0018	0.0002	0.0000	0.0002
School Bus	Diesel	Rural Unrestricted	0.0047	0.0006	0.0000	0.0006
School Bus	Diesel	Urban Restricted	0.0034	0.0003	0.0000	0.0003
School Bus	Diesel	Urban Unrestricted	0.0119	0.0014	0.0000	0.0014
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0001
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Off-Network	0.0049	0.0008	0.0000	0.0008
Refuse Truck	Diesel	Rural Restricted	0.0041	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Rural Unrestricted	0.0069	0.0005	0.0000	0.0005
Refuse Truck	Diesel	Urban Restricted	0.0076	0.0004	0.0000	0.0004
Refuse Truck	Diesel	Urban Unrestricted	0.0162	0.0014	0.0000	0.0014
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0570	0.0418	0.0487	0.0905
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0087	0.0022	0.0003	0.0026
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0142	0.0057	0.0008	0.0065
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0160	0.0044	0.0006	0.0050
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0293	0.0182	0.0023	0.0205
Single Unit Short-haul Truck	Diesel	Off-Network	0.1678	0.0238	0.0000	0.0238
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.1078	0.0091	0.0000	0.0091
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.1949	0.0213	0.0000	0.0213
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.2004	0.0178	0.0000	0.0178
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.4800	0.0549	0.0000	0.0549
Single Unit Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0003	0.0003	0.0021	0.0024
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0005	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0008	0.0003	0.0001	0.0004
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0009	0.0002	0.0000	0.0003
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0017	0.0010	0.0002	0.0012
Single Unit Long-haul Truck	Diesel	Off-Network	0.0075	0.0013	0.0000	0.0013
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0064	0.0005	0.0000	0.0005
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0121	0.0012	0.0000	0.0012
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0120	0.0010	0.0000	0.0010
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0306	0.0031	0.0000	0.0031
Single Unit Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0019	0.0029	0.0145	0.0174
Motor Home	Gasoline	Rural Restricted	0.0036	0.0008	0.0001	0.0009
Motor Home	Gasoline	Rural Unrestricted	0.0059	0.0021	0.0003	0.0024
Motor Home	Gasoline	Urban Restricted	0.0066	0.0015	0.0003	0.0018
Motor Home	Gasoline	Urban Unrestricted	0.0123	0.0063	0.0010	0.0073
Motor Home	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0039	0.0004	0.0000	0.0004
Motor Home	Diesel	Rural Unrestricted	0.0069	0.0009	0.0000	0.0009
Motor Home	Diesel	Urban Restricted	0.0072	0.0007	0.0000	0.0007
Motor Home	Diesel	Urban Unrestricted	0.0170	0.0023	0.0000	0.0023
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0003	0.0003
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0002	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0003	0.0001	0.0000	0.0001
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	Diesel	Off-Network	0.0371	0.0040	0.0000	0.0040

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
				Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.1097	0.0045	0.0000	0.0045
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0489	0.0027	0.0000	0.0027
Combination Short-haul Truck	Diesel	Urban Restricted	0.1992	0.0086	0.0000	0.0086
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.1172	0.0069	0.0000	0.0069
Combination Short-haul Truck	CNG	Off-Network	0.0003	0.0002	0.0000	0.0002
Combination Short-haul Truck	CNG	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Urban Restricted	0.0003	0.0002	0.0000	0.0002
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0003	0.0002	0.0000	0.0002
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.1450	0.0181	0.0000	0.0181
Combination Long-haul Truck	Diesel	Rural Restricted	0.4730	0.0173	0.0000	0.0173
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.2135	0.0098	0.0000	0.0098
Combination Long-haul Truck	Diesel	Urban Restricted	0.8597	0.0327	0.0000	0.0327
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.5164	0.0249	0.0000	0.0249
Combination Long-haul Truck	CNG	Off-Network	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Urban Restricted	0.0002	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0002	0.0001	0.0000	0.0001
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	7.4913	1.7402	1.9813	3.7215
Motorcycle	ALL	ALL	0.0418	0.0741	0.1616	0.2357
Passenger Car	ALL	ALL	1.1672	0.5790	1.0561	1.6351
Passenger Truck	ALL	ALL	1.3068	0.5099	0.5680	1.0779
Light Commercial Truck	ALL	ALL	0.6570	0.1955	0.1217	0.3172
Other Buses	ALL	ALL	0.0724	0.0128	0.0017	0.0145
Transit Bus	ALL	ALL	0.0441	0.0043	0.0003	0.0045
School Bus	ALL	ALL	0.0249	0.0036	0.0002	0.0039
Refuse Truck	ALL	ALL	0.0402	0.0036	0.0000	0.0037
Single Unit Short-haul Truck	ALL	ALL	1.2762	0.1992	0.0528	0.2520
Single Unit Long-haul Truck	ALL	ALL	0.0730	0.0092	0.0024	0.0116
Motor Home	ALL	ALL	0.0653	0.0180	0.0162	0.0342
Combination Short-haul Truck	ALL	ALL	0.5141	0.0278	0.0003	0.0281
Combination Long-haul Truck	ALL	ALL	2.2082	0.1033	0.0000	0.1033
ALL (Total)	ALL (Total)	ALL (Total)	7.4913	1.7402	1.9813	3.7215
ALL	Gasoline	ALL	2.9313	1.3846	1.9796	3.3642
ALL	Diesel	ALL	4.5561	0.3530	0.0000	0.3530
ALL	CNG	ALL	0.0021	0.0014	0.0000	0.0014
ALL	Ethanol (E-85)	ALL	0.0018	0.0011	0.0017	0.0029
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2017			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	7.4913	1.7402	1.9813	3.7215
ALL	ALL	Off-Network	1.1761	0.7707	1.6587	2.4294
ALL	ALL	Rural Restricted	1.0252	0.0944	0.0210	0.1155
ALL	ALL	Rural Unrestricted	1.0427	0.1906	0.0640	0.2546
ALL	ALL	Urban Restricted	1.8679	0.1797	0.0420	0.2218
ALL	ALL	Urban Unrestricted	2.3793	0.5047	0.1956	0.7003
ALL (Total)	ALL (Total)	ALL (Total)	7.4913	1.7402	1.9813	3.7215

Table A7.6. 2023 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Milwaukee County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0003	0.0017	0.1983	0.2000
Motorcycle	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motorcycle	Gasoline	Rural Unrestricted	0.0007	0.0009	0.0005	0.0014
Motorcycle	Gasoline	Urban Restricted	0.0138	0.0158	0.0069	0.0227
Motorcycle	Gasoline	Urban Unrestricted	0.0421	0.0913	0.0605	0.1518
Passenger Car	Gasoline	Off-Network	0.2823	0.3839	1.4328	1.8167
Passenger Car	Gasoline	Rural Restricted	0.0007	0.0002	0.0002	0.0004
Passenger Car	Gasoline	Rural Unrestricted	0.0063	0.0021	0.0018	0.0039
Passenger Car	Gasoline	Urban Restricted	0.3462	0.0960	0.0790	0.1750
Passenger Car	Gasoline	Urban Unrestricted	0.5503	0.2400	0.2361	0.4761
Passenger Car	Diesel	Off-Network	0.0019	0.0022	0.0000	0.0022
Passenger Car	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Diesel	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Restricted	0.0022	0.0006	0.0000	0.0006
Passenger Car	Diesel	Urban Unrestricted	0.0033	0.0013	0.0000	0.0013
Passenger Car	Ethanol (E-85)	Off-Network	0.0002	0.0002	0.0008	0.0010
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0001	0.0000	0.0000	0.0001
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0001	0.0001	0.0002
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.2603	0.3021	0.6088	0.9110
Passenger Truck	Gasoline	Rural Restricted	0.0004	0.0001	0.0001	0.0002
Passenger Truck	Gasoline	Rural Unrestricted	0.0032	0.0011	0.0009	0.0020
Passenger Truck	Gasoline	Urban Restricted	0.1804	0.0534	0.0386	0.0920
Passenger Truck	Gasoline	Urban Unrestricted	0.2635	0.1255	0.1155	0.2410
Passenger Truck	Diesel	Off-Network	0.0176	0.0010	0.0000	0.0010
Passenger Truck	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Diesel	Rural Unrestricted	0.0003	0.0000	0.0000	0.0000
Passenger Truck	Diesel	Urban Restricted	0.0119	0.0021	0.0000	0.0021
Passenger Truck	Diesel	Urban Unrestricted	0.0319	0.0048	0.0000	0.0048
Passenger Truck	Ethanol (E-85)	Off-Network	0.0006	0.0007	0.0017	0.0024
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0003	0.0001	0.0001	0.0002
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0004	0.0002	0.0003	0.0005
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0718	0.0669	0.1277	0.1946
Light Commercial Truck	Gasoline	Rural Restricted	0.0002	0.0000	0.0000	0.0001
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0014	0.0004	0.0002	0.0006
Light Commercial Truck	Gasoline	Urban Restricted	0.0742	0.0182	0.0081	0.0263

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.1176	0.0554	0.0243	0.0797
Light Commercial Truck	Diesel	Off-Network	0.0627	0.0037	0.0000	0.0037
Light Commercial Truck	Diesel	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Light Commercial Truck	Diesel	Rural Unrestricted	0.0010	0.0002	0.0000	0.0002
Light Commercial Truck	Diesel	Urban Restricted	0.0463	0.0084	0.0000	0.0084
Light Commercial Truck	Diesel	Urban Unrestricted	0.1186	0.0192	0.0000	0.0192
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0003	0.0005
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0001	0.0001
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0038	0.0046	0.0021	0.0068
Other Buses	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Other Buses	Gasoline	Urban Restricted	0.0045	0.0021	0.0002	0.0024
Other Buses	Gasoline	Urban Unrestricted	0.0076	0.0068	0.0008	0.0076
Other Buses	Diesel	Off-Network	0.0062	0.0008	0.0000	0.0008
Other Buses	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Diesel	Rural Unrestricted	0.0004	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Restricted	0.0145	0.0008	0.0000	0.0008
Other Buses	Diesel	Urban Unrestricted	0.0338	0.0021	0.0000	0.0021
Other Buses	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0005	0.0006	0.0002	0.0008
Transit Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Restricted	0.0003	0.0002	0.0000	0.0002
Transit Bus	Gasoline	Urban Unrestricted	0.0006	0.0006	0.0001	0.0006
Transit Bus	Diesel	Off-Network	0.0065	0.0006	0.0000	0.0006
Transit Bus	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Diesel	Rural Unrestricted	0.0004	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Restricted	0.0137	0.0009	0.0000	0.0009
Transit Bus	Diesel	Urban Unrestricted	0.0366	0.0023	0.0000	0.0023
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0006	0.0009	0.0003	0.0012
School Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Restricted	0.0002	0.0002	0.0000	0.0002
School Bus	Gasoline	Urban Unrestricted	0.0004	0.0006	0.0001	0.0006
School Bus	Diesel	Off-Network	0.0027	0.0001	0.0000	0.0001
School Bus	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Restricted	0.0035	0.0001	0.0000	0.0001
School Bus	Diesel	Urban Unrestricted	0.0130	0.0005	0.0000	0.0005
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0001	0.0002	0.0000	0.0002
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0001	0.0001	0.0001	0.0002
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0001	0.0001	0.0000	0.0001
Refuse Truck	Gasoline	Urban Unrestricted	0.0002	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Off-Network	0.0063	0.0007	0.0000	0.0007
Refuse Truck	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Unrestricted	0.0002	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Restricted	0.0109	0.0006	0.0000	0.0006
Refuse Truck	Diesel	Urban Unrestricted	0.0198	0.0013	0.0000	0.0013
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0748	0.0671	0.0646	0.1316
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0003	0.0002	0.0000	0.0003
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0156	0.0085	0.0018	0.0103
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0221	0.0284	0.0047	0.0331
Single Unit Short-haul Truck	Diesel	Off-Network	0.2012	0.0133	0.0000	0.0133
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0004	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0045	0.0003	0.0000	0.0003
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.2140	0.0166	0.0000	0.0166
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.5109	0.0376	0.0000	0.0376
Single Unit Short-haul Truck	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0003	0.0004	0.0041	0.0045
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0013	0.0005	0.0001	0.0007
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0019	0.0018	0.0004	0.0022
Single Unit Long-haul Truck	Diesel	Off-Network	0.0088	0.0010	0.0000	0.0010
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0003	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0148	0.0013	0.0000	0.0013
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0356	0.0028	0.0000	0.0028
Single Unit Long-haul Truck	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0025	0.0039	0.0174	0.0213
Motor Home	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
Motor Home	Gasoline	Urban Restricted	0.0100	0.0027	0.0006	0.0034
Motor Home	Gasoline	Urban Unrestricted	0.0138	0.0086	0.0016	0.0103
Motor Home	Diesel	Off-Network	0.0005	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Unrestricted	0.0002	0.0000	0.0000	0.0000
Motor Home	Diesel	Urban Restricted	0.0121	0.0014	0.0000	0.0014
Motor Home	Diesel	Urban Unrestricted	0.0255	0.0032	0.0000	0.0032
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0002	0.0003
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0002	0.0001	0.0000	0.0001
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	Diesel	Off-Network	0.0739	0.0038	0.0000	0.0038

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
				Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.0006	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0017	0.0001	0.0000	0.0001
Combination Short-haul Truck	Diesel	Urban Restricted	0.2922	0.0119	0.0000	0.0119
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.1912	0.0070	0.0000	0.0070
Combination Short-haul Truck	CNG	Off-Network	0.0016	0.0010	0.0000	0.0010
Combination Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Urban Restricted	0.0019	0.0022	0.0000	0.0022
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0014	0.0018	0.0000	0.0018
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.2186	0.0159	0.0000	0.0159
Combination Long-haul Truck	Diesel	Rural Restricted	0.0025	0.0001	0.0000	0.0001
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0071	0.0003	0.0000	0.0003
Combination Long-haul Truck	Diesel	Urban Restricted	1.2281	0.0460	0.0000	0.0460
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.8040	0.0270	0.0000	0.0270
Combination Long-haul Truck	CNG	Off-Network	0.0004	0.0002	0.0000	0.0002
Combination Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Restricted	0.0008	0.0009	0.0000	0.0009
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0006	0.0007	0.0000	0.0007
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	6.7027	1.8482	3.0432	4.8914
Motorcycle	ALL	ALL	0.0568	0.1098	0.2661	0.3759
Passenger Car	ALL	ALL	1.1936	0.7268	1.7507	2.4775
Passenger Truck	ALL	ALL	0.7706	0.4912	0.7660	1.2572
Light Commercial Truck	ALL	ALL	0.4942	0.1726	0.1607	0.3333
Other Buses	ALL	ALL	0.0712	0.0174	0.0031	0.0206
Transit Bus	ALL	ALL	0.0588	0.0055	0.0003	0.0058
School Bus	ALL	ALL	0.0205	0.0027	0.0004	0.0030
Refuse Truck	ALL	ALL	0.0376	0.0030	0.0001	0.0032
Single Unit Short-haul Truck	ALL	ALL	1.0443	0.1723	0.0711	0.2434
Single Unit Long-haul Truck	ALL	ALL	0.0633	0.0081	0.0046	0.0127
Motor Home	ALL	ALL	0.0648	0.0201	0.0197	0.0397
Combination Short-haul Truck	ALL	ALL	0.5648	0.0278	0.0003	0.0281
Combination Long-haul Truck	ALL	ALL	2.2621	0.0911	0.0000	0.0911
ALL (Total)	ALL (Total)	ALL (Total)	6.7027	1.8482	3.0432	4.8914
ALL	Gasoline	ALL	2.3778	1.5948	3.0398	4.6345
ALL	Diesel	ALL	4.3152	0.2440	0.0000	0.2440
ALL	CNG	ALL	0.0078	0.0079	0.0000	0.0079
ALL	Ethanol (E-85)	ALL	0.0019	0.0015	0.0035	0.0050
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	6.7027	1.8482	3.0432	4.8914
ALL	ALL	Off-Network	1.3071	0.8778	2.4594	3.3372
ALL	ALL	Rural Restricted	0.0052	0.0006	0.0003	0.0009
ALL	ALL	Rural Unrestricted	0.0284	0.0060	0.0034	0.0094
ALL	ALL	Urban Restricted	2.5142	0.2920	0.1357	0.4277
ALL	ALL	Urban Unrestricted	2.8477	0.6717	0.4445	1.1163
ALL (Total)	ALL (Total)	ALL (Total)	6.7027	1.8482	3.0432	4.8914
Safety Margin			7½%			7½%
Emissions Budget			7.2054			5.2583

Table A7.7. 2023 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Ozaukee County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0000	0.0002	0.0283	0.0285
Motorcycle	Gasoline	Rural Restricted	0.0012	0.0012	0.0004	0.0017
Motorcycle	Gasoline	Rural Unrestricted	0.0041	0.0051	0.0025	0.0076
Motorcycle	Gasoline	Urban Restricted	0.0008	0.0009	0.0003	0.0012
Motorcycle	Gasoline	Urban Unrestricted	0.0036	0.0075	0.0049	0.0124
Passenger Car	Gasoline	Off-Network	0.0394	0.0540	0.2026	0.2567
Passenger Car	Gasoline	Rural Restricted	0.0334	0.0080	0.0055	0.0135
Passenger Car	Gasoline	Rural Unrestricted	0.0366	0.0116	0.0098	0.0214
Passenger Car	Gasoline	Urban Restricted	0.0216	0.0054	0.0038	0.0092
Passenger Car	Gasoline	Urban Unrestricted	0.0452	0.0192	0.0193	0.0385
Passenger Car	Diesel	Off-Network	0.0003	0.0003	0.0000	0.0003
Passenger Car	Diesel	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Passenger Car	Diesel	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
Passenger Car	Diesel	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Unrestricted	0.0003	0.0001	0.0000	0.0001
Passenger Car	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0001	0.0001
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.0369	0.0429	0.0869	0.1299
Passenger Truck	Gasoline	Rural Restricted	0.0177	0.0047	0.0027	0.0074
Passenger Truck	Gasoline	Rural Unrestricted	0.0188	0.0063	0.0048	0.0111
Passenger Truck	Gasoline	Urban Restricted	0.0114	0.0031	0.0019	0.0050
Passenger Truck	Gasoline	Urban Unrestricted	0.0220	0.0102	0.0095	0.0197
Passenger Truck	Diesel	Off-Network	0.0023	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Rural Restricted	0.0010	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Rural Unrestricted	0.0015	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Urban Restricted	0.0007	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Urban Unrestricted	0.0026	0.0004	0.0000	0.0004
Passenger Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0002	0.0003
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0094	0.0088	0.0168	0.0256
Light Commercial Truck	Gasoline	Rural Restricted	0.0063	0.0013	0.0005	0.0018
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0074	0.0022	0.0009	0.0031
Light Commercial Truck	Gasoline	Urban Restricted	0.0041	0.0009	0.0004	0.0012

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0091	0.0041	0.0019	0.0060
Light Commercial Truck	Diesel	Off-Network	0.0077	0.0005	0.0000	0.0005
Light Commercial Truck	Diesel	Rural Restricted	0.0036	0.0006	0.0000	0.0006
Light Commercial Truck	Diesel	Rural Unrestricted	0.0052	0.0009	0.0000	0.0009
Light Commercial Truck	Diesel	Urban Restricted	0.0024	0.0004	0.0000	0.0004
Light Commercial Truck	Diesel	Urban Unrestricted	0.0091	0.0015	0.0000	0.0015
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0000	0.0001
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0005	0.0006	0.0003	0.0009
Other Buses	Gasoline	Rural Restricted	0.0004	0.0002	0.0000	0.0003
Other Buses	Gasoline	Rural Unrestricted	0.0006	0.0003	0.0000	0.0003
Other Buses	Gasoline	Urban Restricted	0.0003	0.0002	0.0000	0.0002
Other Buses	Gasoline	Urban Unrestricted	0.0006	0.0005	0.0001	0.0006
Other Buses	Diesel	Off-Network	0.0008	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Restricted	0.0013	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Unrestricted	0.0020	0.0001	0.0000	0.0001
Other Buses	Diesel	Urban Restricted	0.0009	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Unrestricted	0.0026	0.0002	0.0000	0.0002
Other Buses	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0001	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Diesel	Off-Network	0.0009	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Restricted	0.0012	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Unrestricted	0.0019	0.0001	0.0000	0.0001
Transit Bus	Diesel	Urban Restricted	0.0008	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Unrestricted	0.0027	0.0002	0.0000	0.0002
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0001	0.0001	0.0000	0.0002
School Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0001
School Bus	Diesel	Off-Network	0.0004	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Restricted	0.0003	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Unrestricted	0.0006	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Unrestricted	0.0011	0.0000	0.0000	0.0000
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Off-Network	0.0008	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Rural Restricted	0.0010	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Unrestricted	0.0011	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Urban Restricted	0.0007	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Unrestricted	0.0015	0.0001	0.0000	0.0001
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0106	0.0094	0.0091	0.0185
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0014	0.0008	0.0001	0.0009
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0015	0.0011	0.0002	0.0013
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0009	0.0005	0.0001	0.0006
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0018	0.0022	0.0004	0.0026
Single Unit Short-haul Truck	Diesel	Off-Network	0.0270	0.0017	0.0000	0.0017
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0186	0.0012	0.0000	0.0012
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0242	0.0019	0.0000	0.0019
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0123	0.0008	0.0000	0.0008
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.0395	0.0030	0.0000	0.0030
Single Unit Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0000	0.0001	0.0006	0.0006
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0002	0.0001	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Off-Network	0.0011	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0013	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0016	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0008	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0027	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0004	0.0006	0.0025	0.0031
Motor Home	Gasoline	Rural Restricted	0.0009	0.0002	0.0000	0.0003
Motor Home	Gasoline	Rural Unrestricted	0.0010	0.0004	0.0001	0.0004
Motor Home	Gasoline	Urban Restricted	0.0006	0.0002	0.0000	0.0002
Motor Home	Gasoline	Urban Unrestricted	0.0011	0.0007	0.0001	0.0008
Motor Home	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0011	0.0001	0.0000	0.0001
Motor Home	Diesel	Rural Unrestricted	0.0014	0.0002	0.0000	0.0002
Motor Home	Diesel	Urban Restricted	0.0007	0.0001	0.0000	0.0001
Motor Home	Diesel	Urban Unrestricted	0.0020	0.0003	0.0000	0.0003
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Off-Network	0.0082	0.0004	0.0000	0.0004

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.0246	0.0009	0.0000	0.0009
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0079	0.0003	0.0000	0.0003
Combination Short-haul Truck	Diesel	Urban Restricted	0.0159	0.0006	0.0000	0.0006
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0129	0.0005	0.0000	0.0005
Combination Short-haul Truck	CNG	Off-Network	0.0002	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Urban Restricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.0316	0.0023	0.0000	0.0023
Combination Long-haul Truck	Diesel	Rural Restricted	0.1235	0.0041	0.0000	0.0041
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0394	0.0014	0.0000	0.0014
Combination Long-haul Truck	Diesel	Urban Restricted	0.0795	0.0027	0.0000	0.0027
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.0646	0.0022	0.0000	0.0022
Combination Long-haul Truck	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0001	0.0000	0.0001
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	0.9562	0.2494	0.4183	0.6677
Motorcycle	ALL	ALL	0.0098	0.0150	0.0365	0.0515
Passenger Car	ALL	ALL	0.1774	0.0989	0.2412	0.3400
Passenger Truck	ALL	ALL	0.1150	0.0683	0.1062	0.1745
Light Commercial Truck	ALL	ALL	0.0644	0.0211	0.0206	0.0417
Other Buses	ALL	ALL	0.0100	0.0024	0.0004	0.0028
Transit Bus	ALL	ALL	0.0077	0.0007	0.0000	0.0008
School Bus	ALL	ALL	0.0028	0.0004	0.0001	0.0004
Refuse Truck	ALL	ALL	0.0052	0.0004	0.0000	0.0004
Single Unit Short-haul Truck	ALL	ALL	0.1379	0.0226	0.0099	0.0325
Single Unit Long-haul Truck	ALL	ALL	0.0081	0.0010	0.0006	0.0016
Motor Home	ALL	ALL	0.0092	0.0026	0.0028	0.0054
Combination Short-haul Truck	ALL	ALL	0.0700	0.0032	0.0000	0.0032
Combination Long-haul Truck	ALL	ALL	0.3387	0.0130	0.0000	0.0130
ALL (Total)	ALL (Total)	ALL (Total)	0.9562	0.2494	0.4183	0.6677
ALL	Gasoline	ALL	0.3525	0.2163	0.4178	0.6341
ALL	Diesel	ALL	0.6025	0.0320	0.0000	0.0320
ALL	CNG	ALL	0.0009	0.0009	0.0000	0.0009
ALL	Ethanol (E-85)	ALL	0.0003	0.0002	0.0005	0.0007
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	0.9562	0.2494	0.4183	0.6677
ALL	ALL	Off-Network	0.1788	0.1230	0.3476	0.4707
ALL	ALL	Rural Restricted	0.2395	0.0242	0.0094	0.0336
ALL	ALL	Rural Unrestricted	0.1572	0.0327	0.0184	0.0511
ALL	ALL	Urban Restricted	0.1551	0.0161	0.0065	0.0226
ALL	ALL	Urban Unrestricted	0.2256	0.0535	0.0363	0.0898
ALL (Total)	ALL (Total)	ALL (Total)	0.9562	0.2494	0.4183	0.6677
Safety Margin			7½%			7½%
Emissions Budget			1.0279			0.7178

Table A7.8. 2023 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Racine County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0001	0.0004	0.0431	0.0435
Motorcycle	Gasoline	Rural Restricted	0.0020	0.0022	0.0008	0.0030
Motorcycle	Gasoline	Rural Unrestricted	0.0051	0.0062	0.0030	0.0093
Motorcycle	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motorcycle	Gasoline	Urban Unrestricted	0.0070	0.0147	0.0097	0.0244
Passenger Car	Gasoline	Off-Network	0.0555	0.0759	0.2835	0.3594
Passenger Car	Gasoline	Rural Restricted	0.0579	0.0141	0.0097	0.0238
Passenger Car	Gasoline	Rural Unrestricted	0.0449	0.0142	0.0120	0.0262
Passenger Car	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Gasoline	Urban Unrestricted	0.0892	0.0384	0.0381	0.0764
Passenger Car	Diesel	Off-Network	0.0004	0.0004	0.0000	0.0004
Passenger Car	Diesel	Rural Restricted	0.0004	0.0001	0.0000	0.0001
Passenger Car	Diesel	Rural Unrestricted	0.0003	0.0001	0.0000	0.0001
Passenger Car	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Unrestricted	0.0005	0.0002	0.0000	0.0002
Passenger Car	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0002	0.0002
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.0520	0.0604	0.1219	0.1823
Passenger Truck	Gasoline	Rural Restricted	0.0307	0.0082	0.0048	0.0131
Passenger Truck	Gasoline	Rural Unrestricted	0.0231	0.0077	0.0059	0.0136
Passenger Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Urban Unrestricted	0.0434	0.0203	0.0188	0.0391
Passenger Truck	Diesel	Off-Network	0.0034	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Rural Restricted	0.0017	0.0003	0.0000	0.0003
Passenger Truck	Diesel	Rural Unrestricted	0.0018	0.0003	0.0000	0.0003
Passenger Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Diesel	Urban Unrestricted	0.0052	0.0008	0.0000	0.0008
Passenger Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0003	0.0005
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0001	0.0001
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0129	0.0120	0.0230	0.0351
Light Commercial Truck	Gasoline	Rural Restricted	0.0107	0.0022	0.0009	0.0031
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0088	0.0026	0.0011	0.0037
Light Commercial Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0174	0.0080	0.0036	0.0116
Light Commercial Truck	Diesel	Off-Network	0.0109	0.0007	0.0000	0.0007
Light Commercial Truck	Diesel	Rural Restricted	0.0062	0.0010	0.0000	0.0010
Light Commercial Truck	Diesel	Rural Unrestricted	0.0062	0.0011	0.0000	0.0011
Light Commercial Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Diesel	Urban Unrestricted	0.0175	0.0028	0.0000	0.0028
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0001	0.0001
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0008	0.0009	0.0004	0.0014
Other Buses	Gasoline	Rural Restricted	0.0007	0.0004	0.0000	0.0005
Other Buses	Gasoline	Rural Unrestricted	0.0007	0.0004	0.0000	0.0004
Other Buses	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Urban Unrestricted	0.0012	0.0010	0.0001	0.0012
Other Buses	Diesel	Off-Network	0.0012	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Restricted	0.0023	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Unrestricted	0.0024	0.0001	0.0000	0.0001
Other Buses	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Unrestricted	0.0052	0.0003	0.0000	0.0003
Other Buses	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0001	0.0001	0.0000	0.0002
Transit Bus	Gasoline	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Transit Bus	Diesel	Off-Network	0.0013	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Restricted	0.0021	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Unrestricted	0.0023	0.0002	0.0000	0.0002
Transit Bus	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Unrestricted	0.0053	0.0003	0.0000	0.0003
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0001	0.0002	0.0001	0.0003
School Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
School Bus	Diesel	Off-Network	0.0006	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Restricted	0.0005	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Unrestricted	0.0007	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Unrestricted	0.0021	0.0001	0.0000	0.0001
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Off-Network	0.0012	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Rural Restricted	0.0018	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Rural Unrestricted	0.0013	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Unrestricted	0.0031	0.0002	0.0000	0.0002
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0147	0.0131	0.0126	0.0257
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0025	0.0014	0.0002	0.0016
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0019	0.0013	0.0003	0.0016
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0035	0.0044	0.0007	0.0051
Single Unit Short-haul Truck	Diesel	Off-Network	0.0390	0.0026	0.0000	0.0026
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0327	0.0021	0.0000	0.0021
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0299	0.0023	0.0000	0.0023
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.0796	0.0059	0.0000	0.0059
Single Unit Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0001	0.0001	0.0008	0.0009
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0003	0.0003	0.0001	0.0003
Single Unit Long-haul Truck	Diesel	Off-Network	0.0017	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0023	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0020	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0055	0.0004	0.0000	0.0004
Single Unit Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0005	0.0008	0.0036	0.0044
Motor Home	Gasoline	Rural Restricted	0.0016	0.0004	0.0001	0.0005
Motor Home	Gasoline	Rural Unrestricted	0.0012	0.0004	0.0001	0.0005
Motor Home	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Urban Unrestricted	0.0023	0.0014	0.0003	0.0017
Motor Home	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0020	0.0002	0.0000	0.0002
Motor Home	Diesel	Rural Unrestricted	0.0017	0.0002	0.0000	0.0002
Motor Home	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Diesel	Urban Unrestricted	0.0042	0.0005	0.0000	0.0005
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Off-Network	0.0099	0.0005	0.0000	0.0005

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
				Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.0405	0.0014	0.0000	0.0014
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0092	0.0004	0.0000	0.0004
Combination Short-haul Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0247	0.0009	0.0000	0.0009
Combination Short-haul Truck	CNG	Off-Network	0.0002	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Rural Restricted	0.0002	0.0002	0.0000	0.0002
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0002	0.0002	0.0000	0.0002
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.0365	0.0026	0.0000	0.0026
Combination Long-haul Truck	Diesel	Rural Restricted	0.2206	0.0073	0.0000	0.0073
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0500	0.0018	0.0000	0.0018
Combination Long-haul Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.1343	0.0045	0.0000	0.0045
Combination Long-haul Truck	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	1.3096	0.3606	0.6003	0.9608
Motorcycle	ALL	ALL	0.0142	0.0235	0.0566	0.0801
Passenger Car	ALL	ALL	0.2492	0.1434	0.3435	0.4868
Passenger Truck	ALL	ALL	0.1615	0.0984	0.1519	0.2503
Light Commercial Truck	ALL	ALL	0.0907	0.0304	0.0287	0.0591
Other Buses	ALL	ALL	0.0146	0.0035	0.0006	0.0041
Transit Bus	ALL	ALL	0.0113	0.0010	0.0001	0.0011
School Bus	ALL	ALL	0.0044	0.0006	0.0001	0.0007
Refuse Truck	ALL	ALL	0.0075	0.0006	0.0000	0.0006
Single Unit Short-haul Truck	ALL	ALL	0.2037	0.0331	0.0138	0.0470
Single Unit Long-haul Truck	ALL	ALL	0.0122	0.0015	0.0009	0.0024
Motor Home	ALL	ALL	0.0137	0.0040	0.0040	0.0080
Combination Short-haul Truck	ALL	ALL	0.0850	0.0039	0.0000	0.0039
Combination Long-haul Truck	ALL	ALL	0.4417	0.0166	0.0000	0.0166
ALL (Total)	ALL (Total)	ALL (Total)	1.3096	0.3606	0.6003	0.9608
ALL	Gasoline	ALL	0.4937	0.3148	0.5996	0.9144
ALL	Diesel	ALL	0.8144	0.0443	0.0000	0.0443
ALL	CNG	ALL	0.0012	0.0012	0.0000	0.0012
ALL	Ethanol (E-85)	ALL	0.0004	0.0003	0.0007	0.0010
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	1.3096	0.3606	0.6003	0.9608
ALL	ALL	Off-Network	0.2433	0.1719	0.4897	0.6616
ALL	ALL	Rural Restricted	0.4200	0.0424	0.0167	0.0591
ALL	ALL	Rural Unrestricted	0.1940	0.0400	0.0225	0.0624
ALL	ALL	Urban Restricted	0.0000	0.0000	0.0000	0.0000
ALL	ALL	Urban Unrestricted	0.4523	0.1063	0.0714	0.1777
ALL (Total)	ALL (Total)	ALL (Total)	1.3096	0.3606	0.6003	0.9608
Safety Margin			7½%			7½%
Emissions Budget			1.4078			1.0329

Table A7.9. 2023 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Washington County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0000	0.0002	0.0286	0.0288
Motorcycle	Gasoline	Rural Restricted	0.0012	0.0012	0.0005	0.0017
Motorcycle	Gasoline	Rural Unrestricted	0.0049	0.0059	0.0028	0.0087
Motorcycle	Gasoline	Urban Restricted	0.0010	0.0010	0.0004	0.0014
Motorcycle	Gasoline	Urban Unrestricted	0.0030	0.0064	0.0043	0.0107
Passenger Car	Gasoline	Off-Network	0.0405	0.0556	0.2087	0.2644
Passenger Car	Gasoline	Rural Restricted	0.0337	0.0081	0.0056	0.0137
Passenger Car	Gasoline	Rural Unrestricted	0.0424	0.0132	0.0111	0.0243
Passenger Car	Gasoline	Urban Restricted	0.0271	0.0066	0.0046	0.0112
Passenger Car	Gasoline	Urban Unrestricted	0.0382	0.0165	0.0168	0.0333
Passenger Car	Diesel	Off-Network	0.0003	0.0003	0.0000	0.0003
Passenger Car	Diesel	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Passenger Car	Diesel	Rural Unrestricted	0.0003	0.0001	0.0000	0.0001
Passenger Car	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Unrestricted	0.0002	0.0001	0.0000	0.0001
Passenger Car	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0001	0.0001
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.0381	0.0444	0.0900	0.1344
Passenger Truck	Gasoline	Rural Restricted	0.0179	0.0048	0.0028	0.0075
Passenger Truck	Gasoline	Rural Unrestricted	0.0219	0.0072	0.0055	0.0127
Passenger Truck	Gasoline	Urban Restricted	0.0144	0.0039	0.0023	0.0061
Passenger Truck	Gasoline	Urban Unrestricted	0.0186	0.0087	0.0083	0.0171
Passenger Truck	Diesel	Off-Network	0.0024	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Rural Restricted	0.0010	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Rural Unrestricted	0.0017	0.0003	0.0000	0.0003
Passenger Truck	Diesel	Urban Restricted	0.0008	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Urban Unrestricted	0.0023	0.0003	0.0000	0.0003
Passenger Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0002	0.0003
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0093	0.0087	0.0167	0.0255
Light Commercial Truck	Gasoline	Rural Restricted	0.0062	0.0012	0.0005	0.0018
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0082	0.0023	0.0010	0.0034
Light Commercial Truck	Gasoline	Urban Restricted	0.0050	0.0010	0.0004	0.0014

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0074	0.0034	0.0016	0.0050
Light Commercial Truck	Diesel	Off-Network	0.0076	0.0005	0.0000	0.0005
Light Commercial Truck	Diesel	Rural Restricted	0.0035	0.0006	0.0000	0.0006
Light Commercial Truck	Diesel	Rural Unrestricted	0.0058	0.0010	0.0000	0.0010
Light Commercial Truck	Diesel	Urban Restricted	0.0029	0.0005	0.0000	0.0005
Light Commercial Truck	Diesel	Urban Unrestricted	0.0076	0.0012	0.0000	0.0012
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0000	0.0001
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0005	0.0006	0.0003	0.0009
Other Buses	Gasoline	Rural Restricted	0.0004	0.0002	0.0000	0.0003
Other Buses	Gasoline	Rural Unrestricted	0.0006	0.0003	0.0000	0.0004
Other Buses	Gasoline	Urban Restricted	0.0003	0.0002	0.0000	0.0002
Other Buses	Gasoline	Urban Unrestricted	0.0005	0.0004	0.0001	0.0005
Other Buses	Diesel	Off-Network	0.0008	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Restricted	0.0013	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Unrestricted	0.0022	0.0001	0.0000	0.0001
Other Buses	Diesel	Urban Restricted	0.0011	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Unrestricted	0.0022	0.0001	0.0000	0.0001
Other Buses	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0001	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Diesel	Off-Network	0.0009	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Restricted	0.0012	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Unrestricted	0.0020	0.0001	0.0000	0.0001
Transit Bus	Diesel	Urban Restricted	0.0010	0.0001	0.0000	0.0001
Transit Bus	Diesel	Urban Unrestricted	0.0022	0.0001	0.0000	0.0001
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0001	0.0001	0.0000	0.0002
School Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Diesel	Off-Network	0.0005	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Restricted	0.0003	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Unrestricted	0.0007	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Restricted	0.0003	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Unrestricted	0.0009	0.0000	0.0000	0.0000
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Off-Network	0.0008	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Rural Restricted	0.0010	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Unrestricted	0.0012	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Urban Restricted	0.0008	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Unrestricted	0.0013	0.0001	0.0000	0.0001
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0108	0.0096	0.0092	0.0188
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0014	0.0008	0.0001	0.0009
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0017	0.0012	0.0002	0.0014
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0012	0.0007	0.0001	0.0008
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0015	0.0019	0.0003	0.0022
Single Unit Short-haul Truck	Diesel	Off-Network	0.0270	0.0017	0.0000	0.0017
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0187	0.0012	0.0000	0.0012
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0266	0.0021	0.0000	0.0021
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0152	0.0010	0.0000	0.0010
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.0335	0.0025	0.0000	0.0025
Single Unit Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0000	0.0001	0.0006	0.0006
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Off-Network	0.0011	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0013	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0018	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0010	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0023	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0004	0.0006	0.0026	0.0032
Motor Home	Gasoline	Rural Restricted	0.0009	0.0002	0.0000	0.0003
Motor Home	Gasoline	Rural Unrestricted	0.0011	0.0004	0.0001	0.0005
Motor Home	Gasoline	Urban Restricted	0.0007	0.0002	0.0000	0.0002
Motor Home	Gasoline	Urban Unrestricted	0.0010	0.0006	0.0001	0.0007
Motor Home	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0012	0.0001	0.0000	0.0001
Motor Home	Diesel	Rural Unrestricted	0.0015	0.0002	0.0000	0.0002
Motor Home	Diesel	Urban Restricted	0.0009	0.0001	0.0000	0.0001
Motor Home	Diesel	Urban Unrestricted	0.0018	0.0002	0.0000	0.0002
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Off-Network	0.0076	0.0004	0.0000	0.0004

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
				Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.0223	0.0008	0.0000	0.0008
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0078	0.0003	0.0000	0.0003
Combination Short-haul Truck	Diesel	Urban Restricted	0.0180	0.0006	0.0000	0.0006
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0099	0.0004	0.0000	0.0004
Combination Short-haul Truck	CNG	Off-Network	0.0002	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Urban Restricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.0345	0.0026	0.0000	0.0026
Combination Long-haul Truck	Diesel	Rural Restricted	0.1261	0.0042	0.0000	0.0042
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0439	0.0016	0.0000	0.0016
Combination Long-haul Truck	Diesel	Urban Restricted	0.1015	0.0034	0.0000	0.0034
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.0559	0.0019	0.0000	0.0019
Combination Long-haul Truck	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Restricted	0.0000	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0001	0.0000	0.0001
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	0.9849	0.2531	0.4270	0.6801
Motorcycle	ALL	ALL	0.0101	0.0149	0.0365	0.0514
Passenger Car	ALL	ALL	0.1832	0.1007	0.2469	0.3476
Passenger Truck	ALL	ALL	0.1193	0.0702	0.1091	0.1793
Light Commercial Truck	ALL	ALL	0.0634	0.0205	0.0203	0.0408
Other Buses	ALL	ALL	0.0099	0.0023	0.0004	0.0027
Transit Bus	ALL	ALL	0.0076	0.0007	0.0000	0.0008
School Bus	ALL	ALL	0.0028	0.0004	0.0001	0.0004
Refuse Truck	ALL	ALL	0.0051	0.0004	0.0000	0.0004
Single Unit Short-haul Truck	ALL	ALL	0.1376	0.0226	0.0100	0.0326
Single Unit Long-haul Truck	ALL	ALL	0.0080	0.0010	0.0006	0.0016
Motor Home	ALL	ALL	0.0095	0.0026	0.0029	0.0055
Combination Short-haul Truck	ALL	ALL	0.0662	0.0030	0.0000	0.0030
Combination Long-haul Truck	ALL	ALL	0.3621	0.0139	0.0000	0.0139
ALL (Total)	ALL (Total)	ALL (Total)	0.9849	0.2531	0.4270	0.6801
ALL	Gasoline	ALL	0.3630	0.2195	0.4265	0.6460
ALL	Diesel	ALL	0.6207	0.0326	0.0000	0.0326
ALL	CNG	ALL	0.0008	0.0009	0.0000	0.0009
ALL	Ethanol (E-85)	ALL	0.0003	0.0002	0.0005	0.0007
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	0.9849	0.2531	0.4270	0.6801
ALL	ALL	Off-Network	0.1838	0.1264	0.3573	0.4836
ALL	ALL	Rural Restricted	0.2403	0.0244	0.0095	0.0339
ALL	ALL	Rural Unrestricted	0.1765	0.0369	0.0208	0.0577
ALL	ALL	Urban Restricted	0.1935	0.0198	0.0079	0.0277
ALL	ALL	Urban Unrestricted	0.1907	0.0456	0.0316	0.0772
ALL (Total)	ALL (Total)	ALL (Total)	0.9849	0.2531	0.4270	0.6801
Safety Margin			7½%			7½%
Emissions Budget			1.0587			0.7311

Table A7.10. 2023 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Waukesha County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0002	0.0011	0.1260	0.1271
Motorcycle	Gasoline	Rural Restricted	0.0019	0.0021	0.0008	0.0029
Motorcycle	Gasoline	Rural Unrestricted	0.0124	0.0158	0.0079	0.0237
Motorcycle	Gasoline	Urban Restricted	0.0050	0.0055	0.0022	0.0077
Motorcycle	Gasoline	Urban Unrestricted	0.0224	0.0410	0.0255	0.0665
Passenger Car	Gasoline	Off-Network	0.1664	0.2271	0.8509	1.0780
Passenger Car	Gasoline	Rural Restricted	0.0545	0.0133	0.0092	0.0225
Passenger Car	Gasoline	Rural Unrestricted	0.1116	0.0363	0.0308	0.0671
Passenger Car	Gasoline	Urban Restricted	0.1362	0.0343	0.0247	0.0590
Passenger Car	Gasoline	Urban Unrestricted	0.2527	0.1019	0.0995	0.2013
Passenger Car	Diesel	Off-Network	0.0011	0.0013	0.0000	0.0013
Passenger Car	Diesel	Rural Restricted	0.0003	0.0001	0.0000	0.0001
Passenger Car	Diesel	Rural Unrestricted	0.0007	0.0002	0.0000	0.0002
Passenger Car	Diesel	Urban Restricted	0.0009	0.0002	0.0000	0.0002
Passenger Car	Diesel	Urban Unrestricted	0.0016	0.0006	0.0000	0.0006
Passenger Car	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0005	0.0006
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0001	0.0001
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.1541	0.1791	0.3626	0.5417
Passenger Truck	Gasoline	Rural Restricted	0.0287	0.0077	0.0045	0.0122
Passenger Truck	Gasoline	Rural Unrestricted	0.0566	0.0195	0.0151	0.0346
Passenger Truck	Gasoline	Urban Restricted	0.0715	0.0197	0.0121	0.0318
Passenger Truck	Gasoline	Urban Unrestricted	0.1237	0.0537	0.0487	0.1025
Passenger Truck	Diesel	Off-Network	0.0101	0.0006	0.0000	0.0006
Passenger Truck	Diesel	Rural Restricted	0.0016	0.0003	0.0000	0.0003
Passenger Truck	Diesel	Rural Unrestricted	0.0046	0.0007	0.0000	0.0007
Passenger Truck	Diesel	Urban Restricted	0.0042	0.0007	0.0000	0.0007
Passenger Truck	Diesel	Urban Unrestricted	0.0136	0.0021	0.0000	0.0021
Passenger Truck	Ethanol (E-85)	Off-Network	0.0003	0.0004	0.0010	0.0014
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0001	0.0000	0.0000	0.0001
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0001	0.0000	0.0000	0.0001
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0002	0.0001	0.0001	0.0002
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0417	0.0390	0.0747	0.1137
Light Commercial Truck	Gasoline	Rural Restricted	0.0109	0.0022	0.0009	0.0032
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0237	0.0072	0.0031	0.0104
Light Commercial Truck	Gasoline	Urban Restricted	0.0276	0.0059	0.0025	0.0084

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0537	0.0226	0.0101	0.0327
Light Commercial Truck	Diesel	Off-Network	0.0356	0.0021	0.0000	0.0021
Light Commercial Truck	Diesel	Rural Restricted	0.0063	0.0010	0.0000	0.0010
Light Commercial Truck	Diesel	Rural Unrestricted	0.0172	0.0030	0.0000	0.0030
Light Commercial Truck	Diesel	Urban Restricted	0.0162	0.0027	0.0000	0.0027
Light Commercial Truck	Diesel	Urban Unrestricted	0.0500	0.0083	0.0000	0.0083
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0002	0.0003
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0023	0.0028	0.0013	0.0041
Other Buses	Gasoline	Rural Restricted	0.0007	0.0004	0.0000	0.0004
Other Buses	Gasoline	Rural Unrestricted	0.0017	0.0010	0.0001	0.0011
Other Buses	Gasoline	Urban Restricted	0.0017	0.0010	0.0001	0.0011
Other Buses	Gasoline	Urban Unrestricted	0.0036	0.0028	0.0003	0.0031
Other Buses	Diesel	Off-Network	0.0035	0.0004	0.0000	0.0004
Other Buses	Diesel	Rural Restricted	0.0022	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Unrestricted	0.0060	0.0003	0.0000	0.0003
Other Buses	Diesel	Urban Restricted	0.0056	0.0002	0.0000	0.0002
Other Buses	Diesel	Urban Unrestricted	0.0148	0.0009	0.0000	0.0009
Other Buses	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0003	0.0004	0.0001	0.0005
Transit Bus	Gasoline	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Urban Restricted	0.0001	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Urban Unrestricted	0.0003	0.0002	0.0000	0.0003
Transit Bus	Diesel	Off-Network	0.0040	0.0004	0.0000	0.0004
Transit Bus	Diesel	Rural Restricted	0.0021	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Unrestricted	0.0059	0.0004	0.0000	0.0004
Transit Bus	Diesel	Urban Restricted	0.0053	0.0003	0.0000	0.0003
Transit Bus	Diesel	Urban Unrestricted	0.0156	0.0010	0.0000	0.0010
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0004	0.0005	0.0002	0.0007
School Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
School Bus	Gasoline	Urban Restricted	0.0001	0.0001	0.0000	0.0001
School Bus	Gasoline	Urban Unrestricted	0.0002	0.0002	0.0000	0.0003
School Bus	Diesel	Off-Network	0.0018	0.0001	0.0000	0.0001
School Bus	Diesel	Rural Restricted	0.0005	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Unrestricted	0.0018	0.0001	0.0000	0.0001
School Bus	Diesel	Urban Restricted	0.0013	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Unrestricted	0.0054	0.0002	0.0000	0.0002
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0000	0.0001	0.0000	0.0001
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0000	0.0001	0.0001	0.0001
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Off-Network	0.0034	0.0004	0.0000	0.0004
Refuse Truck	Diesel	Rural Restricted	0.0017	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Rural Unrestricted	0.0033	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Urban Restricted	0.0042	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Urban Unrestricted	0.0085	0.0006	0.0000	0.0006
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0439	0.0393	0.0378	0.0771
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0023	0.0013	0.0002	0.0015
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0044	0.0034	0.0006	0.0040
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0059	0.0034	0.0006	0.0039
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0101	0.0113	0.0020	0.0133
Single Unit Short-haul Truck	Diesel	Off-Network	0.1137	0.0073	0.0000	0.0073
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0305	0.0020	0.0000	0.0020
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0739	0.0057	0.0000	0.0057
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0784	0.0053	0.0000	0.0053
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.2115	0.0160	0.0000	0.0160
Single Unit Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
				Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0002	0.0002	0.0024	0.0026
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0004	0.0002	0.0001	0.0003
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0005	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0009	0.0007	0.0002	0.0009
Single Unit Long-haul Truck	Diesel	Off-Network	0.0048	0.0005	0.0000	0.0005
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0021	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0051	0.0004	0.0000	0.0004
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0055	0.0004	0.0000	0.0004
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0147	0.0012	0.0000	0.0012
Single Unit Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0015	0.0023	0.0103	0.0127
Motor Home	Gasoline	Rural Restricted	0.0014	0.0004	0.0001	0.0004
Motor Home	Gasoline	Rural Unrestricted	0.0028	0.0011	0.0002	0.0013
Motor Home	Gasoline	Urban Restricted	0.0036	0.0010	0.0002	0.0012
Motor Home	Gasoline	Urban Unrestricted	0.0064	0.0035	0.0007	0.0042
Motor Home	Diesel	Off-Network	0.0003	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0018	0.0002	0.0000	0.0002
Motor Home	Diesel	Rural Unrestricted	0.0040	0.0005	0.0000	0.0005
Motor Home	Diesel	Urban Restricted	0.0046	0.0005	0.0000	0.0005
Motor Home	Diesel	Urban Unrestricted	0.0109	0.0014	0.0000	0.0014
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0001	0.0001
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Off-Network	0.0362	0.0018	0.0000	0.0018

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
				Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.0449	0.0016	0.0000	0.0016
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0273	0.0011	0.0000	0.0011
Combination Short-haul Truck	Diesel	Urban Restricted	0.1136	0.0041	0.0000	0.0041
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0784	0.0029	0.0000	0.0029
Combination Short-haul Truck	CNG	Off-Network	0.0008	0.0005	0.0000	0.0005
Combination Short-haul Truck	CNG	Rural Restricted	0.0002	0.0003	0.0000	0.0003
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0002	0.0002	0.0000	0.0002
Combination Short-haul Truck	CNG	Urban Restricted	0.0006	0.0007	0.0000	0.0007
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0006	0.0007	0.0000	0.0007
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.1104	0.0080	0.0000	0.0080
Combination Long-haul Truck	Diesel	Rural Restricted	0.1921	0.0064	0.0000	0.0064
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.1165	0.0042	0.0000	0.0042
Combination Long-haul Truck	Diesel	Urban Restricted	0.4853	0.0164	0.0000	0.0164
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.3348	0.0116	0.0000	0.0116
Combination Long-haul Truck	CNG	Off-Network	0.0002	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Urban Restricted	0.0002	0.0003	0.0000	0.0003
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0002	0.0003	0.0000	0.0003
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	3.8185	1.0475	1.7716	2.8191
Motorcycle	ALL	ALL	0.0419	0.0655	0.1623	0.2278
Passenger Car	ALL	ALL	0.7263	0.4154	1.0156	1.4310
Passenger Truck	ALL	ALL	0.4693	0.2846	0.4443	0.7289
Light Commercial Truck	ALL	ALL	0.2830	0.0941	0.0916	0.1857
Other Buses	ALL	ALL	0.0420	0.0101	0.0018	0.0119
Transit Bus	ALL	ALL	0.0338	0.0032	0.0002	0.0034
School Bus	ALL	ALL	0.0115	0.0015	0.0002	0.0018
Refuse Truck	ALL	ALL	0.0213	0.0017	0.0001	0.0017
Single Unit Short-haul Truck	ALL	ALL	0.5747	0.0949	0.0412	0.1361
Single Unit Long-haul Truck	ALL	ALL	0.0346	0.0043	0.0027	0.0069
Motor Home	ALL	ALL	0.0372	0.0107	0.0115	0.0222
Combination Short-haul Truck	ALL	ALL	0.3029	0.0140	0.0001	0.0142
Combination Long-haul Truck	ALL	ALL	1.2399	0.0475	0.0000	0.0475
ALL (Total)	ALL (Total)	ALL (Total)	3.8185	1.0475	1.7716	2.8191
ALL	Gasoline	ALL	1.4520	0.9133	1.7696	2.6829
ALL	Diesel	ALL	2.3616	0.1295	0.0000	0.1295
ALL	CNG	ALL	0.0037	0.0038	0.0000	0.0038
ALL	Ethanol (E-85)	ALL	0.0011	0.0009	0.0020	0.0029
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2023			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	3.8185	1.0475	1.7716	2.8191
ALL	ALL	Off-Network	0.7373	0.5160	1.4682	1.9842
ALL	ALL	Rural Restricted	0.3874	0.0399	0.0157	0.0557
ALL	ALL	Rural Unrestricted	0.4805	0.1020	0.0580	0.1600
ALL	ALL	Urban Restricted	0.9782	0.1033	0.0424	0.1457
ALL	ALL	Urban Unrestricted	1.2351	0.2863	0.1872	0.4735
ALL (Total)	ALL (Total)	ALL (Total)	3.8185	1.0475	1.7716	2.8191
Safety Margin			7½%			7½%
Emissions Budget			4.1049			3.0305

Table A7.11. 2024 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Milwaukee County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0003	0.0017	0.1999	0.2016
Motorcycle	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motorcycle	Gasoline	Rural Unrestricted	0.0007	0.0009	0.0005	0.0014
Motorcycle	Gasoline	Urban Restricted	0.0138	0.0160	0.0069	0.0230
Motorcycle	Gasoline	Urban Unrestricted	0.0421	0.0925	0.0609	0.1534
Passenger Car	Gasoline	Off-Network	0.2721	0.3868	1.4844	1.8712
Passenger Car	Gasoline	Rural Restricted	0.0006	0.0002	0.0002	0.0003
Passenger Car	Gasoline	Rural Unrestricted	0.0053	0.0018	0.0019	0.0037
Passenger Car	Gasoline	Urban Restricted	0.2857	0.0823	0.0850	0.1672
Passenger Car	Gasoline	Urban Unrestricted	0.4586	0.1955	0.2538	0.4493
Passenger Car	Diesel	Off-Network	0.0019	0.0022	0.0000	0.0022
Passenger Car	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Diesel	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Restricted	0.0024	0.0006	0.0000	0.0006
Passenger Car	Diesel	Urban Unrestricted	0.0036	0.0015	0.0000	0.0015
Passenger Car	Ethanol (E-85)	Off-Network	0.0002	0.0002	0.0008	0.0011
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0001	0.0000	0.0001	0.0001
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0001	0.0002	0.0002
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.2557	0.2964	0.6301	0.9265
Passenger Truck	Gasoline	Rural Restricted	0.0003	0.0001	0.0001	0.0002
Passenger Truck	Gasoline	Rural Unrestricted	0.0030	0.0011	0.0009	0.0020
Passenger Truck	Gasoline	Urban Restricted	0.1689	0.0509	0.0413	0.0922
Passenger Truck	Gasoline	Urban Unrestricted	0.2449	0.1195	0.1233	0.2428
Passenger Truck	Diesel	Off-Network	0.0165	0.0009	0.0000	0.0009
Passenger Truck	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Diesel	Rural Unrestricted	0.0002	0.0000	0.0000	0.0000
Passenger Truck	Diesel	Urban Restricted	0.0107	0.0018	0.0000	0.0018
Passenger Truck	Diesel	Urban Unrestricted	0.0291	0.0041	0.0000	0.0041
Passenger Truck	Ethanol (E-85)	Off-Network	0.0006	0.0007	0.0017	0.0024
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0003	0.0001	0.0001	0.0002
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0004	0.0002	0.0004	0.0006
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0696	0.0659	0.1275	0.1934
Light Commercial Truck	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0001
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0012	0.0004	0.0002	0.0006
Light Commercial Truck	Gasoline	Urban Restricted	0.0668	0.0160	0.0083	0.0243

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.1046	0.0502	0.0249	0.0751
Light Commercial Truck	Diesel	Off-Network	0.0621	0.0034	0.0000	0.0034
Light Commercial Truck	Diesel	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Light Commercial Truck	Diesel	Rural Unrestricted	0.0010	0.0002	0.0000	0.0002
Light Commercial Truck	Diesel	Urban Restricted	0.0442	0.0078	0.0000	0.0078
Light Commercial Truck	Diesel	Urban Unrestricted	0.1141	0.0179	0.0000	0.0179
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0003	0.0005
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0001	0.0001
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0036	0.0043	0.0018	0.0061
Other Buses	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Other Buses	Gasoline	Urban Restricted	0.0036	0.0019	0.0002	0.0021
Other Buses	Gasoline	Urban Unrestricted	0.0059	0.0058	0.0007	0.0065
Other Buses	Diesel	Off-Network	0.0063	0.0008	0.0000	0.0008
Other Buses	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Diesel	Rural Unrestricted	0.0004	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Restricted	0.0156	0.0008	0.0000	0.0008
Other Buses	Diesel	Urban Unrestricted	0.0356	0.0021	0.0000	0.0021
Other Buses	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0007	0.0009	0.0010	0.0019
Transit Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Restricted	0.0012	0.0005	0.0001	0.0005
Transit Bus	Gasoline	Urban Unrestricted	0.0024	0.0014	0.0003	0.0017
Transit Bus	Diesel	Off-Network	0.0048	0.0004	0.0000	0.0004
Transit Bus	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Diesel	Rural Unrestricted	0.0003	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Restricted	0.0092	0.0006	0.0000	0.0006
Transit Bus	Diesel	Urban Unrestricted	0.0260	0.0016	0.0000	0.0016
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
				Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0006	0.0009	0.0003	0.0012
School Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Restricted	0.0002	0.0002	0.0000	0.0002
School Bus	Gasoline	Urban Unrestricted	0.0004	0.0006	0.0001	0.0006
School Bus	Diesel	Off-Network	0.0027	0.0001	0.0000	0.0001
School Bus	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Restricted	0.0034	0.0001	0.0000	0.0001
School Bus	Diesel	Urban Unrestricted	0.0129	0.0005	0.0000	0.0005
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0001	0.0002	0.0000	0.0002
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0001	0.0001	0.0001	0.0002
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0001	0.0001	0.0000	0.0001
Refuse Truck	Gasoline	Urban Unrestricted	0.0002	0.0001	0.0000	0.0002
Refuse Truck	Diesel	Off-Network	0.0060	0.0006	0.0000	0.0006
Refuse Truck	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Unrestricted	0.0002	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Restricted	0.0099	0.0006	0.0000	0.0006
Refuse Truck	Diesel	Urban Unrestricted	0.0184	0.0012	0.0000	0.0012
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0751	0.0678	0.0650	0.1327
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0002	0.0002	0.0000	0.0002
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0142	0.0083	0.0018	0.0101
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0203	0.0275	0.0047	0.0322
Single Unit Short-haul Truck	Diesel	Off-Network	0.1947	0.0120	0.0000	0.0120
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0004	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0042	0.0003	0.0000	0.0003
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.1956	0.0147	0.0000	0.0147
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.4775	0.0336	0.0000	0.0336
Single Unit Short-haul Truck	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0003	0.0004	0.0031	0.0035
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0011	0.0005	0.0001	0.0006
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0015	0.0016	0.0003	0.0019
Single Unit Long-haul Truck	Diesel	Off-Network	0.0088	0.0009	0.0000	0.0009
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0003	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0145	0.0012	0.0000	0.0012
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0353	0.0027	0.0000	0.0027
Single Unit Long-haul Truck	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0024	0.0038	0.0162	0.0200
Motor Home	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
Motor Home	Gasoline	Urban Restricted	0.0094	0.0027	0.0006	0.0033
Motor Home	Gasoline	Urban Unrestricted	0.0130	0.0085	0.0016	0.0101
Motor Home	Diesel	Off-Network	0.0005	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Unrestricted	0.0002	0.0000	0.0000	0.0000
Motor Home	Diesel	Urban Restricted	0.0122	0.0015	0.0000	0.0015
Motor Home	Diesel	Urban Unrestricted	0.0260	0.0033	0.0000	0.0033
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0002	0.0002
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0002	0.0001	0.0000	0.0001
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Off-Network	0.0724	0.0034	0.0000	0.0034

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.0006	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0016	0.0001	0.0000	0.0001
Combination Short-haul Truck	Diesel	Urban Restricted	0.2685	0.0106	0.0000	0.0106
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.1816	0.0063	0.0000	0.0063
Combination Short-haul Truck	CNG	Off-Network	0.0018	0.0011	0.0000	0.0011
Combination Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Urban Restricted	0.0022	0.0025	0.0000	0.0025
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0017	0.0020	0.0000	0.0020
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.2115	0.0141	0.0000	0.0141
Combination Long-haul Truck	Diesel	Rural Restricted	0.0023	0.0001	0.0000	0.0001
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0068	0.0002	0.0000	0.0002
Combination Long-haul Truck	Diesel	Urban Restricted	1.1275	0.0400	0.0000	0.0400
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.7750	0.0240	0.0000	0.0240
Combination Long-haul Truck	CNG	Off-Network	0.0004	0.0002	0.0000	0.0002
Combination Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Restricted	0.0008	0.0009	0.0000	0.0009
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0006	0.0008	0.0000	0.0008
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	6.2176	1.7455	3.1521	4.8976
Motorcycle	ALL	ALL	0.0569	0.1112	0.2682	0.3795
Passenger Car	ALL	ALL	1.0305	0.6712	1.8264	2.4976
Passenger Truck	ALL	ALL	0.7305	0.4757	0.7979	1.2736
Light Commercial Truck	ALL	ALL	0.4639	0.1619	0.1615	0.3234
Other Buses	ALL	ALL	0.0713	0.0160	0.0026	0.0186
Transit Bus	ALL	ALL	0.0447	0.0055	0.0014	0.0069
School Bus	ALL	ALL	0.0204	0.0026	0.0004	0.0030
Refuse Truck	ALL	ALL	0.0350	0.0028	0.0001	0.0029
Single Unit Short-haul Truck	ALL	ALL	0.9827	0.1646	0.0715	0.2361
Single Unit Long-haul Truck	ALL	ALL	0.0620	0.0076	0.0036	0.0112
Motor Home	ALL	ALL	0.0641	0.0199	0.0184	0.0382
Combination Short-haul Truck	ALL	ALL	0.5308	0.0261	0.0002	0.0263
Combination Long-haul Truck	ALL	ALL	2.1249	0.0803	0.0000	0.0803
ALL (Total)	ALL (Total)	ALL (Total)	6.2176	1.7455	3.1521	4.8976
ALL	Gasoline	ALL	2.1514	1.5165	3.1484	4.6649
ALL	Diesel	ALL	4.0558	0.2189	0.0000	0.2189
ALL	CNG	ALL	0.0086	0.0086	0.0000	0.0086
ALL	Ethanol (E-85)	ALL	0.0018	0.0015	0.0037	0.0052
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	6.2176	1.7455	3.1521	4.8976
ALL	ALL	Off-Network	1.2719	0.8704	2.5324	3.4028
ALL	ALL	Rural Restricted	0.0047	0.0005	0.0003	0.0009
ALL	ALL	Rural Unrestricted	0.0260	0.0055	0.0036	0.0091
ALL	ALL	Urban Restricted	2.2825	0.2634	0.1446	0.4080
ALL	ALL	Urban Unrestricted	2.6325	0.6056	0.4712	1.0768
ALL (Total)	ALL (Total)	ALL (Total)	6.2176	1.7455	3.1521	4.8976
Safety Margin			7½%			7½%
Emissions Budget			6.6840			5.2649

Table A7.12. 2024 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Ozaukee County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0000	0.0002	0.0287	0.0289
Motorcycle	Gasoline	Rural Restricted	0.0012	0.0013	0.0005	0.0017
Motorcycle	Gasoline	Rural Unrestricted	0.0041	0.0051	0.0024	0.0075
Motorcycle	Gasoline	Urban Restricted	0.0008	0.0009	0.0003	0.0012
Motorcycle	Gasoline	Urban Unrestricted	0.0037	0.0078	0.0051	0.0129
Passenger Car	Gasoline	Off-Network	0.0383	0.0546	0.2109	0.2655
Passenger Car	Gasoline	Rural Restricted	0.0276	0.0071	0.0059	0.0130
Passenger Car	Gasoline	Rural Unrestricted	0.0299	0.0096	0.0103	0.0198
Passenger Car	Gasoline	Urban Restricted	0.0178	0.0047	0.0041	0.0088
Passenger Car	Gasoline	Urban Unrestricted	0.0385	0.0161	0.0213	0.0374
Passenger Car	Diesel	Off-Network	0.0003	0.0003	0.0000	0.0003
Passenger Car	Diesel	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Passenger Car	Diesel	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
Passenger Car	Diesel	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Unrestricted	0.0003	0.0001	0.0000	0.0001
Passenger Car	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0001	0.0002
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.0364	0.0423	0.0904	0.1327
Passenger Truck	Gasoline	Rural Restricted	0.0167	0.0045	0.0029	0.0074
Passenger Truck	Gasoline	Rural Unrestricted	0.0173	0.0059	0.0050	0.0109
Passenger Truck	Gasoline	Urban Restricted	0.0108	0.0030	0.0020	0.0050
Passenger Truck	Gasoline	Urban Unrestricted	0.0209	0.0099	0.0104	0.0203
Passenger Truck	Diesel	Off-Network	0.0022	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Rural Restricted	0.0009	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Rural Unrestricted	0.0013	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Urban Restricted	0.0006	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Urban Unrestricted	0.0025	0.0003	0.0000	0.0003
Passenger Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0002	0.0003
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0091	0.0087	0.0169	0.0256
Light Commercial Truck	Gasoline	Rural Restricted	0.0058	0.0011	0.0005	0.0017
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0065	0.0019	0.0009	0.0028
Light Commercial Truck	Gasoline	Urban Restricted	0.0038	0.0008	0.0004	0.0011

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0083	0.0038	0.0020	0.0058
Light Commercial Truck	Diesel	Off-Network	0.0077	0.0004	0.0000	0.0004
Light Commercial Truck	Diesel	Rural Restricted	0.0034	0.0005	0.0000	0.0005
Light Commercial Truck	Diesel	Rural Unrestricted	0.0049	0.0008	0.0000	0.0008
Light Commercial Truck	Diesel	Urban Restricted	0.0023	0.0004	0.0000	0.0004
Light Commercial Truck	Diesel	Urban Unrestricted	0.0090	0.0014	0.0000	0.0014
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0000	0.0001
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0005	0.0006	0.0002	0.0008
Other Buses	Gasoline	Rural Restricted	0.0003	0.0002	0.0000	0.0003
Other Buses	Gasoline	Rural Unrestricted	0.0004	0.0003	0.0000	0.0003
Other Buses	Gasoline	Urban Restricted	0.0002	0.0002	0.0000	0.0002
Other Buses	Gasoline	Urban Unrestricted	0.0005	0.0005	0.0001	0.0005
Other Buses	Diesel	Off-Network	0.0008	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Restricted	0.0014	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Unrestricted	0.0021	0.0001	0.0000	0.0001
Other Buses	Diesel	Urban Restricted	0.0009	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Unrestricted	0.0028	0.0002	0.0000	0.0002
Other Buses	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0001	0.0001	0.0001	0.0003
Transit Bus	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0001
Transit Bus	Gasoline	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Unrestricted	0.0002	0.0001	0.0000	0.0001
Transit Bus	Diesel	Off-Network	0.0007	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Restricted	0.0008	0.0000	0.0000	0.0000
Transit Bus	Diesel	Rural Unrestricted	0.0012	0.0001	0.0000	0.0001
Transit Bus	Diesel	Urban Restricted	0.0005	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Unrestricted	0.0019	0.0001	0.0000	0.0001
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
				Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0001	0.0001	0.0000	0.0002
School Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0001
School Bus	Diesel	Off-Network	0.0004	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Restricted	0.0003	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Unrestricted	0.0006	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Unrestricted	0.0011	0.0000	0.0000	0.0000
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Off-Network	0.0008	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Rural Restricted	0.0010	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Unrestricted	0.0010	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Urban Restricted	0.0006	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Unrestricted	0.0015	0.0001	0.0000	0.0001
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0106	0.0096	0.0092	0.0187
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0013	0.0008	0.0001	0.0009
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0013	0.0010	0.0002	0.0012
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0009	0.0005	0.0001	0.0006
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0017	0.0022	0.0004	0.0025
Single Unit Short-haul Truck	Diesel	Off-Network	0.0262	0.0016	0.0000	0.0016
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0170	0.0011	0.0000	0.0011
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0218	0.0016	0.0000	0.0016
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0112	0.0007	0.0000	0.0007
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.0378	0.0027	0.0000	0.0027
Single Unit Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0000	0.0001	0.0004	0.0005
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Off-Network	0.0011	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0013	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0016	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0008	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0028	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0004	0.0006	0.0024	0.0029
Motor Home	Gasoline	Rural Restricted	0.0008	0.0002	0.0000	0.0003
Motor Home	Gasoline	Rural Unrestricted	0.0009	0.0003	0.0001	0.0004
Motor Home	Gasoline	Urban Restricted	0.0005	0.0002	0.0000	0.0002
Motor Home	Gasoline	Urban Unrestricted	0.0011	0.0007	0.0001	0.0008
Motor Home	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0012	0.0001	0.0000	0.0001
Motor Home	Diesel	Rural Unrestricted	0.0013	0.0002	0.0000	0.0002
Motor Home	Diesel	Urban Restricted	0.0008	0.0001	0.0000	0.0001
Motor Home	Diesel	Urban Unrestricted	0.0021	0.0003	0.0000	0.0003
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Off-Network	0.0081	0.0004	0.0000	0.0004

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.0227	0.0008	0.0000	0.0008
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0071	0.0003	0.0000	0.0003
Combination Short-haul Truck	Diesel	Urban Restricted	0.0146	0.0005	0.0000	0.0005
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0126	0.0004	0.0000	0.0004
Combination Short-haul Truck	CNG	Off-Network	0.0002	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Rural Restricted	0.0001	0.0002	0.0000	0.0002
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Urban Restricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.0306	0.0021	0.0000	0.0021
Combination Long-haul Truck	Diesel	Rural Restricted	0.1138	0.0036	0.0000	0.0036
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0359	0.0012	0.0000	0.0012
Combination Long-haul Truck	Diesel	Urban Restricted	0.0732	0.0024	0.0000	0.0024
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.0637	0.0020	0.0000	0.0020
Combination Long-haul Truck	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0001	0.0000	0.0001
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	0.8875	0.2380	0.4351	0.6731
Motorcycle	ALL	ALL	0.0098	0.0152	0.0370	0.0522
Passenger Car	ALL	ALL	0.1534	0.0928	0.2526	0.3454
Passenger Truck	ALL	ALL	0.1097	0.0666	0.1110	0.1777
Light Commercial Truck	ALL	ALL	0.0607	0.0199	0.0208	0.0407
Other Buses	ALL	ALL	0.0101	0.0022	0.0004	0.0026
Transit Bus	ALL	ALL	0.0058	0.0007	0.0002	0.0009
School Bus	ALL	ALL	0.0028	0.0004	0.0001	0.0004
Refuse Truck	ALL	ALL	0.0049	0.0004	0.0000	0.0004
Single Unit Short-haul Truck	ALL	ALL	0.1299	0.0217	0.0100	0.0317
Single Unit Long-haul Truck	ALL	ALL	0.0080	0.0009	0.0005	0.0014
Motor Home	ALL	ALL	0.0092	0.0026	0.0026	0.0052
Combination Short-haul Truck	ALL	ALL	0.0658	0.0030	0.0000	0.0030
Combination Long-haul Truck	ALL	ALL	0.3174	0.0115	0.0000	0.0115
ALL (Total)	ALL (Total)	ALL (Total)	0.8875	0.2380	0.4351	0.6731
ALL	Gasoline	ALL	0.3203	0.2079	0.4346	0.6426
ALL	Diesel	ALL	0.5660	0.0289	0.0000	0.0289
ALL	CNG	ALL	0.0010	0.0010	0.0000	0.0010
ALL	Ethanol (E-85)	ALL	0.0003	0.0002	0.0005	0.0007
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	0.8875	0.2380	0.4351	0.6731
ALL	ALL	Off-Network	0.1749	0.1225	0.3597	0.4822
ALL	ALL	Rural Restricted	0.2183	0.0222	0.0100	0.0322
ALL	ALL	Rural Unrestricted	0.1400	0.0291	0.0191	0.0482
ALL	ALL	Urban Restricted	0.1411	0.0147	0.0070	0.0217
ALL	ALL	Urban Unrestricted	0.2133	0.0494	0.0394	0.0888
ALL (Total)	ALL (Total)	ALL (Total)	0.8875	0.2380	0.4351	0.6731
Safety Margin			7½%			7½%
Emissions Budget			0.9541			0.7236

Table A7.13. 2024 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Racine County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0001	0.0004	0.0437	0.0441
Motorcycle	Gasoline	Rural Restricted	0.0020	0.0022	0.0008	0.0030
Motorcycle	Gasoline	Rural Unrestricted	0.0050	0.0063	0.0030	0.0093
Motorcycle	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0001
Motorcycle	Gasoline	Urban Unrestricted	0.0071	0.0151	0.0098	0.0249
Passenger Car	Gasoline	Off-Network	0.0539	0.0768	0.2955	0.3723
Passenger Car	Gasoline	Rural Restricted	0.0479	0.0124	0.0105	0.0228
Passenger Car	Gasoline	Rural Unrestricted	0.0369	0.0118	0.0128	0.0246
Passenger Car	Gasoline	Urban Restricted	0.0001	0.0001	0.0001	0.0002
Passenger Car	Gasoline	Urban Unrestricted	0.0753	0.0317	0.0414	0.0731
Passenger Car	Diesel	Off-Network	0.0004	0.0004	0.0000	0.0004
Passenger Car	Diesel	Rural Restricted	0.0004	0.0001	0.0000	0.0001
Passenger Car	Diesel	Rural Unrestricted	0.0003	0.0001	0.0000	0.0001
Passenger Car	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Unrestricted	0.0006	0.0002	0.0000	0.0002
Passenger Car	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0002	0.0002
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.0514	0.0596	0.1269	0.1865
Passenger Truck	Gasoline	Rural Restricted	0.0290	0.0079	0.0051	0.0131
Passenger Truck	Gasoline	Rural Unrestricted	0.0214	0.0073	0.0063	0.0135
Passenger Truck	Gasoline	Urban Restricted	0.0001	0.0000	0.0001	0.0001
Passenger Truck	Gasoline	Urban Unrestricted	0.0409	0.0196	0.0203	0.0399
Passenger Truck	Diesel	Off-Network	0.0032	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Rural Restricted	0.0015	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Rural Unrestricted	0.0016	0.0003	0.0000	0.0003
Passenger Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Diesel	Urban Unrestricted	0.0048	0.0007	0.0000	0.0007
Passenger Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0003	0.0005
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0001	0.0001
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0125	0.0119	0.0231	0.0350
Light Commercial Truck	Gasoline	Rural Restricted	0.0098	0.0019	0.0009	0.0029
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0078	0.0023	0.0011	0.0034
Light Commercial Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0157	0.0074	0.0037	0.0111
Light Commercial Truck	Diesel	Off-Network	0.0109	0.0006	0.0000	0.0006
Light Commercial Truck	Diesel	Rural Restricted	0.0059	0.0009	0.0000	0.0009
Light Commercial Truck	Diesel	Rural Unrestricted	0.0059	0.0010	0.0000	0.0010
Light Commercial Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Diesel	Urban Unrestricted	0.0170	0.0027	0.0000	0.0027
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0001	0.0001
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0007	0.0009	0.0004	0.0012
Other Buses	Gasoline	Rural Restricted	0.0006	0.0004	0.0000	0.0004
Other Buses	Gasoline	Rural Unrestricted	0.0006	0.0003	0.0000	0.0004
Other Buses	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Urban Unrestricted	0.0009	0.0009	0.0001	0.0010
Other Buses	Diesel	Off-Network	0.0012	0.0002	0.0000	0.0002
Other Buses	Diesel	Rural Restricted	0.0025	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Unrestricted	0.0026	0.0001	0.0000	0.0001
Other Buses	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Unrestricted	0.0056	0.0003	0.0000	0.0003
Other Buses	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0001	0.0002	0.0002	0.0004
Transit Bus	Gasoline	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Unrestricted	0.0004	0.0002	0.0000	0.0002
Transit Bus	Diesel	Off-Network	0.0009	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Restricted	0.0014	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Unrestricted	0.0015	0.0001	0.0000	0.0001
Transit Bus	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Unrestricted	0.0038	0.0002	0.0000	0.0002
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0001	0.0002	0.0001	0.0003
School Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
School Bus	Diesel	Off-Network	0.0006	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Restricted	0.0005	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Unrestricted	0.0007	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Unrestricted	0.0022	0.0001	0.0000	0.0001
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Off-Network	0.0011	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Rural Restricted	0.0016	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Rural Unrestricted	0.0012	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Unrestricted	0.0029	0.0002	0.0000	0.0002
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0148	0.0133	0.0128	0.0261
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0023	0.0014	0.0002	0.0016
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0017	0.0013	0.0003	0.0015
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0033	0.0043	0.0007	0.0050
Single Unit Short-haul Truck	Diesel	Off-Network	0.0379	0.0023	0.0000	0.0023
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0297	0.0019	0.0000	0.0019
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0273	0.0020	0.0000	0.0020
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.0753	0.0053	0.0000	0.0053
Single Unit Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0001	0.0001	0.0006	0.0007
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0002	0.0002	0.0001	0.0003
Single Unit Long-haul Truck	Diesel	Off-Network	0.0017	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0022	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0020	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0055	0.0004	0.0000	0.0004
Single Unit Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0005	0.0008	0.0034	0.0041
Motor Home	Gasoline	Rural Restricted	0.0015	0.0004	0.0001	0.0005
Motor Home	Gasoline	Rural Unrestricted	0.0012	0.0004	0.0001	0.0005
Motor Home	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Urban Unrestricted	0.0022	0.0014	0.0003	0.0017
Motor Home	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0021	0.0002	0.0000	0.0002
Motor Home	Diesel	Rural Unrestricted	0.0017	0.0002	0.0000	0.0002
Motor Home	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Diesel	Urban Unrestricted	0.0043	0.0005	0.0000	0.0005
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Off-Network	0.0098	0.0005	0.0000	0.0005

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.0373	0.0013	0.0000	0.0013
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0085	0.0003	0.0000	0.0003
Combination Short-haul Truck	Diesel	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0237	0.0008	0.0000	0.0008
Combination Short-haul Truck	CNG	Off-Network	0.0002	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Rural Restricted	0.0002	0.0003	0.0000	0.0003
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0002	0.0003	0.0000	0.0003
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.0355	0.0023	0.0000	0.0023
Combination Long-haul Truck	Diesel	Rural Restricted	0.2036	0.0065	0.0000	0.0065
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0463	0.0016	0.0000	0.0016
Combination Long-haul Truck	Diesel	Urban Restricted	0.0004	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.1308	0.0041	0.0000	0.0041
Combination Long-haul Truck	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	1.2198	0.3436	0.6253	0.9689
Motorcycle	ALL	ALL	0.0143	0.0240	0.0574	0.0814
Passenger Car	ALL	ALL	0.2158	0.1338	0.3604	0.4941
Passenger Truck	ALL	ALL	0.1541	0.0959	0.1591	0.2551
Light Commercial Truck	ALL	ALL	0.0856	0.0287	0.0290	0.0577
Other Buses	ALL	ALL	0.0148	0.0033	0.0005	0.0038
Transit Bus	ALL	ALL	0.0085	0.0010	0.0003	0.0013
School Bus	ALL	ALL	0.0043	0.0006	0.0001	0.0006
Refuse Truck	ALL	ALL	0.0070	0.0005	0.0000	0.0006
Single Unit Short-haul Truck	ALL	ALL	0.1926	0.0319	0.0140	0.0459
Single Unit Long-haul Truck	ALL	ALL	0.0120	0.0014	0.0007	0.0021
Motor Home	ALL	ALL	0.0136	0.0040	0.0038	0.0078
Combination Short-haul Truck	ALL	ALL	0.0802	0.0037	0.0000	0.0037
Combination Long-haul Truck	ALL	ALL	0.4170	0.0148	0.0000	0.0148
ALL (Total)	ALL (Total)	ALL (Total)	1.2198	0.3436	0.6253	0.9689
ALL	Gasoline	ALL	0.4490	0.3020	0.6246	0.9266
ALL	Diesel	ALL	0.7692	0.0401	0.0000	0.0401
ALL	CNG	ALL	0.0013	0.0013	0.0000	0.0013
ALL	Ethanol (E-85)	ALL	0.0004	0.0003	0.0007	0.0010
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	1.2198	0.3436	0.6253	0.9689
ALL	ALL	Off-Network	0.2382	0.1715	0.5072	0.6787
ALL	ALL	Rural Restricted	0.3827	0.0388	0.0177	0.0565
ALL	ALL	Rural Unrestricted	0.1746	0.0361	0.0236	0.0597
ALL	ALL	Urban Restricted	0.0011	0.0002	0.0002	0.0004
ALL	ALL	Urban Unrestricted	0.4232	0.0970	0.0766	0.1736
ALL (Total)	ALL (Total)	ALL (Total)	1.2198	0.3436	0.6253	0.9689
Safety Margin			7½%			7½%
Emissions Budget			1.3113			1.0416

Table A7.14. 2024 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Washington County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0000	0.0002	0.0289	0.0292
Motorcycle	Gasoline	Rural Restricted	0.0012	0.0013	0.0005	0.0017
Motorcycle	Gasoline	Rural Unrestricted	0.0049	0.0060	0.0029	0.0089
Motorcycle	Gasoline	Urban Restricted	0.0010	0.0011	0.0004	0.0014
Motorcycle	Gasoline	Urban Unrestricted	0.0030	0.0066	0.0044	0.0109
Passenger Car	Gasoline	Off-Network	0.0393	0.0562	0.2172	0.2734
Passenger Car	Gasoline	Rural Restricted	0.0279	0.0072	0.0060	0.0132
Passenger Car	Gasoline	Rural Unrestricted	0.0353	0.0112	0.0120	0.0232
Passenger Car	Gasoline	Urban Restricted	0.0224	0.0058	0.0049	0.0108
Passenger Car	Gasoline	Urban Unrestricted	0.0321	0.0136	0.0182	0.0318
Passenger Car	Diesel	Off-Network	0.0003	0.0003	0.0000	0.0003
Passenger Car	Diesel	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Passenger Car	Diesel	Rural Unrestricted	0.0003	0.0001	0.0000	0.0001
Passenger Car	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Unrestricted	0.0003	0.0001	0.0000	0.0001
Passenger Car	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0001	0.0002
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.0376	0.0437	0.0935	0.1372
Passenger Truck	Gasoline	Rural Restricted	0.0169	0.0046	0.0030	0.0076
Passenger Truck	Gasoline	Rural Unrestricted	0.0206	0.0069	0.0059	0.0128
Passenger Truck	Gasoline	Urban Restricted	0.0136	0.0037	0.0024	0.0062
Passenger Truck	Gasoline	Urban Unrestricted	0.0174	0.0084	0.0090	0.0173
Passenger Truck	Diesel	Off-Network	0.0023	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Rural Restricted	0.0009	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Rural Unrestricted	0.0015	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Urban Restricted	0.0007	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Urban Unrestricted	0.0021	0.0003	0.0000	0.0003
Passenger Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0003	0.0004
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0090	0.0086	0.0168	0.0254
Light Commercial Truck	Gasoline	Rural Restricted	0.0056	0.0011	0.0005	0.0016
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0074	0.0021	0.0011	0.0032
Light Commercial Truck	Gasoline	Urban Restricted	0.0045	0.0009	0.0004	0.0013

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0066	0.0031	0.0016	0.0047
Light Commercial Truck	Diesel	Off-Network	0.0076	0.0004	0.0000	0.0004
Light Commercial Truck	Diesel	Rural Restricted	0.0034	0.0005	0.0000	0.0005
Light Commercial Truck	Diesel	Rural Unrestricted	0.0055	0.0009	0.0000	0.0009
Light Commercial Truck	Diesel	Urban Restricted	0.0027	0.0004	0.0000	0.0004
Light Commercial Truck	Diesel	Urban Unrestricted	0.0074	0.0011	0.0000	0.0011
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0000	0.0001
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0005	0.0006	0.0002	0.0008
Other Buses	Gasoline	Rural Restricted	0.0003	0.0002	0.0000	0.0003
Other Buses	Gasoline	Rural Unrestricted	0.0005	0.0003	0.0000	0.0003
Other Buses	Gasoline	Urban Restricted	0.0003	0.0002	0.0000	0.0002
Other Buses	Gasoline	Urban Unrestricted	0.0004	0.0004	0.0000	0.0004
Other Buses	Diesel	Off-Network	0.0008	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Restricted	0.0014	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Unrestricted	0.0023	0.0001	0.0000	0.0001
Other Buses	Diesel	Urban Restricted	0.0012	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Unrestricted	0.0023	0.0001	0.0000	0.0001
Other Buses	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0001	0.0001	0.0001	0.0003
Transit Bus	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0001
Transit Bus	Gasoline	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Transit Bus	Diesel	Off-Network	0.0007	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Restricted	0.0008	0.0000	0.0000	0.0000
Transit Bus	Diesel	Rural Unrestricted	0.0014	0.0001	0.0000	0.0001
Transit Bus	Diesel	Urban Restricted	0.0007	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Unrestricted	0.0016	0.0001	0.0000	0.0001
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0001	0.0001	0.0000	0.0002
School Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Diesel	Off-Network	0.0005	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Restricted	0.0003	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Unrestricted	0.0007	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Restricted	0.0003	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Unrestricted	0.0009	0.0000	0.0000	0.0000
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Off-Network	0.0007	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Rural Restricted	0.0009	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Unrestricted	0.0011	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Urban Restricted	0.0008	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Unrestricted	0.0012	0.0001	0.0000	0.0001
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0109	0.0097	0.0093	0.0191
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0013	0.0008	0.0001	0.0009
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0015	0.0011	0.0002	0.0014
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0011	0.0006	0.0001	0.0007
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0014	0.0018	0.0003	0.0021
Single Unit Short-haul Truck	Diesel	Off-Network	0.0263	0.0016	0.0000	0.0016
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0170	0.0011	0.0000	0.0011
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0246	0.0018	0.0000	0.0018
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0139	0.0009	0.0000	0.0009
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.0316	0.0023	0.0000	0.0023
Single Unit Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0000	0.0001	0.0004	0.0005
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Off-Network	0.0011	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0012	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0018	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0010	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0023	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0004	0.0006	0.0025	0.0031
Motor Home	Gasoline	Rural Restricted	0.0009	0.0002	0.0000	0.0003
Motor Home	Gasoline	Rural Unrestricted	0.0011	0.0004	0.0001	0.0005
Motor Home	Gasoline	Urban Restricted	0.0007	0.0002	0.0000	0.0002
Motor Home	Gasoline	Urban Unrestricted	0.0009	0.0006	0.0001	0.0007
Motor Home	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0012	0.0001	0.0000	0.0001
Motor Home	Diesel	Rural Unrestricted	0.0016	0.0002	0.0000	0.0002
Motor Home	Diesel	Urban Restricted	0.0010	0.0001	0.0000	0.0001
Motor Home	Diesel	Urban Unrestricted	0.0018	0.0002	0.0000	0.0002
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Off-Network	0.0075	0.0004	0.0000	0.0004

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.0206	0.0007	0.0000	0.0007
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0073	0.0003	0.0000	0.0003
Combination Short-haul Truck	Diesel	Urban Restricted	0.0166	0.0006	0.0000	0.0006
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0095	0.0003	0.0000	0.0003
Combination Short-haul Truck	CNG	Off-Network	0.0002	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Urban Restricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.0334	0.0023	0.0000	0.0023
Combination Long-haul Truck	Diesel	Rural Restricted	0.1162	0.0037	0.0000	0.0037
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0411	0.0014	0.0000	0.0014
Combination Long-haul Truck	Diesel	Urban Restricted	0.0936	0.0030	0.0000	0.0030
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.0541	0.0017	0.0000	0.0017
Combination Long-haul Truck	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	CNG	Urban Restricted	0.0000	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0001	0.0000	0.0001
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	0.9131	0.2417	0.4440	0.6856
Motorcycle	ALL	ALL	0.0102	0.0152	0.0370	0.0522
Passenger Car	ALL	ALL	0.1583	0.0947	0.2585	0.3532
Passenger Truck	ALL	ALL	0.1138	0.0684	0.1140	0.1824
Light Commercial Truck	ALL	ALL	0.0598	0.0193	0.0205	0.0398
Other Buses	ALL	ALL	0.0101	0.0022	0.0003	0.0025
Transit Bus	ALL	ALL	0.0057	0.0007	0.0002	0.0009
School Bus	ALL	ALL	0.0028	0.0004	0.0001	0.0004
Refuse Truck	ALL	ALL	0.0048	0.0004	0.0000	0.0004
Single Unit Short-haul Truck	ALL	ALL	0.1296	0.0217	0.0101	0.0319
Single Unit Long-haul Truck	ALL	ALL	0.0078	0.0009	0.0005	0.0014
Motor Home	ALL	ALL	0.0095	0.0026	0.0027	0.0053
Combination Short-haul Truck	ALL	ALL	0.0620	0.0028	0.0000	0.0028
Combination Long-haul Truck	ALL	ALL	0.3387	0.0124	0.0000	0.0124
ALL (Total)	ALL (Total)	ALL (Total)	0.9131	0.2417	0.4440	0.6856
ALL	Gasoline	ALL	0.3298	0.2112	0.4435	0.6546
ALL	Diesel	ALL	0.5820	0.0294	0.0000	0.0294
ALL	CNG	ALL	0.0009	0.0009	0.0000	0.0009
ALL	Ethanol (E-85)	ALL	0.0003	0.0002	0.0005	0.0007
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	0.9131	0.2417	0.4440	0.6856
ALL	ALL	Off-Network	0.1796	0.1258	0.3695	0.4953
ALL	ALL	Rural Restricted	0.2188	0.0224	0.0102	0.0326
ALL	ALL	Rural Unrestricted	0.1610	0.0338	0.0222	0.0560
ALL	ALL	Urban Restricted	0.1763	0.0182	0.0084	0.0266
ALL	ALL	Urban Unrestricted	0.1774	0.0415	0.0337	0.0752
ALL (Total)	ALL (Total)	ALL (Total)	0.9131	0.2417	0.4440	0.6856
Safety Margin			7½%			7½%
Emissions Budget			0.9815			0.7371

Table A7.15. 2024 Onroad NO_x and VOC Emissions, tons per ozone season weekday (tposwd), for the Waukesha County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0002	0.0011	0.1276	0.1287
Motorcycle	Gasoline	Rural Restricted	0.0020	0.0021	0.0008	0.0029
Motorcycle	Gasoline	Rural Unrestricted	0.0125	0.0161	0.0080	0.0241
Motorcycle	Gasoline	Urban Restricted	0.0050	0.0056	0.0022	0.0078
Motorcycle	Gasoline	Urban Unrestricted	0.0226	0.0418	0.0258	0.0676
Passenger Car	Gasoline	Off-Network	0.1612	0.2295	0.8852	1.1147
Passenger Car	Gasoline	Rural Restricted	0.0451	0.0117	0.0099	0.0216
Passenger Car	Gasoline	Rural Unrestricted	0.0932	0.0307	0.0334	0.0640
Passenger Car	Gasoline	Urban Restricted	0.1125	0.0300	0.0266	0.0566
Passenger Car	Gasoline	Urban Unrestricted	0.2114	0.0841	0.1076	0.1916
Passenger Car	Diesel	Off-Network	0.0011	0.0013	0.0000	0.0013
Passenger Car	Diesel	Rural Restricted	0.0004	0.0001	0.0000	0.0001
Passenger Car	Diesel	Rural Unrestricted	0.0008	0.0002	0.0000	0.0002
Passenger Car	Diesel	Urban Restricted	0.0009	0.0002	0.0000	0.0002
Passenger Car	Diesel	Urban Unrestricted	0.0017	0.0006	0.0000	0.0006
Passenger Car	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0005	0.0006
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0001	0.0001
Passenger Car	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Gasoline	Off-Network	0.1520	0.1764	0.3767	0.5531
Passenger Truck	Gasoline	Rural Restricted	0.0271	0.0074	0.0048	0.0122
Passenger Truck	Gasoline	Rural Unrestricted	0.0531	0.0187	0.0162	0.0349
Passenger Truck	Gasoline	Urban Restricted	0.0674	0.0189	0.0129	0.0319
Passenger Truck	Gasoline	Urban Unrestricted	0.1158	0.0514	0.0523	0.1038
Passenger Truck	Diesel	Off-Network	0.0095	0.0005	0.0000	0.0005
Passenger Truck	Diesel	Rural Restricted	0.0014	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Rural Unrestricted	0.0041	0.0006	0.0000	0.0006
Passenger Truck	Diesel	Urban Restricted	0.0037	0.0006	0.0000	0.0006
Passenger Truck	Diesel	Urban Unrestricted	0.0124	0.0018	0.0000	0.0018
Passenger Truck	Ethanol (E-85)	Off-Network	0.0003	0.0004	0.0010	0.0014
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0001	0.0000	0.0000	0.0001
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0001	0.0000	0.0000	0.0001
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0002	0.0001	0.0002	0.0002
Passenger Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0406	0.0385	0.0749	0.1135
Light Commercial Truck	Gasoline	Rural Restricted	0.0100	0.0020	0.0010	0.0029
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0213	0.0065	0.0032	0.0097
Light Commercial Truck	Gasoline	Urban Restricted	0.0250	0.0053	0.0026	0.0078

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0482	0.0205	0.0104	0.0309
Light Commercial Truck	Diesel	Off-Network	0.0354	0.0020	0.0000	0.0020
Light Commercial Truck	Diesel	Rural Restricted	0.0060	0.0009	0.0000	0.0009
Light Commercial Truck	Diesel	Rural Unrestricted	0.0166	0.0028	0.0000	0.0028
Light Commercial Truck	Diesel	Urban Restricted	0.0155	0.0025	0.0000	0.0025
Light Commercial Truck	Diesel	Urban Unrestricted	0.0483	0.0078	0.0000	0.0078
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0002	0.0003
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Off-Network	0.0021	0.0026	0.0011	0.0037
Other Buses	Gasoline	Rural Restricted	0.0006	0.0004	0.0000	0.0004
Other Buses	Gasoline	Rural Unrestricted	0.0014	0.0008	0.0001	0.0009
Other Buses	Gasoline	Urban Restricted	0.0014	0.0010	0.0001	0.0010
Other Buses	Gasoline	Urban Unrestricted	0.0028	0.0024	0.0003	0.0027
Other Buses	Diesel	Off-Network	0.0036	0.0004	0.0000	0.0004
Other Buses	Diesel	Rural Restricted	0.0024	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Unrestricted	0.0064	0.0004	0.0000	0.0004
Other Buses	Diesel	Urban Restricted	0.0060	0.0003	0.0000	0.0003
Other Buses	Diesel	Urban Unrestricted	0.0157	0.0009	0.0000	0.0009
Other Buses	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0004	0.0005	0.0006	0.0011
Transit Bus	Gasoline	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Rural Unrestricted	0.0005	0.0002	0.0000	0.0002
Transit Bus	Gasoline	Urban Restricted	0.0004	0.0002	0.0000	0.0002
Transit Bus	Gasoline	Urban Unrestricted	0.0011	0.0006	0.0001	0.0007
Transit Bus	Diesel	Off-Network	0.0029	0.0002	0.0000	0.0002
Transit Bus	Diesel	Rural Restricted	0.0014	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Unrestricted	0.0041	0.0003	0.0000	0.0003
Transit Bus	Diesel	Urban Restricted	0.0035	0.0002	0.0000	0.0002
Transit Bus	Diesel	Urban Unrestricted	0.0110	0.0007	0.0000	0.0007
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
				Exhaust	Evaporative	Total
Transit Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Off-Network	0.0004	0.0005	0.0002	0.0007
School Bus	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
School Bus	Gasoline	Urban Restricted	0.0001	0.0001	0.0000	0.0001
School Bus	Gasoline	Urban Unrestricted	0.0002	0.0002	0.0000	0.0003
School Bus	Diesel	Off-Network	0.0018	0.0001	0.0000	0.0001
School Bus	Diesel	Rural Restricted	0.0005	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Unrestricted	0.0017	0.0001	0.0000	0.0001
School Bus	Diesel	Urban Restricted	0.0012	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Unrestricted	0.0054	0.0002	0.0000	0.0002
School Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	CNG	Urban Unrestricted	0.0000	0.0001	0.0000	0.0001
School Bus	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
School Bus	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Off-Network	0.0000	0.0001	0.0001	0.0001
Refuse Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Off-Network	0.0033	0.0003	0.0000	0.0003
Refuse Truck	Diesel	Rural Restricted	0.0015	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Rural Unrestricted	0.0030	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Urban Restricted	0.0039	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Urban Unrestricted	0.0079	0.0005	0.0000	0.0005
Refuse Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0443	0.0398	0.0382	0.0780
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0022	0.0013	0.0002	0.0015
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0041	0.0033	0.0006	0.0040
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0054	0.0033	0.0006	0.0039
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0093	0.0110	0.0020	0.0130
Single Unit Short-haul Truck	Diesel	Off-Network	0.1105	0.0067	0.0000	0.0067
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0278	0.0018	0.0000	0.0018
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0686	0.0051	0.0000	0.0051
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0716	0.0047	0.0000	0.0047
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.1982	0.0143	0.0000	0.0143
Single Unit Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
				Exhaust	Evaporative	Total
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0002	0.0002	0.0018	0.0020
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0003	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0004	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0007	0.0006	0.0001	0.0008
Single Unit Long-haul Truck	Diesel	Off-Network	0.0048	0.0005	0.0000	0.0005
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0021	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0051	0.0004	0.0000	0.0004
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0054	0.0004	0.0000	0.0004
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0147	0.0012	0.0000	0.0012
Single Unit Long-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.0000	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Off-Network	0.0014	0.0023	0.0097	0.0119
Motor Home	Gasoline	Rural Restricted	0.0013	0.0004	0.0001	0.0004
Motor Home	Gasoline	Rural Unrestricted	0.0027	0.0011	0.0002	0.0013
Motor Home	Gasoline	Urban Restricted	0.0034	0.0010	0.0002	0.0012
Motor Home	Gasoline	Urban Unrestricted	0.0061	0.0034	0.0007	0.0041
Motor Home	Diesel	Off-Network	0.0003	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0018	0.0002	0.0000	0.0002
Motor Home	Diesel	Rural Unrestricted	0.0041	0.0005	0.0000	0.0005
Motor Home	Diesel	Urban Restricted	0.0047	0.0005	0.0000	0.0005
Motor Home	Diesel	Urban Unrestricted	0.0111	0.0014	0.0000	0.0014
Motor Home	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0001	0.0001
Combination Short-haul Truck	Gasoline	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Off-Network	0.0356	0.0017	0.0000	0.0017

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Combination Short-haul Truck	Diesel	Rural Restricted	0.0414	0.0014	0.0000	0.0014
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0256	0.0010	0.0000	0.0010
Combination Short-haul Truck	Diesel	Urban Restricted	0.1046	0.0037	0.0000	0.0037
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0746	0.0027	0.0000	0.0027
Combination Short-haul Truck	CNG	Off-Network	0.0009	0.0005	0.0000	0.0005
Combination Short-haul Truck	CNG	Rural Restricted	0.0002	0.0003	0.0000	0.0003
Combination Short-haul Truck	CNG	Rural Unrestricted	0.0002	0.0003	0.0000	0.0003
Combination Short-haul Truck	CNG	Urban Restricted	0.0007	0.0008	0.0000	0.0008
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0007	0.0008	0.0000	0.0008
Combination Short-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.1071	0.0071	0.0000	0.0071
Combination Long-haul Truck	Diesel	Rural Restricted	0.1772	0.0057	0.0000	0.0057
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.1101	0.0037	0.0000	0.0037
Combination Long-haul Truck	Diesel	Urban Restricted	0.4476	0.0145	0.0000	0.0145
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.3224	0.0103	0.0000	0.0103
Combination Long-haul Truck	CNG	Off-Network	0.0002	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Combination Long-haul Truck	CNG	Urban Restricted	0.0002	0.0003	0.0000	0.0003
Combination Long-haul Truck	CNG	Urban Unrestricted	0.0002	0.0003	0.0000	0.0003
Combination Long-haul Truck	Electricity	Off-Network	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Electricity	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
ALL (Total)	ALL (Total)	ALL (Total)	3.5472	0.9985	1.8415	2.8400
Motorcycle	ALL	ALL	0.0422	0.0667	0.1644	0.2311
Passenger Car	ALL	ALL	0.6284	0.3887	1.0632	1.4519
Passenger Truck	ALL	ALL	0.4474	0.2772	0.4643	0.7415
Light Commercial Truck	ALL	ALL	0.2669	0.0888	0.0924	0.1812
Other Buses	ALL	ALL	0.0425	0.0094	0.0015	0.0110
Transit Bus	ALL	ALL	0.0256	0.0032	0.0008	0.0040
School Bus	ALL	ALL	0.0114	0.0015	0.0002	0.0017
Refuse Truck	ALL	ALL	0.0199	0.0015	0.0001	0.0016
Single Unit Short-haul Truck	ALL	ALL	0.5421	0.0913	0.0416	0.1329
Single Unit Long-haul Truck	ALL	ALL	0.0339	0.0041	0.0020	0.0061
Motor Home	ALL	ALL	0.0370	0.0107	0.0108	0.0215
Combination Short-haul Truck	ALL	ALL	0.2846	0.0132	0.0001	0.0133
Combination Long-haul Truck	ALL	ALL	1.1653	0.0422	0.0000	0.0422
ALL (Total)	ALL (Total)	ALL (Total)	3.5472	0.9985	1.8415	2.8400
ALL	Gasoline	ALL	1.3198	0.8766	1.8394	2.7159
ALL	Diesel	ALL	2.2222	0.1169	0.0000	0.1169
ALL	CNG	ALL	0.0041	0.0041	0.0000	0.0041
ALL	Ethanol (E-85)	ALL	0.0011	0.0009	0.0021	0.0030
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of NAA – Year 2024			
			NO _x Emissions (tposwd)	VOC Emissions (tposwd)		
				Exhaust	Evaporative	Total
ALL (Total)	ALL (Total)	ALL (Total)	3.5472	0.9985	1.8415	2.8400
ALL	ALL	Off-Network	0.7205	0.5139	1.5178	2.0317
ALL	ALL	Rural Restricted	0.3530	0.0367	0.0168	0.0535
ALL	ALL	Rural Unrestricted	0.4399	0.0934	0.0620	0.1554
ALL	ALL	Urban Restricted	0.8909	0.0944	0.0453	0.1397
ALL	ALL	Urban Unrestricted	1.1430	0.2602	0.1996	0.4598
ALL (Total)	ALL (Total)	ALL (Total)	3.5472	0.9985	1.8415	2.8400
Safety Margin			7½%			7½%
Emissions Budget			3.8133			3.0530

Table A7.16. Vehicle Activity Data Output from the MOVES4.0.1 Model for Years 2017, 2023 and 2024 for the Milwaukee County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Milwaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Motorcycle	Gasoline	Off-Network	16,810	16,474	16,547			
Motorcycle	Gasoline	Rural Restricted				537	44	44
Motorcycle	Gasoline	Rural Unrestricted				1,690	1,193	1,197
Motorcycle	Gasoline	Urban Restricted				20,559	22,167	22,151
Motorcycle	Gasoline	Urban Unrestricted				97,929	96,589	96,540
Passenger Car	Gasoline	Off-Network	263,529	259,523	260,063			
Passenger Car	Gasoline	Rural Restricted				95,794	7,458	7,436
Passenger Car	Gasoline	Rural Unrestricted				91,063	63,098	63,158
Passenger Car	Gasoline	Urban Restricted				3,464,860	3,577,280	3,565,820
Passenger Car	Gasoline	Urban Unrestricted				5,276,210	5,102,460	5,087,640
Passenger Car	Diesel	Off-Network	1,776	1,288	1,280			
Passenger Car	Diesel	Rural Restricted				643	36	35
Passenger Car	Diesel	Rural Unrestricted				611	303	297
Passenger Car	Diesel	Urban Restricted				23,241	17,169	16,792
Passenger Car	Diesel	Urban Unrestricted				35,391	24,489	23,959
Passenger Car	Ethanol (E-85)	Off-Network	167	171	169			
Passenger Car	Ethanol (E-85)	Rural Restricted				66	5	5
Passenger Car	Ethanol (E-85)	Rural Unrestricted				63	42	41
Passenger Car	Ethanol (E-85)	Urban Restricted				2,378	2,353	2,293
Passenger Car	Ethanol (E-85)	Urban Unrestricted				3,621	3,357	3,271
Passenger Car	Electricity	Off-Network	290	2,381	2,446			
Passenger Car	Electricity	Rural Restricted				130	86	88
Passenger Car	Electricity	Rural Unrestricted				123	731	745
Passenger Car	Electricity	Urban Restricted				4,687	41,438	42,060
Passenger Car	Electricity	Urban Unrestricted				7,137	59,105	60,010
Passenger Truck	Gasoline	Off-Network	226,067	225,722	226,260			
Passenger Truck	Gasoline	Rural Restricted				90,633	7,533	7,540
Passenger Truck	Gasoline	Rural Unrestricted				86,156	63,730	64,044
Passenger Truck	Gasoline	Urban Restricted				3,278,010	3,613,650	3,616,400
Passenger Truck	Gasoline	Urban Unrestricted				4,992,110	5,153,050	5,158,520
Passenger Truck	Diesel	Off-Network	1,420	797	763			
Passenger Truck	Diesel	Rural Restricted				509	24	23
Passenger Truck	Diesel	Rural Unrestricted				484	204	196
Passenger Truck	Diesel	Urban Restricted				18,424	11,576	11,081
Passenger Truck	Diesel	Urban Unrestricted				28,058	16,507	15,807
Passenger Truck	Ethanol (E-85)	Off-Network	564	491	470			

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Passenger Truck	Ethanol (E-85)	Rural Restricted				241	16	15
Passenger Truck	Ethanol (E-85)	Rural Unrestricted				229	134	127
Passenger Truck	Ethanol (E-85)	Urban Restricted				8,717	7,593	7,166
Passenger Truck	Ethanol (E-85)	Urban Unrestricted				13,275	10,827	10,221
Passenger Truck	Electricity	Off-Network	31	1,376	1,546			
Passenger Truck	Electricity	Rural Restricted				15	55	62
Passenger Truck	Electricity	Rural Unrestricted				15	469	525
Passenger Truck	Electricity	Urban Restricted				552	26,591	29,667
Passenger Truck	Electricity	Urban Unrestricted				841	37,918	42,318
Light Commercial Truck	Gasoline	Off-Network	26,082	26,625	26,664			
Light Commercial Truck	Gasoline	Rural Restricted				9,732	842	840
Light Commercial Truck	Gasoline	Rural Unrestricted				9,251	7,121	7,136
Light Commercial Truck	Gasoline	Urban Restricted				351,980	403,794	402,954
Light Commercial Truck	Gasoline	Urban Unrestricted				536,032	575,809	574,783
Light Commercial Truck	Diesel	Off-Network	3,022	2,477	2,515			
Light Commercial Truck	Diesel	Rural Restricted				1,046	74	76
Light Commercial Truck	Diesel	Rural Unrestricted				994	628	644
Light Commercial Truck	Diesel	Urban Restricted				37,824	35,586	36,358
Light Commercial Truck	Diesel	Urban Unrestricted				57,603	50,745	51,861
Light Commercial Truck	Ethanol (E-85)	Off-Network	88	80	78			
Light Commercial Truck	Ethanol (E-85)	Rural Restricted				37	2	2
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted				35	21	20
Light Commercial Truck	Ethanol (E-85)	Urban Restricted				1,339	1,182	1,140
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted				2,039	1,685	1,626
Light Commercial Truck	Electricity	Off-Network	1	50	58			
Light Commercial Truck	Electricity	Rural Restricted				0	2	2
Light Commercial Truck	Electricity	Rural Unrestricted				0	17	20
Light Commercial Truck	Electricity	Urban Restricted				6	973	1,125
Light Commercial Truck	Electricity	Urban Unrestricted				10	1,387	1,605
Other Buses	Gasoline	Off-Network	225	236	234			
Other Buses	Gasoline	Rural Restricted				185	16	16
Other Buses	Gasoline	Rural Unrestricted				241	181	186
Other Buses	Gasoline	Urban Restricted				6,759	7,589	7,781
Other Buses	Gasoline	Urban Unrestricted				13,116	13,762	14,113
Other Buses	Diesel	Off-Network	100	75	77			
Other Buses	Diesel	Rural Restricted				73	4	4
Other Buses	Diesel	Rural Unrestricted				95	51	49
Other Buses	Diesel	Urban Restricted				2,680	2,129	2,056
Other Buses	Diesel	Urban Unrestricted				5,201	3,861	3,729

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Other Buses	CNG	Off-Network	0	3	3			
Other Buses	CNG	Rural Restricted				0	0	0
Other Buses	CNG	Rural Unrestricted				0	3	3
Other Buses	CNG	Urban Restricted				0	120	108
Other Buses	CNG	Urban Unrestricted				0	218	196
Other Buses	Electricity	Off-Network	0	0	0			
Other Buses	Electricity	Rural Restricted				0	0	0
Other Buses	Electricity	Rural Unrestricted				0	0	0
Other Buses	Electricity	Urban Restricted				0	0	0
Other Buses	Electricity	Urban Unrestricted				0	0	0
Transit Bus	Gasoline	Off-Network	41	29	40			
Transit Bus	Gasoline	Rural Restricted				33	2	2
Transit Bus	Gasoline	Rural Unrestricted				43	23	28
Transit Bus	Gasoline	Urban Restricted				1,200	976	1,161
Transit Bus	Gasoline	Urban Unrestricted				2,328	1,770	2,106
Transit Bus	Diesel	Off-Network	69	73	62			
Transit Bus	Diesel	Rural Restricted				49	4	4
Transit Bus	Diesel	Rural Unrestricted				64	52	48
Transit Bus	Diesel	Urban Restricted				1,804	2,196	1,992
Transit Bus	Diesel	Urban Unrestricted				3,502	3,981	3,612
Transit Bus	CNG	Off-Network	0	3	3			
Transit Bus	CNG	Rural Restricted				0	0	0
Transit Bus	CNG	Rural Unrestricted				0	3	3
Transit Bus	CNG	Urban Restricted				0	112	105
Transit Bus	CNG	Urban Unrestricted				0	204	191
Transit Bus	Electricity	Off-Network	0	1	1			
Transit Bus	Electricity	Rural Restricted				0	0	0
Transit Bus	Electricity	Rural Unrestricted				0	2	1
Transit Bus	Electricity	Urban Restricted				0	66	62
Transit Bus	Electricity	Urban Unrestricted				0	120	113
School Bus	Gasoline	Off-Network	91	132	129			
School Bus	Gasoline	Rural Restricted				29	4	4
School Bus	Gasoline	Rural Unrestricted				38	43	41
School Bus	Gasoline	Urban Restricted				1,056	1,790	1,707
School Bus	Gasoline	Urban Unrestricted				2,050	3,246	3,097
School Bus	Diesel	Off-Network	333	275	277			
School Bus	Diesel	Rural Restricted				100	7	7
School Bus	Diesel	Rural Unrestricted				130	84	84
School Bus	Diesel	Urban Restricted				3,652	3,504	3,488

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
School Bus	Diesel	Urban Unrestricted				7,087	6,354	6,326
School Bus	CNG	Off-Network	4	6	6			
School Bus	CNG	Rural Restricted				2	0	0
School Bus	CNG	Rural Unrestricted				2	2	2
School Bus	CNG	Urban Restricted				58	72	67
School Bus	CNG	Urban Unrestricted				113	131	121
School Bus	Electricity	Off-Network	0	0	1			
School Bus	Electricity	Rural Restricted				0	0	0
School Bus	Electricity	Rural Unrestricted				0	0	0
School Bus	Electricity	Urban Restricted				0	0	15
School Bus	Electricity	Urban Unrestricted				0	0	27
Refuse Truck	Gasoline	Off-Network	8	10	10			
Refuse Truck	Gasoline	Rural Restricted				6	0	0
Refuse Truck	Gasoline	Rural Unrestricted				6	3	3
Refuse Truck	Gasoline	Urban Restricted				218	187	180
Refuse Truck	Gasoline	Urban Unrestricted				302	242	233
Refuse Truck	Diesel	Off-Network	140	139	138			
Refuse Truck	Diesel	Rural Restricted				95	4	4
Refuse Truck	Diesel	Rural Unrestricted				87	34	34
Refuse Truck	Diesel	Urban Restricted				3,432	2,011	1,978
Refuse Truck	Diesel	Urban Unrestricted				4,751	2,597	2,554
Refuse Truck	CNG	Off-Network	0	0	0			
Refuse Truck	CNG	Rural Restricted				0	0	0
Refuse Truck	CNG	Rural Unrestricted				0	0	0
Refuse Truck	CNG	Urban Restricted				0	0	12
Refuse Truck	CNG	Urban Unrestricted				0	0	16
Refuse Truck	Electricity	Off-Network	0	0	0			
Refuse Truck	Electricity	Rural Restricted				0	0	0
Refuse Truck	Electricity	Rural Unrestricted				0	0	0
Refuse Truck	Electricity	Urban Restricted				0	0	0
Refuse Truck	Electricity	Urban Unrestricted				0	0	0
Single Unit Short-haul Truck	Gasoline	Off-Network	6,312	7,216	7,290			
Single Unit Short-haul Truck	Gasoline	Rural Restricted				3,116	299	301
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted				2,850	2,436	2,461
Single Unit Short-haul Truck	Gasoline	Urban Restricted				112,597	143,711	144,600
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted				155,882	185,556	186,752
Single Unit Short-haul Truck	Diesel	Off-Network	14,250	13,410	13,257			
Single Unit Short-haul Truck	Diesel	Rural Restricted				6,195	474	470
Single Unit Short-haul Truck	Diesel	Rural Unrestricted				5,667	3,864	3,847

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Single Unit Short-haul Truck	Diesel	Urban Restricted				223,867	227,914	225,998
Single Unit Short-haul Truck	Diesel	Urban Unrestricted				309,928	294,277	291,877
Single Unit Short-haul Truck	CNG	Off-Network	2	5	5			
Single Unit Short-haul Truck	CNG	Rural Restricted				0	0	0
Single Unit Short-haul Truck	CNG	Rural Unrestricted				0	2	2
Single Unit Short-haul Truck	CNG	Urban Restricted				14	123	116
Single Unit Short-haul Truck	CNG	Urban Unrestricted				20	159	150
Single Unit Short-haul Truck	Electricity	Off-Network	0	1	1			
Single Unit Short-haul Truck	Electricity	Rural Restricted				0	0	0
Single Unit Short-haul Truck	Electricity	Rural Unrestricted				0	0	0
Single Unit Short-haul Truck	Electricity	Urban Restricted				0	24	23
Single Unit Short-haul Truck	Electricity	Urban Unrestricted				0	31	30
Single Unit Long-haul Truck	Gasoline	Off-Network	246	267	254			
Single Unit Long-haul Truck	Gasoline	Rural Restricted				163	14	14
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted				150	110	114
Single Unit Long-haul Truck	Gasoline	Urban Restricted				5,908	6,517	6,676
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted				8,179	8,414	8,623
Single Unit Long-haul Truck	Diesel	Off-Network	676	657	666			
Single Unit Long-haul Truck	Diesel	Rural Restricted				443	32	33
Single Unit Long-haul Truck	Diesel	Rural Unrestricted				405	263	270
Single Unit Long-haul Truck	Diesel	Urban Restricted				16,017	15,485	15,872
Single Unit Long-haul Truck	Diesel	Urban Unrestricted				22,174	19,994	20,498
Single Unit Long-haul Truck	CNG	Off-Network	3	3	3			
Single Unit Long-haul Truck	CNG	Rural Restricted				3	0	0
Single Unit Long-haul Truck	CNG	Rural Unrestricted				3	2	2
Single Unit Long-haul Truck	CNG	Urban Restricted				106	117	116
Single Unit Long-haul Truck	CNG	Urban Unrestricted				147	151	150
Single Unit Long-haul Truck	Electricity	Off-Network	0	0	0			
Single Unit Long-haul Truck	Electricity	Rural Restricted				0	0	0
Single Unit Long-haul Truck	Electricity	Rural Unrestricted				0	0	0
Single Unit Long-haul Truck	Electricity	Urban Restricted				1	5	18
Single Unit Long-haul Truck	Electricity	Urban Unrestricted				2	6	23
Motor Home	Gasoline	Off-Network	1,428	1,403	1,385			
Motor Home	Gasoline	Rural Restricted				242	18	19
Motor Home	Gasoline	Rural Unrestricted				222	151	152
Motor Home	Gasoline	Urban Restricted				8,761	8,892	8,955
Motor Home	Gasoline	Urban Unrestricted				12,128	11,481	11,566
Motor Home	Diesel	Off-Network	545	576	586			
Motor Home	Diesel	Rural Restricted				98	8	8

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Motor Home	Diesel	Rural Unrestricted				90	64	67
Motor Home	Diesel	Urban Restricted				3,551	3,804	3,923
Motor Home	Diesel	Urban Unrestricted				4,916	4,912	5,067
Motor Home	CNG	Off-Network	0	0	0			
Motor Home	CNG	Rural Restricted				0	0	0
Motor Home	CNG	Rural Unrestricted				0	0	0
Motor Home	CNG	Urban Restricted				0	0	0
Motor Home	CNG	Urban Unrestricted				0	0	0
Motor Home	Electricity	Off-Network	0	0	0			
Motor Home	Electricity	Rural Restricted				0	0	0
Motor Home	Electricity	Rural Unrestricted				0	0	0
Motor Home	Electricity	Urban Restricted				0	0	0
Motor Home	Electricity	Urban Unrestricted				0	0	0
Combination Short-haul Truck	Gasoline	Off-Network	13	6	5			
Combination Short-haul Truck	Gasoline	Rural Restricted				6	0	0
Combination Short-haul Truck	Gasoline	Rural Unrestricted				1	0	0
Combination Short-haul Truck	Gasoline	Urban Restricted				200	96	83
Combination Short-haul Truck	Gasoline	Urban Unrestricted				75	34	29
Combination Short-haul Truck	Diesel	Off-Network	1,582	1,483	1,459			
Combination Short-haul Truck	Diesel	Rural Restricted				2,749	247	242
Combination Short-haul Truck	Diesel	Rural Unrestricted				667	532	525
Combination Short-haul Truck	Diesel	Urban Restricted				97,590	116,290	113,957
Combination Short-haul Truck	Diesel	Urban Unrestricted				36,418	40,511	39,709
Combination Short-haul Truck	CNG	Off-Network	20	41	49			
Combination Short-haul Truck	CNG	Rural Restricted				81	12	15
Combination Short-haul Truck	CNG	Rural Unrestricted				20	26	32
Combination Short-haul Truck	CNG	Urban Restricted				2,862	5,753	6,943
Combination Short-haul Truck	CNG	Urban Unrestricted				1,068	2,004	2,419
Combination Short-haul Truck	Electricity	Off-Network	0	0	0			
Combination Short-haul Truck	Electricity	Rural Restricted				0	0	0
Combination Short-haul Truck	Electricity	Rural Unrestricted				0	0	0
Combination Short-haul Truck	Electricity	Urban Restricted				0	0	0
Combination Short-haul Truck	Electricity	Urban Unrestricted				0	0	0
Combination Long-haul Truck	Diesel	Off-Network	2,251	2,130	2,106			
Combination Long-haul Truck	Diesel	Rural Restricted				11,678	930	932
Combination Long-haul Truck	Diesel	Rural Unrestricted				2,833	2,008	2,023
Combination Long-haul Truck	Diesel	Urban Restricted				414,534	438,784	439,428
Combination Long-haul Truck	Diesel	Urban Unrestricted				154,691	152,855	153,120
Combination Long-haul Truck	CNG	Off-Network	6	8	8			

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Combination Long-haul Truck	CNG	Rural Restricted				51	5	5
Combination Long-haul Truck	CNG	Rural Unrestricted				12	11	11
Combination Long-haul Truck	CNG	Urban Restricted				1,794	2,360	2,347
Combination Long-haul Truck	CNG	Urban Unrestricted				670	822	818
Combination Long-haul Truck	Electricity	Off-Network	0	0	0			
Combination Long-haul Truck	Electricity	Rural Restricted				0	0	0
Combination Long-haul Truck	Electricity	Rural Unrestricted				0	0	0
Combination Long-haul Truck	Electricity	Urban Restricted				0	0	86
Combination Long-haul Truck	Electricity	Urban Unrestricted				0	0	30
ALL (Total)	ALL (Total)	ALL (Total)	568,191	565,643	566,911	20,345,365	20,809,500	20,796,705
Motorcycle	ALL	ALL	16,810	16,474	16,547	120,715	119,993	119,931
Passenger Car	ALL	ALL	265,761	263,363	263,957	9,006,015	8,899,408	8,873,650
Passenger Truck	ALL	ALL	228,082	228,386	229,038	8,518,270	8,949,877	8,963,712
Light Commercial Truck	ALL	ALL	29,193	29,231	29,315	1,007,929	1,079,869	1,080,194
Other Buses	ALL	ALL	325	314	313	28,352	27,934	28,242
Transit Bus	ALL	ALL	110	106	106	9,023	9,513	9,429
School Bus	ALL	ALL	428	413	412	14,317	15,236	14,984
Refuse Truck	ALL	ALL	148	149	148	8,897	5,079	5,015
Single Unit Short-haul Truck	ALL	ALL	20,564	20,632	20,552	820,138	858,871	856,629
Single Unit Long-haul Truck	ALL	ALL	925	928	924	53,702	51,110	52,410
Motor Home	ALL	ALL	1,973	1,979	1,971	30,007	29,330	29,758
Combination Short-haul Truck	ALL	ALL	1,615	1,530	1,513	141,736	165,505	163,952
Combination Long-haul Truck	ALL	ALL	2,257	2,138	2,115	586,263	597,775	598,799
ALL (Total)	ALL (Total)	ALL (Total)	568,191	565,643	566,911	20,345,365	20,809,500	20,796,705
ALL	Gasoline	ALL	540,852	537,643	538,880	18,740,635	19,093,382	19,077,206
ALL	Diesel	ALL	26,164	23,380	23,185	1,552,145	1,507,462	1,500,962
ALL	CNG	ALL	35	69	77	7,026	12,412	13,951
ALL	Ethanol (E-85)	ALL	819	742	717	32,040	27,216	25,927
ALL	Electricity	ALL	322	3,810	4,053	13,519	169,027	178,658
ALL (Total)	ALL (Total)	ALL (Total)	568,191	565,643	566,911	20,345,365	20,809,500	20,796,705
ALL	ALL	Off-Network	568,191	565,643	566,911			
ALL	ALL	Rural Restricted				224,780	18,258	18,248
ALL	ALL	Rural Unrestricted				204,340	147,641	148,139

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Milwaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
ALL	ALL	Urban Restricted				8,121,240	8,751,980	8,744,861
ALL	ALL	Urban Unrestricted				11,795,004	11,891,621	11,885,456
ALL (Total)	ALL (Total)	ALL (Total)	568,191	565,643	566,911	20,345,365	20,809,500	20,796,705

Table A7.17. Vehicle Activity Data Output from the MOVES4.0.1 Model for Years 2017, 2023 and 2024 for the Ozaukee County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Ozaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Motorcycle	Gasoline	Off-Network	2,272	2,347	2,370			
Motorcycle	Gasoline	Rural Restricted				1,752	1,817	1,821
Motorcycle	Gasoline	Rural Unrestricted				6,889	6,909	6,813
Motorcycle	Gasoline	Urban Restricted				1,189	1,238	1,239
Motorcycle	Gasoline	Urban Unrestricted				7,220	7,890	8,063
Passenger Car	Gasoline	Off-Network	35,879	36,617	36,869			
Passenger Car	Gasoline	Rural Restricted				308,192	306,211	306,172
Passenger Car	Gasoline	Rural Unrestricted				372,555	366,960	361,024
Passenger Car	Gasoline	Urban Restricted				201,564	201,281	200,875
Passenger Car	Gasoline	Urban Unrestricted				390,505	418,407	426,606
Passenger Car	Diesel	Off-Network	242	182	181			
Passenger Car	Diesel	Rural Restricted				2,067	1,470	1,442
Passenger Car	Diesel	Rural Unrestricted				2,499	1,761	1,700
Passenger Car	Diesel	Urban Restricted				1,352	966	946
Passenger Car	Diesel	Urban Unrestricted				2,619	2,008	2,009
Passenger Car	Ethanol (E-85)	Off-Network	23	24	24			
Passenger Car	Ethanol (E-85)	Rural Restricted				212	201	197
Passenger Car	Ethanol (E-85)	Rural Unrestricted				256	241	232
Passenger Car	Ethanol (E-85)	Urban Restricted				138	132	129
Passenger Car	Ethanol (E-85)	Urban Unrestricted				268	275	274
Passenger Car	Electricity	Off-Network	40	336	347			
Passenger Car	Electricity	Rural Restricted				417	3,547	3,611
Passenger Car	Electricity	Rural Unrestricted				504	4,251	4,258
Passenger Car	Electricity	Urban Restricted				273	2,332	2,369
Passenger Car	Electricity	Urban Unrestricted				528	4,847	5,032
Passenger Truck	Gasoline	Off-Network	31,048	32,119	32,350			
Passenger Truck	Gasoline	Rural Restricted				294,129	311,960	313,164
Passenger Truck	Gasoline	Rural Unrestricted				355,569	373,751	369,169
Passenger Truck	Gasoline	Urban Restricted				192,375	205,053	205,455
Passenger Truck	Gasoline	Urban Unrestricted				372,714	426,152	436,250
Passenger Truck	Diesel	Off-Network	195	113	109			
Passenger Truck	Diesel	Rural Restricted				1,653	999	960
Passenger Truck	Diesel	Rural Unrestricted				1,998	1,197	1,131
Passenger Truck	Diesel	Urban Restricted				1,081	657	630
Passenger Truck	Diesel	Urban Unrestricted				2,095	1,365	1,337
Passenger Truck	Ethanol (E-85)	Off-Network	77	70	67			

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Passenger Truck	Ethanol (E-85)	Rural Restricted				782	655	621
Passenger Truck	Ethanol (E-85)	Rural Unrestricted				946	785	731
Passenger Truck	Ethanol (E-85)	Urban Restricted				512	431	407
Passenger Truck	Ethanol (E-85)	Urban Unrestricted				991	895	864
Passenger Truck	Electricity	Off-Network	4	196	221			
Passenger Truck	Electricity	Rural Restricted				50	2,296	2,569
Passenger Truck	Electricity	Rural Unrestricted				60	2,750	3,028
Passenger Truck	Electricity	Urban Restricted				32	1,509	1,685
Passenger Truck	Electricity	Urban Unrestricted				63	3,136	3,579
Light Commercial Truck	Gasoline	Off-Network	3,320	3,511	3,534			
Light Commercial Truck	Gasoline	Rural Restricted				29,271	32,308	32,344
Light Commercial Truck	Gasoline	Rural Unrestricted				35,386	38,707	38,128
Light Commercial Truck	Gasoline	Urban Restricted				19,145	21,236	21,219
Light Commercial Truck	Gasoline	Urban Unrestricted				37,092	44,134	45,056
Light Commercial Truck	Diesel	Off-Network	385	327	333			
Light Commercial Truck	Diesel	Rural Restricted				3,146	2,847	2,918
Light Commercial Truck	Diesel	Rural Unrestricted				3,803	3,411	3,440
Light Commercial Truck	Diesel	Urban Restricted				2,057	1,872	1,915
Light Commercial Truck	Diesel	Urban Unrestricted				3,986	3,889	4,065
Light Commercial Truck	Ethanol (E-85)	Off-Network	11	11	10			
Light Commercial Truck	Ethanol (E-85)	Rural Restricted				111	95	92
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted				135	113	108
Light Commercial Truck	Ethanol (E-85)	Urban Restricted				73	62	60
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted				141	129	127
Light Commercial Truck	Electricity	Off-Network	0	7	8			
Light Commercial Truck	Electricity	Rural Restricted				1	78	90
Light Commercial Truck	Electricity	Rural Unrestricted				1	93	106
Light Commercial Truck	Electricity	Urban Restricted				0	51	59
Light Commercial Truck	Electricity	Urban Unrestricted				1	106	126
Other Buses	Gasoline	Off-Network	30	33	33			
Other Buses	Gasoline	Rural Restricted				592	639	657
Other Buses	Gasoline	Rural Unrestricted				950	1,014	1,026
Other Buses	Gasoline	Urban Restricted				390	422	434
Other Buses	Gasoline	Urban Unrestricted				934	1,090	1,146
Other Buses	Diesel	Off-Network	14	11	11			
Other Buses	Diesel	Rural Restricted				235	179	174
Other Buses	Diesel	Rural Unrestricted				377	284	271
Other Buses	Diesel	Urban Restricted				154	118	115
Other Buses	Diesel	Urban Unrestricted				370	306	303

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Other Buses	CNG	Off-Network	0	0	0			
Other Buses	CNG	Rural Restricted				0	10	9
Other Buses	CNG	Rural Unrestricted				0	16	14
Other Buses	CNG	Urban Restricted				0	7	6
Other Buses	CNG	Urban Unrestricted				0	17	16
Other Buses	Electricity	Off-Network	0	0	0			
Other Buses	Electricity	Rural Restricted				0	0	0
Other Buses	Electricity	Rural Unrestricted				0	0	0
Other Buses	Electricity	Urban Restricted				0	0	0
Other Buses	Electricity	Urban Unrestricted				0	0	0
Transit Bus	Gasoline	Off-Network	5	4	5			
Transit Bus	Gasoline	Rural Restricted				99	77	92
Transit Bus	Gasoline	Rural Unrestricted				159	123	144
Transit Bus	Gasoline	Urban Restricted				65	51	61
Transit Bus	Gasoline	Urban Unrestricted				156	132	161
Transit Bus	Diesel	Off-Network	9	10	8			
Transit Bus	Diesel	Rural Restricted				149	174	158
Transit Bus	Diesel	Rural Unrestricted				239	276	247
Transit Bus	Diesel	Urban Restricted				98	115	104
Transit Bus	Diesel	Urban Unrestricted				234	297	276
Transit Bus	CNG	Off-Network	0	0	0			
Transit Bus	CNG	Rural Restricted				0	9	8
Transit Bus	CNG	Rural Unrestricted				0	14	13
Transit Bus	CNG	Urban Restricted				0	6	6
Transit Bus	CNG	Urban Unrestricted				0	15	15
Transit Bus	Electricity	Off-Network	0	0	0			
Transit Bus	Electricity	Rural Restricted				0	5	5
Transit Bus	Electricity	Rural Unrestricted				0	8	8
Transit Bus	Electricity	Urban Restricted				0	3	3
Transit Bus	Electricity	Urban Unrestricted				0	9	9
School Bus	Gasoline	Off-Network	13	20	19			
School Bus	Gasoline	Rural Restricted				99	161	154
School Bus	Gasoline	Rural Unrestricted				159	256	241
School Bus	Gasoline	Urban Restricted				65	107	102
School Bus	Gasoline	Urban Unrestricted				156	276	269
School Bus	Diesel	Off-Network	48	41	42			
School Bus	Diesel	Rural Restricted				342	316	315
School Bus	Diesel	Rural Unrestricted				549	502	493
School Bus	Diesel	Urban Restricted				225	209	208

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
School Bus	Diesel	Urban Unrestricted				540	539	550
School Bus	CNG	Off-Network	1	1	1			
School Bus	CNG	Rural Restricted				5	7	6
School Bus	CNG	Rural Unrestricted				9	10	9
School Bus	CNG	Urban Restricted				4	4	4
School Bus	CNG	Urban Unrestricted				9	11	11
School Bus	Electricity	Off-Network	0	0	0			
School Bus	Electricity	Rural Restricted				0	0	1
School Bus	Electricity	Rural Unrestricted				0	0	2
School Bus	Electricity	Urban Restricted				0	0	1
School Bus	Electricity	Urban Unrestricted				0	0	2
Refuse Truck	Gasoline	Off-Network	1	1	1			
Refuse Truck	Gasoline	Rural Restricted				19	16	16
Refuse Truck	Gasoline	Rural Unrestricted				22	18	17
Refuse Truck	Gasoline	Urban Restricted				13	11	10
Refuse Truck	Gasoline	Urban Unrestricted				22	19	19
Refuse Truck	Diesel	Off-Network	19	20	20			
Refuse Truck	Diesel	Rural Restricted				303	172	170
Refuse Truck	Diesel	Rural Unrestricted				344	193	187
Refuse Truck	Diesel	Urban Restricted				198	113	112
Refuse Truck	Diesel	Urban Unrestricted				339	208	210
Refuse Truck	CNG	Off-Network	0	0	0			
Refuse Truck	CNG	Rural Restricted				0	0	1
Refuse Truck	CNG	Rural Unrestricted				0	0	1
Refuse Truck	CNG	Urban Restricted				0	0	1
Refuse Truck	CNG	Urban Unrestricted				0	0	1
Refuse Truck	Electricity	Off-Network	0	0	0			
Refuse Truck	Electricity	Rural Restricted				0	0	0
Refuse Truck	Electricity	Rural Unrestricted				0	0	0
Refuse Truck	Electricity	Urban Restricted				0	0	0
Refuse Truck	Electricity	Urban Unrestricted				0	0	0
Single Unit Short-haul Truck	Gasoline	Off-Network	861	1,020	1,035			
Single Unit Short-haul Truck	Gasoline	Rural Restricted				10,037	12,332	12,440
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted				11,396	13,821	13,712
Single Unit Short-haul Truck	Gasoline	Urban Restricted				6,560	8,100	8,156
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted				11,232	14,898	15,350
Single Unit Short-haul Truck	Diesel	Off-Network	1,944	1,895	1,882			
Single Unit Short-haul Truck	Diesel	Rural Restricted				19,956	19,558	19,443
Single Unit Short-haul Truck	Diesel	Rural Unrestricted				22,658	21,920	21,431

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Single Unit Short-haul Truck	Diesel	Urban Restricted				13,044	12,846	12,747
Single Unit Short-haul Truck	Diesel	Urban Unrestricted				22,331	23,627	23,991
Single Unit Short-haul Truck	CNG	Off-Network	0	1	1			
Single Unit Short-haul Truck	CNG	Rural Restricted				1	11	10
Single Unit Short-haul Truck	CNG	Rural Unrestricted				1	12	11
Single Unit Short-haul Truck	CNG	Urban Restricted				1	7	7
Single Unit Short-haul Truck	CNG	Urban Unrestricted				1	13	12
Single Unit Short-haul Truck	Electricity	Off-Network	0	0	0			
Single Unit Short-haul Truck	Electricity	Rural Restricted				0	2	2
Single Unit Short-haul Truck	Electricity	Rural Unrestricted				0	2	2
Single Unit Short-haul Truck	Electricity	Urban Restricted				0	1	1
Single Unit Short-haul Truck	Electricity	Urban Unrestricted				0	2	2
Single Unit Long-haul Truck	Gasoline	Off-Network	33	37	35			
Single Unit Long-haul Truck	Gasoline	Rural Restricted				518	546	565
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted				588	612	623
Single Unit Long-haul Truck	Gasoline	Urban Restricted				338	359	370
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted				579	660	697
Single Unit Long-haul Truck	Diesel	Off-Network	91	91	93			
Single Unit Long-haul Truck	Diesel	Rural Restricted				1,403	1,297	1,343
Single Unit Long-haul Truck	Diesel	Rural Unrestricted				1,593	1,454	1,480
Single Unit Long-haul Truck	Diesel	Urban Restricted				917	852	881
Single Unit Long-haul Truck	Diesel	Urban Unrestricted				1,570	1,567	1,657
Single Unit Long-haul Truck	CNG	Off-Network	0	0	0			
Single Unit Long-haul Truck	CNG	Rural Restricted				9	10	10
Single Unit Long-haul Truck	CNG	Rural Unrestricted				11	11	11
Single Unit Long-haul Truck	CNG	Urban Restricted				6	6	6
Single Unit Long-haul Truck	CNG	Urban Unrestricted				10	12	12
Single Unit Long-haul Truck	Electricity	Off-Network	0	0	0			
Single Unit Long-haul Truck	Electricity	Rural Restricted				0	0	2
Single Unit Long-haul Truck	Electricity	Rural Unrestricted				0	0	2
Single Unit Long-haul Truck	Electricity	Urban Restricted				0	0	1
Single Unit Long-haul Truck	Electricity	Urban Unrestricted				0	0	2
Motor Home	Gasoline	Off-Network	201	203	202			
Motor Home	Gasoline	Rural Restricted				804	783	793
Motor Home	Gasoline	Rural Unrestricted				913	878	874
Motor Home	Gasoline	Urban Restricted				525	514	520
Motor Home	Gasoline	Urban Unrestricted				899	946	979
Motor Home	Diesel	Off-Network	76	84	86			
Motor Home	Diesel	Rural Restricted				326	335	347

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Motor Home	Diesel	Rural Unrestricted				370	376	383
Motor Home	Diesel	Urban Restricted				213	220	228
Motor Home	Diesel	Urban Unrestricted				365	405	429
Motor Home	CNG	Off-Network	0	0	0			
Motor Home	CNG	Rural Restricted				0	0	0
Motor Home	CNG	Rural Unrestricted				0	0	0
Motor Home	CNG	Urban Restricted				0	0	0
Motor Home	CNG	Urban Unrestricted				0	0	0
Motor Home	Electricity	Off-Network	0	0	0			
Motor Home	Electricity	Rural Restricted				0	0	0
Motor Home	Electricity	Rural Unrestricted				0	0	0
Motor Home	Electricity	Urban Restricted				0	0	0
Motor Home	Electricity	Urban Unrestricted				0	0	0
Combination Short-haul Truck	Gasoline	Off-Network	2	1	1			
Combination Short-haul Truck	Gasoline	Rural Restricted				16	7	6
Combination Short-haul Truck	Gasoline	Rural Unrestricted				5	2	2
Combination Short-haul Truck	Gasoline	Urban Restricted				10	5	4
Combination Short-haul Truck	Gasoline	Urban Unrestricted				5	2	2
Combination Short-haul Truck	Diesel	Off-Network	190	180	178			
Combination Short-haul Truck	Diesel	Rural Restricted				7,692	8,859	8,717
Combination Short-haul Truck	Diesel	Rural Unrestricted				2,325	2,647	2,562
Combination Short-haul Truck	Diesel	Urban Restricted				4,969	5,750	5,647
Combination Short-haul Truck	Diesel	Urban Unrestricted				2,291	2,848	2,863
Combination Short-haul Truck	CNG	Off-Network	2	5	6			
Combination Short-haul Truck	CNG	Rural Restricted				226	438	531
Combination Short-haul Truck	CNG	Rural Unrestricted				68	131	156
Combination Short-haul Truck	CNG	Urban Restricted				146	284	344
Combination Short-haul Truck	CNG	Urban Unrestricted				67	141	174
Combination Short-haul Truck	Electricity	Off-Network	0	0	0			
Combination Short-haul Truck	Electricity	Rural Restricted				0	0	0
Combination Short-haul Truck	Electricity	Rural Unrestricted				0	0	0
Combination Short-haul Truck	Electricity	Urban Restricted				0	0	0
Combination Short-haul Truck	Electricity	Urban Unrestricted				0	0	0
Combination Long-haul Truck	Diesel	Off-Network	321	308	306			
Combination Long-haul Truck	Diesel	Rural Restricted				38,805	39,738	39,903
Combination Long-haul Truck	Diesel	Rural Unrestricted				11,731	11,874	11,726
Combination Long-haul Truck	Diesel	Urban Restricted				25,067	25,792	25,851
Combination Long-haul Truck	Diesel	Urban Unrestricted				11,556	12,777	13,105
Combination Long-haul Truck	CNG	Off-Network	1	1	1			

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Combination Long-haul Truck	CNG	Rural Restricted				168	214	213
Combination Long-haul Truck	CNG	Rural Unrestricted				51	64	63
Combination Long-haul Truck	CNG	Urban Restricted				108	139	138
Combination Long-haul Truck	CNG	Urban Unrestricted				50	69	70
Combination Long-haul Truck	Electricity	Off-Network	0	0	0			
Combination Long-haul Truck	Electricity	Rural Restricted				0	0	8
Combination Long-haul Truck	Electricity	Rural Unrestricted				0	0	2
Combination Long-haul Truck	Electricity	Urban Restricted				0	0	5
Combination Long-haul Truck	Electricity	Urban Unrestricted				0	0	3
ALL (Total)	ALL (Total)	ALL (Total)	77,358	79,825	80,390	2,903,549	3,074,814	3,086,469
Motorcycle	ALL	ALL	2,272	2,347	2,370	17,050	17,854	17,935
Passenger Car	ALL	ALL	36,183	37,159	37,421	1,283,949	1,314,890	1,316,878
Passenger Truck	ALL	ALL	31,325	32,498	32,747	1,225,050	1,333,592	1,341,580
Light Commercial Truck	ALL	ALL	3,716	3,855	3,885	134,347	149,132	149,854
Other Buses	ALL	ALL	44	44	44	4,003	4,103	4,172
Transit Bus	ALL	ALL	14	14	14	1,198	1,317	1,309
School Bus	ALL	ALL	62	62	62	2,163	2,398	2,370
Refuse Truck	ALL	ALL	20	21	21	1,260	750	745
Single Unit Short-haul Truck	ALL	ALL	2,805	2,915	2,917	117,218	127,152	127,318
Single Unit Long-haul Truck	ALL	ALL	124	128	129	7,543	7,387	7,662
Motor Home	ALL	ALL	277	287	288	4,414	4,457	4,553
Combination Short-haul Truck	ALL	ALL	194	186	185	17,819	21,115	21,008
Combination Long-haul Truck	ALL	ALL	322	309	307	87,535	90,666	91,086
ALL (Total)	ALL (Total)	ALL (Total)	77,358	79,825	80,390	2,903,549	3,074,814	3,086,469
ALL	Gasoline	ALL	73,665	75,913	76,454	2,673,871	2,822,892	2,833,041
ALL	Diesel	ALL	3,533	3,260	3,248	222,233	221,187	221,118
ALL	CNG	ALL	4	9	10	952	1,687	1,890
ALL	Ethanol (E-85)	ALL	111	105	101	4,564	4,017	3,843
ALL	Electricity	ALL	44	539	576	1,929	25,031	26,578
ALL (Total)	ALL (Total)	ALL (Total)	77,358	79,825	80,390	2,903,549	3,074,814	3,086,469
ALL	ALL	Off-Network	77,358	79,825	80,390			
ALL	ALL	Rural Restricted				723,587	750,379	752,101
ALL	ALL	Rural Unrestricted				835,116	857,449	845,584

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Ozaukee County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
ALL	ALL	Urban Restricted				472,907	492,862	493,060
ALL	ALL	Urban Unrestricted				871,939	974,122	995,724
ALL (Total)	ALL (Total)	ALL (Total)	77,358	79,825	80,390	2,903,549	3,074,814	3,086,469

Table A7.18. Vehicle Activity Data Output from the MOVES4.0.1 Model for Years 2017, 2023 and 2024 for the Racine County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Racine County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Motorcycle	Gasoline	Off-Network	3,459	3,582	3,620			
Motorcycle	Gasoline	Rural Restricted				2,967	3,194	3,174
Motorcycle	Gasoline	Rural Unrestricted				8,170	8,447	8,361
Motorcycle	Gasoline	Urban Restricted				0	0	36
Motorcycle	Gasoline	Urban Unrestricted				14,783	15,610	15,819
Passenger Car	Gasoline	Off-Network	49,641	51,332	51,749			
Passenger Car	Gasoline	Rural Restricted				513,353	531,730	531,050
Passenger Car	Gasoline	Rural Unrestricted				444,266	451,224	445,593
Passenger Car	Gasoline	Urban Restricted				0	0	1,942
Passenger Car	Gasoline	Urban Unrestricted				803,937	832,427	841,620
Passenger Car	Diesel	Off-Network	334	255	255			
Passenger Car	Diesel	Rural Restricted				3,443	2,552	2,501
Passenger Car	Diesel	Rural Unrestricted				2,980	2,166	2,098
Passenger Car	Diesel	Urban Restricted				0	0	9
Passenger Car	Diesel	Urban Unrestricted				5,393	3,995	3,963
Passenger Car	Ethanol (E-85)	Off-Network	31	34	34			
Passenger Car	Ethanol (E-85)	Rural Restricted				352	350	341
Passenger Car	Ethanol (E-85)	Rural Unrestricted				305	297	287
Passenger Car	Ethanol (E-85)	Urban Restricted				0	0	1
Passenger Car	Ethanol (E-85)	Urban Unrestricted				552	548	541
Passenger Car	Electricity	Off-Network	55	471	487			
Passenger Car	Electricity	Rural Restricted				694	6,159	6,264
Passenger Car	Electricity	Rural Unrestricted				601	5,227	5,256
Passenger Car	Electricity	Urban Restricted				0	0	23
Passenger Car	Electricity	Urban Unrestricted				1,087	9,643	9,927
Passenger Truck	Gasoline	Off-Network	43,093	45,164	45,542			
Passenger Truck	Gasoline	Rural Restricted				491,468	543,368	544,796
Passenger Truck	Gasoline	Rural Unrestricted				425,371	460,970	457,002
Passenger Truck	Gasoline	Urban Restricted				0	0	1,992
Passenger Truck	Gasoline	Urban Unrestricted				769,732	850,477	863,242
Passenger Truck	Diesel	Off-Network	271	160	153			
Passenger Truck	Diesel	Rural Restricted				2,762	1,741	1,669
Passenger Truck	Diesel	Rural Unrestricted				2,391	1,477	1,400
Passenger Truck	Diesel	Urban Restricted				0	0	6
Passenger Truck	Diesel	Urban Unrestricted				4,326	2,724	2,645
Passenger Truck	Ethanol (E-85)	Off-Network	108	98	95			

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Passenger Truck	Ethanol (E-85)	Rural Restricted				1,307	1,142	1,079
Passenger Truck	Ethanol (E-85)	Rural Unrestricted				1,131	969	906
Passenger Truck	Ethanol (E-85)	Urban Restricted				0	0	4
Passenger Truck	Ethanol (E-85)	Urban Unrestricted				2,047	1,787	1,710
Passenger Truck	Electricity	Off-Network	6	275	311			
Passenger Truck	Electricity	Rural Restricted				83	3,998	4,469
Passenger Truck	Electricity	Rural Unrestricted				72	3,392	3,749
Passenger Truck	Electricity	Urban Restricted				0	0	16
Passenger Truck	Electricity	Urban Unrestricted				130	6,258	7,082
Light Commercial Truck	Gasoline	Off-Network	4,479	4,799	4,834			
Light Commercial Truck	Gasoline	Rural Restricted				47,539	54,698	54,679
Light Commercial Truck	Gasoline	Rural Unrestricted				41,146	46,404	45,868
Light Commercial Truck	Gasoline	Urban Restricted				0	0	200
Light Commercial Truck	Gasoline	Urban Unrestricted				74,456	85,614	86,641
Light Commercial Truck	Diesel	Off-Network	519	446	456			
Light Commercial Truck	Diesel	Rural Restricted				5,109	4,821	4,934
Light Commercial Truck	Diesel	Rural Unrestricted				4,422	4,090	4,139
Light Commercial Truck	Diesel	Urban Restricted				0	0	18
Light Commercial Truck	Diesel	Urban Unrestricted				8,001	7,545	7,817
Light Commercial Truck	Ethanol (E-85)	Off-Network	15	14	14			
Light Commercial Truck	Ethanol (E-85)	Rural Restricted				181	160	155
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted				157	136	130
Light Commercial Truck	Ethanol (E-85)	Urban Restricted				0	0	1
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted				283	251	245
Light Commercial Truck	Electricity	Off-Network	0	9	11			
Light Commercial Truck	Electricity	Rural Restricted				1	132	153
Light Commercial Truck	Electricity	Rural Unrestricted				1	112	128
Light Commercial Truck	Electricity	Urban Restricted				0	0	1
Light Commercial Truck	Electricity	Urban Unrestricted				1	206	242
Other Buses	Gasoline	Off-Network	43	47	47			
Other Buses	Gasoline	Rural Restricted				984	1,106	1,136
Other Buses	Gasoline	Rural Unrestricted				1,134	1,249	1,269
Other Buses	Gasoline	Urban Restricted				0	0	6
Other Buses	Gasoline	Urban Unrestricted				1,928	2,167	2,257
Other Buses	Diesel	Off-Network	19	15	15			
Other Buses	Diesel	Rural Restricted				390	310	300
Other Buses	Diesel	Rural Unrestricted				450	350	335
Other Buses	Diesel	Urban Restricted				0	0	1
Other Buses	Diesel	Urban Unrestricted				765	608	596

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Other Buses	CNG	Off-Network	0	1	1			
Other Buses	CNG	Rural Restricted				0	18	16
Other Buses	CNG	Rural Unrestricted				0	20	18
Other Buses	CNG	Urban Restricted				0	0	0
Other Buses	CNG	Urban Unrestricted				0	34	31
Other Buses	Electricity	Off-Network	0	0	0			
Other Buses	Electricity	Rural Restricted				0	0	0
Other Buses	Electricity	Rural Unrestricted				0	0	0
Other Buses	Electricity	Urban Restricted				0	0	0
Other Buses	Electricity	Urban Unrestricted				0	0	0
Transit Bus	Gasoline	Off-Network	7	5	7			
Transit Bus	Gasoline	Rural Restricted				166	134	159
Transit Bus	Gasoline	Rural Unrestricted				192	151	178
Transit Bus	Gasoline	Urban Restricted				0	0	1
Transit Bus	Gasoline	Urban Unrestricted				326	262	316
Transit Bus	Diesel	Off-Network	13	14	12			
Transit Bus	Diesel	Rural Restricted				250	301	273
Transit Bus	Diesel	Rural Unrestricted				289	340	305
Transit Bus	Diesel	Urban Restricted				0	0	1
Transit Bus	Diesel	Urban Unrestricted				491	589	541
Transit Bus	CNG	Off-Network	0	1	0			
Transit Bus	CNG	Rural Restricted				0	15	14
Transit Bus	CNG	Rural Unrestricted				0	17	16
Transit Bus	CNG	Urban Restricted				0	0	0
Transit Bus	CNG	Urban Unrestricted				0	30	29
Transit Bus	Electricity	Off-Network	0	0	0			
Transit Bus	Electricity	Rural Restricted				0	9	9
Transit Bus	Electricity	Rural Unrestricted				0	10	9
Transit Bus	Electricity	Urban Restricted				0	0	0
Transit Bus	Electricity	Urban Unrestricted				0	18	17
School Bus	Gasoline	Off-Network	19	29	28			
School Bus	Gasoline	Rural Restricted				166	283	271
School Bus	Gasoline	Rural Unrestricted				191	320	302
School Bus	Gasoline	Urban Restricted				0	0	1
School Bus	Gasoline	Urban Unrestricted				325	555	537
School Bus	Diesel	Off-Network	68	60	60			
School Bus	Diesel	Rural Restricted				573	555	553
School Bus	Diesel	Rural Unrestricted				660	626	617
School Bus	Diesel	Urban Restricted				0	0	3

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
School Bus	Diesel	Urban Unrestricted				1,123	1,086	1,098
School Bus	CNG	Off-Network	1	1	1			
School Bus	CNG	Rural Restricted				9	11	11
School Bus	CNG	Rural Unrestricted				11	13	12
School Bus	CNG	Urban Restricted				0	0	0
School Bus	CNG	Urban Unrestricted				18	22	21
School Bus	Electricity	Off-Network	0	0	0			
School Bus	Electricity	Rural Restricted				0	0	2
School Bus	Electricity	Rural Unrestricted				0	0	3
School Bus	Electricity	Urban Restricted				0	0	0
School Bus	Electricity	Urban Unrestricted				0	0	5
Refuse Truck	Gasoline	Off-Network	1	2	2			
Refuse Truck	Gasoline	Rural Restricted				32	28	27
Refuse Truck	Gasoline	Rural Unrestricted				26	22	21
Refuse Truck	Gasoline	Urban Restricted				0	0	0
Refuse Truck	Gasoline	Urban Unrestricted				44	39	38
Refuse Truck	Diesel	Off-Network	26	27	27			
Refuse Truck	Diesel	Rural Restricted				498	298	294
Refuse Truck	Diesel	Rural Unrestricted				407	238	232
Refuse Truck	Diesel	Urban Restricted				0	0	1
Refuse Truck	Diesel	Urban Unrestricted				695	414	413
Refuse Truck	CNG	Off-Network	0	0	0			
Refuse Truck	CNG	Rural Restricted				0	0	2
Refuse Truck	CNG	Rural Unrestricted				0	0	1
Refuse Truck	CNG	Urban Restricted				0	0	0
Refuse Truck	CNG	Urban Unrestricted				0	0	3
Refuse Truck	Electricity	Off-Network	0	0	0			
Refuse Truck	Electricity	Rural Restricted				0	0	0
Refuse Truck	Electricity	Rural Unrestricted				0	0	0
Refuse Truck	Electricity	Urban Restricted				0	0	0
Refuse Truck	Electricity	Urban Unrestricted				0	0	0
Single Unit Short-haul Truck	Gasoline	Off-Network	1,178	1,413	1,436			
Single Unit Short-haul Truck	Gasoline	Rural Restricted				16,715	21,399	21,576
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted				13,676	17,104	17,044
Single Unit Short-haul Truck	Gasoline	Urban Restricted				0	0	76
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted				23,317	29,744	30,379
Single Unit Short-haul Truck	Diesel	Off-Network	2,660	2,626	2,612			
Single Unit Short-haul Truck	Diesel	Rural Restricted				33,234	33,937	33,721
Single Unit Short-haul Truck	Diesel	Rural Unrestricted				27,192	27,126	26,639

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Source Type	Fuel Type	Road Type	Racine County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Single Unit Short-haul Truck	Diesel	Urban Restricted				0	0	119
Single Unit Short-haul Truck	Diesel	Urban Unrestricted				46,360	47,172	47,480
Single Unit Short-haul Truck	CNG	Off-Network	0	1	1			
Single Unit Short-haul Truck	CNG	Rural Restricted				2	18	17
Single Unit Short-haul Truck	CNG	Rural Unrestricted				2	15	14
Single Unit Short-haul Truck	CNG	Urban Restricted				0	0	0
Single Unit Short-haul Truck	CNG	Urban Unrestricted				3	26	24
Single Unit Short-haul Truck	Electricity	Off-Network	0	0	0			
Single Unit Short-haul Truck	Electricity	Rural Restricted				0	4	4
Single Unit Short-haul Truck	Electricity	Rural Unrestricted				0	3	3
Single Unit Short-haul Truck	Electricity	Urban Restricted				0	0	0
Single Unit Short-haul Truck	Electricity	Urban Unrestricted				0	5	5
Single Unit Long-haul Truck	Gasoline	Off-Network	45	52	49			
Single Unit Long-haul Truck	Gasoline	Rural Restricted				864	956	980
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted				707	764	774
Single Unit Long-haul Truck	Gasoline	Urban Restricted				0	0	3
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted				1,205	1,329	1,379
Single Unit Long-haul Truck	Diesel	Off-Network	124	127	129			
Single Unit Long-haul Truck	Diesel	Rural Restricted				2,341	2,271	2,329
Single Unit Long-haul Truck	Diesel	Rural Unrestricted				1,916	1,816	1,840
Single Unit Long-haul Truck	Diesel	Urban Restricted				0	0	8
Single Unit Long-haul Truck	Diesel	Urban Unrestricted				3,266	3,157	3,279
Single Unit Long-haul Truck	CNG	Off-Network	0	1	1			
Single Unit Long-haul Truck	CNG	Rural Restricted				16	17	17
Single Unit Long-haul Truck	CNG	Rural Unrestricted				13	14	13
Single Unit Long-haul Truck	CNG	Urban Restricted				0	0	0
Single Unit Long-haul Truck	CNG	Urban Unrestricted				22	24	24
Single Unit Long-haul Truck	Electricity	Off-Network	0	0	0			
Single Unit Long-haul Truck	Electricity	Rural Restricted				0	1	3
Single Unit Long-haul Truck	Electricity	Rural Unrestricted				0	1	2
Single Unit Long-haul Truck	Electricity	Urban Restricted				0	0	0
Single Unit Long-haul Truck	Electricity	Urban Unrestricted				0	1	4
Motor Home	Gasoline	Off-Network	281	289	287			
Motor Home	Gasoline	Rural Restricted				1,370	1,394	1,407
Motor Home	Gasoline	Rural Unrestricted				1,121	1,114	1,112
Motor Home	Gasoline	Urban Restricted				0	0	5
Motor Home	Gasoline	Urban Unrestricted				1,912	1,938	1,982
Motor Home	Diesel	Off-Network	107	119	122			
Motor Home	Diesel	Rural Restricted				555	596	617

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Motor Home	Diesel	Rural Unrestricted				454	477	487
Motor Home	Diesel	Urban Restricted				0	0	2
Motor Home	Diesel	Urban Unrestricted				775	829	868
Motor Home	CNG	Off-Network	0	0	0			
Motor Home	CNG	Rural Restricted				0	0	0
Motor Home	CNG	Rural Unrestricted				0	0	0
Motor Home	CNG	Urban Restricted				0	0	0
Motor Home	CNG	Urban Unrestricted				0	0	0
Motor Home	Electricity	Off-Network	0	0	0			
Motor Home	Electricity	Rural Restricted				0	0	0
Motor Home	Electricity	Rural Unrestricted				0	0	0
Motor Home	Electricity	Urban Restricted				0	0	0
Motor Home	Electricity	Urban Unrestricted				0	0	0
Combination Short-haul Truck	Gasoline	Off-Network	2	1	1			
Combination Short-haul Truck	Gasoline	Rural Restricted				25	12	10
Combination Short-haul Truck	Gasoline	Rural Unrestricted				5	3	2
Combination Short-haul Truck	Gasoline	Urban Restricted				0	0	0
Combination Short-haul Truck	Gasoline	Urban Unrestricted				9	4	4
Combination Short-haul Truck	Diesel	Off-Network	210	205	203			
Combination Short-haul Truck	Diesel	Rural Restricted				11,999	14,465	14,244
Combination Short-haul Truck	Diesel	Rural Unrestricted				2,633	3,101	3,010
Combination Short-haul Truck	Diesel	Urban Restricted				0	0	13
Combination Short-haul Truck	Diesel	Urban Unrestricted				4,486	5,383	5,356
Combination Short-haul Truck	CNG	Off-Network	3	6	7			
Combination Short-haul Truck	CNG	Rural Restricted				352	716	868
Combination Short-haul Truck	CNG	Rural Unrestricted				77	153	183
Combination Short-haul Truck	CNG	Urban Restricted				0	0	1
Combination Short-haul Truck	CNG	Urban Unrestricted				132	266	326
Combination Short-haul Truck	Electricity	Off-Network	0	0	0			
Combination Short-haul Truck	Electricity	Rural Restricted				0	0	0
Combination Short-haul Truck	Electricity	Rural Unrestricted				0	0	0
Combination Short-haul Truck	Electricity	Urban Restricted				0	0	0
Combination Short-haul Truck	Electricity	Urban Unrestricted				0	0	0
Combination Long-haul Truck	Diesel	Off-Network	386	382	379			
Combination Long-haul Truck	Diesel	Rural Restricted				65,951	70,563	70,947
Combination Long-haul Truck	Diesel	Rural Unrestricted				14,470	15,125	14,994
Combination Long-haul Truck	Diesel	Urban Restricted				0	0	67
Combination Long-haul Truck	Diesel	Urban Unrestricted				24,657	26,260	26,681
Combination Long-haul Truck	CNG	Off-Network	1	1	2			

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Combination Long-haul Truck	CNG	Rural Restricted				285	379	379
Combination Long-haul Truck	CNG	Rural Unrestricted				63	81	80
Combination Long-haul Truck	CNG	Urban Restricted				0	0	0
Combination Long-haul Truck	CNG	Urban Unrestricted				107	141	142
Combination Long-haul Truck	Electricity	Off-Network	0	0	0			
Combination Long-haul Truck	Electricity	Rural Restricted				0	0	14
Combination Long-haul Truck	Electricity	Rural Unrestricted				0	0	3
Combination Long-haul Truck	Electricity	Urban Restricted				0	0	0
Combination Long-haul Truck	Electricity	Urban Unrestricted				0	0	5
ALL (Total)	ALL (Total)	ALL (Total)	107,204	112,064	112,991	3,999,430	4,298,189	4,319,790
Motorcycle	ALL	ALL	3,459	3,582	3,620	25,920	27,251	27,390
Passenger Car	ALL	ALL	50,061	52,092	52,524	1,776,964	1,846,317	1,851,417
Passenger Truck	ALL	ALL	43,477	45,697	46,101	1,700,819	1,878,302	1,891,768
Light Commercial Truck	ALL	ALL	5,013	5,269	5,315	181,296	204,167	205,349
Other Buses	ALL	ALL	62	63	63	5,651	5,862	5,966
Transit Bus	ALL	ALL	20	20	20	1,714	1,877	1,867
School Bus	ALL	ALL	88	90	90	3,076	3,473	3,435
Refuse Truck	ALL	ALL	27	29	29	1,702	1,038	1,031
Single Unit Short-haul Truck	ALL	ALL	3,838	4,040	4,049	160,501	176,552	177,101
Single Unit Long-haul Truck	ALL	ALL	170	179	179	10,349	10,349	10,654
Motor Home	ALL	ALL	388	408	409	6,188	6,348	6,480
Combination Short-haul Truck	ALL	ALL	214	212	211	19,717	24,103	24,018
Combination Long-haul Truck	ALL	ALL	387	383	381	105,533	112,550	113,312
ALL (Total)	ALL (Total)	ALL (Total)	107,204	112,064	112,991	3,999,430	4,298,189	4,319,790
ALL	Gasoline	ALL	102,248	106,716	107,603	3,703,629	3,966,240	3,985,267
ALL	Diesel	ALL	4,736	4,435	4,424	285,706	289,102	289,464
ALL	CNG	ALL	5	11	12	1,110	2,032	2,264
ALL	Ethanol (E-85)	ALL	154	146	142	6,315	5,638	5,400
ALL	Electricity	ALL	61	756	809	2,670	35,178	37,396
ALL (Total)	ALL (Total)	ALL (Total)	107,204	112,064	112,991	3,999,430	4,298,189	4,319,790
ALL	ALL	Off-Network	107,204	112,064	112,991			
ALL	ALL	Rural Restricted				1,206,039	1,303,841	1,305,461
ALL	ALL	Rural Unrestricted				996,699	1,055,161	1,044,435

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Racine County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
ALL	ALL	Urban Restricted				0	0	4,558
ALL	ALL	Urban Unrestricted				1,796,693	1,939,187	1,965,336
ALL (Total)	ALL (Total)	ALL (Total)	107,204	112,064	112,991	3,999,430	4,298,189	4,319,790

Table A7.19. Vehicle Activity Data Output from the MOVES4.0.1 Model for Years 2017, 2023 and 2024 for the Washington County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Washington County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Motorcycle	Gasoline	Off-Network	2,254	2,366	2,389			
Motorcycle	Gasoline	Rural Restricted				2,755	1,839	1,843
Motorcycle	Gasoline	Rural Unrestricted				8,321	8,067	8,108
Motorcycle	Gasoline	Urban Restricted				432	1,511	1,514
Motorcycle	Gasoline	Urban Unrestricted				5,662	6,638	6,674
Passenger Car	Gasoline	Off-Network	36,446	37,712	37,958			
Passenger Car	Gasoline	Rural Restricted				485,057	308,103	307,895
Passenger Car	Gasoline	Rural Unrestricted				451,613	427,175	428,306
Passenger Car	Gasoline	Urban Restricted				70,083	248,059	247,845
Passenger Car	Gasoline	Urban Unrestricted				307,336	351,122	352,211
Passenger Car	Diesel	Off-Network	246	187	187			
Passenger Car	Diesel	Rural Restricted				3,254	1,479	1,450
Passenger Car	Diesel	Rural Unrestricted				3,029	2,050	2,017
Passenger Car	Diesel	Urban Restricted				470	1,191	1,167
Passenger Car	Diesel	Urban Unrestricted				2,062	1,685	1,659
Passenger Car	Ethanol (E-85)	Off-Network	23	25	25			
Passenger Car	Ethanol (E-85)	Rural Restricted				333	203	198
Passenger Car	Ethanol (E-85)	Rural Unrestricted				310	281	275
Passenger Car	Ethanol (E-85)	Urban Restricted				48	163	159
Passenger Car	Ethanol (E-85)	Urban Unrestricted				211	231	226
Passenger Car	Electricity	Off-Network	40	346	357			
Passenger Car	Electricity	Rural Restricted				656	3,569	3,632
Passenger Car	Electricity	Rural Unrestricted				611	4,948	5,052
Passenger Car	Electricity	Urban Restricted				95	2,873	2,923
Passenger Car	Electricity	Urban Unrestricted				416	4,067	4,154
Passenger Truck	Gasoline	Off-Network	31,682	33,225	33,449			
Passenger Truck	Gasoline	Rural Restricted				465,010	315,258	316,278
Passenger Truck	Gasoline	Rural Unrestricted				432,984	436,987	439,859
Passenger Truck	Gasoline	Urban Restricted				67,190	253,816	254,590
Passenger Truck	Gasoline	Urban Unrestricted				294,663	359,213	361,734
Passenger Truck	Diesel	Off-Network	199	117	113			
Passenger Truck	Diesel	Rural Restricted				2,614	1,010	969
Passenger Truck	Diesel	Rural Unrestricted				2,434	1,400	1,348
Passenger Truck	Diesel	Urban Restricted				378	813	780
Passenger Truck	Diesel	Urban Unrestricted				1,656	1,151	1,108
Passenger Truck	Ethanol (E-85)	Off-Network	79	72	69			

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Source Type	Fuel Type	Road Type	Washington County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Passenger Truck	Ethanol (E-85)	Rural Restricted				1,237	662	627
Passenger Truck	Ethanol (E-85)	Rural Unrestricted				1,151	918	872
Passenger Truck	Ethanol (E-85)	Urban Restricted				179	533	504
Passenger Truck	Ethanol (E-85)	Urban Unrestricted				784	755	717
Passenger Truck	Electricity	Off-Network	4	203	229			
Passenger Truck	Electricity	Rural Restricted				78	2,320	2,595
Passenger Truck	Electricity	Rural Unrestricted				73	3,216	3,608
Passenger Truck	Electricity	Urban Restricted				11	1,868	2,089
Passenger Truck	Electricity	Urban Unrestricted				50	2,643	2,967
Light Commercial Truck	Gasoline	Off-Network	3,252	3,487	3,507			
Light Commercial Truck	Gasoline	Rural Restricted				44,424	31,341	31,356
Light Commercial Truck	Gasoline	Rural Unrestricted				41,365	43,443	43,607
Light Commercial Truck	Gasoline	Urban Restricted				6,419	25,233	25,240
Light Commercial Truck	Gasoline	Urban Unrestricted				28,150	35,711	35,862
Light Commercial Truck	Diesel	Off-Network	377	324	331			
Light Commercial Truck	Diesel	Rural Restricted				4,774	2,762	2,829
Light Commercial Truck	Diesel	Rural Unrestricted				4,445	3,829	3,935
Light Commercial Truck	Diesel	Urban Restricted				690	2,224	2,277
Light Commercial Truck	Diesel	Urban Unrestricted				3,025	3,147	3,236
Light Commercial Truck	Ethanol (E-85)	Off-Network	11	10	10			
Light Commercial Truck	Ethanol (E-85)	Rural Restricted				169	92	89
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted				157	127	123
Light Commercial Truck	Ethanol (E-85)	Urban Restricted				24	74	71
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted				107	105	101
Light Commercial Truck	Electricity	Off-Network	0	7	8			
Light Commercial Truck	Electricity	Rural Restricted				1	76	88
Light Commercial Truck	Electricity	Rural Unrestricted				1	105	122
Light Commercial Truck	Electricity	Urban Restricted				0	61	70
Light Commercial Truck	Electricity	Urban Unrestricted				1	86	100
Other Buses	Gasoline	Off-Network	30	33	33			
Other Buses	Gasoline	Rural Restricted				918	637	655
Other Buses	Gasoline	Rural Unrestricted				1,099	1,130	1,167
Other Buses	Gasoline	Urban Restricted				134	515	529
Other Buses	Gasoline	Urban Unrestricted				706	893	923
Other Buses	Diesel	Off-Network	13	11	11			
Other Buses	Diesel	Rural Restricted				364	179	173
Other Buses	Diesel	Rural Unrestricted				436	317	308
Other Buses	Diesel	Urban Restricted				53	144	140
Other Buses	Diesel	Urban Unrestricted				280	251	244

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Other Buses	CNG	Off-Network	0	0	0			
Other Buses	CNG	Rural Restricted				0	10	9
Other Buses	CNG	Rural Unrestricted				0	18	16
Other Buses	CNG	Urban Restricted				0	8	7
Other Buses	CNG	Urban Unrestricted				0	14	13
Other Buses	Electricity	Off-Network	0	0	0			
Other Buses	Electricity	Rural Restricted				0	0	0
Other Buses	Electricity	Rural Unrestricted				0	0	0
Other Buses	Electricity	Urban Restricted				0	0	0
Other Buses	Electricity	Urban Unrestricted				0	0	0
Transit Bus	Gasoline	Off-Network	5	4	5			
Transit Bus	Gasoline	Rural Restricted				157	77	92
Transit Bus	Gasoline	Rural Unrestricted				188	137	164
Transit Bus	Gasoline	Urban Restricted				23	62	74
Transit Bus	Gasoline	Urban Unrestricted				121	108	129
Transit Bus	Diesel	Off-Network	9	10	8			
Transit Bus	Diesel	Rural Restricted				236	174	158
Transit Bus	Diesel	Rural Unrestricted				282	308	281
Transit Bus	Diesel	Urban Restricted				35	140	127
Transit Bus	Diesel	Urban Unrestricted				181	244	222
Transit Bus	CNG	Off-Network	0	0	0			
Transit Bus	CNG	Rural Restricted				0	9	8
Transit Bus	CNG	Rural Unrestricted				0	16	15
Transit Bus	CNG	Urban Restricted				0	7	7
Transit Bus	CNG	Urban Unrestricted				0	12	12
Transit Bus	Electricity	Off-Network	0	0	0			
Transit Bus	Electricity	Rural Restricted				0	5	5
Transit Bus	Electricity	Rural Unrestricted				0	9	9
Transit Bus	Electricity	Urban Restricted				0	4	4
Transit Bus	Electricity	Urban Unrestricted				0	7	7
School Bus	Gasoline	Off-Network	13	20	20			
School Bus	Gasoline	Rural Restricted				160	166	159
School Bus	Gasoline	Rural Unrestricted				191	295	283
School Bus	Gasoline	Urban Restricted				23	134	128
School Bus	Gasoline	Urban Unrestricted				123	233	224
School Bus	Diesel	Off-Network	49	43	43			
School Bus	Diesel	Rural Restricted				552	325	325
School Bus	Diesel	Rural Unrestricted				661	577	578
School Bus	Diesel	Urban Restricted				81	263	262

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
School Bus	Diesel	Urban Unrestricted				425	456	457
School Bus	CNG	Off-Network	1	1	1			
School Bus	CNG	Rural Restricted				9	7	6
School Bus	CNG	Rural Unrestricted				11	12	11
School Bus	CNG	Urban Restricted				1	5	5
School Bus	CNG	Urban Unrestricted				7	9	9
School Bus	Electricity	Off-Network	0	0	0			
School Bus	Electricity	Rural Restricted				0	0	1
School Bus	Electricity	Rural Unrestricted				0	0	2
School Bus	Electricity	Urban Restricted				0	0	1
School Bus	Electricity	Urban Unrestricted				0	0	2
Refuse Truck	Gasoline	Off-Network	1	1	1			
Refuse Truck	Gasoline	Rural Restricted				30	16	15
Refuse Truck	Gasoline	Rural Unrestricted				26	20	19
Refuse Truck	Gasoline	Urban Restricted				4	13	12
Refuse Truck	Gasoline	Urban Unrestricted				17	16	15
Refuse Truck	Diesel	Off-Network	19	20	20			
Refuse Truck	Diesel	Rural Restricted				474	170	168
Refuse Truck	Diesel	Rural Unrestricted				403	213	211
Refuse Truck	Diesel	Urban Restricted				68	137	135
Refuse Truck	Diesel	Urban Unrestricted				259	169	167
Refuse Truck	CNG	Off-Network	0	0	0			
Refuse Truck	CNG	Rural Restricted				0	0	1
Refuse Truck	CNG	Rural Unrestricted				0	0	1
Refuse Truck	CNG	Urban Restricted				0	0	1
Refuse Truck	CNG	Urban Unrestricted				0	0	1
Refuse Truck	Electricity	Off-Network	0	0	0			
Refuse Truck	Electricity	Rural Restricted				0	0	0
Refuse Truck	Electricity	Rural Unrestricted				0	0	0
Refuse Truck	Electricity	Urban Restricted				0	0	0
Refuse Truck	Electricity	Urban Unrestricted				0	0	0
Single Unit Short-haul Truck	Gasoline	Off-Network	867	1,041	1,056			
Single Unit Short-haul Truck	Gasoline	Rural Restricted				15,813	12,402	12,508
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted				13,424	15,568	15,755
Single Unit Short-haul Truck	Gasoline	Urban Restricted				2,282	9,981	10,064
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted				8,647	12,322	12,477
Single Unit Short-haul Truck	Diesel	Off-Network	1,957	1,934	1,920			
Single Unit Short-haul Truck	Diesel	Rural Restricted				31,440	19,668	19,549
Single Unit Short-haul Truck	Diesel	Rural Unrestricted				26,690	24,689	24,623

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Single Unit Short-haul Truck	Diesel	Urban Restricted				4,536	15,829	15,730
Single Unit Short-haul Truck	Diesel	Urban Unrestricted				17,191	19,542	19,500
Single Unit Short-haul Truck	CNG	Off-Network	0	1	1			
Single Unit Short-haul Truck	CNG	Rural Restricted				2	11	10
Single Unit Short-haul Truck	CNG	Rural Unrestricted				2	13	13
Single Unit Short-haul Truck	CNG	Urban Restricted				0	9	8
Single Unit Short-haul Truck	CNG	Urban Unrestricted				1	11	10
Single Unit Short-haul Truck	Electricity	Off-Network	0	0	0			
Single Unit Short-haul Truck	Electricity	Rural Restricted				0	2	2
Single Unit Short-haul Truck	Electricity	Rural Unrestricted				0	3	3
Single Unit Short-haul Truck	Electricity	Urban Restricted				0	2	2
Single Unit Short-haul Truck	Electricity	Urban Unrestricted				0	2	2
Single Unit Long-haul Truck	Gasoline	Off-Network	33	37	36			
Single Unit Long-haul Truck	Gasoline	Rural Restricted				803	546	561
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted				682	686	707
Single Unit Long-haul Truck	Gasoline	Urban Restricted				116	440	451
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted				439	543	560
Single Unit Long-haul Truck	Diesel	Off-Network	90	92	94			
Single Unit Long-haul Truck	Diesel	Rural Restricted				2,178	1,298	1,334
Single Unit Long-haul Truck	Diesel	Rural Unrestricted				1,849	1,630	1,680
Single Unit Long-haul Truck	Diesel	Urban Restricted				314	1,045	1,073
Single Unit Long-haul Truck	Diesel	Urban Unrestricted				1,191	1,290	1,331
Single Unit Long-haul Truck	CNG	Off-Network	0	0	0			
Single Unit Long-haul Truck	CNG	Rural Restricted				14	10	10
Single Unit Long-haul Truck	CNG	Rural Unrestricted				12	12	12
Single Unit Long-haul Truck	CNG	Urban Restricted				2	8	8
Single Unit Long-haul Truck	CNG	Urban Unrestricted				8	10	10
Single Unit Long-haul Truck	Electricity	Off-Network	0	0	0			
Single Unit Long-haul Truck	Electricity	Rural Restricted				0	0	2
Single Unit Long-haul Truck	Electricity	Rural Unrestricted				0	0	2
Single Unit Long-haul Truck	Electricity	Urban Restricted				0	0	1
Single Unit Long-haul Truck	Electricity	Urban Unrestricted				0	0	2
Motor Home	Gasoline	Off-Network	206	212	211			
Motor Home	Gasoline	Rural Restricted				1,290	804	814
Motor Home	Gasoline	Rural Unrestricted				1,095	1,009	1,026
Motor Home	Gasoline	Urban Restricted				186	647	655
Motor Home	Gasoline	Urban Unrestricted				705	799	812
Motor Home	Diesel	Off-Network	78	87	89			
Motor Home	Diesel	Rural Restricted				523	344	357

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Motor Home	Diesel	Rural Unrestricted				444	432	449
Motor Home	Diesel	Urban Restricted				75	277	287
Motor Home	Diesel	Urban Unrestricted				286	342	356
Motor Home	CNG	Off-Network	0	0	0			
Motor Home	CNG	Rural Restricted				0	0	0
Motor Home	CNG	Rural Unrestricted				0	0	0
Motor Home	CNG	Urban Restricted				0	0	0
Motor Home	CNG	Urban Unrestricted				0	0	0
Motor Home	Electricity	Off-Network	0	0	0			
Motor Home	Electricity	Rural Restricted				0	0	0
Motor Home	Electricity	Rural Unrestricted				0	0	0
Motor Home	Electricity	Urban Restricted				0	0	0
Motor Home	Electricity	Urban Unrestricted				0	0	0
Combination Short-haul Truck	Gasoline	Off-Network	1	1	1			
Combination Short-haul Truck	Gasoline	Rural Restricted				23	7	6
Combination Short-haul Truck	Gasoline	Rural Unrestricted				5	2	2
Combination Short-haul Truck	Gasoline	Urban Restricted				3	5	5
Combination Short-haul Truck	Gasoline	Urban Unrestricted				3	2	2
Combination Short-haul Truck	Diesel	Off-Network	180	173	172			
Combination Short-haul Truck	Diesel	Rural Restricted				11,027	8,048	7,907
Combination Short-haul Truck	Diesel	Rural Unrestricted				2,494	2,694	2,656
Combination Short-haul Truck	Diesel	Urban Restricted				1,548	6,434	6,320
Combination Short-haul Truck	Diesel	Urban Unrestricted				1,606	2,130	2,101
Combination Short-haul Truck	CNG	Off-Network	2	5	6			
Combination Short-haul Truck	CNG	Rural Restricted				323	398	482
Combination Short-haul Truck	CNG	Rural Unrestricted				73	133	162
Combination Short-haul Truck	CNG	Urban Restricted				45	318	385
Combination Short-haul Truck	CNG	Urban Unrestricted				47	105	128
Combination Short-haul Truck	Electricity	Off-Network	0	0	0			
Combination Short-haul Truck	Electricity	Rural Restricted				0	0	0
Combination Short-haul Truck	Electricity	Rural Unrestricted				0	0	0
Combination Short-haul Truck	Electricity	Urban Restricted				0	0	0
Combination Short-haul Truck	Electricity	Urban Unrestricted				0	0	0
Combination Long-haul Truck	Diesel	Off-Network	342	334	332			
Combination Long-haul Truck	Diesel	Rural Restricted				62,479	40,669	40,803
Combination Long-haul Truck	Diesel	Rural Unrestricted				14,130	13,615	13,706
Combination Long-haul Truck	Diesel	Urban Restricted				8,769	32,515	32,614
Combination Long-haul Truck	Diesel	Urban Unrestricted				9,097	10,764	10,843
Combination Long-haul Truck	CNG	Off-Network	1	1	1			

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Combination Long-haul Truck	CNG	Rural Restricted				270	219	218
Combination Long-haul Truck	CNG	Rural Unrestricted				61	73	73
Combination Long-haul Truck	CNG	Urban Restricted				38	175	174
Combination Long-haul Truck	CNG	Urban Unrestricted				39	58	58
Combination Long-haul Truck	Electricity	Off-Network	0	0	0			
Combination Long-haul Truck	Electricity	Rural Restricted				0	0	8
Combination Long-haul Truck	Electricity	Rural Unrestricted				0	0	3
Combination Long-haul Truck	Electricity	Urban Restricted				0	0	6
Combination Long-haul Truck	Electricity	Urban Unrestricted				0	0	2
ALL (Total)	ALL (Total)	ALL (Total)	78,511	82,142	82,691	3,000,056	3,175,494	3,187,177
Motorcycle	ALL	ALL	2,254	2,366	2,389	17,170	18,055	18,138
Passenger Car	ALL	ALL	36,755	38,270	38,526	1,325,583	1,357,199	1,359,171
Passenger Truck	ALL	ALL	31,964	33,617	33,860	1,270,490	1,382,562	1,390,645
Light Commercial Truck	ALL	ALL	3,640	3,828	3,856	133,753	148,415	149,107
Other Buses	ALL	ALL	43	44	44	3,991	4,117	4,186
Transit Bus	ALL	ALL	14	14	14	1,222	1,321	1,313
School Bus	ALL	ALL	63	64	64	2,242	2,483	2,454
Refuse Truck	ALL	ALL	20	21	21	1,281	752	747
Single Unit Short-haul Truck	ALL	ALL	2,824	2,975	2,976	120,029	130,052	130,256
Single Unit Long-haul Truck	ALL	ALL	123	130	130	7,610	7,519	7,743
Motor Home	ALL	ALL	284	299	300	4,603	4,654	4,756
Combination Short-haul Truck	ALL	ALL	184	179	178	17,197	20,277	20,154
Combination Long-haul Truck	ALL	ALL	343	335	333	94,884	98,088	98,508
ALL (Total)	ALL (Total)	ALL (Total)	78,511	82,142	82,691	3,000,056	3,175,494	3,187,177
ALL	Gasoline	ALL	74,790	78,139	78,665	2,760,900	2,913,732	2,923,915
ALL	Diesel	ALL	3,559	3,331	3,318	231,486	230,061	229,949
ALL	CNG	ALL	4	9	10	967	1,691	1,883
ALL	Ethanol (E-85)	ALL	113	108	104	4,710	4,144	3,964
ALL	Electricity	ALL	45	555	594	1,992	25,867	27,465
ALL (Total)	ALL (Total)	ALL (Total)	78,511	82,142	82,691	3,000,056	3,175,494	3,187,177
ALL	ALL	Off-Network	78,511	82,142	82,691			
ALL	ALL	Rural Restricted				1,139,445	754,914	756,192
ALL	ALL	Rural Unrestricted				1,010,752	996,157	1,001,169

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Washington County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
ALL	ALL	Urban Restricted				164,358	607,537	608,448
ALL	ALL	Urban Unrestricted				685,501	816,887	821,368
ALL (Total)	ALL (Total)	ALL (Total)	78,511	82,142	82,691	3,000,056	3,175,494	3,187,177

Table A7.20. Vehicle Activity Data Output from the MOVES4.0.1 Model for Years 2017, 2023 and 2024 for the Waukesha County Portion of the Milwaukee 2015 Ozone NAAQS Nonattainment Area (NAA).

Source Type	Fuel Type	Road Type	Waukesha County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Motorcycle	Gasoline	Off-Network	10,187	10,448	10,545			
Motorcycle	Gasoline	Rural Restricted				3,623	3,057	3,064
Motorcycle	Gasoline	Rural Unrestricted				21,273	21,159	21,277
Motorcycle	Gasoline	Urban Restricted				6,918	7,894	7,900
Motorcycle	Gasoline	Urban Unrestricted				43,261	45,834	46,041
Passenger Car	Gasoline	Off-Network	151,066	153,654	154,613			
Passenger Car	Gasoline	Rural Restricted				623,516	499,435	499,241
Passenger Car	Gasoline	Rural Unrestricted				1,147,280	1,118,330	1,121,880
Passenger Car	Gasoline	Urban Restricted				1,154,620	1,272,110	1,269,770
Passenger Car	Gasoline	Urban Unrestricted				2,333,110	2,422,120	2,427,140
Passenger Car	Diesel	Off-Network	1,018	762	761			
Passenger Car	Diesel	Rural Restricted				4,182	2,397	2,351
Passenger Car	Diesel	Rural Unrestricted				7,696	5,367	5,283
Passenger Car	Diesel	Urban Restricted				7,745	6,105	5,980
Passenger Car	Diesel	Urban Unrestricted				15,650	11,625	11,430
Passenger Car	Ethanol (E-85)	Off-Network	96	101	100			
Passenger Car	Ethanol (E-85)	Rural Restricted				428	329	321
Passenger Car	Ethanol (E-85)	Rural Unrestricted				787	736	721
Passenger Car	Ethanol (E-85)	Urban Restricted				792	837	816
Passenger Car	Ethanol (E-85)	Urban Unrestricted				1,601	1,593	1,561
Passenger Car	Electricity	Off-Network	166	1,410	1,454			
Passenger Car	Electricity	Rural Restricted				843	5,785	5,889
Passenger Car	Electricity	Rural Unrestricted				1,552	12,954	13,233
Passenger Car	Electricity	Urban Restricted				1,562	14,736	14,977
Passenger Car	Electricity	Urban Unrestricted				3,156	28,057	28,629
Passenger Truck	Gasoline	Off-Network	129,834	133,880	134,755			
Passenger Truck	Gasoline	Rural Restricted				590,971	505,388	507,251
Passenger Truck	Gasoline	Rural Unrestricted				1,087,500	1,131,440	1,139,560
Passenger Truck	Gasoline	Urban Restricted				1,094,400	1,287,320	1,290,100
Passenger Truck	Gasoline	Urban Unrestricted				2,211,580	2,450,520	2,465,420
Passenger Truck	Diesel	Off-Network	815	473	454			
Passenger Truck	Diesel	Rural Restricted				3,322	1,619	1,554
Passenger Truck	Diesel	Rural Unrestricted				6,112	3,624	3,492
Passenger Truck	Diesel	Urban Restricted				6,151	4,124	3,953
Passenger Truck	Diesel	Urban Unrestricted				12,430	7,850	7,554
Passenger Truck	Ethanol (E-85)	Off-Network	324	291	280			

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Passenger Truck	Ethanol (E-85)	Rural Restricted				1,572	1,062	1,005
Passenger Truck	Ethanol (E-85)	Rural Unrestricted				2,892	2,377	2,258
Passenger Truck	Ethanol (E-85)	Urban Restricted				2,910	2,705	2,556
Passenger Truck	Ethanol (E-85)	Urban Unrestricted				5,881	5,149	4,885
Passenger Truck	Electricity	Off-Network	18	816	921			
Passenger Truck	Electricity	Rural Restricted				100	3,719	4,161
Passenger Truck	Electricity	Rural Unrestricted				183	8,326	9,348
Passenger Truck	Electricity	Urban Restricted				184	9,473	10,583
Passenger Truck	Electricity	Urban Unrestricted				373	18,032	20,225
Light Commercial Truck	Gasoline	Off-Network	14,746	15,546	15,634			
Light Commercial Truck	Gasoline	Rural Restricted				62,468	55,595	55,642
Light Commercial Truck	Gasoline	Rural Unrestricted				114,954	124,464	125,001
Light Commercial Truck	Gasoline	Urban Restricted				115,683	141,611	141,514
Light Commercial Truck	Gasoline	Urban Unrestricted				233,774	269,569	270,437
Light Commercial Truck	Diesel	Off-Network	1,709	1,446	1,475			
Light Commercial Truck	Diesel	Rural Restricted				6,713	4,900	5,020
Light Commercial Truck	Diesel	Rural Unrestricted				12,353	10,969	11,279
Light Commercial Truck	Diesel	Urban Restricted				12,432	12,480	12,768
Light Commercial Truck	Diesel	Urban Unrestricted				25,122	23,757	24,401
Light Commercial Truck	Ethanol (E-85)	Off-Network	50	47	46			
Light Commercial Truck	Ethanol (E-85)	Rural Restricted				238	163	157
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted				437	364	354
Light Commercial Truck	Ethanol (E-85)	Urban Restricted				440	414	400
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted				889	789	765
Light Commercial Truck	Electricity	Off-Network	0	29	34			
Light Commercial Truck	Electricity	Rural Restricted				1	134	155
Light Commercial Truck	Electricity	Rural Unrestricted				2	300	349
Light Commercial Truck	Electricity	Urban Restricted				2	341	395
Light Commercial Truck	Electricity	Urban Unrestricted				4	649	755
Other Buses	Gasoline	Off-Network	131	143	142			
Other Buses	Gasoline	Rural Restricted				1,212	1,058	1,089
Other Buses	Gasoline	Rural Unrestricted				2,871	3,035	3,134
Other Buses	Gasoline	Urban Restricted				2,257	2,702	2,776
Other Buses	Gasoline	Urban Unrestricted				5,786	6,539	6,745
Other Buses	Diesel	Off-Network	58	46	46			
Other Buses	Diesel	Rural Restricted				481	297	288
Other Buses	Diesel	Rural Unrestricted				1,139	852	828
Other Buses	Diesel	Urban Restricted				895	758	733
Other Buses	Diesel	Urban Unrestricted				2,295	1,835	1,782

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Other Buses	CNG	Off-Network	0	2	2			
Other Buses	CNG	Rural Restricted				0	17	15
Other Buses	CNG	Rural Unrestricted				0	48	44
Other Buses	CNG	Urban Restricted				0	43	39
Other Buses	CNG	Urban Unrestricted				0	104	94
Other Buses	Electricity	Off-Network	0	0	0			
Other Buses	Electricity	Rural Restricted				0	0	0
Other Buses	Electricity	Rural Unrestricted				0	0	0
Other Buses	Electricity	Urban Restricted				0	0	0
Other Buses	Electricity	Urban Unrestricted				0	0	0
Transit Bus	Gasoline	Off-Network	23	17	24			
Transit Bus	Gasoline	Rural Restricted				212	134	159
Transit Bus	Gasoline	Rural Unrestricted				502	384	458
Transit Bus	Gasoline	Urban Restricted				394	341	406
Transit Bus	Gasoline	Urban Unrestricted				1,011	826	985
Transit Bus	Diesel	Off-Network	40	43	37			
Transit Bus	Diesel	Rural Restricted				319	301	273
Transit Bus	Diesel	Rural Unrestricted				755	863	786
Transit Bus	Diesel	Urban Restricted				593	768	696
Transit Bus	Diesel	Urban Unrestricted				1,521	1,858	1,690
Transit Bus	CNG	Off-Network	0	2	2			
Transit Bus	CNG	Rural Restricted				0	15	14
Transit Bus	CNG	Rural Unrestricted				0	44	42
Transit Bus	CNG	Urban Restricted				0	39	37
Transit Bus	CNG	Urban Unrestricted				0	95	89
Transit Bus	Electricity	Off-Network	0	1	1			
Transit Bus	Electricity	Rural Restricted				0	9	9
Transit Bus	Electricity	Rural Unrestricted				0	26	25
Transit Bus	Electricity	Urban Restricted				0	23	22
Transit Bus	Electricity	Urban Unrestricted				0	56	53
School Bus	Gasoline	Off-Network	53	81	79			
School Bus	Gasoline	Rural Restricted				191	252	241
School Bus	Gasoline	Rural Unrestricted				452	722	693
School Bus	Gasoline	Urban Restricted				356	643	614
School Bus	Gasoline	Urban Unrestricted				912	1,555	1,491
School Bus	Diesel	Off-Network	195	168	169			
School Bus	Diesel	Rural Restricted				661	493	492
School Bus	Diesel	Rural Unrestricted				1,565	1,413	1,416
School Bus	Diesel	Urban Restricted				1,230	1,258	1,254

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
School Bus	Diesel	Urban Unrestricted				3,153	3,044	3,046
School Bus	CNG	Off-Network	3	4	3			
School Bus	CNG	Rural Restricted				11	10	9
School Bus	CNG	Rural Unrestricted				25	29	27
School Bus	CNG	Urban Restricted				20	26	24
School Bus	CNG	Urban Unrestricted				50	63	58
School Bus	Electricity	Off-Network	0	0	1			
School Bus	Electricity	Rural Restricted				0	0	2
School Bus	Electricity	Rural Unrestricted				0	0	6
School Bus	Electricity	Urban Restricted				0	0	5
School Bus	Electricity	Urban Unrestricted				0	0	13
Refuse Truck	Gasoline	Off-Network	4	6	6			
Refuse Truck	Gasoline	Rural Restricted				39	26	25
Refuse Truck	Gasoline	Rural Unrestricted				66	53	51
Refuse Truck	Gasoline	Urban Restricted				73	66	64
Refuse Truck	Gasoline	Urban Unrestricted				133	114	111
Refuse Truck	Diesel	Off-Network	80	81	81			
Refuse Truck	Diesel	Rural Restricted				616	279	276
Refuse Truck	Diesel	Rural Unrestricted				1,036	568	564
Refuse Truck	Diesel	Urban Restricted				1,139	710	701
Refuse Truck	Diesel	Urban Unrestricted				2,088	1,225	1,214
Refuse Truck	CNG	Off-Network	0	0	0			
Refuse Truck	CNG	Rural Restricted				0	0	2
Refuse Truck	CNG	Rural Unrestricted				0	0	4
Refuse Truck	CNG	Urban Restricted				0	0	4
Refuse Truck	CNG	Urban Unrestricted				0	0	8
Refuse Truck	Electricity	Off-Network	0	0	0			
Refuse Truck	Electricity	Rural Restricted				0	0	0
Refuse Truck	Electricity	Rural Unrestricted				0	0	0
Refuse Truck	Electricity	Urban Restricted				0	0	0
Refuse Truck	Electricity	Urban Unrestricted				0	0	0
Single Unit Short-haul Truck	Gasoline	Off-Network	3,595	4,241	4,302			
Single Unit Short-haul Truck	Gasoline	Rural Restricted				20,268	20,064	20,244
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted				34,110	40,880	41,396
Single Unit Short-haul Truck	Gasoline	Urban Restricted				37,515	51,092	51,477
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted				68,764	88,088	89,100
Single Unit Short-haul Truck	Diesel	Off-Network	8,117	7,882	7,824			
Single Unit Short-haul Truck	Diesel	Rural Restricted				40,298	31,821	31,640
Single Unit Short-haul Truck	Diesel	Rural Unrestricted				67,818	64,832	64,698

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Single Unit Short-haul Truck	Diesel	Urban Restricted				74,589	81,028	80,454
Single Unit Short-haul Truck	Diesel	Urban Unrestricted				136,717	139,701	139,255
Single Unit Short-haul Truck	CNG	Off-Network	1	3	3			
Single Unit Short-haul Truck	CNG	Rural Restricted				3	17	16
Single Unit Short-haul Truck	CNG	Rural Unrestricted				4	35	33
Single Unit Short-haul Truck	CNG	Urban Restricted				5	44	41
Single Unit Short-haul Truck	CNG	Urban Unrestricted				9	76	72
Single Unit Short-haul Truck	Electricity	Off-Network	0	0	0			
Single Unit Short-haul Truck	Electricity	Rural Restricted				0	3	3
Single Unit Short-haul Truck	Electricity	Rural Unrestricted				0	7	7
Single Unit Short-haul Truck	Electricity	Urban Restricted				0	9	8
Single Unit Short-haul Truck	Electricity	Urban Unrestricted				0	15	14
Single Unit Long-haul Truck	Gasoline	Off-Network	140	157	150			
Single Unit Long-haul Truck	Gasoline	Rural Restricted				1,064	911	936
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted				1,790	1,856	1,914
Single Unit Long-haul Truck	Gasoline	Urban Restricted				1,969	2,319	2,380
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted				3,609	3,998	4,119
Single Unit Long-haul Truck	Diesel	Off-Network	385	387	394			
Single Unit Long-haul Truck	Diesel	Rural Restricted				2,884	2,164	2,225
Single Unit Long-haul Truck	Diesel	Rural Unrestricted				4,853	4,409	4,549
Single Unit Long-haul Truck	Diesel	Urban Restricted				5,338	5,511	5,657
Single Unit Long-haul Truck	Diesel	Urban Unrestricted				9,784	9,501	9,792
Single Unit Long-haul Truck	CNG	Off-Network	1	2	2			
Single Unit Long-haul Truck	CNG	Rural Restricted				19	16	16
Single Unit Long-haul Truck	CNG	Rural Unrestricted				32	33	33
Single Unit Long-haul Truck	CNG	Urban Restricted				35	42	41
Single Unit Long-haul Truck	CNG	Urban Unrestricted				65	72	72
Single Unit Long-haul Truck	Electricity	Off-Network	0	0	0			
Single Unit Long-haul Truck	Electricity	Rural Restricted				0	1	3
Single Unit Long-haul Truck	Electricity	Rural Unrestricted				0	1	5
Single Unit Long-haul Truck	Electricity	Urban Restricted				0	2	6
Single Unit Long-haul Truck	Electricity	Urban Unrestricted				1	3	11
Motor Home	Gasoline	Off-Network	821	832	826			
Motor Home	Gasoline	Rural Restricted				1,591	1,253	1,266
Motor Home	Gasoline	Rural Unrestricted				2,678	2,553	2,590
Motor Home	Gasoline	Urban Restricted				2,945	3,191	3,220
Motor Home	Gasoline	Urban Unrestricted				5,399	5,501	5,574
Motor Home	Diesel	Off-Network	313	342	349			
Motor Home	Diesel	Rural Restricted				645	536	555

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Motor Home	Diesel	Rural Unrestricted				1,085	1,092	1,135
Motor Home	Diesel	Urban Restricted				1,194	1,365	1,411
Motor Home	Diesel	Urban Unrestricted				2,188	2,353	2,442
Motor Home	CNG	Off-Network	0	0	0			
Motor Home	CNG	Rural Restricted				0	0	0
Motor Home	CNG	Rural Unrestricted				0	0	0
Motor Home	CNG	Urban Restricted				0	0	0
Motor Home	CNG	Urban Unrestricted				0	0	0
Motor Home	Electricity	Off-Network	0	0	0			
Motor Home	Electricity	Rural Restricted				0	0	0
Motor Home	Electricity	Rural Unrestricted				0	0	0
Motor Home	Electricity	Urban Restricted				0	0	0
Motor Home	Electricity	Urban Unrestricted				0	0	0
Combination Short-haul Truck	Gasoline	Off-Network	7	3	3			
Combination Short-haul Truck	Gasoline	Rural Restricted				36	13	12
Combination Short-haul Truck	Gasoline	Rural Unrestricted				16	7	6
Combination Short-haul Truck	Gasoline	Urban Restricted				66	34	29
Combination Short-haul Truck	Gasoline	Urban Unrestricted				33	16	14
Combination Short-haul Truck	Diesel	Off-Network	822	779	768			
Combination Short-haul Truck	Diesel	Rural Restricted				17,531	16,156	15,871
Combination Short-haul Truck	Diesel	Rural Unrestricted				7,901	8,847	8,722
Combination Short-haul Truck	Diesel	Urban Restricted				32,122	40,951	40,166
Combination Short-haul Truck	Diesel	Urban Unrestricted				15,927	19,060	18,770
Combination Short-haul Truck	CNG	Off-Network	10	22	26			
Combination Short-haul Truck	CNG	Rural Restricted				514	799	967
Combination Short-haul Truck	CNG	Rural Unrestricted				232	438	531
Combination Short-haul Truck	CNG	Urban Restricted				942	2,026	2,447
Combination Short-haul Truck	CNG	Urban Unrestricted				467	943	1,144
Combination Short-haul Truck	Electricity	Off-Network	0	0	0			
Combination Short-haul Truck	Electricity	Rural Restricted				0	0	0
Combination Short-haul Truck	Electricity	Rural Unrestricted				0	0	0
Combination Short-haul Truck	Electricity	Urban Restricted				0	0	0
Combination Short-haul Truck	Electricity	Urban Unrestricted				0	0	0
Combination Long-haul Truck	Diesel	Off-Network	1,186	1,135	1,125			
Combination Long-haul Truck	Diesel	Rural Restricted				75,511	61,803	62,071
Combination Long-haul Truck	Diesel	Rural Unrestricted				34,034	33,842	34,112
Combination Long-haul Truck	Diesel	Urban Restricted				138,362	156,648	157,094
Combination Long-haul Truck	Diesel	Urban Unrestricted				68,605	72,908	73,413
Combination Long-haul Truck	CNG	Off-Network	3	4	5			

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
Combination Long-haul Truck	CNG	Rural Restricted				327	332	331
Combination Long-haul Truck	CNG	Rural Unrestricted				147	182	182
Combination Long-haul Truck	CNG	Urban Restricted				599	842	839
Combination Long-haul Truck	CNG	Urban Unrestricted				297	392	392
Combination Long-haul Truck	Electricity	Off-Network	0	0	0			
Combination Long-haul Truck	Electricity	Rural Restricted				0	0	12
Combination Long-haul Truck	Electricity	Rural Unrestricted				0	0	7
Combination Long-haul Truck	Electricity	Urban Restricted				0	0	31
Combination Long-haul Truck	Electricity	Urban Unrestricted				0	0	14
ALL (Total)	ALL (Total)	ALL (Total)	326,018	335,286	337,440	11,950,665	12,587,936	12,632,116
Motorcycle	ALL	ALL	10,187	10,448	10,545	75,075	77,944	78,282
Passenger Car	ALL	ALL	152,346	155,928	156,928	5,304,520	5,402,516	5,409,222
Passenger Truck	ALL	ALL	130,991	135,460	136,410	5,026,560	5,442,727	5,473,907
Light Commercial Truck	ALL	ALL	16,505	17,068	17,188	585,513	646,499	649,393
Other Buses	ALL	ALL	189	190	190	16,936	17,286	17,566
Transit Bus	ALL	ALL	63	63	63	5,308	5,782	5,742
School Bus	ALL	ALL	251	252	252	8,624	9,507	9,391
Refuse Truck	ALL	ALL	84	87	87	5,190	3,041	3,024
Single Unit Short-haul Truck	ALL	ALL	11,713	12,127	12,129	480,100	517,711	518,459
Single Unit Long-haul Truck	ALL	ALL	527	546	546	31,445	30,839	31,760
Motor Home	ALL	ALL	1,134	1,174	1,175	17,725	17,844	18,193
Combination Short-haul Truck	ALL	ALL	839	804	797	75,786	89,290	88,679
Combination Long-haul Truck	ALL	ALL	1,189	1,139	1,130	317,882	326,950	328,498
ALL (Total)	ALL (Total)	ALL (Total)	326,018	335,286	337,440	11,950,665	12,587,936	12,632,116
ALL	Gasoline	ALL	310,608	319,009	321,077	11,043,253	11,596,072	11,634,555
ALL	Diesel	ALL	14,737	13,544	13,484	876,777	865,865	865,136
ALL	CNG	ALL	19	38	42	3,803	6,822	7,669
ALL	Ethanol (E-85)	ALL	469	439	426	18,868	16,518	15,801
ALL	Electricity	ALL	185	2,257	2,411	7,964	102,660	108,956
ALL (Total)	ALL (Total)	ALL (Total)	326,018	335,286	337,440	11,950,665	12,587,936	12,632,116
ALL	ALL	Off-Network	326,018	335,286	337,440			
ALL	ALL	Rural Restricted				1,462,407	1,222,362	1,224,873
ALL	ALL	Rural Unrestricted				2,566,135	2,607,462	2,622,032

Attainment Plan for the Milwaukee, WI 2015 Ozone NAAQS Moderate Nonattainment Area

Source Type	Fuel Type	Road Type	Waukesha County Portion of Nonattainment Area					
			Vehicle Population			Vehicle-Miles of Travel Ozone Season Weekday		
			2017	2023	2024	2017	2023	2024
ALL	ALL	Urban Restricted				2,706,477	3,112,629	3,114,391
ALL	ALL	Urban Unrestricted				5,215,645	5,645,483	5,670,821
ALL (Total)	ALL (Total)	ALL (Total)	326,018	335,286	337,440	11,950,665	12,587,936	12,632,116

APPENDIX 8

Wisconsin VOC RACT Regulations and Negative Declarations

Background

Reasonably Available Control Technology (RACT) represents the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility (44 FR 53761). Section 182(b)(2) of the Clean Air Act (CAA) requires nonattainment areas classified as moderate or higher to implement RACT for sources of volatile organic compounds (VOCs).

Section 183 of the CAA requires the EPA to issue guidance for RACT controls for reducing emissions from stationary sources. The EPA has issued such guidance in the form of Control Techniques Guidelines (CTGs), which represent “presumptive norms” for RACT for specific categories of VOC sources. States with nonattainment areas subject to section 182(b)(2) are required to implement RACT for CTGs issued between the date of the CAA Amendments of 1990 and the date of attainment (section 182(b)(2)(A)), and for CTGs issued before the date of enactment of the CAA Amendments of 1990 (section 182(b)(2)(B)).

Wisconsin’s VOC RACT Rules

Generally, states meet RACT requirements by codifying the control requirements established in CTG documents. Wisconsin’s VOC RACT rules are contained in chapters 420 through 423, Wisc. Admin. Code. Table A8-1 lists these RACT rules, the associated CTGs they incorporate, and applicable source categories. In addition to the listed rules, chapter NR 424, Wisc. Admin. Code, addresses the control of VOC emissions from process lines, and chapter NR 425 covers compliance schedules, delays, exemptions and internal offsets.

Negative Declarations

To satisfy Section 182(b)(2)(A) and (B), the WDNR must certify that there are no facilities in the nonattainment area for which RACT requirements have not been codified or for which the state rules do not reflect the most recently published CTG (i.e., make a negative declaration).

Wisconsin has not adopted VOC RACT requirements covered by the following CTGs:

- Shipbuilding and Ship Repair (61 FR-44050 8/27/96; 1996),
- Aerospace Manufacturing (EPA-453/R-97-004; 1997),
- Fiberglass Boat Manufacturing (EPA 453/R-08-004; 2008), and
- Oil and Natural Gas Industry (EPA-453/B-16-001; 2016).

In addition, Wisconsin previously promulgated RACT requirements for automobile and light-duty truck manufacturing ([NR 422.09](#)). However, the Wisconsin Administrative Code does not currently reflect the EPA’s most recent CTG for Automobile and Light-Duty Truck Assembly Coatings (EPA 453/R-08-006; 2008).

The WDNR reviewed available source information in the nonattainment area and did not find any facilities engaging in activities subject any CTG category for which Wisconsin has not adopted or updated RACT requirements. Therefore, to satisfy Section 182(b)(2) requirements, the WDNR is submitting a negative declaration for these five CTG categories for this nonattainment area.

Table A8-1. Volatile Organic Compounds (VOC) Control Technique Guidelines Incorporated into Wisconsin Administrative Code.

Source	Title (Description)	EPA CTG Report No.	Wis. Adm. Code Ref.	Emissions Inventory Classification ¹
Petroleum and Gasoline Sources				
Bulk Gasoline Plants	Control of Volatile Organic Emissions from Bulk Gasoline Plants [bulk gasoline plant unloading, loading and storage]	EPA-450/2-77-035	NR 420.04(2)	Stationary Point Source
Refinery Equipment - Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds	Control of Refinery Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds	EPA-450/2-77-025	NR 420.05(1), (2) and (3)	Stationary Point Source
Refinery Equipment - Control of VOC Leaks	Control of Volatile Organic Compound Leaks from Petroleum Refinery Equipment	EPA-450/2-78-036	NR 420.05(4)	Stationary Point Source
Refinery Equipment - Control of VOC Leaks	Control of Volatile Organic Compound Equipment Leaks from Natural Gas/Gasoline Processing Plants	EPA-450/3-83-007	NR 420.05(4)	Stationary Point Source
Tanks - Fixed Roof	Control of Volatile Organic Emissions from Storage of Petroleum Liquids in Fixed-Roof Tanks	EPA-450/2-77-036	NR 420.03(5)	Stationary Point Source
Tanks - External Floating Roofs	Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks	EPA-450/2-78-047	NR 420.03(6) and (7)	Stationary Point Source
Gasoline Loading Terminals	Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals	EPA-450/2-77-026	NR 420.04(1)	Stationary Point Source
Tank Trucks	Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems	EPA-450/2-78-051	NR 420.04(4)	Stationary Area Source
Gasoline Delivery - Stage I Vapor Control Systems	Design Criteria for Stage I Vapor Control Systems – Gasoline Service Stations	EPA-450/R-75-102	NR 420.04(3)	Stationary Area Source
Surface Coating				
Adhesives	Control Techniques Guidelines for Miscellaneous Industrial Adhesives	EPA 453/R-08-005	NR 422.128	Stationary Point Source

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Source	Title (Description)	EPA CTG Report No.	Wis. Adm. Code Ref.	Emissions Inventory Classification ¹
Automobile & Light-duty Truck	Control Techniques Guidelines for Automobile and Light-Duty Truck Assembly Coatings	EPA 453/R-08-006	NR 422.09	Stationary Point Source
Cans	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks	EPA-450/2-77-008	NR 422.05	Stationary Point Source
Coils	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks	EPA-450/2-77-008	NR 422.06	Stationary Point Source
Fabric & Vinyl	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks	EPA-450/2-77-008	NR 422.08	Stationary Point Source
Flat Wood Paneling	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VII: Factory Surface Coating of Flat Wood Paneling	EPA-450/2-78-032	NR 422.13	Stationary Point Source
	Control Techniques Guidelines for Flat Wood Paneling Coatings	EPA-453/R-06-004	NR 422.131	Stationary Point Source
Large Appliances	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume V: Surface Coating of Large Appliances	EPA-450/2-77-034	NR 422.11	Stationary Point Source
	Control Techniques Guidelines for Large Appliance Coatings	EPA 453/R-07-004	NR 422.115	Stationary Point Source
Magnet Wire	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume IV: Surface Coating of Insulation of Magnet Wire	EPA-450/2-77-033	NR 422.12	Stationary Point Source
Metal Furniture	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume III: Surface Coating of Metal Furniture	EPA-450/2-77-032	NR 422.1	Stationary Point Source
	Control Techniques Guidelines for Metal Furniture Coatings	EPA 453/R-07-005	NR 422.105	Stationary Point Source

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Source	Title (Description)	EPA CTG Report No.	Wis. Adm. Code Ref.	Emissions Inventory Classification ¹
Metal Parts, miscellaneous	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VI: Surface Coating of Miscellaneous Metal Parts and Products	EPA-450/2-78-015	NR 422.15	Stationary Point Source
	Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings	EPA 453/R-08-003	NR 422.151	Stationary Point Source
	Fire Truck and Emergency Response Vehicle Manufacturing - surface coating	(covered under Misc. Metal Parts CTG)	NR 422.151	Stationary Point Source
Paper, Film and Foil	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks	EPA-450/2-77-008	NR 422.07	Stationary Point Source
	Control Techniques Guidelines for Paper, Film, and Foil Coatings	EPA 453/R-07-003	NR 422.075	Stationary Point Source
Plastic Parts - Coatings	Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings	EPA 453/R-08-003	NR 422.084	Stationary Point Source
Traffic Markings	Reduction of Volatile Organic Compound Emissions from the Application of Traffic Markings	EPA-450/3-88-007	NR 422.17	Stationary Area Source
Wood Furniture	Control of Volatile Organic Compound Emissions from Wood Furniture Manufacturing Operations	EPA-453/R-96-007	NR 422.125	Stationary Point Source
Graphic Arts				
Rotogravure & Flexography	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VIII: Graphic Arts-Rotogravure and Flexography	EPA-450/2-78-033	NR 422.14	Stationary Point Source
Flexible Packaging	Control Techniques Guidelines for Flexible Package Printing	EPA-453/R-06-003	NR 422.141	Stationary Point Source
Letterpress	Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing	EPA-453/R-06-002	NR 422.144	Stationary Point Source
Lithographic	Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing	EPA-453/R-06-002	NR 422.142 and 422.143	Stationary Point Source

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Source	Title (Description)	EPA CTG Report No.	Wis. Adm. Code Ref.	Emissions Inventory Classification ¹
Solvents				
Dry Cleaning	Control of Volatile Organic Emissions from Perchloroethylene Dry Cleaning Systems	EPA-450/2-78-050	NR 423.05	Stationary Area Source
Dry Cleaning	Control of Volatile Organic Compound Emissions from Large Petroleum Dry Cleaners	EPA-450/3-82-009	NR 423.05	Stationary Area Source
Industrial Cleaning	Control Techniques Guidelines for Industrial Cleaning Solvents	EPA-453/R-06-001	NR 423.035 and 423.037	Stationary Area Source
Metal Cleaning	Control of Volatile Organic Emissions from Solvent Metal Cleaning	EPA-450/2-77-022	NR 423.03	Stationary Area Source
Chemical				
Pharmaceutical	Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products	EPA-450/2-78-029	NR 421.03	Stationary Point Source
Polystyrene	Control of Volatile Organic Compound Emissions from Manufacture of High-Density Polyethylene, Polypropylene, and Polystyrene Resins	EPA-450/3-83-008	NR 421.05	Stationary Point Source
Rubber	Control of Volatile Organic Emissions from Manufacture of Pneumatic Rubber Tires	EPA-450/2-78-030	NR 421.04	Stationary Point Source
Synthetic Organic	Control of Volatile Organic Compound Emissions from Air Oxidation Processes in Synthetic Organic Chemical Manufacturing Industry	EPA-450/3-84-015	NR 421.07	Stationary Point Source
Synthetic Organic	Control of Volatile Organic Compound Emissions from Reactor Processes and Distillation Operations in Synthetic Organic Chemical Manufacturing Industry	EPA-450/4-91-031	NR 421.07	Stationary Point Source
Synthetic Resin	Control of Volatile Organic Compound Leaks from Synthetic Organic Chemical Polymer and Resin Manufacturing Equipment	EPA-450/3-83-006	NR 421.05	Stationary Point Source
Manufacturing				

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Source	Title (Description)	EPA CTG Report No.	Wis. Adm. Code Ref.	Emissions Inventory Classification ¹
Asphalt	Control of Volatile Organic Emissions from Use of Cutback Asphalt	EPA-450/2-77-037	NR 422.16	Stationary Area Source

¹For purposes of this table, an “Area” source is defined as a nonpoint or fugitive emission source

APPENDIX 9

LADCO 2015 Ozone NAAQS Attainment Modeling Technical Support Document



Attainment Demonstration Modeling for the 2015 Ozone National Ambient Air Quality Standard

Technical Support Document

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Please direct question/comments to adelman@ladco.org

September 21, 2022

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Document Change Log

Version	Date	Comments/Changes
1	May 24, 2022	First draft to LADCO members
2	July 27, 2022	Assimilated comments from LADCO members and US EPA
3	September 21, 2022	Final TSD: assimilated comments from IL EPA and US EPA

Errata/Known Issues

#	Description

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Executive Summary

LADCO prepared this Technical Support Document (TSD) to support the development of 2015 ozone (O₃) national ambient air quality standard (NAAQS) nonattainment area (NAA) state implementation plans (SIPs). LADCO used the Comprehensive Air Quality Model with Extensions (CAMx) v7.10 photochemical model to support these analyses. The LADCO CAMx modeling results are used here to identify O₃ monitoring sites that may have nonattainment or maintenance problems for the 2015 O₃ NAAQS by the August 3, 2024 attainment date for moderate NAAs. Because the attainment date occurs during the 2024 O₃ season, the effective attainment deadline is the end of the 2023 O₃ season and thus resulted in the selection of 2023 as the projection year for this modeling application. LADCO used 2016 as the base modeling year from which we projected air quality in 2023.

LADCO based our 2023 O₃ air quality and NAA attainment forecasts on meteorology modeling that was optimized for conditions in the Great Lakes Basin. We used U.S. EPA 2016fh emissions modeling platform data, and other CAMx modeling platform inputs released by the U.S. EPA in September 2019 for this application. LADCO replaced the Electricity Generating Unit (EGU) emissions in the 2016fh platform with 2023 EGU forecasts estimated with the ERTAC EGU Tool version 16.2 beta. ERTAC EGU 16.2 beta integrated state-reported information on EGU operations and forecasts as of September 2021. Overall the CO, NO_x, and VOC ozone season emissions are projected to decrease in 2023 relative to 2016 in all LADCO states.

The LADCO 2023 CAMx simulation predicts that the Chiwaukee Prairie, WI and Sheboygan Kohler Andrae, WI monitors are the only two receptors in the region that will have an average future year design value (DV₂₀₂₃) that exceeds the 2015 O₃ NAAQS.

We justify the use of the LADCO 2016 modeling platform by comparing O₃ modeling performance benchmarks against recent U.S. EPA 2016 modeling and demonstrating that the LADCO model is a superior model of ground level O₃ in the Great Lakes Basin.

1. Introduction

The Lake Michigan Air Directors Consortium (LADCO) was established by the states of Illinois, Indiana, Michigan, and Wisconsin in 1989. The four states and EPA signed a Memorandum of Agreement (MOA) that initiated the Lake Michigan Ozone Study and identified LADCO as the organization to oversee the study. Additional MOAs were signed by the states in 1991 (to establish the Lake Michigan Ozone Control Program), January 2000 (to broaden LADCO's responsibilities), and June 2004 (to update LADCO's mission and reaffirm the commitment to regional planning). In March 2004, Ohio joined LADCO. Minnesota joined the Consortium in 2012. LADCO consists of a Board of Directors (i.e., the State Air Directors), a technical staff, and various workgroups. The main purposes of LADCO are to provide technical assessments for and assistance to its member states, to provide a forum for its member states to discuss regional air quality issues, and to facilitate training for staff in the member states.

On October 26, 2015 the U.S. EPA revised the primary and secondary National Ambient Air Quality Standard (NAAQS) for ozone (O₃), strengthening the standard to a level of 0.070 parts per million (ppm) for a maximum daily 8-hour average (80 FR 65291)¹. The form of the 8-hour O₃ NAAQS remained the same as the previous standard, the annual fourth-highest daily maximum averaged over three consecutive years. When U.S. EPA adopts a new or revises an existing NAAQS, it is required by Section 107(d)(1) of the Clean Air Act (CAA) to designate areas as nonattainment, attainment, or unclassifiable. Accordingly, on November 6, 2017 U.S. EPA considered recommendations from states and tribes and designated as attainment/unclassifiable 2,646 counties and tribal lands across the U.S. (82 FR 54232). The U.S. EPA followed up this action on June 4, 2018 and initially designated several areas in the Great Lakes region, among other areas in the country, as "marginal" O₃ nonattainment areas (NAA) based on 2014-2016 ambient air quality data (85 FR 25776). Table 1-1 shows the areas in the LADCO region initially designated by U.S. EPA as nonattainment of the 2015 O₃ NAAQS.

¹ The final rule was effective December 8, 2015.

Table 1-1. June 4, 2018 designations of 2015 Ozone NAAQS NAAs in the LADCO region

Area	State	Designation
Allegan County	MI	Marginal
Berrien County	MI	Marginal
Chicago	IL, IN, WI	Marginal
Cincinnati	OH, KY	Marginal
Cleveland	OH	Marginal
Columbus	OH	Marginal
Detroit	MI	Marginal
Door County	WI	Marginal
Louisville	KY, IN	Marginal
Manitowoc County	WI	Marginal
Milwaukee	WI	Marginal
Muskegon County	MI	Marginal
St. Louis	MO, IL	Marginal
Sheboygan County	WI	Marginal

Several follow-up U.S. EPA actions redesignated some of the areas in the LADCO region from nonattainment to maintenance areas or changed the boundaries of the nonattainment areas. Table 1-2 summarizes the subsequent 2015 O₃ NAAQS final actions taken by U.S. EPA on NAAs in the LADCO region.

Table 1-2. U.S. EPA final actions on 2015 Ozone NAAQS NAAs in the LADCO region as of July 27, 2022

Area	State	Action	Date
Columbus	OH	Redesignation to maintenance	8/21/2019
Door County-Revised	WI	Redesignation to maintenance	6/10/2020
Sheboygan County	WI	Boundary change	6/14/2021
Manitowoc County	WI	Boundary change	6/14/2021
Milwaukee	WI	Boundary change	6/14/2021
Door County-Revised	WI	Designation to marginal NAA	6/14/2021
Chicago	IL, IN, WI	Boundary change	6/14/2021
St. Louis	MO, IL	Boundary change	6/14/2021
Manitowoc County	WI	Redesignation to maintenance	3/1/2022
Door County-Revised	WI	Redesignation to maintenance	4/29/2022
Cincinnati	OH	Redesignation to maintenance	6/9/2022
Louisville	IN	Redesignation to maintenance	7/5/2022

On April 13, 2022, U.S. EPA determined that several NAAs in the LADCO region failed to attain the 2015 O₃ NAAQS by the August 3, 2021 attainment date and proposed to reclassify the areas as “moderate” O₃ NAAs. The attainment deadline for moderate NAAs to meet the 2015 O₃ NAAQS is August 3, 2024.

The 2015 O₃ NAAQS nonattainment areas in the LADCO region as of July 27, 2022 are shown in Figure 1-1. The states with NAAs shown in this figure must submit State Implementation Plans (SIPs) to U.S. EPA that meet the requirements applicable to “moderate” O₃ NAAs. The NAA SIPs, or attainment demonstrations, must include a demonstration which identifies emissions reduction strategies that are enough to achieve the NAAQS by August 3, 2024, the attainment date for moderate NAAs. Because the attainment deadline occurs during the 2024 O₃ season, the effective attainment deadline is the end of the 2023 O₃ season.

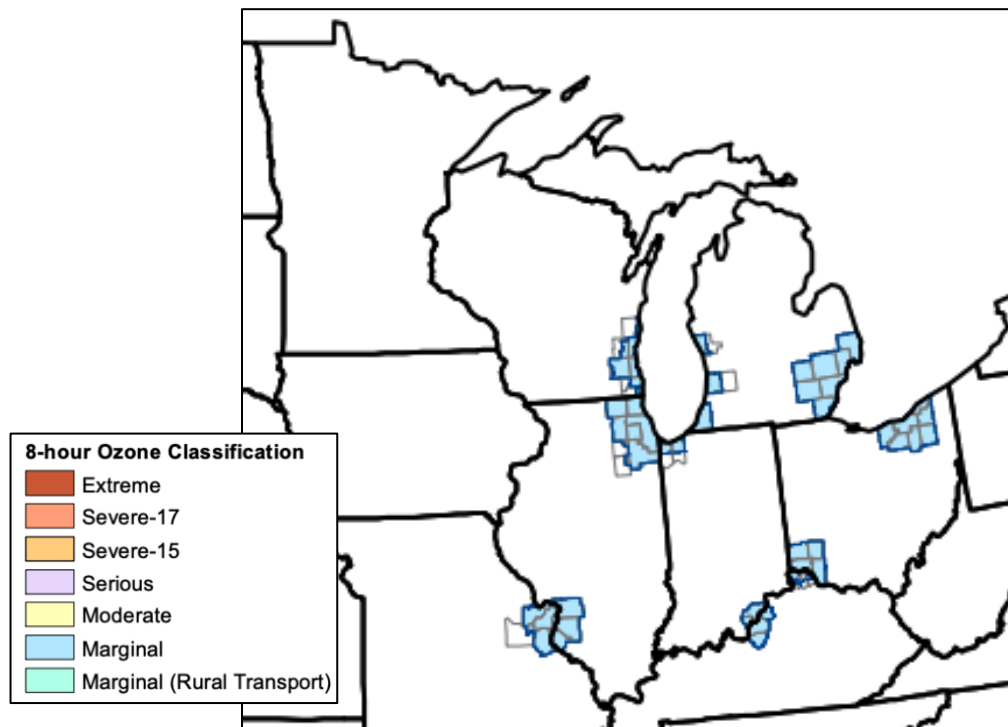


Figure 1-1. Nonattainment areas in the Lake Michigan region for the 2015 O₃ NAAQS (Source: U.S. EPA, June 30, 2022).²

² For the Cincinnati, OH-KY nonattainment area the Ohio portion was redesignated on June 9, 2022. For the Louisville, KY-IN nonattainment area the Indiana portion was redesignated on July 5, 2022. Neither of the Kentucky portions of these areas have been redesignated. The entire area is not considered in maintenance until all states in a multi-state area are redesignated.

One of LADCO's responsibilities is to provide technical air quality modeling guidance and support to the LADCO member states. LADCO prepared this Technical Support Document (TSD) to support the development of the O₃ NAA SIPs (e.g., attainment plans) for our members pursuant to the 2015 O₃ NAAQS. The analyses prepared by LADCO include preparation of modeling emissions inventories for the base year (2016) and the last completed ozone season (2023) before the attainment year (2024), evaluation and application of meteorological and photochemical grid models, analysis of ambient monitoring data, and a modeled attainment test for surface O₃ monitors in the existing NAAs. In this report LADCO provides technical information on the validity of the model used to forecast future air quality, and our predictions of future O₃ design values for the following 2015 O₃ NAAQS nonattainment areas:

- Chicago, IL/IN/WI
- St. Louis, MO/IL
- Allegan County, MI
- Berrien County, MI
- Muskegon County, MI
- Detroit, MI
- Cleveland, OH
- Milwaukee, WI
- Sheboygan County, WI

1.1. Conceptual Models of Ozone Formation in the LADCO Region

An O₃ conceptual model is a qualitative description of the physical and chemical parameters that drive ground level O₃ formation in a specific area. The purpose of the model is to build understanding of the meteorological and chemical factors contributing to high O₃ concentrations. Ozone conceptual models are a component of attainment plans because a

fundamental understanding of the cause of O₃ pollution is needed to enable the development of effective mitigation strategies.

LADCO compiled a library of O₃ conceptual models for the different NAAs in the region on the LADCO website:

[Conceptual Models of Ozone Formation in the LADCO Region](#)

The site includes conceptual models for the following areas in the LADCO region,

- Chicago, IL/IN/WI
- Cincinnati, OH/KH
- Cleveland, OH
- Southeast Michigan
- Louisville, KY/IN
- Wisconsin Lakeshore
- St. Louis, MO/IL
- Western Michigan

1.2. LADCO Ozone Synthesis Project

Starting in 2017 with the Lake Michigan Ozone Study, LADCO has been building a library of contemporary, state-of-the-science information on ground level O₃ pollution in the Great Lakes Basin. The purpose of this effort is to synthesize all known, recent information about O₃ in the region into a coherent picture of the drivers of and potential solutions to O₃ air pollution. The goal of the effort is to provide the LADCO member states with comprehensive decision support resources that are based on the best available information on emissions, ambient observations, satellite-based remote sensing, and modeling.

The LADCO O₃ Synthesis Project supplements this TSD with reports on the following areas:

- Ozone chemistry
- Satellite-based remote sensing
- Ozone trends
- Ozone precursor emissions reduction options
- Machine learning applications for understanding ozone

- Insights from recent monitoring and modeling intensives (LMOS and MOOSE)

The LADCO O₃ Synthesis Project reports are available on the O₃ Science page of the LADCO website:

[LADCO Ozone Science for the Great Lakes Basin](https://www.ladco.org/public-issues/ozone/ozone-science/)³

1.3. Project Overview

LADCO conducted regional air quality modeling to support the statutory obligations of the LADCO member states under Clean Air Section 172. These obligations include SIP revisions that are plans describing how states with designated NAAs will bring the areas back into attainment of the NAAQS. LADCO used the Comprehensive Air Quality Model with Extensions (CAMx⁴) to support these analyses. LADCO used CAMx version 7.10 to predict O₃ concentrations in 2023 to determine if current emissions control programs in the region will lead to attainment of the 2015 O₃ NAAQS.

1.4. Organization of the Technical Support Document

This TSD is presented to the LADCO member states for estimating year 2023 O₃ design values (DVF₂₀₂₃). The TSD is organized into the following sections.

- [Section 2](#) describes current surface O₃ conditions in the LADCO region and trends in O₃ concentrations over the past decade
- [Section 3](#) describes the methods and data that LADCO used for air quality modeling, model performance evaluation, and source apportionment modeling.
- [Section 4](#) describes the 2016 and 2023 emissions used for the modeling and attainment testing described in this TSD
- [Section 5](#) summarizes the results of LADCO 2016 air quality model performance evaluation, including a summary and references to details of the WRF meteorology modeling used to support the CAMx simulations

³ <https://www.ladco.org/public-issues/ozone/ozone-science/>

⁴ www.camx.com

- [Section 6](#) describes LADCO's model attainment testing methods and results
- [Section 7](#) presents source apportionment modeling results that associate O₃ precursors sources to O₃ concentrations at NAA receptors in the region.
- [Section 8](#) provides a justification for using the LADCO 2016 modeling for the 2015 O₃ NAAQS moderate area attainment demonstrations
- The TSD concludes with a [summary of significant findings](#) and observations from the LADCO modeling.
- The [TSD Supplement](#) is a separate document that includes additional supplementary technical information to support this TSD.

Throughout the TSD, the modeling and analysis results are organized by the 2015 O₃ NAAQS NAAs where appropriate. The TSD presents average ozone season day emissions summaries, CAMx model performance, O₃ attainment test results, and source apportionment results for each 2015 O₃ NAAQS NAA in the LADCO region.

2. 2016 Ambient Air Quality Data Analysis

LADCO retrieves and conducts analyses on surface O₃ data collected at routine and special-purpose ambient monitors throughout the region. The current monitored O₃ design values (DVs), or the three-year average of the 4th highest daily maximum 8-hour average (MDA8) O₃ concentrations, are presented in this section along with a discussion of trends in O₃ DVs and other metrics for tracking the changes in surface O₃ concentrations in the region. Design values are labeled by the last year of the three-year average. For example, the 2021 O₃ DV is the average of the annual 4th highest MDA8 O₃ concentrations for the years 2019-2021.

2.1. Current Conditions

Figure 2-1 shows maps of the 2021 annual fourth high MDA8 values and the 2021 DVs for the LADCO region. Figure 2-2 shows the same DV data for each O₃ NAA and maintenance area. DVs exceeding the level of the 2015 O₃ NAAQS (70 ppb) are shown in orange. These figures also show the locations of the 2015 O₃ NAAQS NAAs and maintenance areas.

Table 2-1 and Table 2-2 show the historical trends in O₃ DVs in O₃ nonattainment and maintenance areas in the region. Table 2-1 shows the annual DVs for each area from 2015 to 2021; these values show the DV from the “controlling” monitor, or the monitor with the highest 3-year DV in the entire area. Table 2-2 shows the annual DVs for all monitors in the NAAs and maintenance areas from 2015 to 2021.

The DV tables and figures show that about half of the areas in the LADCO region were attaining the 2015 O₃ NAAQS in 2021. These attaining areas include the Door County-Revised, WI, Manitowoc County, WI, Detroit, MI, St. Louis, MO-IL, Louisville, KY-IN, and Cincinnati, OH-KY areas. Six areas around Lake Michigan (Sheboygan, WI, Milwaukee, WI, Chicago, IL-IN-WI, and the Berrien, Allegan, and Muskegon county areas in MI) and Cleveland, OH violated the 2015 O₃ NAAQS in 2021; no areas violated the 2008 ozone NAAQS in 2021.

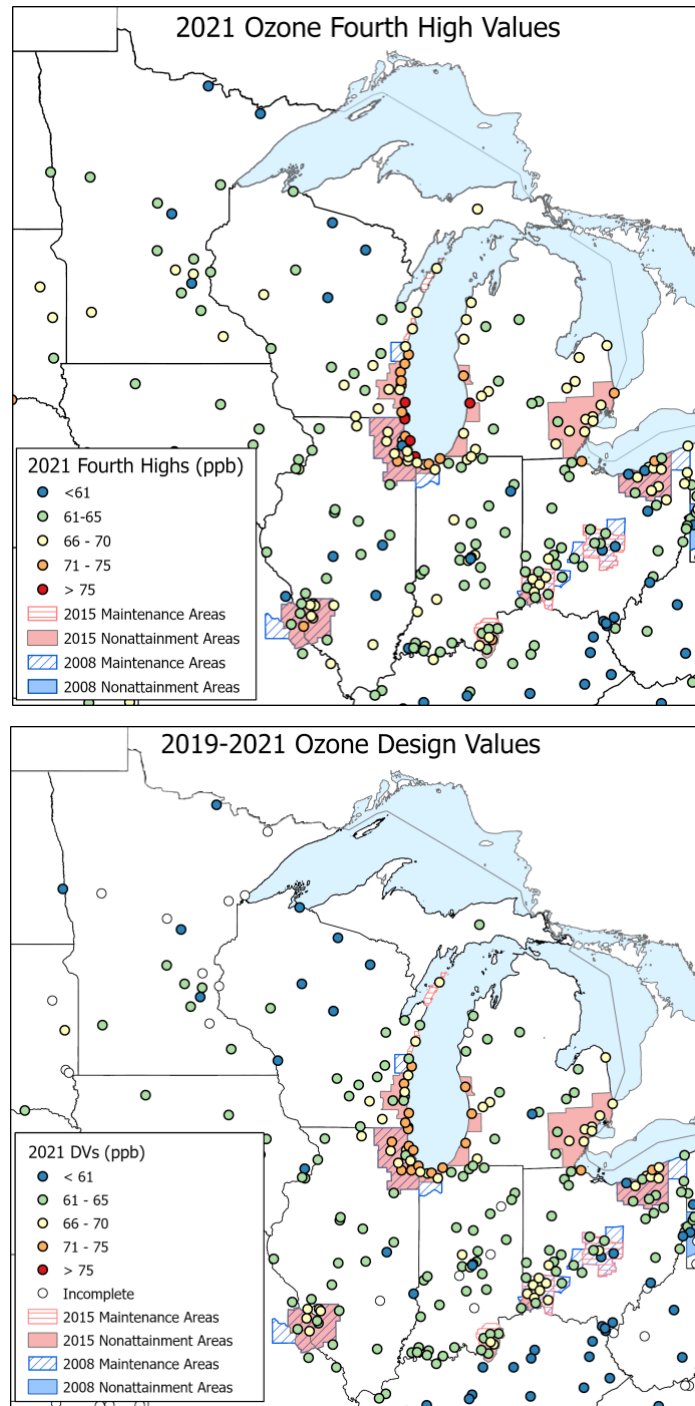


Figure 2-1. 2021 fourth high ozone MDA8 values (top) and draft 2019-2021 ozone design values (bottom) for the LADCO region. Nonattainment and maintenance areas for the 2008 and 2015 ozone NAAQS are shown for comparison. Where the current nonattainment areas overlap, the area appears purple.

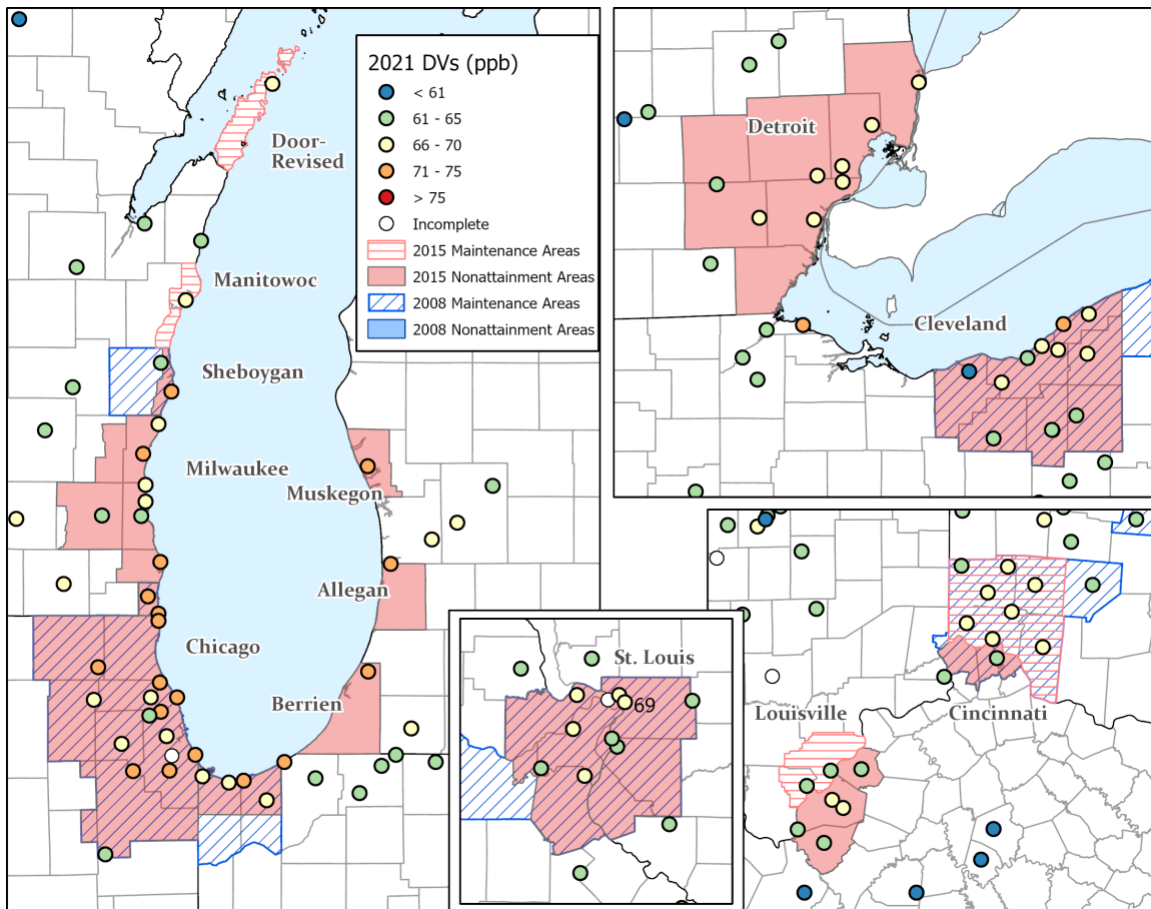


Figure 2-2. 2019-2021 ozone design values for the nonattainment and maintenance areas in the LADCO region. Nonattainment and maintenance areas for the 2008 and 2015 ozone NAAQS are shown for comparison. Where the current nonattainment areas overlap, the area appears purple.

Table 2-1. LADCO nonattainment and maintenance area design values (ppb). Values exceeding the 2015 NAAQS are highlighted in light orange. Values exceeding the 2008 NAAQS are highlighted in medium orange. Design values were downloaded from AQS.

Designated Area	2015	2016	2017	2018	2019	2020	2021
Allegan County, MI	75	75	73	73	72	73	75
Berrien County, MI	73	74	73	73	69	72	71
Muskegon County, MI	74	75	74	76	74	76	74
Door County, WI	69	72	73	73	70	72	70
Manitowoc County, WI	72	72	74	73	71	70	68
Milwaukee, WI	70	73	74	78	74	73	73
Sheboygan County, WI	77	79	80	81	75	75	72
Chicago, IL-IN-WI	75	77	78	79	75	77	75
Cincinnati, OH-KY	71	72	73	75	74	74	70
Cleveland, OH	73	74	73	74	73	74	72
Detroit, MI	71	71	71	69	68	67	66
Louisville, KY-IN	72	73	73	74	72	72	70
St. Louis, MO-IL	69	74	74	75	72	72	69

Table 2-2. LADCO nonattainment and maintenance area monitor design values (ppb). Values exceeding the 2015 NAAQS are highlighted in light orange. Values exceeding the 2008 NAAQS are highlighted in medium orange. Design values were downloaded from AQS

Site	Site Name	2015	2016	2017	2018	2019	2020	2021
<i>Allegan County, MI</i>								
260050003	Holland	75	75	73	73	72	73	75
<i>Berrien County, MI</i>								
260210014	Coloma	73	74	73	73	69	72	71
<i>Muskegon County, MI</i>								
261210039	Muskegon	74	75	74	76	74	76	74
<i>Door County, WI</i>								
550290004	Newport	69	72	73	73	70	72	70
<i>Manitowoc County, WI</i>								
550710007	Manitowoc	72	72	74	73	71	70	68
<i>Milwaukee, WI</i>								
550790010	Milw-16th St	62	64	65	67	64		
550790026/68	SER DNR/UWM Upark	66	68	67	69	65	68	68
550790085	Bayside	68	71	71	73	69	70	70
550890008	Grafton	70	71	71	72	71	71	71
550890009	Harrington Beach	69	73	73	74	70	70	70
551010020	Racine-P&D			74	78	74	73	73
551330027	Waukesha	63	66	65	66	63	64	65

LADCO 2015 O3 NAAQS Moderate NAA SIP Attainment Demonstration TSD

Site	Site Name	2015	2016	2017	2018	2019	2020	2021
<i>Sheboygan County, WI</i>								
551170006	Sheboygan KA	77	79	80	81	75	75	72
<i>Chicago, IL-IN-WI</i>								
170310001	Alsip	65	69	73	77	75	75	71
170310032	Chicago SWFP	68	70	72	75	73	74	75
170310076	Chicago Com Ed	64	69	72	75	72	69	67
170311003	Chicago Taft HS	66	69	67	69	67	73	71
170311601	Lemont	66	69	69	70	68	71	72
170313103	Schiller Park	61	62	62	64	63	65	64
170314002	Cicero	62	66	68	72	68	71	70
170314007	Des Plaines	68	71	71	74	70	71	69
170314201	Northbrook	68	71	72	77	74	77	74
170317002	Evanston	70	72	73	77	75	75	73
170436001	Lisle	64	68	70	71	70	71	70
170890005	Elgin	65	68	69	71	70	72	70
170971007	Zion	71	73	73	75	71	72	73
171110001	Cary	65	68	69	72	71	73	71
171971011	Braidwood	63	64	65	67	66	66	64
180890022	Gary-IITRI	65	67	68	70	68	70	69
180892008	Hammond	63	65		66	65	66	68
181270024	Ogden Dunes	68	69	69	71	70	71	72
181270026	Valparaiso	63	66	69	73	73	69	68
550590019	Chiwaukee	75	77	78	79	75	74	74
550590025	Kenosha WT	69	71	73	77	74	74	72
<i>Cincinnati, OH-KY</i>								
210150003	East Bend	61	63	62	64	63	64	61
210373002	N Kentucky Univ	71	70	69	67	65	63	63
390170018	Middletown	69	70	71	73	71	71	67
390170023	Crawford Woods	69	72	72	73	70	69	66
390179991	Oxford	68	69	69	70	68	66	64
390250022	Batavia	68	70	70	70	69	68	66
390610006	Sycamore	70	72	73	75	74	74	70
390610010	Colerain	69	72	70	72	70	70	67
390610040	Taft	69	71	71	72	71	70	69
391650007	Lebanon	69	72	71	72	71	72	70
<i>Cleveland, OH</i>								
390350034	District 6	69	69	68	70	69	71	70
390350060	GT Craig	62	64	62	62	63	65	63
390350064	Berea BOE	63	64	66	66	64	65	66
390355002	Mayfield	66	67	70	71	71	71	68
390550004	Notre Dame	67	70	72	72	70	68	66

LADCO 2015 O3 NAAQS Moderate NAA SIP Attainment Demonstration TSD

Site	Site Name	2015	2016	2017	2018	2019	2020	2021
390850003	Eastlake	73	74	73	74	73	74	72
390850007	Painesville	66	67	70	70	70	68	66
390930018	Elyria-Sheffield	63	65	65	67	64	62	58
391030004	Chippewa Lake	64	64	64	65	61		61
391331001	Lake Rockwell	61	61	62	63	63	62	62
391530020	Patterson Park	61	61	64	65	67	65	64
<i>Columbus, OH</i>								
390410002	Delaware	68	67	65	64	63	64	62
390490029	New Albany	71	71	71	69	68	67	66
390490037	Franklin Park	67	66	65				
390490081	Columbus-Maple	65	67	66	66	62	62	62
390890005	Heath	66	67	66	64	61	60	59
390890008	Reynoldsburg						61	58
<i>Detroit, MI</i>								
260990009	New Haven	71	72	71	72	68	71	68
260991003	Warren	66	67	66	69	66	68	66
261250001	Oak Park	66	69	70	73	70	72	69
261470005	Port Huron	72	73	71	72	71	71	70
261610008	Ypsilanti	66	67	67	69	66	67	66
261619991	Dexter		68	69	71	66	65	62
261630001	Allen Park	63	65	66	68	66	67	67
261630019	Detroit-E 7 Mile	70	72	73	74	72	71	70
<i>Louisville, KY-IN</i>								
180190008	Charlestown SP	69	70	71	70	67	65	63
180431004	New Albany	67	69	71	73	70	67	64
210290006	Shepherdsville	65	66	65	66	64	65	64
211110051	Watson Ln		69	68	68	66	65	65
211110067	Cannons Lane		74	74	75	72	72	69
211110080	Carrithers MS						67	68
211850004	Buckner	68	70	68	67	66	65	63
<i>St. Louis, MO-IL</i>								
171190120	Alton-HM Sch	71	71	69	70	68	69	68
171191009	Maryville	69	67	68	72	71	68	67
171193007	Wood River	69	71	70	71	69	70	69
171199991	Alhambra	68	67	67	68	66	66	64
171630010	East St. Louis	66	68	68	71	68	67	65
291831002	West Alton	71	72	72	74	71	71	
291831004	Orchard Farm	69	71	70	72	69	68	66
291890005	Pacific	65	65	64	66	65	66	64
291890014	Maryland Heights	70	71	69	70	68	71	69
295100085	Blair Street	65	65	66	71	69	68	65

2.2. Ozone Trends

Figure 2-3 and Figure 2-4 illustrate the 17-year trends in O₃ DVs at surface monitors in the different O₃ NAAs. Ozone DVs in all nonattainment and maintenance areas decreased over this period from high values in the mid-2000s to values in 2021 that were either record lows or near-record lows in many areas. The O₃ DV reductions are particularly notable for the Manitowoc, Sheboygan, and Door County areas along Wisconsin's lakeshore, as well as for Detroit, MI, and the southern areas of Cincinnati, OH, Louisville, KY-IN, and St. Louis, MO-IL. In contrast, while O₃ DVs in the Chicago, IL-IN-WI appear to have been relatively stable since 2010, the area has attained the 2008 ozone NAAQS in two out of the last three design value years.

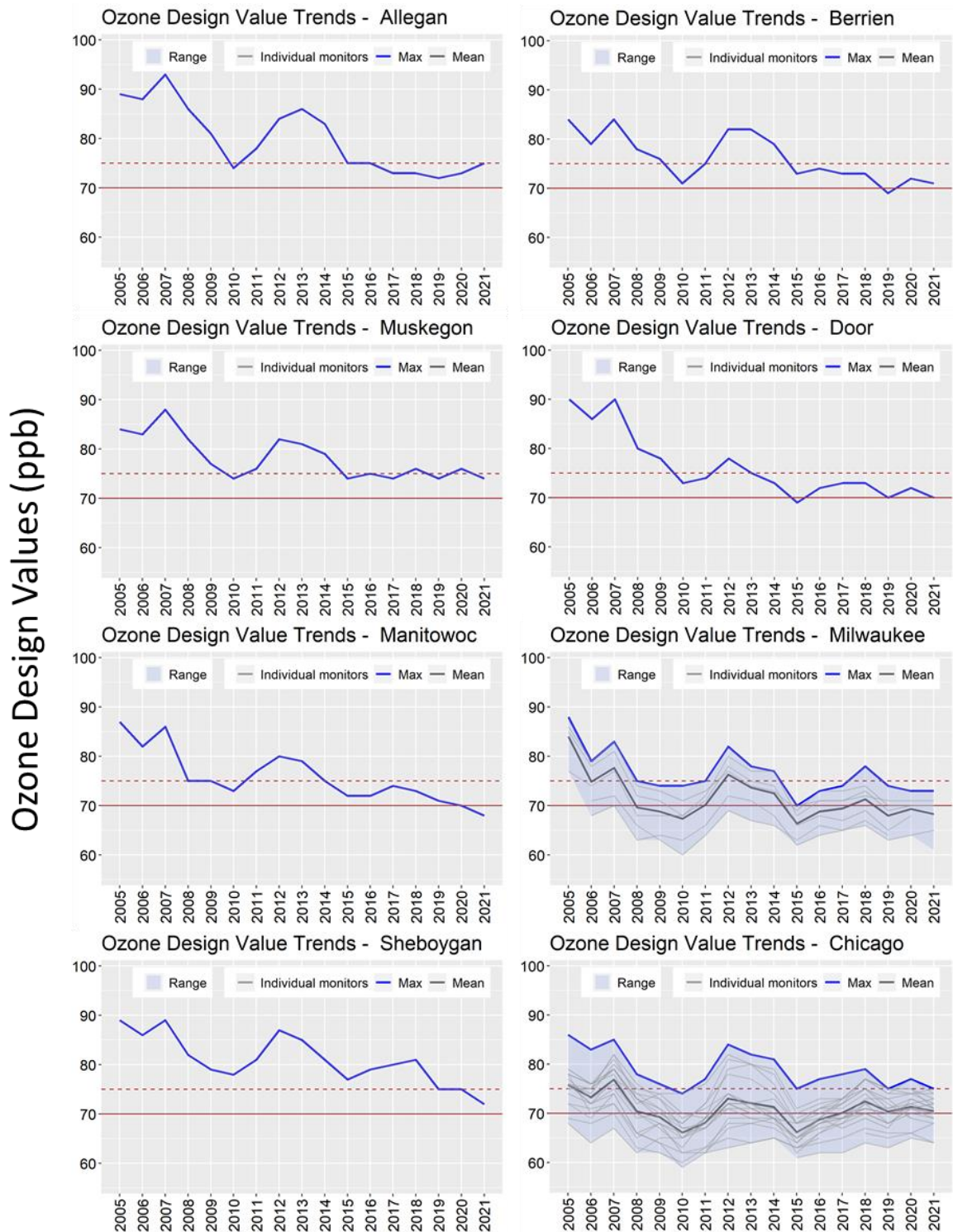


Figure 2-3. 3-year O₃ design value trends from 2005 to 2019 in the LADCO ozone nonattainment and maintenance areas. Area mean and maximum values are shown, along with values for individual monitors. The solid red line shows the level of the 2015 ozone NAAQS, and the dashed line shows the level of the 2015 ozone NAAQS.

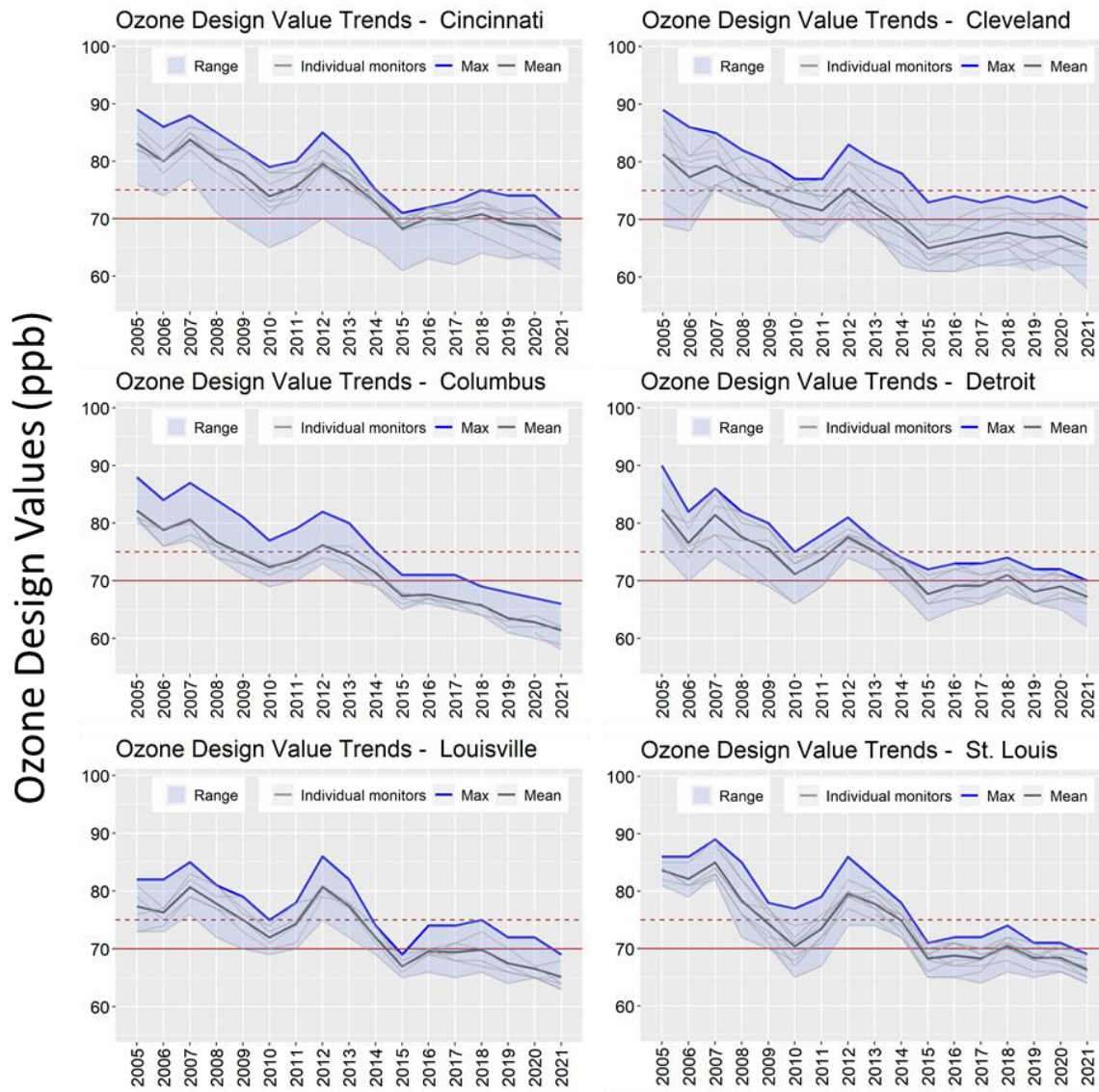


Figure 2-4. 3-year O₃ design value trends from 2005 to 2019 in the LADCO ozone nonattainment and maintenance areas. Area mean and maximum values are shown, along with values for individual monitors. The solid red line shows the level of the 2015 ozone NAAQS, and the dashed line shows the level of the 2008 ozone NAAQS.

2.3. Meteorology and Transport

Ozone concentrations are greatly influenced by meteorological factors. Qualitatively, O₃ episodes in the region are associated with hot weather, clear skies (sometimes hazy), low wind speeds, high solar radiation, and winds with a southerly component. These conditions are often a result of a slow-moving high-pressure system to the east of the region. The relative importance of various meteorological factors in select NAAs is discussed later in this section.

Transport of O₃ and its precursors is a significant factor in the LADCO region and occurs on several spatial scales. Regionally, over a multi-day period, somewhat stagnant summertime conditions can lead to the build-up of O₃ and O₃ precursor concentrations over a large spatial area. This polluted air mass can be transported long distances, resulting in elevated O₃ levels in locations far downwind. Locally, emissions from urban areas add to the regional background leading to O₃ concentration hot spots downwind. Depending on the synoptic wind patterns and presence of local land-lake breezes in some areas, different downwind areas are affected.

The following key findings related to transport can be made:

- Ozone transport is an issue affecting many portions of the eastern U.S. NAAs in the LADCO region receive high concentrations of incoming (transported) O₃ and O₃ precursors from upwind source areas on many hot summer days. Sources in the LADCO region also contribute to the high concentrations of O₃ and O₃ precursors affecting downwind receptor areas.
- Lake Michigan and Lake Erie influence the formation and transport of O₃ in the region, particularly at sites within a few kilometers of the shoreline. Depending on large-scale synoptic winds and local-scale lake breezes, different parts of the area experience high O₃ concentrations. For example, during southerly flow, high O₃ can be transported from Chicago to the Wisconsin lakeshore, whereas during southwesterly flow, high O₃ from Chicago can be transported to western Michigan.

2.4. Adjustment of Ozone Trends for Meteorology

Given the importance of the impacts of meteorology on ambient O₃ concentrations, year-to-year variations in meteorology can make it difficult to assess short term (e.g. less than 10 years) trends in O₃ concentrations. One approach to adjust the trends in O₃ concentrations for meteorological influences uses Classification and Regression Trees (CART). CART is a statistical tool to classify data (Breiman et al., 1984). We applied CART to MDA O₃ and meteorological data to determine the meteorological conditions most commonly associated with high O₃ days in nonattainment and maintenance areas in the LADCO region. Once days are classified by their unique, shared meteorological characteristics, O₃ concentration trends among days with similar

meteorological conditions can be examined. The LADCO CART analysis removes the influence of year-to-year meteorological variability on O₃ concentrations, and any remaining trend is assumed to be the result of non-meteorological factors, such as reductions in emissions of O₃ precursors.

LADCO conducted the CART analyses using MDA8 O₃ monitoring data from regulatory monitors in the NAAs and daily meteorological data from airport weather stations. The analysis included data from the years 2005 through 2020 to identify the trends in ambient, surface O₃ concentrations after adjustment for meteorology. LADCO developed regression trees to classify each summer day (May – September) by a common set of meteorology variables. Each branch in a regression tree describes the meteorological conditions associated with different O₃ concentrations. We assigned meteorologically similar days to day-type groups (known in CART as “nodes”), which are equivalent to branches of the regression tree. Grouping days with similar meteorology normalizes the influence of meteorological variability on the underlying trend in O₃ concentrations. The remaining trend in O₃ concentrations can be presumed to be due to trends in non-meteorological predictors, such as precursor emissions. We then plotted the O₃ trends for each of the different CART nodes.

This TSD gives a high-level summary of the CART results for the currently designated ozone NAAs. A brief description of CART analysis is provided in Section S3 of the Supplement to this TSD. A more complete description of the results for all nonattainment and maintenance areas, along with the CART methodology, is available in a LADCO report on CART.⁵

Although the exact selection of predictive variables changes from site to site, the most common predictors of high surface O₃ concentrations during the period we analyzed are temperature, wind direction, and relative humidity. Trends in O₃ concentrations in high-O₃ nodes were found to be declining over the 16-year period for almost all areas studied (Figure 2-5 and Figure 2-6). These plots reflect long term trends and are not meant to depict trends over shorter time periods.

⁵ https://www.ladco.org/wp-content/uploads/Projects/Ozone/LADCO_O3_CART-Analysis_27Oct2021-FINAL-with-Appendices.pdf

2.4.1. Western Michigan NAA CART Analyses

LADCO conducted CART analyses for each of the three NAAs along Michigan's Lake Michigan shoreline. This TSD examines the analyses for these three NAAs, all of which are currently designated nonattainment for the 2015 O₃ NAAQS. The high-ozone nodes from the CART analysis for the Muskegon County monitor generally have southerly transport, hot temperatures, and low relative humidity (Supplement Table S11). Similarly, the high-ozone nodes for the Allegan County monitor all had southerly transport and hot temperatures (Supplement Table S11), but relative humidity was not a factor. The most important factors for the high-ozone nodes for the Berrien County monitor were hot temperatures and low relative humidity (Supplement Table S11). Several Berrien County nodes also have southerly winds or transport. Mean O₃ concentrations in all high-ozone nodes in Muskegon and Allegan counties have decreased from 2005 to 2020 (Figure 2-5). In Berrien County, mean O₃ concentrations in all but one of the high-ozone nodes have decreased from 2005 to 2020 (Figure 2-5); the one node with steady O₃ concentrations has a mean concentration of 53 ppb, so these days are unlikely to contribute to O₃ nonattainment.

2.4.2. Wisconsin NAA CART Analyses

LADCO conducted CART analyses for each of the four NAAs along Wisconsin's Lake Michigan shoreline. This TSD examines the analyses for the Sheboygan and Milwaukee NAAs, both of which are currently designated nonattainment for the 2015 O₃ NAAQS. The high-ozone nodes from the CART analysis for the Sheboygan County monitor generally have southerly winds/transport and hot temperatures (Supplement Table S11). Mean O₃ concentrations in all the high-ozone nodes have decreased from 2005 to 2020 (Figure 2-5). Similarly, the high-ozone nodes from the CART analysis for the Milwaukee monitors generally have hot temperatures and southerly winds (Supplement Table S11). The highest O₃ node also has winds that are either weak from the west (<2.0 m/s) or from the east. Mean O₃ concentrations in all the high-ozone nodes have decreased from 2005 to 2020 (Figure 2-5).

2.4.3. Chicago, IL-IN-WI, CART Analyses

LADCO conducted CART analyses for three different parts of the large Chicago NAA: the far north (Kenosha and Lake counties, WI-IL), central (Cook County, IL), and the far east (Lake

and Porter counties, IN). The high-ozone nodes from all three CART analyses generally have hot temperatures and low relative humidity (Supplement Table S11). Some of the nodes in all three of the analyses are also influenced by southerly transport, although southerly transport is most important for the northern Kenosha and Lake County monitors. Several nodes in the Indiana monitor analysis are also influenced by wind speeds. For the far north and far eastern parts of Chicago, mean O₃ concentrations in all the high-ozone nodes have decreased from 2005 to 2020 (Figure 2-5). In contrast, mean O₃ concentrations in most of the high-concentration nodes in central Chicago have increased from 2005 to 2020 (Figure 2-5).

2.4.1. Detroit, MI, CART Analyses

LADCO conducted CART analyses for the Detroit nonattainment area. The high-ozone nodes from the CART analysis for the Detroit monitors generally have hot temperatures and low relative humidity (Supplement Table S11). The highest ozone nodes also have winds from the east to south-southwest, and other high-ozone nodes have low wind speeds. Southerly winds and transport appear as important variables. Figure 2-6 shows that the mean O₃ concentrations in all the high-concentration nodes for Detroit have decreased from 2005 to 2020.

2.4.2. St. Louis, MO-IL, CART Analyses

LADCO conducted CART analyses for the St. Louis nonattainment area. The high-ozone nodes from the CART analysis for the St. Louis monitors generally have low relative humidity and hot temperatures (Supplement Table S11). The highest ozone nodes also have gentle winds or shorter transport distances, with easterly winds. These factors also appear as important variables, with relative humidity-related parameters being the most important. Figure 2-6 shows that the mean O₃ concentrations in all the high-concentration nodes for St. Louis have decreased from 2005 to 2020.

2.4.3. Cleveland, OH, CART Analyses

LADCO conducted CART analyses for the Cleveland nonattainment area. The high-ozone nodes from the CART analysis generally have hot temperatures and low relative humidity (Supplement Table S11). The highest ozone nodes for Cleveland have low wind speed, which also appears as an important variable, along with southerly transport. Figure 2-6 shows that the

mean O₃ concentrations in all the high-concentration nodes for Cleveland have decreased from 2005 to 2020 (Figure 2-6).

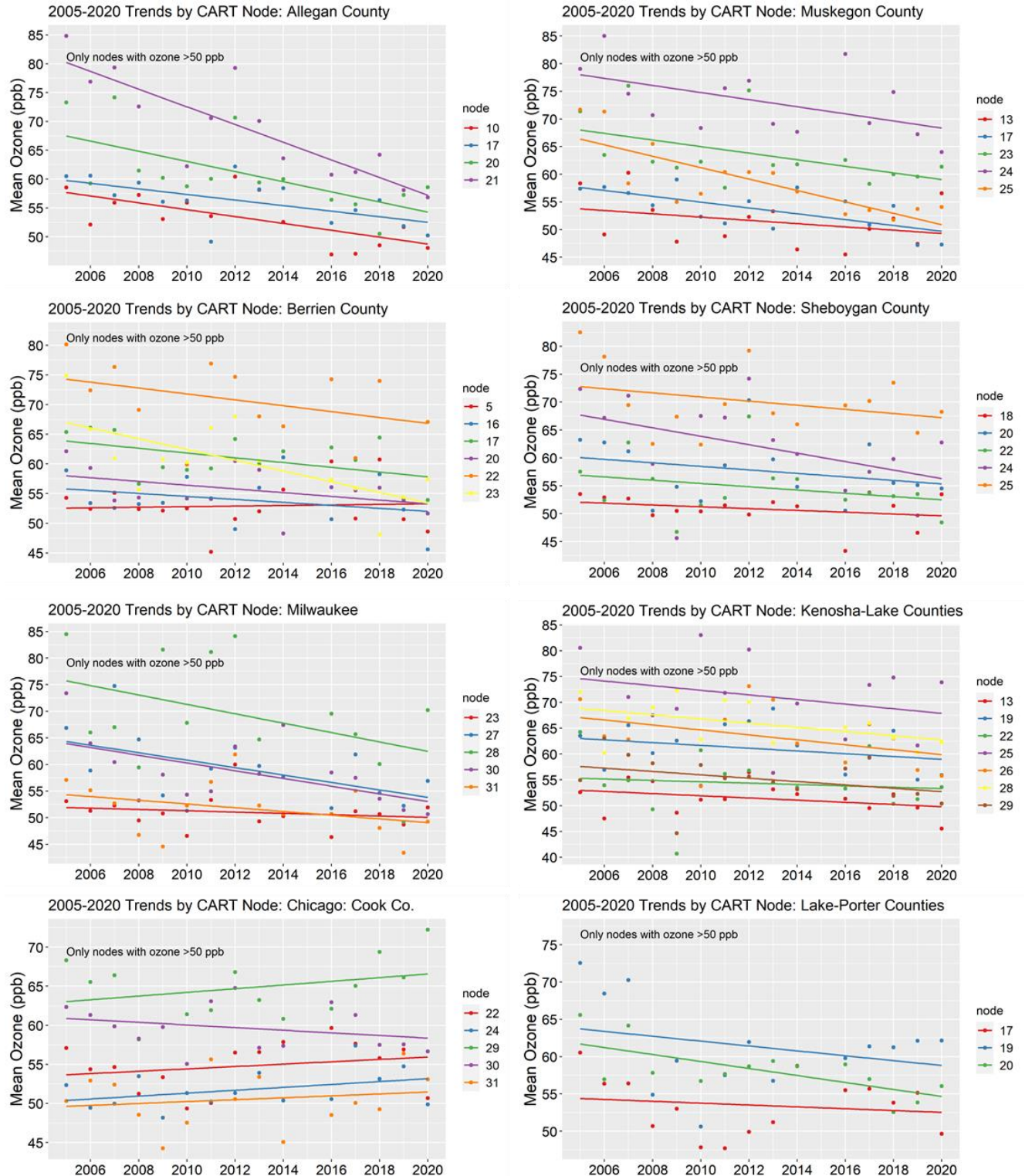


Figure 2-5. Ozone trends in high-ozone nodes in select ozone nonattainment areas in the LADCO region.

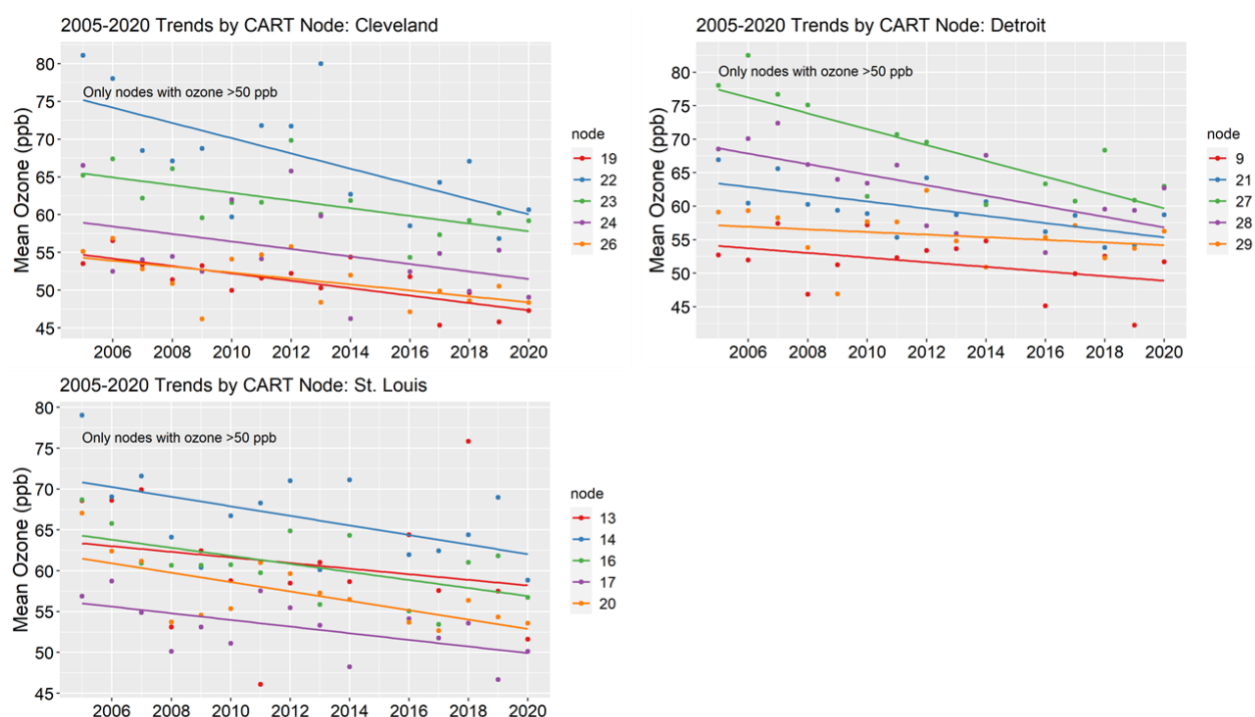


Figure 2-6. Ozone trends in high-ozone nodes in select ozone nonattainment areas in the LADCO region.

2.5. Summary

Overall, the LADCO CART analysis shows that O₃ DVs have decreased considerably since 2005, reaching levels where all nonattainment and maintenance areas attained the 2008 ozone NAAQS and many areas attained the 2015 O₃ NAAQS in 2021. Ozone concentrations in the different areas are impacted by different meteorological factors, with all areas impacted by high temperatures and many areas impacted by southerly transport and low relative humidity. When adjusted for meteorology using CART, O₃ concentrations on high-ozone days in select NAAs (those that did not attain the 2015 ozone NAAQS in 2021) decreased for almost all types of days in almost all NAAs. The notable exception is for central Chicago, where meteorologically-adjusted O₃ concentrations appear to have increased since 2005. The CART trends indicate that ongoing reductions of O₃ precursor emissions are continuing to reduce O₃ concentrations in most areas of the LADCO region.

3. Air Quality Modeling Platform

3.1. 2016 Modeling Platform

LADCO based our 2016 O₃ air quality predictions on the 2016v1 National Emission Inventory Collaborative emissions inventory⁷ and the U.S. EPA 2016fh_16j (herein referred to as 2016fh) emissions modeling platform (US EPA, 2021). LADCO generated the Weather Research Forecast (WRF) model meteorology (LADCO, 2022) and used initial and boundary conditions from the U.S. EPA 2016fg CAMx modeling platform (US EPA, 2019). LADCO processed the 2016 emissions using the U.S. EPA Sparse Matrix Operator Kernel Emissions (SMOKE) scripts distributed with the 2016fh emissions modeling platform. The CAMx inputs, including the meteorology data simulated with the Weather Research Forecast (WRF) model, emissions data, and boundary conditions represent year 2016 conditions.

3.2. Modeling Year Justification

LADCO selected 2016 as a modeling year for this study because at the initiation of this project in late 2019 CAMx input data for 2016 were widely available and they represented the state-of-the-science for emissions and meteorology data. In 2017, a group of multi-jurisdictional organizations (MJOs), states, and EPA established 2016 as the new base year for a national air quality modeling platform⁸. The group concluded that if only one recent year could be selected, that 2016 would serve as a good base year because of typical O₃ conditions and average wildfire conditions. Following from the base year recommendations from that group, several modeling centers, including U.S. EPA and LADCO, developed data and capabilities for simulating and evaluating air quality in 2016.

Following from the selection of 2016 as the base year for a national modeling platform, starting in late 2017, the MJOs, states, and EPA formed the National Emissions Inventory Collaborative to develop a 2016 emissions inventory and modeling platform. Over 200

⁷ <http://views.cira.colostate.edu/wiki/wiki/10202>

⁸ [Base Year Selection Workgroup Final Report](#)

participants collaborated across 12 workgroups to develop base and future year emissions to support upcoming regulatory modeling applications. This effort was designed to involve a broad group of emissions experts in the development of a new national emissions modeling platform. LADCO used the 2016 and 2023 inventories developed by the Collaborative for the modeling presented here. Section 8 presents LADCO's justification for using the 2016v1 emissions data over the 2016v2 data for the modeling reported in this TSD.

The attainment date for 2015 O₃ NAAQS moderate NAAs is August 3, 2024. LADCO selected 2023 as the future projection year because it aligns with the last complete O₃ season that will be used to determine attainment of these areas.

3.3. Air Quality Model Configuration and Data

LADCO based our CAMx air quality modeling platform for this application on the configuration that we recently used for 2008 O₃ NAAQS attainment demonstration modeling (LADCO, 2020) and regional haze modeling for the Regional Haze Rule 2nd implementation period (LADCO, 2021). LADCO used CAMx 7.10 (Ramboll, 2020) as the photochemical grid model for this application. CAMx is a three-dimensional, Eulerian air quality model that simulates the chemical transformation and physical transport processes of air pollutants in the troposphere. It includes capabilities to estimate the concentrations of primary and secondary gas and particle phase air pollutants, and dry and wet deposition, from urban to continental spatial scales. As CAMx associates source-level air pollution emissions estimates with air pollution concentrations, it can be used to design and assess emissions reduction strategies pursuant to NAAQS attainment goals.

LADCO selected CAMx for this study because it is a component of recent LADCO and U.S. EPA modeling platforms for investigating the drivers of ground level O₃ in the Great Lakes region and across the U.S. As CAMx is a component of U.S. EPA studies with a similar scope to this project, LADCO was able to leverage the data and software elements that are distributed with recent U.S. EPA regulatory air quality modeling platforms. Using these elements saved LADCO significant resources relative to building a modeling platform from scratch.

Figure 3-1 shows the LADCO WRF modeling domains used for this application. A 12-km uniform grid (12US2) covers all the continental U.S. and includes parts of Southern Canada and

Northern Mexico. A 4-km domain covers all the LADCO member states in their entirety. A 1.33-km domain covers Lake Michigan. The vertical modeling domain has 36 layers with a model top at about 17,550 meters (50 mb). LADCO used the same U.S. EPA 12-km domain for this project because it supported the use of initial and boundary conditions data that were readily available from U.S. EPA.

Table 3-1 summarizes the CAMx science configurations and options LADCO used for the 2016 and 2023 CAMx modeling for this application. We used the Piecewise Parabolic Method (PPM) advection solver for horizontal transport along with the spatially varying (Smagorinsky) horizontal diffusion approach. We used K-theory for vertical diffusion using the CMAQ-like vertical diffusivities from WRFCAMx. The CB6r5 gas-phase chemical mechanism was selected because it includes the latest chemical kinetic rates and represents improvements over the other alternative CB05 and SAPRC chemical mechanisms as well as active methane chemistry. Additional CAMx inputs were as follows:

[Meteorological Inputs](#): The LADCO WRF-derived meteorological fields (LADCO, 2022) were processed to generate CAMx meteorological inputs using the WRFCAMx processor, as described in Section 3.3.1.

[Initial/Boundary Conditions](#): LADCO used 2016 initial and boundary conditions for CAMx generated by the U.S. EPA from a northern hemisphere simulation of the Community Multiscale Air Quality (CMAQ) model (US EPA, 2019d). EPA generated hourly, one-way nested boundary conditions (i.e., hemispheric-scale to regional-scale) from a 2016 108-km x 108-km polar stereographic CMAQ simulation of the northern hemisphere. Following the convention of the U.S. EPA 2016 regional haze modeling (U.S. EPA, 2019b), LADCO used year 2016 CMAQ boundary conditions for modeling 2016 and 2023 air quality with CAMx.

[Photolysis Rates](#): LADCO prepared the photolysis rate inputs as well as albedo/haze/ozone/snow inputs for CAMx. Day-specific O₃ column data were based on the Total Ozone Mapping Spectrometer (TOMS) data measured using the satellite-based Ozone Monitoring Instrument ([OMI](#)). Albedo were based on land use data. LADCO used the TUV photolysis rate processor to prepare clear-sky photolysis rates for CAMx. If there were periods where daily TOMS data were unavailable in 2016, the TOMS measurements were interpolated

between the days with valid data. CAMx was also configured to use the in-line TUV to adjust for cloud cover and account for the effects that modeled aerosol loadings have on photolysis rates; this latter effect on photolysis may be especially important in adjusting the photolysis rates due to the occurrence of PM concentrations associated with emissions from fires.

Landuse: LADCO used landuse/landcover data from the U.S. EPA WRF simulation.

Spin-Up Initialization: A minimum of ten days of model spin up (e.g., December 21-31, 2015) was used for all modeling domains. LADCO ran monthly CAMx simulations, initializing each month with a 10-day spin-up period.

As the focus of this study is on O₃, LADCO used CAMx to simulate the 2016 O₃ season. LADCO simulated April 1 through October 31, 2016 as individual months using 10-day model spin-up periods for each month. LADCO selected a CAMx configuration that was consistent with previous O₃ modeling applications performed by LADCO (2020) and U.S. EPA. U.S. EPA (2019).

Table 3-1. LADCO 2016 CAMx modeling platform configuration

Science Options	Configuration
Model Codes	CAMx v7.10
Simulation Period	March 20-October 31, 2016
Horizontal Grid Mesh	12 km, 396 cols x 246 rows 4 km, 420 cols x 390 rows 1.33 km, 279 cols x 450 rows
Vertical Grid Mesh	36 layers up to 50 mb
Grid Interaction	Two-way nested
Initial Conditions	10-day spin up on all grids
Boundary Conditions	12km from hemispheric CMAQ (U.S. EPA 2016ff)
Emissions	
Baseline Emissions Processing	Sparse Matrix Operator Kernel Emissions (SMOKE), EPA's Motor Vehicle Emission Simulator (MOVES2014) and Biogenic Emission Inventory System (BEIS)
Emissions Modeling Platform	U.S. EPA 2016fh_16j Platform with ERTAC 16.2 beta EGU Point and hourly CEMs
Chemistry	
Gas Phase Chemistry	CB6r5
Aerosol Chemistry	CF + SOAP
Meteorological Processor	WRFCAMx_v4.9.1
Horizontal Diffusion	Spatially varying
Vertical Diffusion	CMAQ-like in WRF2CAMx
Diffusivity Lower Limit	Kz_min = 0.1 to 1.0 m ² /s or 2.0 m ² /s
Dry Deposition	Zhang dry deposition scheme (CAMx)
Wet Deposition	CAMx-specific formulation
Gas Phase Chemistry Solver	Euler Backward Iterative (EBI) -- Fast Solver

Science Options	Configuration
Vertical Advection Scheme	Implicit scheme w/ vertical velocity update (CAMx)
Horizontal Advection Scheme	Piecewise Parabolic Method (PPM) scheme
Integration Time Step	Wind speed dependent
Source Apportionment	CAMx APCA with region and inventory sector tags

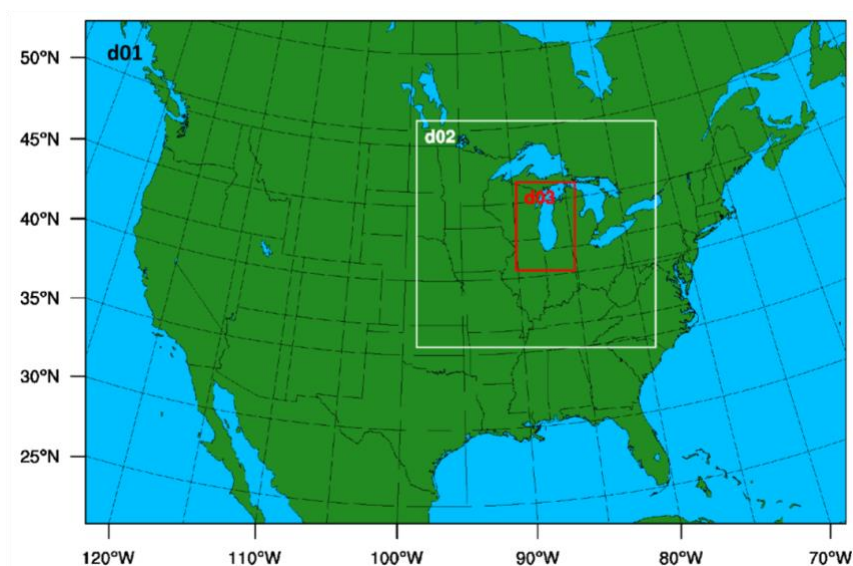


Figure 3-1. LADCO WRF modeling domains

3.3.1. Meteorology Data

LADCO developed 2016 WRF data for this application (LADCO, 2022). We used version 3.9.1 of the WRF model, initialized with the 12-km North American Model (NAM) from the National Climatic Data Center (NCDC) to simulate 2016 meteorology. Complete details of the WRF simulation, including the input data, physics options, and four-dimensional data assimilation (FDDA) configuration are detailed in the LADCO Meteorology Model Performance for Annual 2016 Simulation report (LADCO, 2022). LADCO prepared the WRF data for input to CAMx with version 4.8 of the WRFCAMx software.

3.4. 2016 and 2023 Emissions Data

LADCO collected 2016 and 2023 emissions data for this study primarily from the U.S. EPA 2016fh emissions modeling platform (U.S. EPA, 2021). U.S. EPA and the 2016 Emissions

Inventory Collaborative⁹ generated version 1 of the 2016 (2016v1) inventory for use in O₃ NAAQS and Regional Haze SIPs. The first version of the 2016 inventories used 2014 inventory data; the 2016v1 inventory fully integrated 2016 estimates of emissions activities, growth and controls, and the latest emissions factors. Table 3-2 lists the 2016 base year inventory components that LADCO used to simulate 2016 air quality for this application.

LADCO replaced the 2023 EGU emissions in the U.S. EPA 2016fh emissions modeling platform with 2023 EGU forecasts estimated with the August 2021 version of the ERTAC EGU Tool version 16.2 beta (MARAMA, 2012). LADCO also used a version of the 2016fh non-EGU point inventory that is synchronized with the ERTAC EGU inventory in our 2016 modeling platform to ensure consistency with the EGU sector. The ERTAC model defines EGUs as power generating units with Continuous Emissions Monitoring (CEM). The U.S. EPA EGU inventory encompasses all power generating units, including industrial facilities such as paper mills and aluminum foundries. The non-EGU point inventory needed to be modified to work with the ERTAC EGU inventory by including the industrial sources from the U.S EPA EGU point inventory that are not included in the ERTAC model.

Figure 3-2 through Figure 3-7 show 2016 daily total EGU NO_x emissions by fuel type for each of the LADCO states. These figures show that in 2016 the NO_x emissions from power generation in the LADCO region were primarily emitted by sources that burn coal, that there is significant day to day variation in power plant emissions, and that the summer and winter seasons are the peak periods of EGU NO_x emissions. Note that vertical axis of these figures varies from state to state.

⁹ <http://views.cira.colostate.edu/wiki/wiki/10202>

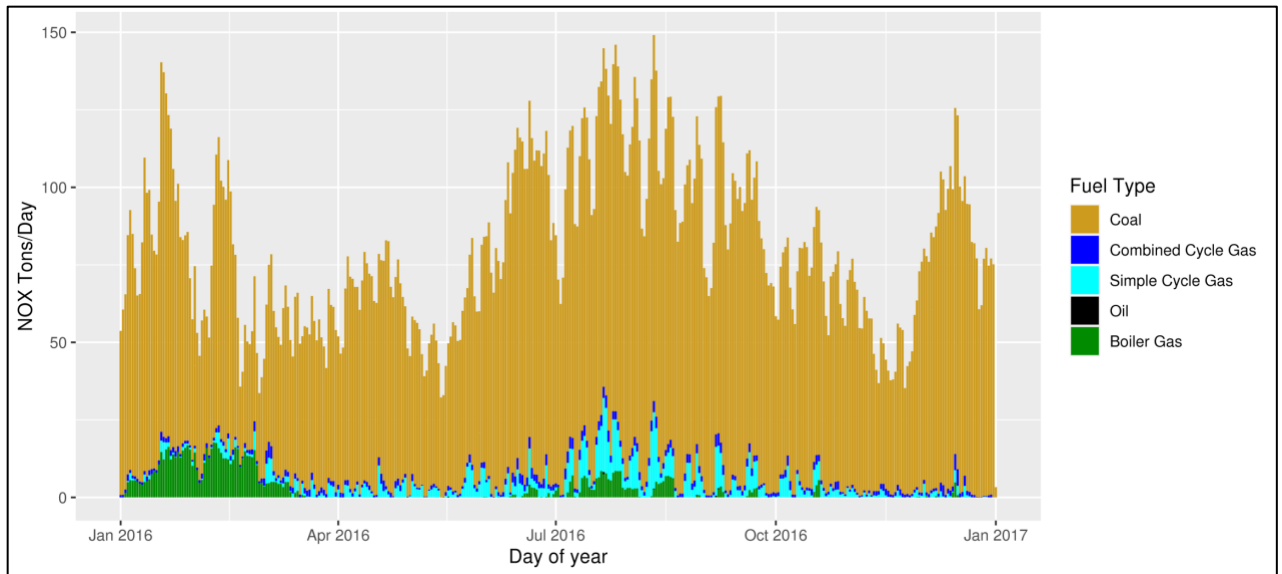


Figure 3-2. Illinois power generation 2016 daily NOx emissions by fuel type

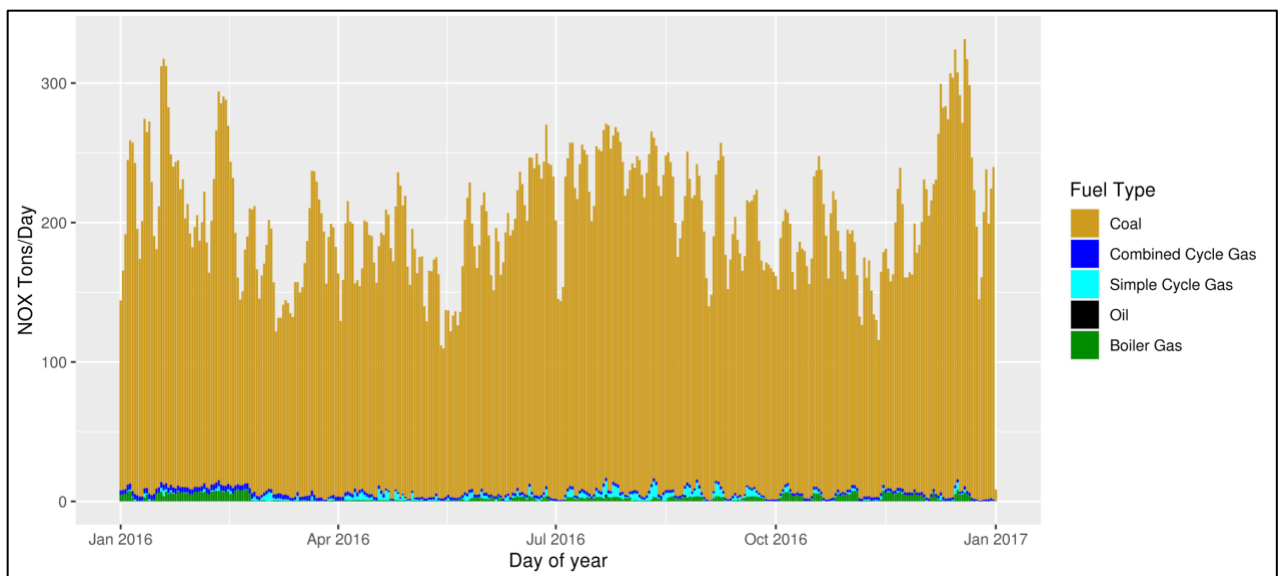


Figure 3-3. Indiana power generation 2016 daily NOx emissions by fuel type

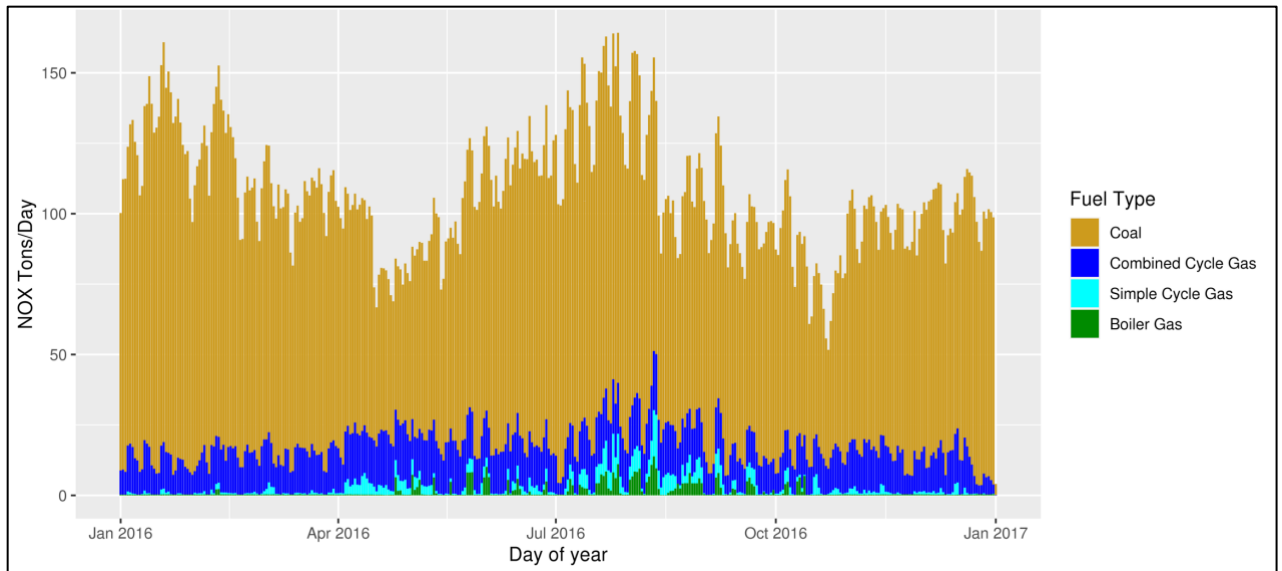


Figure 3-4. Michigan power generation 2016 daily NOx emissions by fuel type

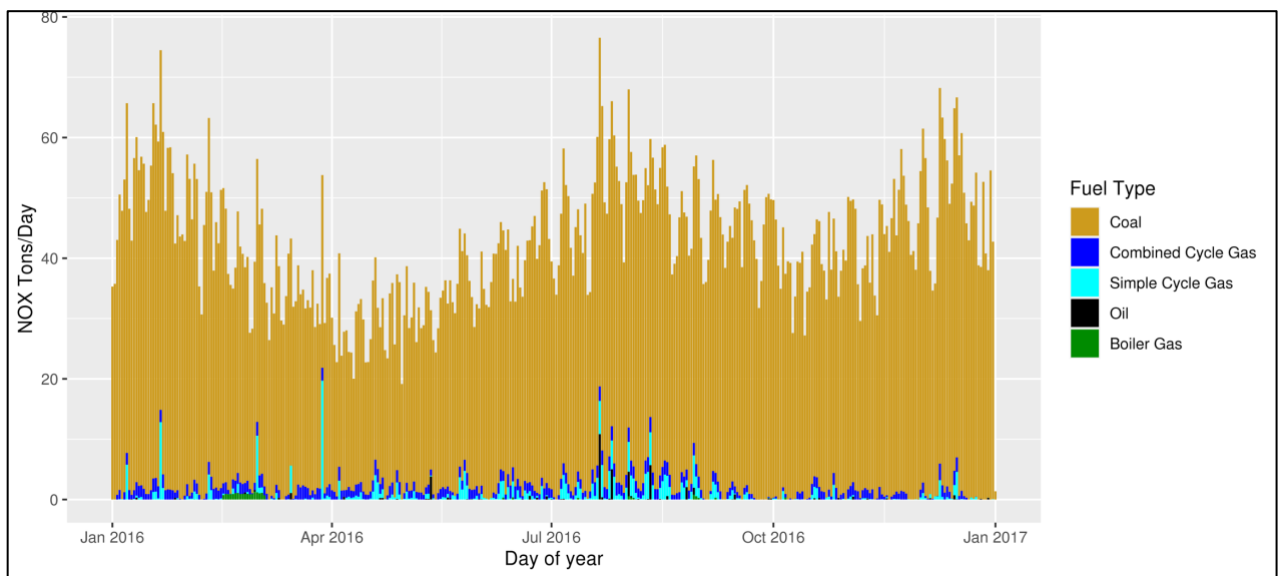


Figure 3-5. Minnesota power generation 2016 daily NOx emissions by fuel type

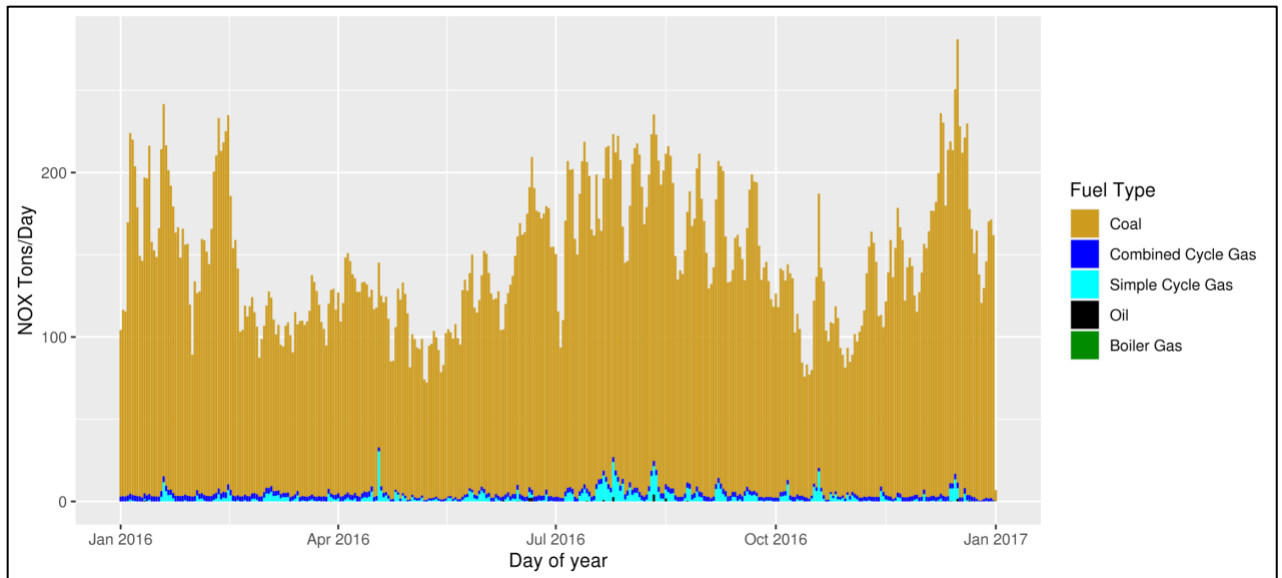


Figure 3-6. Ohio power generation 2016 daily NOx emissions by fuel type

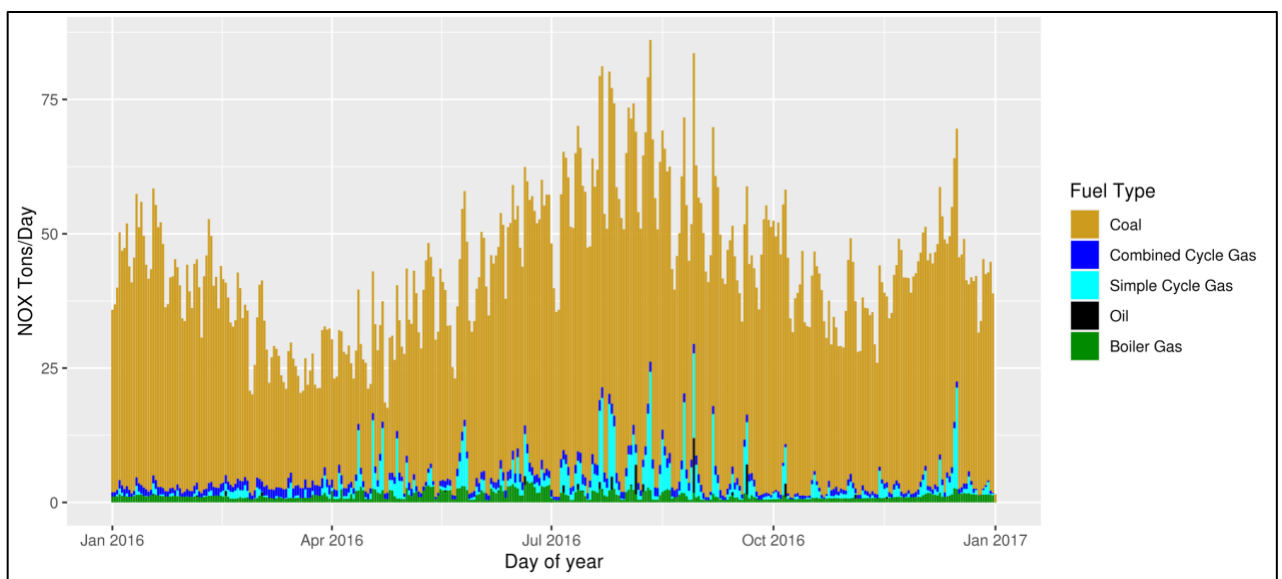


Figure 3-7. Wisconsin power generation 2016 daily NOx emissions by fuel type

LADCO modified the ERTAC EGU 16.2 beta inventory forecasts for 2023 to exclude the emissions from two EGU units that announced shutdowns that will occur before 2023. These announcements came after the ERTAC EGU 16.2 beta emissions were developed. LADCO zeroed out the 2023 emissions from these units in our 2016-based modeling forecasts for 2023. The two units removed from the ERTAC EGU 16.2 beta inventory included:

- ComED Will County, Illinois (ORIS ID: 884)

- WEPCO Rock River, Wisconsin (ORIS ID: 4057).

Supplement Section S4 to this TSD is a table of all of the EGU sources that operated in 2016 but were removed from the 2023 inventory and LADCO CAMx simulation due to retirement dates that occurred before the end of 2023.

Table 3-2 lists the 2016 base year and 2023 future year inventory components that LADCO used to simulate 2016 and 2023 air quality for this application. LADCO processed the inventories into CAMx binary format with SMOKE to estimate hourly emissions on three nested modeling domains (12/4/1.33 km) for March 20, 2016 through October 31, 2016.

Table 3-2. LADCO 2016 emissions modeling platform inventory components

Sector	Abbreviation	Base Year Data Source	Future Year Data Source
Agriculture	ag	U.S. EPA 2016fh	U.S. EPA 2023fh
Fugitive Dust	afdust	U.S. EPA 2016 fh	U.S. EPA 2023fh
Airports	airports	U.S. EPA 2016 fh	U.S. EPA 2023fh
Biogenic	BEIS3	U.S. EPA 2016fh	U.S. EPA 2013fh
C1/C2 Commercial Marine	cmv_c1c2	U.S. EPA 2016fh	U.S. EPA 2023fh
C3 Commercial Marine	cmv_c2	U.S. EPA 2016fh	U.S. EPA 2023fh
Nonpoint	nonpt	U.S. EPA 2016fh	U.S. EPA 2023fh
Offroad Mobile	nonroad	U.S. EPA 2016fh	U.S. EPA 2023fh
Nonpoint Oil & Gas	np_oilgas	U.S. EPA 2016fh	U.S. EPA 2023fh
Onroad Mobile	onroad	U.S. EPA 2016fh	U.S. EPA 2023fh
Point Oil & Gas	pt_oilgas	U.S. EPA 2016fh	U.S. EPA 2023fh
Electricity Generation	ptertac	ERTAC 16.1	ERTAC 16.2 modified
Industrial Point	ptnonertac	U.S. EPA 2016fh	U.S. EPA 2023fh modified
Minnesota Taconite	ptmntaconite	Provided by MPCA	Provided by MPCA
Rail	rail	U.S. EPA 2016fh	U.S. EPA 2023fh
Residential Wood Combustion	rwc	U.S. EPA 2016fh	U.S. EPA 2023fh
Agricultural Fires	ptagfire	U.S. EPA 2016fh	U.S. EPA 2023fh
Wild and Prescribed Fires	ptfire	U.S. EPA 2016fh	U.S. EPA 2023fh
Mexico Anthropogenic	othar/othpt/	U.S. EPA 2016fh	U.S. EPA 2023fh
Canada Anthropogenic	othar/othpt	U.S. EPA 2016fh	U.S. EPA 2023fh

3.4.1. Spatial Surrogates and Emissions Grids

LADCO's 2016 air quality modeling platform uses three nested modeling grids that focus on the Great Lakes region. We processed the 2016fh emissions on the LADCO modeling grids using U.S. EPA 12-km and 4-km spatial surrogates. LADCO used the Spatial Allocator Surrogate Tool

with the GIS shapefiles that U.S. EPA used for the 12-km and 4-km spatial surrogates to generate surrogates for the LADCO 1.33 km grid. We processed the point source emissions inventory modeling files for CAMx.

3.5. Source Apportionment Modeling

LADCO used the CAMx Anthropogenic Precursor Culpability Assessment (APCA) tool to calculate emissions tracers for identifying upwind sources of ozone precursors at downwind monitoring sites. We used APCA to quantify the impacts of inventory sectors or geographic source regions on ozone concentrations at receptors. LADCO simulated 2016 meteorology and emissions on the 12-km modeling domain for the APCA simulations used for this application.

3.5.1. 2016 Inventory Sector Source Apportionment Configuration

LADCO used CAMx APCA to track the contributions of emissions sources on modeled O₃ concentrations. We configured the 2016fh emissions modeling platform to track the influence of emissions from key inventory sectors on O₃ concentrations in the region. We split the nonpoint, onroad mobile, and offroad mobile (nonroad) into subsectors to better distinguish the sources of O₃ pollution from these sectors. For example, LADCO split the two mobile sectors into diesel and non-diesel (gasoline, natural gas, and other) to resolve the impacts of diesel and non-diesel engines on O₃ in the region. Table 3-3 lists the APCA tags used for the LADCO 2016 CAMx APCA “sectors” simulation.

Table 3-3. LADCO 2016 CAMx APCA “sector” tags

Tag	Description	Tag	Description
1	Biogenic	12	Offroad Mobile - diesel
2	Agriculture	13	Offroad Mobile – non-diesel
3	Nonpoint – industrial combustion	14	Rail
4	Nonpoint – other combustion, including residential wood combustion	15	Onroad Mobile – California only*
5	Nonpoint – non-combustion	16	Commercial Marine (C2/C3)
6	Nonpoint – solvents	17	Point - agricultural fires
7	Nonpoint – waste	18	Point – electricity generation
8	Oil and gas	19	Point – wildfires
9	Onroad Mobile - diesel	20	Point – non-electricity generation
10	Onroad Mobile – non-diesel	21	Point – airports
11	Canada and Mexico		

* Emissions for this sector are for sources in California only and were generated with the EMFAC model

3.5.2. 2016 Geographic Source Apportionment Configuration

LADCO used CAMx APCA to track the contributions of geographic source regions on modeled O₃ concentrations. For the 2016 APCA simulation LADCO used the CAMx point source override option to tag emissions from geographic source groups. Emissions from all sectors, point and non-point, used the point source override option to better identify the locations of the source emissions. LADCO prepared the emissions through SMOKE by including state/county code-based geographic tags in each inventory sector processing stream to support the point source override option. This option is an improvement over the spatial masks traditionally used to tag emissions by source region because it does not suffer from the border errors in which a model grid cell can only be associated with one geographic region. Table 3-4 lists the APCA geographic tags used for the LADCO 2016 CAMx simulation.

For the states that have both state and county tags (IL, IN, MI, OH, WI) the state tag includes emissions from the areas of the state outside of the explicitly-tagged counties. For example, the tracer for WI sources (Tag = 6) includes the emissions from all areas of the state except for the counties included in Tags 20 and 21.

Table 3-4. LADCO 2016 CAMx APCA “geographic” tags

Tag	Description	Tag	Description
1	Biogenic	14	West: NM, AZ, CO, UT, WY, MT, ID, WA, OR, CA, NV, ND, SD
2	Miscellaneous	15	Northeast: ME, NH, VT, MA, RI, CT, NY, NJ, PA, DE, MD, DC
3	IL	16	Chicago IL Metro Counties: Cook, Du Page, Kane, Lake, Mc Henry, Will,
4	IN	17	Chicago IL Exurb Counties: Boone, De Kalb, Ford, Grundy, Iroquois, Kankakee, Kendall, La Salle, Lee, Livingston, Ogle, Stephenson, Winnebago
5	MI	18	East St. Louis IL Counties: Madison, Monroe, St. Clair
6	WI	19	Northern IN Counties: De Kalb, Elkhart, Fulton, Jasper, Kosciusko, Lagrange, La Porte, Marshall, Newton, Noble, Polaski, St. Joesph, Starke, Steuben, Porter, Lake
7	MN	20	Southeast WI Counties: Kenosha, Racine, Milwaukee, Ozaukee, Washington, Waukesha
8	OH	21	Central Coast WI: Kewaunee, Manitowoc, Sheboygan
9	MO	22	Detroit MI Counties: Livingston, Macomb, Monroe, Oakland, St. Claire, Washtenaw, Wayne
10	KY	23	Berrien County, MI
11	TX	24	Allegan County, MI
12	Southeast: WV, VA, NC, SC, TN, GA, AL, FL, MS	25	Muskegon County, MI
13	Great Plains: AR, KS, IA, NE, OK	26	Cincinnati OH Counties: Butler, Clermont, Hamilton, Warren
		27	Cleveland OH Counties: Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, Summit

3.6. LADCO Modeling Platform Summary

Table 3-5 summarizes the LADCO 2016 air quality modeling platform elements.

Table 3-5. Listing of the LADCO 2016 air quality modeling platform components

Platform Element	Configuration	Reference	Data source
Meteorology Data	WRFv3.9.1	LADCO, 2022	LADCO
Initial and Boundary Conditions	2016 Hemispheric CMAQ	U.S. EPA, 2019c	U.S. EPA
2016 Emissions Data	Inventory Collaborative 2016v1 ERTAC16.1 EGU Point and hourly CEMs		Inventory Collaborative and ERTAC
2023 Emissions Data	Inventory Collaborative 2016v1 ERTAC16.1 EGU Point		LADCO and ERTAC
Emissions Modeling Platform	U.S. EPA 2016fh_16j		U.S. EPA
Photochemical Grid Model	CAMxv7.10	Ramboll, 2020	LADCO

3.7. 2016 CAMx Model Performance Evaluation Methods

LADCO simulated 2016 air quality with CAMx using data derived from the U.S. EPA 2016fh emissions modeling platform. The CAMx model performance evaluation (MPE) presented here focuses on O₃ at surface monitors in the LADCO states with 2015 O₃ NAAQS NAAs, including Illinois (IL), Indiana (IN), Michigan (MI), Ohio (OH), and Wisconsin (WI). These states will use the information in this TSD as weight of evidence in support of the moderate area NAA SIPs. LADCO used the Atmospheric Model Evaluation Tool (AMET) version 1.4 to pair the model results and surface observations in space and time, generate bi-variate statistics of model performance, and to produce MPE plots.

LADCO evaluated the CAMx 2016 modeled O₃ concentrations against concurrent measured surface ambient O₃ concentrations using graphical displays of model performance and statistical model performance measures. We compared the statistical measures against established model performance goals and criteria (Emery et al., 2017) and following the procedures recommended in EPA's photochemical modeling guidance document (US EPA, 2018).

3.7.1. Available Aerometric Data for the Model Evaluation

LADCO used the following routine air quality measurement data networks operating in in 2016 to assess CAMx O₃ model performance:

EPA AQS Surface Air Quality Data: Data files containing hourly-averaged concentration measurements at a wide variety of state and EPA monitoring networks are available in the Air Quality System ([AQS](#)) database throughout the U.S. The AQS consists of many sites that tend to be mainly located in and near major cities. There are several types of networks within AQS that measure different species. The standard hourly AQS AIRS monitoring stations typically measure hourly O₃, NO₂, NO_x and CO concentration and there are thousands of sites across the U.S. Figure 3-8 shows the locations of AQS surface monitors in the LADCO region.

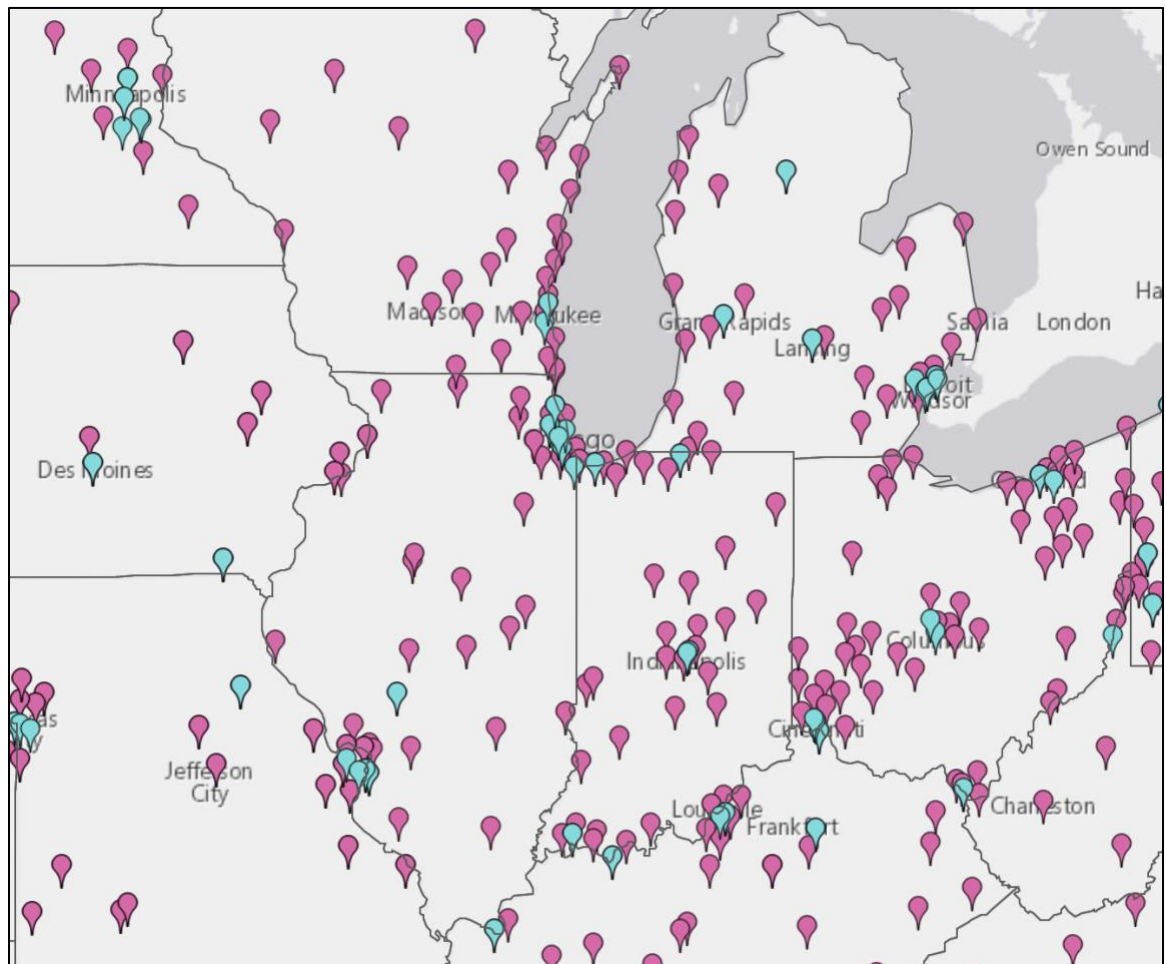


Figure 3-8. Locations of AQS monitors in the LADCO region, O₃ monitors are pink and NO₂ monitors are blue; source: U.S. EPA AirData

CASTNet Monitoring Network: The Clean Air Status and Trends Network ([CASTNet](https://www.epa.gov/castnet)) operates approximately 80 monitoring sites in mainly rural areas across the U.S. CASTNet sites typically collect hourly O₃, temperature, wind speed and direction, the standard deviation of the wind direction, solar radiation, relative humidity, precipitation and surface wetness. CASTNet also collects weekly (Tuesday to Tuesday) samples of speciated PM_{2.5} sulfate, nitrate, ammonium and other relevant ions and weekly gaseous SO₂ and nitric acid (HNO₃). Figure 3-9 displays the locations of the approximately 80 CASTNet sites across the U.S.



Figure 3-9. Locations of CASTNet monitoring sites; source: <https://www.epa.gov/castnet>

3.7.2. Model Performance Statistics, Goals and Criteria

U.S. EPA (2018) recommended a 60 ppb observed O₃ cut-off threshold when calculating O₃ model performance statistics. Emery et al., (2017) conducted a meta-analysis of 38 peer-reviewed articles from 2005 through 2015 on photochemical grid modeling applications to update the MPE benchmarks for O₃ and particulate matter modeling. Table 3-6 lists their recommended MPE goals and criteria, and cutoff concentrations. In addition, Emery et al., recommended that MPE statistics for O₃ should be calculated for time periods of roughly 1 week (episodic) and not to exceed 1 month.

Table 3-6. Ozone model performance benchmarks by Emery, et al. (2017)

Metric	Goal	Criteria	Cutoff
Normalized Mean Bias (NMB)	$\leq \pm 5\%$	$\leq \pm 15\%$	40 ppb for 1-hour O ₃ , no cutoff for MDA8 O ₃
Normalized Mean Error (NME)	$< 15\%$	$< 25\%$	40 ppb for 1-hour O ₃ , no cutoff for MDA8 O ₃
Correlation Coefficient (r)	> 0.75	> 0.5	No cutoff

The model performance goals by U.S. EPA and Emery et al. are not used to assign passing or failing grades to model performance, but rather to help interpret the model performance and intercompare across locations, species, time periods and model applications. The model inputs to CAMx vary hourly, but tend to represent average conditions that do not account for unusual or extreme conditions. For example, an accident or large event could cause significant increases in congestion and motor vehicle emissions that are not accounted for in the average emissions inputs used in the model.

U.S. EPA compiled and interpreted the model performance from 69 air quality modeling studies in the peer-reviewed literature between 2006 and March 2012 and developed recommendations on what should be reported in a model performance evaluation (Simon, et al., 2012). Included in the most recent EPA guidance (U.S. EPA, 2018), they are useful and were used by LADCO in our model performance evaluation:

- Photochemical modeling MPE studies should at a minimum report the Mean Bias (MB) and Error (ME or RMSE), and Normalized Mean Bias (NMB) and Error (NME) and/or Fractional Bias (FB) and Error (FE). The NMB and NME are unbounded on the positive end ($+\infty$) but bounded at -100% for bias and 0% for error, while FE is bounded in 0-200% and FB is bounded in -200% to +200%.
- The model evaluation statistics should be calculated for the highest temporal resolution available and for important regulatory averaging times (e.g., daily maximum 8-hour O₃).
- It is important to report processing steps in the model evaluation and how the predicted and observed data were paired and whether data are spatially/temporally averaged before the statistics are calculated.

- Predicted values should be taken from the grid cell that contains the monitoring site, although bilinear interpolation to the monitoring site point can be used for higher resolution modeling (< 12 km).
- Evaluation should be performed for subsets of the data including, high observed concentrations (e.g., O₃ > 60 ppb), by subregions and by season or month.
- Evaluation should include more than just O₃ and PM_{2.5}, such as SO₂, NO₂ and CO.
- Spatial displays should be used in the model evaluation to evaluate model predictions away from the monitoring sites. Time series of predicted and observed concentrations at a monitoring site should also be used.
- It is necessary to understand measurement artifacts to make meaningful interpretation of the model performance evaluation.

We incorporated the recommendations of U.S. EPA (2018) and Emery et al., (2017) into the LADCO CAMx model performance evaluation. The LADCO evaluation products include qualitative and quantitative evaluation for MDA8 O₃ with and without a 60 ppb threshold.

Table 3-7. Definition of model performance evaluation statistical measures used to evaluate CAMx.

Statistical Measure	Mathematical Expression	Notes
Normalized Mean Error (NME)	$\frac{\sum_{i=1}^N P_i - O_i }{\sum_{i=1}^N O_i}$	Reported as %
Normalized Mean Bias (NMB)	$\frac{\sum_{i=1}^N (P_i - O_i)}{\sum_{i=1}^N O_i}$	Reported as %
Correlation Coefficient (r)	$\frac{\sum [(P_j - \bar{P}) \times (O_j - \bar{O})]}{\sqrt{\sum (P_j - \bar{P})^2 \times \sum (O_j - \bar{O})^2}}$	Unitless, $-1 \leq r \leq +1$ $r = 1$ is perfectly correlated $r = 0$ is totally uncorrelated

3.7.3. Subregional Evaluation of Model Performance

The evaluation of the LADCO 2016 CAMx simulations focuses on monthly and O₃ season model performance at monitors in IL, IN, MI, OH and WI. We also examined summer season high O₃ episodes in the 2015 O₃ NAAQS NAAs in the LADCO region to determine how well the model performs on O₃ exceedance days in policy relevant locations.

4. 2016 and 2023 Emissions Summary

In this section we summarize the base and future year emissions modeling results used to forecast ground-level O₃ concentrations in 2023. The emissions projections from the 2016 base year to 2023 are the foundation of the air quality model forecasts of future year air quality. The emissions plots and tables in this section illustrate and quantify how the U.S. emissions modeling community, including LADCO, U.S. EPA, and state air quality planning agencies forecasted air pollution emissions for the current round of 2015 O₃ NAAQS attainment demonstrations. As described in Section 3.4, LADCO based the 2016 and 2023 emissions data for this application on the U.S. EPA 2016fh emissions modeling platform (US EPA, 2021). LADCO replaced the EGU emissions in the U.S. EPA 2016fh platform with 2023 EGU forecasts estimated with a modified version of the ERTAC EGU Tool version 16.2 beta (MARAMA, 2012). Table 3-2 lists the 2016 base year and 2023 future year inventory components that LADCO used to simulate 2016 and 2023 air quality for this application.

The following sections summarize the 2016 and 2023 emissions used by LADCO for simulating O₃ and O₃ precursors during these years. Tabulated ozone season total emissions by state, county, and sector for the data used by LADCO for this TSD are include in the supporting materials to this TSD:

[2016 and 2023 State, County, and Sector Emissions Summary](#) (XLSX; 41 Mb)

4.1. 2016 Emissions Summary

The tables and figures in this section summarize the emissions used in the LADCO 2016 CAMx simulation. Table 4-1 shows the LADCO state 2016 average O₃ season (March – October) day emissions (OSDE) for CO, NO_x, and VOC for all sectors, including natural sources like biogenics and fires. The calculation for average OSDE is shown in Equation 4-1.

$$OSDE_{s,p} = \frac{\sum_{m=mar}^{oct} \sum_{y=1}^n E_{m,y,s,p}}{244} \quad (\text{Equation 4-1})$$

Where E = monthly total emissions, s = state, p = pollutant, m = month, y = inventory sector, n = number of inventory sectors; note that 244 is the number of days in March - October 2016

Figure 4-1 through Figure 4-9 are tile plots of the 12-km, 4-km, and 1.33-km gridded, July 2016 total CO, NOx, and VOC surface layer emissions, respectively. The CO and NOx plots illustrates that the highest emissions occur in proximity to urban areas and roadways. The VOC plot shows high emissions around urban areas and a diffuse emissions signal from biogenic sources. Table 4-2 through Table 4-4 show the 2016 average OSDE for CO, NOx, and VOC, respectively, by LADCO member state and inventory sector.

Table 4-1. 2016 average ozone season day emissions (OSDE) by state (tons/day)

State	CO	NOX	VOC
Illinois	4,421	1,082	2,703
Indiana	3,578	876	1,789
Michigan	4,123	805	3,152
Minnesota	4,355	652	2,838
Ohio	4,776	946	2,371
Wisconsin	2,636	533	2,399

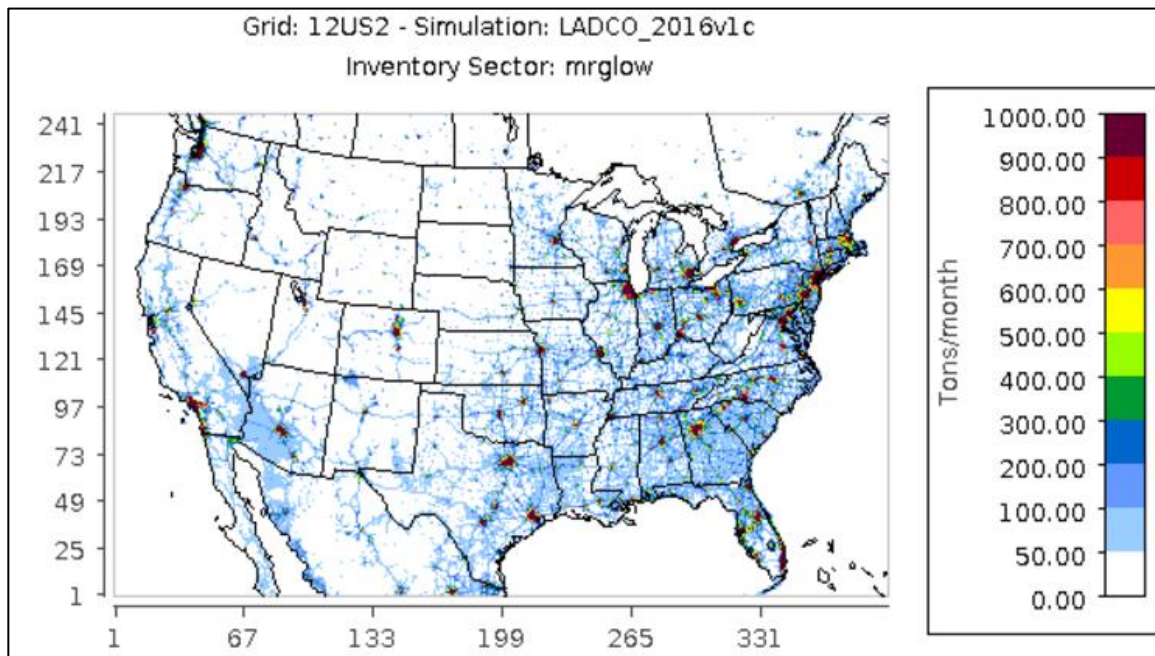


Figure 4-1. July 2016 total 12-km gridded CO surface layer emissions (tons/month)

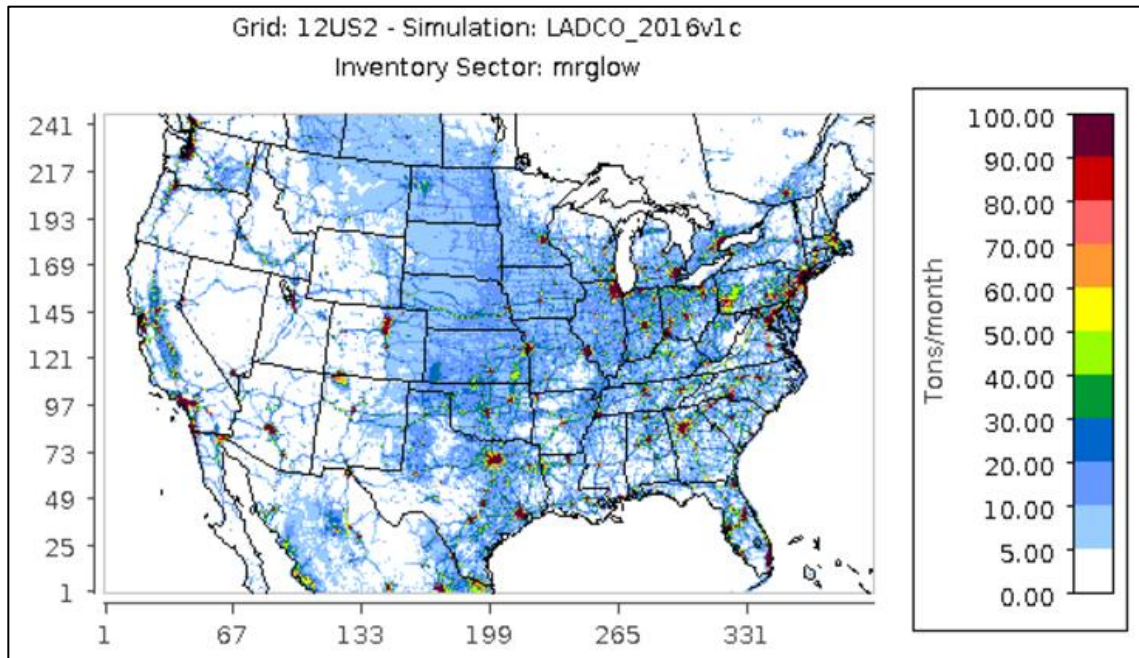


Figure 4-2. July 2016 total 12-km gridded NOx surface layer emissions (tons/month)

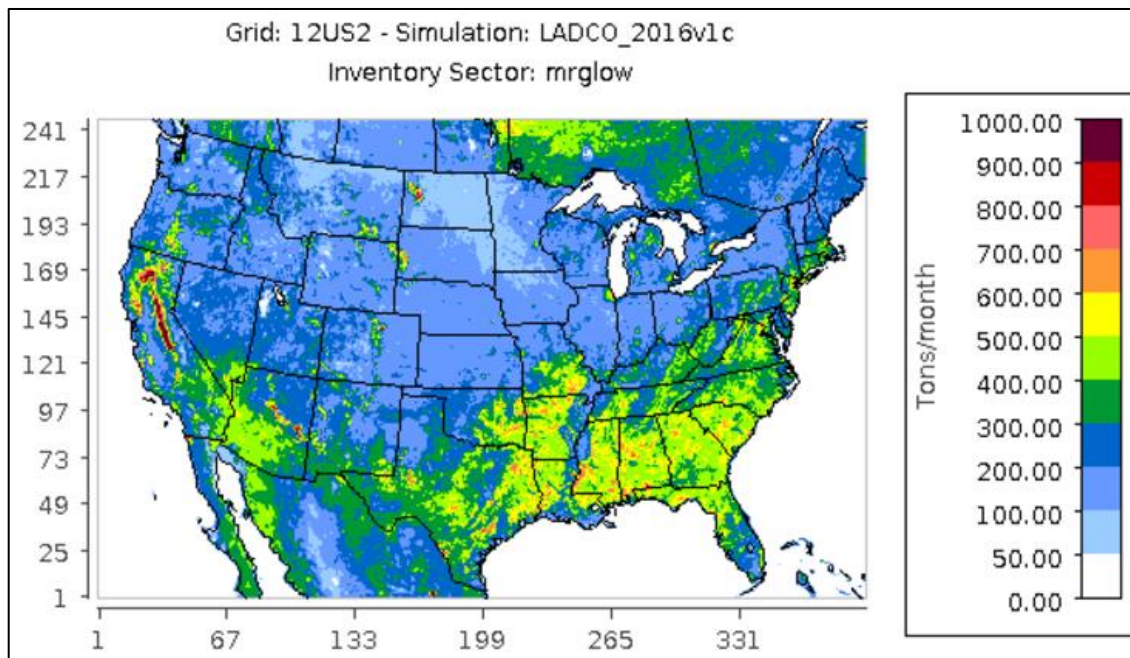


Figure 4-3. July 2016 total 12-km gridded VOC surface layer emissions (tons/month)

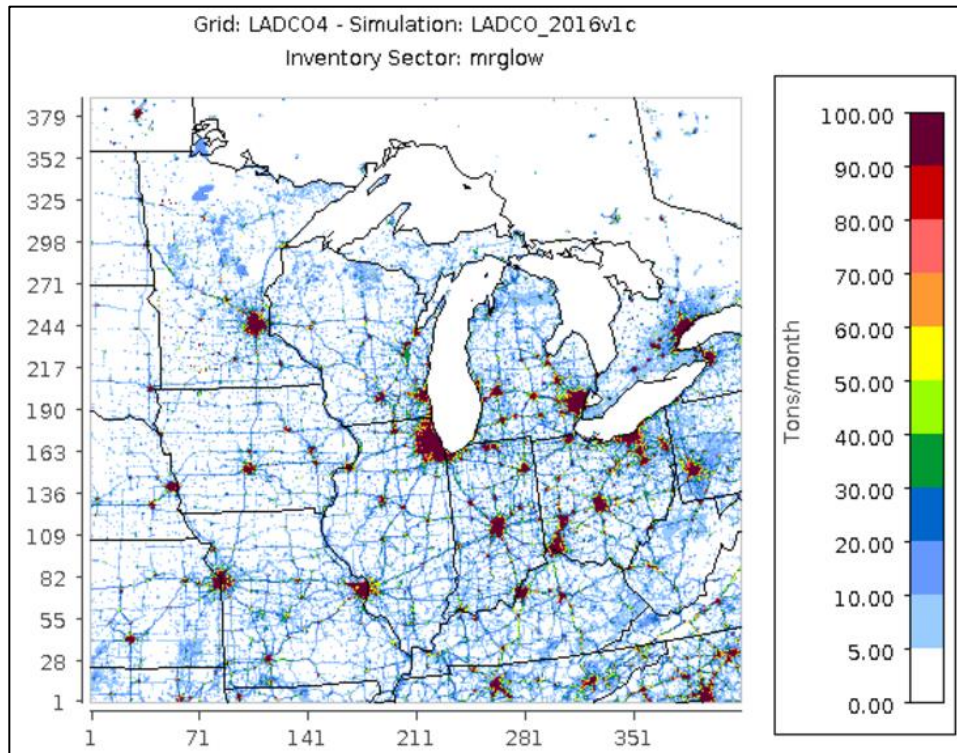


Figure 4-4. July 2016 4-km gridded CO surface layer emissions (tons/month)

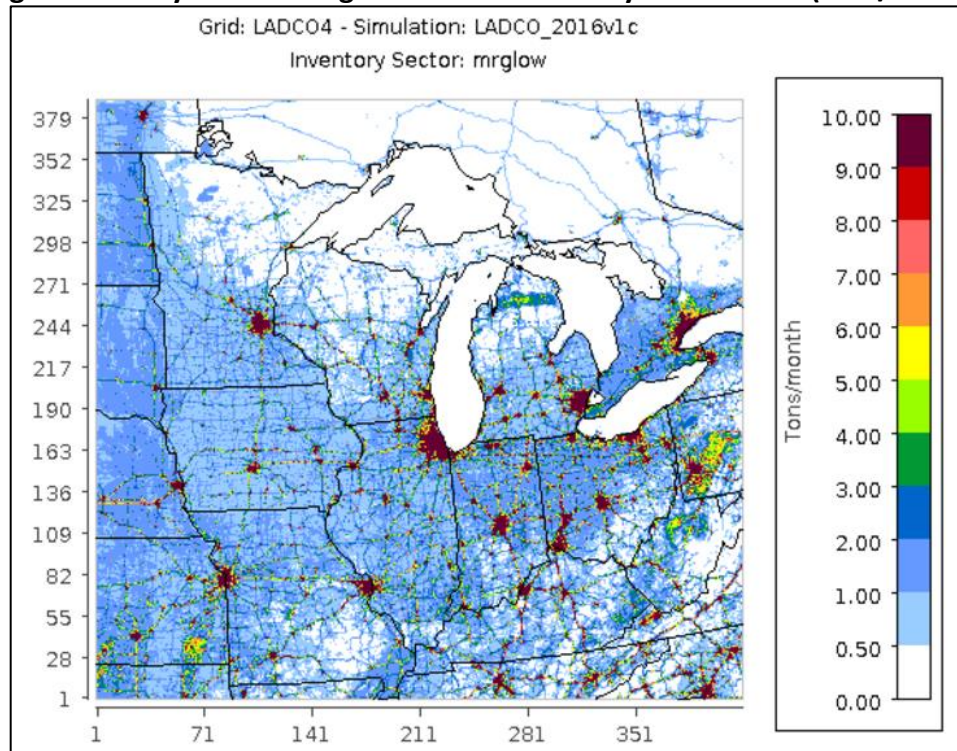


Figure 4-5. July 2016 4-km gridded NOx surface layer emissions (tons/month)

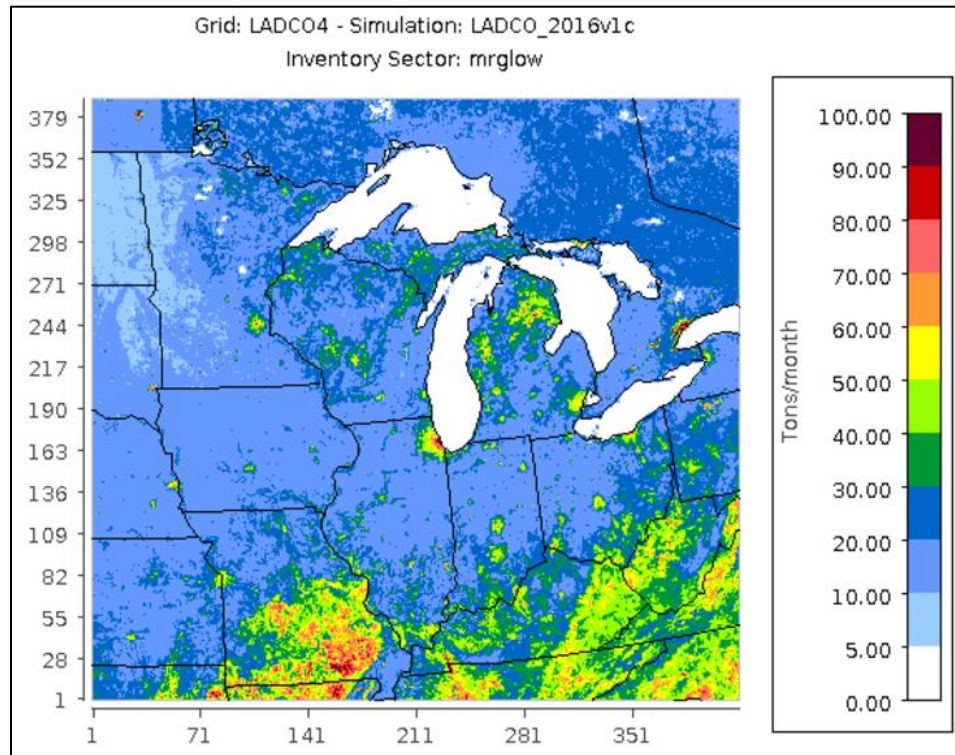


Figure 4-6. July 2016 4-km gridded VOC surface layer emissions (tons/month)

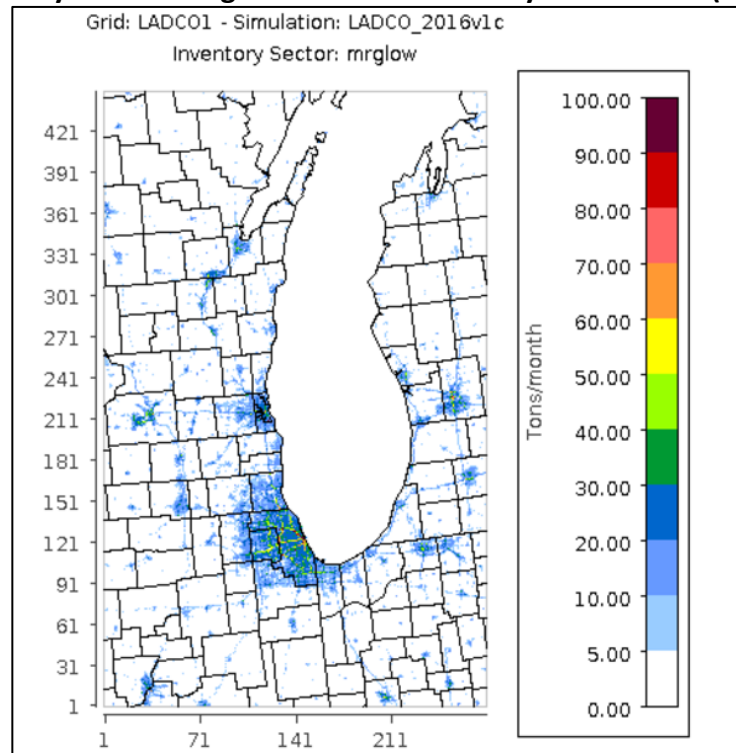


Figure 4-7. July 2016 1.33-km gridded CO surface layer emissions (tons/month)

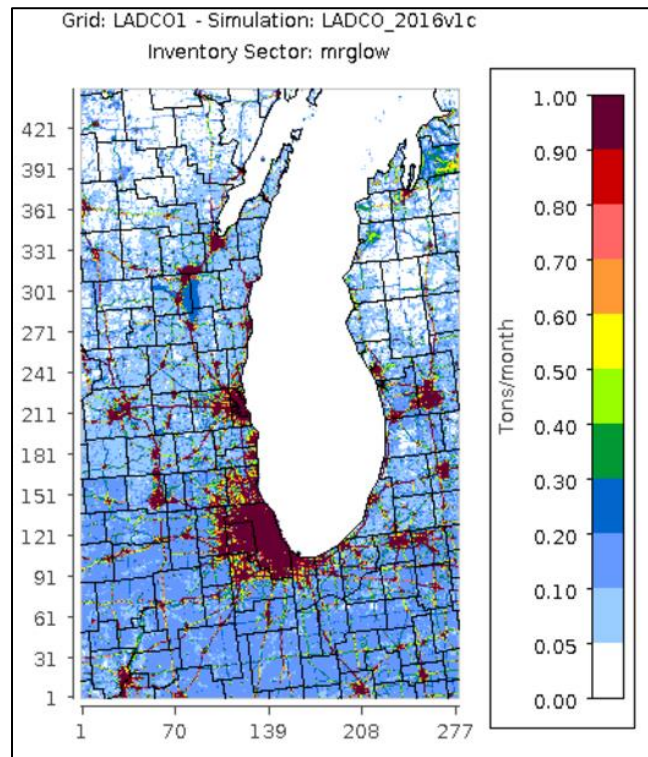


Figure 4-8. July 2016 1.33-km gridded NOx surface layer emissions (tons/month)

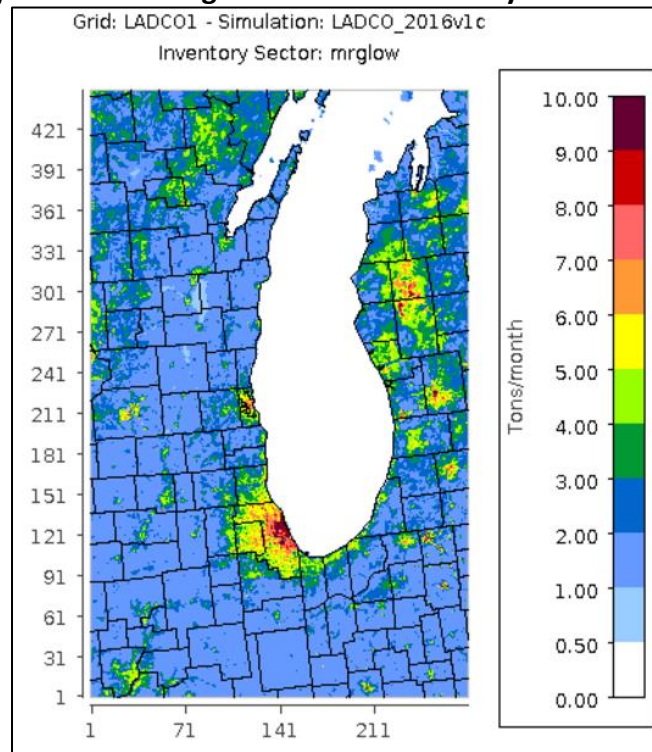


Figure 4-9. July 2016 1.33-km gridded VOC surface layer emissions (tons/month)

Table 4-2. 2016 average ozone season day CO emissions by inventory sector (tons/day)

Sector	IL	IN	MI	MN	OH	WI
Airports	91	27	44	37	45	25
Biogenic	344	220	391	424	247	313
C1/C2 Commercial Marine	2	1	2	0	1	1
C3 Commercial Marine	0	0	2	0	0	0
Nonpoint	164	112	202	118	265	157
Offroad Mobile	1,379	749	1,010	828	1,315	730
Nonpoint Oil & Gas	58	14	48		4	
Onroad Mobile	1,926	1,624	1,870	1,191	2,253	1,020
Point Oil & Gas	7	4	11	1	7	0
Agricultural Fires	1	0	1	6	0	1
Electricity Generation	29	25	30	21	40	27
Wild and Prescribed Fires	236	141	132	1,091	79	152
Industrial Point	80	543	149	38	360	56
Rail	17	8	2	7	12	5
RWC*	87	109	229	591	147	148
Total	4,421	3,578	4,123	4,355	4,776	2,636

* RWC = Residential Wood Combustion

Table 4-3. 2016 average ozone season day NOx emissions by inventory sector (tons/day)

Sector	IL	IN	MI	MN	OH	WI
Airports	27	5	10	9	6	3
Biogenic	141	77	51	104	64	59
C1/C2 Commercial Marine	16	4	13	2	7	5
C3 Commercial Marine	0	1	17	2	2	2
Nonpoint	98	24	78	47	72	42
Offroad Mobile	157	116	78	134	130	71
Nonpoint Oil & Gas	39	10	34		4	
Onroad Mobile	323	288	270	182	340	221
Point Oil & Gas	24	14	29	8	31	1
Agricultural Fires	0	0	0	0	0	0
Electricity Generation	76	182	100	46	132	41
Wild and Prescribed Fires	4	2	2	9	1	2
Industrial Point	83	110	107	62	90	55
Rail	91	43	13	38	65	28
RWC	1	1	3	7	2	2
Total	1,082	876	805	652	946	533

Table 4-4. 2016 average ozone season day VOC emissions by inventory sector (tons/day)

Sector	IL	IN	MI	MN	OH	WI
Agriculture	21	21	9	39	19	15
Airports	9	2	4	3	3	2
Biogenic	1,689	1,118	2,328	2,016	1,440	1,922
C1/C2 Commercial Marine	1	0	0	0	0	0
C3 Commercial Marine	0	0	1	0	0	0
Nonpoint	372	262	352	184	419	178
Offroad Mobile	106	59	100	94	120	80
Nonpoint Oil & Gas	161	44	62		43	
Onroad Mobile	173	150	169	105	205	90
Point Oil & Gas	4	1	4	0	5	1
Agricultural Fires	0	0	0	0	0	0
Electricity Generation	3	3	2	1	3	2
Wild and Prescribed Fires	56	33	31	256	19	36
Industrial Point	88	75	55	44	69	51
Rail	4	2	1	2	3	1
RWC	15	18	35	93	24	22
Total	2,703	1,789	3,152	2,838	2,371	2,399

4.2. 2023₂₀₁₆ Emissions Summary

The tables and figures in this section summarize the emissions used in the LADCO 2016-based 2023 CAMx simulation. Table 4-5 shows the LADCO state 2023 average OSDE for CO, NO_x, and VOC for all sectors, including natural sources like biogenics and fires. Table 4-6 shows the percent difference in average OSDE between 2023 and 2016. Table 4-7 through Table 4-12 Figure 4-10 through Figure 4-24 are tile plots of the 12-km, 4-km, and 1.33-km gridded, July 2023 total CO, NO_x, and VOC surface layer emissions, and emissions differences between 2023 and 2016. The difference plots show the locations where emissions are projected to change in 2023 relative to 2016. The emissions differences indicate widespread reductions across the region. The largest CO and NO_x emissions reductions will occur along roadways and in urban areas; emissions increases are projected in oil and gas development regions, in Mexico, and in Canadian offshore sources in the Great Lakes. VOC emissions reductions are projected to occur in urban areas; increasing VOC emissions are expected in oil and gas development areas.

Table 4-5. 2023₂₀₁₆ average ozone season day emissions (OSDE) by state (tons/day)

State	CO	NOx	VOC
Illinois	3,799	798	2,609
Indiana	3,093	590	1,719
Michigan	3,528	578	3,049
Minnesota	3,996	493	2,772
Ohio	4,054	663	2,266
Wisconsin	2,308	367	2,339

Table 4-6. 2023-2016 percent difference in average OSDE by state

State	CO	NOx	VOC
Illinois	-14%	-26%	-3%
Indiana	-14%	-33%	-4%
Michigan	-14%	-28%	-3%
Minnesota	-8%	-24%	-2%
Ohio	-15%	-30%	-4%
Wisconsin	-12%	-31%	-3%

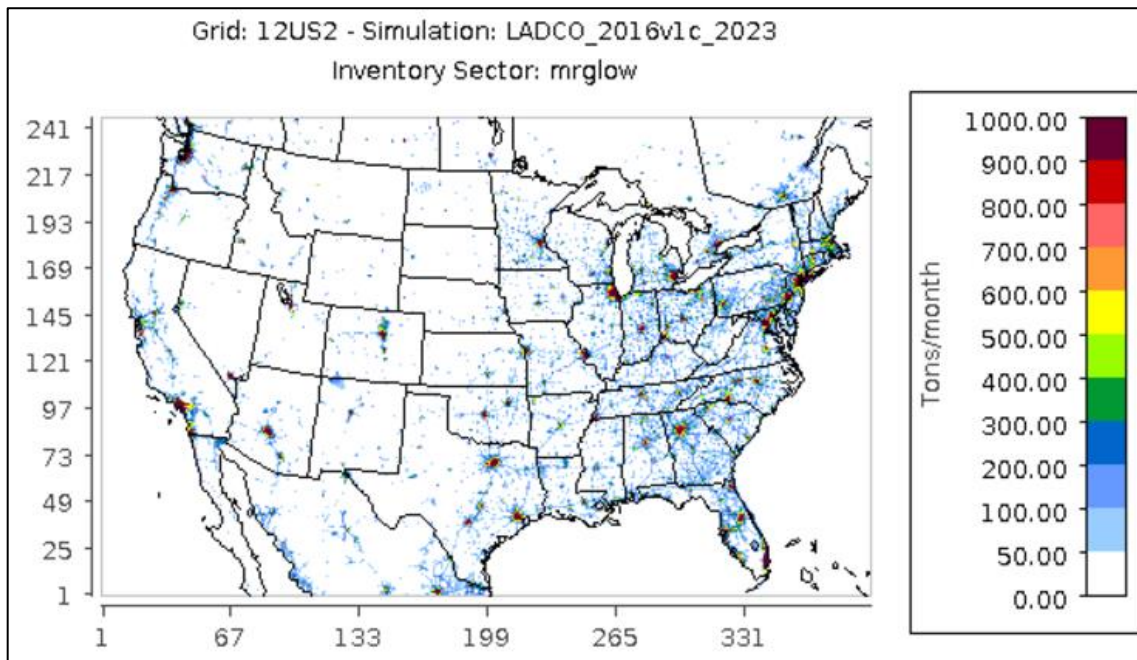


Figure 4-10. July 2023 total 12-km gridded CO surface layer emissions (tons/month).

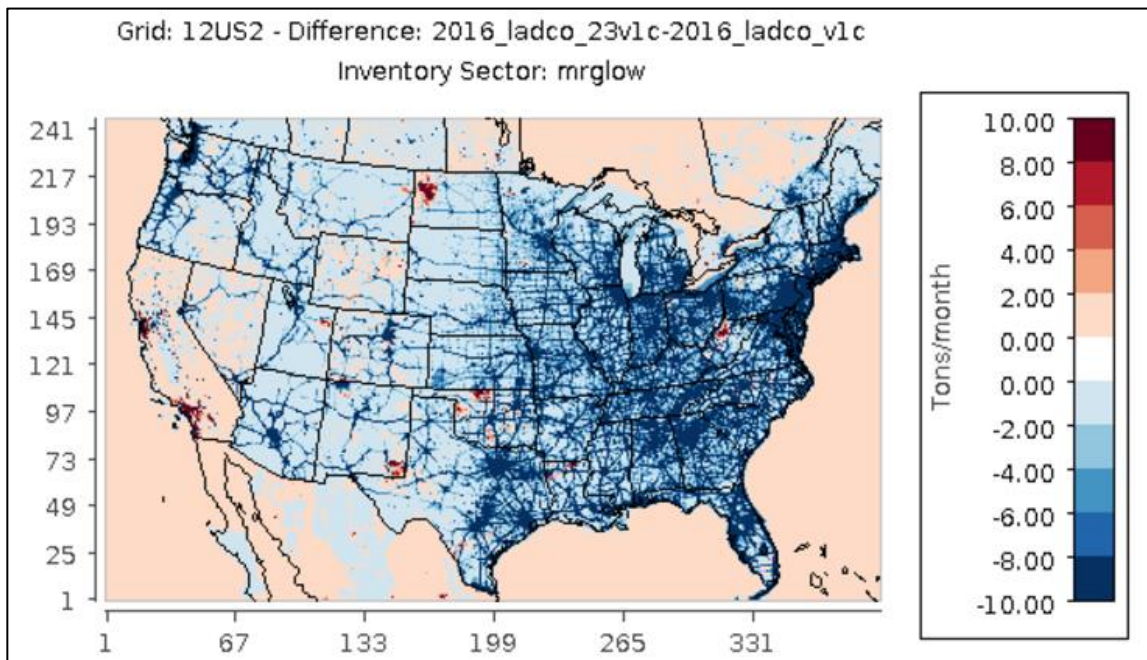


Figure 4-11. Difference (2023-2016) in July 12-km gridded CO surface layer emissions

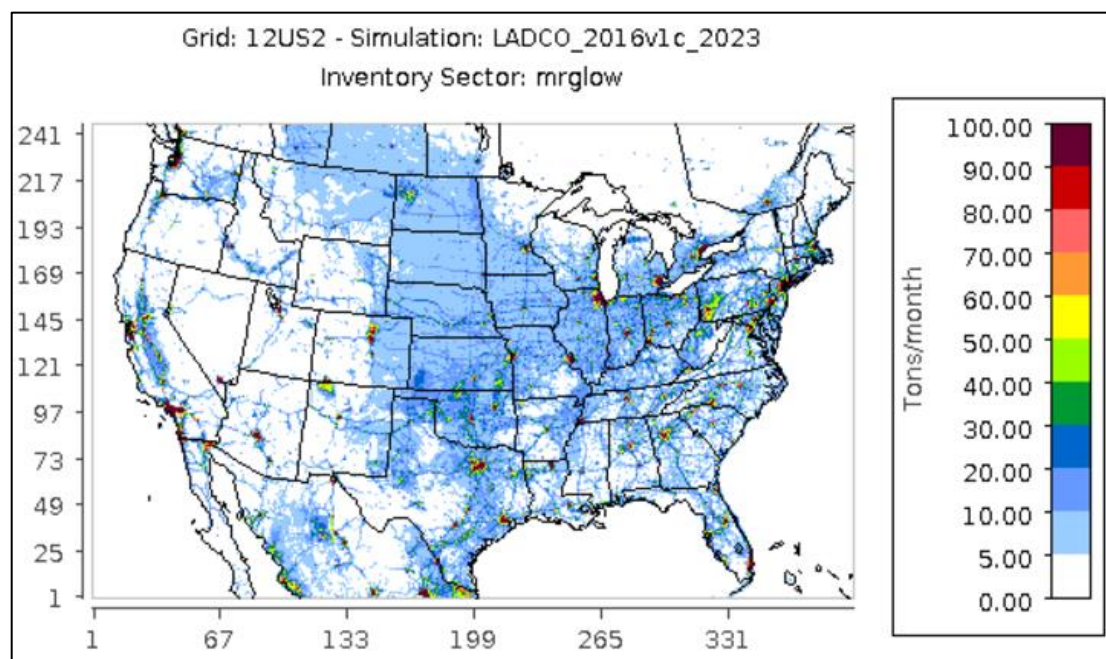


Figure 4-12. July 2023 total 12-km gridded NOx surface layer emissions (tons/month).

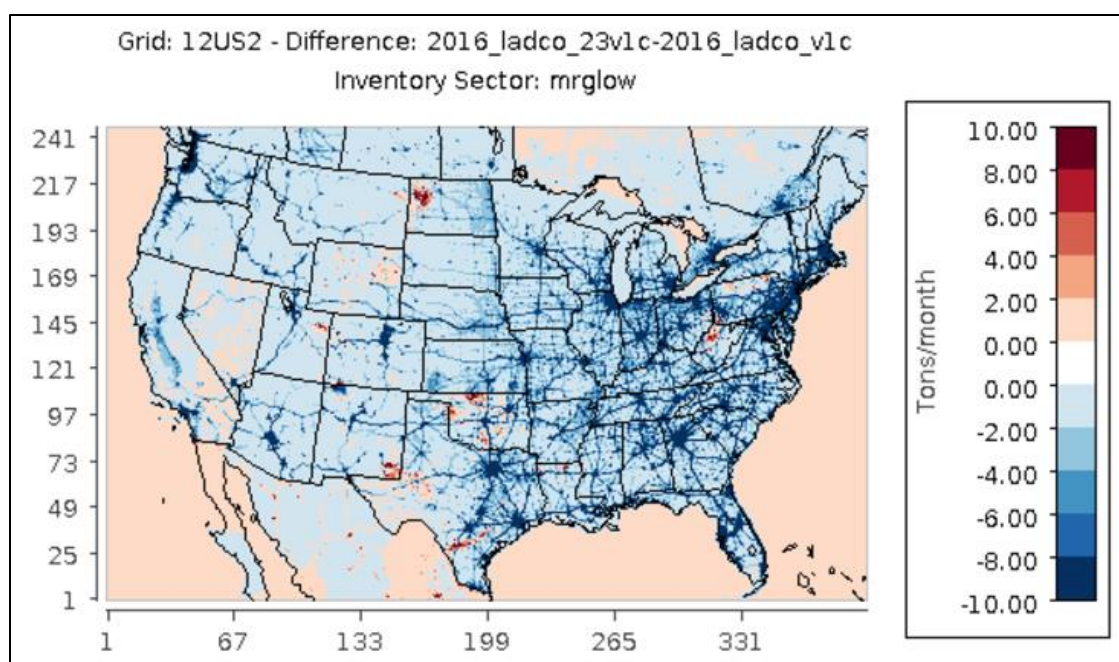


Figure 4-13. Difference (2023-2016) in July 12-km gridded NOx surface layer emissions (tons/month)

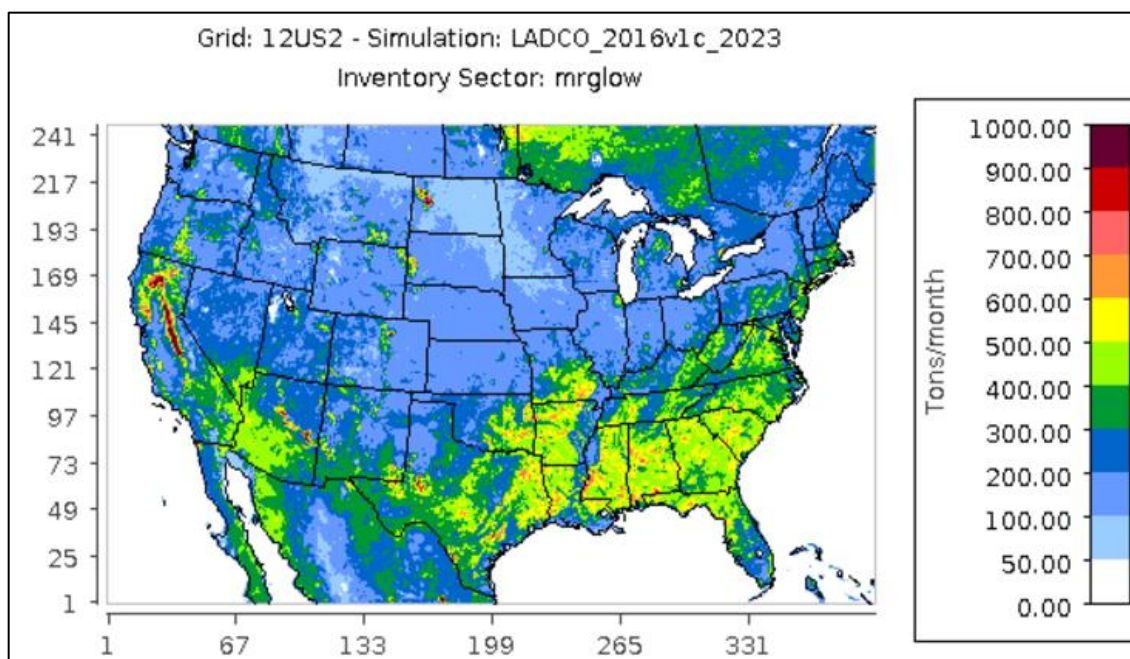


Figure 4-14. July 2023 total 12-km gridded VOC surface layer emissions (tons/month).

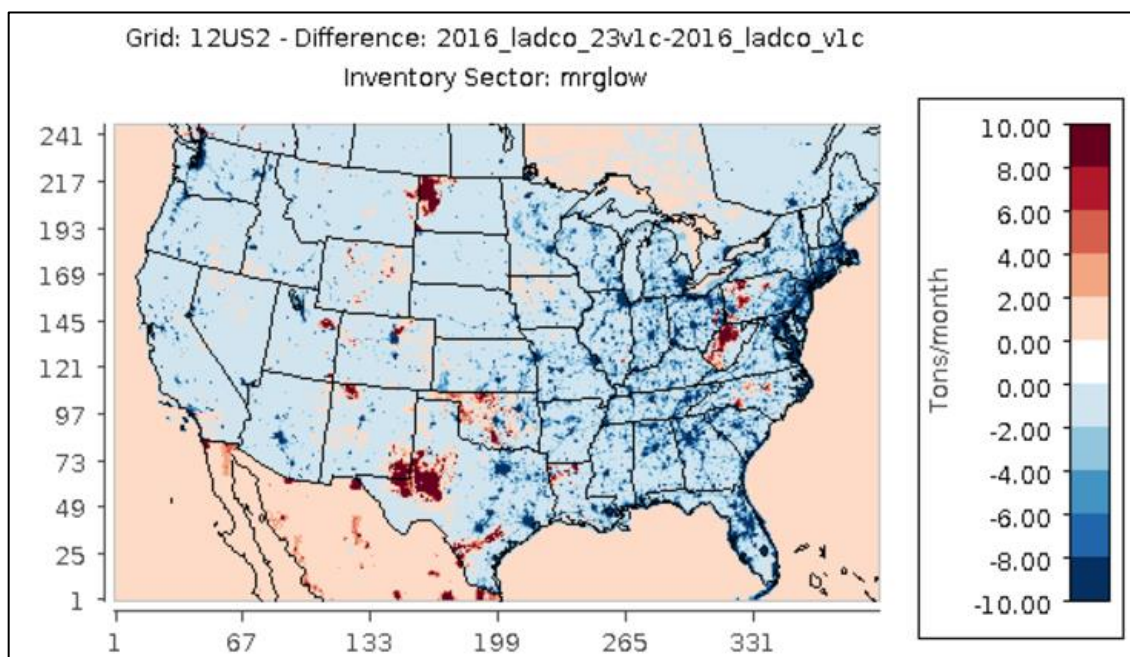


Figure 4-15. Difference (2023-2016) in July 12-km gridded VOC surface layer emissions (tons/month)

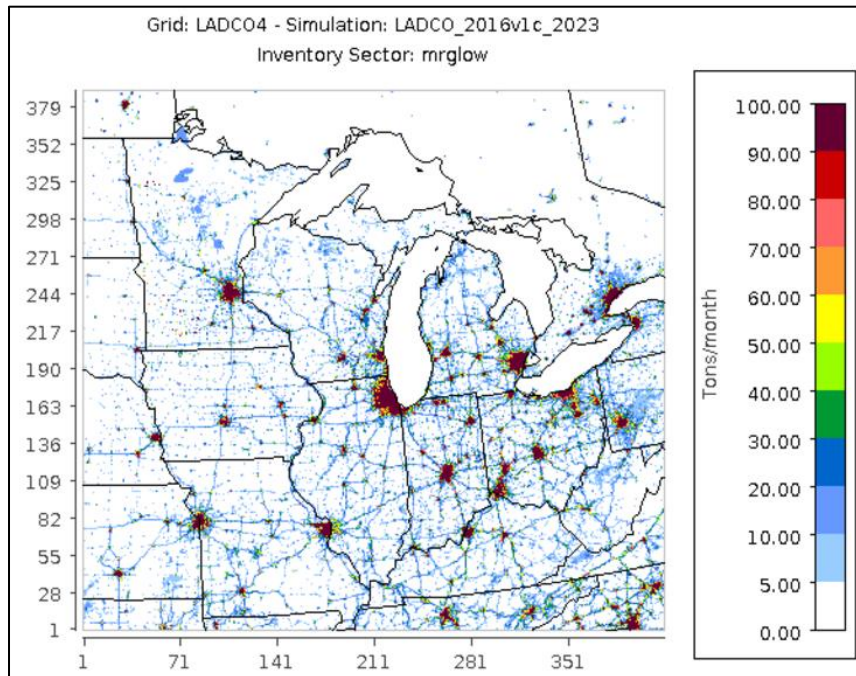


Figure 4-16. July 2023 total 4-km gridded CO surface layer emissions (tons/month).

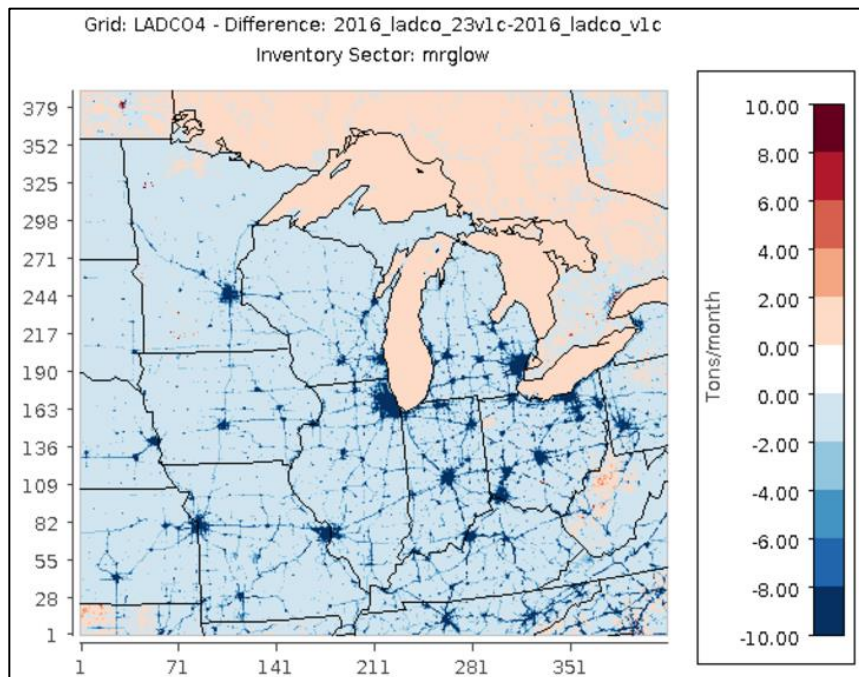


Figure 4-17. Difference (2023-2016) in July 4-km gridded CO surface layer emissions (tons/month)

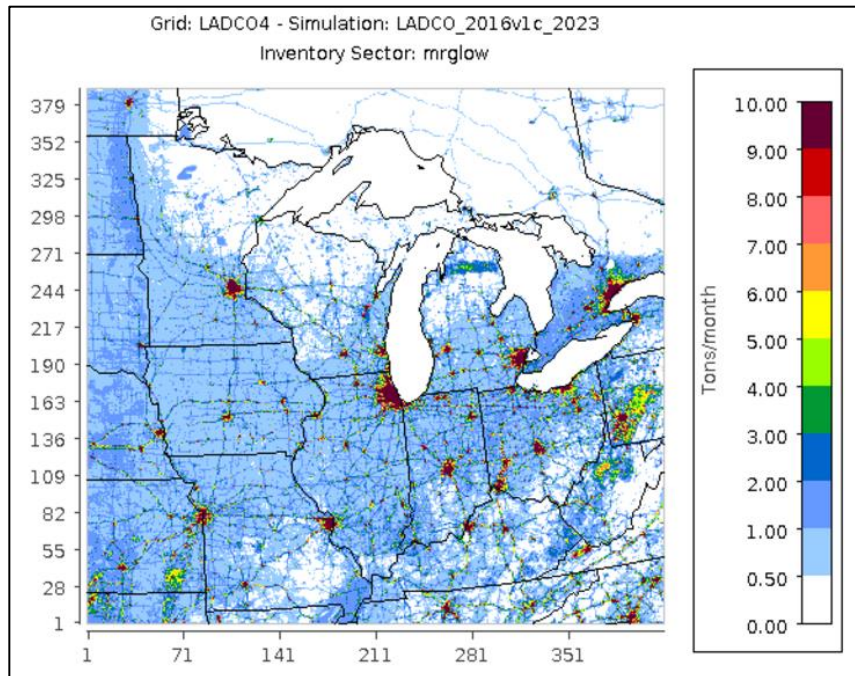


Figure 4-18. July 2023 total 4-km gridded NO_x surface layer emissions (tons/month).

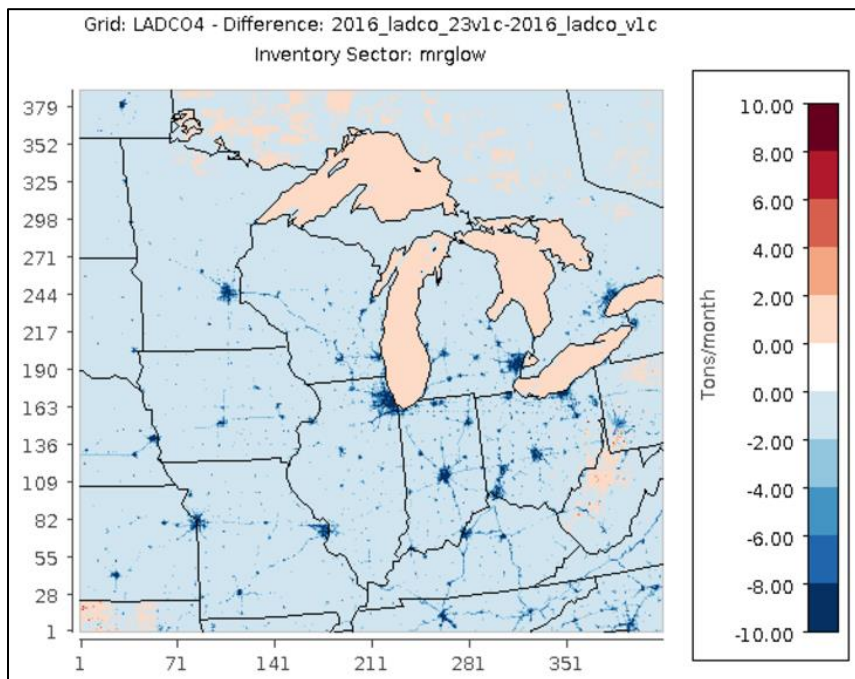


Figure 4-19. Difference (2023-2016) in July 12-km gridded NO_x surface layer emissions (tons/month).

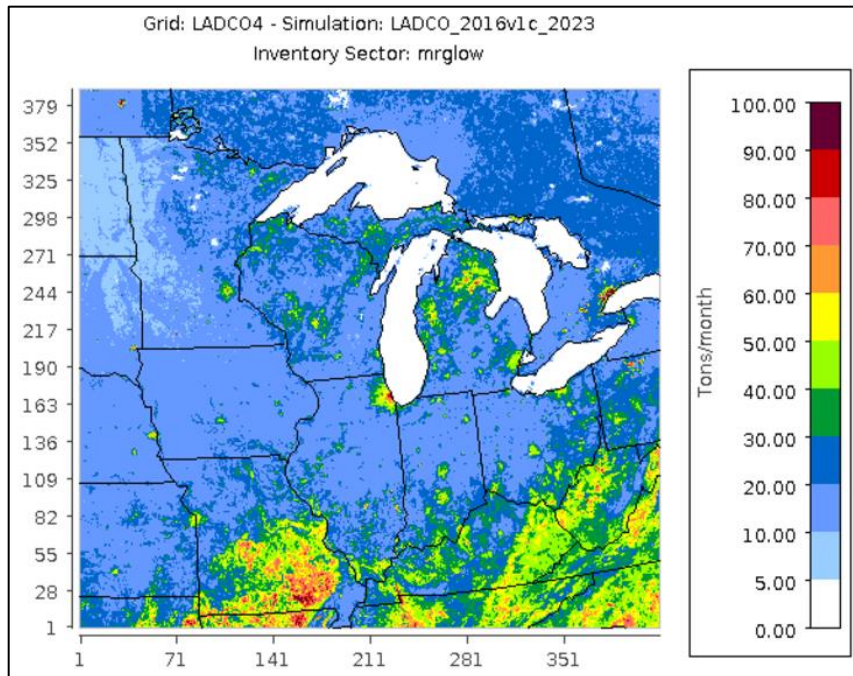


Figure 4-20. July 2023 total 4-km gridded VOC surface layer emissions (tons/month).

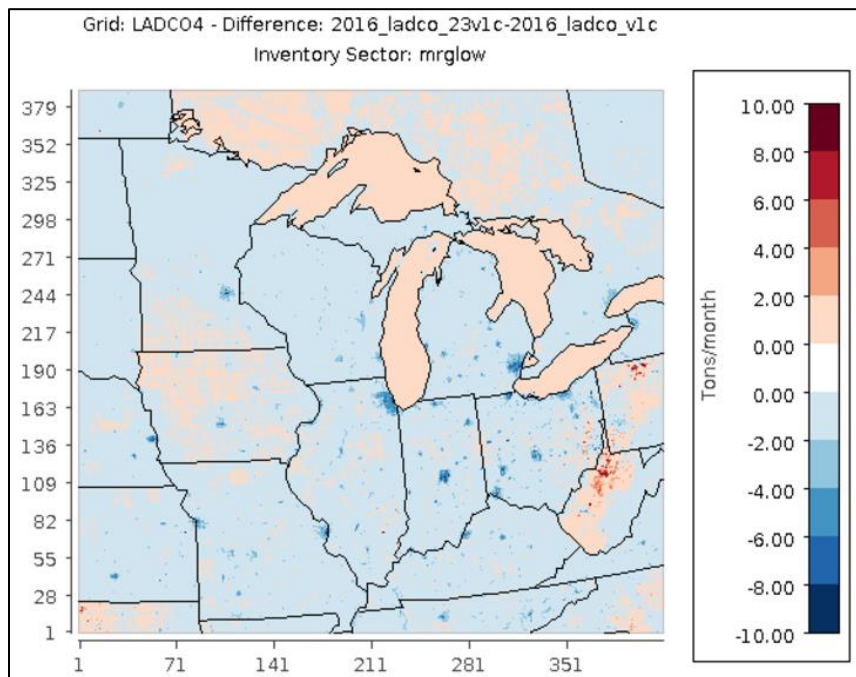


Figure 4-21. Difference (2023-2016) in July 4-km gridded VOC surface layer emissions (tons/month)

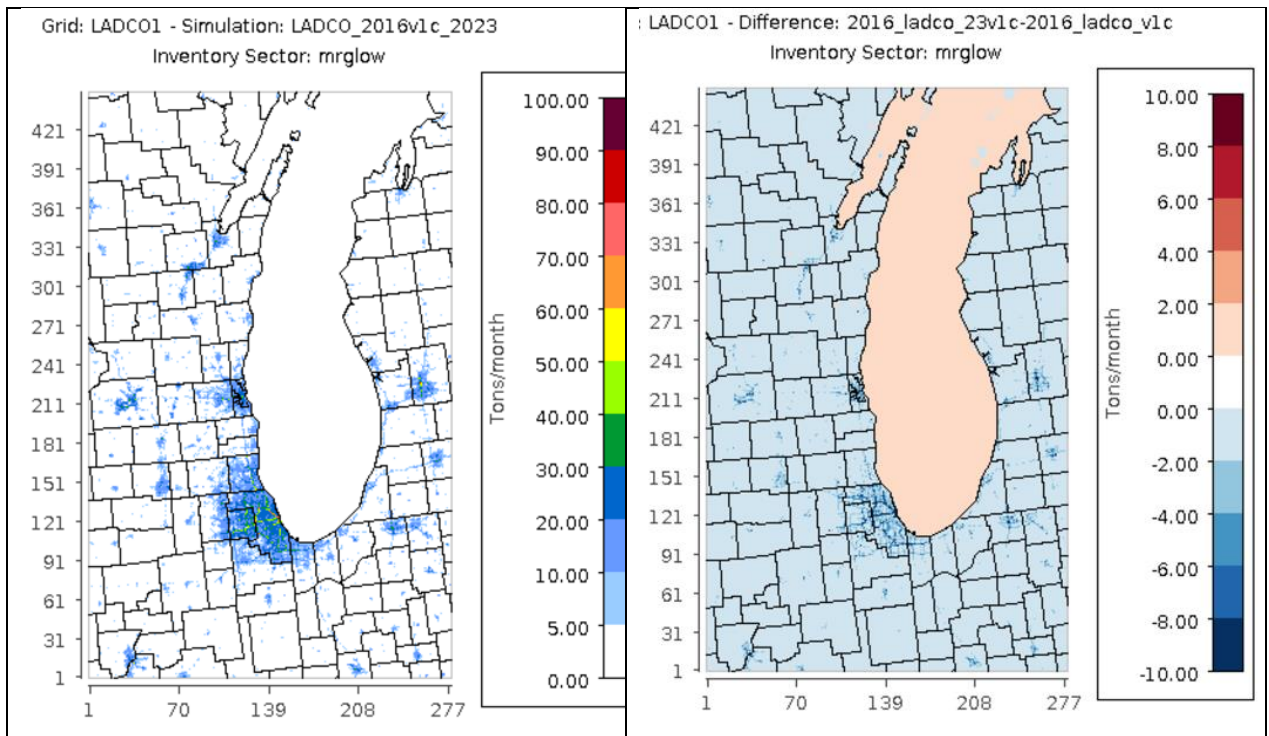


Figure 4-22. July 2023 total (left) and difference (2023-2016) [right] in 1-km gridded CO surface layer emissions (tons/month).

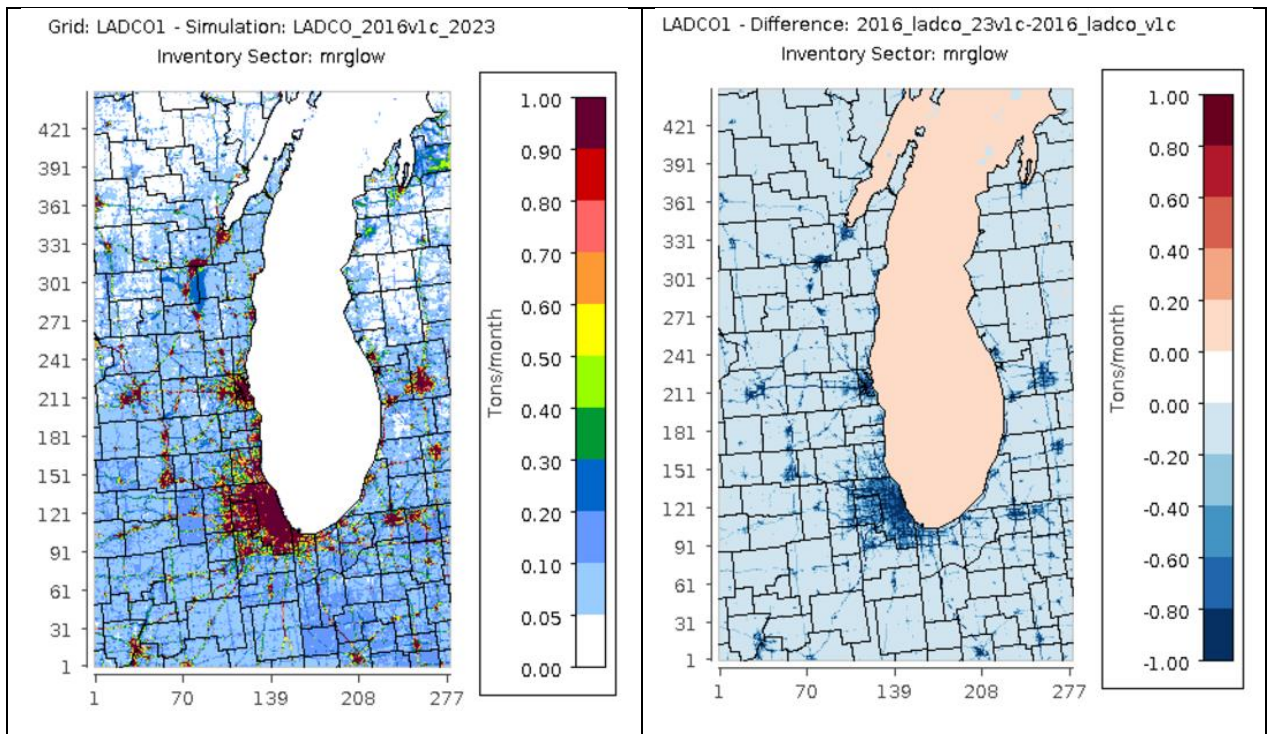


Figure 4-23. July 2023 total (left) and difference (2023-2016) [right] in 1-km gridded NOx surface layer emissions (tons/month).

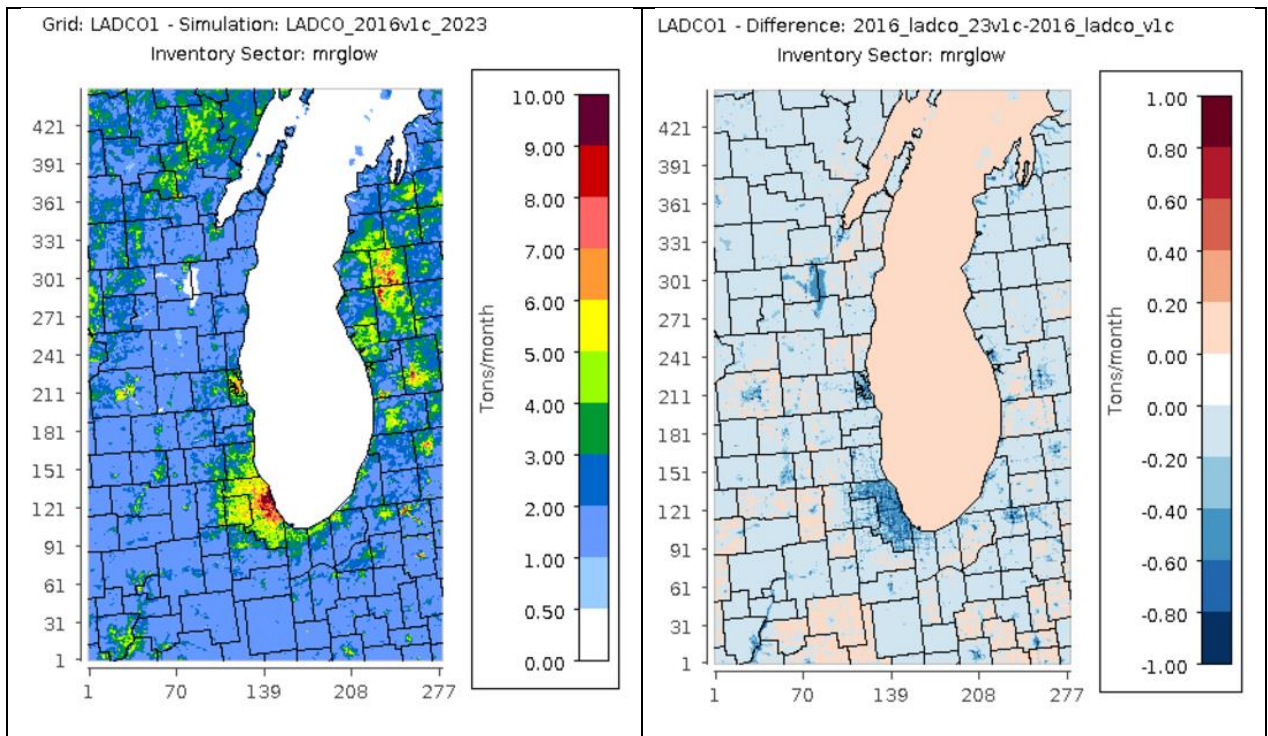


Figure 4-24. July 2023 total (left) and difference (2023-2016) [right] in 1-km gridded VOC surface layer emissions (tons/month).

Table 4-7 through Table 4-12 show the LADCO state 2023₂₀₁₆ average OSDE CO, NO_x, and VOC emissions, and compare the future and base year OSDE values by state and inventory sector. Negative numbers in these tables indicate percent emissions reductions in 2023 relative to 2016. Comparisons of the EGU and industrial point source emissions changes between 2016 and 2023 is confounded by the different methods used by the U.S EPA and ERTAC EGU projection models for distinguishing EGU from non-EGU industrial point sources. ERTAC only forecasts emissions for sources with CEM data while EPA does economic projections of all units that sell power to the grid including facilities with co-generation units like paper mills and aluminum foundries. For the LADCO modeling that used ERTAC to project power plant emissions, we used the EPA 2023 inventory projections for those sources that generate power but do not have CEMs.

LADCO projects that overall CO, NO_x, and VOC emissions will decrease in 2023 relative to 2016 in each of the LADCO states. The total NO_x reductions range from -24% to -33% across the LADCO states, driven primarily by reductions in EGU point, onroad mobile, and offroad mobile

source emissions. We project that the total VOC emissions reductions will range from -2% to -4% across the LADCO states. These reductions are driven by changes to onroad and offroad mobile sources.

Table 4-7. 2023 average ozone season day CO emissions by inventory sector (tons/day)

Sector	IL	IN	MI	MN	OH	WI
Airports	101	26	47	40	45	27
Biogenic	344	220	391	424	247	313
C1/C2 Commercial Marine	2	1	2	0	1	1
C3 Commercial Marine	0	0	2	0	0	0
Nonpoint	163	112	201	119	265	157
Offroad Mobile	1,355	747	975	810	1,283	699
Nonpoint Oil & Gas	55	13	43		6	
Onroad Mobile	1,339	1,141	1,322	858	1,572	723
Point Oil & Gas	9	5	12	1	10	0
Agricultural Fires	1	0	1	6	0	1
Electricity Generation	17	27	22	14	28	27
Wild and Prescribed Fires	236	141	132	1,091	79	152
Industrial Point	81	545	150	40	362	56
Rail	17	8	2	7	12	5
RWC	81	106	227	586	143	147
Total	3,799	3,093	3,528	3,996	4,054	2,308

Table 4-8. Percent difference between base and future year (2023-2016) average ozone season day CO emissions

Sector	IL	IN	MI	MN	OH	WI
Airports	11%	-3%	7%	6%	0%	6%
Biogenic	0%	0%	0%	0%	0%	0%
C1/C2 Commercial Marine	-1%	-1%	-1%	-1%	-1%	-1%
C3 Commercial Marine	15%	15%	15%	15%	15%	15%
Nonpoint	-1%	0%	0%	0%	0%	0%
Offroad Mobile	-2%	0%	-4%	-2%	-2%	-4%
Nonpoint Oil & Gas	-4%	-4%	-11%		74%	
Onroad Mobile	-31%	-30%	-29%	-28%	-30%	-29%
Point Oil & Gas	25%	36%	1%	0%	32%	41%
Agricultural Fires	0%	0%	0%	0%	0%	0%
Electricity Generation	-43%	6%	-26%	-34%	-31%	0%
Wild and Prescribed Fires	0%	0%	0%	0%	0%	0%
Industrial Point	1%	0%	0%	4%	1%	0%
Rail	1%	2%	0%	1%	1%	1%
RWC	-7%	-3%	-1%	-1%	-3%	-1%
Total	-14%	-14%	-14%	-8%	-15%	-12%

Table 4-9. 2023 average ozone season day NOx emissions by inventory sectors (tons/day)

Sector	IL	IN	MI	MN	OH	WI
Airports	34	6	13	11	7	4
Biogenic	141	77	51	104	64	59
C1/C2 Commercial Marine	11	3	9	2	5	4
C3 Commercial Marine	0	1	19	2	2	2
Nonpoint	94	23	75	47	70	41
Offroad Mobile	99	72	55	90	86	48
Nonpoint Oil & Gas	37	9	30		7	
Onroad Mobile	157	140	125	86	157	98
Point Oil & Gas	27	20	31	8	36	2
Agricultural Fires	0	0	0	0	0	0
Electricity Generation	34	88	53	29	83	27
Wild and Prescribed Fires	4	2	2	9	1	2
Industrial Point	82	112	101	67	87	54
Rail	77	36	11	32	55	24
RWC	1	1	3	7	2	2
Total	798	590	578	493	663	367

Table 4-10. Percent difference between base and future year (2023-2016) average ozone season day NOx emissions

Sector	IL	IN	MI	MN	OH	WI
Airports	24%	19%	25%	17%	13%	27%
Biogenic	0%	0%	0%	0%	0%	0%
C1/C2 Commercial Marine	-29%	-29%	-29%	-29%	-29%	-29%
C3 Commercial Marine	9%	9%	9%	9%	9%	9%
Nonpoint	-4%	-2%	-4%	-1%	-4%	-3%
Offroad Mobile	-37%	-38%	-29%	-33%	-33%	-32%
Nonpoint Oil & Gas	-4%	-5%	-12%		68%	
Onroad Mobile	-51%	-51%	-54%	-53%	-54%	-56%
Point Oil & Gas	12%	42%	5%	-3%	16%	20%
Agricultural Fires	0%	0%	0%	0%	0%	0%
Electricity Generation	-56%	-52%	-47%	-37%	-38%	-34%
Wild and Prescribed Fires	0%	0%	0%	0%	0%	0%
Industrial Point	-2%	1%	-6%	7%	-3%	-2%
Rail	-15%	-15%	-11%	-16%	-16%	-16%
RWC	-3%	1%	3%	2%	2%	3%
Total	-26%	-33%	-28%	-24%	-30%	-31%

Table 4-11. 2023 average ozone season day VOC emissions by inventory sectors (tons/day)

Sector	IL	IN	MI	MN	OH	WI
Agriculture	23	23	10	42	21	15
Airports	10	2	4	4	3	2
Biogenic	1,689	1,118	2,328	2,016	1,440	1,922
C1/C2 Commercial Marine	1	0	0	0	0	0
C3 Commercial Marine	0	0	1	0	0	0
Nonpoint	377	265	352	188	424	180
Offroad Mobile	82	48	70	64	89	54
Nonpoint Oil & Gas	157	44	59		48	
Onroad Mobile	102	86	98	61	119	53
Point Oil & Gas	5	1	4	1	7	1
Agricultural Fires	0	0	0	0	0	0
Electricity Generation	2	3	2	1	2	1
Wild and Prescribed Fires	56	33	31	256	19	36
Industrial Point	89	76	54	45	68	52
Rail	3	2	1	1	2	1
RWC	14	18	34	93	24	22
Total	2,609	1,719	3,049	2,772	2,266	2,339

Table 4-12. Percent difference between base and future year (2023-2016) average ozone season day VOC emissions

Sector	IL	IN	MI	MN	OH	WI
Agriculture	10%	8%	6%	8%	8%	2%
Airports	10%	3%	6%	5%	-2%	5%
Biogenic	0%	0%	0%	0%	0%	0%
C1/C2 Commercial Marine	-32%	-31%	-32%	-32%	-32%	-32%
C3 Commercial Marine	15%	15%	15%	15%	15%	15%
Nonpoint	1%	1%	0%	2%	1%	1%
Offroad Mobile	-23%	-19%	-29%	-32%	-26%	-32%
Nonpoint Oil & Gas	-2%	0%	-5%		12%	
Onroad Mobile	-41%	-43%	-42%	-41%	-42%	-41%
Point Oil & Gas	40%	50%	6%	10%	56%	45%
Agricultural Fires	0%	0%	0%	0%	0%	0%
Electricity Generation	-49%	-8%	-1%	-27%	-24%	-18%
Wild and Prescribed Fires	0%	0%	0%	0%	0%	0%
Industrial Point	1%	2%	0%	3%	-1%	0%
Rail	-21%	-20%	-13%	-22%	-22%	-22%
RWC	-4%	-2%	-1%	-1%	-2%	-1%
Total	-3%	-4%	-3%	-2%	-4%	-3%

4.2.1. LADCO 2023 Electricity Generating Unit Emissions

The ERTAC EGU model was developed using EGU activity pattern matching algorithms designed to provide hourly EGU emissions data for air quality planning. The original goal of the model was to create low-cost software that air quality planning agencies could use for developing EGU emissions projections. States needed a transparent model that was numerically stable and did not produce dramatic changes to the emissions forecasts with small changes in inputs. A key feature of the model includes data transparency; all the inputs to the model are publicly available. The code is also operationally transparent and includes extensive documentation, open source code, and a diverse user community to support new users of the software.

Operation of the ERTAC EGU model is straightforward given the complexity of the projection calculations and inputs. The model imports base year CEM data from U.S. EPA and sorts the data from the peak to the lowest generation hour. It applies hour-specific growth rates that include peak and off-peak rates. The model then balances the system for all units and hours that exceed physical or regulatory limits. ERTAC EGU applies future year controls to the emissions estimates and tests for reserve capacity, generates quality assurance reports, and converts the outputs to SMOKE-ready modeling files.

ERTAC EGU has distinct advantages over other EGU growth methodologies because it can generate hourly future year estimates that are key to understanding O₃ episodes. The model does not shutdown or mothball existing units because economics algorithms suggest they are not economically viable. Additionally, alternate control scenarios are easy to simulate with the model. In recent years significant effort has been put into the model to help users to prevent the generation of new coal plants to fit demand. The model allows portability of generation to different fuels like renewables and natural gas to prevent this.

Differences between the U.S. EPA and ERTAC EGU emissions forecasts arise from alternative forecast algorithms and from the data used to inform the model predictions. The U.S. EPA based the EGU emissions forecast in their 2016fh modeling platform on comments from states and stakeholders received through Spring 2020. ERTAC EGU 16.2 beta used CEM data from 2016 and state-reported changes to EGUs received through July 2021. The ERTAC EGU 16.2 beta emissions

used for this modeling application represented the best available information on EGU forecasts for the Midwest and Eastern U.S. that was available in September 2021.

4.3. Emissions Summaries by Nonattainment Area

Table 4-13 presents average OSDE for CO, NO_x, and VOC in 2016 and 2023 for each of the 2015 O₃ NAAQS NAAs in the LADCO region. These emissions include all sources, anthropogenic and natural, in the entirety of the counties contained in each NAA. The emissions in this table include the total county emissions and do not reflect partial county totals for those NAAs that have partial-county designations.

Table 4-13. Average ozone season day emissions by nonattainment area (tons/day)

State and NAA	CO		NOX		VOC	
	2016	2023	2016	2023	2016	2023
Illinois						
Chicago, IL	2,130	1,845	393	283	503	467
Indiana						
Chicago, IN	668	635	93	77	72	68
Kentucky						
Cincinnati, OH-KY	123	108	31	24	55	53
Michigan						
Allegan, MI	59	49	11	8	46	44
Berrien, MI	69	56	12	8	30	28
Muskegon, MI	66	54	9	6	40	37
Missouri						
St. Louis, MO-IL	759	650	156	113	340	326
Ohio						
Cleveland, OH	892	750	131	91	267	249
Wisconsin						
Chicago, WI	43	36	13	6	16	15
Milwaukee/Ozaukee, WI	458	406	82	60	130	123
Sheboygan, WI	41	35	10	5	19	18

5. Model Performance Evaluation

5.1. WRF 2016 Meteorology Modeling Performance Evaluation

LADCO used the WRF version 3.9.1.1 model (Advanced Research WRF dynamic core WRF-ARW) to simulate meteorology on 12-km, 4-km, and 1.33-km domains focused on the Great Lakes Basin for the year 2016. The physics options for the LADCO WRF simulation were based on the best performing configuration identified through a collaboration with University of Wisconsin researchers through a NASA Health and Air Quality (HAQ) program grant-funded project.

LADCO conducted qualitative and quantitative analysis to assess operational performance of the 2016 WRF modeling. Focus of this analysis is on the LADCO region. For the 4-km domains, LADCO evaluated the WRF performance by state; and for the 1.33 domains LADCO evaluated the performance across all monitors in the entire domain. LADCO compared modeled surface pressure, precipitation, and wind vectors against observations by season and for high-concentration ozone episodic events. We also performed a detailed analysis of the model during lake breeze events at the shoreline monitors of Lake Michigan and Lake Erie.

LADCO found that the 12-km and 4-km WRF simulations adequately captured the observed meso- and synoptic-scale processes during high-concentration ozone periods. The LADCO WRF 2016 output fields represent a reasonable approximation of the actual meteorology that occurred in 2016. While the WRF performance statistics for the 12-km grid resolution simulation are within the acceptable performance benchmarks, the simulation has a cold and dry bias in the summer across much of the Eastern U.S. For the 4-km WRF simulation all the summer season metrics, except for wind direction error, fall within the simple terrain model performance benchmarks; the wind direction error falls within the complex terrain benchmark (Table 5-1).

Table 5-1. 2016 summer season (JJA) 4-km WRF model performance for the LADCO states

State*	Temp2m (K)		MixingRatio2m (g/kg)		WS10m (m/s)		WD10m (degrees)	
	MAE	MB	MAE	MB	MAE	MB	MAE	MB
IL	1.0	0.1	1.2	-0.5	1.0	0.1	35.3	3.6
IN	1.1	0.1	1.4	-0.1	0.9	0.1	35.4	3.8
MI	1.2	0.0	1.0	0.0	1.0	0.1	34.4	5.5
MN	1.2	0.0	1.1	-0.1	1.1	0.2	33.4	4.0
OH	1.2	0.0	1.3	-0.3	0.9	-0.1	37.5	8.5
WI	1.2	-0.1	1.1	0.0	1.0	0.3	32.0	4.6

*Green shading indicates a metric that meets the performance benchmarks for simple conditions, orange for complex conditions, and red for outside of the performance benchmarks

The LADCO 1.33 km WRF simulations had very good model performance with low errors for all variables and biases near zero (Table 5-2). Both errors and biases for temperature and specific humidity at the 12-km grid resolution are reduced by about 20% at the 4-km resolution. Model performance remains about the same for the wind speed and direction when going from 12-km to 4-km resolution. There was not an appreciative improvement in model performance for the analyzed variables between the 4-km and 1.33-km resolution simulations.

Table 5-2. 2016 seasonal average 1.33-km WRF model performance statistics

Season*	Temp2m (K)		MixingRatio2m (g/kg)		WS10m (m/s)		WD10m (degrees)	
	MAE	MB	MAE	MB	MAE	MB	MAE	MB
	1.33 km d03: Lake Michigan							
Spring (AM)	1.3	0.0	0.9	0.5	1.3	0.1	34.1	1.1
Summer (JJA)	1.3	0.1	1.2	0.2	1.1	0.1	32.8	3.4
Fall (SO)	1.2	0.0	0.8	0.0	1.2	0.3	31.1	-0.1
	1.33 km d04: Detroit and Ohio River Valley							
Spring (AM)	1.3	-0.2	1.1	0.6	1.2	0.1	37.0	1.7
Summer (JJA)	1.3	0.7	1.3	0.3	1.1	0.0	37.1	5.1
Fall (SO)	1.3	0.0	0.8	-0.1	1.1	0.1	36.9	1.6

*Green shading indicates a metric that meets the performance benchmarks for simple conditions, orange

Analysis of WRF performance at shoreline monitors during lake breeze events showed that the model successfully reproduced the surface conditions. LADCO developed a CART statistical model using data from selected surface stations on the shorelines of Lake Michigan and Lake Erie for predicting lake-breeze days. The CART lake breeze model prediction accuracies were

92% for Lake Michigan and 82% for Lake Erie, on average. LADCO used the CART model to determine the typical meteorological conditions and indicators for lake-breeze days along the shores of Lake Michigan and Lake Erie. The model identified wind direction and 2-m temperature as the top two variables for explaining lake breeze vs. non-lake breeze events in the Lake Michigan shore, while 2-m temperature, wind speed, and specific humidity were the variables most associated with the lake breeze along the south shore of Lake Erie. WRF performed well predicting temperature, moisture, and winds at the shoreline monitors of both lakes during lake breeze events (Table 5-3). The WRF model errors and biases are within the WRF performance benchmarks for temperature, specific humidity and wind speed, and less than 30-degree errors for wind direction. The model performance is slightly degraded on the lake-breeze days compared to the non-lake breeze days on shoreline of Lake Michigan, while opposite is true on the south shore of Lake Erie. The errors and biases for lake breeze days were slightly improved at finer grids in Lake Michigan and Lake Erie shore.

Table 5-3. Average WRF model performance summary for lake breeze and non-lake breeze days along the shoreline of Lake Michigan

Variable*	Lake Breeze		Non-Lake Breeze	
	MAE	MB	MAE	MB
Temp2m	1.24	0.50	1.06	0.21
MixingRatio2m	1.30	-0.65	1.06	-0.41
Wind speed10m	1.14	-0.68	1.14	-0.73
Wind direction10m	25.93	1.73	22.29	-2.05

*Green shading indicates a metric that meets the performance benchmarks for simple conditions, orange

Additional details and results for the LADCO 2016 WRF model performance analysis are available in the LADCO Weather Research and Forecast 2016 Meteorological Model Simulation and Evaluation TSD (<https://www.ladco.org/technical/modeling/ladco-2016-wrf-modeling>).

5.2. CAMx 2016 Ozone Modeling Performance Evaluation

The CAMx model performance evaluation (MPE) results presented in this section establish the validity of the photochemical modeling platform that LADCO developed to support O₃ planning in the Great Lakes region. The MPE results are presented by increasing spatial resolution, first from a regional perspective, averaged across each state, and then by 2015 O₃ NAAQS nonattainment area.

LADCO simulated the April 1 – October 31, 2016 with CAMx using the 2016 CAMx modeling platform described previously. Figure 5-1 summarizes ground level O₃ concentrations during the 2016 O₃ season across the 2015 O₃ NAAQS NAAs in the LADCO region. The first high concentration O₃ episode in the season was a regional event in the middle of April. The last O₃ episode happened September 21-23 in the southern part of the LADCO domain. The model performance evaluation presented here will focus on April through September as these were the months in 2016 that experienced high O₃ concentration periods in this region.

5.2.1. Regional Model Performance Evaluation

Figure 5-2 is a set of spatial plots of monthly MDA8 O₃ normalized mean bias (NMB) for the LADCO 4-km CAMx simulation. Each colored symbol in the figure is an AQS or CASTNet monitoring location. Cool colors represent monitors at which the observed MDA O₃ concentrations were underestimated by the CAMx simulation; warm colors represent where CAMx overestimated the observations. Grey and lighter shades represent low bias, or acceptable model performance, relative to the model performance goals discussed in Section 3.7.2. The CAMx average monthly MDA8 O₃ NMB plots shown in Figure 5-2 reveal a seasonal trend in the bias. Early in the O₃ season (April – June) CAMx underpredicted O₃ throughout the LADCO region. For many of the northern and near-shore monitors in the LADCO region the monthly averaged NMB values miss the model performance criteria for O₃ (+/- 15%) in April. In the latter part of the season (July – September), CAMx overpredicted O₃ at most of the monitors in the region. The overpredictions in the later months of the season are worse in the southern and eastern areas of the LADCO region. The model misses the NMB O₃ performance criteria for sites in St. Louis, Ohio River valley, Indianapolis, and most of Ohio in August and September.

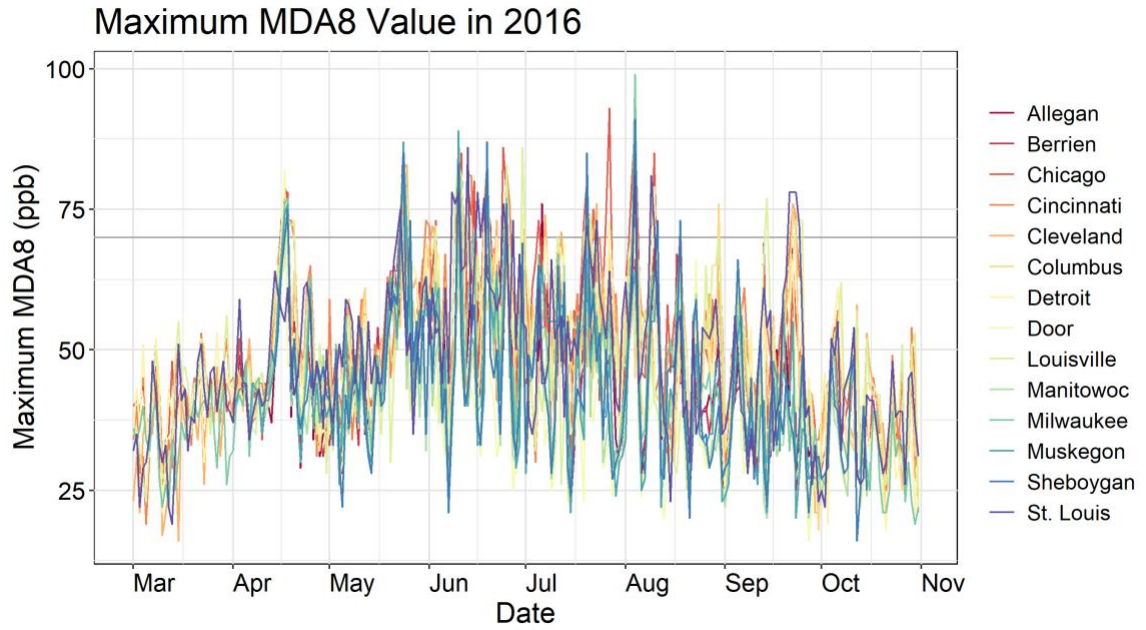


**Figure 5-1. March 1 – October 31, 2016 observed MDA8 O₃ concentrations in the LADCO region
2015 O₃ NAAQS nonattainment and maintenance areas**

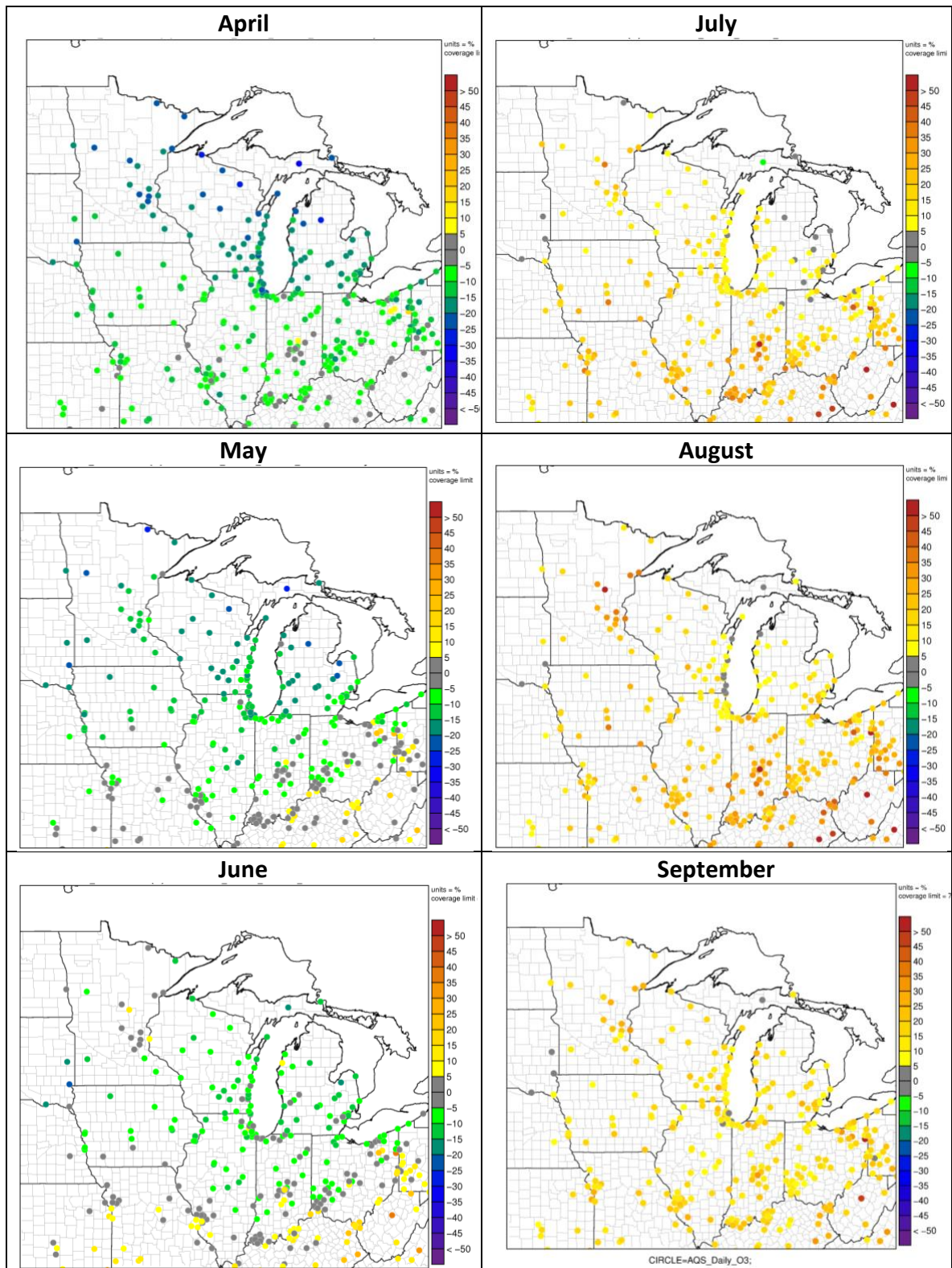


Figure 5-2. Monthly 2016 MDA8 O₃ normalized mean bias spatial stats plots; no concentration cutoff

5.2.2. Performance Evaluation by LADCO State

Table 5-4 through Table 5-8 show MDA8 O₃ performance statistics by month and state for the LADCO 2016 4-km CAMx simulation. The NMB, NME, and correlation coefficients in these tables are monthly averages across all Air Quality System (AQS) sites in each state. Each statistic is calculated for all days and for days only with observed MDA8 O₃ > 60 ppb. The latter is used to determine the performance of the model on days with high observed O₃ concentrations. These statistics quantify the LADCO CAMx 4-km simulation seasonal O₃ biases and show that the model performance generally improves (reductions in NMB and NME) at higher observed concentrations. The orange shading in these tables indicate the statistics which fall outside of the benchmark model performance criteria for O₃; the green shading indicates model performance that meets or exceeds the Emery, et al. (2017) benchmark goal for O₃.

Consistent with the spatial statistics plots in Figure 5-2 these tables highlight that the model underestimates (negative NMBs) O₃ in April through June and overestimates O₃ in July through September. On high O₃ concentration days (> 60 ppb) the early-season underestimates get worse while the late-season overestimates are improved. The model errors (NME) by state and month are predominantly within the performance benchmarks, and in many cases, they meet or exceed the performance goal of NME <15%. While the correlation (r) of the model with the observations on all days is within the performance benchmark criteria (> 0.5), on high O₃ days the correlations are outside of the benchmarks.

Despite the model performance deficits shown in these statistics, the O₃ model performance criteria for bias (NMB $\leq \pm 15\%$) is missed only for high concentrations in April and May at the AQS monitors. The performance goal for error (NME < 25%) is met across all but one of the location-months (IN in August) presented here.

Table 5-4. CAMx 4-km monthly MDA8 O₃ performance at AQS sites in IL

Region	NMB (%)		NME (%)		r	
	All	> 60ppb	All	> 60ppb	All	> 60ppb
April	-11.50	-13.50	15.40	13.70	0.83	0.74
May	-9.66	-18.60	15.10	18.60	0.74	0.66
June	-5.53	-10.50	11.70	11.80	0.75	0.46
July	16.50	9.31	18.90	12.10	0.74	0.15
August	16.40	-8.97	19.30	11.40	0.79	0.18
September	13.50	5.44	16.00	10.30	0.82	0.03

Table 5-5. CAMx 4-km monthly MDA8 O₃ performance at AQS sites in IN

Region	NMB (%)		NME (%)		r	
	All	> 60ppb	All	> 60ppb	All	> 60ppb
April	-6.94	-8.98	13.0	9.52	0.84	0.60
May	-5.30	-17.70	13.50	17.70	0.75	0.54
June	-1.34	-11.20	11.80	11.80	0.69	0.59
July	23.50	12.10	24.50	19.40	0.66	-0.66
August	25.30	-10.50	26.30	10.70	0.81	-0.03
September	18.00	4.66	18.80	5.73	0.88	1.00

Table 5-6. CAMx 4-km monthly MDA8 O₃ performance at AQS sites in MI

Region	NMB (%)		NME (%)		r	
	All	> 60ppb	All	> 60ppb	All	> 60ppb
April	-17.70	-16.60	18.80	16.60	0.87	0.68
May	-5.30	-17.70	17.40	19.30	0.80	0.74
June	-1.34	-11.20	14.30	15.80	0.83	0.46
July	23.50	12.10	14.30	12.50	0.78	-0.11
August	25.30	-10.50	16.20	10.20	0.83	0.73
September	18.00	4.66	17.60		0.81	

Table 5-7. CAMx 4-km monthly MDA8 O₃ performance at AQS sites in OH

Region	NMB (%)		NME (%)		r	
	All	> 60ppb	All	> 60ppb	All	> 60ppb
April	-8.56	-9.98	14.30	10.60	0.81	0.66
May	-2.21	-16.40	13.60	16.40	0.68	0.38
June	-1.61	-11.90	12.10	13.10	0.67	0.43
July	16.10	3.12	18.00	8.19	0.65	0.02
August	21.80	5.59	22.70	8.28	0.79	-0.28
September	16.40	-3.39	17.70	6.05	0.85	0.38

Table 5-8. CAMx 4-km monthly MDA8 O₃ performance at AQS sites in WI

Region	NMB (%)		NME (%)		r	
	All	> 60ppb	All	> 60ppb	All	> 60ppb
April	-19.40	-16.70	20.0	16.70	0.89	0.73
May	-15.10	-15.90	18.30	15.90	0.80	0.49
June	-8.85	-9.56	12.30	11.40	0.87	0.58
July	10.20	1.79	14.90	8.70	0.81	0.00
August	10.80	-12.20	15.00	12.70	0.86	0.73
September	14.60		16.40		0.78	

Figure 5-3 compares monthly, state averaged model performance (NMB) for MDA8 O₃ days > 60 ppb across four CAMx simulations. Three of the CAMx simulations are the runs used for this TSD at 12-km (Sim 1), 4-km (Sim 2), and 1.33-km (Sim 3) grid resolutions, and the fourth CAMx simulation is a 12-km resolution simulation run by LADCO that used U.S. EPA meteorology (Sim 4; US EPA, 2020). These plots show the same early season (April-June) underestimates and late season (July-September) overestimates as the bubble plots in Figure 5-2, although they include the 60 ppb concentration cutoff. The plots also show that from a state-wide average, there is not a significant performance difference between the model grid resolutions (Sim 1, Sim 2, and Sim 3). The CAMx two-way nested configuration used for these simulations explains the similarity in performance across the three resolutions¹⁰. The U.S. EPA meteorology used for Sim 4 produced lower MDA8 O₃ concentrations, which lead to worse model underpredictions in April through June, but improvements to the model overpredictions in July through September. The key takeaway from Figure 5-3 is that for most months and states, on average, the LADCO 2016 CAMx modeling predicts MDA8 O₃ concentrations > 60 ppb within the performance NMB benchmark ($\leq \pm 15\%$).

¹⁰ With CAMx two-way nesting the fine grid, nested domains provide much of the solution to the parent grid

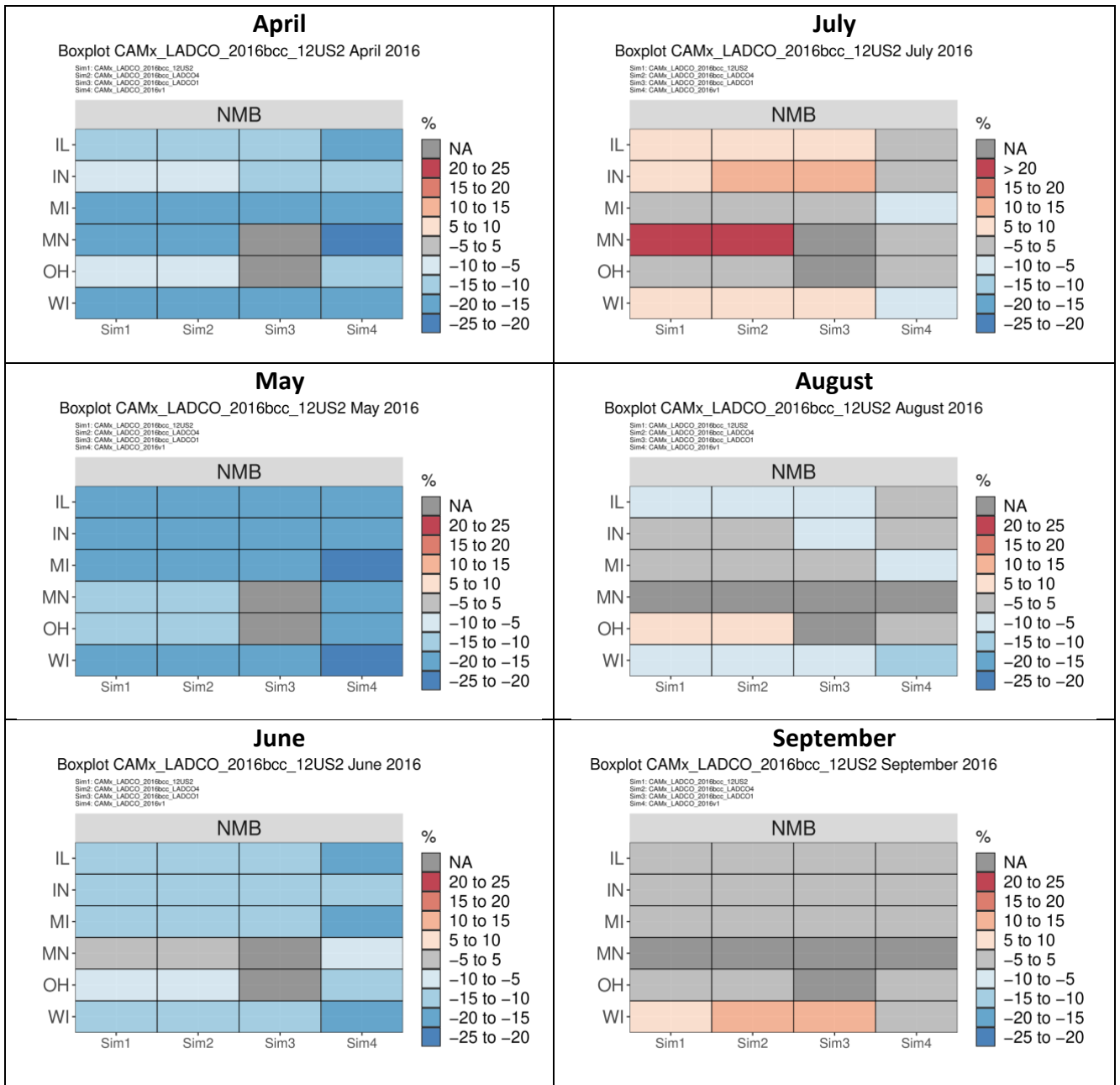


Figure 5-3. Monthly 2016 MDA8 O₃ normalized mean bias state summary plots on days with observed values > 60 ppb

Figure 5-4 through Figure 5-8 are monthly box and whisker plots of CAMx and observed MDA8 O₃ concentrations for AQS sites in IL, IN, MI, OH, WI, respectively. The box and whisker plots show the observed and model median concentrations as symbols connected by lines (blue for CAMx and black for observations), the 25th and 75th percentile concentrations as the bottom

and top of each box, and the 5th and 95th percentile concentrations as the bottom and top of each whisker. Each figure compares CAMx and observations on all days, and only on days with MDA8 O₃ > 60 ppb. These plots further highlight the seasonal shift in biases as seen by the median values for CAMx relative to the observations across all the states. Where the observations for all days have a seasonal profile with median values that peak in all states in June, the seasonality of the median observed MDA8 O₃ on high-concentration days is generally flatter across the months. The CAMx predictions have a seasonal profile with peak median values in July in most states for both all days and high O₃ days.

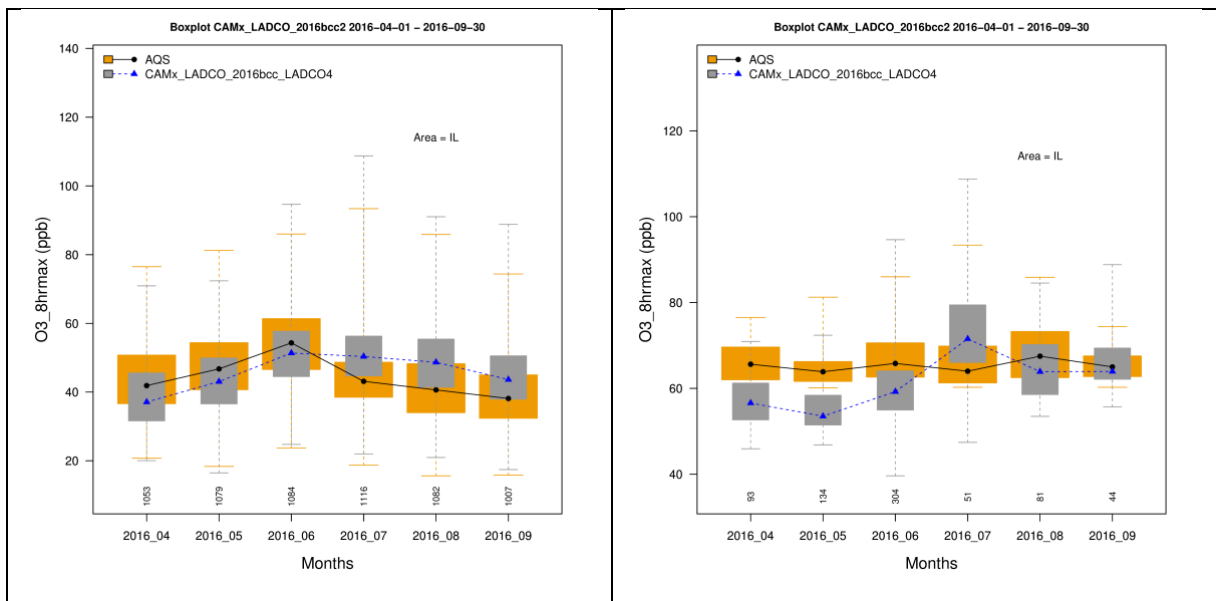


Figure 5-4. 2016 monthly MDA8 O₃ box and whisker plots comparing CAMx with AQS monitors for sites in IL; all days (left) and days with obs > 60 ppb (right)

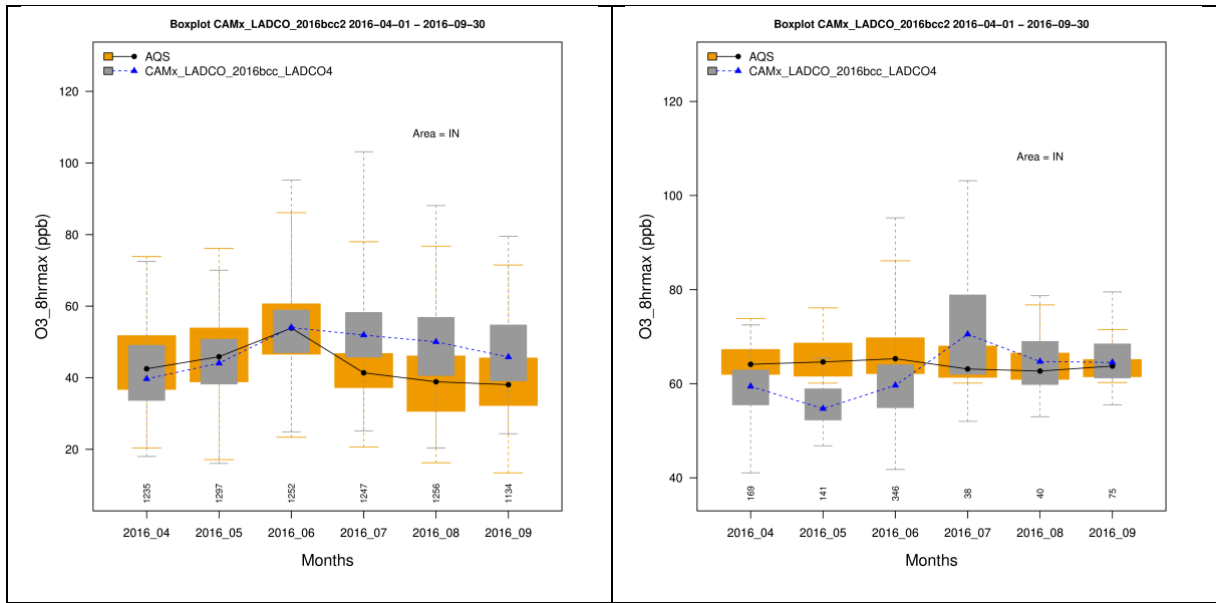


Figure 5-5. 2016 monthly MDA8 O₃ box and whisker plots comparing CAMx with AQS monitors for sites in IN; all days (left) and days with obs > 60 ppb (right)

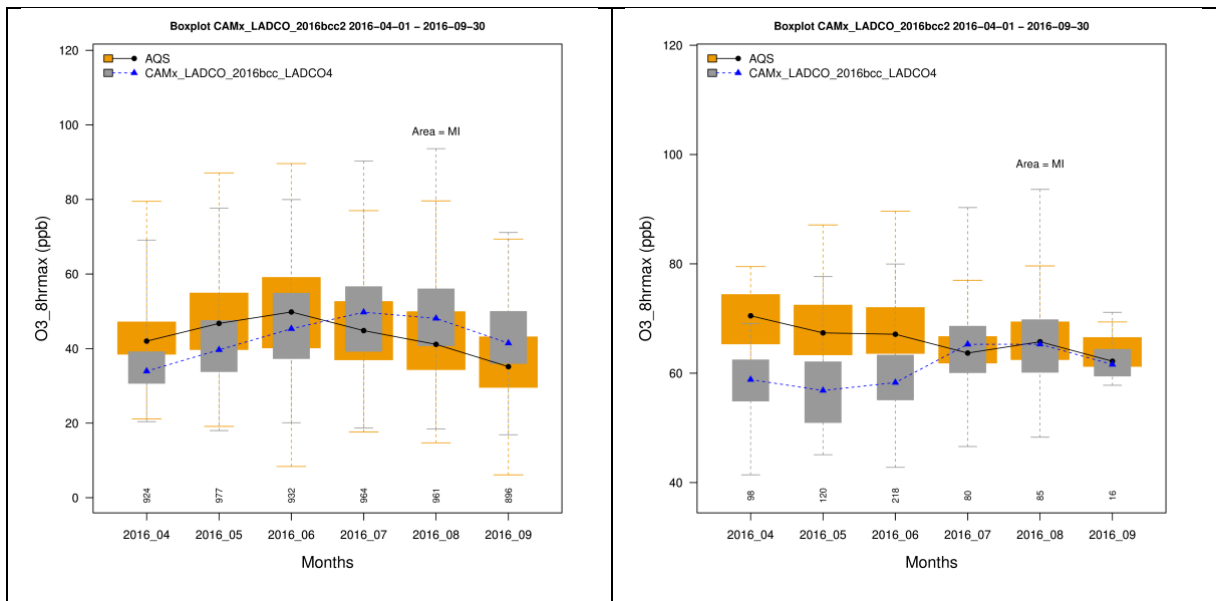


Figure 5-6. 2016 monthly MDA8 O₃ box and whisker plots comparing CAMx with AQS monitors for sites in MI; all days (left) and days with obs > 60 ppb (right)

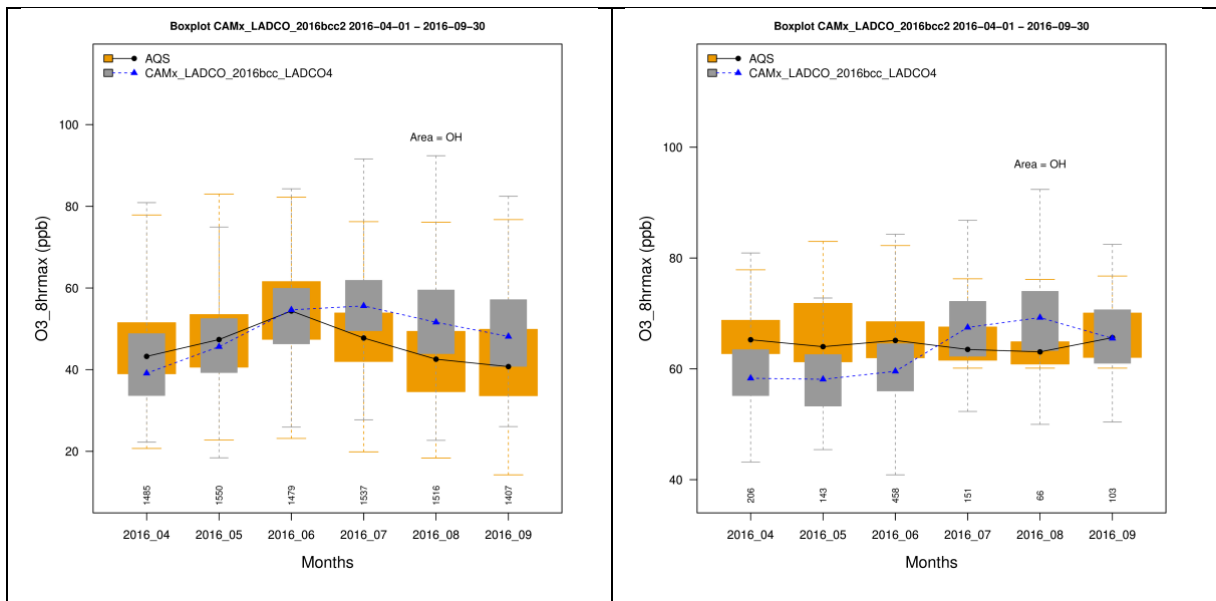


Figure 5-7. 2016 monthly MDA8 O₃ box and whisker plots comparing CAMx with AQS monitors for sites in OH; all days (left) and days with obs > 60 ppb (right)

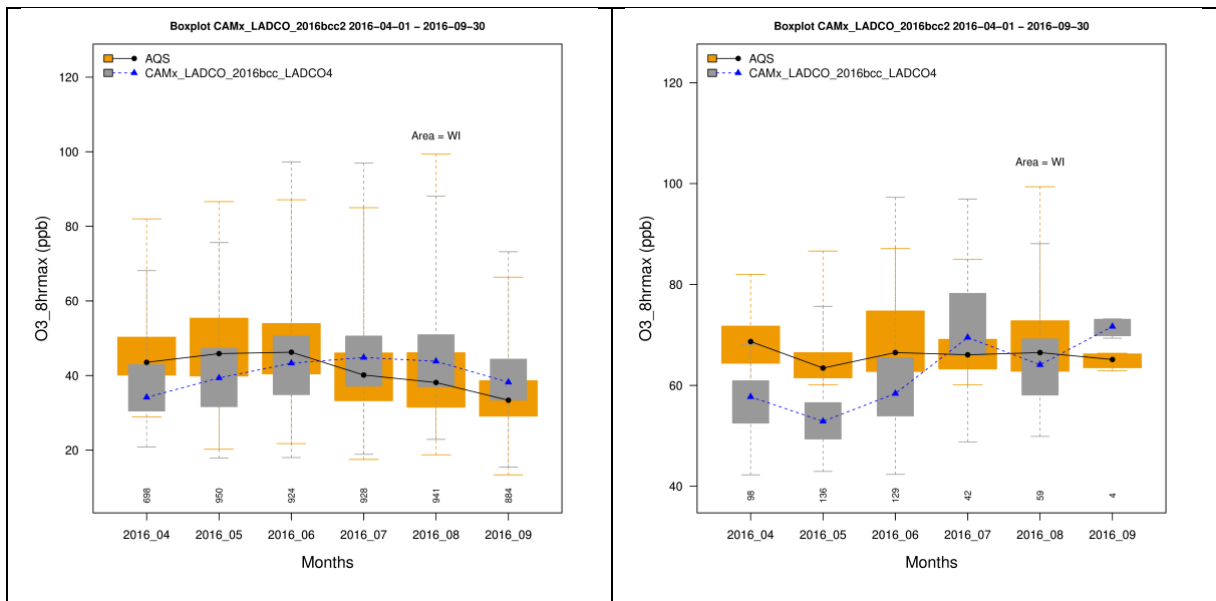


Figure 5-8. 2016 monthly MDA8 O₃ box and whisker plots comparing CAMx with AQS monitors for sites in WI; all days (left) and days with obs > 60 ppb (right)

5.2.3. Performance Evaluation by Ozone Nonattainment Area

This section presents the 2016 LADCO 4-km CAMx model performance evaluation results by month averaged across all the monitors in each of the different 2015 O₃ NAAQS NAAs. The statistics in the plots and tables described in this section indicate the skill of the model at

simulating MDA8 O₃ on all days and on high concentrations days (observed MDA8 concentrations > 60 ppb) at the small set of monitors contained within each NAA boundary. In some cases, these performance results are based on a single monitor, particularly at the more rural, downwind NAAs.

Figure 5-9 and Figure 5-10 show the average percent NMB and NME, respectively, for high concentration MDA8 O₃ days at each NAA by month. The green dashed lines in these figures show the levels of the Emery et al (2017) MPE goal, and the orange dashed lines show the MPE benchmark. While the NMB results in Figure 5-9 reflect the more general trend already discussed of CAMx underestimating O₃ (NMB < 0) in April – June and overestimating O₃ (NMB > 0) in July – September, it shows that the model meets the less stringent performance criteria for most NAAs in all months. The exception is for the downwind Lake Michigan coastline NAAs in April and May. The LADCO 2016 CAMx model underestimated MDA8 O₃ on high concentration days for the Western MI NAAs and the Sheboygan County, WI NAA by more than 15% in April and May. The reasons for the model underpredictions >-15% at these locations early in the ozone season are not clear. The model shows particularly good performance for the Cleveland NAA, with biases within +/- 10% for all months other than May.

The NME plot in Figure 5-10 shows that the model performance improves as the O₃ season progresses with the lowest errors at all monitors in August and September. The model meets the MDA8 O₃ NME performance criteria (25%) for all NAAs and all months, and meets the more stringent performance goal (15%) for most monitors and months.

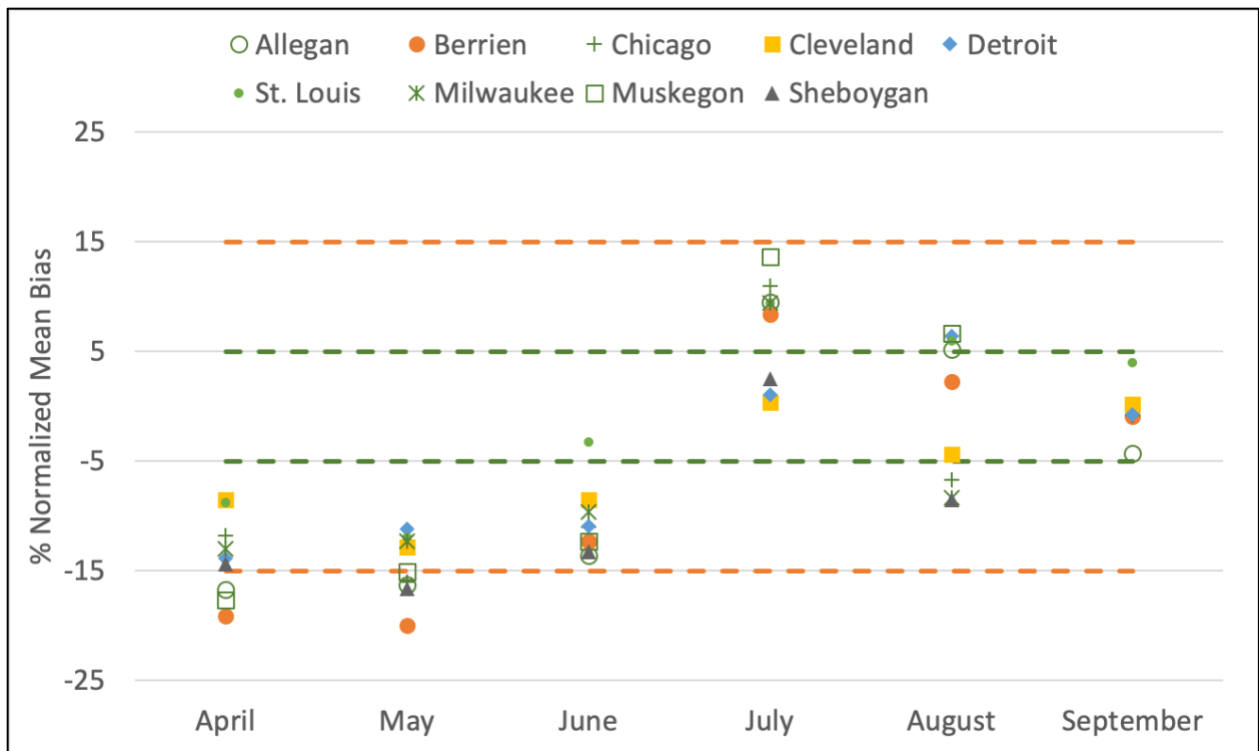


Figure 5-9. MDA8 O₃ average normalized mean bias by month and nonattainment area for days with MDA8 observations > 60 ppb; dashed lines indicate model performance benchmarks

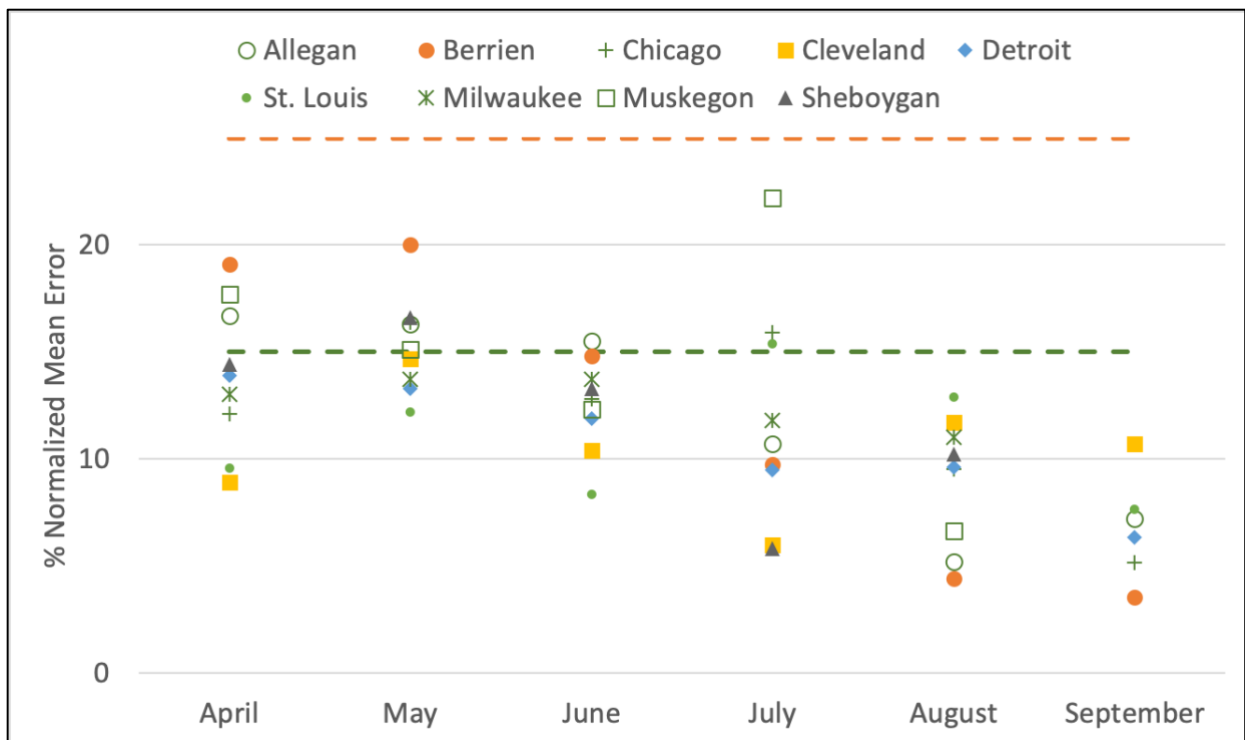


Figure 5-10. MDA8 O₃ average normalized mean error by month and nonattainment area for days with MDA8 observations > 60 ppb; dashed lines indicate model performance benchmarks

The Supplement to this TSD includes additional MDA8 O₃ model performance results for the 2015 O₃ NAAQS NAAs in the LADCO region. Box and whisker plots by NAA generally show similar patterns as the statewide figures, with CAMx underestimating O₃ in April – June and overestimating in July – September. Tables of monthly NMB, NME, and correlation coefficients are shaded (green = better than the performance goal; orange = worse than the performance criteria) to indicate how well CAMx simulates MDA8 O₃ on all days and on high concentration days. Along with a tabulated form of the data shown in Figure 5-9 and Figure 5-10 for the high concentration days, these tables include the performance statistics for all days.

Table S 1 in the Supplementary Materials lists LADCO 2016 CAMx 4-km simulation performance statistics for all monitors in each of the 2015 O₃ NAAQS NAAs. These statistics show the model performance on high observed concentration days (> 60 ppb) for the CAMx 4-km grid cell that contains each monitor. Although CAMx misses the Emery et al. (2017) performance criteria for correlation (>0.5) at some monitors, particularly in the Cleveland and Detroit NAAs, it meets or exceeds the performance criteria for NMB and NME at most of the monitor locations.

The value of including the NAA-specific performance data in this TSD is to demonstrate the validity of the LADCO 2016-based CAMx model to O₃ planning applications and attainment testing for the NAAs in the region.

5.3. CAMx 2016 Ozone Precursor Modeling Performance Evaluation

LADCO calculated performance statistics for O₃ precursor pollutants with 2016 observations from the AQS network. The LADCO CAMx 2016 4-km simulation is evaluated against hourly NO₂ and CO AQS observations, and 1-in-6 day 24-hour average formaldehyde, acetaldehyde, ethane, isoprene, and toluene observations from Photochemical Assessment Monitoring Station (PAMS) locations in the region. Figure 3-8 shows the locations of the AQS NO₂ (and CO) monitors and Figure 5-11 shows the locations of the PAMS monitors that collected the 2016 data used in the statistics presented here. The CAMx 4-km model results are paired in space and time with the AQS observations for the model grid cell in which each monitor is located.

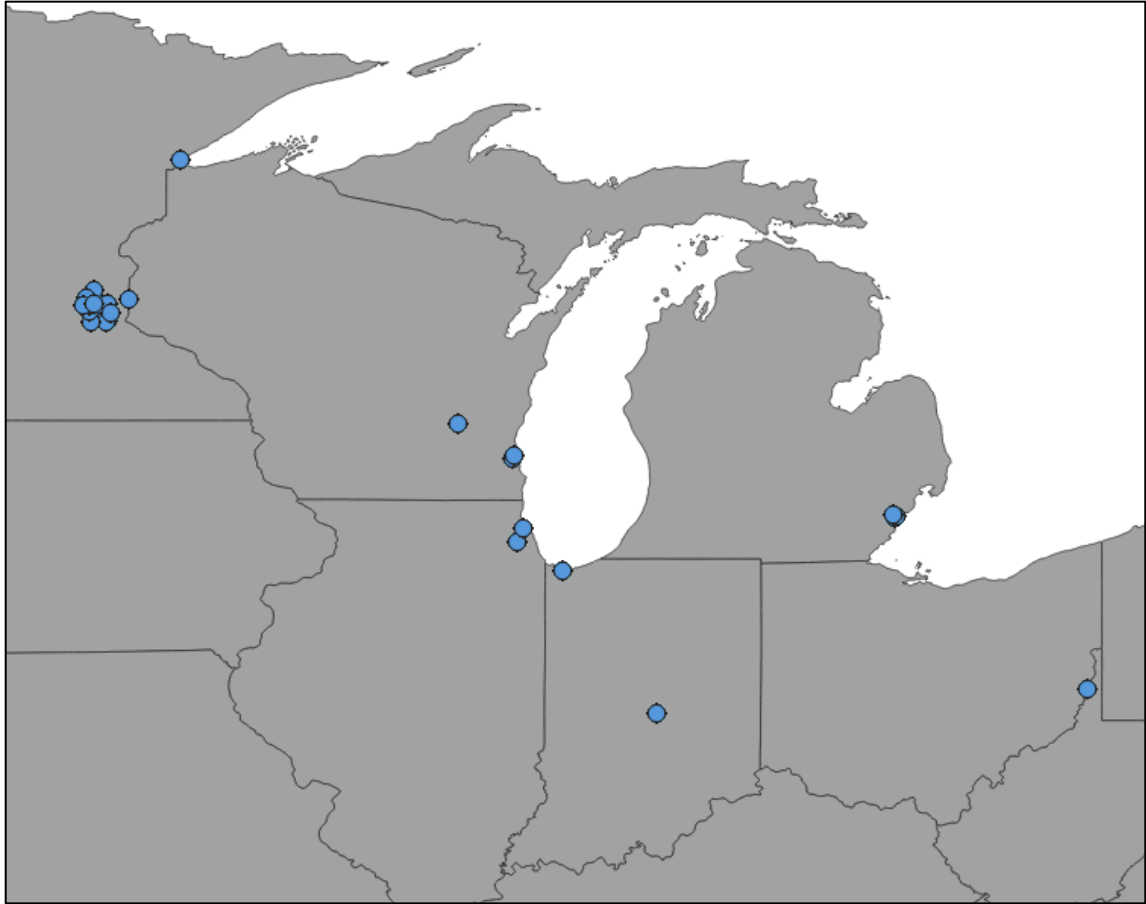


Figure 5-11. Locations of PAMs monitors with VOC observations for 2016 in the LADCO region

Table 5-9 summarizes the summer season (June – August) 4-km domain average CAMx performance statistics for the LADCO 2016 CAMx 4-km simulation. The model underestimates ($NMB < 0$) for all reported O₃ precursor species except for Acetaldehyde. Table 5-10 shows the state-averaged summer season NMB and NME from the LADCO 2016 CAMx 4-km simulation for NO₂, CO, formaldehyde, and isoprene. The state-averaged results mirror the regional-average results in which the CAMx simulation underestimated all reported species.

Figure 5-12 expands on these tables and shows state-averaged monthly NMB for April – September for select O₃ precursor species for the LADCO CAMx 2016 4-km simulation. The LADCO CAMx simulation underestimated ($NMB < 0$) most of the precursor species in most months during that period. The CAMx simulation significantly overestimated ($NMB > 0$) isoprene in April and May, likely related to mischaracterization of the biogenic emissions during that period.

There are an insufficient number of O₃ precursor species monitoring stations to estimate performance statistics by nonattainment area.

Table 5-9. LADCO CAMx 2016 4-km summer (JJA) average ozone precursor model performance statistics

Pollutant	CAMx Avg (ppb)	Obs Avg (ppb)	NMB (%)	NME (%)	r	# obs
NO ₂	7.03	8.79	-19.76	53.84	0.53	69470
CO	174.37	276.00	-35.26	48.13	0.25	75234
Formaldehyde	2.19	3.67	-36.72	43.63	0.32	127
Acetaldehyde	0.89	0.91	3.30	36.20	0.23	127
Ethane	1.41	5.38	-60.77	61.94	0.16	201
Isoprene	0.24	0.30	-25.66	51.79	0.66	199
Toluene	0.46	0.58	-9.95	52.37	0.33	531

Table 5-10. LADCO CAMx 2016 4-km summer (JJA) average ozone precursor model performance statistics by state

State	NO ₂		CO		Formaldehyde		Isoprene	
	NMB	NME	NMB	NME	NMB	NME	NMB	NME
IL	-3.18	45.00	-25.83	38.23	-18.57	26.57	-3.40	31.03
IN	-13.05	53.43	-45.50	61.83	-47.17	56.83	-17.70	61.80
MI	-33.50	48.63	-42.27	47.87	-51.03	51.60		
MN	2.05	60.40	-24.90	47.57				
OH	-35.00	53.80	-35.13	49.17				
WI	-35.90	61.77	-37.93	44.13	-30.10	39.53	-55.87	62.53

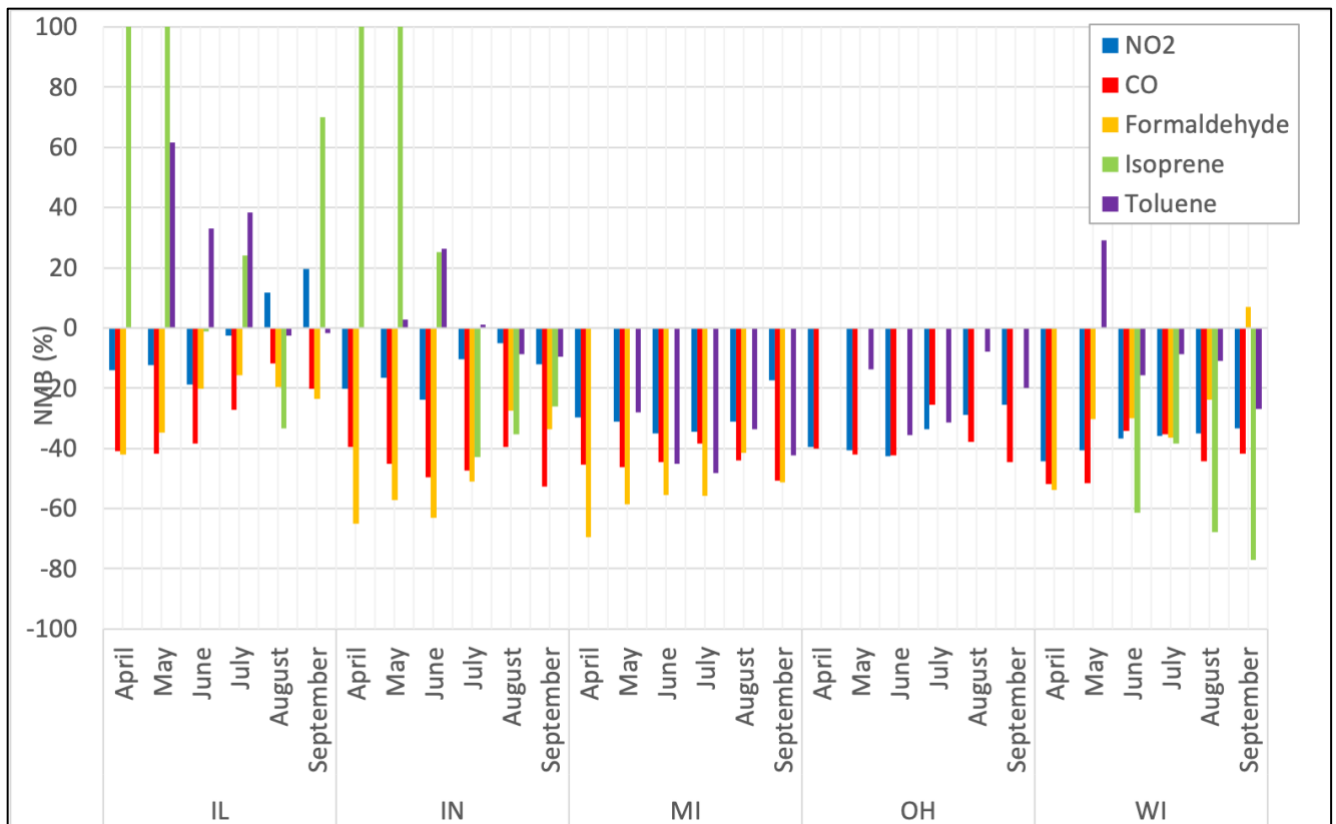


Figure 5-12. Monthly state average LADCO CAMx 2016 4km ozone precursor NMB

5.4. CAMx Model Performance Discussion

U.S. EPA (2019) reported model performance for the 2016 CAMx modeling platform upon which the LADCO 2016 modeling platform is based. The U.S. EPA evaluated the model by comparing CAMx-predicted MDA8 O₃ to observations at the U.S. EPA AQS and CASTNet networks. They performed statistical evaluations using modeled and observed data that were paired in space and time. U.S. EPA developed statistics across spatial and temporal scales and in aggregate across multiple sites by climate region.

The results provided by U.S. EPA (2019; 2022) from their operational model performance evaluations of their 2016 simulations are like the results of the LADCO 2016 CAMx modeling MPE. U.S. EPA and LADCO both found that the 2016 CAMx modeling platform on average underestimates MDA8 O₃ in April – June, and overpredicts in July – October. The biases in the April – June period are more severe than in the later months. In July – September the mean bias is within +/- 5 ppb at many sites in the LADCO region.

Investigation of the diurnal variability at key monitors demonstrated that CAMx generally captured day to day fluctuations in observed MDA8 O₃ but missed the peaks on many of the highest observed days, particularly during April – June.

The O₃ performance evaluation by nonattainment area reveals that the LADCO CAMx 4-km simulation met the model performance benchmarks averaged across the high concentration days (> 60 ppb).

The LADCO CAMx 4-km simulation underestimated most of the available O₃ precursor species, including NO₂, CO, isoprene, and formaldehyde in most months and locations. The exception was for isoprene, where the simulation significantly overestimated the observations in April and May.

The statistics and model performance metrics presented in this section demonstrate that the LADCO CAMx 2016 O₃ model performance is within conventional and accepted model performance benchmarks, and is a valid model for use in regulatory applications.

6. LADCO 2023 Air Quality Projections

6.1. Attainment Test Methods

LADCO followed the U.S. EPA Modeling Guidance for Demonstrating Air Quality Goals for Ozone, PM_{2.5}, and Regional Haze (US EPA, 2018) to calculate future-year design values in 2023 (DVF₂₀₂₃) for monitors in IL, IN, MI, OH, and WI¹¹. As we used a base year of 2016, we estimated the base year design values using surface observations for the years 2014-2018 (DVB₂₀₁₄₋₂₀₁₈). LADCO estimated the DVF₂₀₂₃ with version 1.6 of the Software for Modeled Attainment Test Community Edition (SMAT-CE)¹². SMAT-CE was configured to use the daily max average 8-hr (MDA8) O₃ concentration above 60 ppb in a 3x3 matrix around each monitor across for the 10 highest modeled days, per the U.S. EPA Guidance. If there are less than 10 days with MDA8 O₃ greater than 60 ppb, SMAT-CE uses all days, if there are at least 5 days that meet the minimum threshold criteria¹³.

Consistent with US EPA modeling guidance (US EPA, 2018), SMAT-CE uses a four-step process to estimate DVF₂₀₂₃:

1. Calculate DVB₂₀₁₄₋₂₀₁₈ for each monitor

- The O₃ design value is a three-year average of the 4th highest daily maximum 8 hour average O₃ (MDA8₄):

$$DV_{2016} = (MDA8_{4,2014} + MDA8_{4,2015} + MDA8_{4,2016})/3$$

- Weighted 5-year average of design values centered on the base model year (2016):

$$DVB_{2014-2018} = (DV_{2016} + DV_{2017} + DV_{2018})/3$$

2. Find highest base year modeled days surrounding each monitor

- Find ten days with the highest base year modeled MDA8 from within a 3x3 matrix of grid cells surrounding each monitor
- At least 5 days with modeled MDA8 >= 60 ppb are needed to retain the monitor for the future year DV calculation

¹¹ MN is not included because there are no 2015 O3 NAAQS nonattainment or maintenance areas in the state

¹² <https://www.epa.gov/scram/photochemical-modeling-tools>

¹³ 26 sites dropped out of the SMAT-CE design value calculation because their data did not meet the threshold criteria; none of these sites are located in 2015 O3 NAAQS nonattainment or maintenance areas

3. Calculate relative response factor (RRF) for each monitor

- Calculate multi-day average MDA8 for the base and future years from the maximum paired in space values in the 3x3 matrix
- Calculate the RRF as the ratio of the multi-day average future to multi-day average base year MDA8:

$$RRF = MDA8_{2023,avg} / MDA8_{2016,avg}$$

4. Calculate DVF₂₀₂₃ for each monitor

$$DVF_{2023} = RRF * DVB_{2014-2018}$$

LADCO used the DVF₂₀₂₃ to identify nonattainment sites in 2023 using the 5-year weighted average baseline design values (2014-2018) per U.S. EPA (2018). Under this methodology, sites with an average DVF₂₀₂₃ that exceeds the 2015 O₃ NAAQS (71.0 ppb or greater) would be considered nonattainment in 2023.

6.2. 2023 CAMx Modeling Results

LADCO modified the emissions in the U.S. EPA 2016fh CAMx modeling platform to create a LADCO 2016 modeling platform with a projection year to 2023 (see Section 3.4). The LADCO 2023 CAMx simulation forecasted air quality on three nested modeling domains, including EGU emissions forecasts from the ERTAC v16.1 model. Figure 6-1 and Figure 6-2 show April through September 2016 maximum MDA8 O₃ for the LADCO 2016 and 2023 CAMx simulations, respectively, on the CONUS12 modeling domain. Figure 6-3 shows the difference (2023-2016) in O₃ season maximum MDA8 O₃ between the two simulations. Cool colors indicate that the 2023 simulation forecasted lower O₃ than the 2016 simulation; warm colors indicate higher O₃ in the 2023 forecast. As Figure 6-3 is a difference of the O₃ season maximum MDA O₃ concentrations, it represents the extent to which the highest concentrations are forecast to change in 2023.

The LADCO 2023 CAMx 12-km simulation predicted lower seasonal maximum O₃ concentrations across much of the modeling domain, with the largest reductions occurring in the eastern U.S., and in some urban areas in the west, namely Phoenix and Denver. Note that the concentration changes shown in these figures mask finer temporal resolution features (i.e., hourly and daily) that also exist between the base and future year simulations.

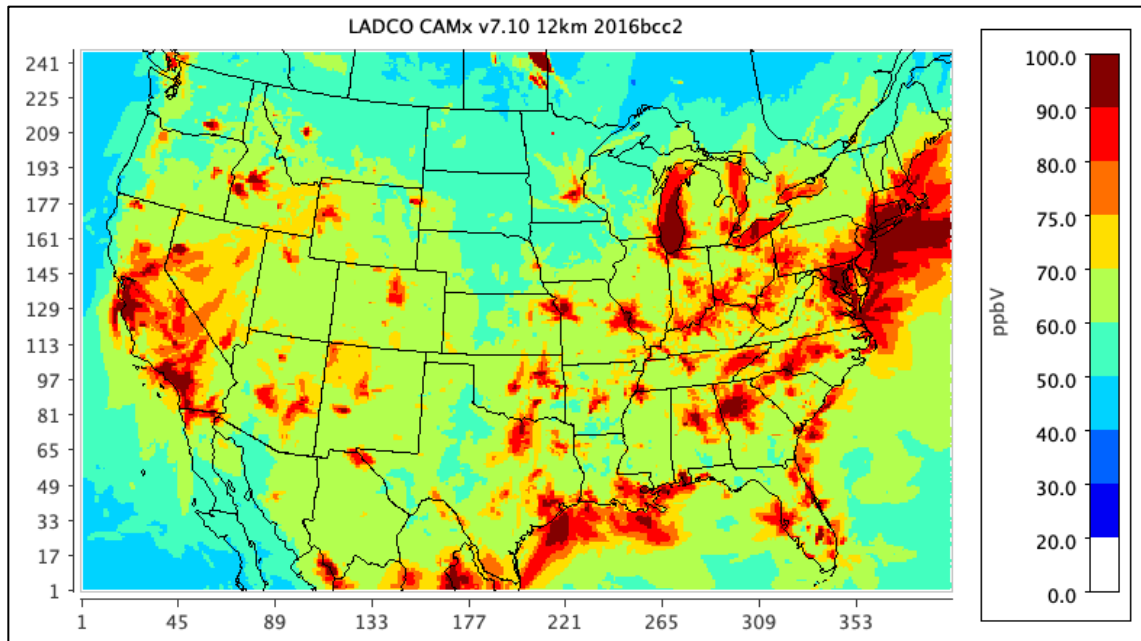


Figure 6-1. LADCO CAMx 12-km 2016 O₃ season maximum MDA8 O₃ concentrations

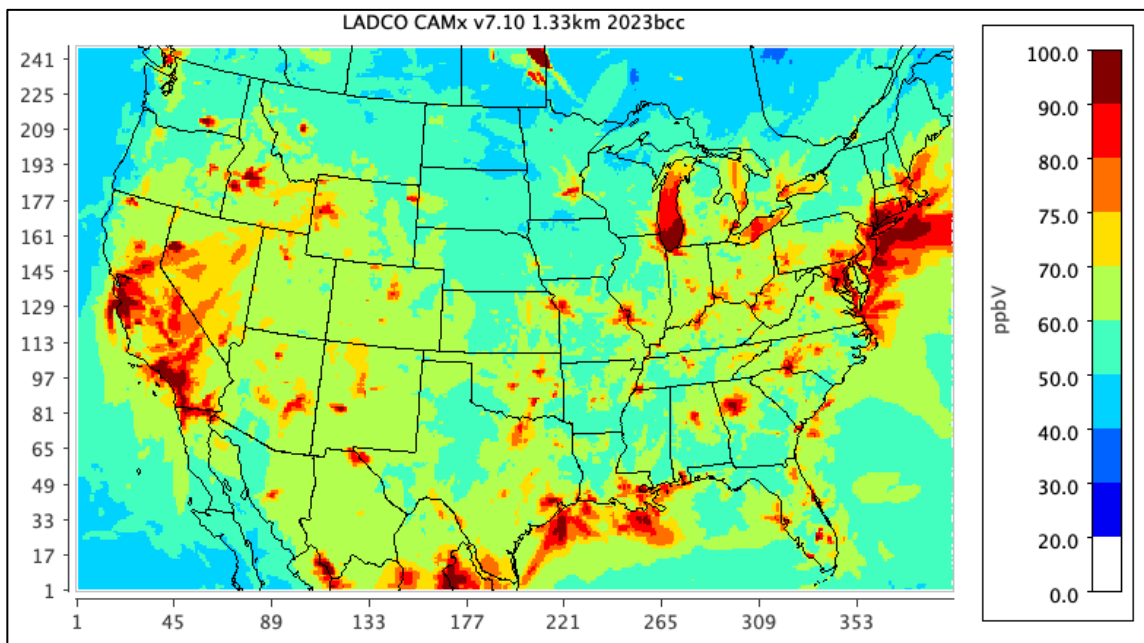


Figure 6-2. LADCO CAMx 12-km 2023 O₃ season maximum MDA8 O₃ concentrations

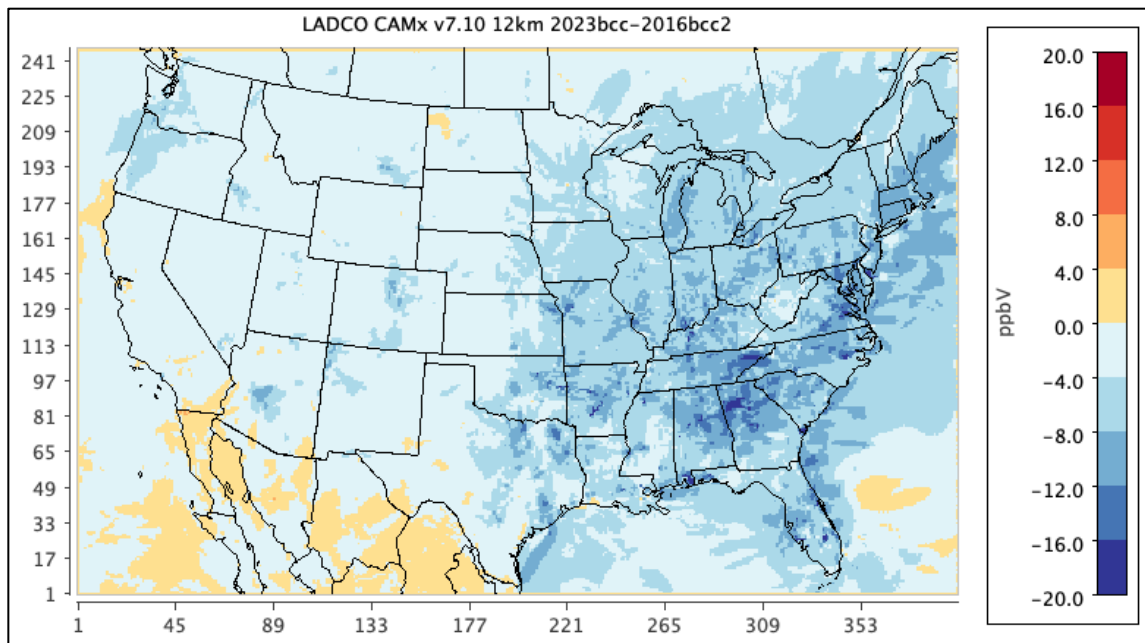


Figure 6-3. LADCO CAMx 12-km difference (2023-2016) in O₃ season maximum MDA8 O₃ concentrations

Figure 6-4 and Figure 6-5 show April through September 2016 maximum MDA8 O₃ for the LADCO 2016 and 2023 CAMx simulations, respectively, on the LADCO 4-km modeling domain. Figure 6-6 shows the difference (2023-2016) in O₃ season maximum MDA8 O₃ between the two simulations. The LADCO simulation forecasts a 4-8 ppb decrease in seasonal maximum MDA8 O₃ across much of the domain in 2023. The largest concentration decreases (12-16 ppb) in 2023 are forecast downwind of the urban areas, particularly in the southern half of the domain. Concentration decreases in the range of 8-12 ppb are forecast over Lakes Michigan and Erie.

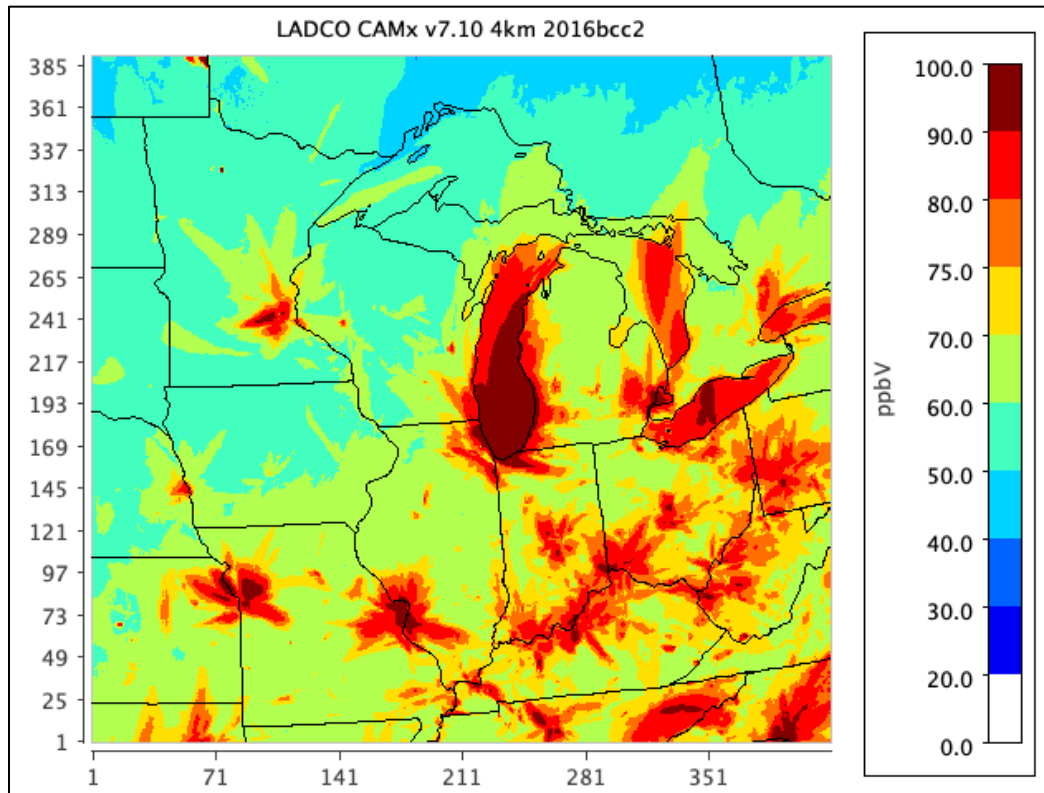


Figure 6-4. LADCO CAMx 4-km 2016 O₃ season maximum MDA8 O₃ concentrations

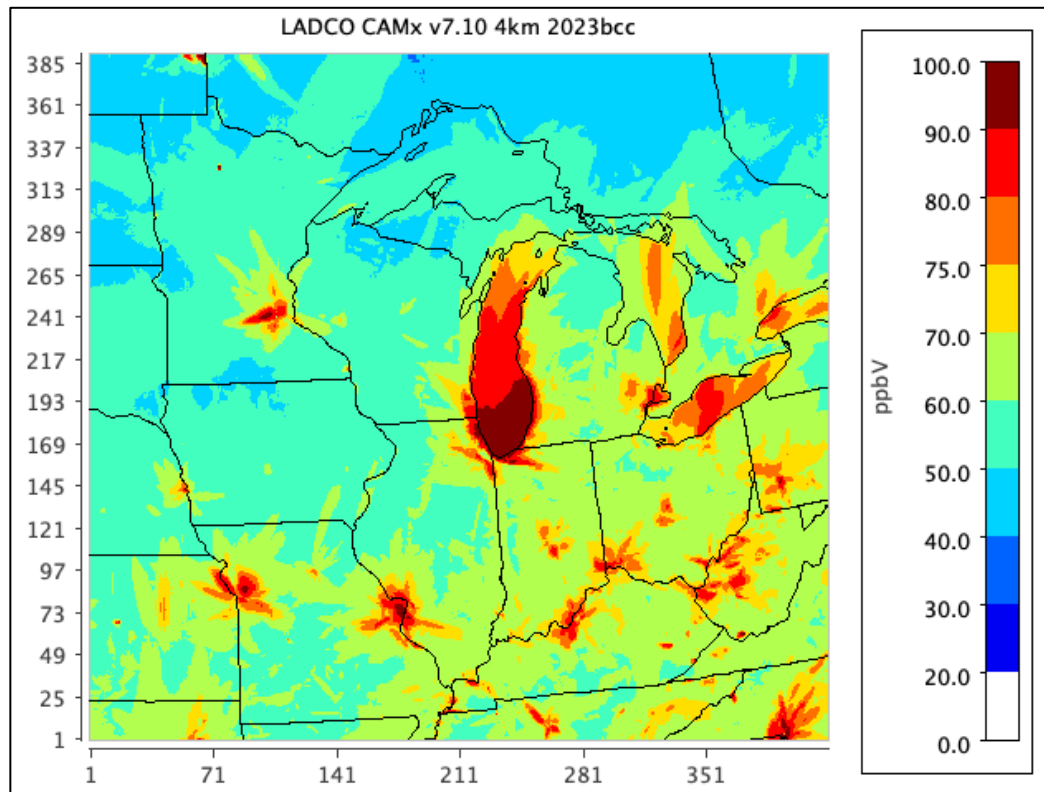


Figure 6-5. LADCO CAMx 4-km 2023 O₃ season maximum MDA8 O₃ concentrations

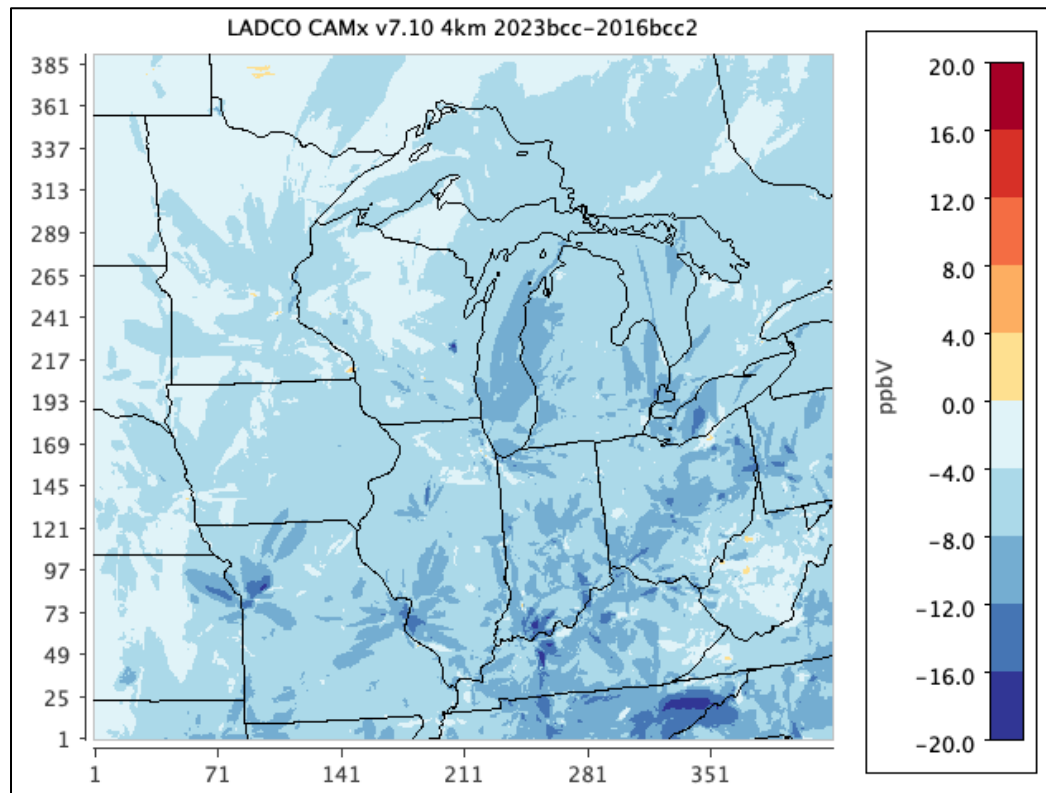


Figure 6-6. LADCO CAMx 4-km difference (2023-2016) in O₃ season maximum MDA8 O₃ concentrations

Figure 6-7 and Figure 6-8 show April through September 2016 maximum MDA8 O₃ for the LADCO 2016 and 2023 CAMx simulations, respectively, on the LADCO 1.33-km modeling domain. Figure 6-9 shows the difference (2023-2016) in O₃ season maximum MDA8 O₃ between the two simulations. The LADCO simulation forecasts a 4-8 ppb decrease in seasonal maximum MDA8 O₃ across much of the domain in 2023. The largest concentration decrease (12-16 ppb) in 2023 is forecast over Lake Winnebago in Wisconsin. Concentration decreases in the range of 8-12 ppb are forecast over Lake Michigan and extend inland into northern Indiana and western Michigan.

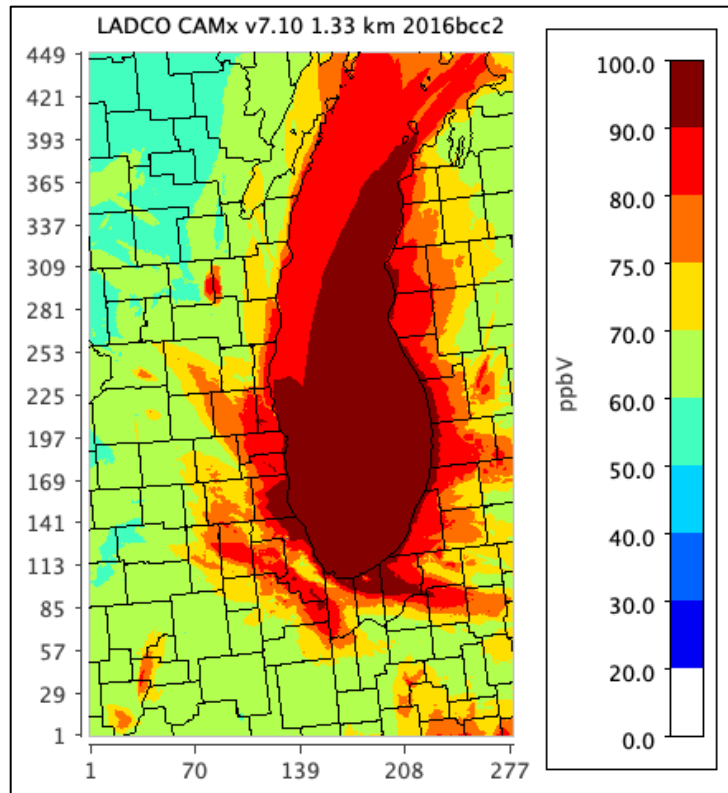


Figure 6-7. LADCO CAMx 1.33-km 2016 O₃ season maximum MDA8 O₃ concentrations

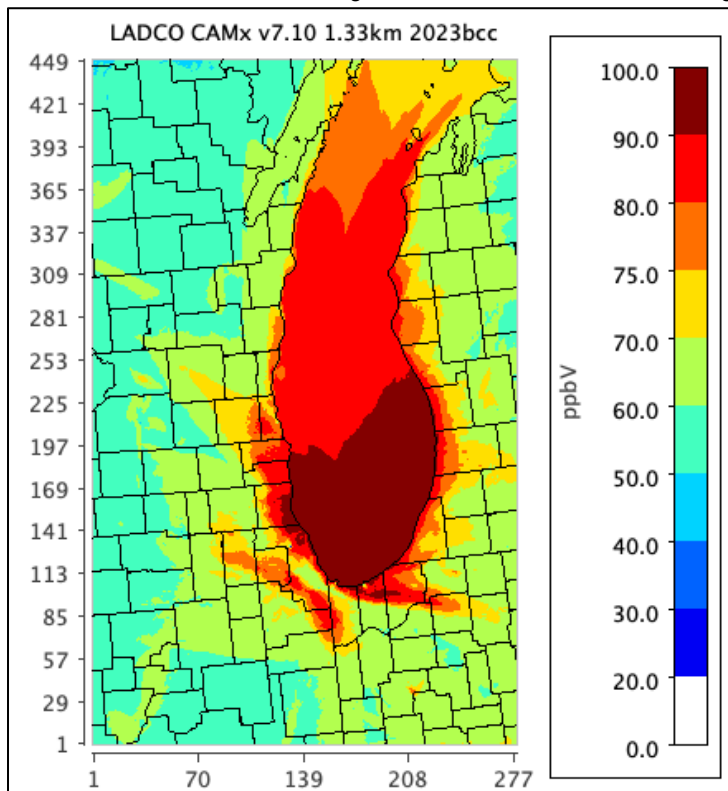


Figure 6-8. LADCO CAMx 1.33-km 2023 O₃ season maximum MDA8 O₃ concentrations

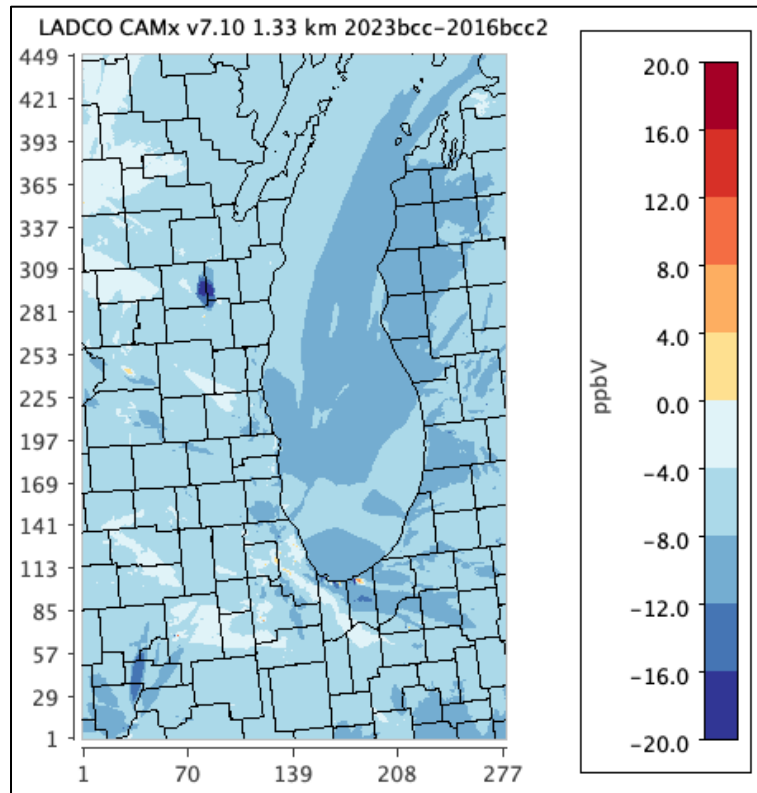


Figure 6-9. LADCO CAMx 1.33-km difference (2023-2016) in O₃ season maximum MDA8 O₃ concentrations

6.3. 2023 O₃ Design Values

Figure 6-10 shows the O₃ DVF₂₀₂₃ values from the LADCO 2023 4-km CAMx simulation. Figure 6-11 is a map of the SMAT-CE 2023 relative response factors (RRFs) from the LADCO CAMx 4-km modeling. LADCO generated these results with SMAT-CE using the standard U.S. EPA attainment test configuration (top 10 modeled days, 3x3 cell matrix around the monitor, including water cells). We are showing the DVF₂₀₂₃ calculated from the 4-km CAMx simulation because the domain encompasses the entire LADCO region, and presents an optimized model configuration relative to the 12-km domain. As described previously in this TSD, the CAMx two-way nesting configuration used by LADCO propagates the fine grid model solution upward to the parent grids. The solution for the model grid cells in the 4-km modeling domain that include the 1.33-km nested domain is primarily from the 1.33-km simulation. Similarly, the model solution in the grid cells in the 12-km modeling domain that include the 4-km domain is primarily from the 4-km simulation.

The LADCO O₃ DVF₂₀₂₃ values presented here used observational data completeness criteria based on the 2015 O₃ NAAQS. The completeness criteria are tied to the level of the standard in cases in which the number of valid observations falls below a statutory threshold but when at least one of the valid observations is greater than the NAAQS (see 40 CFR Part 50 Appendix U, Section 3(d)). By using the 2015 O₃ NAAQS for determining completeness, LADCO includes more available data points in the DV calculations than if we had used the 2008 O₃ NAAQS completeness criteria because the lower standard is more inclusive of the available monitoring data (i.e., there are more MDA8 O₃ observations ≥ 70 ppb than there are observations ≥ 75 ppb). Per U.S. EPA modeling guidance (U.S. EPA, 2018), LADCO truncated the SMAT-CE average DVF₂₀₂₃ values to integer numbers.

The LADCO 2023 CAMx simulation predicts that two monitors in the region will have an average DVF₂₀₂₃ that exceeds the 2015 O₃ NAAQS: Sheboygan Kohler Andrae in Sheboygan County, Wisconsin (DVF₂₀₂₃ = 75) and Chiwaukee Prairie in Kenosha County, Wisconsin (DVF₂₀₂₃ = 71). The RRF plot shows that the LADCO CAMx modeling projected all the monitors along the western shore of Lake Michigan and southern shore of Lake Erie, along with a few other areas of the region, to have 5-9% reductions in their DVF₂₀₂₃ values (RRFs = 0.91-0.95). Most of the monitors in the region are forecast to have 10-14% DVF₂₀₂₃ reductions (RRFs = 0.86-0.9). Table 6-1 presents the average DVF₂₀₂₃ values for monitors in each of the 2015 O₃ NAAQS NAAs in the region. As with the DVF₂₀₂₃ and RRF figures in this section, this table presents the DVF₂₀₂₃ values calculated from the LADCO 4-km CAMx modeling using a matrix of 3x3 grid cells surrounding each monitor and including water cells in the calculation.

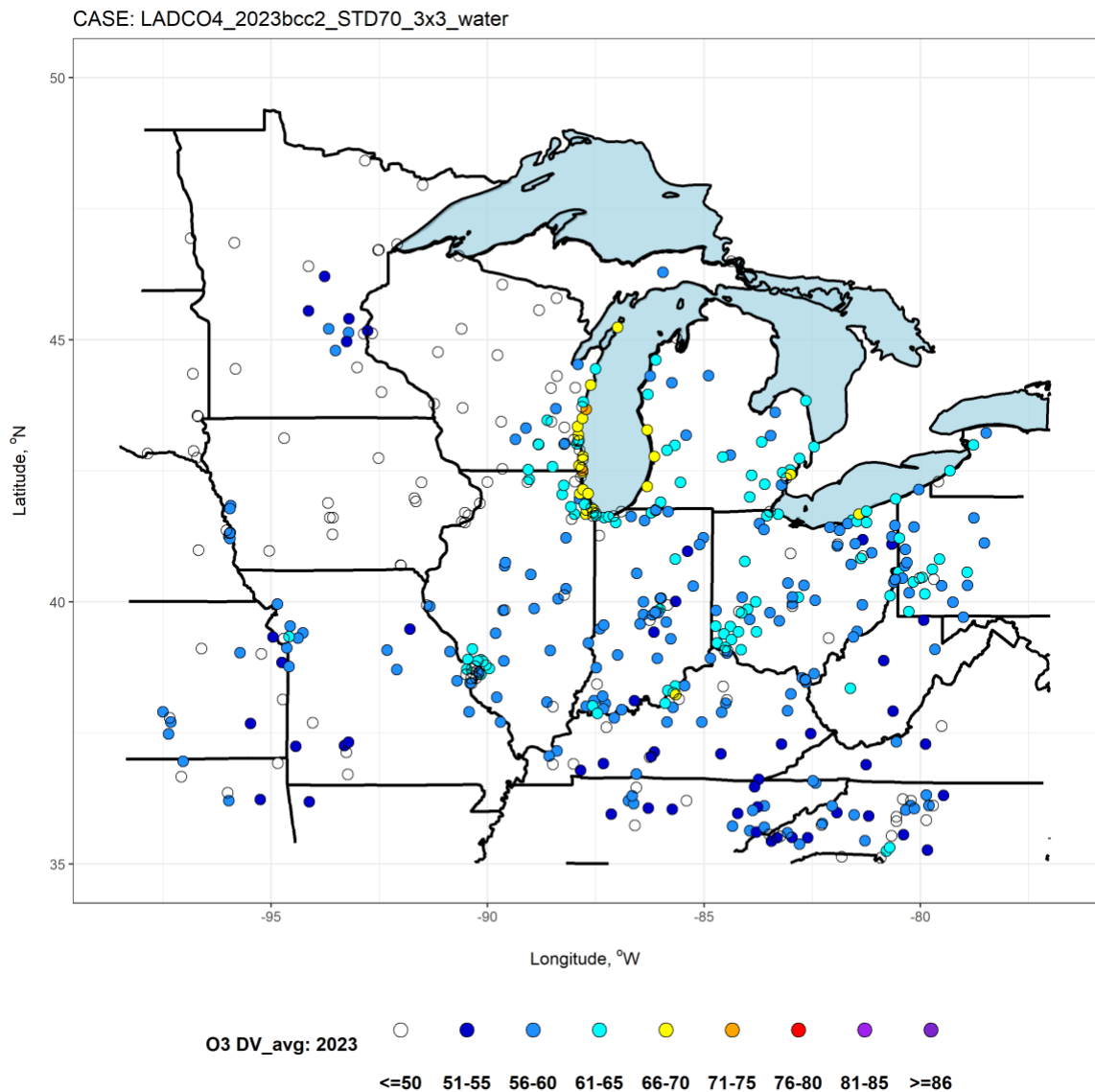


Figure 6-10. DVF₂₀₃ O₃ design values calculated with water cells included from the LADCO 2023 4-km CAMx simulation.

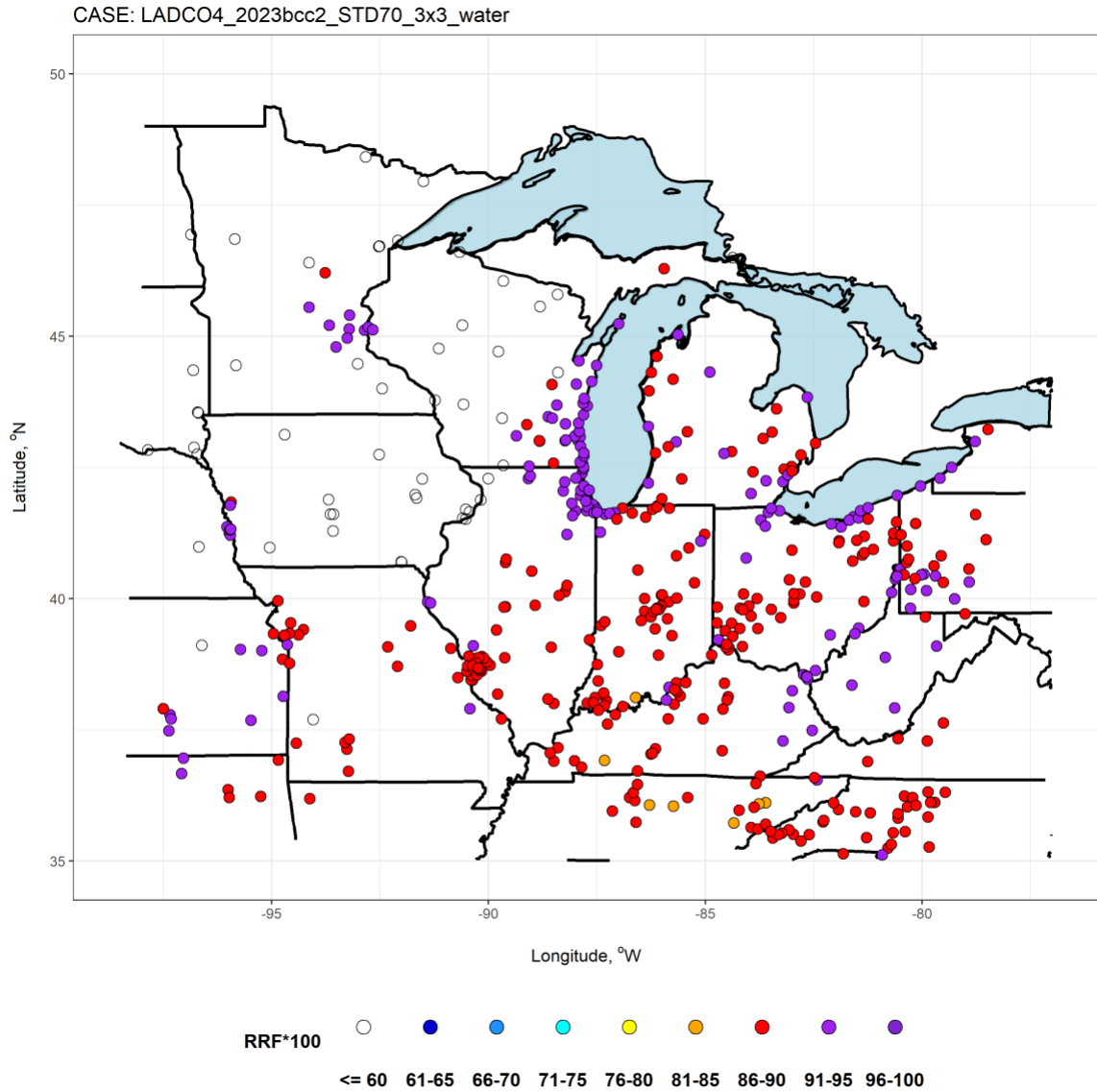


Figure 6-11. 2023 RRFs calculated with water cells included from the LADCO 2023 4-km CAMx simulation.

Table 6-1. 2023 O₃ design values at each monitor in the 2015 O₃ NAAQS NAAs in the LADCO region; calculated from the LADCO 4-km CAMx modeling with water cells included in the 3x3 matrix surrounding the monitor

State	NAA	AQS Site ID	Site Name	2021 DV	2023 DV	RRF
Michigan	Allegan County, MI	260050003	HOLLAND	75	66.9	0.9084
Michigan	Berrien County, MI	260210014	COLOMA	71	67.3	0.9185
Michigan	Muskegon County, MI	261210039	MUSKEGON	74	68.6	0.9149
Illinois	Chicago, IL-IN-WI	170310001	ALSIP	71	67.5	0.9251
Illinois	Chicago, IL-IN-WI	170314201	NORTHBRK	74	68.0	0.9285
Illinois	Chicago, IL-IN-WI	170317002	EVANSTON	73	68.9	0.9324
Illinois	Chicago, IL-IN-WI	170310032	CHI_SWFP	75	66.6	0.9214
Illinois	Chicago, IL-IN-WI	170310076	CHI_COM	0	67.9	0.9436
Illinois	Chicago, IL-IN-WI	170971007	ZION	73	67.9	0.9218
Illinois	Chicago, IL-IN-WI	170314007	DESPLNS	69	66.1	0.9187
Illinois	Chicago, IL-IN-WI	170314002	CICERO	70	64.9	0.9448
Illinois	Chicago, IL-IN-WI	171110001	CARY	71	63.7	0.9151
Illinois	Chicago, IL-IN-WI	170436001	LISLE	70	65.3	0.9383
Illinois	Chicago, IL-IN-WI	170890005	ELGIN	70	64.3	0.9285
Illinois	Chicago, IL-IN-WI	170311601	LEMONT	72	64.8	0.9363
Illinois	Chicago, IL-IN-WI	170311003	CHI_TAFT	71	63.3	0.9281
Illinois	Chicago, IL-IN-WI	171971011	BRAIDWD	64	60.2	0.9227
Illinois	Chicago, IL-IN-WI	170313103	SCHILPRK	64	59.4	0.9486
Indiana	Chicago, IL-IN-WI	181270026	Valparaiso	68	62.5	0.9022
Indiana	Chicago, IL-IN-WI	181270024	Ogden Dunes	72	63.4	0.9097
Indiana	Chicago, IL-IN-WI	180890022	Gary-IITRI	69	62.2	0.912
Indiana	Chicago, IL-IN-WI	180892008	Hammond-141st St	68	61.1	0.9259
Wisconsin	Chicago, IL-IN-WI	550590019	CHIWAUKEE	74	71.6	0.9183
Wisconsin	Chicago, IL-IN-WI	550590025	Kenosha-Water Tower	72	67.6	0.9184
Ohio	Cincinnati, OH-KY	390610006	Sycamore	70	65.8	0.8985
Ohio	Cincinnati, OH-KY	390170018	Middletown Airport	67	63.8	0.8955
Ohio	Cincinnati, OH-KY	390170023	Crawford Woods	66	64.4	0.8915
Ohio	Cincinnati, OH-KY	390610010	Colerain	67	64.8	0.9099
Ohio	Cincinnati, OH-KY	390610040	Taft NCore	69	63.8	0.895
Ohio	Cincinnati, OH-KY	391650007	Lebanon	70	63.4	0.8844
Ohio	Cincinnati, OH-KY	390179991	Oxford	64	62.8	0.9042
Ohio	Cincinnati, OH-KY	390250022	Batavia	66	62.3	0.8914
Ohio	Cleveland, OH	390850003	Eastlake	72	67.1	0.9113
Ohio	Cleveland, OH	390550004	Notre Dame	66	63.8	0.8958

Ohio	Cleveland, OH	390355002	Mayfield	68	63.3	0.9142
Ohio	Cleveland, OH	390350034	District 6	70	63.3	0.9185
Ohio	Cleveland, OH	390850007	Painesville	66	62.7	0.9095
Ohio	Cleveland, OH	390930018	Sheffield	58	59.7	0.9095
Ohio	Cleveland, OH	390350064	Berea BOE	66	59.5	0.9123
Ohio	Cleveland, OH	391030004	Chippewa	61	57.5	0.8953
Ohio	Cleveland, OH	391530020	Patterson Park	64	56.9	0.899
Ohio	Cleveland, OH	390350060	GT Craig NCore	63	58.1	0.9272
Ohio	Cleveland, OH	391331001	Lake Rockwell	62	55.6	0.8983
Michigan	Detroit, MI	261630019	East 7 MILE	70	66.3	0.9085
Michigan	Detroit, MI	261250001	OAK PARK	69	64.1	0.9077
Michigan	Detroit, MI	261470005	PORT HURON	70	64.8	0.9008
Michigan	Detroit, MI	260990009	NEW HAVEN	68	64.4	0.8994
Michigan	Detroit, MI	261619991	Ann Arbor	62	62.8	0.9067
Michigan	Detroit, MI	260991003	WARREN	66	61.0	0.9077
Michigan	Detroit, MI	261610008	YPSILANTI	66	62.0	0.917
Michigan	Detroit, MI	261630001	ALLEN PARK	67	60.9	0.9193
Indiana	Louisville, KY-IN	180431004	New Albany	64	64.9	0.9148
Indiana	Louisville, KY-IN	180190008	Charlestown State Park	63	62.9	0.8952
Wisconsin	Milwaukee, WI	551010020	Racine	73	69.5	0.9148
Wisconsin	Milwaukee, WI	550890009	HARRINGTON BCH	70	68.7	0.9381
Wisconsin	Milwaukee, WI	550790085	BAYSIDE	70	66.5	0.9282
Wisconsin	Milwaukee, WI	550890008	GRAFTON	71	66.0	0.926
Wisconsin	Milwaukee, WI	550790026	MILWAUKEE SER	68	63.1	0.928
Wisconsin	Milwaukee, WI	550790010	MILWAUKEE 16TH ST	61	61.0	0.9354
Wisconsin	Milwaukee, WI	551330027	CLEVELAND AVE	65	60.5	0.9209
Wisconsin	Sheboygan County, WI	551170006	SHEBOYGAN	72	75.1	0.9391
Wisconsin	Sheboygan County, WI	551170009	Sheboygan-Haven	65	65.2	0.9328
Illinois	St. Louis, MO-IL	171191009	MARYVILL	67	61.5	0.8923
Illinois	St. Louis, MO-IL	171193007	WOOD_WTP	69	63.0	0.8916
Illinois	St. Louis, MO-IL	171630010	East St. Louis	65	62.1	0.9
Illinois	St. Louis, MO-IL	171199991	Alhambra	64	59.5	0.8846

6.3.1. Alternative DVF₂₀₂₃ Results

Confidence in the ability of photochemical models to accurately estimate O₃ over water is a persistent concern with the use of the models for air quality planning. This concern prompted measurement campaigns in the Eastern U.S. to address the issue (see the 2017 Lake Michigan

Ozone Study, Long Island Sound Tropospheric Ozone Study, and OWLETS). The meteorology and chemistry processes in model grid cells that are dominated by water (> 50% landuse area) are a challenge to simulate because the conventional technical formulations of the models were not optimized for water cells. Even with the introduction of new algorithms to simulate the dynamical and chemical features of water cells, a lack of over-water observations hinders our ability to verify the accuracy of the models in simulating these conditions.

In consideration that the models may not perform well in simulating water cells, U.S. EPA and others have presented alternative DVF calculation approaches that exclude water cells (US EPA, 2017; US EPA, 2018b). Per U.S. EPA (2018, pg. 109), when appropriate there may be cases where certain cells along the periphery of the 3 x 3 model grid cell matrix have different modeled responses than what would be expected at the monitor location at the center of a matrix due to a specific local topographic or geographical feature (e.g., a large water body or a significant elevation change). A potential example of this situation would be a matrix of grid cells where several grid cells are over water and where the meteorological conditions and relevant emissions sources differ substantially from the land-based monitor location. Again, in these types of cases and with appropriate justification, air agencies could consider removing the unrepresentative cells from the calculation.

Section 4.2.2 of the U.S EPA (2018) modeling guidance states, “In cases in which the spatial representativeness of a monitoring location is much smaller or larger than the area covered by the 3x3 array of cells, air agencies may consider assessing site-specific model response over an alternative grid cell array as part of corroborative analyses that inform the aggregate weight of evidence determination. Additionally, there may be cases where certain cells along the periphery of the 3 x 3 array have different modeled responses than what would be expected at the monitor location at the center of array due to a specific local topographic or geographical feature (e.g., a large water body or a significant elevation change). “

Factoring in the impact of water cells on the DVF calculation does not require additional CAMx simulations. It is implemented through a postprocessing sequence per U.S. EPA (2018b) in which model grid cells that are dominated by water (> 50% landuse area) are removed from the 3x3 matrix in the RRF and DVF calculation. One important modification to this process is to

override the exclusion condition for cells that contain monitors; in other words, grid cells that contain monitors will be included in the 3x3 matrix regardless of the amount of water coverage in the cell.

Adjustments to the size of the grid cell matrix used in the DVF calculation is a configuration that can be adjusted in SMAT-CE. The program gives users the option to calculate DVs using only the model grid cell that contains a monitor, or matrices of 3x3, 5x5, or 7x7 cells around a monitor location. LADCO's 2016 CAMx modeling platform used a 3:1 nesting ratio to simulation air quality at 12-km, 4-km, and 1.33-km resolution. To normalize the area around a monitor used for calculating DVFs, the size of the matrix surrounding a monitor can be increased at finer grid resolutions.

LADCO conducted a series of attainment test experiments to understand the impacts on DVFs of excluding water cells or changing the size of the grid cell matrix. Table 6-2 shows the results of attainment test experiments for controlling¹⁴ monitors at the lakeshore nonattainment areas in the region. The results in this table compare DVF₂₀₂₃ values for SMAT-CE configurations that include/exclude water cells and use different matrix sizes around the monitor. The range of DVF₂₀₂₃ values at a monitor resulting from the different configurations presented in the table averages about 0.5 ppb.

Table 6-2. Comparison of LADCO 2023 4-km O₃ design values at shoreline nonattainment area monitors in the region

NAA	AQS Site ID	3x3		5x5		7x7	
		Water	No Water	Water	No Water	Water	No Water
Allegan County, MI	260050003	66.9	66.9	67.6	67.2	67.5	67.2
Berrien County, MI	260210014	67.3	67.3	67.8	67.4	67.9	67.7
Muskegon County, MI	261210039	68.6	68.6	68.9	68.6	68.9	68.5
Chicago, IL-IN-WI	550590019	71.6	72.0	71.3	71.8	71.5	71.8
Cleveland, OH	390850003	67.1	66.5	67.3	66.7	67.4	66.5
Detroit, MI	261630019	66.3	66.3	66.0	66.0	66.0	66.1
Milwaukee, WI	551010020	69.5	69.4	69.6	69.4	69.4	69.5
Sheboygan County, WI	551170006	75.1	74.6	75.1	74.7	74.5	74.6

¹⁴ The controlling monitor is the monitor location in the nonattainment area with the highest base year design value

Figure 6-12 compares different DVF₂₀₂₃ estimates for the Sheboygan Kohler Andrae monitor in Wisconsin. This figure adds the impacts of model grid resolution on the DVF₂₀₂₃ estimates by comparing configurations that include/exclude water cells, different grid cell matrix sizes, and model resolution. As seen in the table above, the attainment test configuration has a modest impact (~0.5 ppb) on the DVF₂₀₂₃ results, and will only be important for monitors that have estimated DVFs that are close to the NAAQS value.

LADCO's CAMx DVF estimates are available in supporting materials to this TSD in the following spreadsheet. The spreadsheet includes tables and figures of DVF₂₀₂₃ values calculated from the LADCO 12-km, 4-km, and 1.33-km CAMx modeling that use the different SMAT-CE configurations presented here.

[LADCO 2016-based 2023 Design Value Forecasts](#) (19 MB; XLSX)

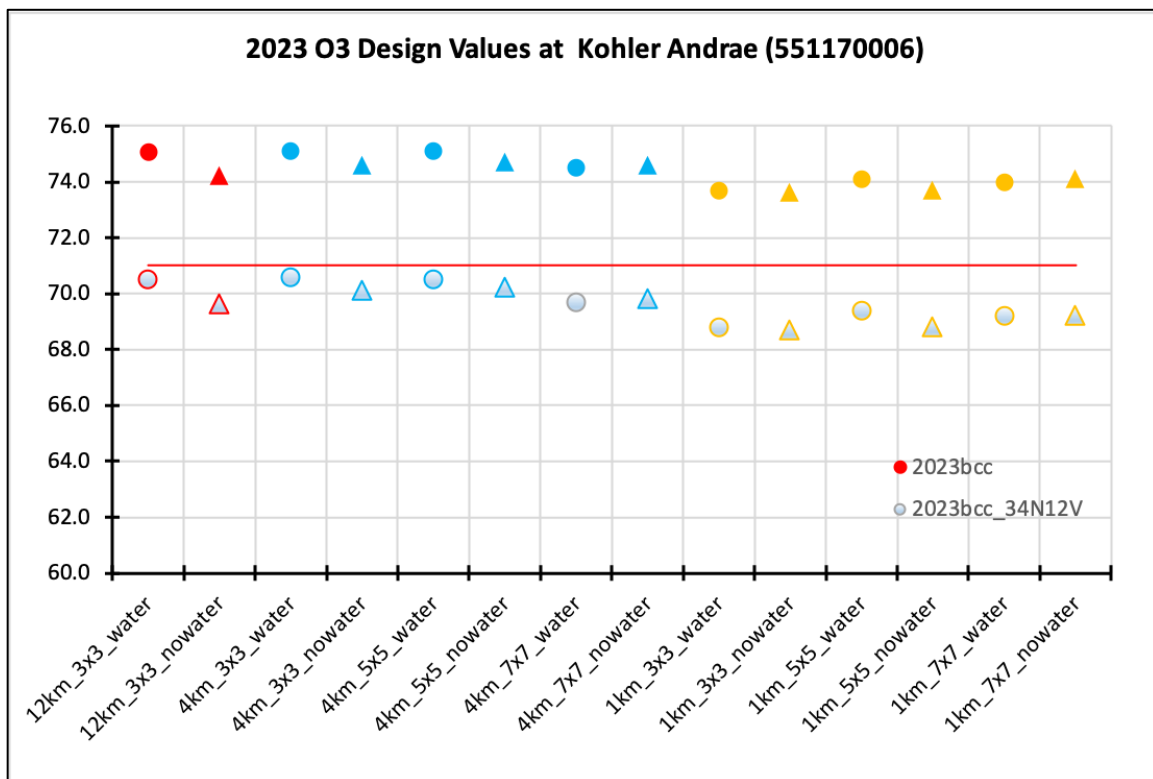


Figure 6-12. Alternative DVF₂₀₂₃ results for Sheboygan Kohler Andrae, WI

7. Source Apportionment Modeling Results

LADCO conducted source apportionment modeling with CAMx to quantify source-receptor relationships for O₃ in 2016. The CAMx APCA results show the extent to which emission from different source regions or inventory sectors impact ground-level O₃ concentrations in the region. The information provided by APCA can be used to inform air quality planners about the main drivers of O₃ formation at specific locations. The techniques used by LADCO to process the APCA results provide information on the sources that contribute to the annual 4th highest MDA8 O₃ concentrations at each monitor location.

In Section 3.4.1 we discussed the APCA configurations for the LADCO 2016-based CAMx simulations. The configuration description includes the APCA emission sector tags and geographic source region tags used for quantifying the contributions of upwind states, regions, and inventory sectors at downwind O₃ monitors.

7.1. APCA Post-processing for Source Contribution Estimates

LADCO post-processed the CAMx APCA tagged species model outputs to create SMAT-CE input files. This process involved operations on both the 2016 core model concentration outputs and the source apportionment outputs. The core model outputs are the total O₃ concentrations, while the source apportionment outputs track the amount of O₃ formed by either NO_x or VOC emissions from the tagged sources.

The model attainment test software SMAT-CE processes daily average O₃ concentrations from a 3 x 3 grid cell matrix surrounding each O₃ monitor location in the CAMx modeling domain. LADCO used the following steps to prepare the SMAT-CE input files and to run the software to calculate the contribution of the tracers to O₃ at downwind receptors.

1. Combine hourly CAMx core model output into hourly total concentrations (File A).
2. Generate hourly pseudo total concentration outputs (File X') for each source tag by subtracting the tagged source apportionment output (File X) from File A.
3. Generate daily average total (File $\bar{A}$) concentration files from File A and File X', respectively

4. Extract the results in File $\bar{A}$ and File $\bar{X}'$ from 3x3 grid cells surrounding each monitor location in the modeling domain. LADCO then converted the extracted netCDF data to comma-delimited (CSV) files in the SMAT-CE input file format; the CSV outputs for File $\bar{A2}$ and File $\bar{X2}'$ were then ready for SMAT-CE.
5. Run SMAT-CE version 1.6 using the File $\bar{A2}$ and File $\bar{X2}'$ with observed surface O₃ data as inputs
6. We then used R to prepare the raw SMAT-CE for easy import to a spreadsheet for plotting and tabulation of the results.

LADCO's CAMx APCA O₃ tracer estimates are available in the supporting materials to this TSD in the following spreadsheet:

[LADCO 2016-based O3 tracer contributions](#) (8 MB; XLSX)

7.2. CAMx 2016 APCA Results

This section illustrates some of the results from the LADCO CAMx 2016-based APCA configurations that are included in the spreadsheet described in the previous section. The LADCO CAMx 2016 geographic tracer APCA modeling estimated the amount of O₃ contributed by O₃ precursor (NO_x and VOC) emissions originating from states, groups of counties, biogenic, initial and boundary condition (ICBC), and international (Canada and Mexico) anthropogenic sources. The LADCO CAMx 2016 inventory sectors tracer APCA modeling estimated the amount of O₃ contributed by O₃ precursor emissions from various inventory sectors.

Figure 7-1 through Figure 7-10 show the contributions of emissions from the geographic and sectors tags to the 2016 O₃ design value (DV₂₀₁₆), or the annual 4th highest MDA8 O₃ at each monitor in Illinois, Indiana, Michigan, Ohio, and Wisconsin, respectively. These results are summarized by the NAAs in each state below.

7.2.1. APCA Tracer Contributions to Illinois O₃

Chicago

Figure 7-1 shows that the IL monitors with the highest DV₂₀₁₆ values in the state are in the Chicago NAA. NO_x and VOC emissions from the Chicago metro and suburban counties are the

largest contributors to O₃ at the Chicago NAA monitors. The Chicago metro/suburban area tracers contribute about 35-40% of the DV₂₀₁₆ at the monitors north and northwest of downtown Chicago. For example, the Chicago metro/suburban county emissions are associated with 37% of the DV₂₀₁₆ at the Zion, IL monitor (170971007) near the border with Wisconsin. Emissions from these same counties contribute ~24-30% of the DV₂₀₁₆ at monitors to the south of downtown. For example, emissions from these counties contribute 24% of the DV₂₀₁₆ at the South Water Treatment Plant (170310032). Emissions from the northern Indiana counties are the next largest single source region contributor to the Chicago NAA monitors, associated with about 5% of the DV₂₀₁₆ values.

Figure 7-2 shows that onroad mobile non-diesel (~12-15%) and onroad mobile diesel (~8-11%) sources are the largest emissions contributors to the Chicago DV₂₀₁₆ values. Other anthropogenic emissions sectors with notable contributions to Chicago O₃ concentrations include non-EGU point (~6-10%), offroad diesel engines (~5-7%), and offroad non-diesel engines (~5-6%).

East St. Louis

Emissions from anthropogenic sources in Missouri are the largest contributor to DV₂₀₁₆ values at monitors in the East St. Louis, IL counties (~30-40%). Other significant contributors to the East St. Louis, IL DV₂₀₁₆ values include emissions from the East St. Louis, IL counties (~10-15%), statewide emissions in TX and LA (~5%), and statewide emissions from the rest of the CenSARA states (~7%). Onroad mobile diesel (~12-13%) and onroad mobile non-diesel (~12-13%) emissions are the largest anthropogenic inventory sector contributors to O₃ at the East St. Louis, IL monitors. EGU point (~10-13%) and offroad diesel engines (~6-8%) are also important sources of emissions that contribute to O₃ at the East St. Louis monitors.

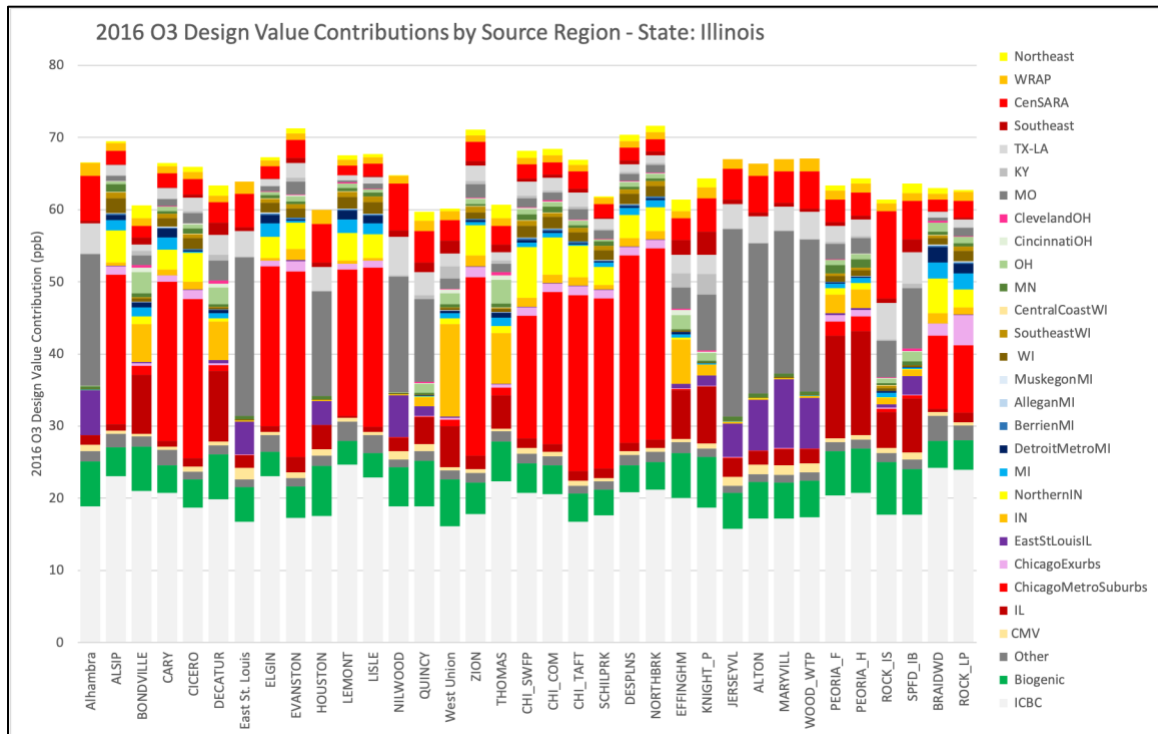


Figure 7-1. Geographic tracer contributions to 2016 MDA8 O₃ at IL monitors

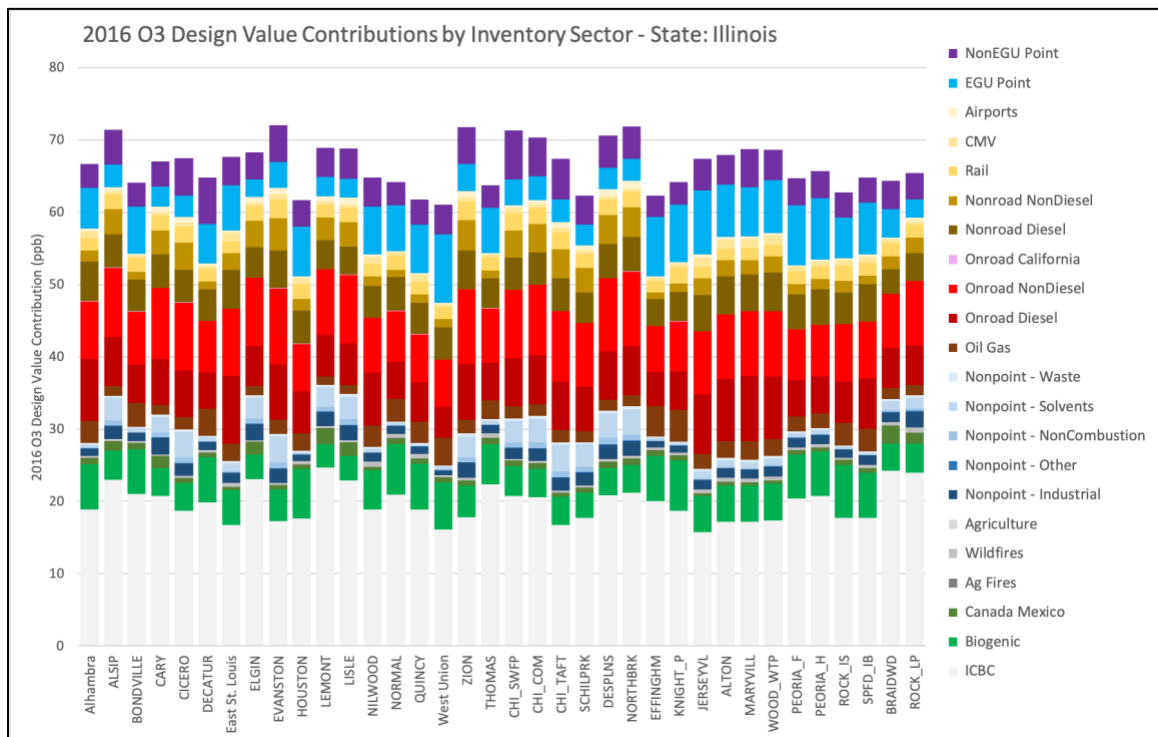


Figure 7-2. Inventory sector tracer contributions to 2016 MDA8 O₃ at IL monitors

7.2.2. APCA Tracer Contributions to Indiana O₃

Indianapolis

Figure 7-3 shows that the IN monitors with the highest DV₂₀₁₆ values in the state are in Indianapolis, northern Indiana near Lake Michigan, and in the Louisville area. Statewide emissions from Indiana, excluding the northern counties, are the largest contributor (~33-34%) to O₃ at the Indianapolis monitors. No other single source region contributes more than about 4% of the O₃ at the Indianapolis monitors. Figure 7-7 shows the inventory sectors contributing to O₃ concentrations in Indiana. Ozone at the Indianapolis monitors is most impacted by emissions from onroad mobile non-diesel (~17%) and onroad mobile diesel (~10%) sources. Other notable contributors to DV₂₀₁₆ values in Indianapolis include emissions from offroad diesel engines (~8%) and EGU point (~7%) sources.

Northwest Indiana

Ozone at the northern Indiana monitors is primarily impacted by emissions from the northern Indiana counties (~15-23%) and from the Chicago metro/suburban counties (~10-18%). The largest sources contributing to O₃ at the northern Indiana O₃ monitors include onroad mobile non-diesel (~13%), non-EGU point (~10-12%), onroad mobile diesel (~10%), offroad diesel engines (~7%), offroad non-diesel engines (~6-7%), and EGU point (~5%).

Louisville Area

Statewide emissions from Kentucky are the largest contributor to O₃ (~27%) at the Louisville area monitors in Indiana. Indiana statewide NO_x and VOC emissions contribute about 10-13% of the DV₂₀₁₆ at these monitors. Ozone concentrations in the Indiana counties in the Louisville area are impacted most by emissions from onroad mobile non-diesel (~15-16%), EGU point (~12-13%), onroad mobile diesel (~10%), non-EGU point (~7%), and offroad diesel engines (~6%).

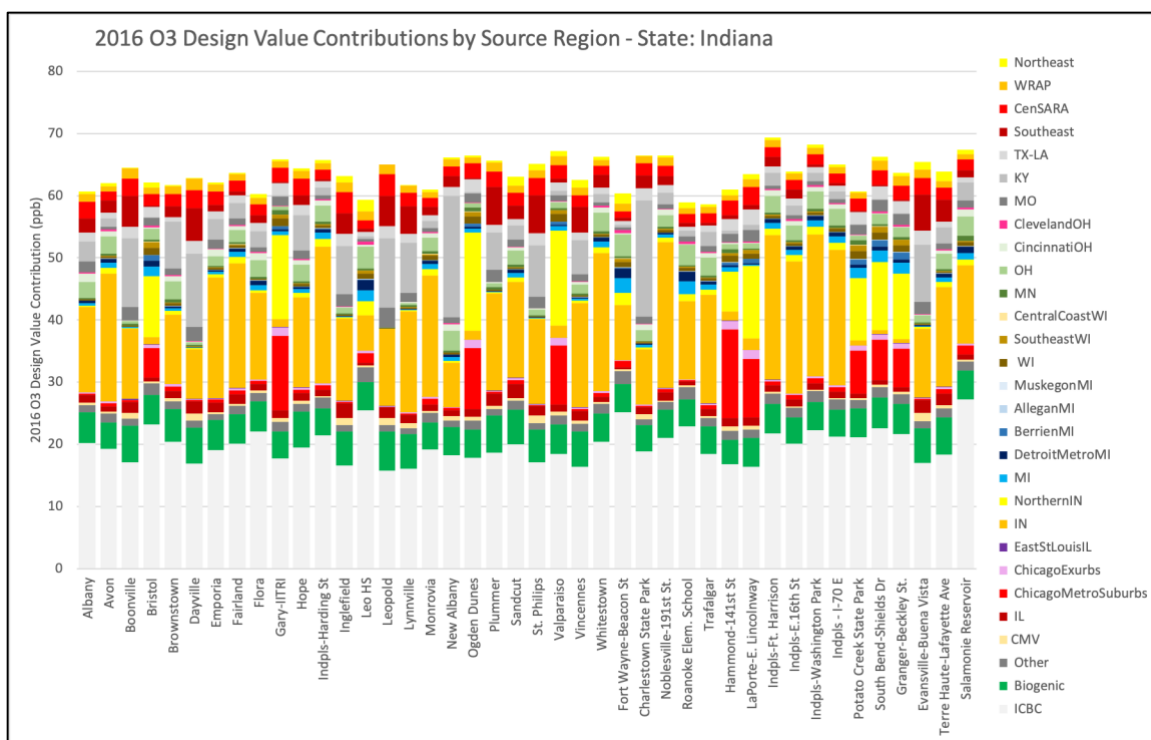


Figure 7-3. Geographic tracer contributions to 2016 MDA8 O₃ at IN monitors

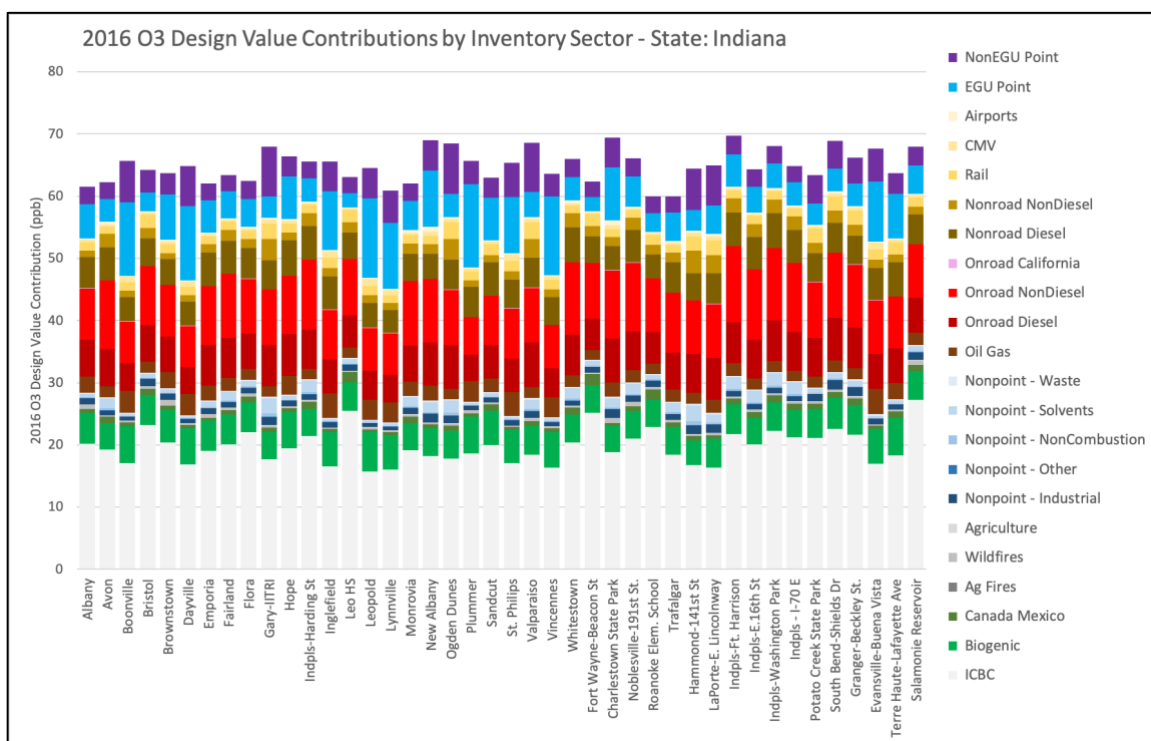


Figure 7-4. Inventory sector tracer contributions to 2016 MDA8 O₃ at IN monitors

7.2.1. APCA Tracer Contributions to Michigan O₃

Detroit

Figure 7-5 shows that the monitors in Michigan with the highest DV₂₀₁₆ values are along the shore of Lake Michigan and in the Detroit area. The geographic source regions with the largest NO_x and VOC emissions contributions to O₃ at Detroit monitors include the Detroit metro counties (~18-25%) and the rest of state Michigan (~3-5%). Canadian emissions sources contribute ~5-9% of the DV₂₀₁₆ value, with the largest impact (9%) at the Port Huron monitor (261470005). Figure 7-6 shows that onroad mobile non-diesel emissions sources are the largest contributor to O₃ at the Detroit monitors (~10-15%). Other notable anthropogenic emissions sectors contributing to O₃ in Detroit include EGU point (~5-8%), onroad mobile diesel (~5-8%), non-EGU point (~5-6%), and offroad diesel engines (~4-5%).

Western Michigan

Emissions from the Chicago metro/surburban counties are the largest contributor (~16-22%) to the DV₂₀₁₆ values at the western Michigan monitors. Other notable emissions source regions include the northern Indiana counties (~8-14%), and the CenSARA states (~12-14%). The inventory sectors that have the largest contributions to O₃ at the western Michigan monitors include onroad mobile non-diesel (~13%), onroad mobile diesel (~11%), non-EGU point (~10%), and EGU point (~6-7%).

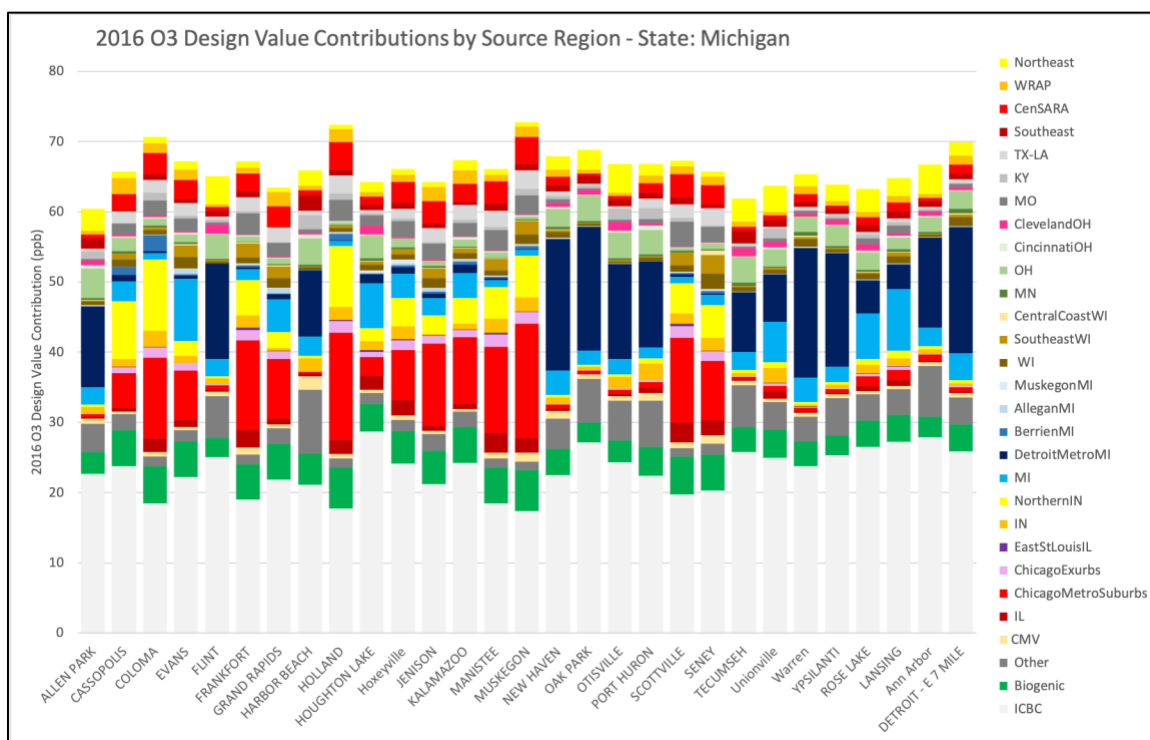


Figure 7-5. Geographic tracer contributions to 2016 MDA8 O₃ at MI monitors

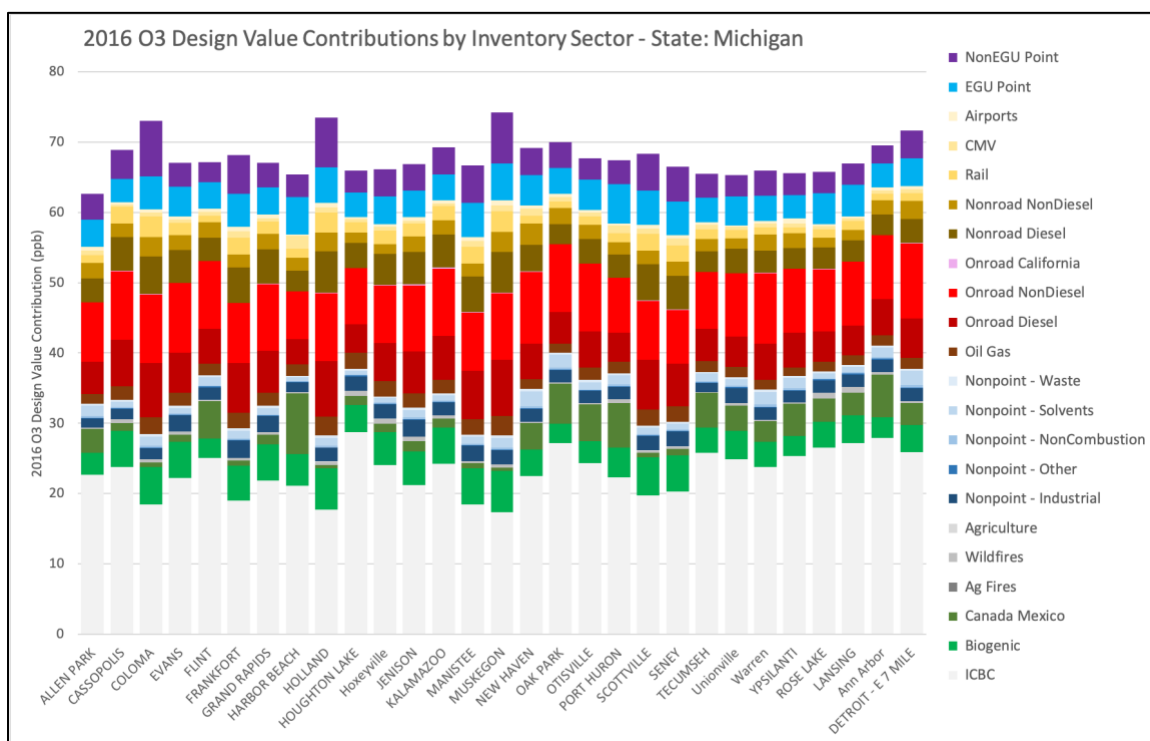


Figure 7-6. Inventory sector tracer contributions to 2016 MDA8 O₃ at MI monitors

7.2.1. APCA Tracer Contributions to Ohio O₃

Cincinnati

Figure 7-7 shows that NO_x and VOC emissions from the Cincinnati counties are the largest contributor (~15-20%) to the DV₂₀₁₆ values at the Cincinnati O₃ monitors. Other notable geographic source regions that contribute to O₃ concentrations in Cincinnati include statewide Kentucky (~10-13%), the CenSARA states (~7-10%), the rest of Ohio (~5-10%), and statewide Indiana (~4-7%). Figure 7-8 shows that the largest inventory sector contributors to Cincinnati O₃ include emissions from onroad mobile non-diesel (~15-16%), EGU point (~12-14%), onroad mobile diesel (~9-10%), and non-EGU point (~5%) sources.

Cleveland

Ozone at the Cleveland monitors is most impacted by NO_x and VOC emissions from the Cleveland area counties (~15-23%), the rest of Ohio statewide (~12-15%), and the states in the SESARM region (~10-13%). Onroad mobile non-diesel emissions sources are the largest contributor (~13-15%) to O₃ in the Cleveland area. Other notable anthropogenic inventory sectors that contribute to Cleveland O₃ include onroad mobile diesel (~7-9%), EGU point (~7-8%), non-EGU point (~6%), offroad diesel engines (~7-8%), and offroad non-diesel engines (~5-6%).

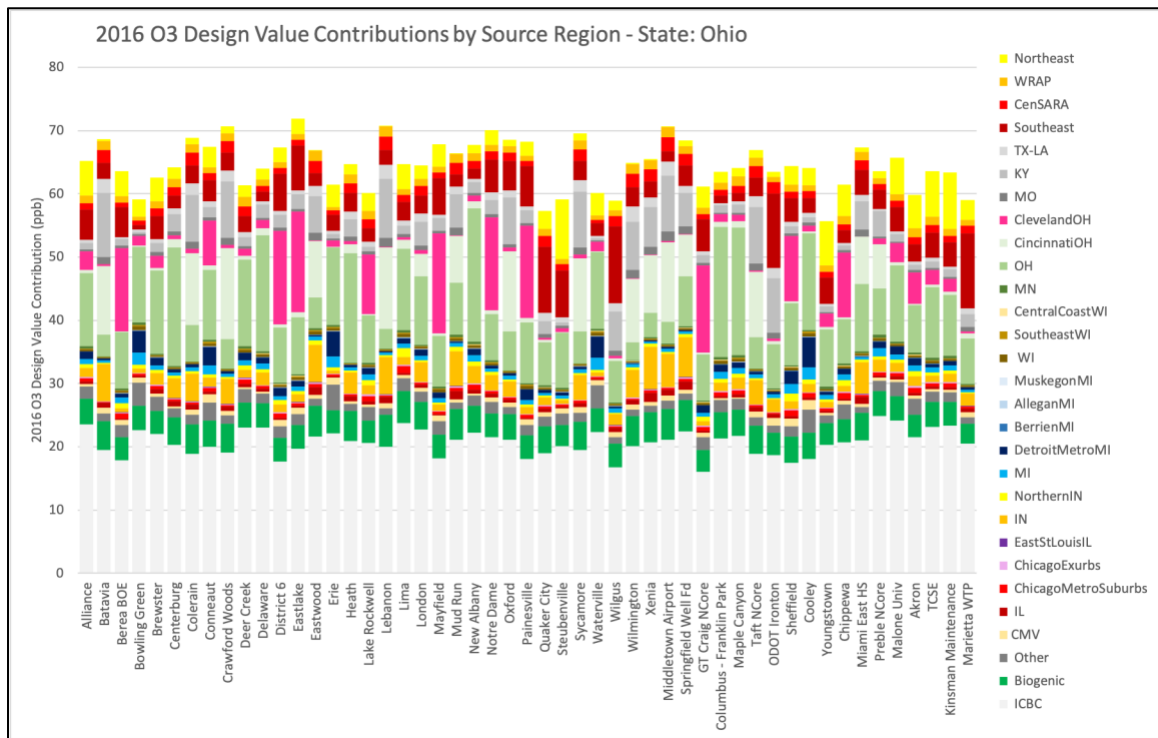


Figure 7-7. Geographic tracer contributions to 2016 MDA8 O₃ at OH monitors

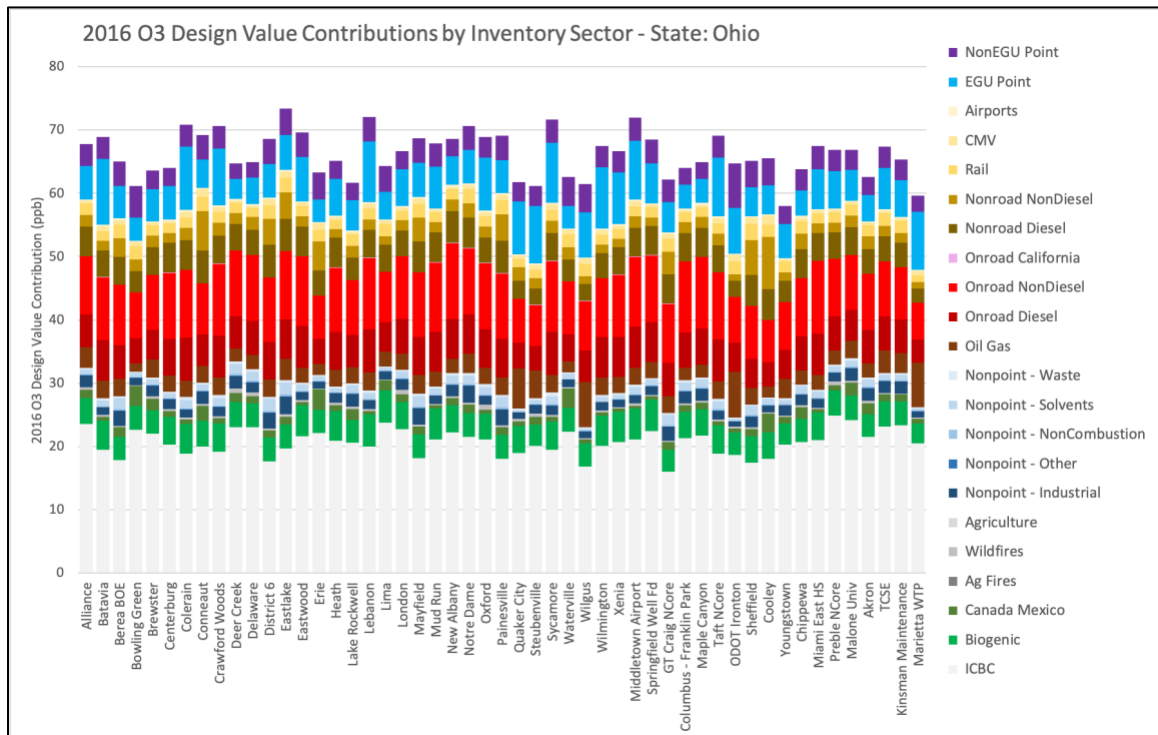


Figure 7-8. Inventory sector tracer contributions to 2016 MDA8 O₃ at OH monitors

7.2.1. APCA Tracer Contributions to Wisconsin O₃

Southeast Wisconsin

Figure 7-9 shows that highest DV₂₀₁₆ values in Wisconsin are measured at the Lake Michigan coastline monitors. Ozone concentrations in the southeastern counties (Kenosha and Racine) near the border with Illinois are most impacted by NO_x and VOC emissions from the Chicago metro/suburban counties (~27-32%). Other notable geographic source regions contributing to O₃ in southeast Wisconsin include the northern Indiana counties (~6-7%) and the CenSARA states (~8-10%). Emissions sources in the southeast Wisconsin counties contribute ~1-2% of the DV₂₀₁₆. Figure 7-10 shows that onroad mobile non-diesel sources are the largest contributor to O₃ in this area (~14%). Other anthropogenic inventory sectors with notable contributions to O₃ in southeast Wisconsin include onroad mobile diesel (~11%), non-EGU point (~7-8%), offroad diesel engines (~7-8%), offroad non-diesel engines (~5-6%), and EGU point (~5-6%).

Milwaukee

Emissions from the Chicago metro/surburban counties are the largest contributor to O₃ at monitors in Milwaukee (~18-19%). Emissions from southeast Wisconsin counties, which include Milwaukee, contribute about 7-9% of the DV₂₀₁₆ values. Other notable geographic source regions contributing to Milwaukee O₃ include NO_x and VOC emissions from the northern Indiana counties (~5-6%) and the CenSARA states (~7%). Onroad mobile non-diesel sources are the largest contributor to O₃ in this area (~13%). Other anthropogenic inventory sectors with notable contributions to O₃ in Milwaukee include onroad mobile diesel (~10%), non-EGU point (~7%), offroad diesel engines (7%), and EGU point (~6%).

Sheboygan County

Emissions from the Chicago metro/surburban counties are the largest contributor to O₃ at monitors in Sheboygan county (~19-21%). Other notable anthropogenic emission source regions to Sheboygan county O₃ include the CenSARA states (~8%) and the northern Indiana counties (~7%). Anthropogenic emissions from the Wisconsin central coast counties, which include Sheboygan county, contribute ~1% to the DV₂₀₁₆ value for this area. Onroad mobile non-diesel sources are the largest contributor to O₃ in this area (~13%). Other anthropogenic inventory

sectors with notable contributions to O₃ in Sheboygan county include onroad mobile diesel (~9%), non-EGU point (~8%), offroad diesel engines (7%), and EGU point (~6%).

Door County

Emissions from the Chicago metro/surburban counties are the largest contributor to O₃ at monitors in Door county (~17%). Other notable anthropogenic emission source regions to Door county O₃ include the CenSARA states (~11%) and the northern Indiana counties (~7%). Onroad mobile non-diesel sources are the largest contributor to O₃ in this area (~12%). Other anthropogenic inventory sectors with notable contributions to O₃ in Door county include onroad mobile diesel (~10%), non-EGU point (~8%), offroad diesel engines (7%), and EGU point (~7%).

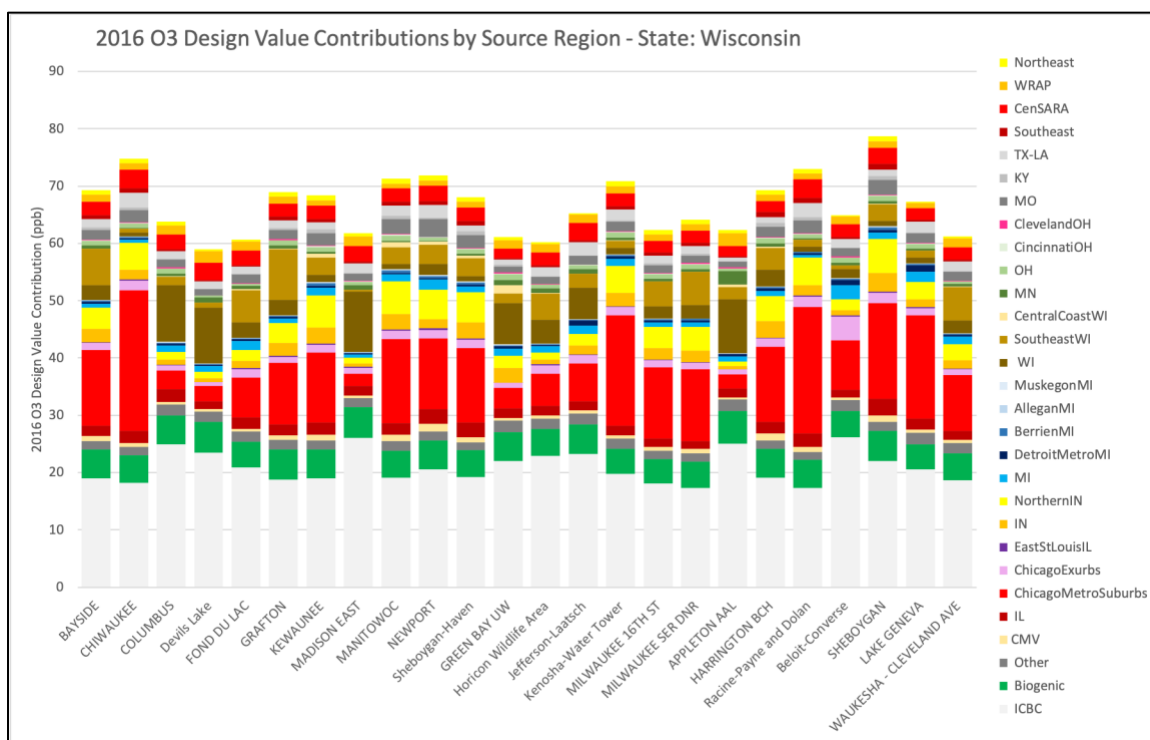


Figure 7-9. Geographic tracer contributions to 2016 MDA8 O₃ at WI monitors

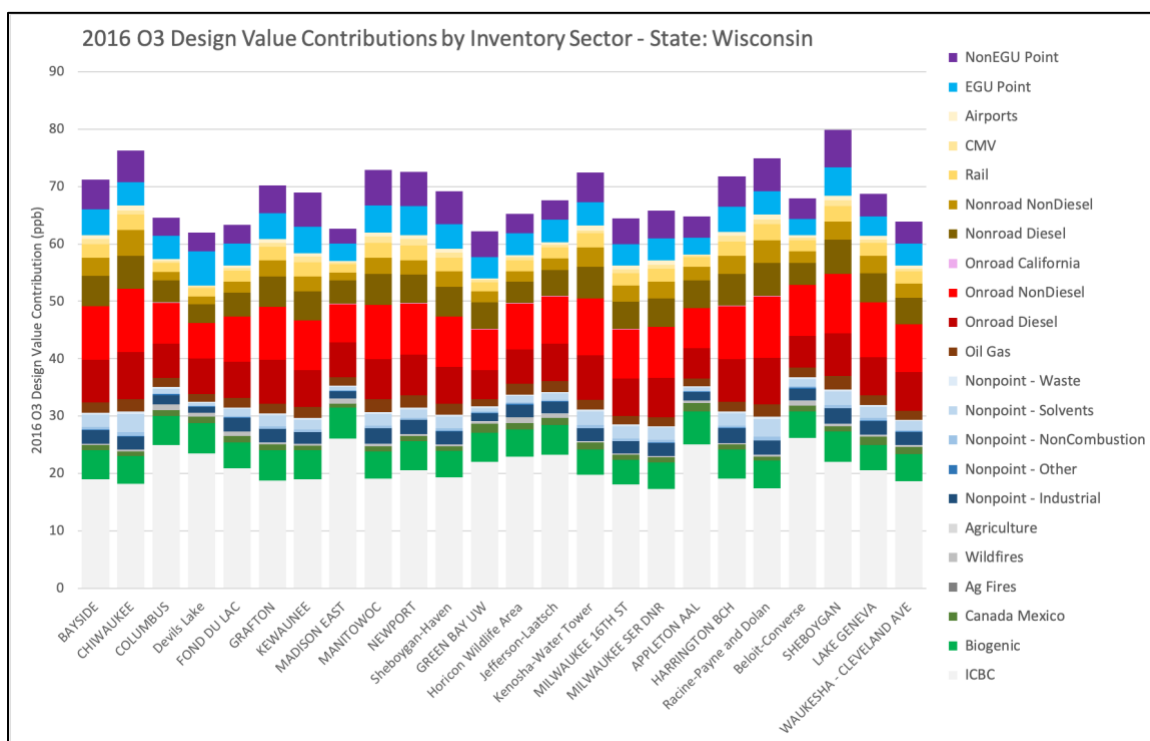


Figure 7-10. Inventory sector tracer contributions to 2016 MDA8 O₃ at WI monitors

8. 2016 Version 1 Modeling Platform Justification

As described in Section 3, LADCO used a modified version of the 2016v1 Inventory Collaborative emissions inventory and the U.S. EPA 2016fh emissions modeling platform to build the LADCO 2016 modeling platform. The LADCO 2016 platform used WRF 3.9.1 meteorology data optimized for the Great Lakes Basin (LADCO, 2022) and CAMx v7.10 to simulate 2016 and 2023 ozone concentrations. A key feature of the LADCO 2016 platform is the use of 12-km/4-km/1.33-km two-way nested domains centered on the LADCO region and Lake Michigan. Section 5 validated the performance of the LADCO 2016 platform for simulating O₃ concentrations in the Great Lakes region.

LADCO originally developed the 2016 modeling platform in early 2021 for demonstrating progress for the second regional haze planning period (LADCO, 2021). We extended the regional haze CAMx modeling to include the LADCO 2016 WRF meteorology and nested domains during spring and summer 2021, completing the LADCO CAMx simulations documented in this TSD (LADCO CAMx 2016bcc2 and 2023bcc) in late 2021.

U.S. EPA officially released the full 2016v2 emissions modeling platform in February 2022 (US EPA, 2022b). Starting in July 2021, U.S. EPA began to release components of the 2016v2 platform with MOVES3 onroad mobile source emission factors tables and inventory data for 2016 and 2023. U.S. EPA then released the rest of the inventory and modeling platform components by October 2021.

When U.S. EPA began to release the 2016v2 emissions data in summer 2021, LADCO was already committed to using the 2016v1-based emissions modeling platform to support 2015 O₃ NAAQS moderate area attainment demonstrations. As described in this section, LADCO's use of the 2016v1 emissions was justified for the following reasons:

1. LADCO had already invested significant resources into developing and evaluating the 2016v1-based platform when U.S. EPA released the 2016v2 data, and we did not have time to restart the modeling and evaluation to meet our commitments to our member states
2. While there are differences in the NO_x and VOC emissions estimates between the 2016v1 and 2016v2 platforms, the differences are driven primarily by changes to the biogenic and

onroad mobile sectors. LADCO feels that the 2016v2 platform methodological updates to the models used to estimate the emissions for these sectors, BEIS and MOVES, respectively, require further evaluation for sources in the Great Lakes region. As described below, LADCO's modeling using 2016v1 emissions is well within the model performance benchmarks and is a better model than U.S. EPA's model using 2016v2 emissions in the LADCO region. Therefore, we did not feel that it was a good use of our time or resources to evaluate the extent to which the changes to these sectors impacted model performance and attainment testing for receptors in the Great Lakes region.

3. The LADCO 2016v1-based modeling platform has equal or better skill at simulating O₃ in the Great Lakes region than the U.S. EPA 2016v2-based platform

8.1.1. 2016v1 and 2016v2 Emissions Comparison

A comparison of the 2016fh and 2016v2 EMP estimates of NO_x and VOC emissions shows differences for the states in the LADCO region. Table 8-1 shows that the 2016 annual, state total anthropogenic VOC emissions decrease across a range of 1% (WI) to 21% (MI) in the v2 platform relative to 2016fh. The 2023 annual, state total anthropogenic VOC emissions differences range from a 4% (WI) increase to a 19% (MI) decrease in the v2 platform relative to 2016fh. Table 8-2 shows that the 2016 annual, state total anthropogenic NO_x emissions differences range from a 4% increase in OH to 6% decrease in WI. The 2023 annual, state total anthropogenic NO_x emissions changes range from a negligible decrease in MN to a 10% decrease in OH.

Table 8-1. LADCO state annual total anthropogenic VOC emissions in the 2016fh and 2016v2 platforms (tons/year)

State	2016			2023		
	2016fh	V2	V2-fh (%)	2016fh	V2	V2-fh (%)
Illinois	358,774	323,933	-10%	323,736	300,714	-7%
Indiana	238,181	191,731	-20%	212,422	173,352	-18%
Michigan	318,496	253,054	-21%	274,125	221,088	-19%
Minnesota	244,278	220,320	-10%	212,262	198,488	-6%
Ohio	340,110	286,892	-16%	303,176	261,050	-14%
Wisconsin	181,182	179,946	-1%	154,312	160,096	4%

Table 8-2. LADCO state annual total anthropogenic NO_x emissions in the 2016fh and 2016v2 platforms (tons)

State	2016			2023		
	2016fh	V2	V2-fh (%)	2016fh	V2	V2-fh (%)
Illinois	350,279	338,053	-3%	256,826	243,255	-5%
Indiana	305,578	303,099	-1%	200,095	186,696	-7%
Michigan	284,877	275,104	-3%	212,245	197,776	-7%
Minnesota	211,544	208,421	-1%	151,136	150,577	0%
Ohio	334,833	348,213	4%	242,282	218,930	-10%
Wisconsin	178,423	168,119	-6%	118,851	112,283	-6%

Figure 8-1 and Figure 8-2 are thematic maps of 2016fh and v2 platform differences in annual county total (anthropogenic + natural) NO_x and VOC emissions in 2016 and 2023. The maps show that the emissions differences between the two platforms are not spatially uniform. The 2016 NO_x emissions map (Figure 8-1, top) for example shows that many of the counties in the Great Lakes region have higher annual total NO_x emissions in the 2016v2 platform relative to 206fh, despite lower state total emissions.

Table 8-3 compares the annual state total biogenic emissions between the 2016fh and v2 platforms. The statewide biogenic NO emissions increase across the region in the v2 platform relative to 2016fh ranging from +13% (IL) to +30% (WI). The statewide biogenic VOC emissions decrease in the v2 platform across the region with a range from -22% (OH) to -44% (IL). The biogenic sector is the single largest VOC emissions source on an annual, statewide basis. As 2016fh emissions are generally higher than those included in 2016v2, LADCO's modeling using 2016fh emissions is likely conservative and predicting higher O₃ than if 2016v2 emissions were used.

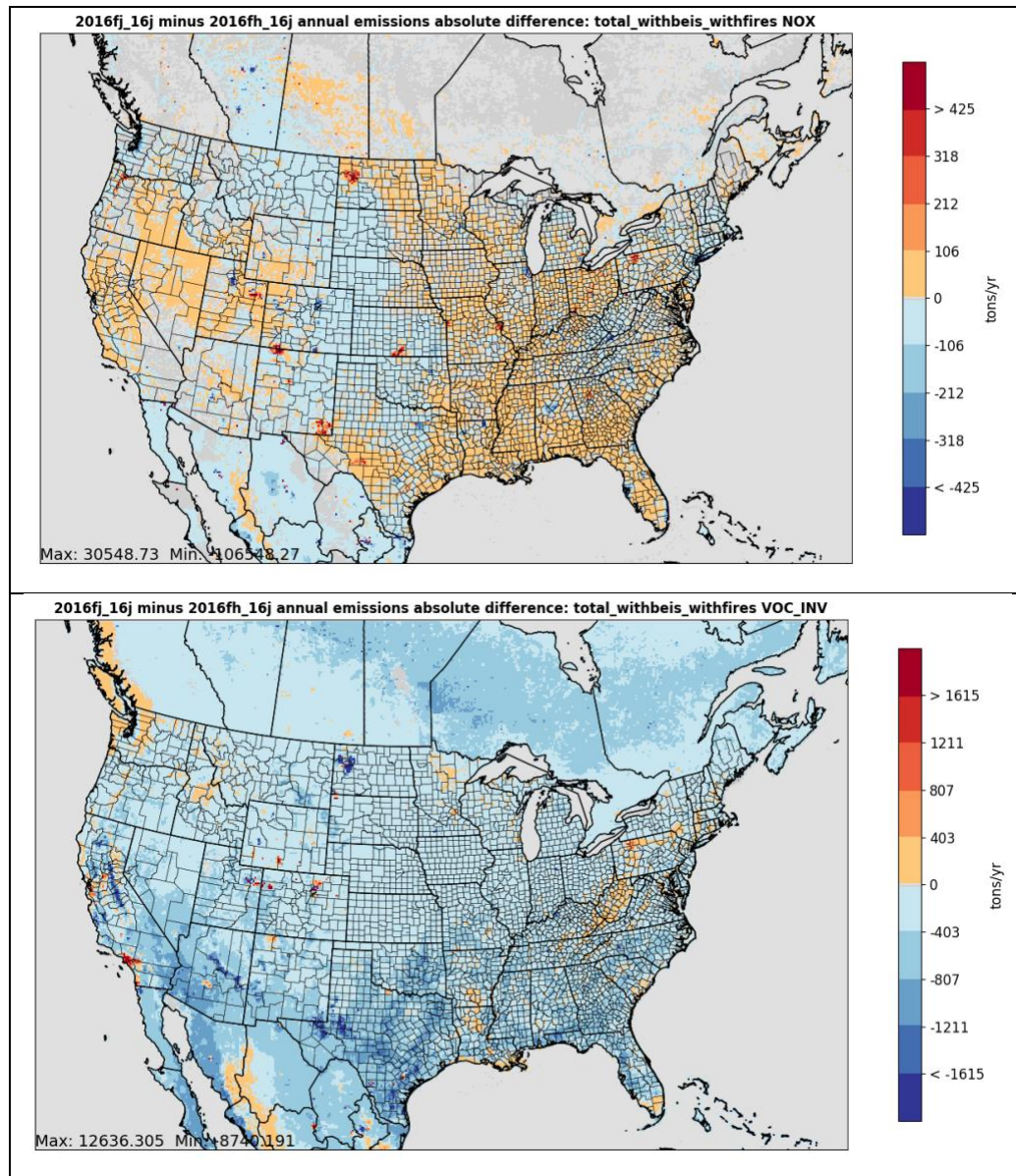


Figure 8-1. Comparison of annual 2016 NOx (top) and VOC (bottom) emissions between the 2016fh and 2016v2 modeling platforms

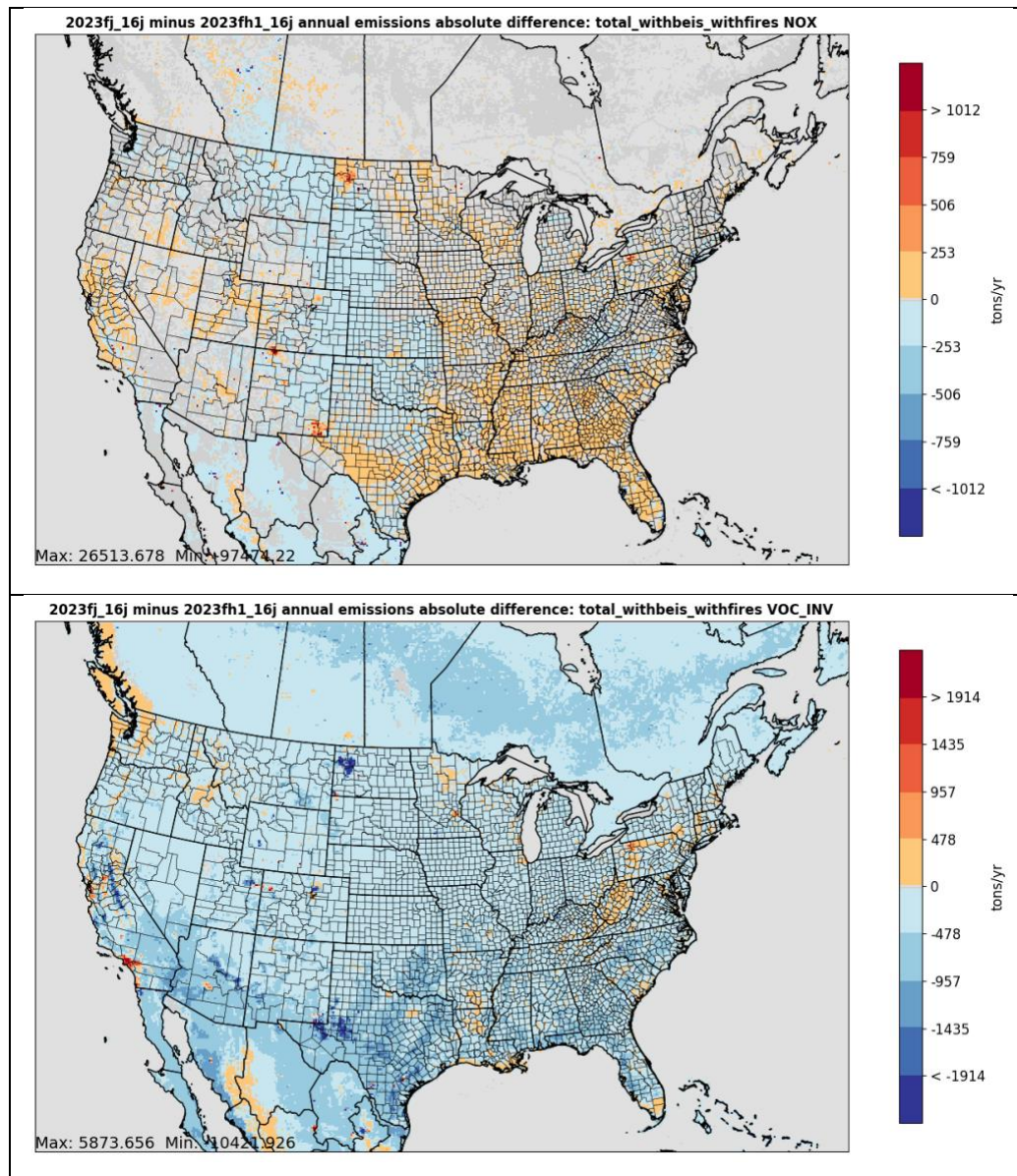


Figure 8-2. Comparison of annual 2023 NO_x (top) and VOC (bottom) emissions between the 2016fh and 2016v2 modeling platforms

Table 8-3. Annual state total biogenic emissions in the 2016fh and v2 platforms (tons)

State	NO			VOC		
	2016fh	V2	V2-fh (%)	2016fh	V2	V2-fh (%)
Illinois	38,921	44,043	13%	422,736	236,316	-44%
Indiana	21,381	24,667	15%	279,976	188,777	-33%
Michigan	14,572	17,990	23%	593,916	401,359	-32%
Minnesota	28,031	35,863	28%	510,385	366,050	-28%
Ohio	18,120	21,720	20%	360,156	279,428	-22%
Wisconsin	16,095	20,871	30%	484,780	324,112	-33%

8.1.2. 2016v1 and 2016v2 Ozone Model Performance Comparison

Figure 8-3 through Figure 8-10 compare LADCO 2016v1 and U.S. EPA 2016v2 12-km CAMx model performance in simulating O₃ season (May – September) MDA8 O₃ on days with observed concentrations > 60 ppb. The U.S. EPA figures are extracted from the U.S. EPA 2016v2 modeling platform technical support document (U.S. EPA, 2022). The figures show average O₃ season bias and error statistics at sites in the LADCO region. Each pair of figures compares the CAMx performance between the LADCO and U.S. EPA simulations. Note that the color scales are normalized in these figures, with the color scale legend included in the LADCO plot for each statistic. Figure 8-3 and Figure 8-4 show LADCO and U.S. EPA CAMx mean error (ME), respectively. The LADCO simulation has a lower ME compared to the U.S. EPA simulation at almost every site in and near the LADCO states. Most notably, the LADCO simulation has a significantly lower ME (5-10 ppb) at the lakeshore monitors throughout the region.

Figure 8-5 and Figure 8-6 compare the seasonal normalized mean error (NME) on high MDA8 O₃ days between the LADCO and U.S. EPA simulations, respectively. The NME comparison highlights the superior performance of the LADCO CAMx simulation throughout the domain and most notably at the lakeshore monitors. While the two simulations have similar NME values at sites around the Ohio River Valley and south, the LADCO simulation has NMEs that are consistently 5-10% lower at inland sites in Illinois, Indiana, and Ohio. Compared to the EPA CAMx simulation, the LADCO simulation has NMEs that are 10-15% lower at lakeshore sites, and at inland sites in Wisconsin and Michigan.

Figure 8-7 and Figure 8-8 show O₃ season average MDA8 O₃ mean bias (MB) for days with observations higher than 60 ppb. Both simulations had very good performance around the Ohio River Valley with MB values less than ± 5 ppb. The LADCO simulation outperforms the U.S. EPA simulation at nearly all monitors in the LADCO states. The U.S. EPA CAMx simulation on average underestimates high MDA8 O₃ concentrations by 5-15 ppb, with the worst performance around Lake Michigan and at inland sites in Wisconsin and Michigan. The LADCO CAMx simulation also underestimates MDA8 O₃ on average at these sites but has MBs in the range of 0-10 ppb.

Figure 8-9 and Figure 8-10 compare the O₃ season normalized mean bias (NMB) for the LADCO and U.S. EPA CAMx simulations. These figures show similar performance differences as

the previous error and MB plots, with the LADCO CAMx simulation systematically outperforming the U.S. EPA CAMx simulation at nearly all sites in the domain. Most notably, LADCO CAMx simulated very low seasonal averaged NMB (<10%) at all the controlling monitors in the 2015 O₃ NAAQS NAAs in the region. The U.S. EPA simulation for many of these monitors underestimated MDA8 O₃ on high concentration days by 10-30%.

These comparisons of the LADCO and U.S. EPA CAMx simulations indicate that on average, for high O₃ concentration days the LADCO 2016v1-based CAMx is a better model of ground-level O₃ for the Great Lakes region than the U.S. EPA 2016v2-based CAMx model. These comparisons reflect differences in both meteorology and emissions inputs to the model, but taken together the LADCO CAMx model presented here is well within the model performance benchmarks cited by U.S. EPA (2022), and superior to the current U.S. EPA model for this region.

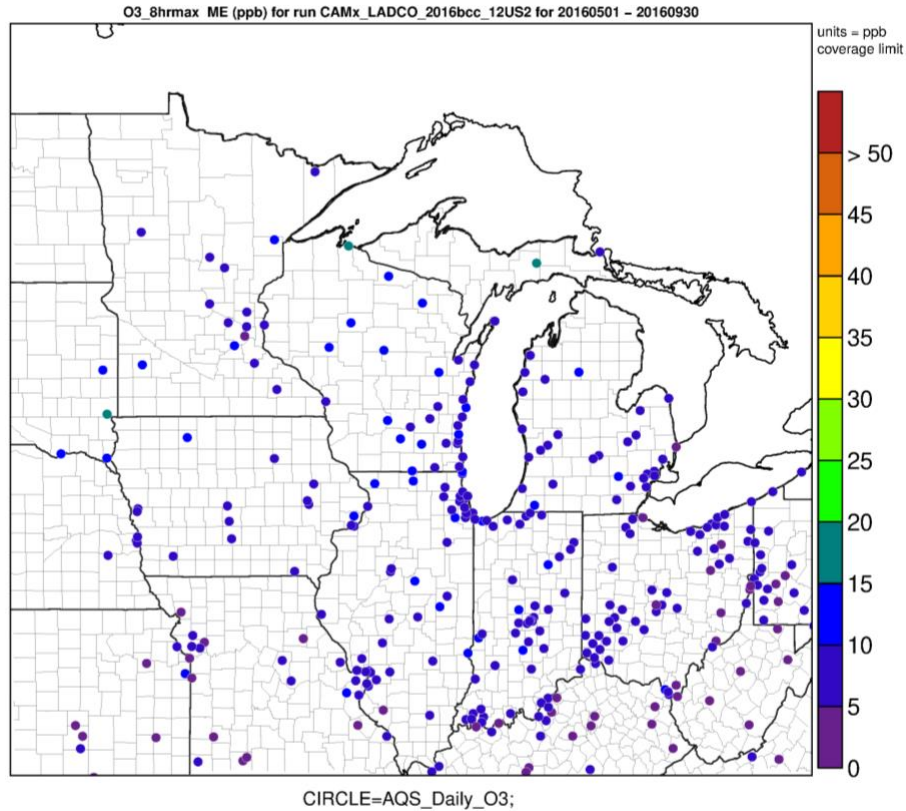


Figure 8-3. LADCO CAMx 12km MDA8 O3 May – September average mean error for days > 60 ppb.

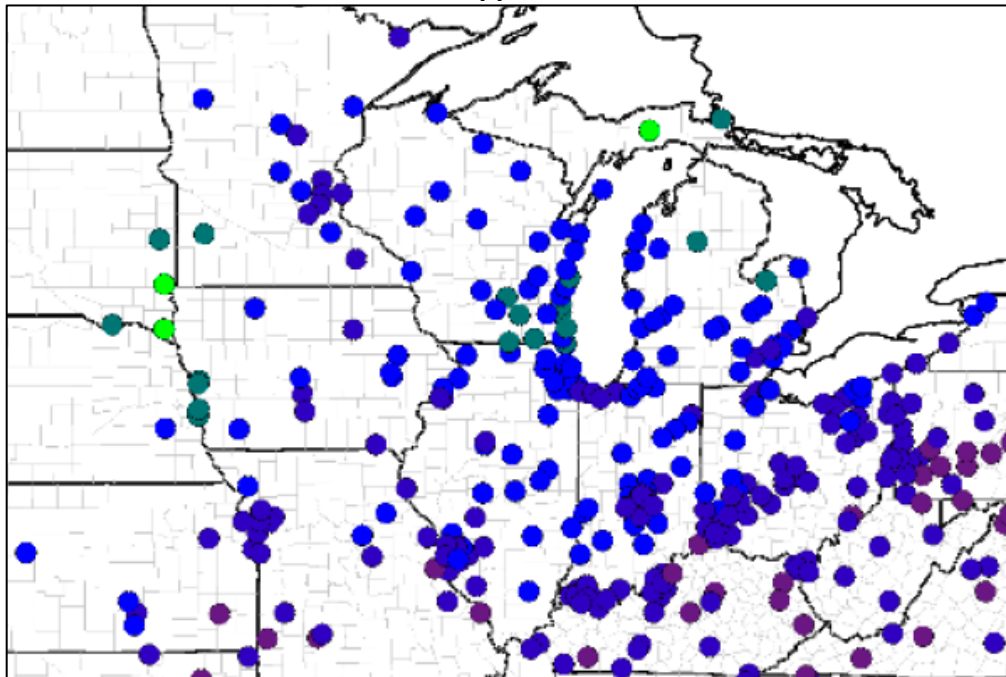


Figure 8-4. US EPA 2016v2 (2016fj_v710_CB6r5) CAMx 12km MDA8 O3 May – September average mean error for days > 60 ppb (US EPA, 2022).

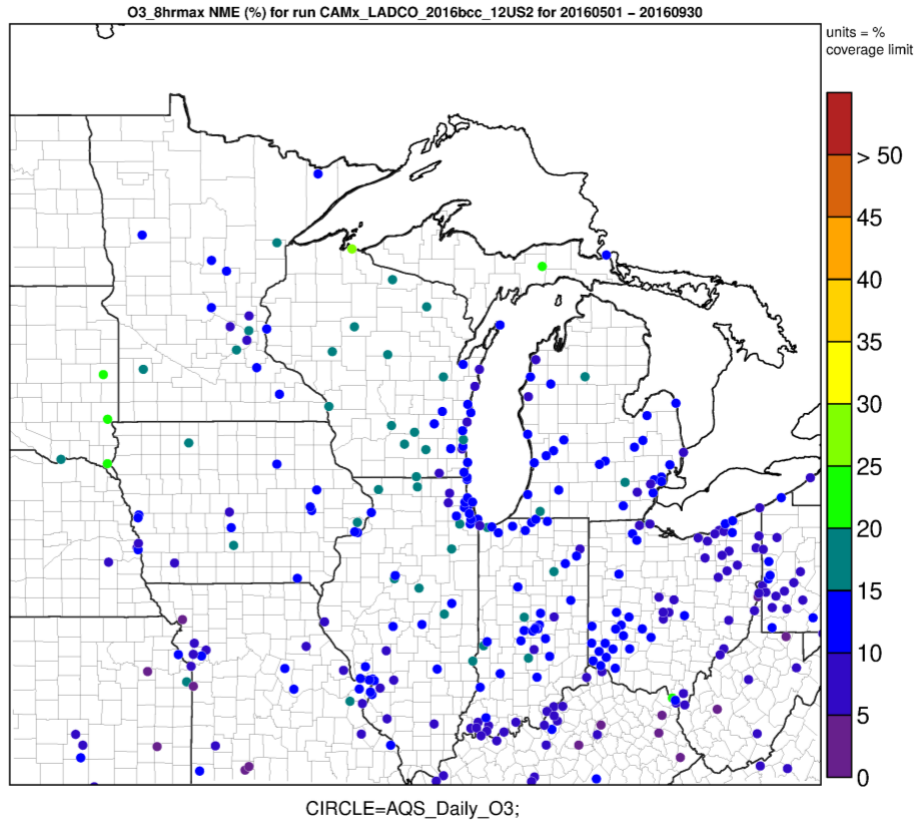


Figure 8-5. LADCO CAMx 12km MDA8 O3 May – September average normalized mean error for days > 60 ppb.

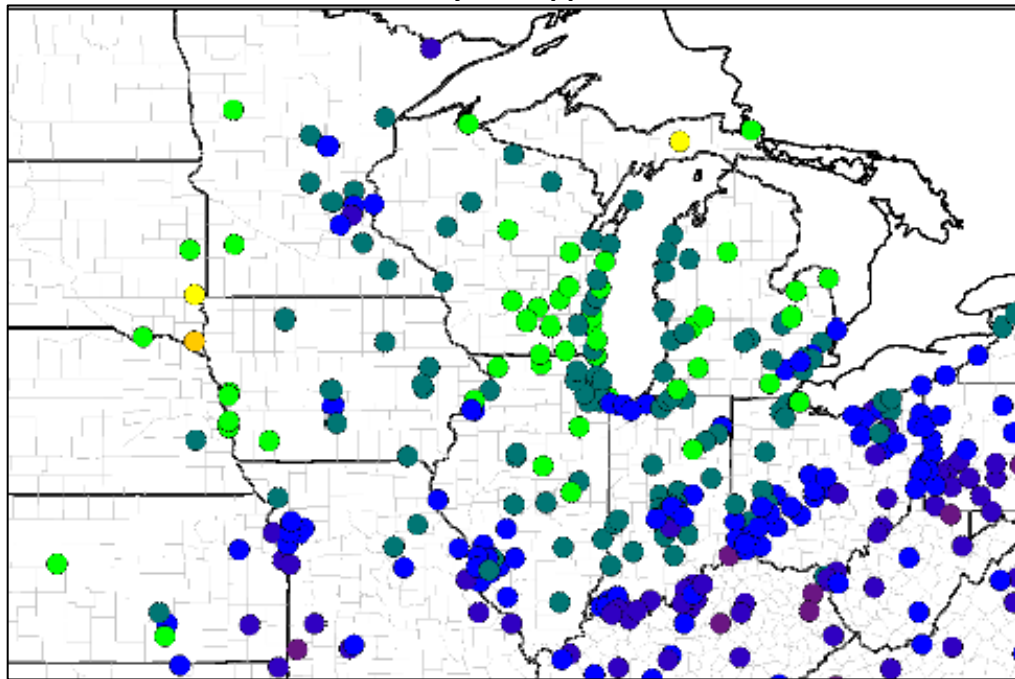


Figure 8-6. US EPA 2016v2 (2016fj_v710_CB6r5) CAMx 12km MDA8 O3 May – September average normalized mean error for days > 60 ppb (US EPA, 2022).

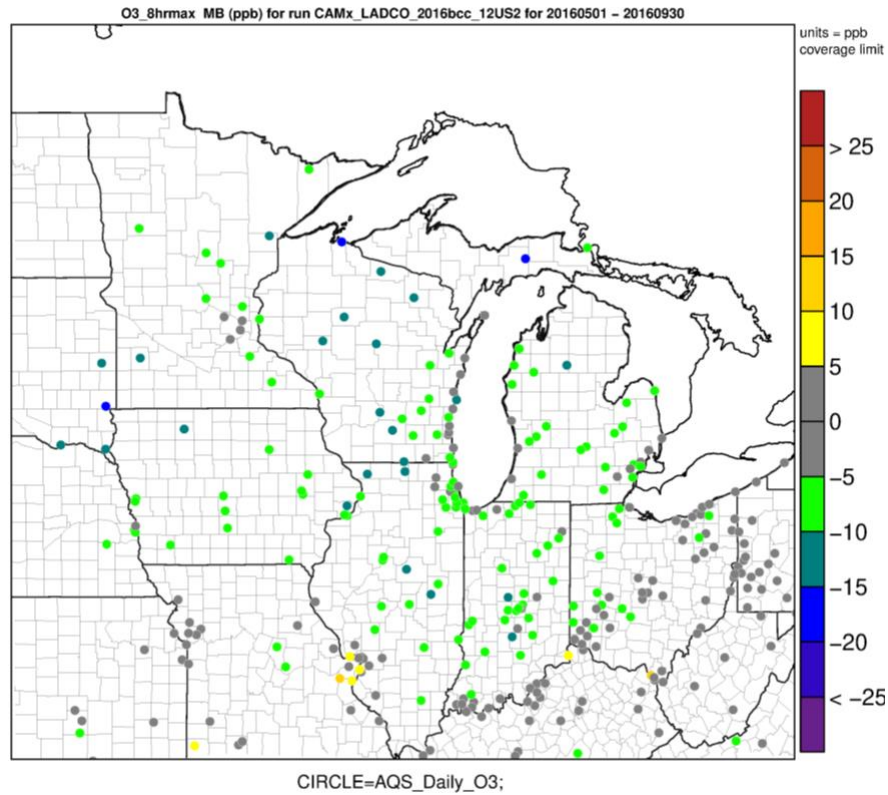


Figure 8-7. LADCO CAMx 12km MDA8 O3 May – September average mean bias for days > 60 ppb.

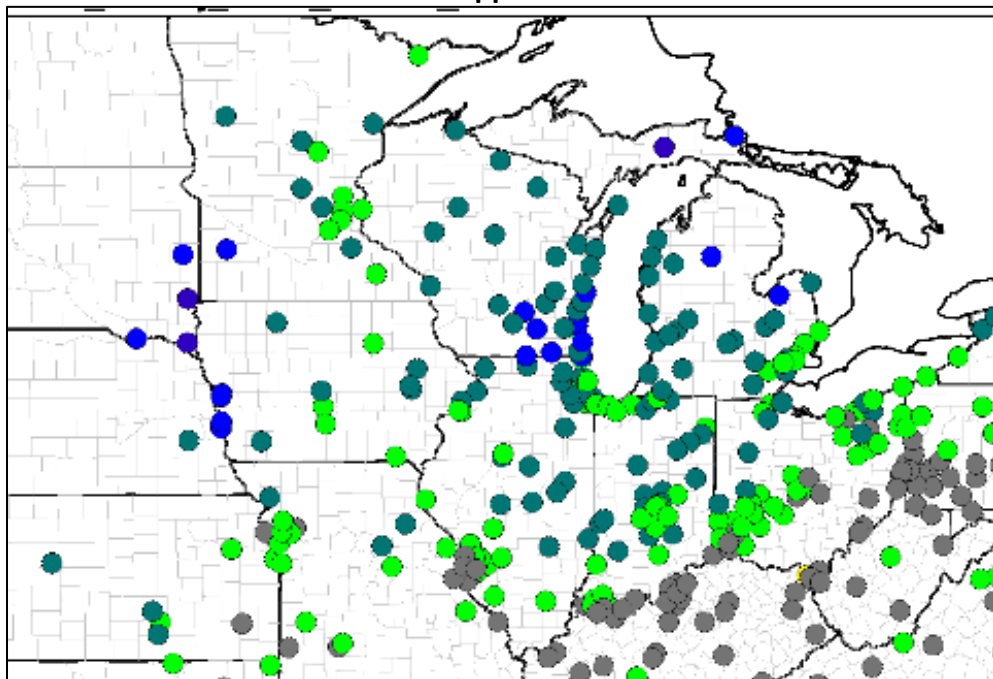


Figure 8-8. US EPA 2016v2 (2016fj_v710_CB6r5) CAMx 12km MDA8 O3 May – September average mean bias for days > 60 ppb (US EPA, 2022).

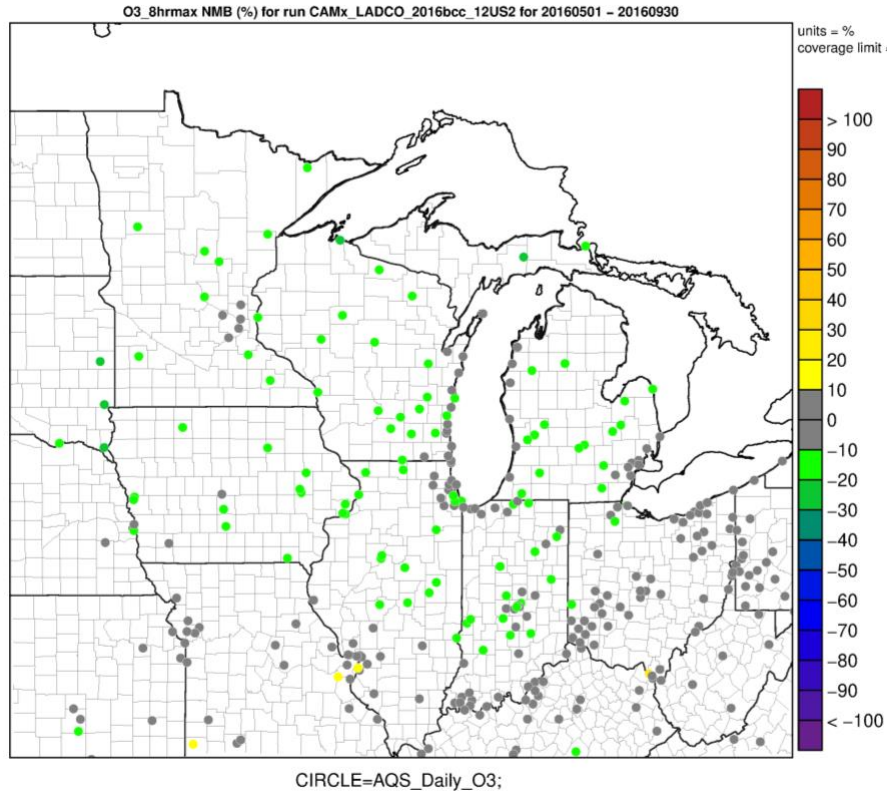


Figure 8-9. LADCO CAMx 12km MDA8 O3 May – September average normalized mean bias for days > 60 ppb.

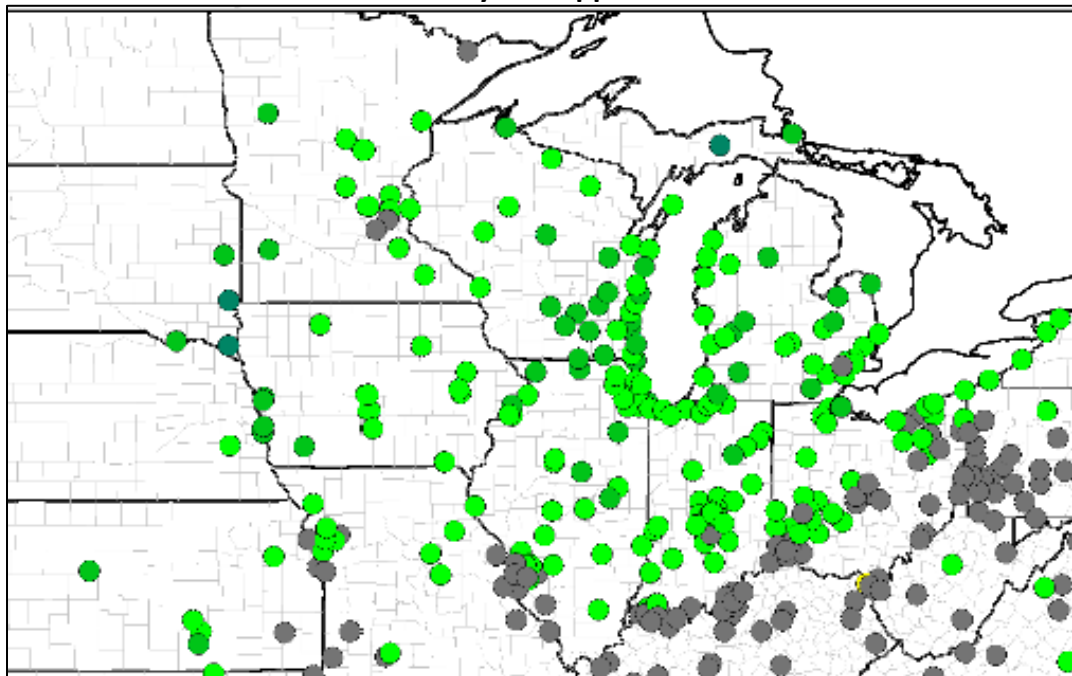


Figure 8-10. US EPA 2016v2 (2016fj_v710_CB6r5) CAMx 12km MDA8 O3 May – September average normalized mean bias for days > 60 ppb (US EPA, 2022).

8.1.3. 2016v1 and 2016v2 Attainment Test Comparison

Table 8-4 compares the 2023 O₃ attainment test results for the LADCO 2016v1-based and U.S. EPA 2016v2-based CAMx modeling. The O₃ future year design values (DVF₂₀₂₃) in this table are calculated from CAMx 12-km simulations that used similar SMAT-CE configurations (3x3 cells surrounding the monitors, including water cells in the calculations). The table compares average and DVF₂₀₂₃ values. The table shows 2023 DVs for every site in all 2015 O₃ NAAQS nonattainment areas in the LADCO region.

There is no systematic difference between the LADCO and U.S. EPA CAMx-estimated DVF₂₀₂₃ values. The LADCO CAMx simulation forecasted that two sites in the Great Lakes region will exceed the 2015 O₃ NAAQS in 2023, the coastal Wisconsin sites Sheboygan Kohler Andrae and Chiwaukee Prairie. The U.S. EPA CAMx simulation forecasted that four sites in the LADCO region will exceed the NAAQS, the same two sites as the LADCO simulation plus Racine County, Wisconsin and Evanston, Illinois.

Table 8-4. LADCO and US EPA v2 2023 average O₃ design values at all monitors in the LADCO region 2015 O₃ NAAQS nonattainment areas

State	NAA	Site ID	Site Name	LADCO 2023 DV	EPA 2023 DV
Michigan	Allegan County, MI	260050003	HOLLAND	67.5	67.8
Michigan	Berrien County, MI	260210014	COLOMA	67.7	68.7
Michigan	Muskegon County, MI	261210039	MUSKEGON	68.9	69.1
Illinois	Chicago, IL-IN-WI	170310001	ALSIP	67.7	69.6
Illinois	Chicago, IL-IN-WI	170314201	NORTHBRK	67.6	70.0
Illinois	Chicago, IL-IN-WI	170317002	EVANSTON	68.2	71.1
Illinois	Chicago, IL-IN-WI	170310032	CHI_SWFP	67.0	70.1
Illinois	Chicago, IL-IN-WI	170310076	CHI_COM	66.9	69.3
Illinois	Chicago, IL-IN-WI	170971007	ZION	67.8	70.0
Illinois	Chicago, IL-IN-WI	170314007	DESPLNS	66.4	68.8
Illinois	Chicago, IL-IN-WI	170314002	CICERO	64.3	66.9
Illinois	Chicago, IL-IN-WI	171110001	CARY	64.1	64.5
Illinois	Chicago, IL-IN-WI	170436001	LISLE	65.5	65.8
Illinois	Chicago, IL-IN-WI	170890005	ELGIN	64.0	64.8
Illinois	Chicago, IL-IN-WI	170311601	LEMONT	64.5	65.2
Illinois	Chicago, IL-IN-WI	170311003	CHI_TAFT	63.3	65.8
Illinois	Chicago, IL-IN-WI	170313103	SCHILPRK	57.8	59.5
Indiana	Chicago, IL-IN-WI	181270026	Valparaiso	63.0	64.5

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Indiana	Chicago, IL-IN-WI	181270024	Ogden Dunes	63.8	65.5
Indiana	Chicago, IL-IN-WI	180890022	Gary-IITRI	62.4	65.2
Indiana	Chicago, IL-IN-WI	180892008	Hammond-141st St	60.5	63.3
Wisconsin	Chicago, IL-IN-WI	550590019	CHIWAUKEE	71.5	73.6
Wisconsin	Chicago, IL-IN-WI	550590025	Kenosha-Water Tower	67.5	69.2
Ohio	Cincinnati, OH-KY	390610006	Sycamore	64.9	64.6
Ohio	Cincinnati, OH-KY	390170018	Middletown Airport	63.2	62.4
Ohio	Cincinnati, OH-KY	390170023	Crawford Woods	64.5	63.4
Ohio	Cincinnati, OH-KY	390610010	Colerain	64.7	62.7
Ohio	Cincinnati, OH-KY	390610040	Taft NCore	63.9	62.8
Ohio	Cincinnati, OH-KY	391650007	Lebanon	63.3	62.9
Ohio	Cincinnati, OH-KY	390179991	Oxford	62.1	61.1
Ohio	Cincinnati, OH-KY	390250022	Batavia	62.3	60.4
Ohio	Cleveland, OH	390850003	Eastlake	67.5	65.6
Ohio	Cleveland, OH	390550004	Notre Dame	63.6	62.0
Ohio	Cleveland, OH	390355002	Mayfield	63.6	61.9
Ohio	Cleveland, OH	390350034	District 6	63.0	62.1
Ohio	Cleveland, OH	390850007	Painesville	63.1	62.1
Ohio	Cleveland, OH	390930018	Sheffield	59.6	58.4
Ohio	Cleveland, OH	390350064	Berea BOE	59.6	58.5
Ohio	Cleveland, OH	391030004	Chippewa	58.1	56.2
Ohio	Cleveland, OH	391530020	Patterson Park	56.9	54.9
Ohio	Cleveland, OH	390350060	GT Craig NCore	57.3	56.1
Ohio	Cleveland, OH	391331001	Lake Rockwell	55.6	53.8
Michigan	Detroit, MI	261630019	East 7 MILE	66.2	65.7
Michigan	Detroit, MI	261250001	OAK PARK	64.4	64.4
Michigan	Detroit, MI	261470005	PORT HURON	65.6	66.4
Michigan	Detroit, MI	260990009	NEW HAVEN	64.3	64.5
Michigan	Detroit, MI	261619991	Ann Arbor	62.6	63.2
Michigan	Detroit, MI	260991003	WARREN	60.7	60.2
Michigan	Detroit, MI	261610008	YPSILANTI	62.2	62.5
Michigan	Detroit, MI	261630001	ALLEN PARK	60.9	60.2
Indiana	Louisville, KY-IN	180431004	New Albany	64.0	63.6
Indiana	Louisville, KY-IN	180190008	Charlestown State Park	62.9	62.2
Wisconsin	Milwaukee, WI	551010020	Racine	69.6	71.1

Wisconsin	Milwaukee, WI	550890009	HARRINGTON BCH	68.3	68.7
Wisconsin	Milwaukee, WI	550790085	BAYSIDE	66.7	66.5
Wisconsin	Milwaukee, WI	550890008	GRAFTON	66.0	66.6
Wisconsin	Milwaukee, WI	550790026	MILWAUKEE SER	62.6	63.5
Wisconsin	Milwaukee, WI	550790010	MILWAUKEE 16TH ST	59.7	60.7
Wisconsin	Milwaukee, WI	551330027	CLEVELAND AVE	59.9	60.3
Wisconsin	Sheboygan County, WI	551170006	SHEBOYGAN	75.1	74.7
Wisconsin	Sheboygan County, WI	551170009	Sheboygan- Haven	65.6	65.1
Illinois	St. Louis, MO-IL	171191009	MARYVILL	61.9	62.3
Illinois	St. Louis, MO-IL	171193007	WOOD_WTP	63.1	63.8
Illinois	St. Louis, MO-IL	171630010	East St. Louis	61.3	62.4
Illinois	St. Louis, MO-IL	171199991	Alhambra	60.2	60.4

9. Conclusions and Significant Findings

LADCO presents in this TSD a regional air quality modeling platform for quantifying and evaluating future year O₃ concentrations pursuant to testing attainment of the 2015 O₃ NAAQS moderate area designations for receptors at nonattainment areas throughout the Great Lakes Basin. After establishing that the LADCO 2016-based modeling platform is an acceptable tool for simulating regional O₃ concentrations, we presented the results from projections of future O₃ concentrations and for calculating O₃ design values in 2023. A summary of the significant findings from the LADCO modeling follows.

- Finding 1: While the LADCO 2016v1-based CAMx modeling platform has an underprediction bias for high O₃ concentrations, the LADCO platform skill is the same or better than U.S. EPA 2016 modeling platforms used to support recent O₃ regulatory actions.
- Finding 2: The LADCO 2023 CAMx simulation predicts that two monitors in the LADCO region will have an average DV₂₀₂₃ that exceeds the 2015 O₃ NAAQS.
- Finding 3: Excluding water cells in the attainment test calculation results in both higher and lower DVs₂₀₂₃ for the lakeshore monitors in the LADCO region.
- Finding 4: Compared to the U.S. EPA 2016v2 CAMx modeling platform, the LADCO CAMx modeling platform is a superior model of O₃ in the Great Lakes Basin

As with all regional air quality modeling applications, there are uncertainties in the model inputs and in the model formulation that produce biases in the results presented here. LADCO determined that when the modeling for this application was started in Fall 2021 the LADCO 2016 WRF meteorology, U.S. EPA 2016fh emissions modeling platform, and the ERTAC EGU 16.2 beta emissions were the best available data for forecasting 2023 air quality for the LADCO member states.

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APPENDIX 10

Responses to Public Comment

Responses to Public Comments Received on the Draft Attainment Plan

This attainment plan SIP submittal was made available for public review and comment from December 16, 2024, to January 17, 2025. In addition, a virtual public hearing was held online on January 16, 2025, and was attended by eight members of the public. The WDNR received two comments, one during the virtual public hearing and one written comment. This appendix contains a summary of the comments and the WDNR's responses.

Note that a single comment period and public hearing were held for all three of the WDNR's 2015 ozone NAAQS moderate area attainment plans (for the Sheboygan, Milwaukee, and Kenosha nonattainment areas). As such, unless specifically noted by the commenter, the WDNR assumed comments were intended to apply generally to all the plans, rather than a specific SIP.

Commenter 1: Laura Lane

Comment: The commenter expresses concern about the poor air quality in Milwaukee, Sheboygan, and Kenosha, noting that data from the American Lung Association's 2024 State of the Air Report shows that there are serious air quality concerns in these areas. The commenter requests expanded air monitoring programs in these communities.

The commenter also requests that the WDNR stop "rubber stamping" air permits for new fossil fuel projects, especially in environmental justice communities. The commenter specifically notes We Energies' proposals to develop methane gas infrastructure, including reciprocal internal combustion engines in Paris and a methane gas plant in Oak Creek. The commenter questions how WDNR can continue to approve air permits for fossil fuel projects and data centers without doing a more comprehensive review of the public health and environmental impacts to vulnerable communities that experience environmental injustices like poor air quality.

The commenter concludes that the WDNR's proposed submittal and its practice of approving air permits without doing meaningful and comprehensive assessments means the department is failing to protect public health, especially for its most vulnerable citizens.

Response: Thank you for these comments. In terms of air quality monitoring, as described in Section 5.2 of the plans, the WDNR operates two ozone monitors in Sheboygan County (one in the nonattainment area), seven monitors in the Milwaukee nonattainment area, and two monitors in Kenosha area.¹ This monitoring network exceeds federal requirements and is reviewed by the WDNR and approved by the EPA annually. This network is considered more than adequate to assess ambient ozone concentrations in these areas and no additional monitors are currently being contemplated.

In response to the comments about permitting, as noted in Section 1 of the plans, these SIPs are being submitted to fulfill specific Clean Air Act requirements associated with demonstrating attainment in these areas. No air pollution control permitting programs are impacted by these SIP submittals, and nothing in these submittals can or would change any permitting requirements for any emissions source. Comments relating to the WDNR's air permitting processes or decisions

¹ In addition, Illinois and Indiana operate almost 20 monitors in their portions of the Chicago nonattainment area.

are therefore outside of the scope of these SIPs, and no changes were made to the plans in response to this comment.

However, the WDNR reiterates that all air pollution control permit applications received by the department are subject to a rigorous review process. Before the WDNR can issue an air pollution control permit, state and federal laws require the WDNR to assure that the worst-case air pollution emissions from a facility will not cause pollution concentrations in the vicinity that would exceed any National Ambient Air Quality Standard set by the EPA. This is done through air quality analysis and dispersion modeling, which includes consideration of emissions from nearby industries and other sources. Air pollution control permits are also subject to public review and comment prior to issuance.

Commenter 2: Brittany Keyes (Healthy Climate Wisconsin/NAACP WI State Conference)

Comment: The commenter observes that some citations and research in the submittal are from the 1970s, 1980s and 1990s. As an example, the commenter points to the mesoscale meteorological data presented in Section 2.3. The commenter also notes that the hourly surface temperature for Racine (Figure 2.2) uses data from 2002, even as NOAA data shows that global average temperatures have changed since 2002. From the perspective of a researcher, the commenter requests that the WDNR use more recent data when available, especially given global shifts in climate and temperatures.

Response: Thank you for this comment. Section 2 of the plans, to which the commenter refers, contains a general discussion of ozone dynamics along the Wisconsin lakeshore. While not necessary to fulfill a specific CAA requirement, the WDNR has long included this information in ozone SIPs to provide important context to understanding how local and regional emissions impact ozone values along Wisconsin's lakeshore. This discussion pulls from decades of research that continues to be corroborated by ongoing field studies and data analysis, and is specific to the unique conditions and processes present in the Lake Michigan region (as opposed to global trends). As the WDNR notes in a footnote in Section 2, the scientific principles and findings in this section remain current, even if the examples utilize older data. While the WDNR will consider updating the examples in future SIPs to reflect data of more recent vintage, no changes were made to these plans in response to this comment.

Comment: The commenter requests that the WDNR more critically analyze Wisconsin industrial sources of air pollution in these nonattainment areas, even if there are unique conditions in this region that cause out-of-state emissions to impact the air quality in these areas. For example, based on industry-reported CO₂ emissions data in the EPA's FLIGHT² tool, in 2023 four industrial polluters in Sheboygan County reported over 2.5 million metric tons of greenhouse gases (GHGs). The Alliant Edgewater coal plant was responsible for over 2 million metric tons (over 80% of the county total). In Milwaukee County, 13 sources reported emissions of almost 11 million metric tons of GHGs in 2023, with just under 10 million tons coming from We Energies' coals plants at South Oak Creek and Elm Road (accounting for 90% of the county's reported industrial emissions).

² Facility Level Information on GreenHouse gases Tool

The SIPs highlight the cross-state nature of air pollution. The commenter notes that, in 2023, there were 23 industrial polluters in Cook County (Chicago) that together reported less than 2 million metric tons of CO₂. Emissions from the Sheboygan Edgewater power plant would therefore appear to be greater than Cook County's total industrial emissions. Similarly, We Energies' coal plants in Milwaukee County would appear to emit five times more emissions than all industrial polluters in Cook County.

The commenter appreciates that emissions have declined overall leading up to 2020. However, the conclusions in the SIPs fail to recognize that emissions reductions have plateaued and even reversed since then. The commenter notes this was identified in a presentation made by Air Management Program staff at the For Kids Health Summit hosted by the Children's Health Alliance of Wisconsin. The commenter requests that the WDNR amend the conclusion of these plans to reflect that emissions have plateaued since 2020.

Response: Thank you for these comments. The emissions data referenced by the commenter refers are for CO₂ (or GHGs in general). As described in Section 1, these SIPs are being submitted to fulfill specific CAA attainment planning requirements associated with ground-level ozone, which is caused by emissions of two precursor pollutants: nitrogen oxides (NO_x), and volatile organic compounds (VOCs). For this reason, any discussion of CO₂ or GHG emissions are outside the scope of these submittals.

In terms of emission trends, as discussed in Section 3 of the plans, emissions of the precursor pollutants of NO_x and VOCs have decreased between the nonattainment base year (2017) and attainment year (2023) in all three nonattainment areas. As pointed out by the commenter, ozone measurements in these nonattainment areas have not kept pace with these emissions reductions. While the WDNR acknowledged this in Section 5.2.1 of the plans,³ in response to this comment, the WDNR has also noted this trend in the conclusion of each plan (Section 8).

Comment: The commenter did not see environmental justice considerations reflected in the plans. This is important, as high-polluting industry often situates itself near low income and minority communities. The commenter requests that the WDNR consider historic and ongoing environmental injustices when evaluating any new minor or major air permits being considered in these nonattainment areas.

The commenter notes that, according to the NAACP, race, more than class, is the number one indicator for the placement of toxic facilities in the U.S. Racially diverse communities continue to be those located closest to gas plants and high-polluting facilities. When it comes to public health, these communities will continue to have higher rates of cancer risk and chronic disease until regulators are able to fully evaluate cumulative impacts and prioritize environmental justice assessments as part of permitting processes. The commenter asks that the WDNR incorporate assessment and modeling for regional pollution identifying cumulative impacts.

The commenter further notes that evaluating cumulative impacts is very important when considering impacts on public health. It is especially important to evaluate environmental justice

³ See, for example, Section 5.2.1 of the Milwaukee plan: "Despite continuing reductions of regional emissions, a leveling-out of ozone values has been observed in more recent years."

considerations from a regional perspective. This SIP considered emissions and impacts from as far away as the Ohio River valley. In contrast, a recent nonattainment permit (this may not have been a Wisconsin permit) only considered environmental justice impacts within a one-mile radius around the facility. The commenter asks that the WDNR apply a regional approach when assessing health impacts and environmental justice concerns.

Finally, the commenter thanks the WDNR for its work and effort on the SIP, and asks that the WDNR continue to strengthen its processes and protections for the health of residents across the state of Wisconsin.

Response: Thank you for this comment. As discussed in the response to Commenter 1, these SIPs are being submitted to fulfill specific Clean Air Act requirements associated with demonstrating attainment in these areas. Comments relating to the WDNR's air permitting processes or decisions are therefore outside of the scope of these submittals.

As described in Section 1 of the plans, the CAA prescribes specific requirements that need to be satisfied by attainment SIPs being submitted for moderate nonattainment areas. These requirements include implementation of specific control programs (e.g., reasonably available control measures (RACT) rules, vehicle inspection and maintenance programs) as well as other, specific attainment planning obligations (such as development of a modeled attainment demonstration). Technical work beyond those requirements, such as assessing cumulative impacts or evaluating source-specific air pollution impacts on environmental justice communities, have not been included in these plans, as those are beyond the CAA attainment planning obligations these SIPs have been developed to fulfill.

However, the WDNR agrees with the commenter that improving the air quality in nonattainment areas is critical. Long-term ozone nonattainment results in adverse health impacts on the residents of these areas. The WDNR continues to work closely with the EPA and neighboring states to address the challenges that nonattainment poses, especially the impact of out-of-state emissions on these areas, in order to ensure that these communities meet federal ozone standards as soon as possible.

APPENDIX 11

Enhanced I/M Program Performance Standard Modeling Demonstration

This appendix provides a modeled demonstration that Wisconsin's current motor vehicle inspection and maintenance (I/M) program meets the requirements of EPA's enhanced performance standard for areas designated and classified under the 8-hour ozone standard as specified in [40 CFR 51.351\(i\)](#). This section of the CFR specifies a model program which is to be compared to the state I/M program being assessed using emissions modeling.

A previous modeling demonstration that confirmed that Wisconsin's I/M program met the enhanced I/M program performance standard was completed in 2021 as part of the state's redesignation request for the Kenosha County (partial) 2008 ozone nonattainment area. The EPA approved this demonstration on April 11, 2022 (87 FR 21027). This appendix updates that modeling demonstration for the 2015 ozone nonattainment areas within the I/M program area.

1. Description of the Wisconsin I/M Program

Wisconsin's I/M program has been in operation since 1984. It was originally implemented in accordance with the 1977 CAA Amendments and operated in the six counties of Kenosha, Milwaukee, Ozaukee, Racine, Washington, and Waukesha. Sheboygan County was added to the program in July 1993, resulting in a seven-county program area that has remained to the present. Vehicles were originally tested by measuring tailpipe emissions using a steady-state idle test. Tampering inspections were added in 1989.

The 1990 CAA Amendments set additional requirements for I/M programs. For moderate areas, a "basic" program was required under section 182(b)(4). For serious or worse areas, an "enhanced" program was required under section 182(c)(3). The EPA's requirements for basic and enhanced I/M programs are found in 40 CFR part 51, subpart S.

Wisconsin's I/M program transitioned to an enhanced program in December 1995. The major enhancement involved adding new test procedures to more effectively identify high-emitting vehicles. These new test procedures included a transient emissions test in which tailpipe emissions were measured while the vehicle was driven on a dynamometer (a treadmill-type device). Improving repairs and public convenience were also major focuses of the enhancement effort.

Since July 2001, all model year (MY) 1996 and later cars and light trucks have been inspected by scanning the vehicle's computerized second-generation on-board diagnostic (OBDII) system instead of measuring tailpipe emissions. As of July 2008, the program dropped tailpipe testing entirely and has inspected all vehicles by scanning the OBDII system. This change was the result of statutory changes in Wisconsin's 2007-2009 biennial budget which exempted model years of vehicles not federally required to be equipped with the OBDII technology (MY 1995 and earlier cars and light trucks and MY 2006 and earlier heavy trucks). To help offset the emissions reductions lost from exempting the pre-OBDII vehicles, the program increased the testable fleet for MYs 2007 and later by adding gasoline-powered vehicles between 10,001 to 14,000 pounds gross vehicle weight rating (GVWR) and diesel-powered vehicles of all weights up to 14,000 pounds GVWR.

The EPA approved Wisconsin's enhanced I/M program on August 16, 2001 (66 FR 42949), including the program's legal authority and regulatory requirements. On June 7, 2012, the WDNR submitted a SIP revision to the EPA covering all the changes to the program since the EPA approved the program in 2001. This submittal included a demonstration under section 110(l) of the CAA addressing emission reductions associated with the program changes. The EPA approved this SIP revision on September 19, 2013 (78 FR 57501).

Wisconsin's I/M program is jointly administered by the WDNR and the Wisconsin Department of Transportation. Legal authority and administrative requirements for the Wisconsin I/M program are found in ss. 110.20 and 285.30, Wisc. Stats. and Ch. NR 485 and Trans 131, Wisc. Admin. Code.

2. Description of the Modeling Demonstration

The WDNR conducted this modeling demonstration using the most recent version of the EPA's mobile source emissions model, MOVES5.0.0, released in November 2024. This modeling was conducted in accordance with the following EPA technical guidance:

- [Performance Standard Modeling for New and Existing Vehicle Inspection and Maintenance \(I/M\) Programs Using the MOVES Mobile Source Emissions Model](#), EPA-420-B-22-034, October 2022.
- [MOVES5 Technical Guidance: Using MOVES to Prepare Emission Inventories for State Implementation Plans and Transportation Conformity](#), EPA-420-B-24-043, November 2024.

The demonstration involves a comparison of emission levels from the EPA's model program specified in 40 CFR 51.351(i) and Wisconsin's program as currently implemented. The WDNR did separate modeling for each of the individual counties in Wisconsin's seven county I/M program area and then compared overall program results to the performance standard.

Since the attainment date for the 2015 ozone NAAQS for moderate areas, August 3, 2024, has passed, in accordance with the EPA's above-cited Performance Standard Modeling guidance¹, the WDNR modeled an evaluation date of July 2025, which is within the calendar year this demonstration will be submitted.

Table A11.1 summarizes the MOVES5.0.0 modeling assumptions used, other than those inputs pertaining to the I/M program.

¹ [Performance Standard Modeling for New and Existing Vehicle Inspection and Maintenance \(I/M\) Programs Using the MOVES Mobile Source Emissions Model](#), EPA-420-B-22-034, October 2022, page 10.

Table A11.1. Assumptions, Other than I/M Program Parameters, Associated with MOVES5.0.0 I/M Performance Standard Modeling.

Category	Area	
	Six SEWRPC Counties	Sheboygan County
Calendar Year	2025	2025
Month	July	July
Day Type	Weekday	Weekday
Age Distribution	WDNR 2025 projections by county	WDNR 2025 projections
Vehicle Miles of Travel	2023 NEI VMT grown to 2025	2025 VMT projections by WDOT and WDNR using conversion factors
Vehicle Population	2023 NEI population grown to 2025	2023 NEI population grown to 2025
Fuel Inputs	MOVES5 Defaults with 2023 NEI AVFT projected to 2025	MOVES5 Defaults with 2023 NEI AVFT projected to 2025
Road Type Distribution	2023 NEI distribution	2023 NEI distribution
Average Speed Distribution	2023 I/M Program Data	2023 I/M Program Data
Daily Temperature Range	70 to 94 degrees Fahrenheit	65 to 93 degrees Fahrenheit
Daily Humidity Range	57.0% to 85.8%	55.5% to 87.0%

Note: The following abbreviations are used in this table: I/M = Inspection/Maintenance; MOVES5= United States Environmental Protection Agency's Motor Vehicle Emissions Simulator Model (Version 5); NEI = National Emissions Inventory; SEWRPC = Southeastern Wisconsin Regional Planning Commission; VMT = Vehicle-Miles of Travel; WDNR = Wisconsin Department of Natural Resources; WDOT = Wisconsin Department of Transportation

The I/M parameters used in the modeling for both the EPA model program for the enhanced performance standard and Wisconsin's current program are presented in Table A11.2.

Table A11.2. I/M Program Parameters Associated with MOVES5.0.0 I/M Performance Standard Modeling.

Category	I/M Program	
	Enhanced I/M Performance Standard	Wisconsin I/M Program
Evaluation Date	July 2025	July 2025
Test Type		
Unloaded Idle Test	MYs 1968 to 2000	Not done
Evaporative System OBD Check	MYs 2001 to 2025	MYs 1996 to 2022
Exhaust OBD Check	MYs 2001 to 2025	MYs 1996 to 2022
Test Frequency	Annual	Biennial
Fuel Types Tested for: Passenger Cars Passenger Trucks Light Commercial Trucks	Gasoline and E-85	Gasoline and E-85
Fuel Types Tested for: School Buses Refuse Truck Single Unit Short-haul Trucks Single Unit Long-haul Trucks	Not Included	Gasoline Only
Waiver Rate	3.00%	0.21%
Compliance Rate	96.0%	84.74%
Failure Rate	3.68%	3.68%
Maximum GVWR Tested for MYs 2006 and Older	8,500 pounds	8,500 pounds
Maximum GVWR Tested for MYs 2007 and Newer	8,500 pounds	14,000 pounds
Regulatory Class Coverage Adjustment		
Passenger Cars		
All MYs	1.0000	1.0000
Passenger Trucks		
MYs 2006 and Older	0.9727	0.9727
MYs 2007 and Newer	0.9727	1.0000
Light Commercial Trucks		
MYs 2006 and Older	0.7630	0.7630
MYs 2007 and Newer	0.7630	1.0000
School Buses		
MYs 2006 and Older	0.0000	0.0000

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Category	I/M Program	
	Enhanced I/M Performance Standard	Wisconsin I/M Program
MYs 2007 and Newer	0.0000	0.0014
Refuse Trucks		
MYs 2006 and Older	0.0000	0.0000
MYs 2007 and Newer	0.0000	0.0292
Single Unit Short-haul Trucks		
MYs 2006 and Older	0.0000	0.0000
MYs 2007 and Newer	0.0000	0.5709
Single Unit Long-haul Trucks		
MYs 2006 and Older	0.0000	0.0000
MYs 2007 and Newer	0.0000	0.5798
Final Compliance Factor		
Passenger Cars		
All MYs	95.7696	84.73
Passenger Trucks		
MYs 2006 and Older	93.1551	82.42
MYs 2007 and Newer	93.1551	84.73
Light Commercial Trucks		
MYs 2006 and Older	73.0722	64.65
MYs 2007 and Newer	73.0722	84.73
School Buses		
MYs 2006 and Older	0.00	0.00
MYs 2007 and Newer	0.00	0.12
Refuse Trucks		
MYs 2006 and Older	0.00	0.00
MYs 2007 and Newer	0.00	2.47
Single Unit Short-haul Trucks		
MYs 2006 and Older	0.00	0.00
MYs 2007 and Newer	0.00	48.37
Single Unit Long-haul Trucks		
MYs 2006 and Older	0.00	0.00
MYs 2007 and Newer	0.00	49.13

Note 1: Abbreviations: E-85 = gasoline-ethanol blend with up to 85% ethanol; GVWR = Gross Vehicle Weight Rating; I/M = Inspection/Maintenance; MYs = Model Years; OBD = On-Board Diagnostics

Note 2: For the Enhanced I/M Performance Standard Program, the test types, test frequency, vehicle classes, waiver rate and compliance rate are specified in 40 CFR 51.351(i). Since no overall failure rate is specified in 40 CFR 51.351(i), the failure rate for the actual Wisconsin I/M program (3.68%) is used.

Note 3: For Wisconsin's program, the waiver rate and compliance rate were provided by DOT for 2023, while the failure rate can be obtained on page 55 of the [Wisconsin Vehicle Inspection Program Annual Report 2022](#).

Note 4: Regulatory Class Coverage Adjustments obtained from EPA's [MOVES5 Technical Guidance](#) (Appendix A starting on p. 90.)

Note 5: Final Compliance Factors are calculated as specified in EPA's [MOVES5 Technical Guidance](#) (pp. 69-71).

Note 6: Although Wisconsin's I/M program tests some school buses, refuse trucks, single unit short-haul and long haul trucks, MOVES currently does not provide I/M emission reductions for the OBD testing of these vehicles.

3. Modeling Results

Tables A11.3 and A11.4 provide the modeling results. In all cases, the emission reductions from Wisconsin's actual I/M program, while short of meeting the emission factors established by the performance standard, are within the 0.02 gram-per-mile buffer allowed by 40 CFR 51.351(i). Therefore, Wisconsin's current I/M program meets the applicable enhanced I/M performance requirements in 40 CFR 51.351 in all areas in which the program is implemented.

The MOVES data files used in this assessment are available from the WDNR upon request.

Table A11.3. I/M Program Performance Standard Modeling Results - VOCs.

County	VMT	Emissions (grams)		Emission Factor (g/mile)		Wisc. I/M Program Shortfall (g/mile)	Allowable Shortfall (g/mile)	Meets Perf. Std?
		Perf Std	Wisc. I/M Program	Perf Std	Wisc. I/M Program			
Kenosha	5,426,228	1,216,175	1,245,892	0.224129	0.229606	0.005477		
Milwaukee	22,040,346	5,205,915	5,337,176	0.236199	0.242155	0.005955		
Ozaukee	3,428,799	773,349	791,161	0.225545	0.23074	0.005195		
Racine	5,658,640	1,306,499	1,336,236	0.230886	0.236141	0.005255		
Sheboygan	3,529,630	797,948	816,541	0.226071	0.231339	0.005268		
Washington	5,239,504	1,166,716	1,193,497	0.222677	0.227788	0.005111		
Waukesha	13,902,350	3,173,965	3,249,972	0.228304	0.233771	0.005467		
ALL	59,225,497	13,640,567	13,970,475	0.230316	0.235886	0.005570	0.02	Yes

Table A11.4. I/M Program Performance Standard Modeling Results - NOx.

County	VMT	Emissions (grams)		Emission Factor (g/mile)		Wisc. I/M Program Shortfall (g/mile)	Allowable Shortfall (g/mile)	Meets Perf. Std?
		Perf Std	Wisc. I/M Program	Perf Std	Wisc. I/M Program			
Kenosha	5,426,228	1,383,130	1,387,393	0.254897	0.255683	0.000786		
Milwaukee	22,040,346	4,874,839	4,885,537	0.221178	0.221663	0.000485		
Ozaukee	3,428,799	1,037,005	1,039,472	0.30244	0.303159	0.000719		
Racine	5,658,640	1,761,280	1,765,419	0.311255	0.311986	0.000731		
Sheboygan	3,529,630	1,109,090	1,111,780	0.314223	0.314985	0.000762		
Washington	5,239,504	1,545,326	1,549,083	0.294937	0.295655	0.000717		
Waukesha	13,902,350	3,221,091	3,231,408	0.231694	0.232436	0.000742		
ALL	59,225,497	14,931,761	14,970,092	0.252117	0.252764	0.000647	0.02	Yes