Redesignation Request and Maintenance Plan for the Wisconsin Portion of the Chicago-Naperville (IL-IN-WI) 2008 8-Hour Ozone National Ambient Air Quality Standard Serious Nonattainment Area

Kenosha County (Partial), Wisconsin

DRAFT FOR PUBLIC REVIEW

Developed By:
The Wisconsin Department of Natural Resources

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List of Acronyms

AEI	WDNR's air emissions inventory
AQS	EPA's Air Quality System database
CAA	Clean Air Act
CAMD	EPA's Clean Air Markets Division
CSA	Combined statistical area
CSAPR	Cross-State Air Pollution Rule
CTG	Control techniques guideline
DV	Design value
EGU	Electric generating unit
EIA	Energy Information Administration
EPA	U.S. Environmental Protection Agency
FID	Facility identification number
ICI	Industrial, commercial and institutional emissions sources
IDEM	Indiana Department of Environmental Management
IEPA	Illinois Environmental Protection Agency
I/M	Vehicle inspection and maintenance (emissions testing)
iSIP	Infrastructure state implementation plan
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
NOx	Nitrogen oxides (NO and NO_2)
NSR	New source review
ppm	Parts per million
PSD	Prevention of significant deterioration
RACM	Reasonably Available Control Measures
RACT	Reasonably Available Control Technology
RFP	Reasonable further progress
RTP	Regional transportation plan
SCC	Source Classification Code
SEWRPC	Southeastern Wisconsin Regional Planning Commission
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

Wisconsin requests that the U.S. Environmental Protection Agency (EPA) redesignate the Wisconsin portion of the Chicago-Naperville, IL-IN-WI, nonattainment area to attainment for the 2008 8-hour ozone National Ambient Air Quality Standard (NAAQS). The Chicago-Naperville, IL-IN-WI, nonattainment area for the 2008 ozone NAAQS (the "Chicago nonattainment area") consists of all or portions of 11 counties in Illinois, Indiana and Wisconsin. This area includes 8 counties in Illinois (including two partial counties), two counties in Indiana, and part of Kenosha County in Wisconsin, all classified as a serious ozone nonattainment area. This nonattainment area is shown in Figure 1.1. The states of Illinois and Indiana plan to submit separate redesignation requests for their portions of the Chicago nonattainment area. The Chicago area has recorded three years of ambient air quality monitoring data for the years 2019 through 2021 that demonstrates attainment of the 2008 ozone NAAQS.

1.1. Background

The federal Clean Air Act (CAA) requires an area not meeting a NAAQS for a specified criteria pollutant to develop or revise its State Implementation Plan (SIP) to expeditiously attain and maintain the NAAQS in that nonattainment area. When attainment of a NAAQS in a nonattainment area has been achieved, Section 107(d)(3)(D) of the CAA allows states to request the nonattainment area to be redesignated to attainment provided that certain criteria are met.

Historically, exceedances of the federal ozone standards have been monitored along the lakeshore of Lake Michigan, including in Kenosha County. Kenosha County was designated nonattainment for two previous ozone NAAQS but has been either redesignated to attainment or found to be attaining each of these standards[1], as shown in Table 1.1.

In March 2008, EPA finalized a revision to the 8-hour ozone NAAQS (73 FR 16436). The 2008 ozone NAAQS (0.075 parts per million, ppm) was more restrictive than the previous 1997 ozone NAAQS (0.08 ppm). In June 2012, EPA published a final rulemaking that designated all or part of eleven counties in the Chicago-Naperville, IL-IN-WI, Combined Statistical Area (CSA) as marginal nonattainment for the 2008 ozone NAAQS (77 FR 34221). This rulemaking was based upon EPA's review of ozone monitoring data collected during the years 2009-2011 for Illinois and 2008-2010 for Indiana and Wisconsin.[2] On May 4, 2016, EPA reclassified the Chicago nonattainment area from marginal to moderate nonattainment status, effective June 3, 2016. This reclassification was based on 2012-2014 monitoring data. On August 23, 2019, EPA again reclassified this area, from moderate to serious nonattainment status, effective September 23, 2019. This reclassification was based on 2015-2017 monitoring data.

[1] EPA issued an attainment determination for the Milwaukee-Racine nonattainment area after the 1979 1-hour NAAQS was revoked, so this area was never formally redesignated to attainment of this standard. The area was redesignated to attainment of the 1997 ozone NAAQS in July 2012.

[2] EPA designated most areas based on 2008-2010 air monitoring data. However, Illinois certified its 2011 ozone monitoring data for the Chicago area early and submitted this data to EPA for consideration. This delayed the designation process for this area, which was designated nonattainment via a separate rulemaking two months after all other areas.

The air quality in the Chicago nonattainment area attained the 2008 ozone NAAQS based on 2017-2019 monitoring data, and all three states subsequently submitted requests to EPA to redesignate the area to attainment.[3] However, the area reviolated the standard in 2020 before EPA could finalize those requests.

Table 1.1. Kenosha County ozone NAAQS nonattainment history.

Year Promulgated	1979	1997	2008	2015
Level	0.12 ppm	0.08 ppm	0.075 ppm	0.070 ppm
Averaging Time	1 hour	8 hours	8 hours	8 hours
Wisconsin Nonattainment Area	Milwaukee-Racine Area*	Milwaukee-Racine Area*	Kenosha (partial), part of Chicago Area	Kenosha (partial), part of Chicago Area
Classification	Severe-17	Moderate	Marginal (reclassified to Serious)	Marginal
Finding of / Redesignation to Attainment[1]	4/24/2009 74 FR 18641	7/31/2012 77 FR 45252	TBD	TBD

*The Milwaukee-Racine Area for the 1979 and 1997 NAAQS encompassed all of Kenosha, Racine, Milwaukee, Ozaukee, Washington and Waukesha counties.

In October 2015, EPA finalized a new, more stringent primary 8-hour ozone NAAQS of 0.070 ppm (80 FR 65291). In April 2018, EPA published a final rulemaking designating part of Kenosha County as nonattainment of the 2015 NAAQS based on 2014-2016 monitoring data (83 FR 25776). The EPA designated the remainder of Kenosha County as attainment for the 2015 NAAQS.

On June 14, 2021, in response to a July 10, 2020 decision by the D.C. Circuit Court, EPA published a final rule revising the 2015 ozone NAAQS designations for 13 counties, including Kenosha County (86 FR 31438). The revised designations expanded the nonattainment area in Kenosha County to include a larger part of the county and was effective July 14, 2021. The revised 2015 ozone NAAQS area is identical to the county's 2008 ozone NAAQS nonattainment area.

This redesignation request is for the 2008 ozone NAAQS and does not affect Kenosha County's nonattainment status under the 2015 ozone NAAQS.

1.2. Geographical Description

Kenosha County is located in southeastern Wisconsin along the western shoreline of Lake Michigan, just north of the Illinois state line. The nonattainment designation for Kenosha County for the 2008 ozone NAAQS applies only to the eastern portion of the county, including the

[3] EPA proposed approving Wisconsin's redesignation request on April 17, 2020 (85 FR 21351).

townships of Pleasant Prairie and Somers. Kenosha County has a largely service-based and industrial economy, with a 2020 population of 169,151. 77% of the county's population (130,813) is estimated to live in the 2008 ozone NAAQS nonattainment area. Kenosha County is roughly halfway between the cities of Chicago and Milwaukee and is part of the Chicago-Naperville CSA. Most of the CSA is upwind of Kenosha County on high ozone days and contributes to high ozone concentrations in Kenosha County.

Figure 1.1. Map of the Chicago-Naperville, IL-IN-WI, 2008 ozone nonattainment area ("Chicago nonattainment area"), with monitoring locations shown.

1.3. Status of Air Quality

Ozone monitoring data for the most recent three years, 2019 through 2021, demonstrate that the air quality meets the 2008 ozone NAAQS in the Chicago nonattainment area, as discussed in more detail in Section 3. In addition, total summer emissions of ozone precursors - nitrogen oxides (NOx) and volatile organic compounds (VOCs) - are projected to continue to decrease. As a result, the Wisconsin Department of Natural Resources (WDNR) expects maintenance of the standard as discussed in sections 4 and 7, justifying a redesignation to attainment for Wisconsin's portion of the nonattainment area based on Section 107(d)(3)(E) of the CAA.

1.4. Requirements for Redesignation and Overview of this Request

Sections 107(d)(3)(E)(i) through (v) of the CAA establish several criteria to be met for an area to be considered for redesignation of a NAAQS:

(i) A determination by EPA that the area has attained the NAAQS;

(ii) A fully approved SIP for the area under Section 110(k) of the CAA;

(iii) A determination by EPA that the improvement in air quality is due to permanent and enforceable reductions in emissions;

(iv) A fully approved maintenance plan, including a contingency plan, for the area under Section 175(A) of the CAA; and

(v) A determination that all applicable requirements for the area under Section 110 and Part D of the CAA have been met.

Section 110 and Part D of the CAA further list criteria that must be met before a nonattainment area can be redesignated to attainment. In addition, EPA has published guidance entitled "Procedures for Processing Requests to Redesignate Areas to Attainment," issued September 4, 1992 as a memo to EPA Regional Air Directors ("Redesignation Guidance"). This redesignation request and maintenance plan is based on this Redesignation Guidance, supplemented by additional guidance received from staff at EPA Region 5.

This redesignation request and maintenance plan shows that the Wisconsin portion of the Chicago nonattainment area has met the applicable CAA criteria as demonstrated by all of the following:

- Ozone monitoring data demonstrate that the area has attained the 2008 ozone NAAQS (criterion (i), addressed in Section 3).

- Emissions inventories for the nonattainment base year (2011) and attainment year (2019), in combination with a discussion of the control measures in place, indicate that air quality improvements are consistent with observed reductions in NOx and VOC inventories and are due to permanent and enforceable emissions reductions (criterion (iii), addressed in Sections 4 and 6).

- Transportation conformity budgets and a description of how the state has met other Section 110 and Part D CAA requirements fulfill the state's remaining requirements for a redesignation request (criteria (ii) and (v), addressed in Sections 2 and 5).

- Projected emissions inventories for the maintenance years (2030 and 2035) and a contingency plan serve as a complete maintenance plan (criterion (iv), addressed in Sections 4 and 7).

2. CAA SECTION 110(a) AND PART D REQUIREMENTS

As a precondition to redesignation of a nonattainment area to attainment, the CAA requires EPA to determine that the state has met all applicable requirements under section 110 and part D of Title I of the CAA (per CAA Section 107(d)(3)(E)(v)) and that the state has a fully approved SIP under Section 110(k) for the area (per CAA Section 107(d)(3)(E)(ii)).

2.1. Satisfying CAA Section 110(a) General SIP Requirements

Section 110(a) of the CAA contains the general requirements for a SIP. Section 110(a)(2) provides that the implementation plan submitted by a state must have been adopted by the state after reasonable public notice and hearing, and, among other things, must:

- Include enforceable emission limitations and other control measures, means or techniques necessary to meet the requirements of the CAA;

- Provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to monitor ambient air quality;

- Provide for implementation of a source permit program to regulate the modification and construction of any stationary source within the areas covered by the plan;

- Include provisions for the implementation of part C, Prevention of Significant Deterioration (PSD), and part D, New Source Review (NSR) permit programs;

- Include criteria for stationary source emission control measures, monitoring, and reporting; and

- Include provisions for air quality modeling; and provide for public and local agency participation in planning and emission control rule development.

Wisconsin submitted an infrastructure SIP (iSIP) to satisfy the Section 110(a) requirements, exclusive of the interstate transport component, for the 2008 ozone NAAQS (and the 2010 NO_2 and SO_2 NAAQS) to EPA on June 20, 2013. The state submitted an additional clarification on January 28, 2015. EPA approved most elements of Wisconsin's iSIP in a September 11, 2015 rule (80 FR 54725). EPA subsequently approved the three remaining iSIP components, as follows:

- Most elements relating to Wisconsin's PSD program were approved October 6, 2014 (79 FR 60064). EPA approved the remaining components on February 7, 2017 (82 FR 9515).

- Transport provisions are addressed by EPA's Cross-State Air Pollution Rule (CSAPR) Update for the 2008 ozone NAAQS, finalized October 26, 2016 (81 FR 74504).[4]
- EPA approved Wisconsin's state board requirements under section 128 of the CAA on January 21, 2016 (81 FR 3334).

Appendix 1 includes Wisconsin's two iSIP submittals, EPA's partial approval of the iSIP, and submittal documents and approvals for the additional components. These submissions by Wisconsin and EPA's approvals demonstrate compliance with the CAA Section 110 requirements.

2.2. Satisfying CAA Part D Requirements

CAA Title I, Part D, Subpart 1 sets forth the basic nonattainment requirements applicable to all nonattainment areas. Subpart 2 of Part D, which includes Section 182 of the CAA, establishes additional required provisions for ozone nonattainment areas based on their level of nonattainment classification.

On May 4, 2016, EPA reclassified the Chicago nonattainment area to a classification of moderate. The WDNR subsequently submitted the required moderate area attainment plan on April 17, 2017.[5] EPA approved most elements of that plan on February 13, 2019.[6] On August 23, 2019, EPA further reclassified the Chicago nonattainment area to a classification of serious. The WDNR submitted the required serious area attainment plan on December 1, 2020.[7]

Subpart 1 Requirements

Section 172(c)(1) requires that states implement any reasonably available control measures (RACM) necessary for attainment of the NAAQS. The WDNR submitted an evaluation of RACM in Section 6.4 of its December 2020 serious area attainment plan. The WDNR concluded that no additional controls or emission reduction requirements were applicable for RACM under the 2008 ozone NAAQS in this area.

Section 172(c)(2) requires a demonstration of Reasonable Further Progress (RFP). These requirements are further expanded upon in Section 182(b)(1) of Subpart 2 of the CAA and are discussed in the Subpart 2 section below.

Section 172(c)(3) requires submission and approval of a comprehensive, accurate and complete inventory of actual emissions for the area. This requirement was superseded by the inventory requirement in Section 182(a)(1), discussed below.

[4] On December 6, 2018, EPA finalized a determination that the CSAPR Update fully addresses Wisconsin's transport obligations for the 2008 ozone NAAQS. EPA reaffirmed that finding in its Revised CSAPR Update (86 FR 26054).
[5] "Attainment Plan for the Wisconsin Portion of the Chicago-Naperville (IL-IN-WI) 2008 8-Hour Ozone Moderate Nonattainment Area." Available at: https://dnr.wisconsin.gov/sites/default/files/topic/AirQuality/AttainmentPlan20170417.pdf.
[6] See 84 FR 3701. EPA approved all elements of the plan except the modeled attainment demonstration.
[7] "Attainment Plan for the Wisconsin Portion of the Chicago-Naperville (IL-IN-WI) 2008 8-Hour Ozone Serious Nonattainment Area." Available at: https://dnr.wisconsin.gov/sites/default/files/topic/AirQuality/AttainmentPlanKenosha1212020.pdf.

Section 172(c)(4) requires the identification and quantification of allowable emissions for major new and modified stationary sources in an area. Section 172(c)(5) requires source permits for the construction and operation of new and modified major stationary sources in the nonattainment area. Wisconsin has an approved NSR program that meets these requirements. Furthermore, after redesignation, PSD requirements will apply. Wisconsin has an approved PSD program. EPA approved provisions in Wisconsin's PSD rule on October 6, 2014 (79 FR 60064) and February 7, 2017 (82 FR 9515).

Section 172(c)(7) requires the SIP to meet the applicable provisions of CAA Section 110(a)(2). As noted in the previous section, Wisconsin submitted an affirmation of meeting the Section 110(a) requirements to the EPA on June 20, 2013, with a clarification submitted on January 28, 2015. EPA approved the combined submittal and clarification on September 11, 2015 (80 FR 54725).

Section 172(c)(9) requires contingency measures to be implemented in the event of failure to attain a standard. EPA approved WDNR's RFP contingency measures for the partial Kenosha County moderate nonattainment area for the 2008 ozone NAAQS on February 13, 2019 (84 FR 3701). The WDNR further submitted RFP contingency measures as part of its December 2020 serious area attainment plan.

Section 176(c) of the CAA requires states to establish criteria and procedures to ensure that federally supported or funded activities, including highway projects, conform to the air quality planning goals in the applicable SIPs. The requirement to determine conformity applies to transportation plans, programs, and projects developed, funded, or approved under Title 23 of the U.S. Code and the Federal Transit Act (transportation conformity) as well as to all other federally-supported or funded projects (general conformity). Section 5 of this document includes a discussion of transportation conformity.

Subpart 2 Section 182 Requirements

CAA Section 182(c) describes requirements applicable to ozone nonattainment areas classified as serious. CAA Section 182(a) and (b) requirements applicable to marginal and moderate areas also need to be satisfied in serious areas. WDNR addressed these marginal and moderate requirements as they apply to serious areas in its December 2020 serious area attainment plan.

Marginal area requirements

Section 182(a)(1) requires the submission of a comprehensive emissions inventory. An emissions inventory is included in Section 4 of this redesignation request.

Section 182(a)(2) requires the submission of certain corrections to VOC Reasonably Available Control Technology (RACT) rules, vehicle inspection and maintenance (I/M) programs and permitting programs. These corrections were addressed for the Kenosha County portion of the nonattainment area under the 1-hour ozone standard and do not need to be addressed again under the 2008 8-hour standard.

Section 182(a)(3)(B) requires the submission of an emission statement SIP. EPA approved Wisconsin's emission statement program for the partial Kenosha County nonattainment area for the 2008 ozone NAAQS on February 13, 2019 (84 FR 3701).

Moderate area requirements

Section 182(b)(1), in combination with Section 172(c)(2), requires a demonstration of RFP reductions in VOC and/or NOx emissions in the area. EPA approved WDNR's RFP demonstration for the partial Kenosha County moderate nonattainment area for the 2008 ozone NAAQS on February 13, 2019 (84 FR 3701).

Section 182(b)(2) requires areas to implement VOC RACT. EPA approved Wisconsin's VOC RACT program as meeting the moderate VOC RACT requirements for this area on September 16, 2020 (85 FR 57729).

Section 182(b)(4) requires a vehicle I/M program. EPA fully approved Wisconsin's I/M program on August 16, 2001 (66 FR 42949) and approved revisions to the program on September 19, 2013 (78 FR 57501).

Section 182(f) requires states with moderate nonattainment areas to implement NOx RACT. EPA approved Wisconsin's NOx RACT program in October 2010 (75 FR 64155).

Serious area requirements

The WDNR submitted an attainment plan for the Wisconsin portion of the Chicago 2008 ozone NAAQS serious nonattainment area on December 1, 2020. This plan addressed all Section 182(c) requirements for serious nonattainment areas, including the following:

- Enhanced ozone monitoring (Section 182(c)(1));
- An attainment demonstration showing how the standard will be attained by the applicable attainment date, and the required demonstration of RFP (Section 182(c)(2));
- Enhanced vehicle inspection and maintenance program (Section 182(c)(3)), with additional information provided in Appendix 10 of this submittal;
- Clean-fuel vehicle program requirements (Section 182(c)(4));
- Transportation control measures (Section 182(c)(5));
- Nonattainment NSR provisions and rules (Sections 182(c)(6)-(8);
- Contingency measures (Section 182(c)(9);
- Nonattainment NSR NOx and VOC emissions offsets (Section 182(c)(10).

The WDNR's December 2020 attainment plan also addressed marginal and moderate requirements as they apply to serious areas for the partial Kenosha County area. Once EPA approves the applicable elements from the WDNR's December 2020 serious area attainment plan, along with the applicable additional information provided in this request, WDNR will have a fully approved SIP and will have satisfied all Section 182 elements required for redesignation.

3. OZONE MONITORING

3.1. Ozone Monitoring Network

There are currently 21 ozone monitors operating in the Chicago nonattainment area. The WDNR operates two of these monitors in Kenosha County, both located in the nonattainment area (Figure 1.1). The Chiwaukee Prairie monitor along the lakeshore has measured ozone concentrations since 1988, whereas the Kenosha Water Tower monitor is a special-purpose monitor that began collecting data in 2013. In addition, Illinois operates 15 monitors, and Indiana operates four monitors (Figure 1.1). Table 3.1 shows the data collected over the last three years at these monitors.

3.2. Ambient Ozone Monitoring Data

EPA's requirements for ozone air monitoring data are contained in Appendix P to 40 CFR Part 50 ("Interpretation of the Primary and Secondary National Ambient Air Quality Standards for Ozone"). The level of the 2008 ozone NAAQS is 0.075 ppm. A monitoring site measures compliance with the 2008 ozone NAAQS if it meets the following conditions:

1. There are three complete years of ozone monitoring data at the site.

2. The 3-year average of the annual fourth-highest daily maximum 8-hour average ozone concentration is equal to or less than 0.075 ppm. This value is called the "design value".

For an area to attain the standard, the design values for all monitoring sites within that area must be equal to or lower than the NAAQS.

Table 3.1 shows the fourth-highest daily maximum 8-hour average values for all ozone monitors in the Chicago nonattainment area for the years 2019-2021, along with the design values for 2019-2021. During this time period, no design value exceeded the standard. The monitoring data for 2019 and 2020 met the completeness criteria, and data for 2021 is anticipated to meet these criteria when certified (see Section 3.4). This data confirms that the entire nonattainment area attained the 2008 ozone NAAQS in 2019-2021. The monitored design values are shown graphically in Figure 3.1.

Significant reductions in emissions of ozone precursors, NOx and VOC, have resulted from a number of permanent and enforceable control measures implemented during the time period associated with the 2008 ozone standard, as discussed in more detail in Sections 4 and 6. As a result of these emissions reductions, meteorologically adjusted concentrations of atmospheric ozone have also decreased over this period, as described in detail in Section 5.2.3 of the December 2020 serious area attainment plan for this area.

3.3. Quality Assurance

All available data for the years 2019 and 2020 for the 21 ozone monitoring sites listed in Table 3.1 have been quality assured and archived in EPA's Air Quality System (AQS). The states are in the process of quality assuring and certifying the 2021 monitoring data. This data must be

quality assured and archived in AQS before EPA can finalize a redesignation of this area. The WDNR does not expect any significant changes to the monitored data during this process.

The WDNR has an approved Ozone Quality Assurance Plan and quality assures monitoring data in accordance with 40 CFR Part 58 to assure that the quality of the monitoring data submitted to the AQS meets federal criteria. Illinois Environmental Protection Agency (IEPA) and Indiana Department of Environmental Management (IDEM) have also quality assured the data for their monitors in the nonattainment area in accordance with 40 CFR Part 58 and their state quality assurance plans. The 2019 and 2020 datasets have been certified and are available to the public. Draft 2021 data for all three states is available at AirNow-Tech (http://www.airnowtech.org/).

3.4. Data Completeness

EPA requires that daily maximum 8-hour average concentrations be available for at least 90 percent of the days in the ozone season for a given site over the 3-year period and that no site have less than 75 percent data completeness for a given year. The data from all ozone monitoring sites meet EPA requirements for completeness (as described in Appendix P to 40 CFR Part 50) for the years 2019 and 2020. For these two years, the overall average data completeness for all sites was 94.9 percent. All sites individually averaged at least 85 percent completeness for the 2-year period, and no site was less than 75 percent complete in any given year. 2021 data is anticipated to have similar levels of completeness and will be verified during the quality assurance process.

Table 3.1. Monitoring data for the Chicago nonattainment area, showing annual fourth-highest 8-hour concentrations and design values (DV) ppm. 2019 and 2020 data were downloaded from EPA's Air Quality System (AQS) database. 2021 data are from AirNow-Tech (http://www.airnowtech.org/).

Wisconsin			4th high 8-hr ozone (ppm)			2019-21 DV
Site ID	County	Site	2019	2020	2021*	(ppm)
55-059-0019	Kenosha	Chiwaukee	0.067	0.078	0.079	0.074
55-059-0025	Kenosha	Kenosha WT	0.066	0.078	0.072	0.072

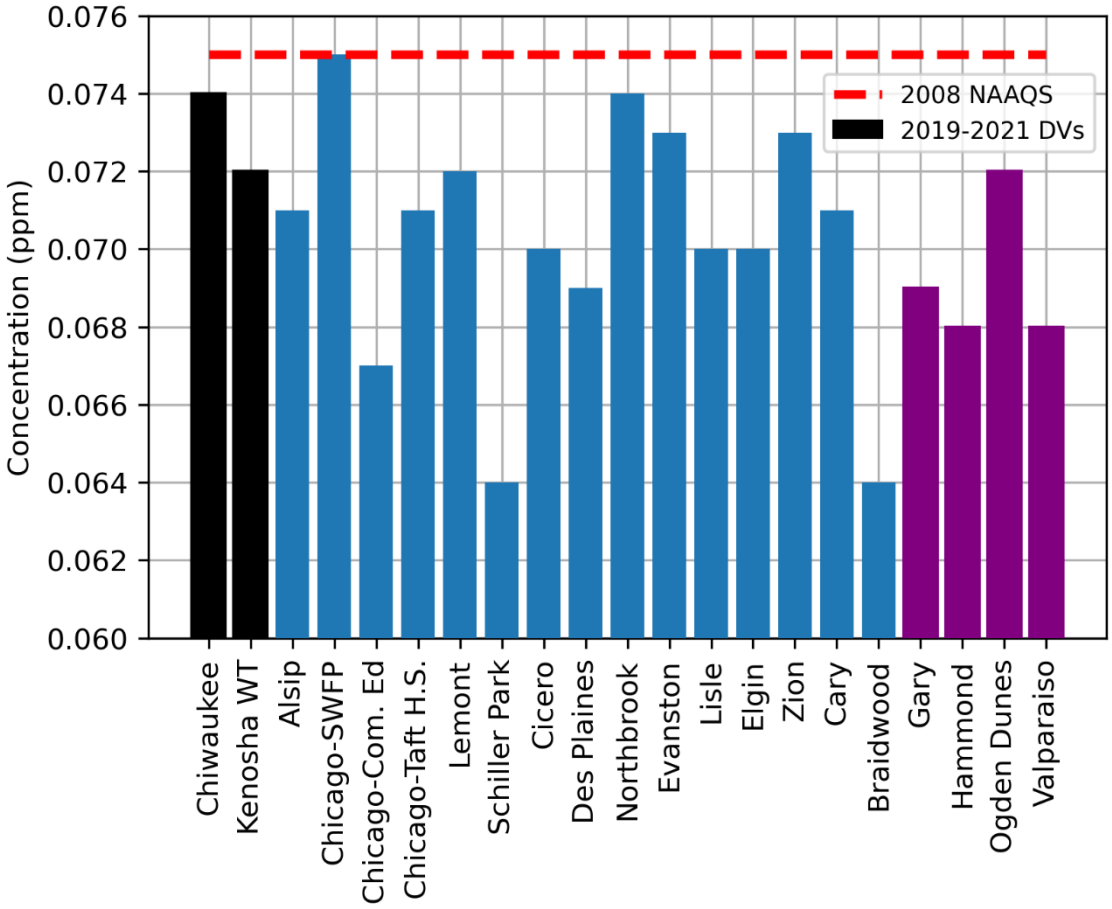
Illinois			4th high 8-hr ozone (ppm)			2019-21 DV
Site ID	County	Site	2019	2020	2021*	(ppm)
17-031-0001	Cook	Alsip	0.070	0.076	0.068	0.071
17-031-0032	Cook	Chicago-SWFP	0.071	0.077	0.077**	0.075**
17-031-0076	Cook	Chicago-Com. Ed	0.065	0.068	0.070	0.067
17-031-1003	Cook	Chicago-Taft H.S.	0.069	0.077	0.068	0.071
17-031-1601	Cook	Lemont	0.068	0.078	0.072	0.072
17-031-3103	Cook	Schiller Park	0.064	0.068	0.060	0.064
17-031-4002	Cook	Cicero	0.064	0.079	0.067	0.070
17-031-4007	Cook	Des Plaines	0.066	0.072	0.069	0.069
17-031-4201	Cook	Northbrook	0.069	0.079	0.075	0.074
17-031-7002	Cook	Evanston	0.069	0.074	0.078	0.073
17-043-6001	DuPage	Lisle	0.070	0.073	0.069	0.070
17-089-0005	Kane	Elgin	0.071	0.073	0.068	0.070
17-097-1007	Lake	Zion	0.066	0.076	0.077	0.073
17-111-0001	McHenry	Cary	0.070	0.076	0.069	0.071
17-197-1011	Will	Braidwood	0.060	0.067	0.065	0.064

Indiana			4th high 8-hr ozone (ppm)			2019-21 DV
Site ID	County	Site	2019	2020	2021*	(ppm)
18-089-0022	Lake	Gary	0.065	0.074	0.070	0.069
18-089-2008	Lake	Hammond	0.065	0.071	0.068	0.068
18-127-0024	Porter	Ogden Dunes	0.068	0.076	0.072	0.072
18-127-0026	Porter	Valparaiso	0.071	0.067	0.066	0.068

* 2021 data has not yet been quality assured but is not expected to change significantly during this process. This data will be quality assured and certified before the final redesignation request and maintenance plan is approved by EPA.

** Note that the Chicago-SWFP monitor's highest value of 87 ppb (August 10, 2021) was invalidated by IEPA. The figures shown in this table reflect that adjustment.

Figure 3.1. 2019-2021 design values* (DVs) for all ozone monitors in the Chicago nonattainment area, with Wisconsin monitors shown in black, Illinois monitors in blue, Indiana monitors in purple and the 2008 ozone NAAQS level shown for comparison.



*2021 data has not yet been quality assured but is not expected to change significantly during this process. This data will be quality assured and certified before the final redesignation request and maintenance plan is approved by EPA.

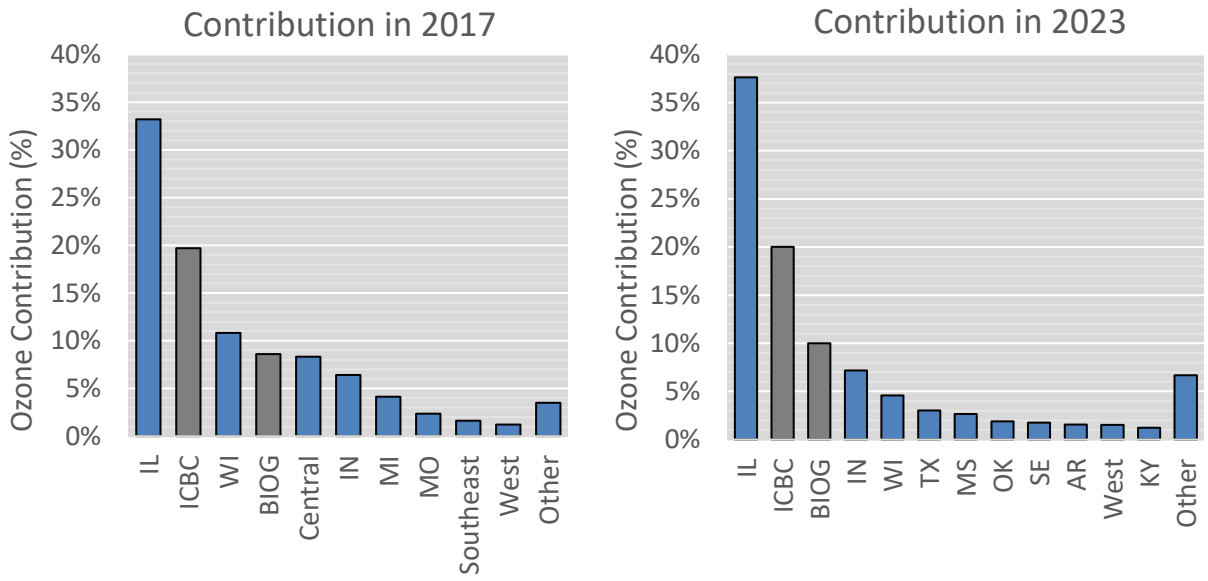
4. EMISSIONS INVENTORIES

4.1. Overview and Choice of Inventory Years

The CAA requires that a state must demonstrate that the improvement in ozone air quality between the nonattainment and attainment years is based on permanent and enforceable emissions reductions in order for a nonattainment area to be redesignated to attainment.

Kenosha County sources have little to no ability to influence ozone concentrations at monitors in the county. Emissions from upwind states contribute much more ozone to the Kenosha County monitors than do sources in Wisconsin, as shown in Figure 4.1 and discussed below. Even with the significant contribution from out-of-state transport to ozone concentrations at the Kenosha County monitors, ozone design values within Kenosha County (and the larger Chicago nonattainment area) do not exceed the 2008 ozone NAAQS (Table 3.1).

Figure 4.1. Ozone source apportionment modeling for 2017 (left) and 2023 (right) from the Lake Michigan Air Directors Consortium (LADCO) for the Chiwaukee Prairie monitor.[8]



The WDNR is submitting comprehensive inventories of actual and projected emissions for the partial Kenosha County nonattainment area. These inventories fulfill the CAA requirement to

[8] Contributions are projected from a 2011 base year. Only source regions that contributed 1% or more to ozone at the monitor are shown individually; other source regions are grouped together into the "other" category. 2017 modeling was provided by LADCO to WDNR in 2017. 2023 projected contributions come from LADCO 2015 Interstate Transport Modeling (with water). For information on 2023 modeling methodology see: LADCO 2015 O3 NAAQS Transport Modeling TSD. https://www.ladco.org/wp-content/uploads/Documents/Reports/TSDs/O3/LADCO_2015O3iSIP_TSD_13Aug2018.pdf. Source regions were grouped differently for the different modeling efforts. The "Central" region includes MN, IA, NE, KS, OK, TX, AR and LA. The "Southeast" region includes MS, AL, GA, FL, TN, VA, NC and SC. The "West" region includes WA, OR, CA, NV, ID, MT, WY, UT, CO, AZ, NM, ND and SD. "ICBC" refers to "initial/boundary conditions," which are contributions that cannot otherwise be attributed to a state or source region, such as emissions originating outside the U.S. "BIOG" represents biogenic emissions. "Other" represents other states or regions not otherwise listed.

demonstrate that reductions in emissions drove the air quality improvement. Section 6 documents the specific programs responsible for making such emissions reductions permanent and enforceable. It should be noted that these inventories do not result in a limitation on emissions for any specific source or source category in the future. The inventories are a snapshot of recent emission levels and a best estimate of future emission levels used to demonstrate relative changes in total emissions and future maintenance of the standard.

EPA's Redesignation Guidance requires a state to submit emissions inventories for the following years:

1. A year in which the standard was not attained ("nonattainment year");
2. A year in which the standard was attained ("attainment year");
3. A year at least 10 years after the area has been redesignated to attainment to demonstrate maintenance ("maintenance year"); and
4. An intermediate year between the attainment year and maintenance year ("interim year").

The WDNR has developed the following NOx and VOC emission inventories for the partial Kenosha County area as part of the redesignation request:

- 2011 nonattainment year emissions inventory;
- 2019 attainment year emissions inventory;
- 2030 interim maintenance year emissions inventory; and
- 2035 maintenance year emissions inventory.

The Chicago nonattainment area monitored nonattainment in 2011 for the 2008 8-hour ozone NAAQS. In contrast, the area monitored attainment concentrations of ozone for the design value period of 2019-2021. Wisconsin is required to demonstrate continued maintenance of the NAAQS for ten years after redesignation. As part of this demonstration, WDNR is providing a projection of emissions for 2030 as the interim projection year and 2035 as the maintenance year. The emission projections through 2035 are relied upon in the maintenance demonstration presented in section 7.

Illinois and Indiana are also developing emissions inventories for these same years. Estimates of inventories for these two states are presented and discussed in Section 4.4.

Tables 4.1 and 4.2 provide a summary of emissions (in tons per ozone season day, or tposd) for NOx and VOC within the partial Kenosha County area for the different sectors. These tables also show that the Wisconsin portion of the Chicago nonattainment area contributes less than 3% of total NOx emissions and less than 2% of total VOC emissions for the Chicago nonattainment area. Appendices 2 through 8 contain details about how the inventories were constructed. A comparison of the Kenosha County emissions to the emission inventories from the Illinois and Indiana portions of the nonattainment area is also provided.

4.2. Nonattainment Year (2011) and Attainment Year (2019) Inventories

The WDNR developed the following emissions information to satisfy EPA's redesignation requirements to submit nonattainment and attainment year inventories for NOx and VOC. The EPA has approved Wisconsin's 2011 emission inventories for partial Kenosha County and other nonattainment areas under the 2008 8-hour ozone standard (81 FR 11673).[9] Appendix 2 includes a discussion of the methodology used to estimate sector-specific emissions for 2011 and 2019 (shown in Tables 4.1 and 4.2).

The emission reduction credits (ERCs) shown are based on a creditable VOC emission reduction of 135.3 tons per year and a creditable NOx emission reduction of 2,634.3 tons per year resulting from the permanent shutdown of boilers B20, B21, B22 and B23 at the Pleasant Prairie power plant in Kenosha County (Construction Permit #18-RAB-050-ERC). ERC ozone season day emissions were derived by dividing the annual tons by 365 days.

Between 2011 and 2019, NOx emissions decreased 30%, and VOC emissions decreased 26% in the partial Kenosha County nonattainment area. These reductions are primarily due to decreases in NOx and VOC emissions from the onroad and nonroad mobile sectors provided by the federal and state mobile source control programs (described in Sections 6.3 and 6.4), along with the decrease in NOx emissions from the Pleasant Prairie power plant shutdown that were not credited for NOx ERCs.

Table 4.1. Partial Kenosha County area NOx emissions (tposd) by source type.

Sector	2011 nonattainment year	2019 attainment year	2030 interim year	2035 maintenance year
Point - EGU	8.71	0.00	0.00	0.00
Point - Non-EGU	0.09	0.08	0.12	0.12
Area	1.20	1.13	0.95	0.96
Onroad	4.82	1.81	0.85	0.75
Nonroad	2.25	1.64	1.21	1.21
Emission Reduction Credits	---	7.22	7.22	7.22
TOTAL	**17.08**	**11.87**	**10.34**	**10.26**
% of Chicago nonattainment area	**2.16%**	**2.36%**	**2.57%**	**2.67%**

[9] Once approved by EPA, the 2011 nonattainment year inventory contained in this request will replace the approved baseline inventory for this area.

Table 4.2. Partial Kenosha County area VOC emissions (tposd) by source type.

Sector	2011 nonattainment year	2019 attainment year	2030 interim year	2035 maintenance year
Point - EGU	0.38	0.00	0.00	0.00
Point - Non-EGU	0.24	0.19	0.26	0.26
Area	4.10	3.58	3.49	3.56
Onroad	1.90	0.89	0.54	0.47
Nonroad	1.14	0.70	0.63	0.62
Emission Reduction Credits	---	0.37	0.37	0.37
TOTAL	**7.75**	**5.72**	**5.28**	**5.29**
% of Chicago nonattainment area	**1.32%**	**1.21%**	**1.21%**	**1.24%**

4.3. Maintenance Year Inventories (2030 and 2035) and Projected Emissions Trends

The WDNR developed emissions information to satisfy the EPA redesignation requirements to submit an interim maintenance year and maintenance year inventory for NOx and VOC. Appendix 3 includes information on sector-specific emissions projection methodology. Tables 4.1 and 4.2 show the projected NOx and VOC emissions (in tposd) in 2030 and 2035 for electric generating unit (EGU) point, non-EGU point, area, onroad mobile, and nonroad mobile sources. ERC ozone season day emissions are also shown for 2030 and 2035, and are the same as the 2019 ERC emissions shown in section 4.2.

Comparison of emissions from 2019 to projected emissions in the maintenance year (2035) for the partial Kenosha County area shows that total NOx emissions in this area are projected to decrease by approximately 14% (1.61 tposd) over this time (Table 4.1). The largest reductions are projected from the onroad mobile sector (1.06 tposd). VOC emissions are projected to decrease in the partial Kenosha County area by approximately 8% (or 0.44 tposd) from 2019 to 2035 (Table 4.2). The largest VOC reductions are projected from the onroad mobile sector (0.41 tposd). This analysis shows that the partial Kenosha County area is expected to contribute towards maintaining the air quality standard in the Chicago nonattainment area for at least ten years into the future.

4.4. Comparison of Partial Kenosha County Nonattainment Area Emissions and Total Chicago Nonattainment Area Emissions[10]

The WDNR also compared 2011 and 2019 emissions with the maintenance year emissions for the entire Chicago nonattainment area, as summarized in Tables 4.3 to 4.4 and Figures 4.2 to 4.7. A comparison of net emission changes for all three states between the 2019 inventory and projected 2030 and 2035 inventories is also included in Tables 4.3 and 4.4.

As Tables 4.3 to 4.4 and Figures 4.2 to 4.7 show, the partial Kenosha County nonattainment area NOx emissions are a very small part (less than 3%) of the total Chicago nonattainment area NOx emissions in every inventory year. Between 2011 and 2019, NOx emissions decreased in both the partial Kenosha County (30%) and total Chicago nonattainment areas (36%). NOx emissions within the partial Kenosha County area are projected to decline by 14% between 2019 and 2035, and emissions from the total Chicago nonattainment area are projected to decrease by 24% over the same period. The largest NOx reductions in the Chicago nonattainment area are projected from the onroad mobile sector (119 tposd), followed by the nonroad mobile sector (42.0 tposd). These reductions are anticipated due to federal and state mobile source control programs.

As with NOx, the partial Kenosha County nonattainment area VOC emissions also comprise a very small part (less than 2%) of the total Chicago nonattainment area VOC emissions in all years (see Tables 4.3 to 4.4 and Figures 4.2 to 4.7). Between 2011 and 2019, VOC emissions decreased for partial Kenosha County (26%) and the total Chicago nonattainment area (20%). VOC emissions within the partial Kenosha County area are projected to decline by 8% between 2019 and 2035 and by 9% in the total Chicago nonattainment area. The largest VOC reductions in the Chicago nonattainment area are anticipated from the onroad mobile sector (46.2 tposd) followed by the area source sector (4.12 tposd).

The continued NOx and VOC emissions reductions from the attainment year (2019) to the maintenance year (2035), shown in Table 4.3 and Table 4.4, illustrate that continued maintenance of the 2008 8-hour ozone NAAQS is expected both in the partial Kenosha County nonattainment area and throughout the greater Chicago nonattainment area.

[10] IDEM provided emissions inventory data for Indiana on October 7, 2021. Emissions for Illinois were derived from inventories developed by IEPA that were included in Wisconsin's January 2020 redesignation request for Kenosha County (see Section 4 of that request). For this request, 2011 and 2030 emissions for Illinois were taken directly from these earlier inventories, whereas 2019 and 2035 emissions were determined by interpolating and extrapolating from these inventories.

Table 4.3. Comparison of NOx emissions for the Illinois, Indiana and Wisconsin portions of the Chicago nonattainment area.

Source Type	2011 nonattainment year	2019 attainment year	2030 interim year	2035 maintenance year
Illinois				
Point – EGU	67.41	34.31	60.75	71.94
Point – Non EGU	52.57	47.61	48.54	49.4
Area	27.14	33.66	33.97	34.11
Onroad	296.38	154.51	65.66	46.28
Nonroad	188.34	135.69	106.92	99.01
TOTAL	**631.84**	**405.78**	**315.84**	**300.74**
Indiana				
Point – EGU	30.15	4.29	1.44	0.42
Point – Non-EGU	66.46	59.91	60.79	61.51
Area	9.69	0.91	0.88	0.87
Onroad	24.70	14.91	6.62	5.51
Nonroad	12.69	13.43	10.25	8.49
TOTAL	**143.69**	**93.45**	**79.98**	**76.80**
Wisconsin				
Point – EGU	8.71	0.00	0.00	0.00
Point – Non-EGU	0.09	0.08	0.12	0.12
Area	1.20	1.13	0.95	0.96
Onroad	4.82	1.81	0.85	0.75
Nonroad	2.25	1.64	1.21	1.21
Emission Reduction Credits	---	7.22	7.22	7.22
TOTAL	**17.08**	**11.87**	**10.34**	**10.26**
Total Nonattainment Area				
Point – EGU	106.27	38.60	62.19	72.36
Point – Non-EGU	119.12	107.61	109.45	111.03
Area	38.03	35.69	35.80	35.94
Onroad	325.90	171.22	73.13	52.54
Nonroad	203.28	150.76	118.38	108.71
Emission Reduction Credits	0.00	7.22	7.22	7.22
TOTAL	**792.61**	**511.10**	**406.16**	**387.80**

Table 4.4. Comparison of VOC emissions for the Illinois, Indiana and Wisconsin portions of the Chicago nonattainment area.

Source Type	2011 nonattainment year	2019 attainment year	2030 interim year	2035 maintenance year
Illinois				
Point – EGU	0.62	1.12	2.64	3.16
Point – Non EGU	47.63	44.32	43.57	43.47
Area	210.04	225.57	221.4	220.61
Onroad	91.04	74.33	42.64	32.43
Nonroad	169.58	80.19	82.27	85.47
TOTAL	**518.91**	**425.51**	**392.52**	**385.14**
Indiana				
Point – EGU	0.63	0.47	0.56	0.67
Point – Non-EGU	17.07	10.83	10.84	10.90
Area	18.07	17.00	17.58	17.85
Onroad	9.58	6.80	3.77	2.93
Nonroad	14.19	5.53	4.80	4.35
TOTAL	**59.54**	**40.63**	**37.55**	**36.70**
Wisconsin				
Point – EGU	0.38	0.00	0.00	0.00
Point – Non-EGU	0.24	0.19	0.26	0.26
Area	4.10	3.58	3.49	3.56
Onroad	1.90	0.89	0.54	0.47
Nonroad	1.14	0.70	0.63	0.62
Emission Reduction Credits	---	0.37	0.37	0.37
TOTAL	**7.75**	**5.72**	**5.28**	**5.29**
Total Nonattainment Area				
Point – EGU	1.63	1.59	3.20	3.83
Point – Non-EGU	64.94	55.33	54.67	54.63
Area	232.21	246.14	242.47	242.02
Onroad	102.52	82.02	46.95	35.83
Nonroad	184.91	86.42	87.70	90.44
Emission Reduction Credits	0.00	0.37	0.37	0.37
TOTAL	**586.20**	**471.87**	**435.35**	**427.13**

Figure 4.2. Comparison of NOx emissions for the Illinois, Indiana and Wisconsin portions of the Chicago nonattainment area.

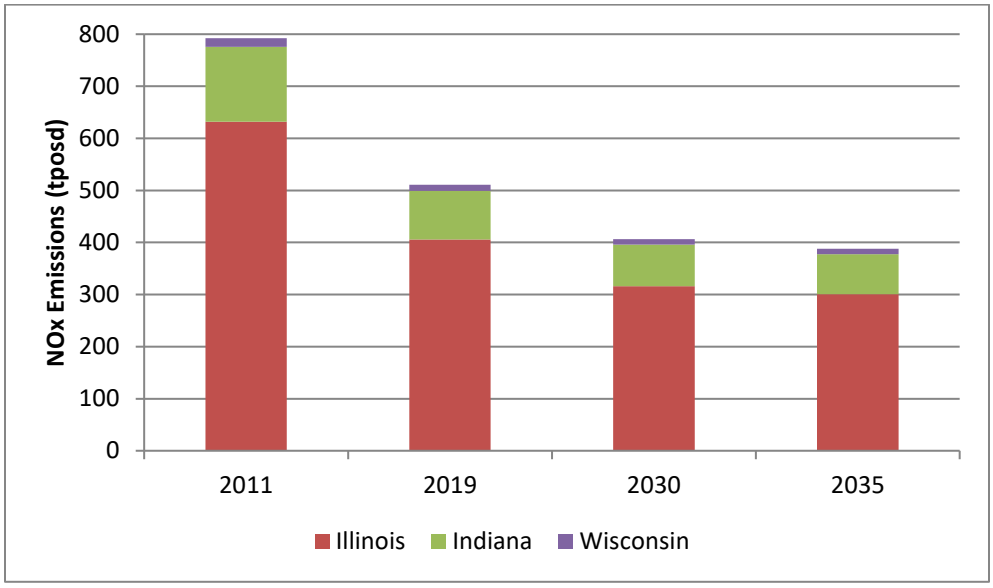


Figure 4.3. Comparison of VOC emissions for the Illinois, Indiana and Wisconsin portions of the Chicago nonattainment area.

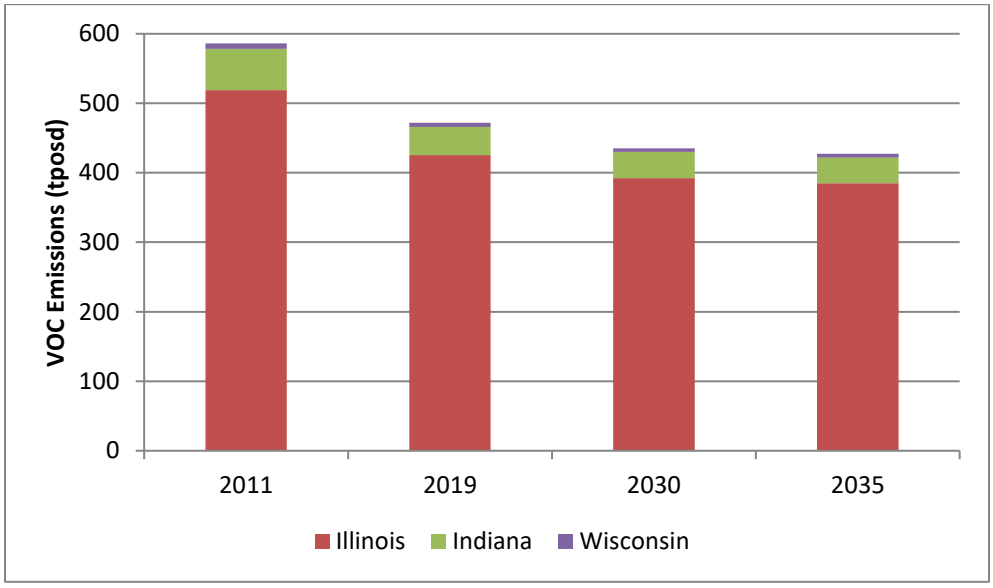


Figure 4.4. NOx emissions by source type for the Illinois, Indiana and Wisconsin portions of the Chicago nonattainment area.

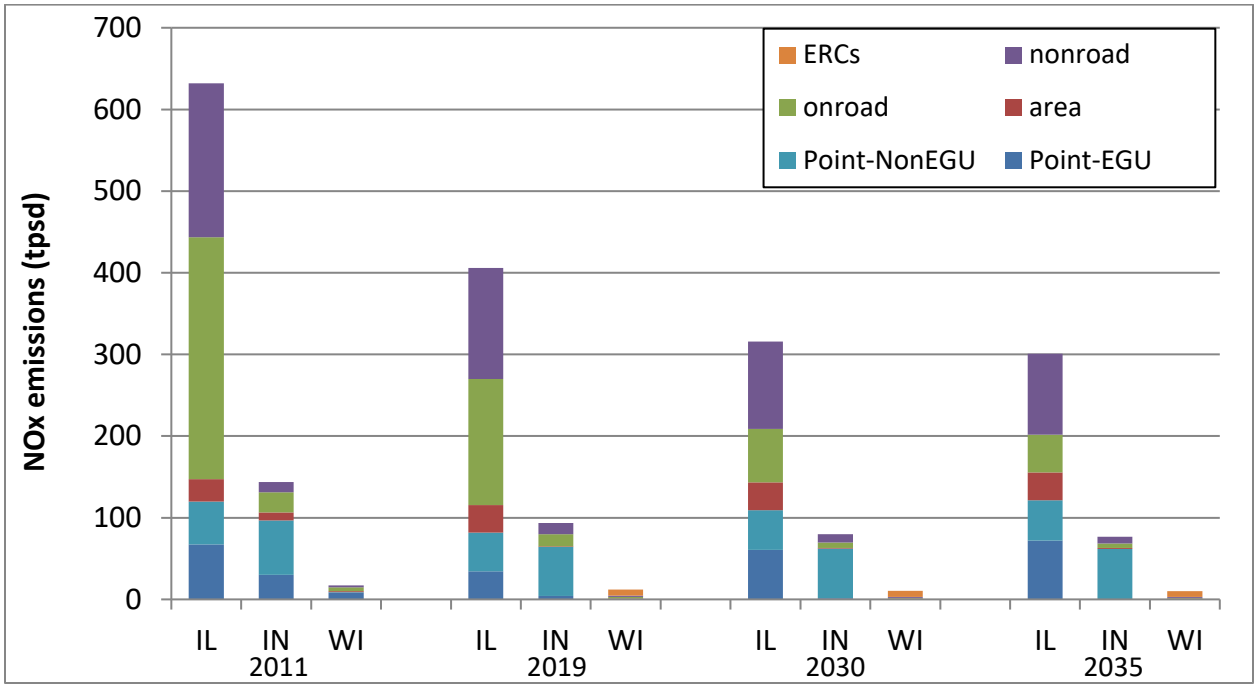


Figure 4.5. Partial Kenosha County area NOx emissions by source type.

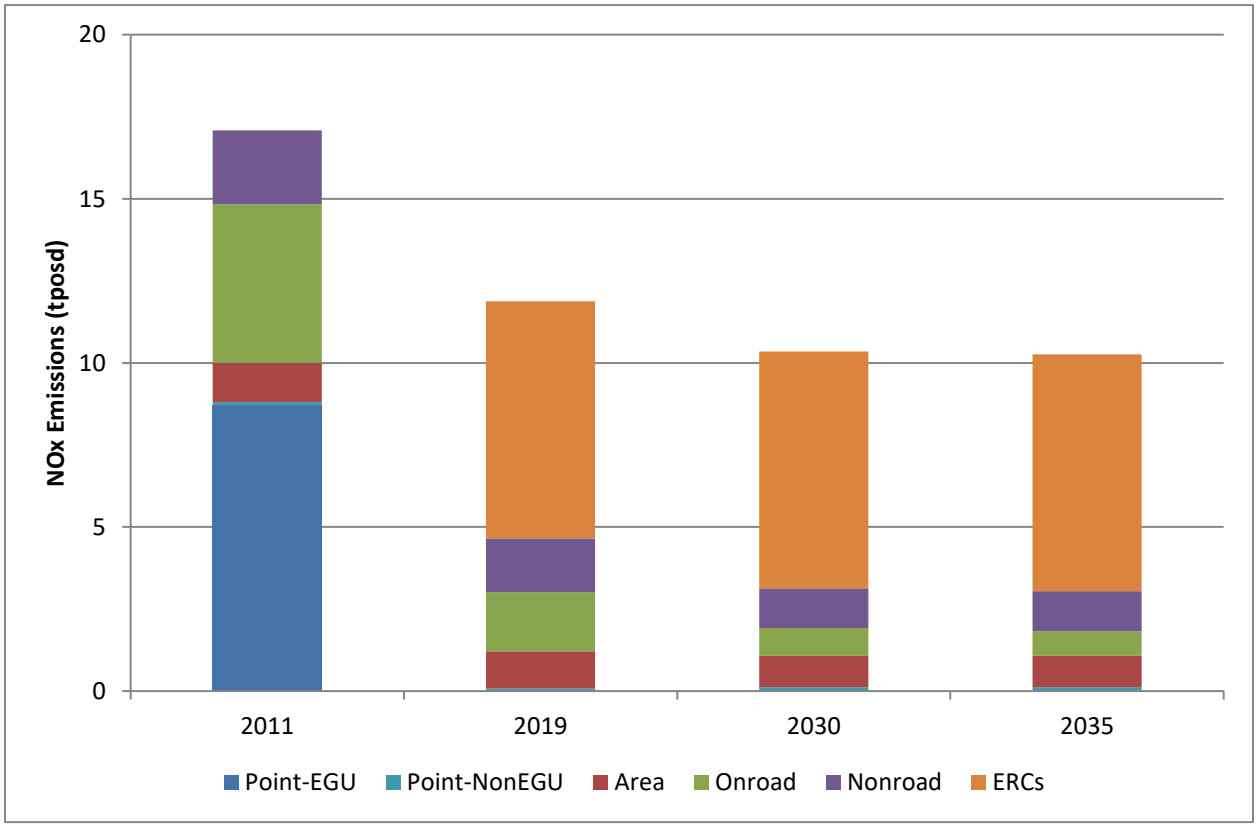


Figure 4.6. VOC emissions by source type for the Illinois, Indiana and Wisconsin portions of the Chicago nonattainment area.

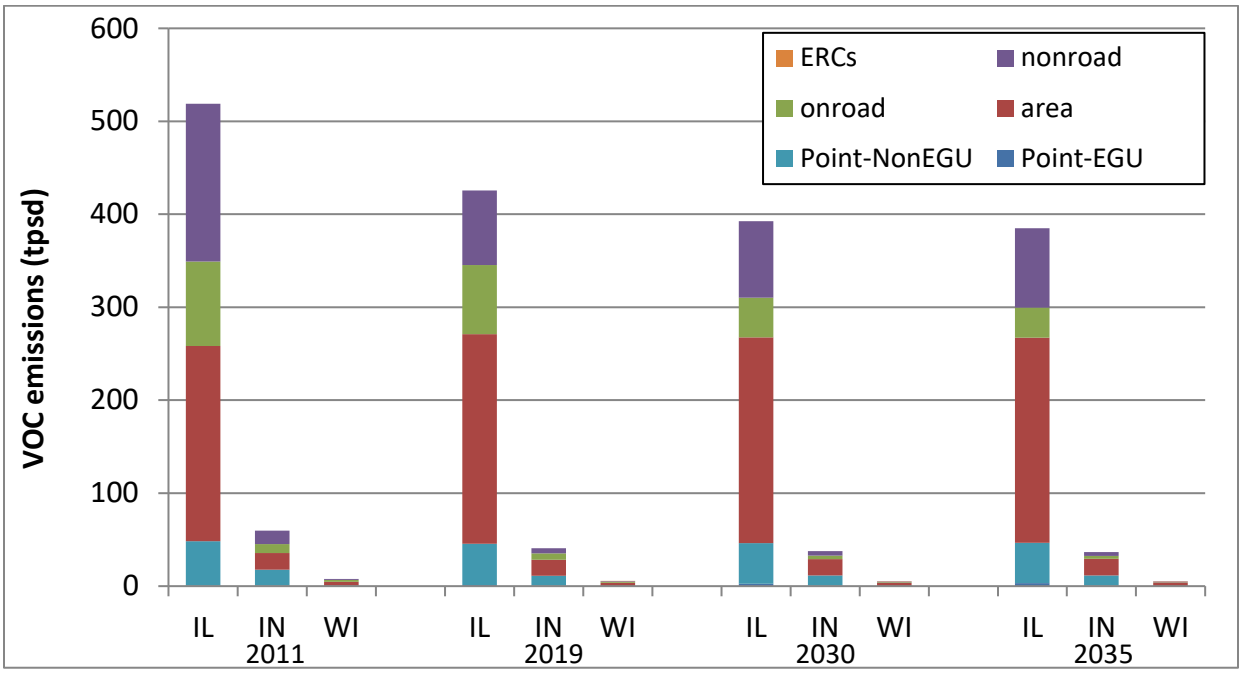
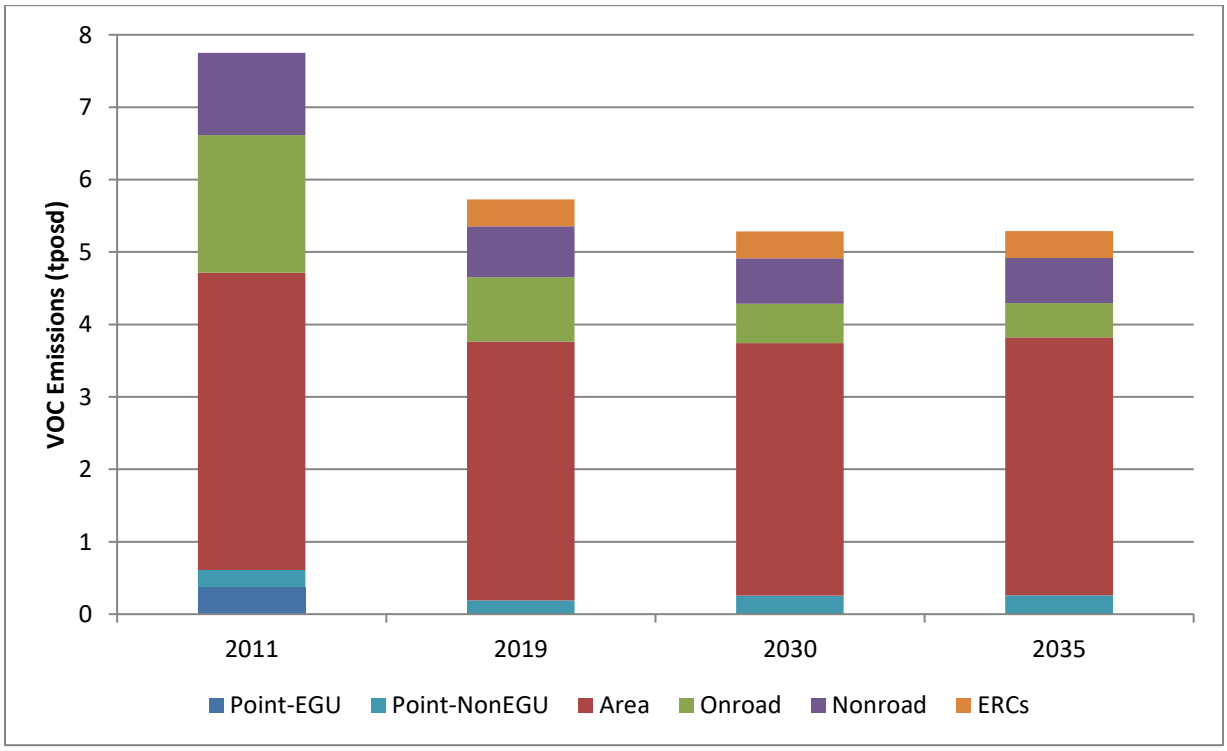


Figure 4.7. Partial Kenosha County area VOC emissions by source type.



5. 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 partial Kenosha County 2008 ozone NAAQS area as part of this redesignation request.

5.1. Motor Vehicle Emissions Model

The MVEBs were developed using EPA's MOtor Vehicle Emission Simulator (MOVES3) model and a travel demand model. The MOVES3 model is used to derive estimates of hot summer day emissions for ozone precursors of NOx 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 8 contains key data used to develop inputs to MOVES3.[11]

5.2. Motor Vehicle Emissions Budgets

The WDNR submitted an early progress SIP with updated MVEBs for the partial Kenosha County nonattainment area on January 16, 2015. On April 1, 2015, EPA found the MVEBs for Wisconsin's 8-hour ozone nonattainment area were adequate for use in transportation conformity determinations (80 FR 17428).

The WDNR submitted updated MVEBs for the partial Kenosha County area as part of its 2008 ozone NAAQS moderate area attainment plan on April 17, 2017, with supplemental information submitted on January 23, 2018. EPA determined that these budgets met the adequacy criteria of the transportation conformity rule on October 31, 2017, with an effective date November 15, 2017 (82 FR 50418). The WDNR submitted revised MVEBs for this area in its serious area attainment plan in December 2020. EPA has not yet approved or determined those budgets to be adequate.

Table 5.1 describe the MVEBs developed by WDNR for the partial Kenosha County 2008 ozone NAAQS area for the years 2030 and 2035. These budgets are identical to the corresponding

[11] The complete set of inputs to MOVES3 is too lengthy to include in this document. However, electronic copies of the inputs can be obtained from WDNR upon request.

projected emission inventories presented in section 4. 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, WDNR increased the emissions calculated by MOVES3 by 7.5% for 2030 and 2035 for the partial Kenosha County maintenance area.

To ensure consistency between SIP inventories and photochemical modeling inventories, the vehicle miles traveled and vehicle population data for the partial Kenosha County area provided by WDNR to EPA for the 2016 emissions modeling platform also include this 7.5% safety margin for the platform's projection years (2023 and 2028).

Table 5.1. Motor vehicle emissions budgets (MVEBs) for the partial Kenosha County area for 2030 and 2035.

Year	Emissions (tons per hot summer day)	
	VOC	NO_x
2030	0.54	0.85
2035	0.47	0.75

6. PERMANENT AND ENFORCEABLE CONTROL MEASURES

The CAA Section 107(d)(3)(E)(iv) specifies that improvements in air quality must be due to permanent and enforceable emission reductions. Additionally, EPA's 1992 Calcagni memo indicates that attainment resulting from temporary reductions in emission rates (e.g., reduced production or shutdown due to temporary adverse economic conditions) or unusually favorable meteorology would not qualify as an air quality improvement due to permanent and enforceable emission reductions. This section outlines the permanent and enforceable control measures that apply to sources in the partial Kenosha County 2008 ozone NAAQS area. These control measures reduced emissions in this area by the 2019 attainment year, leading to the emission reductions shown in Section 4. These control programs are described in greater detail in Appendix 9.

Table 6.1 lists the permanent and enforceable emission control programs implemented for each emission source sector. Many of the control measures have been implemented under long-standing programs that began prior to 2011 (the nonattainment year) and 2019 (the attainment year). This discussion highlights those control measures or emission reductions that have occurred since 2011.

Table 6.1. Emission control programs that have reduced NOx and VOC emissions in the partial Kenosha County area and contributing regions.[a]

Sector	NOx Control Measures	VOC Control Measures
Point	- Wisconsin NOx RACM[b] and RACT[c] - Federal NOx Transport Rules	- VOC RACT/CTG[d] - Federal NESHAP[e] Rules
	- Closure of the We Energies-Pleasant Prairie Power Plant (April 2018)	
Area		- VOC RACT / CTGs - Federal VOC emission standards for consumer/commercial products - Area source NESHAP Rules
Onroad	- Numerous federal onroad mobile source control programs[a] - Wisconsin vehicle inspection and maintenance program	
Nonroad	- Numerous federal nonroad mobile source control programs[a]	

[a] Table 6.1 lists emission control programs implemented within the partial Kenosha County 2008 ozone NAAQS nonattainment area and/or throughout the state. Appendix 9 provides a detailed explanation of these programs.
[b] Reasonably Available Control Measures
[c] Reasonably Available Control Technology
[d] Control Techniques Guidelines
[e] National Emissions Standards for Hazardous Air Pollutants

It is important to note that: (1) emissions sources located in the partial Kenosha County area are already very well-controlled in all respects; and (2) most of the ozone measured in Kenosha County comes from ozone and ozone precursors originating in upwind states. For these reasons, even though pollution control programs continue to decrease emissions within the partial

Kenosha County area, emission reductions in upwind areas will have an outsized impact on the area's air quality.

6.1. Point Source Control Measures

Wisconsin implemented RACT for major NO_x sources in the state's nonattainment areas for the 1997 ozone NAAQS. This area included the partial Kenosha County 2008 ozone nonattainment area.

Wisconsin implemented Reasonably Available Control Measures (RACM) for NOx sources in the state's nonattainment areas for the 1997 ozone NAAQS. NOx emission units constructed on or before February 1, 2001 in Kenosha County that meet the corresponding applicability criteria are subject to the NOx RACM requirements in s. NR 428.05, Wis. Adm. Code, which list the NOx emission rate limits for various types of NOx emission units. The affected NOx emission units are required to install continuous emission monitoring systems to demonstrate compliance with the NOx emission limits specified in s. NR 428.05, Wis. Adm. Code. NOx emission units constructed or modified after February 1, 2001 are subject to the federal transport requirements described below.

Following a consent decree (E.D. Wis., Case No. 03-CV-0371), Boilers B20 and B21 at the We-Energies Pleasant Prairie Power Plant became subject to the NOx emission limit of 0.08 lbs/MMBtu, based on a 12-month rolling average, by December 31, 2006 and December 31, 2003, respectively. The selective catalytic reduction technologies that were installed to comply with the consent decree were in use prior to the 2011 nonattainment year. The Pleasant Prairie Power Plant, which was a significant NOx and VOC point source in the partial Kenosha County area, was shut down on or around April 10, 2018, between the nonattainment and attainment years (Construction Permit #18-RAB-050-ERC).

EGUs in 22 states east of the Mississippi, including Wisconsin, have been subject to a series of federal NOx transport rules since 2009. These rules have included the Clean Air Interstate Rule, the Cross State Air Pollution Rule (CSAPR) and the CSAPR Update Rule. These rules contributed to a 24% reduction from 2008 to 2014 in total EGU NOx emissions across the states that contribute >0.75 ppb to Kenosha County ozone concentrations (Appendix 9). The three states contributing the most to Kenosha County ozone concentrations (in decreasing order), Illinois, Indiana, and Wisconsin, had proportionately larger individual EGU emission reductions of 40.6%, 24.1%, and 54.5%, respectively, from 2008 to 2014.

On April 30, 2021, 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).[12] The rule further reduced EGU NOx emissions in 12 states starting in the 2021 ozone season. Due to this rule and other changes already underway in the power sector, EPA

[12] The rulemaking responds to a September 2019 ruling by the U.S. Court of Appeals for the D.C. Circuit, *Wisconsin v. EPA*, which remanded the CSAPR Update to EPA for failing to fully eliminate significant contribution to nonattainment and interference with maintenance of the 2008 ozone NAAQS from upwind states by downwind areas' attainment dates.

expects ozone season NOx emissions will be nearly 25,000 tons lower in 2021 than in 2019, a reduction of 19 percent.[13]

EPA approved moderate area VOC RACT requirements for the partial Kenosha County 2008 ozone NAAQS area on September 16, 2020 (85 FR 57729). The December 2020 serious area attainment plan describes the partial Kenosha County 2008 ozone NAAQS area's VOC RACT program, which includes codified Control Techniques Guidelines (CTGs), SIP-approved RACT equivalency measures for a source subject to a CTG that has not been incorporated into state code, and negative declarations that no other sources exist within the partial Kenosha County area that are applicable to any unincorporated CTGs or that meet VOC major source criteria.

In the 2019 attainment year, non-combustion sources accounted for the majority (96%) of total VOC emissions in the partial Kenosha County area. Combustion sources accounted for the remaining 4% of the area's VOC emissions. Sources of VOCs in the area are subject to source-specific National Emission Standards for Hazardous Air Pollutant (NESHAP) requirements and/or VOC RACT rules, as applicable. The non-combustion NESHAP rules were implemented prior to 2011 with no additional reductions expected after 2011. The combustion point sources are subject to NESHAP rules that became effective since 2011. These NESHAP rules also apply to sources nationally, thereby reducing the transport of VOC emissions into the nonattainment area. See Appendix 9 for more information about these federally enforceable control programs.

6.2. Area Source Control Measures

As noted for point sources, Wisconsin has implemented VOC RACT rules under chs. NR 419 through 424, Wis. Adm. Code. In addition, VOC emission 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 Industrial, Commercial and Institutional Boilers. See Appendix 9 for more information about these federally enforceable control programs.

6.3. Onroad Source Control Measures

Both NOx and VOC emissions from onroad mobile sources are controlled through federal new vehicle emission standards programs and fuel standards. Although initial compliance dates in many cases were prior to 2011, 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 nonattainment area and in contributing ozone precursor transport areas. The Wisconsin-administered I/M program also limits on-road VOC and NOx emissions from on-road sources in southeastern Wisconsin and meets the performance standard for enhanced I/M programs. See Appendices 9 and 10 for more information about these federally enforceable control programs.

[13] https://www.epa.gov/sites/default/files/2021-03/documents/revised_csapr_update_factsheet_for_final_rule.pdf.

6.4. Nonroad Source Control Measures

VOC and NOx emitted by nonroad mobile sources are significantly controlled via federal standards for new engines. The nonroad regulations continue to slowly lower average unit and total sector emissions as equipment fleets are replaced each year, pulling the highest emitting equipment out of circulation or substantially reducing its use. Fuel programs regulating fuel sulfur content also enable achievement of various new engine tier VOC and NOx emission limits. See Appendix 9 for more information about these federally enforceable control programs.

6.5. Section 110(l) Noninterference Requirements

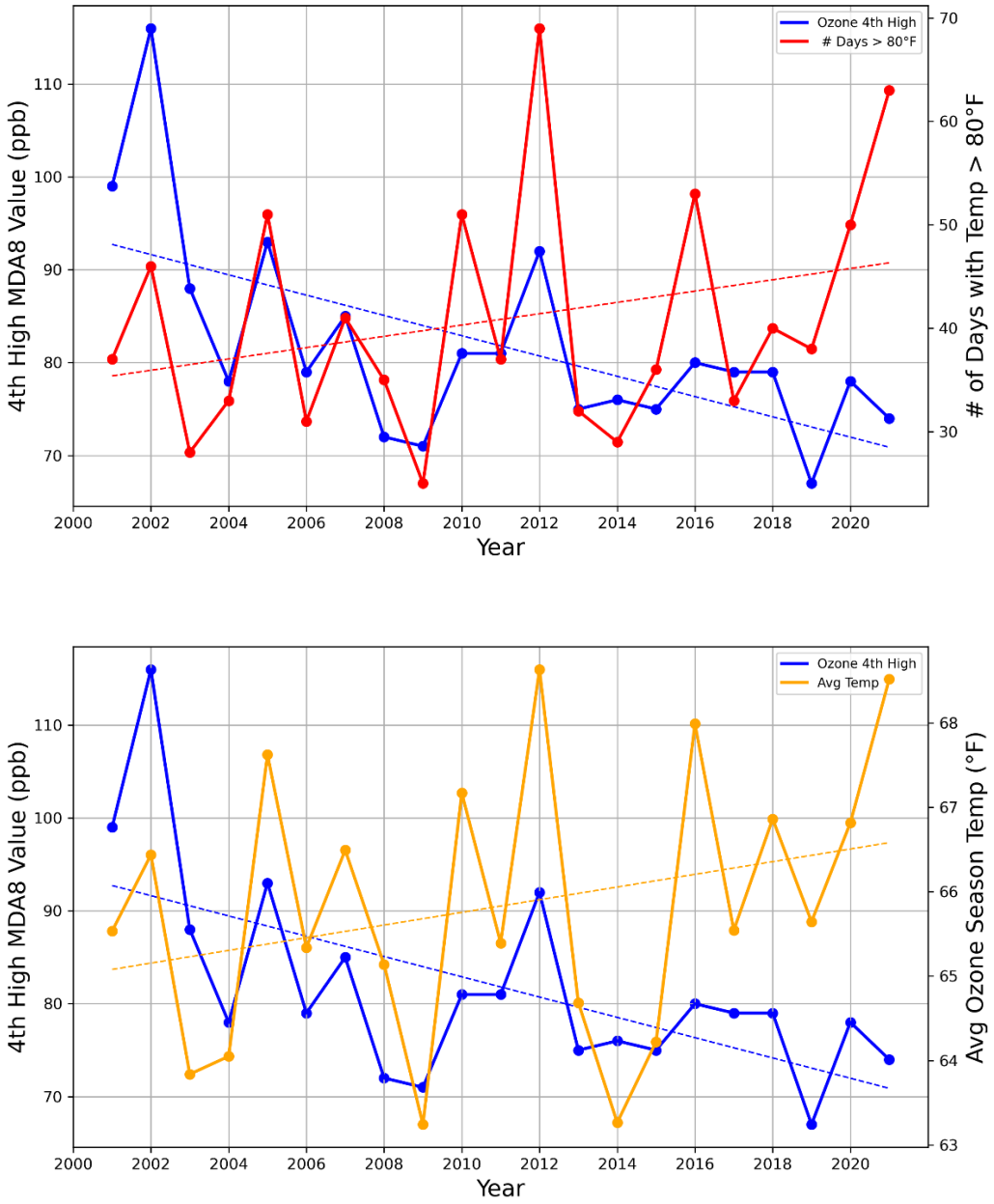
When revising rules and regulations in the SIP, the state is responsible for demonstrating that such a change will not interfere with any applicable requirement concerning attainment and reasonable further progress, or any other applicable CAA requirements for any of the criteria pollutants. This request for redesignation does not implement any changes in the control programs or requirements approved in the SIP and in place during the 2019 attainment year. Therefore, all requirements related to section 110(l) noninterference are fulfilled under this request. Further, Wisconsin will continue to implement all control programs currently in the SIP for emissions of ozone precursors in this maintenance area. As documented in Wisconsin's iSIP for the 2008 ozone NAAQS (Appendix 1), 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 EPA.

6.6. Impact of Permanent and Enforceable Measures on Monitored Ozone Concentrations

Comparison of trends in ozone concentrations and temperature supports the conclusion that the improvement in air quality shown in Section 3 is derived from the permanent and enforceable control measures described in this section, rather than from unusually favorable meteorology or adverse economic conditions. Since ozone typically has a positive correlation with temperature, WDNR analyzed the fourth highest daily maximum 8-hour average (MDA8) ozone concentrations for the months May through September. These data were compared with two measures of temperature: the number of days with temperatures above 80 °F and the average ozone season (defined here as May through September) temperature. The WDNR examined data since 2001 in order to eliminate or dampen the influence of other meteorological variables affecting ozone formation, such as wind direction and wind speed.

Figure 6.1 shows that, over the past twenty years, ozone concentrations at the Chiwaukee Prairie monitor have decreased substantially. In contrast, local temperatures have increased, with the data showing both an increase in the number of hot days and in the average seasonal temperature. This comparison suggests that reductions in emissions, rather than favorable meteorology, led to the long-term reduction in ozone concentrations. Therefore, this analysis suggests that the observed long-term decreases in ozone concentrations, including the more recent nonattainment to attainment year ozone concentrations, are due to the permanent and enforceable reductions in ozone precursor emissions discussed earlier in this section. Similarly, adverse economic conditions cannot account for the downward trends in ozone levels.

Figure 6.1. Comparison of Kenosha County ozone values to temperature (2001-2021). Annual fourth highest maximum daily 8-hour average ozone concentrations plotted with (top) the number of days with temperatures over 80 °F and (bottom) the average May through September temperatures. Dotted lines are best-fit linear regressions.[14]



[14] Ozone data is from the Chiwaukee Prairie air quality monitor. Temperature data is from the Kenosha Wastewater Treatment Plant, obtained from the Midwest Regional Climate Center (MRCC) database.

7. MAINTENANCE PLAN

Section 175A of the CAA sets forth the elements of a maintenance plan for areas seeking redesignation from nonattainment to attainment. The plan must demonstrate continued attainment of the applicable NAAQS for at least ten years after EPA approves a redesignation to attainment. Eight years after the redesignation, the state must submit a revised maintenance plan, which demonstrates attainment for the ten years following the initial ten-year period.

Based on the latest air quality monitoring data, all monitors in the Chicago nonattainment area were at or below the 2008 ozone NAAQS (Section 3). Comparison of nonattainment (2011) and attainment (2019) year inventories showed that attainment of the NAAQS was accompanied by significant reductions in ozone precursor emissions from the nonattainment area (Section 4). These emissions reductions were due to permanent and enforceable measures, many of which will further reduce emissions during the maintenance period (Section 6). In this section, maintenance of the attainment status in the Chicago nonattainment area is demonstrated via reported and projected summer day emissions provided on a sector-specific basis that show continued reductions in emissions during maintenance years. This section also includes contingency measures and commitments to continue monitoring and to revise this maintenance plan.

7.1. Comparison of Attainment and Maintenance Emissions Inventories

Maintenance emission inventory projections are described in Section 4 and summarized in Tables 7.1 and 7.2. The three states in the Chicago nonattainment area have agreed to use 2019 as the representative attainment year inventory.[15] 2035 was chosen as the maintenance year and 2030 was chosen as the interim year.

The forecast maintenance inventories for 2030 and 2035 demonstrate that emissions of NOx and VOCs are projected to decrease in future years relative to the 2019 attainment year for the Chicago nonattainment area (Tables 7.1 and 7.2). Total emissions affecting ozone concentrations from the nonattainment area are projected to decrease 24% for NOx and 9% for VOC from 2019 to 2035. NOx and VOC emissions from the partial Kenosha County area are projected to decrease 14% and 8% during this same period; these emissions make up only 1% to 3% of total emissions from the three-state Chicago nonattainment area. Since the area attained the standard in 2019-2021 and emissions are projected to decrease through 2035, this inventory analysis demonstrates that the Chicago nonattainment area is expected to maintain the 2008 NAAQS for more than ten years into the future.

[15] EPA guidance for redesignation inventories provides the flexibility to use any one of the three years contained in the attainment design value provided emissions from the season selected are found representative in terms of economic conditions, key sector emissions characteristics and weather/ozone conduciveness conditions. 2019 is the first year in the attainment design value period (2019-2021) and also meets the other conditions. This year therefore forms a reasonable basis for assessing the “real and permanent” nature of attainment as required by the act.

Table 7.1. NOx emissions in the Chicago-Naperville, IL-IN-WI, 2008 ozone NAAQS area.

	Total NOx emissions (tposd)				
	2019 attainment year	**2030 interim year**	**2035 maintenance year**	**Net Change (2019-2035)**	
Partial Kenosha County Nonattainment Area					
Point	0.08	0.12	0.12	0.03	(38%)
Area	1.13	0.95	0.96	-0.16	(-15%)
Onroad	1.81	0.85	0.75	-1.06	(-58%)
Nonroad	1.64	1.21	1.21	-0.52	(-31%)
Emission Reduction Credits	7.22	7.22	7.22	0.00	(0.0%)
Total	**11.87**	**10.34**	**10.26**	**-1.62**	**(-14%)**
Kenosha % of Total Area	2.36%	2.57%	2.67%	---	
Total Nonattainment Area					
Point	146.21	171.64	183.39	37.18	(25%)
Area	35.69	35.80	35.94	0.25	(0.7%)
Onroad	171.22	73.13	52.54	-118.68	(-69%)
Nonroad	150.76	118.38	108.71	-42.04	(-28%)
Emission Reduction Credits	7.22	7.22	7.22	0.00	(0.0%)
Total	**511.10**	**406.16**	**387.80**	**-123.30**	**(-24%)**

Table 7.2. VOC emissions in the Chicago-Naperville, IL-IN-WI, 2008 ozone NAAQS area.

	Total VOC emissions (tposd)				
	2019 attainment year	**2030 interim year**	**2035 maintenance year**	**Net Change (2019-2035)**	
Partial Kenosha County Nonattainment Area					
Point	0.19	0.26	0.26	0.07	(38%)
Area	3.58	3.49	3.56	-0.02	(-0.5%)
Onroad	0.89	0.54	0.47	-0.41	(-47%)
Nonroad	0.70	0.63	0.62	-0.08	(-11%)
Emission Reduction Credits	0.37	0.37	0.37	0.00	(0.0%)
Total	**5.72**	**5.28**	**5.29**	**-0.44**	**(-8%)**
Kenosha % of Total Area	1.21%	1.21%	1.24%	---	
Total Nonattainment Area					
Point	56.92	57.87	58.46	1.54	(2.7%)
Area	246.14	242.47	242.02	-4.12	(-1.7%)
Onroad	82.02	46.95	35.83	-46.18	(-56%)
Nonroad	86.42	87.70	90.44	4.03	(4.7%)
Emission Reduction Credits	0.37	0.37	0.37	0.00	(0.0%)
Total	**471.87**	**435.35**	**427.13**	**-44.74**	**(-9.5%)**

7.2. Verification of Continued Attainment

Per EPA's Redesignation Guidance, WDNR will verify continued attainment of the 2008 8-hour ozone NAAQS in the partial Kenosha County area during the maintenance period via continued ozone monitoring. The WDNR, along with IEPA and IDEM, commits to continue monitoring ozone levels in the Chicago nonattainment area and will discuss any changes in siting that may become necessary with EPA Region 5 staff. The WDNR will continue to quality assure the monitoring data to meet the requirements of 40 CFR Part 58 and will enter all data into EPA's AQS database on a timely basis in accordance with federal guidelines. Ozone concentration data will continue to be available on the WDNR's website,[16] providing real-time data and information about any NAAQS exceedances to the public.

In addition, ozone precursor inventories will be prepared for 2020, 2023, 2026, 2029, and 2032 as part of the CAA-required National Emissions Inventory program. These inventories will be compared with the 2019 attainment year inventory and projected 2030 interim and 2035 maintenance year inventories to assess emissions trends, as necessary, to assure continued attainment of the 2008 ozone NAAQS.

[16] See https://airquality.wi.gov/home/map.

7.3. Maintenance Contingent Response Plan

EPA's Redesignation Guidance states that a state's maintenance plan "shall contain such contingency measures as the Administrator deems necessary to ensure prompt correction of any violation of the NAAQS". As part of Wisconsin's maintenance plan for Wisconsin's portion of the Chicago nonattainment area, Wisconsin commits to two separate levels of contingent response to any renewed exceedance and/or violation of the 2008 ozone NAAQS. The first step, a "warning level response", initiates a study to investigate whether the observed exceedance requires further evaluation or action to ensure maintenance going forward. The second step, an "action level response", would identify and implement any needed control measures necessary to ensure maintenance. Wisconsin commits to work with Illinois and Indiana in evaluating and identifying specific measures to be implemented in the event that the 2008 ozone NAAQS is not maintained.

Specifics of Wisconsin's contingency response are as follows.

Warning Level Response

A warning level response would be triggered if an annual (1-year) 4th high monitored concentration is above the level of the 2008 ozone NAAQS (0.075 ppm). A warning level response would initiate a study to determine whether the high ozone concentrations indicate a trend towards higher ozone levels and whether emissions are significantly higher than projected in the maintenance plan. The study would include the following elements:

- An assessment of whether actual emissions have deviated significantly from the emissions projections contained in this maintenance plan for the nonattainment area, along with an evaluation of which sectors and states are responsible for any emissions increases.
- A study of whether unusual meteorological conditions during the high-ozone year led to the high monitored ozone concentrations.

Should it be determined through the warning level study that action is necessary to ensure maintenance, Wisconsin will follow the procedures for control selection and implementation outlined under the action level response below. The warning level study will be completed no later than the beginning of the following summer ozone control period (May 1).

Action Level Response

An action level response would be triggered if a three-year design value exceeds the level of the 2008 ozone NAAQS (0.075 ppm). This response would follow a cooperative study conducted with Illinois and Indiana to determine whether additional control measures are needed to assure attainment and maintenance of the 2008 ozone NAAQS within the maintenance area. This analysis will examine the following factors for the entire maintenance area:

- The level, distribution, and severity of ambient ozone concentrations;
- The weather patterns contributing to ozone levels;
- Potential contributing emissions sources;

- The geographic applicability of possible contingency measures;
- Emission trends, including the impact of existing or forthcoming control measures that have not yet been implemented;
- Current and recently identified control technologies; and
- Air quality contributions from outside the maintenance area.

The selection of emission reduction measures to be implemented will be based upon their potential to reduce ozone concentrations at violating monitors in the nonattainment area, cost-effectiveness, emission reduction potential, economic and social considerations, ease and timing of implementation, and other appropriate factors. When considering these criteria, priority will be given to measures that can be in place within 18 months.

Potential additional control measures are listed below. Because it is not possible to determine what control measures, if any, will be appropriate at an unspecified time in the future, this list is neither comprehensive nor in order of priority.

- Anti-idling control program for mobile sources, targeting diesel vehicles
- Diesel exhaust retrofits
- Traffic flow improvements
- Park and ride facilities
- Rideshare/carpool program
- Expansion of the vehicle emissions testing program

Wisconsin has an extremely limited ability to affect ozone concentrations in the Chicago nonattainment area due to the influence of emissions originating in upwind states. As shown in Tables 7.1 and 7.2, the Wisconsin portion of the nonattainment area contributes less than 3% of total NOx and 2% of total VOC emissions from the entire area. In addition, high ozone events at the controlling Chiwaukee Prairie monitor occur almost exclusively when this site is downwind of the core Chicago nonattainment areas of Illinois and Indiana. As a consequence, additional controls on NOx and VOC emissions from Wisconsin are likely to have very little impact on ozone concentrations in the Chicago nonattainment area. When identifying additional controls for implementation, the state will have to consider the potential of those controls to reduce ozone concentrations at violating monitors in the nonattainment area. Federal regulatory programs may be more appropriate to limit the transport of ozone and its precursors to the Chicago area from upwind states. Examples of such programs include:

- Implementation of any federally promulgated rule regulating transport of ozone precursors.
- Updated federal NOx emission limits for heavy-duty vehicles.
- Updated (Phase 2) federal fuel efficiency standards for medium- and heavy-duty engines and vehicles.
- New federal regulations on the sale of aftermarket catalysts for vehicle catalytic converters.

Should it be determined through the action level study that existing and on-the-way measures are inadequate to return the area to attainment, WDNR will identify and implement candidate control measures as necessary to assure attainment and maintenance of the area within 18 months of

certification of the monitoring data that triggered the action level response. Given the impact of upwind emissions on ozone formation along Wisconsin's Lake Michigan shoreline, WDNR notes that the action level study findings may indicate that additional Wisconsin control measures would do little to help the Chicago area return to and maintain attainment.

The adoption of any additional control measures would be subject to the necessary Wisconsin administrative, legal, and legislative processes. The WDNR would solicit input from interested and affected parties in the area prior to selecting appropriate control measures. This process would include publication of notices, an opportunity for a public hearing, and other measures required by Wisconsin law.

7.4. Commitment to Revise Maintenance Plan

As required by Section 175A(b) of the CAA, WDNR commits to submit to EPA, eight years after redesignation, an additional revision of the SIP. The revision will contain Wisconsin's plan for maintaining the 2008 ozone NAAQS in this area for an additional ten years beyond the first ten-year maintenance period following redesignation.

8. PUBLIC PARTICIPATION

In accordance with section 110(a)(2) of the CAA, WDNR published a notice on the internet on November 1, 2021 stating that it would hold a public hearing on the Redesignation Request and Maintenance Plan for the Wisconsin Portion of the Chicago-Naperville (IL-IN-WI) 2008 8-hour Ozone Nonattainment Area. A notice of availability was also posted on the website. The public hearing will take place on December 1, 2021 and the redesignation request will be available for public comment through December 2, 2021. The WDNR will respond to any public comments received in the version of this document submitted to EPA.

9. CONCLUSIONS

The partial Kenosha County, Wisconsin nonattainment area, along with the rest of the greater Chicago nonattainment area, has attained the 2008 ozone NAAQS. In addition, as described within this document, all applicable provisions of the CAA regarding redesignation to attainment have been met. Therefore, WDNR, on behalf of the State of Wisconsin, hereby requests that EPA redesignate the partial Kenosha County area from nonattainment to attainment for the 2008 ozone NAAQS and approve the associated maintenance plan for the area.

APPENDIX 1

Wisconsin's Infrastructure State Implementation Plan (SIP) for the 2015 Ozone National Ambient Air Quality Standard (NAAQS)

Wisconsin's Infrastructure State Implementation Plan for the 2015 Ozone National Ambient Air Quality Standard (NAAQS)

Introduction

The Wisconsin Department of Natural Resources (DNR) is submitting this SIP revision to confirm that the State of Wisconsin has the authority necessary to evaluate ambient air quality, develop plans to attain and maintain new and existing air quality standards, meet the requirements of the New Source Review (NSR) program, and effectively enforce all applicable requirements. Specifically, the current Wisconsin State Implementation Plan (SIP) contains the resources and authority to implement and satisfactorily complete the requirements set forth in Section 110 of the federal Clean Air Act (CAA), commonly referred to as the "infrastructure SIP," for the 2015 Ozone National Ambient Air Quality Standard (NAAQS).

The SIP elements addressed in this document are required under CAA Sections 110(a)(1) and (2) and in accordance with the U.S. Environmental Protection Agency's (EPA's) guidance on infrastructure SIP elements[1]. Section 110(a)(1) provides the procedural and timing requirements for SIPs. Section 110(a)(2) specifies the basic elements and sub-elements that all SIPs must contain. An opportunity for public comment and hearing will be provided for this certification of SIP authority, in accordance with 40 CFR part 51, appendix V, paragraph 2.1(g), and 40 CFR 51.102.

Required SIP Elements under CAA Section 110(a)(2)

The sections below include descriptions of the required SIP elements excerpted from the EPA guidance on infrastructure SIPs.[1] The italicized text is from the CAA. The DNR response follows each requirement.

1. Element A – Section 110(a)(2)(A): Emission limits and other control measures

Each such plan shall […] include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of this chapter.

The DNR has authority under Chapters 227 and 285, *Wis. Stats*. to create new rules and implement existing emission limits and controls to meet the requirements of Section 110(a)(2)(A). The authority for DNR to develop rules and regulations is found in ss.

[1] Guidance on Infrastructure State Implementation Plan (SIP) Elements under Clean Air Act Sections 110(a)(1) and 110(a)(2), memo from Stephen D. Page to Regional Air Directors, Regions 1-10, September 13, 2013.

227.11(2)(a), 285.11(1), 285.17(1)(a) and 285.21(1)(a), *Wis. Stats*. Section 227.11(2)(a), *Wis. Stats.*, expressly confers rule making authority to an agency. Section 285.11(1) and (6), *Wis. Stats.*, requires that DNR promulgate rules and establish control strategies in order to prepare and implement the SIP for the prevention, abatement and control of air pollution in the state. Section 285.17(1)(a), *Wis. Stats.*, requires DNR to classify sources or categories of sources that may cause or contribute to air pollution. Section 285.21(1)(a), *Wis. Stats.*, requires that DNR promulgate by rule ambient air quality standards that are similar to, but no more restrictive than, the federal NAAQS.

The following current Wisconsin administrative code contains existing emission limits and control requirements that apply to ozone:

- Chapters NR 419 through NR 425, *Wis. Adm. Code*, control VOC as an ozone precursor.
- Chapter NR 428, *Wis. Adm. Code*, controls nitrogen oxides (NOx) as an ozone precursor.

2. Element B – Section 110(a)(2)(B): Ambient air quality monitoring/data system

Each such plan shall […] provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to

(i) monitor, compile, and analyze data on ambient air quality, and

(ii) upon request, make such data available to the Administrator.

The DNR operates a fully-approved air monitoring network in accordance with EPA's ambient air quality monitoring network requirements (40 CFR part 53 and 40 CFR part 58). After the monitoring data has been certified, it is used to determine compliance with the NAAQS. All monitored data is submitted to the EPA's Air Quality System in a timely manner in accordance with 40 CFR part 58. Authority for air monitoring efforts exists under general air pollution duties in s. 285.11, *Wis. Stats*. Funding for Wisconsin's air monitoring network comes from a variety of sources, including from EPA under its Section 103 and 105 grant programs supporting federal monitoring requirements specified in 40 CFR 58.10.

Wisconsin's most recently adopted annual network plan for 2018 was approved by EPA on September 1, 2017. The DNR continues to provide EPA Region 5 notice of any proposals to remove or move monitoring stations in its network plan, pursuant to 40 CFR part 58.10. In addition, DNR actively participates in the development of five-year regional network assessments for EPA Region 5 states; the most recent assessment was completed in 2015.

3. Element C – Section 110(a)(2)(C): Programs for enforcement of control measures and for construction or modification of stationary sources

Each such plan shall […] include a program to provide for the enforcement of the measures described in subparagraph (A), and regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that national ambient air quality standards are achieved, including a permit program as required in parts C and D of this subchapter.

The DNR Air Management and Environmental Enforcement programs work together to ensure compliance with Wisconsin SIP provisions, administrative code, and permit requirements. Authority to enforce violations and to assess penalties is contained in ss. 285.83 and 285.87, *Wis. Stats*. The DNR follows a stepped enforcement process to address violations. The enforcement response ranges from issuance of a Letter of Inquiry (the state counterpart to an EPA "114 request") when additional information is needed to determine compliance or confirm the significance of a violation, up through referral to the Wisconsin Department of Justice for civil or criminal enforcement, as appropriate.

The Environmental Performance Partnership Agreement (EnPPA) between the Wisconsin Air Management Program and EPA Region 5 addresses implementation of the EPA's High Priority Violation (HPV) and Federally Regulated Violations (FRV) policies. The process for prosecution of violations is also addressed in a May 22, 2015 Air Management Program Compliance and Enforcement Memorandum of Understanding (MOU) between EPA Region 5 and the DNR Air Management Program. Consistent with the provisions of this MOU, the two agencies conduct monthly compliance and enforcement conference calls to discuss program issues and specific cases.

The DNR regulates modification and construction of stationary sources through its EPA approved nonattainment NSR, Prevention of Significant Deterioration (PSD), and Title V permit programs under s. 285.11, s. 285.13, s. 285.17, s. 285.19, and ss. 285.60 through 285.69, *Wis. Stats*. The DNR collects revenue dedicated to the implementation of these permit programs through applicable fees under s. 285.69, *Wis. Stats*.

On February 7, 2017, EPA approved revisions to Wisconsin's SIP that meet EPA's requirements for Wisconsin's PSD and NSR program (82 FR 9515). In this action, EPA fully approved the PSD-related infrastructure requirements for previous Wisconsin submittals. In addition, EPA's approval confirmed that Wisconsin's PSD program continues to require that PSD permits (that would otherwise be required based on emissions of pollutants other than greenhouse gases (GHGs)) contain limitations on GHG emissions based on the application of Best Available Control Technology, consistent with the June 23, 2014 U.S. Supreme Court decision in *Utility Air Regulatory Group v. Environmental Protection Agency*, 134 S.Ct. 2427. Wisconsin 2015 Act 33 modified language related to GHGs in ch. NR 405, *Wis. Adm. Code* to reflect the 2014 Supreme Court decision. DNR submitted a request to EPA on November 29, 2017 to incorporate the revised administrative code provision into the state SIP.

4. Elements D(i)(I) and (II) – Section 110(a)(2)(D)(i): Interstate pollution transport

Each such plan shall […] contain adequate provisions:

(i) prohibiting, consistent with the provisions of this subchapter, any source or other type of emissions activity within the state from emitting any air pollutant in amounts which will-

(I) contribute significantly to nonattainment in, or

(II) interfere with maintenance by, any other state with respect to any such national primary or secondary ambient air quality standard, or interfere with measures required to be included in the applicable implementation plan for any other state under part C of this subchapter to prevent significant deterioration of air quality to protect visibility."

The DNR has adopted and implemented all federal programs required to date in addressing transport of NO_X and sulfur dioxide (SO_2) impacting ozone, fine particulate matter ($PM_{2.5}$) and visibility in other states. These programs include the Clean Air Interstate Rule (CAIR), Cross State Air Pollution Rule (CSAPR), CSAPR Update Rule, and all regional haze rule requirements applicable for the 2008-2018 planning period.

In fulfilling CAIR program requirements, Wisconsin adopted ch. NR 432, *Wis. Adm. Code*, in 2007 for the annual distribution of NO_X allowances. The SO_2 CAIR program is implemented through a federal implementation plan (FIP). EPA implemented CSAPR to replace CAIR requirements beginning January 1, 2015. CSAPR and the CSAPR Update are fully implemented through a FIP, and Wisconsin does not have to take any additional actions regarding this rule.

In August 2012, EPA approved Wisconsin's regional haze SIP applicable for the 2008-2018 planning period. This haze SIP satisfied Reasonable Progress Goals required under Subpart P of 40 CFR Part 51 and Best Available Retrofit Technology required under Appendix Y of 40 CFR Part 51.

Wisconsin will continue to work in addressing the transport of pollutants which impede compliance with new and revised NAAQS and will continue regional haze work and planning for the 2018-2028 period and beyond. To do this, Wisconsin has entered into agreements and working relationships with the surrounding states of Illinois, Indiana, Michigan, Ohio and Minnesota through the Lake Michigan Air Directors Consortium (LADCO) to perform air quality assessments and develop control strategies for regional pollutants, such as NO_X and SO_2 ($PM_{2.5}$ precursors). Together, continued implementation of federal regulations and cooperative work with other states will address Wisconsin's transport and regional haze obligations.

If needed, section 285.11, 285.13 and 285.15, *Wis. Stats*., address circumstances where interstate transport reduction agreements between states are needed to resolve SIP

development of cross-boundary nonattainment areas. As detailed in the section addressing Section 110(a)(2)(C), Wisconsin has adequate PSD regulations; these regulations satisfy the PSD-related elements of Section 110(a)(2)(D)(i), as well as those of Section 110(a)(2)(C).

5. Element D(ii) – Section 110(a)(2)(D)(ii): Interstate pollution abatement and international air pollution

Each such plan shall […] contain adequate provisions […] ensuring compliance with the applicable requirements of sections 126 and 115 (relating to interstate and international pollution abatement).

Wisconsin's SIP contains adequate provisions to ensure compliance with Section 126 of the CAA relating to interstate pollution abatement. Neighboring states and tribes are notified regarding new or modified sources per 285.61(5), *Wis. Stats.* No source or sources within Wisconsin are the subject of an active finding under section 126 of the CAA with respect to any NAAQS. There are no final findings under section 115 of the CAA against Wisconsin with respect to ozone.

6. Element E – Section 110(a)(2)(E): Adequate resources and authority, conflict of interest, and oversight of local governments and regional agencies

Each such plan shall […] provide:

(i) necessary assurances that the State (or, except where the Administrator deems inappropriate, the general purpose local government or governments, or a regional agency designated by the State or general purpose local governments for such purpose) will have adequate personnel, funding, and authority under state (and, as appropriate, local) law to carry out such implementation plan (and is not prohibited by any provision of Federal or State law from carrying out such implementation plan or portion thereof),

(ii) requirements that the state comply with the requirements respecting state boards under section 128,

(iii) necessary assurances that, where the State has relied on a local or regional government agency, or instrumentality for the implementation of any plan provision, the State has responsibility for ensuring adequate implementation of such plan provision.

Wisconsin's basic air management duties and authorities are described in s. 285.11, *Wis. Stats*. Funding and personnel for the DNR is provided through the state's biennial budget process. The DNR Air Management Program has several funding sources, including program revenue (fees paid by businesses), tax revenue, and grants (federal and state). There are separate accounts affiliated with the different funding sources to ensure the funding and related personnel are used for the intended purpose.

The primary federal grant the DNR Air Management Program receives is the Section 105 Air Pollution Control Grant. This grant is monitored extensively by EPA; in addition, DNR and EPA negotiate priorities and grant commitments under the EnPPA, which is a two-year agreement itemizing performance measures and outcomes across various funding sources and grants.

Section 128 of the CAA requires that:

a. Any board or body which approves permits or enforcement orders under this chapter shall have at least a majority of members who represent the public interest and do not derive any significant portion of their income from persons subject to permits and enforcement orders under this Act; and

b. Any potential conflicts of interest by members of such board or body or the head of an executive agency with similar powers be adequately disclosed.

Existing Wisconsin state statutes address these CAA Section 128 requirements. Section 15.05, *Wis. Stats.*, vests the administrative powers and duties of DNR in the secretary, including issuance of air permits or enforcement orders. Wisconsin's Natural Resources Board (NRB) functions are purely regulatory, advisory, and policy-making. The NRB cannot approve enforcement orders or permits under the statutes that govern its operations. Section 19.45(2), *Wis. Stats*, prevents financial gain of a public official and Section 19.46, *Wis. Stats*, prevents a public official from taking actions where there is a conflict of interest. The Secretary of DNR is a public official subject to these ethical obligations under ch. 19, *Wis. Stats*.

On February 22, 2016, EPA finalized approval of DNR's SIP revision incorporating ss. 15.05, 19.45(2) and 19.46, *Wis. Stats*. into the Wisconsin SIP to meet Section 128 requirements for state boards.

7. Element F – Section 110(a)(2)(F): Stationary source monitoring and reporting

Each such plan shall […] require, as may be prescribed by the Administrator:

(i) the installation, maintenance, and replacement of equipment, and the implementation of other necessary steps, by owners or operators of stationary sources to monitor emissions from such sources,

(ii) periodic reports on the nature and amounts of emissions and emissions-related data from such sources, and

(iii) correlation of such reports by the state agency with any emission limitations or standards established pursuant to this chapter, which reports shall be available at reasonable times for public inspection."

The DNR requires regulated sources to monitor, keep records, and submit reports dependent on applicable requirements and the type of permit issued. Frequency and requirements for review are incorporated as part of chs. NR 438 and 439, *Wis. Adm. Code*. Emission reports are submitted to meet requirements of Wisconsin's emission statement SIP. Wisconsin has a web-based monitoring, reporting, permits and compliance database called the Wisconsin Air Resources Program to help ensure efficient operation of these functions. Authority for these activities is provided in s. 285.65, *Wis. Stats*. Public inspection of reports is available under Wisconsin's open records law contained in s. 19.35, *Wis. Stats*.

8. Element G – Section 110(a)(2)(G): Emergency powers

Each such plan shall provide for authority comparable to that in section 303 of this Title and adequate contingency plans to implement such authority.

Wisconsin Statute s. 285.85 requires DNR to act upon a finding that episode or emergency conditions exist. This language authorizes DNR to seek immediate injunctive relief in circumstances of substantial danger to the environment or to public health. Air pollution episode levels and episode emission control action programs are codified in ch. NR 493, *Wis. Adm. Code*.

9. Element H – Section 110(a)(2)(H): SIP revisions

Each such plan shall [...] provide for revisions of such plan –

(i) from time to time as may be necessary to take account of revisions of such national primary or secondary ambient air quality standard or the availability of improved or expeditious methods of attaining such standard, and

(ii) except as provided in paragraph (3)(C), whenever the Administrator finds on the basis of information available to the Administrator that the plan is substantially inadequate to attain the national ambient air quality standard which it implements or to otherwise comply with any additional requirements established under this chapter (CAA).

Wisconsin Statute s. 285.11(6) provides DNR the authority to develop a plan for the prevention, abatement and control of air pollution that includes all rules, limits, and regulations necessary to meet NAAQS, which includes responding to any deficiencies that may be identified in these plans, rules, or control strategies.

10. Element I – Section 110(a)(2)(I): Plan revisions for nonattainment areas

Each such plan shall –

(I) in the case of a plan or plan revision for an area designated as a nonattainment area, meet the applicable requirements of part D of this subchapter (relating to nonattainment areas).

According to EPA's interpretation of the CAA, this element is subject to a different submission schedule and will be reviewed and acted upon through a separate process. Therefore, the DNR is not addressing this element in this submission.

11. Element J – Section 110(a)(2)(J): Consultation with government officials, public notification, and PSD and visibility protection

Each such plan shall […] meet the applicable requirements of section 121 of this Title (relating to consultation), section 127 of this Title (relating to public notification), and part C of this subchapter (relating to prevention of significant deterioration of air quality and visibility protection).

The DNR is given the authority in s. 285.13(5), *Wis. Stats.*, to "advise, consult, contract and cooperate with other agencies of the state, local governments, industries, other states, interstate or inter-local agencies, and the federal government, and with interested persons or groups" during the entire SIP revision process and for other elements related to air management for which DNR is the officially-charged agency.

DNR follows an administrative rulemaking process for public input, adoption by the Wisconsin NRB, and legislative review on rule-based SIP revisions for air quality control programs or measures. Non-rule SIP revisions also allow for public review and input under the authority of s. 285.13(1), *Wis. Stats.*, and as required by 40 CFR 51.102. In addition, for any SIP revision not related to a single source, DNR is required under 285.14(2), *Wis. Stats*., to provide the proposed revision to the standing committees of the Wisconsin State Legislature with jurisdiction over environmental matters for their review at least 60 days prior to submittal to EPA and to respond within 15 days to any written comments received from the chairpersons of the committees.

These processes ensure that potentially impacted public entities are identified and have an opportunity to provide input in the SIP development process. In addition, the DNR Air Management Program routinely engages stakeholders (through formal bodies such as the Air Management Study Group, or otherwise) when developing SIP revisions.

As provided for under s. 285.11, *Wis. Stats.*, public notice (such as an air quality advisory) is provided at specified monitoring levels associated with the Air Quality Index as air quality conditions warrant. Public notification is provided through the department's website and through a contracted e-mail subscription service known as "GovDelivery." Wisconsin also actively participates in development of regional air quality forecasts and EPA's AirNow air quality data outreach program.

The DNR's satisfaction of the PSD and visibility requirements of this section have been previously addressed in the section addressing 110(a)(2)(C) and 110(a)(2)(D) requirements. Insofar as those provisions satisfy the applicable requirements of those sections, DNR intends the same provisions to satisfy the applicable requirements of Section 110(a)(2)(J).

12. Element K – Section 110 (a)(2)(K): Air quality modeling and submission of modeling data

"Each such plan shall […] provide for-

(i) the performance of such air quality modeling as the administrator may prescribe for the purpose of predicting the effect on ambient air quality of any emissions of any pollutant for which the Administrator has established a national ambient air quality standard, and

(ii) the submission upon request, of data related to such air quality modeling to the Administrator."

The DNR has the authority and capacity to perform air quality modeling to predict the effect of emissions of pollutants covered by the NAAQS and/or their precursors. The DNR works with LADCO and EPA to perform regional modeling of ozone from consistent emissions inventory and meteorology platforms. This regional modeling supports SIP development for Wisconsin, quantifies interstate pollutant transport contributions, and supports visibility impact assessments. The DNR requires source-specific modeling or modeling-based assessments for permitting for the construction of major sources and some minor sources. The DNR also conducts source-specific modeling for some major and minor operation permits. These authorities reside under ss. 285.11, 285.13 and 285.60-285.69, *Wis. Stats*.

13. Element L – Section 110(a)(2)(L): Permitting fees

Each such plan shall require the owner or operator of each major stationary source to pay to the permitting authority, as a condition of any permit required under this chapter, a fee sufficient to cover –

(i) the reasonable costs of reviewing and acting upon any application for such a permit, and

(ii) if the owner or operator receives a permit for such source, the reasonable costs of implementing and enforcing the terms and conditions of any such permit (not including any court costs or other costs associated with any enforcement action), until such fee requirement is superseded with respect to such sources by the Administrator's approval of a fee program under subchapter Title V of this chapter.

Major stationary sources receive permits under Wisconsin's Title V and NSR programs. The Title V program is funded by emission fees paid by sources and the level of funding is included in the state's biennial budget process. The NSR program is funded by application and review fees that vary based on the type and complexity of the permit. The NSR program fees were revised and effective on January 1, 2011. The annual emission fees for Title V sources were revised and effective on January 1, 2014. Authority for these activities is established under s. 285.69, *Wis. Stats*.

14. Element M – Section 110(a)(2)(M): Consultation and participation by affected local entities

Each such plan shall […] provide for consultation and participation by local political subdivisions affected by the plan.

Consultative authorities and responsibilities are noted in response to Section 110(a)(2)(J) requirements above regarding intergovernmental consultation. The formal public processes used to develop and adopt both rule and non-rule SIP revisions allow for consultation and participation by the public, including local government entities and political subdivisions.

APPENDIX 2

2011 and 2019 Emissions Inventories Documentation

1. Introduction

This appendix provides additional information for the sector-specific nitrogen oxides (NOx) and volatile organic compounds (VOC) tons per ozone season day (tposd) emission estimates in Section 4.2 of the WDNR's Redesignation Request and Maintenance Plan for the Partial Kenosha County, Wisconsin 2008 Ozone NAAQS 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 plan, portable point sources, such as asphalt plants and rock crushers, were reported under nonpoint sources to be consistent with other states. The 2011 and 2019 point source emission inventories were created using 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 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 is one electric generating unit (EGU) point source that operated in the partial Kenosha County 2008 ozone nonattainment area over the period of this request: the Pleasant Prairie coal-fired power plant. For this facility, WDNR used the ozone season NOx emissions divided by the days of reported operation during the ozone season to represent 2011 ozone season day emissions. The 2011 VOC ozone season day emissions were derived by multiplying the facility's ozone season heat input by an average VOC emission rate. There are no 2019 NOx and VOC ozone season day emissions from the Pleasant Prairie power plant because the facility retired in 2018. Appendix 4 provides the detailed methodology used to calculate EGU 2011 ozone season day emissions.

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

The 2011 and 2019 emissions inventories for non-EGU point sources were tabulated using the emissions data reported annually by each facility operator to the WDNR air emissions inventory (AEI). 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 EPA's WebFIRE database. The emission calculations in the AEI also account for any operating control equipment. Appendix 5 provides a list of non-EGU point source emissions by facility identification number (FID) and facility name for 2011 and 2019.

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.

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

Where:

EM = Typical ozone season day emissions in tons per day
Annual = Annual emissions of VOC or NOx 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 WDNR
DPW = Days per week the facility operates, as reported to 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 for emissions inventories associated with the 2015 ozone NAAQS.

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. The nonpoint inventory quantifies emissions collectively. 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.

For the 2011 nonattainment year, nonpoint source emissions inventory estimates were based on the 2011 NEI version 2, except for certain categories as described below. Emission calculation

methodologies used in developing 2011 nonpoint emissions inventory are available in the EPA's 2011 NEI, version 2 Technical Support Document.[2]

For the 2019 attainment year, nonpoint source emissions inventory estimates were based on the data interpolation between the 2016 base year and the 2023 projection year of EPA's 2016 version 1 emissions modeling platform, except for the category "Gasoline Service Stations, Stage II: Total Refueling" as described below. Methodologies used to develop 2016 and 2023 emissions modeling data are available in the EPA's National Emissions Inventory Collaborative Wiki v1 release page.[3]

The WDNR updated EPA 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 EPA 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 Source Classification Code (SCC) cross-walk between nonpoint and their corresponding point source SCCs provided by EPA was used for point source subtraction. 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 the State of Wisconsin is obtained from the U.S. Department of Energy'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.[4]

To update emission estimates for most of the solvent utilization for industrial surface coating categories, the U.S. Census Bureau's employment and county business pattern data were used.[5]

In order to obtain the area source emissions for the partial Kenosha County area, emission estimates for the entire county were allocated to the partial county area based on population data. Kenosha County's population for 2019 was estimated by interpolating between 2013 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 in the partial Kenosha County area as compared to the entire county. For 2011 and 2019, 77% of the county's population was estimated to live in the partial Kenosha County area. Appendix 6 includes table of area source emissions by source category.

[2] https://www.epa.gov/sites/production/files/2015-10/documents/nei2011v2_tsd_14aug2015.pdf.
[3] http://views.cira.colostate.edu/wiki/wiki/10202.
[4] https://www.eia.gov/state/seds/sep_use/notes/use_print.pdf.
[5] https://www.census.gov/programs-surveys/cbp/data.html.

Waste Disposal

For the 2011 NEI, WDNR adopted EPA estimated emissions for waste disposal. However, for this redesignation request, WDNR back-calculated NOx and VOC emissions for waste disposal categories using EPA's 2016 and 2023 emissions modeling estimates. This was done due to a suspected methodology change by EPA (which led to significantly lower NOx and VOC emission estimates) for NOx and VOC emission estimates for these categories after 2011. Back-calculating 2011 emissions from EPA's 2016 and 2023 estimates is assumed to more accurately reflect EPA's updated methodology after 2011.

Residential Grilling

For the 2011 NEI, WDNR adopted EPA estimated emissions for residential grilling. However, for this redesignation request, WDNR back-calculated NOx and VOC emissions for residential grilling category listed under miscellaneous non-industrial not-elsewhere-classified (NEC) using EPA's 2016 and 2023 emissions modeling estimates. This was done due to a suspected methodology change by EPA (which led to significantly lower NOx and VOC emission estimates) for NOx and VOC emission estimates for these categories after 2011. Back-calculating 2011 emissions from EPA's 2016 and 2023 estimates is assumed to more accurately reflect EPA's updated methodology after 2011.

Fuel Combustion-ICI Boilers

For the 2011 NEI, WDNR estimated emissions for industrial, commercial and institutional fuel combustion. However, for this redesignation request, WDNR back-calculated VOC emissions for distillate oil IC engines of both industrial as well as commercial and institutional fuel combustion categories using EPA's 2016 and 2023 emissions modeling estimates. This was done due to a suspected methodology change by EPA, which led to significantly higher VOC emission estimates for these categories after 2011. Back-calculating 2011 emissions from EPA's 2016 and 2023 modeling estimates is assumed to more accurately reflect EPA's updated methodology after 2011.

Residential and Commercial Portable Fuel Containers

For the 2011 NEI, WDNR adopted EPA estimated emissions for residential and commercial portable fuel containers. However, for this redesignation request, WDNR back-calculated VOC emissions for selected SCCs of these categories using EPA's 2016 and 2023 emissions modeling estimates. This was done due to a suspected methodology change by EPA (which led to significantly lower VOC emission estimates) for VOC emission estimates for these categories after 2011. Back-calculating 2011 emissions from EPA's 2016 and 2023 estimates is assumed to more accurately reflect EPA's updated methodology after 2011.

Residential Wood Combustion

For the 2011 NEI, WDNR adopted EPA estimated emissions for residential wood combustion. However, for this redesignation request, WDNR back-calculated VOC emissions for selected SCCs of residential wood combustion using EPA's 2016 and 2023 emissions modeling estimates. The selection was made if there was a significant negative discrepancy from 2011 to 2016 emission estimates for those SCCs. This was done due to a suspected methodology change by EPA (which led to significantly lower VOC emission estimates) for VOC emission estimates for these categories after 2011. Back-calculating 2011 emissions from EPA's 2016 and 2023 estimates is assumed to more accurately reflect EPA's updated methodology after 2011.

Agricultural Livestock Waste

For the 2011 NEI, WDNR adopted EPA estimated emissions for agricultural livestock waste. However, for this redesignation request, WDNR back-calculated VOC emissions for agricultural livestock waste categories using EPA's 2016 and 2023 emissions modeling estimates. This was done due to a suspected methodology change by EPA, which led to significantly higher VOC emission estimates for these categories after 2011. Back-calculating 2011 emissions from EPA's 2016 and 2023 modeling estimates is assumed to more accurately reflect EPA's updated methodology after 2011.

Solvent Utilization: Agricultural Pesticides

For the 2011 NEI, WDNR adopted EPA estimated emissions for agricultural pesticide application. However, for this redesignation request, WDNR back-calculated VOC emissions for this source category using EPA's 2016 and 2023 emissions modeling estimates. The decision was made based on a significant negative discrepancy from 2011 to 2016 emission estimates for SCC 2461850000. This was done due to a suspected methodology change by EPA, which led to significantly lower VOC emission estimates for this category after 2011. Back-calculating 2011 emissions from EPA's 2016 and 2023 estimates is assumed to more accurately reflect EPA's updated methodology after 2011.

Gasoline Service Stations, Stage II: Total Refueling

The WDNR estimated emissions from vehicle refueling at gasoline stations (Stage II refueling) using EPA's MOVES3.0.2 model, using the same inputs used for the onroad modeling.

Beginning in the 1990s, a Stage II vapor recovery program (vapor recovery nozzles at gas pumps) was in effect in nine Wisconsin counties, including Kenosha County. 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.[6] Wisconsin submitted a state implementation plan (SIP) revision removing Stage II requirements, which EPA approved in November 2013. By 2019 most gasoline stations in the nine Wisconsin

[6] 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.

counties had removed or decommissioned their Stage II vapor recovery systems. Because of this significant decrease in Stage II systems from 2011 to 2019, WDNR used different Stage II-related inputs to MOVES3.0.2 for those two years.

To model the effects of a Stage II program, MOVES3.0.2 provides the following two inputs:

- Vapor displacement reductions
- Spillage reductions

The WDNR used a vapor displacement reduction of 56% for 2011. This value is specified in EPA guidance for programs with minimal inspection frequency (less than annual).[7] Because of a near total removal of Stage II systems by the summer of 2019, WDNR used a value of 0% for 2019.

The WDNR used a spillage reduction percentage of 50% for 2011. This percentage is the standard percentage used in the MOVES3.0.2 model for all areas in the United States having a Stage II vapor recovery program. Again, WDNR used a value of 0% for 2019.

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, using travel data developed by the Wisconsin Department of Transportation (WDOT), adjusted the MOVES oswd output emissions to osd emissions, based on the ratio of average day (weekdays and weekends) to weekday travel during the ozone season. The adjustment factors used are 0.9525 for 2011 and 0.9510 for 2019.

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 MOVES, the EPA's recommended mobile source model. The model was run in inventory mode. The version used was MOVES3.0.2, the most recent version of the model, released in September 2021. All estimates were made in accordance with the following EPA technical guidance:

- "MOVES3 Technical Guidance: Using MOVES to Prepare Emission Inventories for State Implementation Plans and Transportation Conformity" (76 pp, November 2020, EPA-420-B-20-052).

The onroad mobile NOx and VOC emissions for the partial Kenosha County area for 2011 and 2019 (as well as the 2030 and 2035 projections) are presented in Appendix 8, separated by

[7] "Procedures for Emission Inventory Preparation; Volume IV: Mobile Sources", Section 3.3.6.1, U.S. EPA, EPA-420-R-92-009, December 1992. The reduction percentages in this document and section are specified for use in the EPA's current technical guidance for the MOVES model: "MOVES3 Technical Guidance: Using MOVES to Prepare Emission Inventories for State Implementation Plans and Transportation Conformity," EPA-420-B-20-052, November 2020.

source type (vehicle class), fuel type and road type. A Table summarizing vehicle activity data presented in Appendix 8 after the emissions tables.[8]

[8] The complete set of inputs to MOVES3.0.2 is too lengthy to include in this document. Electronic copies can be obtained from 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 gubernatorially designated MPO for the Kenosha urbanized area is the Southeastern Wisconsin Regional Planning Commission (SEWRPC). Under state law SEWRPC is responsible for preparing travel and traffic estimates and forecasts within their seven-county region, which includes Kenosha County. SEWRPC maintains transportation network inventory data, including traffic counts by WDOT and local agencies. SEWRPC has developed and validated travel simulation models to estimate and forecast vehicle-miles of travel (VMT) and average speed distributions for their region. SEWRPC also runs the MOVES model for transportation planning and conformity analyses.

On September 23, 2021, SEWRPC provided to WDNR MOVES input files for the partial Kenosha County area for 2011 and 2019 (as well as projections to 2030 and 2035) 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
    - Weekday vs. weekend
    - Month of year

2.3.2 Descriptions of MOVES Modeling Inputs

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

2.3.2.1 Vehicle-Miles of Travel (VMT)

SEWRPC provided WDNR annual VMT data for 2011 and 2019 (as well as projections to 2030 and 2035), broken down by five Highway Performance Monitoring System (HPMS) vehicle classes for all travel in the partial Kenosha County area. The data were obtained from their transportation network inventory data and travel demand model. The WDNR then input those data into MOVES3.0.2 (see Table A2.1).

Table A2.1. Annual VMT Provided by SEWRPC and Input into MOVES3.0.2.

HPMS Vehicle Class	Year	
	2011	2019
Motorcycles	6,774,406	7,067,687
Light Duty Vehicles	943,903,376	1,048,458,574
Buses	2,696,161	2,980,308
Single Unit Trucks	46,068,512	52,184,615
Combination Trucks	33,130,997	38,448,371
TOTAL	**1,032,573,452**	**1,149,139,555**

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. The WDNR has always defined "ozone season" for the mobile sector as the three months of June, July and August. To determine ozone season weekday VMT, WDNR input into MOVES temporal VMT distributions for month-of-year and weekday-vs.-weekend provided by SEWRPC. (SEWRPC developed these distributions from WDOT statewide data.) MOVES3.0.2 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 MOVES3.0.2 is shown in Table A2.2.

Table A2.2. Ozone Season Weekday VMT Output by MOVES3.0.2.

MOVES Vehicle Class	Year	
	2011	2019
Motorcycles	21,263	22,144
Passenger Cars	1,451,618	1,521,353
Passenger Trucks	1,337,252	1,568,135
Light Commercial Trucks	142,562	163,754
Other Buses	4,450	5,025
Transit Buses	1,248	1,532
School Buses	2,697	2,713
Refuse Trucks	1,818	1,488
Single Unit Short-haul Trucks	127,202	145,585
Single Unit Long-haul Trucks	7,624	9,172
Motor Homes	6,235	5,478
Combination Short-haul Trucks	16,491	20,332
Combination Long-haul Trucks	84,374	96,906
TOTAL	**3,204,835**	**3,563,619**

The total ozone season weekday VMT in 2019 is 11.2% greater than the total ozone season weekday VMT in 2011. Annual VMT divided by ozone season weekday VMT equals 322.2 for 2011 and 322.5 for 2019.

2.3.2.2 VMT by Hour of Day

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

2.3.2.3 Vehicle Population

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

Table A2.3. Vehicle Populations Provided by SEWRPC and Output by MOVES3.0.2.

MOVES Vehicle Class	Year	
	2011	2019
Motorcycles	2,999	2,941
Passenger Cars	42,375	43,786
Passenger Trucks	33,570	38,393
Light Commercial Trucks	3,844	4,396
Other Buses	55	54
Transit Buses	16	17
School Buses	90	76
Refuse Trucks	26	24
Single Unit Short-haul Trucks	2,834	3,436
Single Unit Long-haul Trucks	126	152
Motor Homes	339	346
Combination Short-haul Trucks	188	198
Combination Long-haul Trucks	273	339
TOTAL	**86,735**	**94,158**

The total vehicle population in 2019 is 8.6% greater than the total vehicle population in 2011.

2.3.2.4 Average Speed Distribution

SEWRPC provided speed distributions, in MOVES input format, for the partial Kenosha County area, developed from their transportation inventory data and travel simulation models.

2.3.2.5 Vehicle Age Distribution

Year 2011: The WDNR had previously developed local vehicle age distributions for 2014 for five source types: passenger cars, passenger trucks, light commercial trucks, intercity buses and school buses. The EPA default distributions were used for the other eight source types: motorcycles, transit buses and six medium-to-heavy truck classes. The WDNR calculated the local distributions from a file of select fields from the state's registration database of March 2014 provided by the WDOT. The WDNR calculated a 2014 distribution for a seven-county region, including Kenosha County. The WDNR adjusted the 2014 distributions back to 2011 based on differences between the EPA default age distributions for those two years.

Year 2017: Using data from the WDOT registration database as of January 2018, WDNR calculated a new local vehicle age distribution for the year 2017 for all vehicle classes except the two long-haul truck classes (MOVES classes 53 and 62, for which the MOVES default distributions were used). The WDNR calculated a 2017 distribution for a seven-county region including Kenosha County.

Year 2019: The WDNR projected the 2017 vehicle age distribution to 2019 using the methodology presented in the memorandum: "New Method to Project Age Distribution", from Allison DenBleyker, ERG, to Alison Eyth, EPA, dated August 14, 2019. This new method does not attempt to predict any future growth, and only shifts the economic recession "dip" for model years 2009 to 2011 downstream while dampening the recession's effect with increasing calendar year. No other features of the age distribution change, except for minor shifts due to re-normalizing the distribution. EPA used this same methodology to project age distributions to the years 2020, 2023 and 2028 for their 2016 Emissions Modeling Platform.

A comparison of the average vehicle ages from the 2011, 2017 and 2019 age distributions follows:

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

MOVES Vehicle Class	Year		
	2011	2017	2019
Motorcycle	7.28	13.74	13.68
Passenger Car	9.67	9.37	9.31
Passenger Truck	8.18	7.44	7.39
Light Commercial Truck	10.33	10.27	10.21
Other Bus	9.18	11.29	11.12
Transit Bus	10.60	12.33	12.33
School Bus	6.71	7.42	7.37
Refuse Truck	10.64	10.95	11.09
Single Unit Short-haul Truck	11.32	11.14	11.03
Single Unit Long-haul Truck	11.84	11.95	11.78
Motor Home	10.76	15.29	15.24
Combination Short-haul Truck	13.46	13.55	13.48
Combination Long-haul Truck	7.53	10.42	10.42

The following differences between the average ages in 2011 and 2017 should be noted:

- For the light duty classes (passenger car, passenger truck and light commercial truck), the average ages in 2017 are less than those in 2011 because the model years 2009 to 2011 had lower sales than the post-2011 model years.
- For combination long-haul trucks, the average age in 2017 is greater than in 2011 because the model years 2005 to 2007 had high sales.
- For some low-population vehicle classes (especially, motorcycle and motor home) the average age in 2017 is significantly greater than in 2011 because the MOVES default distribution was used for 2011 whereas a local distribution was used for 2017. This bias

produces a slight underestimation of the reduction in onroad emissions from 2011 to 2017.

The average ages in 2019 tend to be slightly less than those in 2017. The reason for this is that the effect of the "recession dip" for model years 2009 to 2011 on lowering the average age diminishes over time.

2.3.2.6 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

SEWRPC provided road type distributions for the partial Kenosha County area developed from their transportation inventory data.

A detailed breakdown of VMT by roadway class by MOVES source type is provided in Appendix 5. The proportion of heavy-duty truck travel is significantly higher on restricted access roadways than on unrestricted access roadways.

2.3.2.7 Fuel Formulation and Supply

The MOVES3.0.2 defaults currently provide the best available fuel data and therefore were used.

2.3.2.8 Vehicle Inspection and Maintenance Program

Kenosha County 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.

2.3.2.9 Meteorology Data

Temperatures conducive to peak ozone formation were assumed for the ozone season weekday modeling. To ensure consistent emission estimates over time, 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 Kenosha County.

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, construction, lawn and garden, locomotive 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 7.

2.4.1 Non-MAR Sources

The 2011 and 2019 nonroad emissions for the non-MAR categories were developed using the EPA's MOVES3.0.2 model.

The only change WDNR made to the MOVES3.0.2 nonroad defaults was an updated monthly distribution of agricultural activity, developed by the Lake Michigan Air Directors Consortium (LADCO) for Wisconsin and other Midwestern states. EPA also used these updated distributions for each Midwestern state for the 2016 emission modeling platform, version 1, and the 2017 NEI.

The model was run for Kenosha County for the months of June, July and August, using the same hot ozone season day temperatures used for the onroad modeling. 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).

The WDNR then allocated the countywide hot ozone season day emissions to the partial Kenosha County area based on surrogates such as population, land area and water area, depending on the category, as described below in section 2.4.4

2.4.2 MAR Sources – Aircraft and Rail Locomotive

To avoid the possibility of inconsistent emissions between years due to methodology changes, WDNR used the same data source for estimating aircraft and rail emissions for all four inventory

years (2011, 2019, 2030 and 2035): the EPA's 2016 emissions modeling platform, version 1 (2016v1 platform). First, emissions for the three months of June, July and August were obtained from the 2016v1 for the years 2016, 2023 and 2028. Then, WDNR divided these emissions by 92 (the number of days in those three months) to obtain ozone season day emissions.

For the year 2011, WDNR calculated emissions by linearly back-calculating from the 2023 and 2016 ozone season day emissions, with the constraint that if the 2016 emissions exceeded the 2023 emissions, the 2011 emissions were set equal to the 2016 emissions. This constraint helps ensure against an overestimation of 2011 emissions.

For the year 2019, WDNR calculated emissions by linearly interpolating between 2016 and 2023 ozone season day emissions.

The resulting ratio of annual emissions to ozone season day emissions is 339.7 to 1 for aircraft and 362.6 to 1 for rail locomotive. These two ratios hold for all years (2011 and 2019, as well as the 2030 and 2035 projection years) and for both pollutants (NOx and VOC).

The allocation of the full county emissions to the partial Kenosha County area is described in section 2.4.4.

2.4.3 MAR Sources – Commercial Marine Vessels

As was done for aircraft and rail, WDNR used the same data source for estimating commercial marine emissions for all four inventory years. In this case, the data source was a May 2020 EPA update to the 2016v1 platform for annual commercial marine emissions in the Great Lakes region for the years 2016 and 2028.

For the year 2011, WDNR calculated emissions by linearly back-calculating from the 2028 and 2016 annual emissions, again with the constraint that if the 2016 emissions were greater than the 2028 emissions, the 2011 emissions were set equal to the 2016 emissions.

For the year 2019, WDNR calculated emissions by linearly interpolating between the 2016 and 2028 annual emissions.

Since the EPA's May 2020 updated emissions did not include monthly emissions, WDNR used earlier monthly estimates in EPA's 2016 emissions modeling platform to develop ratios between annual emissions and ozone season day emissions. Using the same procedures described in section 2.4.2 for aircraft and rail, WDNR determined that ozone season day emissions equal annual emissions divided by the following amounts:

- For category C1 and C2 engines:
    - 208.3 for NOx for all four years (2011, 2019, 2030 and 2035)
    - 206.1 for VOC for all four years (2011, 2019, 2030 and 2035)
- For category C3 engines:
    - 312.1 for NOx for all four years (2011, 2019, 2030 and 2035)
    - 318.7 for VOC for all four years (2011, 2019, 2030 and 2035)

Thus, to estimate ozone season day emissions, WDNR divided the annual emissions by the above amounts.

2.4.4 Allocation of Emissions to the partial Kenosha County area

Given the wide range of nonroad mobile sources, several surrogates were employed to estimate the proportion of countywide emissions in the partial Kenosha County area. The surrogates are described below:

2.4.4.1 Land Area

Based on geographic data for each city and township in Kenosha County, the land area of the partial Kenosha County area comprises 31% of the total county land area. Excluding the City of Kenosha, where no significant agricultural activity occurs, this percentage is 24%.

The nonroad categories allocated to the partial Kenosha County area based on land area are agriculture, logging, oilfields, recreational, and underground mining. The 24% factor was used for agriculture and the 31% factor was used for the other categories. Kenosha County has no emissions from oilfields or underground mining.

2.4.4.2 Population

As described in section 2.2 (Nonpoint (Area) Sources), the percentage of the county's population estimated to live in the partial Kenosha County area is 77% for both 2011 and 2019.

The nonroad categories allocated to the partial Kenosha County area based on this 77% population proportion are: commercial, construction, industrial, and lawn & garden.

2.4.4.3 Water Area

The WDNR obtained water area data from two tables in the MOVES3.0.2 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 Kenosha County, WI_WIB.ALO has 81 square kilometers of water area and WI_WOB.ALO has 25 square kilometers of water area. The 81 square kilometer value for inboard engines contains Lake Michigan waters (56 square kilometers) and 25 square kilometers of water from several inland lakes (of which about one square kilometer is in the partial Kenosha County area). The 25 square kilometer value for outboard engines contains only the water from the inland lakes. Thus, for pleasure craft with inboard engines (56+1)/81 = 70% of the associated water area is in the partial Kenosha County area and for pleasure craft with outboard engines 1/25 = 4% of the associated water area is in the partial Kenosha County area.

The nonroad category allocated to the partial Kenosha County area based on water area is pleasure craft. For pleasure craft with inboard engines, 70% of the full county emissions were allocated to the partial Kenosha County area and for pleasure craft with outboard engines, 4% of the full county emissions were allocated to the partial Kenosha County area.

2.4.4.4 Lake Michigan Shoreline

All (100.0%) of the Lake Michigan shoreline is in the partial Kenosha County area. The nonroad category allocated to the partial Kenosha County area based on Lake Michigan shoreline is commercial marine, since all commercial marine emissions attributable to Kenosha County come from vessels traveling on Lake Michigan past the county. Kenosha County does not have any ports, inland lakes or inland rivers with commercial marine activity.

2.4.4.5 Airport Location

The WDNR obtained countywide annual aircraft emissions from the EPA's February 2020 release of 2017 NEI point source emissions. 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 partial Kenosha County area. The WDNR calculated that the percentage of countywide aircraft emissions in the partial Kenosha County area are:

- 88% for NOx
- 82% for VOC

Thus, aircraft emissions in the partial Kenosha County area are those percentages of the total Kenosha County aircraft emissions.

2.4.4.6 Railroad Link Location

The EPA's 2014 NEI, version 2, provides the location (shape identifier) and the percentage of county rail travel for each link of railway in the United States. The WDNR used these data to estimate the percentage of Kenosha County rail travel within the partial Kenosha County area and assumed these travel percentages would equal the emission percentages. These percentages are 60% for commercial rail and 100% for passenger rail. Based on the rail emissions in the 2017 NEI, the weighted-average percentages for all rail emissions are 63% for NOx and 64% for VOC. The WDNR assumed these weighted-average percentage to hold for all four inventory years (2011, 2019, 2030 and 2035).

Thus, rail locomotive emissions in the partial Kenosha County area are those percentages of the total Kenosha County rail locomotive emissions.

For railroad maintenance emissions, 100% of the countywide emissions are assumed to be in the partial Kenosha County area since no railyards exist in Kenosha County outside of that area.

APPENDIX 3

2030 and 2035 Emissions Projections Documentation

This appendix provides additional information for the sector-specific nitrogen oxides (NOx) and volatile organic compounds (VOC) tons per ozone season day (tposd) emission estimates in Section 4.3 of WDNR's Redesignation Request and Maintenance Plan for the Partial Kenosha County, Wisconsin 2008 Ozone NAAQS Nonattainment Area.

1. EGU Inventory Methodology for 2030 and 2035

See Appendix 4 for the projection methodology related to electric generating units (EGUs).

2. Point Non-EGU Inventory Methodology for 2030 and 2035

Non-EGU point source emissions are projected for 2030 and 2035 by applying growth factors to the 2019 base year inventory, as well as considering new and modified sources. A detailed description of the methodology is provided below, and a list of sources with the applied growth rates and calculated emissions is provided in Appendix 5.

2.1 Growth Factors from AEO 2020 for Existing Sources

Non-EGU point source projected 2030 and 2035 emissions were derived by applying growth factors to the 2019 base year inventory. Growth factors were developed from Annual Energy Outlook (AEO) 2020 industry-specific energy consumption data, summarized in Table A2.1. Growth in energy consumption was assumed to correspond linearly with growth in emissions. A second step in projecting emissions – accounting for potential emissions increases resulting from the modification of existing sources or the installation of new sources – is described in section 2.2 below.

Table A3.1. Growth Factors from AEO 2020 Used for Projecting Wisconsin Non-EGU Point Source Emissions for the Partial Kenosha County Area.

NAICS	NAICS Description	AEO Industrial or Commercial Sub-sector	AEO Energy Consumption (trillion Btu) [1]			Growth Factors (from 2017) [2]	
			2019	2030	2035	2030 GF	2035 GF
323111	Printing and Related Support Activities	Paper Industry	1483	1565	1571	1.06	1.06
322222	Paper Bag and Coated and Treated Paper Manufacturing	Paper Industry	1483	1565	1571	1.06	1.06
326112	Plastics Packaging Film and Sheet (including Laminated) Manufacturing	Other Manufacturing - Plastics	456	555	573	1.22	1.26
332722	Fabricated Metal Product Manufacturing	Metals Based Durables	350	363	379	1.04	1.08
332322	Fabricated Metal Product Manufacturing	Metals Based Durables	350	363	379	1.04	1.08

331513	Foundries	Iron and Steel Industries	1321	1161	1108	0.88	0.84
335921	Electrical Equipment, Appliance, and Component Manufacturing	Industrial Sector Macroeconomic Indicators - Electrical Equipment	130	220	255	1.69	1.96
335210	Small Electrical Appliance Manufacturing	Industrial Sector Macroeconomic Indicators - Electrical Equipment	130	220	255	1.69	1.96
311421	Food Manufacturing	Food Industry	1154	1286	1345	1.11	1.17
31121	Flour Milling and Malt Manufacturing	Food Industry	1154	1286	1345	1.11	1.17
622110	General Medical and Surgical Hospitals	East North Central	2782	3266	2904	1.17	1.04
6221	General Medical and Surgical Hospitals	East North Central	2782	3266	2904	1.17	1.04
611310	Colleges, Universities, and Professional Schools	East North Central	2782	3266	2904	1.17	1.04
611310	Colleges, Universities, and Professional Schools	East North Central	2782	3266	2904	1.17	1.04
325510	Paint, Coating and Adhesive Manufacturing	Bulk Chemical Industry Energy Consumption	7546	9850	10481	1.31	1.39
424690	Other Chemical and Allied Products Merchant Wholesalers	Bulk Chemical Industry Energy Consumption	7546	9850	10481	1.31	1.39
331523	Foundries	Aluminum Industry	219	222	226	1.02	1.03
221320	Sewage Treatment Facilities					1	1

[1] Source: http://www.eia.gov/forecasts/aeo/index.cfm.

[2] Growth factors for the entire 2019-2030 and 2019-2035 periods were calculated by dividing the 2030 or 2035 energy consumption values by the 2019 energy consumption value. If energy consumption values were not available from AEO for a NAICS category, a growth factor of 1.00 (i.e., no growth) was applied.

[3] For General Medical and Surgical Hospitals, the values for "natural gas" and "distillate fuel oil" from Energy Information Administration (EIA) were added together.

[4] For Electrical Equipment, Appliance, and Component Manufacturing, the same values were used as Fabricated Metal Product Manufacturing.

2.2. Modified and New Source Emissions

Section 172(c)(4) of the Clean Air Act (CAA) requires identification and quantification of potential emissions from new or modified sources when developing emission inventories for attainment and maintenance purposes. The point source emissions inventory described in section 2.1 above includes projections of emissions growth determined by applying general regional growth factors. However, this methodology alone does not distinguish emissions associated with modified and new sources. Therefore, as a second step the WDNR reviewed permitting actions for sources in the partial Kenosha County area from 2016 to 2020 (five years). A summary of the permitting activity and associated potential emissions is shown in Table A3.2. The resulting emissions from this exercise are added to the projected emissions for *existing* point source non-EGU, to yield the *total* projected point source non-EGU emissions for 2030 and 2035 found in section 4.3 of the redesignation request (see also Appendix 5, Table A5.2 for the addition of new/modified sources to existing sources). This approach may add emissions which overlap with existing source grown emissions, but it provides a more conservative estimate of future emissions. It should be noted that this future projection of emissions does not limit the amount of future emissions allowed from modified and new sources.

Table A3.2. Permitting Actions for Existing Source and New Emission Sources in the Partial Kenosha County Area – 2014 to 2018.

Construction Permit Class	Year	Potential Emissions Increase (TPY)		Estimated Daily Average (TPOSD) [1]		Project Description	Construction Permit #
		NOx	VOC	NOx	VOC		
Minor action [2]	2016	0	10	0.000	0.027	Replacement of an existing 2,200 gal mixing tank with a 10,000 gal tank.	16-RSG-208-EXM
Minor action [2]	2017	0	0	0.000	0.000	N/A	
Minor action [2]	2018	0	0	0.000	0.000	N/A	
Minor action [2]	2019	0	0	0.000	0.000	N/A	
Minor action [2]	2020	0	0	0.000	0.000	N/A	
Total		**0.00**	**10.0**	**0.00**	**0.027**		

[1] Daily ozone season emissions are calculated by dividing annual potential emissions by 365 days which assumes the facilities are accomplishing all throughput during the whole week.

[2] A minor action is a permitting action that falls below the major source threshold for PSD minor sources, or the significant emissions increase threshold of 40 TPY for PSD major sources.

3. Area Source Inventory Methodology for 2030 and 2035

EPA's 2016 Emissions Modeling Platform, Version 1 includes base year 2016 and projections for the years 2023 and 2028.[1] Wisconsin's 2030 and 2035 area source emissions were estimated primarily by extrapolating EPA's 2016, 2023 and 2028 modeling inventories. The exception is that WDNR staff projected emissions from vehicle refueling at gasoline stations (Stage II refueling) using EPA's MOVES3.0.2 model with the same inputs used for the onroad modeling.

As was done for Stage II refueling emissions for 2011 and 2019, WDNR adjusted weekday emissions from MOVES3.0.2 to average day (weekdays and weekends) emissions, based on the ratio of average day to weekday travel, resulting in adjustment factors of 0.9485 for 2030 and 0.9480 for 2035. Also, as was done for 2019, no Stage II vapor recovery program was modeled for 2030 and 2035. Owing to most vehicles now having their own vapor recovery system (on-board refueling vapor recovery or ORVR), Stage II controls at the pump are largely redundant or even counter-productive. Wisconsin submitted a SIP revision removing Stage II requirements, and EPA approved the revision in November 2013. Even without a Stage II program in 2019 and the projection years, emissions from Stage II refueling steadily decrease from 2011 to 2035, owing to the larger percentage of vehicles having ORVR.

In order to obtain the areas source emissions for the partial Kenosha County area, emission estimates for the entire county were allocated to the partial county area based on population data. The Kenosha County population data projections for 2030 and 2035 from the Wisconsin Department of Administration were used to calculate the emission estimates. The partial-county population was identified based on the relative population of the Minor Civil Divisions in the partial Kenosha County area compared with the entire county. For both 2030 and 2035, the percentage of the county population estimated to live in the partial Kenosha area was 77%. Appendix 6 includes tables of projected area source emissions for the partial Kenosha County area by source category.

[1] https://www.epa.gov/air-emissions-modeling/2016v1-platform

4. Onroad Inventory Methodology for 2030 and 2035

As was done for the 2011 and 2019 emissions, the 2030 and 2035 projected onroad emissions were developed using the MOVES3.0.2 model. Unless otherwise stated in this section, the methodology WDNR used for 2030 and 2035 is the same methodology WDNR used for years 2011 and 2019, as described in Appendix 2, section 2.3.

SEWRPC provided WDNR the same suite of MOVES inputs they provided for 2011 and 2019 for the two projection years of 2030 and 2035

The resulting annual VMTs that WDNR entered into MOVES3.0.2 and the ozone season weekday VMTs output by MOVES3.0.2 are shown in the following two tables:

Table A3.3. Annual VMT Provided by SEWRPC and Input into MOVES3.0.2.

HPMS Vehicle Class	Year			
	2011	2019	2030	2035
Motorcycles	6,774,406	7,067,687	7,918,696	8,284,849
Light Duty Vehicles	943,903,376	1,048,458,574	1,169,531,905	1,225,358,642
Buses	2,696,161	2,980,308	3,328,975	3,486,066
Single Unit Trucks	46,068,512	52,184,615	58,191,120	60,971,304
Combination Trucks	33,130,997	38,448,371	42,568,178	44,707,493
TOTAL	**1,032,573,452**	**1,149,139,555**	**1,281,538,874**	**1,342,808,355**

Table A3.4. Ozone Season Weekday VMT Output by MOVES3.0.2.

MOVES Vehicle Class	Year			
	2011	2019	2030	2035
Motorcycles	21,263	22,144	24,765	25,912
Passenger Cars	1,451,618	1,521,353	1,685,042	1,748,777
Passenger Trucks	1,337,252	1,568,135	1,756,861	1,855,545
Light Commercial Trucks	142,562	163,754	183,995	194,265
Other Buses	4,450	5,025	5,617	5,853
Transit Buses	1,248	1,532	1,673	1,784
School Buses	2,697	2,713	3,054	3,195
Refuse Trucks	1,818	1,488	1,705	1,762
Single Unit Short-haul Trucks	127,202	145,585	162,178	169,843
Single Unit Long-haul Trucks	7,624	9,172	10,270	10,815
Motor Homes	6,235	5,478	6,058	6,388
Combination Short-haul Trucks	16,491	20,332	22,625	23,671
Combination Long-haul Trucks	84,374	96,906	107,290	112,721
TOTAL	**3,204,835**	**3,563,619**	**3,971,134**	**4,160,529**

The total ozone season weekday VMT increases by 11.2% from 2011 to 2019, increases by 11.4% from 2019 to 2030, and increases by 4.8% from 2030 to 2035. In terms of annual VMT growth rates, these rates are 1.34% from 2011 to 2019, 0.99% from 2019 to 2030, and 0.94% from 2030 to 2035.

Annual VMT divided by ozone season weekday VMT equals 322.2 for 2011, 322.5 for 2019, and 322.7 for both 2030 and 2035.

The vehicle populations for each of the years are:

Table A3.5. Vehicle Populations Provided by SEWRPC and Output by MOVES3.0.2.

MOVES Vehicle Class	Year			
	2011	**2019**	**2030**	**2035**
Motorcycles	2,999	2,941	3,382	3,635
Passenger Cars	42,375	43,786	48,470	50,017
Passenger Trucks	33,570	38,393	43,088	45,249
Light Commercial Trucks	3,844	4,396	4,934	5,182
Other Buses	55	54	58	60
Transit Buses	16	17	18	19
School Buses	90	76	83	86
Refuse Trucks	26	24	26	26
Single Unit Short-haul Trucks	2,834	3,436	3,693	3,736
Single Unit Long-haul Trucks	126	152	164	166
Motor Homes	339	346	372	377
Combination Short-haul Trucks	188	198	204	207
Combination Long-haul Trucks	273	339	349	355
TOTAL	**86,735**	**94,158**	**104,841**	**109,115**

The total vehicle population increases by 8.6% from 2011 to 2019, increases by 11.3% from 2019 to 2030, and increases by 4.1% from 2030 to 2035. In terms of annual population growth rates, these rates are 1.03% from 2011 to 2019, 0.98% from 2019 to 2030, and 0.80% from 2030 to 2035.

The WDNR projected the 2017 vehicle age distribution to 2030 and 2035 using the methodology done to project to 2019, which is described in section 2.3.2.5 in Appendix 2. Table A3.6 presents the resulting average vehicle ages for all four inventory years as well as for 2017.

Table A3.6. Average Vehicle Ages (years old).

MOVES Vehicle Class	Year				
	2011	2017	2019	2030	2035
Motorcycle	7.28	13.74	13.68	13.46	13.48
Passenger Car	9.67	9.37	9.31	9.29	9.30
Passenger Truck	8.18	7.44	7.39	7.44	7.45
Light Commercial Truck	10.33	10.27	10.21	10.18	10.20
Other Bus	9.18	11.29	11.12	10.75	10.84
Transit Bus	10.60	12.33	12.33	12.33	12.33
School Bus	6.71	7.42	7.37	7.38	7.39
Refuse Truck	10.64	10.95	11.09	10.59	10.72
Single Unit Short-haul Truck	11.32	11.14	11.03	10.83	10.90
Single Unit Long-haul Truck	11.84	11.95	11.78	11.58	11.55
Motor Home	10.76	15.29	15.24	14.92	14.96
Combination Short-haul Truck	13.46	13.55	13.48	13.46	13.46
Combination Long-haul Truck	7.53	10.42	10.42	10.42	10.42

Emissions for 2030 and 2035 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 assumed to remain in effect for 2030 and 2035.

Detailed listing of the projected onroad emissions and activity data are provided in Appendix 8.

5. Nonroad Inventory Methodology for 2030 and 2035

The methodology for the 2030 and 2035 projected nonroad emissions is parallel to the methodology used to determine the 2011 and 2019 estimates, as described in Appendix 2, section 2.4.

For all source categories except commercial marine, aircraft and rail locomotive (MAR), the nonroad component of the MOVES3.0.2 model was run for Kenosha County at hot ozone season day temperatures. As was done for 2011 and 2019, the only change made to the MOVES3.0.2 nonroad defaults was an updated monthly distribution of agricultural activity, developed by the Lake Michigan Air Directors Consortium (LADCO). The MOVES3.0.2 model's default growth projections were assumed.

For aircraft and rail locomotive, WDNR calculated emissions for 2030 and 2035 by linearly extrapolating from the 2023 and 2028 ozone season day emissions derived from the EPA's 2016 emissions modeling platform, version 1, with the constraint that if the 2028 emissions were less than the 2023 emissions, the 2030 and 2035 emissions were set equal to the 2028 emissions. The intent of this constraint is to avoid an underestimation of 2030 and 2035 emissions.

For commercial marine, WDNR calculated emissions for 2030 and 2035 by linearly extrapolating from the ozone season day emission values for the years 2016 and 2028 derived from the EPA's May 2020 updated commercial marine estimates in EPA's 2016 emissions modeling platform, version 1, again with the constraint that if 2028 emissions were less than 2016 emissions, the 2030 and 2035 emissions were set equal to the 2028 emissions.

In allocating the full Kenosha County emissions to the partial Kenosha County area, the adjustment factors did not change from those used for 2011 and 2019. In particular, the population adjustment factor was 77% for all four inventory years, consistent with the allocation done for area sources as described in section 3 of Appendices 2 and 3.

Detailed listings of the projected nonroad emissions for over 200 subcategories are provided in Appendix 7.

APPENDIX 4

EGU Point Source Emissions for

for 2011, 2019, 2030 and 2035

This appendix provides the methodology for calculating electric generating unit (EGU) sector nitrogen oxides (NOx) and volatile organic compounds (VOC) tons per ozone season day (tposd) emission estimates in Section 4.2 and Section 4.3 of WDNR's Redesignation Request and Maintenance Plan for the Partial Kenosha County 2008 Ozone NAAQS Nonattainment Area.

The Pleasant Prairie coal-fired power plant retired in 2018 and was the only EGU point source facility located in the partial Kenosha County nonattainment area. The NOx emissions and days of operation for 2011 for the generating units at Pleasant Prairie were derived from data reported by the utility to EPA's Clean Air Markets Division (CAMD) database. For each unit, WDNR used the ozone season (i.e., May 1 through September 30) NOx emissions divided by the days of reported operation during the ozone season to represent ozone season day emissions. This data and the tposd emissions calculated from this data are provided in Table A4.1. The NOx emissions were 8.71 tposd in 2011. It should be noted that the Pleasant Prairie power plant operated selective catalytic reduction (SCR) since 2006 for controlling NOx emissions.

The VOC ozone season day emissions for 2011 for Pleasant Prairie were derived by multiplying the facility's ozone season heat input by an average VOC emission rate for 2011. The base data used in the calculation and the resulting emissions are provided in Table A4.1. In this case, VOC emissions are not monitored by continuous emissions monitors and reported to the CAMD database as is done for NOx. Therefore, the VOC emission rate was derived by dividing the facility's annual VOC emissions reported to the WDNR Air Emissions Inventory (AEI) by the facility's annual heat input reported to the CAMD database. The data applied in deriving the VOC emission rate are shown in Table A4.2. Multiplying the VOC emission rate for 2011 by the ozone season heat input then dividing by the days of reported operation during the ozone season resulted in 0.38 tposd of VOC in 2011.

Note: emissions from non-electric generating emission units at the plant (i.e., units other than the two coal boilers) are not included because they are insignificant (less than 0.1% of the total plant emissions on a tons per year basis) compared to the boiler emissions.

Table A4.1. Pleasant Prairie Ozone Season Day Operation and Emissions.

Variable	2011		2019		2030	2035
	B20	B21	B20	B21	B20&B21	B20&B21
Ozone Season NOx (tons)[1]	531.1	522.8	Retired		Retired	Retired
# of Ozone Season Days Reported[1]	123	119				
NOx (tposd)	4.32	4.39				
NOx Control	SCR	SCR				
VOC Rate (lbs/mmBtu)[2]	0.0033					
Ozone Season Heat Input (mmBtu)[3]	31,500,945					
# of Ozone Season Days Reported[1]	138					
VOC (tpsod)	0.38					

SCR = Selective Catalytic Reduction

[1] Data reported to EPA CAMD database. "Ozone Season" is defined here as May 1 through September 30.

[2] Calculated in Table 2.2.

[3] Data reported to EPA CAMD database for boilers B20 and B21 combined. "Ozone Season" is defined here as May 1 through September 30.

Table A4.2. Pleasant Prairie VOC Annual Emissions and Emission Rates.

Variable	2011	2019	2030	2035
Annual VOC (tons)[1]	123.6	Retired	Retired	Retired
Annual Heat Input (mmBtu)[2]	75,084,093			
VOC Rate (lbs/mmBtu)[3]	0.0033			

[1] Emissions reported to WDNR AEI.
[2] Heat input reported to EPA CAMD database for boilers B20 and B21 combined.
[3] Calculated by the equation (Annual VOC tons x 2000 lbs/ton) / Annual Heat Input (mmBtu).

APPENDIX 5

Non-EGU Point Source Emissions for 2011, 2019, 2030 and 2035

This appendix provides a list of the point source non-electric generating unit (non-EGU) tons per ozone day (tposd) emissions by facility identification number (FID) and facility name for 2011, 2019, 2030 and 2035 in the partial Kenosha County area. The sums of nitrogen oxides (NOx) and volatile organic compounds (VOC) emissions from these facilities were used for the non-EGU sector NOx and VOC tposd emission estimates in Section 4.2 and Section 4.3 of WDNR's Redesignation Request and Maintenance Plan for the Partial Kenosha County 2008 Ozone NAAQS Nonattainment Area.

Table A5.1 2011 and 2019 Point Non-EGU Emissions for the Partial Kenosha County 2008 Ozone NAAQS area.[1,2]

FID	Facility Name	NAICS	Pollutant	2011 (tposd)	2019 (tposd)	2011 (tons)	2019 (tons)
230008350	KENOSHA STEEL CASTINGS	230008350	NOx	0.0092	0.0042	2.13	0.78
230009450	OCEAN SPRAY CRANBERRIES INC	230009450	NOx	0.017	0.0018	8.83	9.01
230012530	LAMINATED PRODUCTS INC	230012530	NOx	0.0013	Shut down	0.43	Shut down
230035410	BALCAN USA INC. (Mondi Akrosil LLC)	230035410	NOx	0.014	0.013	0.63	4.76
230058180	WI DOA / UW-PARKSIDE POWER PLANT	230058180	NOx	0.0096	0.0087	5.87	5.51
230059280	FROEDTERT SOUTH PLEASANT PRAIRIE HOSPITAL (St. Catherines Medical Center Campus/UHSI	230059280	NOx	0.012	0.017	4.26	5.30
230072040	RUST - OLEUM CORP	230072040	NOx	0.0041	0.0072	1.50	2.10
230094590	FROEDTERT SOUTH KENOSHA HOSPITAL (Kenosha Medical Center Campus)	230094590	NOx	0.011	0.0099	3.81	2.07
230099100	CARTHAGE COLLEGE	230099100	NOx	0.012	0.012	4.49	9.12
230105590	SHILOH - PLEASANT PRAIRIE	230105590	NOx	Not reporting	Not reporting	Not reporting	Not reporting
230141780	ARDENT MILLS LLC	230141780	NOx	0.00	0.00	0.01	0.01
230167520	IEA INC - KENOSHA	230167520	NOx	0.0006	Not reporting	0.29	Not reporting
230198760	KKSP PRECISION MACHINING LLC	230198760	NOx	0.00007	0.00007	0.07	0.04
230167630	INSINKERATOR	230167630	NOx	Not reporting	0.00004	Not reporting	0.06
230002960	KENOSHA WASTEWATER TREATMENT FACILITY	230002960	NOx	Not reporting	9.50E-03	Not reporting	3.69
230008350	KENOSHA STEEL CASTINGS	331513	VOC	0.053	0.047	15.7	9.07
230009450	OCEAN SPRAY CRANBERRIES INC	311421	VOC	0.0032	0.0034	1.32	1.43
230012530	LAMINATED PRODUCTS INC	N/A	VOC	0.013	Shut down	3.29	Shut down
230035410	BALCAN USA INC. (Mondi Akrosil LLC)	322222	VOC	0.016	0.0022	0.69	0.79
230058180	WI DOA / UW-PARKSIDE POWER PLANT	611310	VOC	0.0005	0.0005	0.32	0.3

FID	Facility Name	NAICS	Pollutant	2011 (tposd)	2019 (tposd)	2011 (tons)	2019 (tons)
230059280	FROEDTERT SOUTH PLEASANT PRAIRIE HOSPITAL (St. Catherines Medical Center/UHSI)	6221	VOC	0.0006	0.0009	0.22	0.32
230072040	RUST - OLEUM CORP	325510	VOC	0.046	0.015	14.6	5.47
230094590	FROEDTERT SOUTH KENOSHA HOSPITAL (Kenosha Medical Center Campus)	622110	VOC	0.0006	0.0006	0.23	0.2
230099100	CARTHAGE COLLEGE	611310	VOC	0.0007	0.0006	0.25	0.24
230105590	SHILOH - PLEASANT PRAIRIE	331523	VOC	Not reporting	Not Reporting	Not reporting	Not Reporting
230117580	RESIDEO TECHNOLOGIES INC. (Honeywell Automation and Control Solutions)	335921	VOC	0.0046	0.0051	1.2	1.46
230134960	LMI PACKAGING SOLUTIONS	323111	VOC	0.021	0.025	6.52	8.93
230141780	ARDENT MILLS LLC	31121	VOC	0.00	0.00	0.0004	0.00046
230167520	IEA INC - KENOSHA	332322	VOC	0.013	Not reporting	3.94	Not reporting
230198760	KKSP PRECISION MACHINING LLC	332722	VOC	0.063	0.0022	16.4	0.57
230167630	INSINKERATOR	335210	VOC	Not reporting	0.009	Not reporting	2.42
230153000	PPC INDUSTRIES	326112	VOC	Not reporting	0.05	Not reporting	18.2
230200190	EMCO CHEMICAL DISTRIBUTORS INC.	424690	VOC	Not reporting	0.027	Not reporting	8.45
230002960	KENOSHA WASTEWATER TREATMENT FACILITY	221320	VOC	Not reporting	0.0004	Not reporting	0.14
TOTAL			**NOX**	**0.09**	**0.08**	**32.32**	**42.45**
			VOC	**0.24**	**0.19**	**64.65**	**57.99**

[1] Tons per ozone season day (tposd) emissions were calculated by Wisconsin air emissions inventory using the 3rd quarter operation information.
[2] According to Wisconsin State 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 A5.2 2030 and 2035 Point Non-EGU Emissions for the Partial Kenosha County 2008 Ozone NAAQS area.[1]

FID	Facility Name	NAICS	Pollutant	2030 (tposd)	2035 (tposd)	2030 (tons)	2035 (tons)
230008350	KENOSHA STEEL CASTINGS	230008350	NOx	0.004	0.004	0.685	0.654
230009450	OCEAN SPRAY CRANBERRIES INC	230009450	NOx	0.002	0.002	10.037	10.501
230012530	LAMINATED PRODUCTS INC	230012530	NOx	N/A	N/A	N/A	N/A
230035410	BALCAN USA INC. (Mondi Akrosil LLC)	230035410	NOx	0.014	0.014	5.023	5.041
230058180	WI DOA / UW-PARKSIDE POWER PLANT	230058180	NOx	0.010	0.009	6.469	5.752
230059280	FROEDTERT SOUTH PLEASANT PRAIRIE HOSPITAL (St. Catherines Medical Center Campus/UHSI)	230059280	NOx	0.020	0.018	6.222	5.532
230072040	RUST - OLEUM CORP	230072040	NOx	0.009	0.010	2.741	2.917
230094590	FROEDTERT SOUTH KENOSAH HOSPITAL (Kenosha Medical Center Campus)	230094590	NOx	0.012	0.010	2.430	2.161
230099100	CARTHAGE COLLEGE	230099100	NOx	0.014	0.013	10.707	9.520
230105590	SHILOH - PLEASANT PRAIRIE	230105590	NOx	0.0265	0.0268	10.1	10.2
230141780	ARDENT MILLS LLC	230141780	NOx	0.0	0.0	0.009	0.010
230167520	IEA INC - KENOSHA	230167520	NOx	0.00000084	0.00000088	0.00022	0.00023
230198760	KKSP PRECISION MACHINING LLC	230198760	NOx	0.000073	0.000076	0.041	0.043
230167630	INSINKERATOR	230167630	NOx	0.000042	0.000045	0.064	0.068
230002960	KENOSHA WASTEWATER TREATMENT FACILITY	230002960	NOx	0.0095	0.010	3.690	3.690
230008350	KENOSHA STEEL CASTINGS	331513	VOC	0.0413	0.0394	7.97	7.60
230009450	OCEAN SPRAY CRANBERRIES INC	311421	VOC	0.00379	0.00396	1.59	1.67

FID	Facility Name	NAICS	Pollutant	2030 (tposd)	2035 (tposd)	2030 (tons)	2035 (tons)
230012530	LAMINATED PRODUCTS INC	N/A	VOC	N/A	N/A	N/A	N/A
230035410	BALCAN USA INC. (Mondi Akrosil LLC)	322222	VOC	0.00232	0.00233	0.83	0.84
230058180	WI DOA / UW-PARKSIDE POWER PLANT	611310	VOC	0.000585	0.00052	0.35	0.31
230059280	FROEDTERT SOUTH PLEASANT PRAIRIE HOSPITAL (St. Catherines Medical Center)	6221	VOC	0.00105	0.000936	0.37	0.33
230072040	RUST - OLEUM CORP	325510	VOC	0.0196	0.0208	7.14	7.60
230094590	FROEDTERT SOUTH KENOSHA HOSPITAL (Kenosha Medical Center Campus)	622110	VOC	0.000702	0.000624	0.23	0.21
230099100	CARTHAGE COLLEGE	611310	VOC	0.000702	0.000624	0.28	0.25
230105590	SHILOH - PLEASANT PRAIRIE	331523	VOC	0.00704	0.00711	2.58	2.61
230117580	RESIDEO TECHNOLOGIES INC. (Honeywell Automation and Control Solutions)	335921	VOC	0.00541	0.0054	1.55	1.65
230134960	LMI PACKAGING SOLUTIONS	323111	VOC	0.0264	0.0264	9.42	9.46
230141780	ARDENT MILLS LLC	31121	VOC	0.00000	0.00000	0.00051	0.00054
230167520	IEA INC - KENOSHA	332322	VOC	0.0105	0.0109	3.42	3.57
230198760	KKSP PRECISION MACHINING LLC	332722	VOC	0.00228	0.00238	0.59	0.62
230167630	INSINKERATOR	335210	VOC	0.00954	0.0102	2.57	2.73
230153000	PPC INDUSTRIES	326112	VOC	0.0609	0.0629	22.17	22.89
230200190	EMCO CHEMICAL DISTRIBUTORS INC.	424690	VOC	0.0352	0.0375	11.03	11.74
230002960	KENOSHA WASTEWATER TREATMENT FACILITY	221320	VOC	0.00040	0.0004	0.14	0.14

Sub-total – Existing Sources			NOX	0.12	0.12	58.19	56.05
			VOC	0.23	0.23	72.24	74.21
New & Modified Sources							
N/A	N/A	N/A	NOX	0.00	0.00	0.00	0.00
N/A	N/A	N/A	VOC	0.027	0.027	10.0	10.0
TOTAL (Existing + New/Modified Sources)			**NOX**	**0.12**	**0.12**	**58.19**	**56.05**
			VOC	**0.26**	**0.26**	**82.24**	**84.21**

[1] According to Wisconsin State 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. For sources that chose not to report NOx and/or VOC for 2019, other reported emissions have been used to determine projections. In the case of Shiloh – Pleasant Prairie (FID 230105590), 2018 emissions were utilized. IEA Inc – Kenosha (FID 230167520), 2015 emissions were utilized.

APPENDIX 6

Area Source Emissions for 2011, 2019, 2030 and 2035

This appendix provides a list of the area source tons per summer day (tposd) emissions by source classification code (SCC) for 2011, 2019, 2030 and 2035 in the partial Kenosha County area. The sums of nitrogen oxides (NOx) and volatile organic compounds (VOC) emissions from the different SCCs were used for the area source sector NOx and VOC tposd emission estimates in Section 4.2 and Section 4.3 of WDNR's Redesignation Request and Maintenance Plan for the Partial Kenosha County, Wisconsin 2008 Ozone NAAQS Nonattainment Area.

Table A6.1. Area Source 2011 and Projected 2019, 2030 and 2035 Emissions for the Partial Kenosha County 2008 Ozone NAAQS area.

FIPS	SCC	POLLUTANT	2011(tpsod)	2019(tpsod)	2030(tpsod)	2035(tpsod)
55059	2102001000	NOx	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55059	2102002000	NOx	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55059	2102004001	NOx	1.0E-03	4.5E-04	1.8E-03	2.3E-03
55059	2102004002	NOx	5.6E-03	2.4E-03	9.4E-03	1.2E-02
55059	2102005000	NOx	5.8E-04	0.0E+00	0.0E+00	0.0E+00
55059	2102006000	NOx	6.1E-02	1.6E-01	5.1E-03	5.1E-03
55059	2102007000	NOx	1.5E-03	2.1E-03	1.4E-03	1.1E-03
55059	2102008000	NOx	0.0E+00	1.2E-01	9.1E-02	8.0E-02
55059	2102011000	NOx	0.0E+00	5.3E-05	0.0E+00	0.0E+00
55059	2103001000	NOx	0.0E+00	1.5E-05	0.0E+00	0.0E+00
55059	2103002000	NOx	1.3E-02	2.0E-03	0.0E+00	0.0E+00
55059	2103004001	NOx	6.8E-03	1.5E-03	1.5E-03	1.4E-03
55059	2103004002	NOx	2.3E-01	3.9E-03	9.2E-03	1.1E-02
55059	2103005000	NOx	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55059	2103006000	NOx	1.6E-01	2.0E-01	1.5E-01	1.3E-01
55059	2103007000	NOx	1.1E-02	1.1E-02	1.0E-02	1.0E-02
55059	2103008000	NOx	1.2E-02	1.3E-02	1.3E-02	1.3E-02
55059	2103011000	NOx	2.6E-08	8.5E-05	4.7E-05	3.1E-05
55059	2104001000	NOx	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55059	2104002000	NOx	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55059	2104004000	NOx	9.4E-03	5.9E-03	8.9E-03	1.0E-02
55059	2104006000	NOx	5.2E-01	4.7E-01	5.4E-01	5.7E-01
55059	2104007000	NOx	1.7E-02	5.6E-02	1.2E-02	1.6E-03
55059	2104008100	NOx	1.4E-02	6.2E-03	3.1E-04	3.1E-04
55059	2104008210	NOx	9.4E-03	7.7E-04	1.6E-03	2.0E-03
55059	2104008220	NOx	3.2E-03	1.1E-03	4.8E-04	2.3E-04
55059	2104008230	NOx	9.2E-04	5.4E-04	2.2E-05	2.2E-05
55059	2104008310	NOx	4.1E-02	3.2E-03	4.9E-03	5.5E-03
55059	2104008320	NOx	1.1E-02	6.1E-03	3.4E-03	2.3E-03
55059	2104008330	NOx	1.0E-02	3.6E-03	1.9E-03	1.2E-03
55059	2104008400	NOx	4.1E-03	4.1E-03	4.7E-03	5.0E-03
55059	2104008510	NOx	6.9E-05	1.6E-03	3.3E-04	3.3E-04
55059	2104008530	NOx	0.0E+00	3.3E-03	0.0E+00	0.0E+00
55059	2104008610	NOx	2.2E-04	1.7E-03	5.8E-04	5.8E-04
55059	2104008620	NOx	0.0E+00	1.1E-03	0.0E+00	0.0E+00
55059	2104008630	NOx	0.0E+00	8.8E-05	0.0E+00	0.0E+00
55059	2104008700	NOx	2.4E-02	1.4E-02	3.1E-02	3.8E-02
55059	2104009000	NOx	2.7E-04	2.8E-04	3.1E-04	3.2E-04
55059	2104011000	NOx	1.9E-04	1.1E-04	1.4E-04	1.6E-04
55059	2302002200	NOx	0.0E+00	0.0E+00	0.0E+00	0.0E+00

FIPS	SCC	POLLUTANT	2011(tpsod)	2019(tpsod)	2030(tpsod)	2035(tpsod)
55059	2610000100	NOx	2.7E-04	2.4E-04	2.9E-04	3.2E-04
55059	2610000400	NOx	2.1E-04	2.2E-04	2.2E-04	2.3E-04
55059	2610000500	NOx	1.8E-02	1.5E-02	2.0E-02	2.1E-02
55059	2610030000	NOx	1.3E-02	1.2E-02	1.4E-02	1.5E-02
55059	2810025000	NOx	6.3E-03	3.5E-03	8.0E-03	1.0E-02
55059	2810060100	NOx	1.5E-03	6.8E-04	1.9E-03	2.4E-03
55059	2810060200	NOx	0.0E+00	4.2E-08	0.0E+00	0.0E+00
55059	2102001000	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55059	2102002000	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55059	2102004001	VOC	1.0E-05	4.5E-06	1.3E-05	1.4E-05
55059	2102004002	VOC	5.0E-04	1.7E-04	5.6E-04	6.7E-04
55059	2102005000	VOC	3.0E-06	0.0E+00	0.0E+00	0.0E+00
55059	2102006000	VOC	3.3E-03	9.3E-03	5.1E-03	5.0E-03
55059	2102007000	VOC	5.8E-06	7.9E-05	7.5E-05	8.5E-05
55059	2102008000	VOC	0.0E+00	9.4E-03	9.5E-03	1.1E-02
55059	2102011000	VOC	4.7E-07	5.2E-07	0.0E+00	0.0E+00
55059	2103001000	VOC	0.0E+00	5.0E-07	0.0E+00	0.0E+00
55059	2103002000	VOC	5.8E-05	9.2E-06	0.0E+00	0.0E+00
55059	2103004001	VOC	1.2E-04	2.5E-05	8.4E-06	4.7E-07
55059	2103004002	VOC	5.1E-04	2.7E-04	6.0E-04	7.1E-04
55059	2103005000	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55059	2103006000	VOC	8.9E-03	1.1E-02	1.1E-02	1.2E-02
55059	2103007000	VOC	4.8E-04	3.9E-04	3.7E-04	3.5E-04
55059	2103008000	VOC	8.3E-06	9.8E-04	1.2E-03	1.3E-03
55059	2103011000	VOC	4.4E-10	1.4E-06	1.3E-06	1.4E-06
55059	2104001000	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55059	2104002000	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55059	2104004000	VOC	3.7E-04	2.3E-04	2.8E-04	2.8E-04
55059	2104006000	VOC	2.6E-02	2.7E-02	3.1E-02	3.1E-02
55059	2104007000	VOC	6.1E-04	2.2E-03	1.3E-03	1.3E-03
55059	2104008100	VOC	1.0E-01	4.5E-02	4.6E-03	1.8E-03
55059	2104008210	VOC	1.8E-01	1.5E-02	2.0E-02	1.8E-02
55059	2104008220	VOC	1.7E-02	5.6E-03	1.4E-03	1.8E-04
55059	2104008230	VOC	6.9E-03	4.1E-03	8.4E-04	9.8E-05
55059	2104008310	VOC	8.8E-02	6.2E-02	7.1E-02	6.6E-02
55059	2104008320	VOC	2.3E-02	3.2E-02	1.8E-02	1.3E-02
55059	2104008330	VOC	2.0E-02	2.7E-02	9.6E-03	8.2E-04
55059	2104008400	VOC	4.2E-05	2.4E-03	3.3E-03	3.9E-03
55059	2104008510	VOC	0.0E+00	1.0E-02	2.1E-03	1.5E-03
55059	2104008530	VOC	0.0E+00	1.9E-03	0.0E+00	0.0E+00
55059	2104008610	VOC	0.0E+00	5.9E-02	1.9E-02	1.8E-02
55059	2104008620	VOC	0.0E+00	3.6E-02	0.0E+00	0.0E+00

FIPS	SCC	POLLUTANT	2011(tpsod)	2019(tpsod)	2030(tpsod)	2035(tpsod)
55059	2104008630	VOC	0.0E+00	5.1E-05	0.0E+00	0.0E+00
55059	2104008700	VOC	1.7E-01	1.0E-01	1.8E-01	1.9E-01
55059	2104009000	VOC	1.4E-03	1.5E-03	1.6E-03	1.7E-03
55059	2104011000	VOC	7.5E-06	4.1E-06	4.5E-06	4.1E-06
55059	2302002100	VOC	2.8E-03	3.8E-03	3.3E-03	3.3E-03
55059	2302002200	VOC	7.8E-03	1.1E-02	9.1E-03	9.1E-03
55059	2302003000	VOC	1.4E-03	2.3E-03	1.7E-03	1.7E-03
55059	2302003100	VOC	1.0E-03	1.4E-03	1.2E-03	1.2E-03
55059	2302003200	VOC	4.8E-05	7.8E-05	5.9E-05	5.9E-05
55059	2401001000	VOC	4.1E-01	4.2E-01	4.3E-01	4.4E-01
55059	2401005000	VOC	6.6E-02	7.1E-02	7.2E-02	7.3E-02
55059	2401008000	VOC	3.4E-04	7.3E-02	9.1E-02	1.0E-01
55059	2401015000	VOC	2.5E-03	1.3E-03	0.0E+00	0.0E+00
55059	2401020000	VOC	9.2E-02	1.5E-02	0.0E+00	0.0E+00
55059	2401025000	VOC	2.3E-02	4.9E-03	1.1E-02	1.0E-02
55059	2401030000	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55059	2401055000	VOC	2.0E-03	1.6E-03	0.0E+00	0.0E+00
55059	2401065000	VOC	6.1E-03	1.8E-03	0.0E+00	0.0E+00
55059	2401070000	VOC	1.5E-01	2.2E-02	0.0E+00	0.0E+00
55059	2401080000	VOC	2.4E-03	1.6E-03	2.9E-03	3.1E-03
55059	2401090000	VOC	7.7E-03	1.8E-02	0.0E+00	0.0E+00
55059	2401100000	VOC	1.1E-01	7.9E-02	1.1E-01	1.1E-01
55059	2401200000	VOC	1.1E-02	1.1E-03	1.1E-03	1.1E-03
55059	2415000000	VOC	2.8E-01	1.5E-01	0.0E+00	0.0E+00
55059	2420000000	VOC	2.8E-07	5.6E-04	0.0E+00	0.0E+00
55059	2425000000	VOC	1.2E-01	0.0E+00	0.0E+00	0.0E+00
55059	2460100000	VOC	3.3E-01	3.5E-01	3.7E-01	3.8E-01
55059	2460200000	VOC	3.2E-01	3.7E-01	4.2E-01	4.3E-01
55059	2460400000	VOC	2.4E-01	1.0E-01	2.2E-01	2.3E-01
55059	2460500000	VOC	1.7E-01	1.7E-01	1.7E-01	1.8E-01
55059	2460600000	VOC	1.0E-01	2.5E-01	1.3E-01	1.3E-01
55059	2460800000	VOC	3.1E-01	3.2E-01	3.3E-01	3.3E-01
55059	2460900000	VOC	1.2E-02	1.3E-02	1.3E-02	1.3E-02
55059	2461021000	VOC	9.1E-02	1.5E-01	1.7E-01	1.9E-01
55059	2461022000	VOC	2.2E-02	8.1E-02	1.0E-01	1.1E-01
55059	2461850000	VOC	4.1E-02	4.3E-02	3.0E-02	2.1E-02
55059	2501011011	VOC	7.4E-03	7.4E-03	8.8E-04	8.8E-04
55059	2501011012	VOC	8.3E-03	8.3E-03	8.5E-03	8.5E-03
55059	2501011013	VOC	1.0E-02	1.1E-02	1.1E-02	1.1E-02
55059	2501011014	VOC	1.6E-03	1.5E-03	1.2E-03	9.9E-04
55059	2501011015	VOC	2.9E-04	2.9E-04	3.0E-04	3.0E-04
55059	2501012011	VOC	3.2E-04	3.2E-04	1.4E-04	2.9E-06

FIPS	SCC	POLLUTANT	2011(tpsod)	2019(tpsod)	2030(tpsod)	2035(tpsod)
55059	2501012012	VOC	2.7E-04	2.6E-04	2.7E-04	2.7E-04
55059	2501012013	VOC	1.4E-02	1.4E-02	1.5E-02	1.5E-02
55059	2501012014	VOC	4.5E-03	4.4E-03	4.2E-03	4.0E-03
55059	2501012015	VOC	5.6E-04	5.6E-04	5.8E-04	5.8E-04
55059	2501050120	VOC	3.5E-02	0.0E+00	0.0E+00	0.0E+00
55059	2501055120	VOC	1.1E-02	0.0E+00	0.0E+00	0.0E+00
55059	2501060051	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55059	2501060052	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55059	2501060053	VOC	4.1E-02	2.3E-02	3.4E-02	3.3E-02
55059	2501060100	VOC	1.3E-01	1.0E-01	6.5E-02	6.3E-02
55059	2501060201	VOC	5.6E-02	2.9E-02	4.7E-02	4.6E-02
55059	2501080050	VOC	5.1E-02	4.3E-02	3.4E-02	3.1E-02
55059	2501080100	VOC	2.6E-03	3.3E-04	3.5E-04	9.3E-05
55059	2505030120	VOC	3.6E-03	1.9E-03	3.1E-03	3.0E-03
55059	2505040120	VOC	1.2E-02	0.0E+00	0.0E+00	0.0E+00
55059	2610000100	VOC	1.2E-03	1.1E-03	1.4E-03	1.6E-03
55059	2610000400	VOC	8.1E-04	9.5E-04	1.0E-03	1.2E-03
55059	2610000500	VOC	4.1E-02	4.1E-02	5.0E-02	5.7E-02
55059	2610030000	VOC	1.3E-02	1.2E-02	1.5E-02	1.7E-02
55059	2630020000	VOC	6.6E-03	1.6E-03	4.0E-03	3.9E-03
55059	2680003000	VOC	5.5E-02	5.1E-02	6.7E-02	7.6E-02
55059	2805002000	VOC	2.1E-03	2.1E-03	2.2E-03	2.3E-03
55059	2805007100	VOC	5.0E-05	4.8E-05	6.8E-05	8.1E-05
55059	2805009100	VOC	8.5E-06	8.3E-06	1.1E-05	1.3E-05
55059	2805010100	VOC	5.7E-06	5.7E-06	8.1E-06	9.9E-06
55059	2805018000	VOC	1.7E-02	1.7E-02	2.3E-02	2.7E-02
55059	2805025000	VOC	1.4E-03	1.4E-03	1.8E-03	2.1E-03
55059	2805035000	VOC	1.8E-03	1.8E-03	2.5E-03	3.1E-03
55059	2805040000	VOC	2.3E-04	2.3E-04	3.2E-04	3.9E-04
55059	2805045000	VOC	3.1E-05	3.1E-05	4.4E-05	5.4E-05
55059	2810025000	VOC	5.5E-03	5.5E-03	6.9E-03	7.8E-03
55059	2810060100	VOC	4.0E-06	1.7E-05	7.9E-06	7.6E-06
55059	2810060200	VOC	0.0E+00	3.5E-09	0.0E+00	0.0E+00
TOTAL		NOx	**1.20**	**1.13**	**0.95**	**0.96**
		VOC	**4.10**	**3.58**	**3.49**	**3.56**

*Values marked in red font indicate WDNR staff estimates, as explained in Appendix 2. These values were estimated because of suspected changes in EPA's methodology between 2011 and 2014. The WDNR estimated emissions from SCC 2501060100 using EPA's MOVES3.0.2 model for all years.

APPENDIX 7

Nonroad Emissions for 2011, 2019, 2030 and 2035

This appendix provides detailed listings of the estimated nonroad emissions for over 200 subcategories for the partial Kenosha County area, as well as all of Kenosha County, for 2011, 2019, 2030 and 2035. The sums of nitrogen oxides (NOx) and volatile organic compounds (VOC) emissions from the different nonroad source types were used for the nonroad sector NOx and VOC tons per ozone season day (tposd) emission estimates in Section 4.2 and Section 4.3 of WDNR's Redesignation Request and Maintenance Plan for the Partial Kenosha County, Wisconsin 2008 Ozone NAAQS Nonattainment Area.

These inventories are based on two primary sources of data:

MOVES model estimates[1]
EPA's MOVES3.0.2 model was used for most source categories, with exceptions listed below.

EPA's 2016 Emission Modeling Platform, version 1 (2016v1 Platform)[2]
Emissions for commercial marine, aircraft and rail locomotive were derived from EPA's 2016 emissions modeling platform, version 1 (which includes projections to 2023 and 2028). Emissions for 2011 were linearly back-calculated, with the constraint of not being greater than 2016 emissions. Emissions for 2019 were linearly interpolated. Emissions for 2030 and 2035 were linearly extrapolated, with the constraint of not being less than 2028 emissions.

[1] https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves.
[2] https://www.epa.gov/air-emissions-modeling/2016v1-platform.

Table A7.1. 2011 Nonroad NOx and VOC Emissions: tons per ozone season day (tposd) Kenosha County and the Partial Kenosha County 2008 Ozone NAAQS area.

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2011 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2011 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0004	0.0694	31%	31%	land area	0.0001	0.0215
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0002	0.0300	31%	31%	land area	0.0001	0.0093
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0004	0.0013	31%	31%	land area	0.0001	0.0004
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0001	0.0055	77%	77%	population	0.0001	0.0042
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0002	77%	77%	population	0.0000	0.0002
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0002	77%	77%	population	0.0000	0.0002
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0004	0.0139	77%	77%	population	0.0003	0.0107
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0002	77%	77%	population	0.0000	0.0002
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0001	0.0019	77%	77%	population	0.0000	0.0014
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0002	0.0040	77%	77%	population	0.0001	0.0031
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0004	0.0142	77%	77%	population	0.0003	0.0109
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0010	0.0440	77%	77%	population	0.0008	0.0339
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0011	0.0339	77%	77%	population	0.0009	0.0261
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0017	0.0445	77%	77%	population	0.0013	0.0343
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0007	0.0224	77%	77%	population	0.0006	0.0172
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0016	0.0443	77%	77%	population	0.0012	0.0341
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0041	77%	77%	population	0.0000	0.0031
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0004	77%	77%	population	0.0000	0.0003
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0001	24%	24%	land area (1)	0.0000	0.0000
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0000	0.0009	77%	77%	population	0.0000	0.0007
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0002	0.0061	77%	77%	population	0.0002	0.0047
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0001	31%	31%	land area	0.0000	0.0000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0003	0.0028	31%	31%	land area	0.0001	0.0009
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0027	0.0288	31%	31%	land area	0.0008	0.0089
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0045	0.0139	31%	31%	land area	0.0014	0.0043
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0014	31%	31%	land area	0.0001	0.0004
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0002	0.0004	77%	77%	population	0.0002	0.0003
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0003	0.0013	77%	77%	population	0.0002	0.0010
2265002015	Construction	4-Stroke Rollers	MOVES	0.0003	0.0006	77%	77%	population	0.0002	0.0005
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0006	0.0022	77%	77%	population	0.0005	0.0017

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2011 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2011 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0002	0.0008	77%	77%	population	0.0002	0.0006
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0007	0.0015	77%	77%	population	0.0005	0.0012
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0003	0.0009	77%	77%	population	0.0002	0.0007
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0008	0.0021	77%	77%	population	0.0006	0.0016
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0006	0.0031	77%	77%	population	0.0004	0.0024
2265002045	Construction	4-Stroke Cranes	MOVES	0.0002	0.0001	77%	77%	population	0.0001	0.0001
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0001	0.0002	77%	77%	population	0.0001	0.0002
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0002	0.0001	77%	77%	population	0.0002	0.0001
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0004	0.0002	77%	77%	population	0.0003	0.0002
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0003	0.0008	77%	77%	population	0.0003	0.0006
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0006	0.0007	77%	77%	population	0.0005	0.0005
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0001	0.0005	77%	77%	population	0.0001	0.0004
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0003	0.0002	77%	77%	population	0.0002	0.0001
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0034	0.0033	77%	77%	population	0.0026	0.0026
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0087	0.0049	77%	77%	population	0.0067	0.0038
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0012	0.0020	77%	77%	population	0.0009	0.0015
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0022	0.0099	77%	77%	population	0.0017	0.0076
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0002	0.0002	77%	77%	population	0.0002	0.0002
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	77%	77%	population	0.0000	0.0001
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0003	0.0002	77%	77%	population	0.0002	0.0001
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0132	0.1521	77%	77%	population	0.0101	0.1171
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0058	0.0442	77%	77%	population	0.0045	0.0340
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0011	0.0133	77%	77%	population	0.0009	0.0102
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0033	0.0275	77%	77%	population	0.0025	0.0212
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0001	0.0008	77%	77%	population	0.0001	0.0006
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0001	0.0009	77%	77%	population	0.0001	0.0007
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0001	0.0014	77%	77%	population	0.0001	0.0011
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0078	0.0195	77%	77%	population	0.0060	0.0150
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0078	77%	77%	population	0.0000	0.0060
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0007	77%	77%	population	0.0000	0.0006
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0029	0.0154	77%	77%	population	0.0023	0.0119
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0007	0.0020	77%	77%	population	0.0006	0.0015
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0010	0.0032	77%	77%	population	0.0008	0.0025
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0004	0.0034	77%	77%	population	0.0003	0.0026
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0393	0.1602	77%	77%	population	0.0302	0.1234
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0101	0.0252	77%	77%	population	0.0078	0.0194
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0019	0.0029	77%	77%	population	0.0014	0.0022
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0304	0.0875	77%	77%	population	0.0234	0.0674
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0014	0.0092	77%	77%	population	0.0011	0.0071

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2011 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2011 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0011	0.0072	77%	77%	population	0.0009	0.0055
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0001	0.0001	24%	24%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0004	0.0004	24%	24%	land area (1)	0.0001	0.0001
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0006	0.0010	24%	24%	land area (1)	0.0001	0.0002
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0008	0.0037	24%	24%	land area (1)	0.0002	0.0009
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0007	0.0005	24%	24%	land area (1)	0.0002	0.0001
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0007	0.0006	24%	24%	land area (1)	0.0002	0.0001
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0001	0.0001	24%	24%	land area (1)	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0093	0.0431	77%	77%	population	0.0071	0.0332
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0025	0.0100	77%	77%	population	0.0019	0.0077
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0014	0.0040	77%	77%	population	0.0011	0.0031
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0027	0.0067	77%	77%	population	0.0021	0.0052
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0038	0.0188	77%	77%	population	0.0029	0.0145
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0002	0.0006	77%	77%	population	0.0001	0.0005
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0001	31%	31%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	31%	31%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0001	0.0000	31%	31%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0003	0.0001	77%	77%	population	0.0003	0.0001
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0002	0.0000	77%	77%	population	0.0001	0.0000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0002	0.0000	77%	77%	population	0.0001	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0003	0.0001	77%	77%	population	0.0002	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0004	0.0001	77%	77%	population	0.0003	0.0001
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0006	0.0001	77%	77%	population	0.0004	0.0001
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0003	0.0001	77%	77%	population	0.0002	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0032	0.0007	77%	77%	population	0.0025	0.0005
2267003020	Industrial	LPG Forklifts	MOVES	0.1575	0.0349	77%	77%	population	0.1213	0.0269
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0008	0.0002	77%	77%	population	0.0006	0.0001
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0003	0.0001	77%	77%	population	0.0002	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0002	0.0000	77%	77%	population	0.0001	0.0000
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0003	0.0000	77%	77%	population	0.0002	0.0000

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2011 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2011 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0011	0.0002	77%	77%	population	0.0008	0.0002
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0042	0.0007	77%	77%	population	0.0033	0.0005
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0007	0.0001	77%	77%	population	0.0005	0.0001
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0006	0.0001	77%	77%	population	0.0005	0.0001
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0009	0.0002	77%	77%	population	0.0007	0.0001
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0123	0.0097	77%	77%	population	0.0095	0.0075
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0003	0.0002	24%	24%	land area (1)	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0016	0.0010	77%	77%	population	0.0012	0.0007
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0001	0.0000	77%	77%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0005	0.0002	77%	77%	population	0.0004	0.0002
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0009	0.0003	31%	31%	land area	0.0003	0.0001
2270002003	Construction	Diesel Pavers	MOVES	0.0098	0.0008	77%	77%	population	0.0075	0.0006
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0004	0.0001	77%	77%	population	0.0003	0.0000
2270002015	Construction	Diesel Rollers	MOVES	0.0260	0.0024	77%	77%	population	0.0200	0.0018
2270002018	Construction	Diesel Scrapers	MOVES	0.0301	0.0016	77%	77%	population	0.0232	0.0013
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0017	0.0002	77%	77%	population	0.0013	0.0001
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0013	0.0001	77%	77%	population	0.0010	0.0001
2270002027	Construction	Diesel Signal Boards	MOVES	0.0032	0.0004	77%	77%	population	0.0024	0.0003
2270002030	Construction	Diesel Trenchers	MOVES	0.0139	0.0014	77%	77%	population	0.0107	0.0011
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0186	0.0015	77%	77%	population	0.0143	0.0012
2270002036	Construction	Diesel Excavators	MOVES	0.0851	0.0064	77%	77%	population	0.0655	0.0050
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0009	0.0001	77%	77%	population	0.0007	0.0001
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0007	0.0001	77%	77%	population	0.0006	0.0001
2270002045	Construction	Diesel Cranes	MOVES	0.0294	0.0019	77%	77%	population	0.0226	0.0015
2270002048	Construction	Diesel Graders	MOVES	0.0221	0.0017	77%	77%	population	0.0170	0.0013
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.0820	0.0045	77%	77%	population	0.0631	0.0035
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0055	0.0004	77%	77%	population	0.0042	0.0003
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0367	0.0037	77%	77%	population	0.0283	0.0029

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2011 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2011 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.1342	0.0093	77%	77%	population	0.1033	0.0072
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.0993	0.0212	77%	77%	population	0.0765	0.0163
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.1069	0.0071	77%	77%	population	0.0823	0.0055
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.0686	0.0189	77%	77%	population	0.0528	0.0146
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0150	0.0009	77%	77%	population	0.0116	0.0007
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0002	0.0001	77%	77%	population	0.0002	0.0000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0153	0.0010	77%	77%	population	0.0118	0.0008
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0049	0.0013	77%	77%	population	0.0038	0.0010
2270003020	Industrial	Diesel Forklifts	MOVES	0.0396	0.0030	77%	77%	population	0.0305	0.0023
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0212	0.0018	77%	77%	population	0.0163	0.0014
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0248	0.0020	77%	77%	population	0.0191	0.0016
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0014	0.0003	77%	77%	population	0.0011	0.0002
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0502	0.0047	77%	77%	population	0.0387	0.0036
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0250	0.0020	77%	77%	population	0.0193	0.0015
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0133	0.0018	77%	77%	population	0.0103	0.0014
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0026	0.0004	77%	77%	population	0.0020	0.0003
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0211	0.0020	77%	77%	population	0.0162	0.0015
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0018	0.0002	77%	77%	population	0.0014	0.0001
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0001	0.0000	77%	77%	population	0.0000	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.1700	0.0158	24%	24%	land area (1)	0.0408	0.0038
2270005020	Agriculture	Diesel Combines	MOVES	0.0205	0.0017	24%	24%	land area (1)	0.0049	0.0004
2270005025	Agriculture	Diesel Balers	MOVES	0.0001	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0016	0.0002	24%	24%	land area (1)	0.0004	0.0000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0014	0.0002	24%	24%	land area (1)	0.0003	0.0000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0040	0.0004	24%	24%	land area (1)	0.0010	0.0001
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0019	0.0002	24%	24%	land area (1)	0.0005	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0225	0.0029	77%	77%	population	0.0173	0.0022
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0053	0.0007	77%	77%	population	0.0041	0.0005
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0121	0.0012	77%	77%	population	0.0093	0.0009
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0067	0.0021	77%	77%	population	0.0052	0.0016
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0007	0.0001	77%	77%	population	0.0006	0.0001
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0005	0.0001	77%	77%	population	0.0004	0.0000
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidders	MOVES	0.0007	0.0000	31%	31%	land area	0.0002	0.0000
2275000000	Aircraft	All Aircraft	EPA16v1	0.0176	0.0199	88%	82%	airport location	0.0155	0.0163
2280002201	Comm. Mar.	CM Vessels, Diesel, Underway, C1&C2, Main Eng.	EPA16v1	0.1215	0.0047	100%	100%	Lk. Mich. Shoreline	0.1215	0.0047

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2011 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2011 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002202	Comm. Mar.	CM Vessels, Diesel, Underway, C1&C2, Aux. Eng.	EPA16v1	0.2353	0.0069	100%	100%	Lk. Mich. Shoreline	0.2353	0.0069
2280002203	Comm. Mar.	CM Vessels, Diesel, Underway, C3, Main Eng.	EPA16v1	0.0765	0.0030	100%	100%	Lk. Mich. Shoreline	0.0765	0.0030
2280002204	Comm. Mar.	CM Vessels, Diesel, Underway, C3, Aux. Eng.	EPA16v1	0.0063	0.0002	100%	100%	Lk. Mich. Shoreline	0.0063	0.0002
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0373	0.4678	4%	4%	water area	0.0015	0.0187
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0151	0.1208	70%	70%	water area	0.0105	0.0846
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.1044	0.0991	70%	70%	water area	0.0731	0.0694
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0860	0.0037	70%	70%	water area	0.0602	0.0026
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0001	0.0000	4%	4%	water area	0.0000	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	EPA16v1	0.8059	0.0384	63%	64%	rail links	0.5077	0.0246
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0020	0.0004	100%	100%	rail links	0.0020	0.0004
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0001	100%	100%	rail links	0.0000	0.0001
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	100%	100%	rail links	0.0000	0.0000
ALL (Total)	**ALL (Total)**	**ALL (Total)**		**3.1399**	**2.0446**	**71.8%**	**55.5%**		**2.2540**	**1.1351**
22xx005xxx	Agriculture	All	MOVES	0.2034	0.0254	24.0%	24.0%	land area (1)	0.0488	0.0061
22750xxxxx	Airport	All	EPA16v1	0.0176	0.0199	88.0%	82.0%	airport location	0.0155	0.0163
22xx006xxx	Commercial	All	MOVES	0.0768	0.0996	77.0%	77.0%	population	0.0591	0.0767
2280002xxx	Comm. Mar	All	EPA16v1	0.4395	0.0147	100.0%	100.0%	Lk. Mich. Shoreline	0.4395	0.0147
22xx002xxx	Construction	All	MOVES	0.8160	0.1222	77.0%	77.0%	population	0.6284	0.0941
22xx003xxx	Industrial	All	MOVES	0.3577	0.0817	77.0%	77.0%	population	0.2754	0.0629
22xx004xxx	Lawn/Garden	All	MOVES	0.1674	0.8027	77.0%	77.0%	population	0.1289	0.6181
22xx007xxx	Logging	All	MOVES	0.0007	0.0002	31.0%	31.0%	land area	0.0002	0.0001
22820xxxxx	Pleasure Craft	All	MOVES	0.2429	0.6915	59.8%	25.3%	water area	0.1453	0.1753
228500200x	Railroad	All	EPA16v1	0.8059	0.0384	63.0%	64.0%	rail links	0.5077	0.0246
228500x015	Railway Maint.	All	MOVES	0.0021	0.0005	100.0%	100.0%	rail links	0.0021	0.0005
22xx001xxx	Recreational	All	MOVES	0.0099	0.1479	31.0%	31.0%	land area	0.0031	0.0459
ALL (Total)	**ALL (Total)**	**ALL (Total)**		**3.1399**	**2.0446**	**71.8%**	**55.5%**		**2.2540**	**1.1351**

(1) City of Kenosha excluded.

Table A7.2. 2019 Nonroad NOx and VOC Emissions: tons per ozone season day (tposd) Kenosha County and the Partial Kenosha County 2008 Ozone NAAQS area.

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2019 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2019 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0006	0.0470	31%	31%	land area	0.0002	0.0146
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0003	0.0090	31%	31%	land area	0.0001	0.0028
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0002	0.0007	31%	31%	land area	0.0001	0.0002
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0002	0.0081	77%	77%	population	0.0002	0.0062
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0003	77%	77%	population	0.0000	0.0002
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0003	77%	77%	population	0.0000	0.0003
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0005	0.0206	77%	77%	population	0.0004	0.0158
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0001	77%	77%	population	0.0000	0.0001
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0003	77%	77%	population	0.0000	0.0002
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0001	0.0014	77%	77%	population	0.0000	0.0011
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0002	0.0040	77%	77%	population	0.0001	0.0031
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0004	0.0140	77%	77%	population	0.0003	0.0108
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0010	0.0457	77%	77%	population	0.0008	0.0352
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0011	0.0278	77%	77%	population	0.0009	0.0214
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0018	0.0458	77%	77%	population	0.0014	0.0353
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0007	0.0171	77%	77%	population	0.0006	0.0132
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0017	0.0458	77%	77%	population	0.0013	0.0353
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0010	77%	77%	population	0.0000	0.0008
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0001	77%	77%	population	0.0000	0.0001
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0001	24%	24%	land area (1)	0.0000	0.0000
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0000	0.0010	77%	77%	population	0.0000	0.0008
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0003	0.0071	77%	77%	population	0.0002	0.0054
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0001	31%	31%	land area	0.0000	0.0000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0003	0.0022	31%	31%	land area	0.0001	0.0007
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0021	0.0226	31%	31%	land area	0.0007	0.0070
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0035	0.0115	31%	31%	land area	0.0011	0.0036
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0003	0.0009	31%	31%	land area	0.0001	0.0003
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0001	0.0004	77%	77%	population	0.0001	0.0003
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0002	0.0009	77%	77%	population	0.0002	0.0007
2265002015	Construction	4-Stroke Rollers	MOVES	0.0002	0.0006	77%	77%	population	0.0002	0.0005
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0005	0.0017	77%	77%	population	0.0004	0.0013

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2019 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2019 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0002	0.0007	77%	77%	population	0.0002	0.0005
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0004	0.0012	77%	77%	population	0.0003	0.0009
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0002	0.0006	77%	77%	population	0.0002	0.0004
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0009	0.0026	77%	77%	population	0.0007	0.0020
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0004	0.0020	77%	77%	population	0.0003	0.0016
2265002045	Construction	4-Stroke Cranes	MOVES	0.0001	0.0001	77%	77%	population	0.0001	0.0000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0001	0.0002	77%	77%	population	0.0000	0.0001
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0001	0.0001	77%	77%	population	0.0001	0.0000
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0003	0.0008	77%	77%	population	0.0002	0.0006
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0003	0.0004	77%	77%	population	0.0003	0.0003
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0001	0.0003	77%	77%	population	0.0001	0.0003
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0001	0.0001	77%	77%	population	0.0001	0.0001
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0017	0.0019	77%	77%	population	0.0013	0.0015
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0033	0.0015	77%	77%	population	0.0025	0.0012
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0008	0.0014	77%	77%	population	0.0006	0.0011
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0016	0.0058	77%	77%	population	0.0012	0.0045
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0001	0.0001	77%	77%	population	0.0001	0.0001
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	77%	77%	population	0.0000	0.0001
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0003	0.0001	77%	77%	population	0.0002	0.0001
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0073	0.0612	77%	77%	population	0.0056	0.0471
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0038	0.0238	77%	77%	population	0.0029	0.0183
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0006	0.0055	77%	77%	population	0.0005	0.0043
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0019	0.0141	77%	77%	population	0.0015	0.0108
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0000	0.0004	77%	77%	population	0.0000	0.0003
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0001	0.0006	77%	77%	population	0.0001	0.0005
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0001	0.0005	77%	77%	population	0.0001	0.0004
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0037	0.0149	77%	77%	population	0.0029	0.0115
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0024	77%	77%	population	0.0000	0.0018
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0002	77%	77%	population	0.0000	0.0002
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0015	0.0084	77%	77%	population	0.0012	0.0065
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0004	0.0015	77%	77%	population	0.0003	0.0011
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0006	0.0020	77%	77%	population	0.0004	0.0015
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0002	0.0016	77%	77%	population	0.0002	0.0013
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0200	0.0907	77%	77%	population	0.0154	0.0698
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0056	0.0191	77%	77%	population	0.0043	0.0147
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0009	0.0020	77%	77%	population	0.0007	0.0016
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0181	0.0560	77%	77%	population	0.0140	0.0431
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0008	0.0042	77%	77%	population	0.0006	0.0032

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				NOx	VOC	NOx	VOC		NOx	VOC
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0007	0.0032	77%	77%	population	0.0005	0.0025
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0003	0.0003	24%	24%	land area (1)	0.0001	0.0001
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0004	0.0005	24%	24%	land area (1)	0.0001	0.0001
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0006	0.0026	24%	24%	land area (1)	0.0001	0.0006
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0005	0.0004	24%	24%	land area (1)	0.0001	0.0001
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0005	0.0004	24%	24%	land area (1)	0.0001	0.0001
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0001	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0059	0.0264	77%	77%	population	0.0045	0.0203
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0016	0.0057	77%	77%	population	0.0012	0.0044
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0008	0.0023	77%	77%	population	0.0006	0.0018
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0016	0.0053	77%	77%	population	0.0013	0.0041
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0025	0.0112	77%	77%	population	0.0019	0.0086
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0001	0.0004	77%	77%	population	0.0001	0.0003
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0000	31%	31%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	31%	31%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0001	0.0000	31%	31%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0001	0.0000	77%	77%	population	0.0000	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0003	0.0001	77%	77%	population	0.0002	0.0000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0015	0.0003	77%	77%	population	0.0011	0.0002
2267003020	Industrial	LPG Forklifts	MOVES	0.0525	0.0068	77%	77%	population	0.0404	0.0052
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0004	0.0000	77%	77%	population	0.0003	0.0000
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0001	0.0000	77%	77%	population	0.0000	0.0000
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0002	0.0000	77%	77%	population	0.0002	0.0000

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				NOx	VOC	NOx	VOC		NOx	VOC
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0003	0.0000	77%	77%	population	0.0003	0.0000
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0027	0.0004	77%	77%	population	0.0021	0.0003
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0003	0.0000	77%	77%	population	0.0002	0.0000
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0002	0.0000	77%	77%	population	0.0002	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0003	0.0000	77%	77%	population	0.0002	0.0000
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0043	0.0020	77%	77%	population	0.0033	0.0015
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0001	0.0001	24%	24%	land area (1)	0.0000	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0011	0.0006	77%	77%	population	0.0008	0.0005
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0005	0.0003	77%	77%	population	0.0004	0.0002
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0007	0.0002	31%	31%	land area	0.0002	0.0000
2270002003	Construction	Diesel Pavers	MOVES	0.0049	0.0002	77%	77%	population	0.0038	0.0002
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0003	0.0001	77%	77%	population	0.0003	0.0000
2270002015	Construction	Diesel Rollers	MOVES	0.0140	0.0008	77%	77%	population	0.0108	0.0006
2270002018	Construction	Diesel Scrapers	MOVES	0.0100	0.0005	77%	77%	population	0.0077	0.0004
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0009	0.0001	77%	77%	population	0.0007	0.0000
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0009	0.0001	77%	77%	population	0.0007	0.0000
2270002027	Construction	Diesel Signal Boards	MOVES	0.0031	0.0003	77%	77%	population	0.0024	0.0002
2270002030	Construction	Diesel Trenchers	MOVES	0.0094	0.0006	77%	77%	population	0.0072	0.0004
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0131	0.0009	77%	77%	population	0.0101	0.0007
2270002036	Construction	Diesel Excavators	MOVES	0.0353	0.0016	77%	77%	population	0.0272	0.0012
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0007	0.0000	77%	77%	population	0.0005	0.0000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0006	0.0001	77%	77%	population	0.0004	0.0000
2270002045	Construction	Diesel Cranes	MOVES	0.0126	0.0007	77%	77%	population	0.0097	0.0005
2270002048	Construction	Diesel Graders	MOVES	0.0083	0.0004	77%	77%	population	0.0064	0.0003
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.0525	0.0018	77%	77%	population	0.0404	0.0014
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0030	0.0002	77%	77%	population	0.0023	0.0001
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0195	0.0011	77%	77%	population	0.0150	0.0008

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				NOx	VOC	NOx	VOC		NOx	VOC
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.0633	0.0033	77%	77%	population	0.0488	0.0026
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.0683	0.0122	77%	77%	population	0.0526	0.0094
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0459	0.0021	77%	77%	population	0.0354	0.0016
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.0553	0.0114	77%	77%	population	0.0426	0.0087
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0078	0.0003	77%	77%	population	0.0060	0.0003
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0002	0.0000	77%	77%	population	0.0001	0.0000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0087	0.0005	77%	77%	population	0.0067	0.0004
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0039	0.0008	77%	77%	population	0.0030	0.0006
2270003020	Industrial	Diesel Forklifts	MOVES	0.0199	0.0006	77%	77%	population	0.0153	0.0005
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0101	0.0005	77%	77%	population	0.0077	0.0004
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0126	0.0008	77%	77%	population	0.0097	0.0006
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0009	0.0001	77%	77%	population	0.0007	0.0001
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0415	0.0020	77%	77%	population	0.0320	0.0015
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0079	0.0004	77%	77%	population	0.0061	0.0003
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0106	0.0010	77%	77%	population	0.0082	0.0008
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0022	0.0002	77%	77%	population	0.0017	0.0002
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0156	0.0013	77%	77%	population	0.0120	0.0010
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0011	0.0001	77%	77%	population	0.0008	0.0000
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0791	0.0059	24%	24%	land area (1)	0.0190	0.0014
2270005020	Agriculture	Diesel Combines	MOVES	0.0131	0.0011	24%	24%	land area (1)	0.0032	0.0003
2270005025	Agriculture	Diesel Balers	MOVES	0.0001	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0011	0.0001	24%	24%	land area (1)	0.0003	0.0000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0009	0.0001	24%	24%	land area (1)	0.0002	0.0000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0022	0.0002	24%	24%	land area (1)	0.0005	0.0000
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0008	0.0001	24%	24%	land area (1)	0.0002	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0175	0.0017	77%	77%	population	0.0135	0.0013
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0041	0.0004	77%	77%	population	0.0032	0.0003
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0076	0.0005	77%	77%	population	0.0059	0.0004
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0056	0.0011	77%	77%	population	0.0043	0.0009
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0006	0.0001	77%	77%	population	0.0004	0.0000
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0003	0.0000	77%	77%	population	0.0003	0.0000
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidders	MOVES	0.0002	0.0000	31%	31%	land area	0.0001	0.0000
2275000000	Aircraft	All Aircraft	EPA16v1	0.0164	0.0199	88%	82%	airport location	0.0144	0.0163
2280002201	Comm. Mar.	CM Vessels, Diesel, Underway, C1&C2, Main Eng.	EPA16v1	0.1080	0.0041	100%	100%	Lk. Mich. Shoreline	0.1080	0.0041

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2019 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2019 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002202	Comm. Mar.	CM Vessels, Diesel, Underway, C1&C2, Aux. Eng.	EPA16v1	0.2090	0.0060	100%	100%	Lk. Mich. Shoreline	0.2090	0.0060
2280002203	Comm. Mar.	CM Vessels, Diesel, Underway, C3, Main Eng.	EPA16v1	0.0875	0.0036	100%	100%	Lk. Mich. Shoreline	0.0875	0.0036
2280002204	Comm. Mar.	CM Vessels, Diesel, Underway, C3, Aux. Eng.	EPA16v1	0.0072	0.0003	100%	100%	Lk. Mich. Shoreline	0.0072	0.0003
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0427	0.2145	4%	4%	water area	0.0017	0.0086
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0196	0.0337	70%	70%	water area	0.0137	0.0236
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0762	0.0719	70%	70%	water area	0.0533	0.0504
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0786	0.0043	70%	70%	water area	0.0550	0.0030
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0001	0.0000	4%	4%	water area	0.0000	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	EPA16v1	0.7496	0.0347	63%	64%	rail links	0.4722	0.0222
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0014	0.0002	100%	100%	rail links	0.0014	0.0002
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0001	100%	100%	rail links	0.0000	0.0001
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	100%	100%	rail links	0.0000	0.0000
ALL (Total)	**ALL (Total)**	**ALL (Total)**		**2.2692**	**1.1890**	**72.2%**	**59.0%**		**1.6391**	**0.7015**
22xx005xxx	Agriculture	All	MOVES	0.0998	0.0118	24.0%	24.0%	land area (1)	0.0240	0.0028
22750xxxxx	Airport	All	EPA16v1	0.0164	0.0199	88.0%	82.0%	airport location	0.0144	0.0163
22xx006xxx	Commercial	All	MOVES	0.0536	0.0648	77.0%	77.0%	population	0.0412	0.0499
2280002xxx	Comm. Mar	All	EPA16v1	0.4117	0.0141	100.0%	100.0%	Lk. Mich. Shoreline	0.4117	0.0141
22xx002xxx	Construction	All	MOVES	0.4448	0.0813	77.0%	77.0%	population	0.3425	0.0626
22xx003xxx	Industrial	All	MOVES	0.1635	0.0257	77.0%	77.0%	population	0.1259	0.0198
22xx004xxx	Lawn/Garden	All	MOVES	0.1033	0.5178	77.0%	77.0%	population	0.0795	0.3987
22xx007xxx	Logging	All	MOVES	0.0002	0.0002	31.0%	31.0%	land area	0.0001	0.0000
22820xxxxx	Pleasure Craft	All	MOVES	0.2172	0.3244	57.0%	26.4%	water area	0.1238	0.0855
228500200x	Railroad	All	EPA16v1	0.7496	0.0347	63.0%	64.0%	rail links	0.4722	0.0222
228500x015	Railway Maint.	All	MOVES	0.0014	0.0003	100.0%	100.0%	rail links	0.0014	0.0003
22xx001xxx	Recreational	All	MOVES	0.0079	0.0940	31.0%	31.0%	land area	0.0025	0.0292
ALL (Total)	**ALL (Total)**	**ALL (Total)**		**2.2692**	**1.1890**	**72.2%**	**59.0%**		**1.6391**	**0.7015**

(1) City of Kenosha excluded.

Table A7.3. 2030 Nonroad NOx and VOC Emissions: tons per ozone season day (tposd) Kenosha County and the Partial Kenosha County 2008 Ozone NAAQS area.

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2030 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2030 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0006	0.0414	31%	31%	land area	0.0002	0.0128
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0003	0.0027	31%	31%	land area	0.0001	0.0008
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0002	0.0007	31%	31%	land area	0.0001	0.0002
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0002	0.0086	77%	77%	population	0.0002	0.0067
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0003	77%	77%	population	0.0000	0.0002
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0004	77%	77%	population	0.0000	0.0003
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0006	0.0220	77%	77%	population	0.0004	0.0169
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0001	77%	77%	population	0.0000	0.0001
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0004	77%	77%	population	0.0000	0.0003
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0001	0.0014	77%	77%	population	0.0000	0.0011
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0002	0.0040	77%	77%	population	0.0001	0.0031
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0004	0.0138	77%	77%	population	0.0003	0.0107
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0010	0.0452	77%	77%	population	0.0008	0.0348
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0011	0.0275	77%	77%	population	0.0009	0.0212
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0018	0.0453	77%	77%	population	0.0014	0.0349
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0007	0.0169	77%	77%	population	0.0005	0.0130
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0016	0.0453	77%	77%	population	0.0013	0.0349
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0010	77%	77%	population	0.0000	0.0008
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0001	77%	77%	population	0.0000	0.0001
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0001	24%	24%	land area (1)	0.0000	0.0000
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0000	0.0012	77%	77%	population	0.0000	0.0009
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0003	0.0084	77%	77%	population	0.0002	0.0065
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0001	77%	77%	population	0.0000	0.0000
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0001	31%	31%	land area	0.0000	0.0000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0003	0.0020	31%	31%	land area	0.0001	0.0006
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0020	0.0206	31%	31%	land area	0.0006	0.0064
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0035	0.0113	31%	31%	land area	0.0011	0.0035
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0002	0.0005	31%	31%	land area	0.0000	0.0002
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0001	0.0004	77%	77%	population	0.0001	0.0003
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0003	0.0010	77%	77%	population	0.0002	0.0008
2265002015	Construction	4-Stroke Rollers	MOVES	0.0002	0.0007	77%	77%	population	0.0002	0.0005
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0005	0.0018	77%	77%	population	0.0004	0.0014

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2030 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2030 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0002	0.0007	77%	77%	population	0.0002	0.0005
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0004	0.0012	77%	77%	population	0.0003	0.0009
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0002	0.0005	77%	77%	population	0.0001	0.0004
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0009	0.0028	77%	77%	population	0.0007	0.0021
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0004	0.0020	77%	77%	population	0.0003	0.0015
2265002045	Construction	4-Stroke Cranes	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0001	0.0002	77%	77%	population	0.0000	0.0001
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0003	0.0009	77%	77%	population	0.0002	0.0007
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0002	0.0004	77%	77%	population	0.0002	0.0003
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0001	0.0003	77%	77%	population	0.0000	0.0002
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0013	0.0019	77%	77%	population	0.0010	0.0015
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0045	0.0020	77%	77%	population	0.0035	0.0016
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0011	0.0020	77%	77%	population	0.0008	0.0016
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0023	0.0085	77%	77%	population	0.0018	0.0065
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0001	0.0002	77%	77%	population	0.0001	0.0001
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	77%	77%	population	0.0000	0.0001
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0004	0.0002	77%	77%	population	0.0003	0.0001
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0070	0.0569	77%	77%	population	0.0054	0.0438
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0037	0.0235	77%	77%	population	0.0029	0.0181
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0006	0.0052	77%	77%	population	0.0005	0.0040
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0019	0.0138	77%	77%	population	0.0015	0.0106
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0000	0.0004	77%	77%	population	0.0000	0.0003
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0001	0.0006	77%	77%	population	0.0001	0.0005
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0001	0.0005	77%	77%	population	0.0001	0.0004
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0034	0.0146	77%	77%	population	0.0026	0.0112
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0023	77%	77%	population	0.0000	0.0018
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0002	77%	77%	population	0.0000	0.0002
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0014	0.0079	77%	77%	population	0.0011	0.0061
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0004	0.0015	77%	77%	population	0.0003	0.0011
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0005	0.0017	77%	77%	population	0.0004	0.0013
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0002	0.0016	77%	77%	population	0.0002	0.0012
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0188	0.0865	77%	77%	population	0.0145	0.0666
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0055	0.0189	77%	77%	population	0.0043	0.0145
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0009	0.0020	77%	77%	population	0.0007	0.0015
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0179	0.0553	77%	77%	population	0.0138	0.0426
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0007	0.0035	77%	77%	population	0.0005	0.0027

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2030 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2030 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0005	0.0027	77%	77%	population	0.0004	0.0021
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0001	0.0001	24%	24%	land area (1)	0.0000	0.0000
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0002	0.0003	24%	24%	land area (1)	0.0000	0.0001
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0003	0.0011	24%	24%	land area (1)	0.0001	0.0003
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0001	0.0001	24%	24%	land area (1)	0.0000	0.0000
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0002	0.0002	24%	24%	land area (1)	0.0000	0.0000
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0001	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0064	0.0291	77%	77%	population	0.0049	0.0224
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0017	0.0067	77%	77%	population	0.0013	0.0052
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0009	0.0028	77%	77%	population	0.0007	0.0021
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0019	0.0063	77%	77%	population	0.0014	0.0049
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0029	0.0133	77%	77%	population	0.0023	0.0102
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0001	0.0005	77%	77%	population	0.0001	0.0004
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0000	31%	31%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	31%	31%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0000	0.0000	31%	31%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0001	0.0000	77%	77%	population	0.0000	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0001	0.0000	77%	77%	population	0.0000	0.0000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0001	0.0000	77%	77%	population	0.0000	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0009	0.0001	77%	77%	population	0.0007	0.0001
2267003020	Industrial	LPG Forklifts	MOVES	0.0714	0.0084	77%	77%	population	0.0550	0.0064
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0006	0.0001	77%	77%	population	0.0004	0.0001
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0002	0.0000	77%	77%	population	0.0001	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0003	0.0000	77%	77%	population	0.0003	0.0000

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2030 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2030 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0003	0.0000	77%	77%	population	0.0003	0.0000
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0011	0.0002	77%	77%	population	0.0009	0.0001
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0002	0.0000	77%	77%	population	0.0001	0.0000
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0002	0.0000	77%	77%	population	0.0001	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0002	0.0000	77%	77%	population	0.0002	0.0000
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0058	0.0025	77%	77%	population	0.0045	0.0019
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0001	0.0000	24%	24%	land area (1)	0.0000	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0005	0.0002	77%	77%	population	0.0004	0.0002
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0006	0.0003	77%	77%	population	0.0005	0.0002
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0004	0.0001	31%	31%	land area	0.0001	0.0000
2270002003	Construction	Diesel Pavers	MOVES	0.0021	0.0001	77%	77%	population	0.0016	0.0001
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0004	0.0001	77%	77%	population	0.0003	0.0000
2270002015	Construction	Diesel Rollers	MOVES	0.0068	0.0003	77%	77%	population	0.0052	0.0002
2270002018	Construction	Diesel Scrapers	MOVES	0.0017	0.0001	77%	77%	population	0.0013	0.0001
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0005	0.0000	77%	77%	population	0.0003	0.0000
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0004	0.0000	77%	77%	population	0.0003	0.0000
2270002027	Construction	Diesel Signal Boards	MOVES	0.0029	0.0002	77%	77%	population	0.0022	0.0002
2270002030	Construction	Diesel Trenchers	MOVES	0.0063	0.0002	77%	77%	population	0.0049	0.0001
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0052	0.0003	77%	77%	population	0.0040	0.0002
2270002036	Construction	Diesel Excavators	MOVES	0.0113	0.0005	77%	77%	population	0.0087	0.0004
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0005	0.0000	77%	77%	population	0.0004	0.0000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0003	0.0000	77%	77%	population	0.0002	0.0000
2270002045	Construction	Diesel Cranes	MOVES	0.0028	0.0001	77%	77%	population	0.0022	0.0001
2270002048	Construction	Diesel Graders	MOVES	0.0014	0.0001	77%	77%	population	0.0010	0.0001
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.0424	0.0008	77%	77%	population	0.0327	0.0006
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0012	0.0000	77%	77%	population	0.0009	0.0000
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0089	0.0002	77%	77%	population	0.0068	0.0002

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2030 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2030 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.0216	0.0008	77%	77%	population	0.0166	0.0006
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.0261	0.0025	77%	77%	population	0.0201	0.0019
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0167	0.0005	77%	77%	population	0.0129	0.0004
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.0341	0.0037	77%	77%	population	0.0263	0.0028
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0045	0.0001	77%	77%	population	0.0035	0.0001
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0022	0.0001	77%	77%	population	0.0017	0.0001
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0035	0.0004	77%	77%	population	0.0027	0.0003
2270003020	Industrial	Diesel Forklifts	MOVES	0.0222	0.0004	77%	77%	population	0.0171	0.0003
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0064	0.0002	77%	77%	population	0.0050	0.0002
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0053	0.0002	77%	77%	population	0.0041	0.0002
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0005	0.0001	77%	77%	population	0.0004	0.0000
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0546	0.0017	77%	77%	population	0.0421	0.0013
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0040	0.0001	77%	77%	population	0.0031	0.0001
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0083	0.0006	77%	77%	population	0.0064	0.0004
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0020	0.0002	77%	77%	population	0.0015	0.0001
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0070	0.0005	77%	77%	population	0.0054	0.0003
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0007	0.0000	77%	77%	population	0.0005	0.0000
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0256	0.0014	24%	24%	land area (1)	0.0062	0.0003
2270005020	Agriculture	Diesel Combines	MOVES	0.0034	0.0003	24%	24%	land area (1)	0.0008	0.0001
2270005025	Agriculture	Diesel Balers	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0003	0.0000	24%	24%	land area (1)	0.0001	0.0000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0003	0.0000	24%	24%	land area (1)	0.0001	0.0000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0005	0.0000	24%	24%	land area (1)	0.0001	0.0000
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0003	0.0000	24%	24%	land area (1)	0.0001	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0120	0.0009	77%	77%	population	0.0093	0.0007
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0028	0.0002	77%	77%	population	0.0021	0.0002
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0046	0.0001	77%	77%	population	0.0036	0.0001
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0044	0.0004	77%	77%	population	0.0034	0.0003
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0004	0.0000	77%	77%	population	0.0003	0.0000
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0002	0.0000	77%	77%	population	0.0002	0.0000
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidders	MOVES	0.0000	0.0000	31%	31%	land area	0.0000	0.0000
2275000000	Aircraft	All Aircraft	EPA16v1	0.0101	0.0169	88%	82%	airport location	0.0089	0.0138
2280002201	Comm. Mar.	CM Vessels, Diesel, Underway, C1&C2, Main Eng.	EPA16v1	0.0673	0.0025	100%	100%	Lk. Mich. Shoreline	0.0673	0.0025

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2030 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2030 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2280002202	Comm. Mar.	CM Vessels, Diesel, Underway, C1&C2, Aux. Eng.	EPA16v1	0.1303	0.0036	100%	100%	Lk. Mich. Shoreline	0.1303	0.0036
2280002203	Comm. Mar.	CM Vessels, Diesel, Underway, C3, Main Eng.	EPA16v1	0.1026	0.0045	100%	100%	Lk. Mich. Shoreline	0.1026	0.0045
2280002204	Comm. Mar.	CM Vessels, Diesel, Underway, C3, Aux. Eng.	EPA16v1	0.0084	0.0004	100%	100%	Lk. Mich. Shoreline	0.0084	0.0004
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0450	0.0898	4%	4%	water area	0.0018	0.0036
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0215	0.0231	70%	70%	water area	0.0150	0.0162
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0353	0.0456	70%	70%	water area	0.0247	0.0319
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0757	0.0052	70%	70%	water area	0.0530	0.0037
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0001	0.0000	4%	4%	water area	0.0000	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	EPA16v1	0.6052	0.0247	63%	64%	rail links	0.3813	0.0158
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0006	0.0001	100%	100%	rail links	0.0006	0.0001
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0001	100%	100%	rail links	0.0000	0.0001
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	100%	100%	rail links	0.0000	0.0000
ALL (Total)	**ALL (Total)**	**ALL (Total)**		**1.6630**	**0.9567**	**72.5%**	**65.6%**		**1.2057**	**0.6275**
22xx005xxx	Agriculture	All	MOVES	0.0316	0.0039	24.0%	24.0%	land area (1)	0.0076	0.0009
22750xxxxx	Airport	All	EPA16v1	0.0101	0.0169	88.0%	82.0%	airport location	0.0089	0.0138
22xx006xxx	Commercial	All	MOVES	0.0415	0.0709	77.0%	77.0%	population	0.0320	0.0546
2280002xxx	Comm. Mar	All	EPA16v1	0.3087	0.0109	100.0%	100.0%	Lk. Mich. Shoreline	0.3087	0.0109
22xx002xxx	Construction	All	MOVES	0.2059	0.0552	77.0%	77.0%	population	0.1585	0.0425
22xx003xxx	Industrial	All	MOVES	0.1856	0.0296	77.0%	77.0%	population	0.1429	0.0228
22xx004xxx	Lawn/Garden	All	MOVES	0.0889	0.5014	77.0%	77.0%	population	0.0685	0.3860
22xx007xxx	Logging	All	MOVES	0.0000	0.0001	31.0%	31.0%	land area	0.0000	0.0000
22820xxxxx	Pleasure Craft	All	MOVES	0.1775	0.1638	53.2%	33.8%	water area	0.0945	0.0553
228500200x	Railroad	All	EPA16v1	0.6052	0.0247	63.0%	64.0%	rail links	0.3813	0.0158
228500x015	Railway Maint.	All	MOVES	0.0006	0.0002	100.0%	100.0%	rail links	0.0006	0.0002
22xx001xxx	Recreational	All	MOVES	0.0073	0.0793	31.0%	31.0%	land area	0.0023	0.0246
ALL (Total)	**ALL (Total)**	**ALL (Total)**		**1.6630**	**0.9567**	**72.5%**	**65.6%**		**1.2057**	**0.6275**

(1) City of Kenosha excluded.

Table A7.4. 2035 Nonroad NOx and VOC Emissions: tons per ozone season day (tposd) Kenosha County and the Partial Kenosha County 2008 Ozone NAAQS area.

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2035 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2035 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0006	0.0407	31%	31%	land area	0.0002	0.0126
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0003	0.0025	31%	31%	land area	0.0001	0.0008
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0002	0.0007	31%	31%	land area	0.0001	0.0002
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0002	0.0089	77%	77%	population	0.0002	0.0068
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0003	77%	77%	population	0.0000	0.0002
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0004	77%	77%	population	0.0000	0.0003
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0006	0.0225	77%	77%	population	0.0004	0.0173
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0001	77%	77%	population	0.0000	0.0001
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0005	77%	77%	population	0.0000	0.0004
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0001	0.0014	77%	77%	population	0.0000	0.0010
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0002	0.0039	77%	77%	population	0.0001	0.0030
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0004	0.0136	77%	77%	population	0.0003	0.0105
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0010	0.0445	77%	77%	population	0.0008	0.0342
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0011	0.0271	77%	77%	population	0.0008	0.0209
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0017	0.0446	77%	77%	population	0.0013	0.0343
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0007	0.0167	77%	77%	population	0.0005	0.0128
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0016	0.0446	77%	77%	population	0.0012	0.0343
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0010	77%	77%	population	0.0000	0.0008
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0001	77%	77%	population	0.0000	0.0001
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0001	24%	24%	land area (1)	0.0000	0.0000
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0000	0.0013	77%	77%	population	0.0000	0.0010
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0003	0.0092	77%	77%	population	0.0003	0.0071
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0001	77%	77%	population	0.0000	0.0000
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0001	31%	31%	land area	0.0000	0.0000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0003	0.0020	31%	31%	land area	0.0001	0.0006
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0020	0.0203	31%	31%	land area	0.0006	0.0063
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0034	0.0112	31%	31%	land area	0.0011	0.0035
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0001	0.0004	31%	31%	land area	0.0000	0.0001
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0001	0.0004	77%	77%	population	0.0001	0.0003
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0003	0.0010	77%	77%	population	0.0002	0.0008
2265002015	Construction	4-Stroke Rollers	MOVES	0.0002	0.0007	77%	77%	population	0.0002	0.0005
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0005	0.0018	77%	77%	population	0.0004	0.0014

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2035 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2035 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0002	0.0007	77%	77%	population	0.0002	0.0006
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0004	0.0013	77%	77%	population	0.0003	0.0010
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0002	0.0005	77%	77%	population	0.0001	0.0004
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0009	0.0028	77%	77%	population	0.0007	0.0022
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0004	0.0020	77%	77%	population	0.0003	0.0016
2265002045	Construction	4-Stroke Cranes	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0001	0.0002	77%	77%	population	0.0000	0.0001
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0001	0.0001	77%	77%	population	0.0001	0.0000
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0003	0.0009	77%	77%	population	0.0002	0.0007
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0002	0.0004	77%	77%	population	0.0001	0.0003
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0001	0.0003	77%	77%	population	0.0001	0.0002
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0015	0.0022	77%	77%	population	0.0011	0.0017
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0053	0.0024	77%	77%	population	0.0041	0.0018
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0013	0.0024	77%	77%	population	0.0010	0.0018
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0027	0.0100	77%	77%	population	0.0021	0.0077
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0001	0.0002	77%	77%	population	0.0001	0.0001
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	77%	77%	population	0.0000	0.0001
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0005	0.0002	77%	77%	population	0.0004	0.0002
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0069	0.0560	77%	77%	population	0.0053	0.0431
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0037	0.0231	77%	77%	population	0.0028	0.0178
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0006	0.0051	77%	77%	population	0.0005	0.0039
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0019	0.0136	77%	77%	population	0.0014	0.0105
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0000	0.0004	77%	77%	population	0.0000	0.0003
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0001	0.0006	77%	77%	population	0.0001	0.0005
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0001	0.0005	77%	77%	population	0.0001	0.0004
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0033	0.0143	77%	77%	population	0.0026	0.0110
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0023	77%	77%	population	0.0000	0.0017
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0002	77%	77%	population	0.0000	0.0002
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0014	0.0078	77%	77%	population	0.0011	0.0060
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0004	0.0014	77%	77%	population	0.0003	0.0011
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0004	0.0016	77%	77%	population	0.0003	0.0013
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0002	0.0016	77%	77%	population	0.0002	0.0012
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0185	0.0851	77%	77%	population	0.0143	0.0655
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0055	0.0186	77%	77%	population	0.0042	0.0143
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0009	0.0020	77%	77%	population	0.0007	0.0015
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0177	0.0545	77%	77%	population	0.0136	0.0420
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0007	0.0034	77%	77%	population	0.0005	0.0027

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2035 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2035 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0005	0.0027	77%	77%	population	0.0004	0.0020
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0001	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0001	0.0003	24%	24%	land area (1)	0.0000	0.0001
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0002	0.0009	24%	24%	land area (1)	0.0001	0.0002
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0001	0.0001	24%	24%	land area (1)	0.0000	0.0000
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0001	0.0001	24%	24%	land area (1)	0.0000	0.0000
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0001	0.0000	24%	24%	land area (1)	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0069	0.0316	77%	77%	population	0.0053	0.0243
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0018	0.0073	77%	77%	population	0.0014	0.0056
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0009	0.0030	77%	77%	population	0.0007	0.0023
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0020	0.0068	77%	77%	population	0.0016	0.0053
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0032	0.0145	77%	77%	population	0.0025	0.0111
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0002	0.0005	77%	77%	population	0.0001	0.0004
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0000	31%	31%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	31%	31%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0000	0.0000	31%	31%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0001	0.0000	77%	77%	population	0.0000	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0009	0.0001	77%	77%	population	0.0007	0.0001
2267003020	Industrial	LPG Forklifts	MOVES	0.0840	0.0098	77%	77%	population	0.0647	0.0076
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0007	0.0001	77%	77%	population	0.0005	0.0001
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0002	0.0000	77%	77%	population	0.0002	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0004	0.0000	77%	77%	population	0.0003	0.0000

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				NOx	VOC	NOx	VOC		NOx	VOC
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0003	0.0000	77%	77%	population	0.0002	0.0000
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0009	0.0001	77%	77%	population	0.0007	0.0001
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0002	0.0000	77%	77%	population	0.0001	0.0000
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0002	0.0000	77%	77%	population	0.0001	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0002	0.0000	77%	77%	population	0.0002	0.0000
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0068	0.0029	77%	77%	population	0.0053	0.0022
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0001	0.0000	24%	24%	land area (1)	0.0000	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0004	0.0002	77%	77%	population	0.0003	0.0001
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0007	0.0003	77%	77%	population	0.0005	0.0003
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0003	0.0000	31%	31%	land area	0.0001	0.0000
2270002003	Construction	Diesel Pavers	MOVES	0.0020	0.0001	77%	77%	population	0.0015	0.0000
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0004	0.0001	77%	77%	population	0.0003	0.0000
2270002015	Construction	Diesel Rollers	MOVES	0.0063	0.0002	77%	77%	population	0.0049	0.0002
2270002018	Construction	Diesel Scrapers	MOVES	0.0013	0.0001	77%	77%	population	0.0010	0.0001
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0004	0.0000	77%	77%	population	0.0003	0.0000
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0004	0.0000	77%	77%	population	0.0003	0.0000
2270002027	Construction	Diesel Signal Boards	MOVES	0.0029	0.0002	77%	77%	population	0.0023	0.0002
2270002030	Construction	Diesel Trenchers	MOVES	0.0062	0.0002	77%	77%	population	0.0048	0.0001
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0038	0.0002	77%	77%	population	0.0030	0.0001
2270002036	Construction	Diesel Excavators	MOVES	0.0112	0.0005	77%	77%	population	0.0086	0.0004
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0005	0.0000	77%	77%	population	0.0004	0.0000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0003	0.0000	77%	77%	population	0.0002	0.0000
2270002045	Construction	Diesel Cranes	MOVES	0.0018	0.0001	77%	77%	population	0.0014	0.0001
2270002048	Construction	Diesel Graders	MOVES	0.0013	0.0001	77%	77%	population	0.0010	0.0001
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.0434	0.0008	77%	77%	population	0.0334	0.0006
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0010	0.0000	77%	77%	population	0.0008	0.0000
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0082	0.0002	77%	77%	population	0.0063	0.0001

SCC	Segment Description	SCC Description	Emis-sions from	Kenosha County 2035 Emissions		% in Partial Kenosha Co.		Allocate by	Partial Ken. Co. 2035 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.0175	0.0006	77%	77%	population	0.0134	0.0004
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.0200	0.0013	77%	77%	population	0.0154	0.0010
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0161	0.0005	77%	77%	population	0.0124	0.0004
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.0304	0.0023	77%	77%	population	0.0234	0.0018
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0043	0.0001	77%	77%	population	0.0033	0.0001
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0001	0.0000	77%	77%	population	0.0001	0.0000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0014	0.0001	77%	77%	population	0.0011	0.0001
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0036	0.0002	77%	77%	population	0.0028	0.0002
2270003020	Industrial	Diesel Forklifts	MOVES	0.0261	0.0005	77%	77%	population	0.0201	0.0004
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0074	0.0002	77%	77%	population	0.0057	0.0002
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0055	0.0002	77%	77%	population	0.0042	0.0001
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0004	0.0000	77%	77%	population	0.0003	0.0000
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0643	0.0020	77%	77%	population	0.0495	0.0015
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0047	0.0002	77%	77%	population	0.0036	0.0001
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0079	0.0005	77%	77%	population	0.0061	0.0004
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0019	0.0002	77%	77%	population	0.0015	0.0001
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0047	0.0003	77%	77%	population	0.0036	0.0002
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0007	0.0000	77%	77%	population	0.0005	0.0000
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0000	0.0000	77%	77%	population	0.0000	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0172	0.0008	24%	24%	land area (1)	0.0041	0.0002
2270005020	Agriculture	Diesel Combines	MOVES	0.0021	0.0002	24%	24%	land area (1)	0.0005	0.0000
2270005025	Agriculture	Diesel Balers	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0002	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	24%	24%	land area (1)	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0002	0.0000	24%	24%	land area (1)	0.0001	0.0000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0003	0.0000	24%	24%	land area (1)	0.0001	0.0000
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0002	0.0000	24%	24%	land area (1)	0.0001	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0109	0.0007	77%	77%	population	0.0084	0.0005
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0025	0.0002	77%	77%	population	0.0019	0.0001
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0046	0.0001	77%	77%	population	0.0036	0.0001
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0043	0.0003	77%	77%	population	0.0033	0.0002
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0003	0.0000	77%	77%	population	0.0003	0.0000
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0002	0.0000	77%	77%	population	0.0002	0.0000
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidders	MOVES	0.0000	0.0000	31%	31%	land area	0.0000	0.0000
2275000000	Aircraft	All Aircraft	EPA16v1	0.0101	0.0169	88%	82%	airport location	0.0089	0.0138
2280002201	Comm. Mar.	CM Vessels, Diesel, Underway, C1&C2, Main Eng.	EPA16v1	0.0673	0.0025	100%	100%	Lk. Mich. Shoreline	0.0673	0.0025

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				NOx	VOC	NOx	VOC		NOx	VOC
2280002202	Comm. Mar.	CM Vessels, Diesel, Underway, C1&C2, Aux. Eng.	EPA16v1	0.1303	0.0036	100%	100%	Lk. Mich. Shoreline	0.1303	0.0036
2280002203	Comm. Mar.	CM Vessels, Diesel, Underway, C3, Main Eng.	EPA16v1	0.1095	0.0049	100%	100%	Lk. Mich. Shoreline	0.1095	0.0049
2280002204	Comm. Mar.	CM Vessels, Diesel, Underway, C3, Aux. Eng.	EPA16v1	0.0090	0.0004	100%	100%	Lk. Mich. Shoreline	0.0090	0.0004
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0453	0.0779	4%	4%	water area	0.0018	0.0031
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0216	0.0233	70%	70%	water area	0.0151	0.0163
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0297	0.0415	70%	70%	water area	0.0208	0.0290
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.0784	0.0056	70%	70%	water area	0.0549	0.0039
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0001	0.0000	4%	4%	water area	0.0000	0.0000
228500200x	Railroad	All Diesel Line Haul Locomotives	EPA16v1	0.6052	0.0247	63%	64%	rail links	0.3813	0.0158
2285002015	Railway Maint.	Diesel Railway Maintenance	MOVES	0.0004	0.0000	100%	100%	rail links	0.0004	0.0000
2285004015	Railway Maint.	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0001	100%	100%	rail links	0.0000	0.0001
2285006015	Railway Maint.	LPG Railway Maintenance	MOVES	0.0000	0.0000	100%	100%	rail links	0.0000	0.0000
ALL (Total)	**ALL (Total)**	**ALL (Total)**		**1.6645**	**0.9390**	**72.9%**	**66.5%**		**1.2141**	**0.6242**
22xx005xxx	Agriculture	All	MOVES	0.0212	0.0028	24.0%	24.0%	land area (1)	0.0051	0.0007
22750xxxxx	Airport	All	EPA16v1	0.0101	0.0169	88.0%	82.0%	airport location	0.0089	0.0138
22xx006xxx	Commercial	All	MOVES	0.0409	0.0763	77.0%	77.0%	population	0.0315	0.0588
2280002xxx	Comm. Mar	All	EPA16v1	0.3161	0.0114	100.0%	100.0%	Lk. Mich. Shoreline	0.3161	0.0114
22xx002xxx	Construction	All	MOVES	0.1867	0.0530	77.0%	77.0%	population	0.1438	0.0408
22xx003xxx	Industrial	All	MOVES	0.2165	0.0344	77.0%	77.0%	population	0.1667	0.0265
22xx004xxx	Lawn/Garden	All	MOVES	0.0851	0.4933	77.0%	77.0%	population	0.0655	0.3798
22xx007xxx	Logging	All	MOVES	0.0000	0.0001	31.0%	31.0%	land area	0.0000	0.0000
22820xxxxx	Pleasure Craft	All	MOVES	0.1751	0.1483	52.9%	35.3%	water area	0.0927	0.0524
228500200x	Railroad	All	EPA16v1	0.6052	0.0247	63.0%	64.0%	rail links	0.3813	0.0158
228500x015	Railway Maint.	All	MOVES	0.0004	0.0001	100.0%	100.0%	rail links	0.0004	0.0001
22xx001xxx	Recreational	All	MOVES	0.0071	0.0778	31.0%	31.0%	land area	0.0022	0.0241
ALL (Total)	**ALL (Total)**	**ALL (Total)**		**1.6645**	**0.9390**	**72.9%**	**66.5%**		**1.2141**	**0.6242**

(1) City of Kenosha excluded.

APPENDIX 8

Onroad Emissions and Activity Data for 2011, 2019, 2030 and 2035

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 partial Kenosha County area for 2011, 2019, 2030 and 2035. The sums of nitrogen oxides (NOx) and volatile organic compounds (VOC) emissions from these onroad categories were used for the onroad sector NOx and VOC tposwd emission estimates in Section 4.2 and Section 4.3 of WDNR's Redesignation Request and Maintenance Plan for the Partial Kenosha County, Wisconsin 2008 Ozone NAAQS Nonattainment Area.

Table A8.1. 2011 Onroad NOx and VOC Emissions: tons per ozone season weekday (tposwd) for the Partial Kenosha County 2008 Ozone NAAQS area.

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2011			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0000	0.0002	0.0283	0.0286
Motorcycle	Gasoline	Rural Restricted	0.0018	0.0020	0.0007	0.0027
Motorcycle	Gasoline	Rural Unrestricted	0.0033	0.0043	0.0017	0.0060
Motorcycle	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motorcycle	Gasoline	Urban Unrestricted	0.0071	0.0144	0.0075	0.0218
Passenger Car	Gasoline	Off-Network	0.1360	0.1299	0.3864	0.5164
Passenger Car	Gasoline	Rural Restricted	0.2445	0.0485	0.0151	0.0636
Passenger Car	Gasoline	Rural Unrestricted	0.1559	0.0387	0.0133	0.0521
Passenger Car	Gasoline	Urban Restricted	0.0009	0.0003	0.0002	0.0005
Passenger Car	Gasoline	Urban Unrestricted	0.4483	0.1439	0.0575	0.2014
Passenger Car	Diesel	Off-Network	0.0007	0.0014	0.0000	0.0014
Passenger Car	Diesel	Rural Restricted	0.0011	0.0005	0.0000	0.0005
Passenger Car	Diesel	Rural Unrestricted	0.0007	0.0004	0.0000	0.0004
Passenger Car	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Unrestricted	0.0019	0.0014	0.0000	0.0014
Passenger Car	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0000	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	0.1840	0.1305	0.1799	0.3104
Passenger Truck	Gasoline	Rural Restricted	0.3088	0.0436	0.0080	0.0516
Passenger Truck	Gasoline	Rural Unrestricted	0.1895	0.0355	0.0070	0.0425
Passenger Truck	Gasoline	Urban Restricted	0.0010	0.0003	0.0001	0.0004
Passenger Truck	Gasoline	Urban Unrestricted	0.5189	0.1346	0.0303	0.1649
Passenger Truck	Diesel	Off-Network	0.0565	0.0055	0.0000	0.0055
Passenger Truck	Diesel	Rural Restricted	0.0433	0.0088	0.0000	0.0088
Passenger Truck	Diesel	Rural Unrestricted	0.0336	0.0068	0.0000	0.0068
Passenger Truck	Diesel	Urban Restricted	0.0003	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Urban Unrestricted	0.1246	0.0247	0.0000	0.0247
Passenger Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0001	0.0002
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	0.0002	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	0.0433	0.0317	0.0347	0.0664
Light Commercial Truck	Gasoline	Rural Restricted	0.0581	0.0094	0.0016	0.0110
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0373	0.0086	0.0014	0.0100
Light Commercial Truck	Gasoline	Urban Restricted	0.0002	0.0001	0.0000	0.0001
Light Commercial Truck	Gasoline	Urban Unrestricted	0.1059	0.0360	0.0061	0.0421

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2011			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
Light Commercial Truck	Diesel	Off-Network	0.0164	0.0018	0.0000	0.0018
Light Commercial Truck	Diesel	Rural Restricted	0.0121	0.0025	0.0000	0.0025
Light Commercial Truck	Diesel	Rural Unrestricted	0.0093	0.0019	0.0000	0.0019
Light Commercial Truck	Diesel	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Light Commercial Truck	Diesel	Urban Unrestricted	0.0344	0.0071	0.0000	0.0071
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0000	0.0000
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	0.0001	0.0001	0.0000	0.0001
Other Buses	Gasoline	Rural Restricted	0.0003	0.0000	0.0000	0.0000
Other Buses	Gasoline	Rural Unrestricted	0.0002	0.0000	0.0000	0.0001
Other Buses	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Urban Unrestricted	0.0007	0.0002	0.0000	0.0002
Other Buses	Diesel	Off-Network	0.0043	0.0008	0.0000	0.0008
Other Buses	Diesel	Rural Restricted	0.0103	0.0005	0.0000	0.0005
Other Buses	Diesel	Rural Unrestricted	0.0080	0.0005	0.0000	0.0005
Other Buses	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Unrestricted	0.0239	0.0018	0.0000	0.0018
Other Buses	CNG	Off-Network	0.0001	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Restricted	0.0007	0.0001	0.0000	0.0001
Other Buses	CNG	Rural Unrestricted	0.0006	0.0001	0.0000	0.0001
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0016	0.0004	0.0000	0.0004
Transit Bus	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	Diesel	Off-Network	0.0016	0.0002	0.0000	0.0002
Transit Bus	Diesel	Rural Restricted	0.0031	0.0002	0.0000	0.0002
Transit Bus	Diesel	Rural Unrestricted	0.0026	0.0002	0.0000	0.0002
Transit Bus	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Unrestricted	0.0083	0.0006	0.0000	0.0006
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0002	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0002	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0005	0.0001	0.0000	0.0001
School Bus	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000
School Bus	Diesel	Off-Network	0.0008	0.0002	0.0000	0.0002
School Bus	Diesel	Rural Restricted	0.0031	0.0004	0.0000	0.0004
School Bus	Diesel	Rural Unrestricted	0.0028	0.0004	0.0000	0.0004
School Bus	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2011			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
School Bus	Diesel	Urban Unrestricted	0.0093	0.0013	0.0000	0.0013
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
Refuse Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0001
Refuse Truck	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Unrestricted	0.0002	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Off-Network	0.0027	0.0004	0.0000	0.0004
Refuse Truck	Diesel	Rural Restricted	0.0058	0.0003	0.0000	0.0003
Refuse Truck	Diesel	Rural Unrestricted	0.0033	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Unrestricted	0.0102	0.0008	0.0000	0.0008
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
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0253	0.0157	0.0232	0.0389
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0241	0.0033	0.0004	0.0038
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0140	0.0031	0.0004	0.0035
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0001
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0380	0.0142	0.0014	0.0156
Single Unit Short-haul Truck	Diesel	Off-Network	0.0737	0.0160	0.0000	0.0160
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.1499	0.0162	0.0000	0.0162
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0950	0.0122	0.0000	0.0122
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0009	0.0001	0.0000	0.0001
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.3101	0.0421	0.0000	0.0421
Single Unit Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0002	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0001	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	0.0004	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0003	0.0002	0.0008	0.0011
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0015	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0009	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0024	0.0009	0.0001	0.0009
Single Unit Long-haul Truck	Diesel	Off-Network	0.0039	0.0010	0.0000	0.0010
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0087	0.0011	0.0000	0.0011
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0055	0.0008	0.0000	0.0008
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0181	0.0028	0.0000	0.0028
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
Motor Home	Gasoline	Off-Network	0.0005	0.0008	0.0037	0.0044
Motor Home	Gasoline	Rural Restricted	0.0042	0.0007	0.0001	0.0008
Motor Home	Gasoline	Rural Unrestricted	0.0025	0.0007	0.0001	0.0007

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2011			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
Motor Home	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Gasoline	Urban Unrestricted	0.0068	0.0029	0.0003	0.0032
Motor Home	Diesel	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0040	0.0005	0.0000	0.0005
Motor Home	Diesel	Rural Unrestricted	0.0026	0.0004	0.0000	0.0004
Motor Home	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Motor Home	Diesel	Urban Unrestricted	0.0088	0.0013	0.0000	0.0013
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
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	0.0124	0.0020	0.0000	0.0020
Combination Short-haul Truck	Diesel	Rural Restricted	0.1222	0.0060	0.0000	0.0060
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0191	0.0012	0.0000	0.0012
Combination Short-haul Truck	Diesel	Urban Restricted	0.0006	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0575	0.0040	0.0000	0.0040
Combination Short-haul Truck	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Combination Long-haul Truck	Diesel	Off-Network	0.0531	0.0092	0.0000	0.0092
Combination Long-haul Truck	Diesel	Rural Restricted	0.5266	0.0249	0.0000	0.0249
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0839	0.0049	0.0000	0.0049
Combination Long-haul Truck	Diesel	Urban Restricted	0.0027	0.0002	0.0000	0.0002
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.2545	0.0166	0.0000	0.0166
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**4.8224**	**1.0926**	**0.8107**	**1.9033**
Motorcycle	ALL	ALL	0.0122	0.0209	0.0382	0.0591
Passenger Car	ALL	ALL	0.9900	0.3651	0.4726	0.8377
Passenger Truck	ALL	ALL	1.4610	0.3906	0.2254	0.6160
Light Commercial Truck	ALL	ALL	0.3173	0.0991	0.0439	0.1430
Other Buses	ALL	ALL	0.0509	0.0047	0.0000	0.0047
Transit Bus	ALL	ALL	0.0168	0.0015	0.0000	0.0015
School Bus	ALL	ALL	0.0163	0.0023	0.0000	0.0024
Refuse Truck	ALL	ALL	0.0224	0.0019	0.0000	0.0019
Single Unit Short-haul Truck	ALL	ALL	0.7318	0.1232	0.0254	0.1486
Single Unit Long-haul Truck	ALL	ALL	0.0413	0.0071	0.0010	0.0081
Motor Home	ALL	ALL	0.0295	0.0072	0.0042	0.0114
Combination Short-haul Truck	ALL	ALL	0.2120	0.0132	0.0000	0.0132
Combination Long-haul Truck	ALL	ALL	0.9208	0.0558	0.0000	0.0558
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**4.8224**	**1.0926**	**0.8107**	**1.9033**
ALL	Gasoline	ALL	2.5675	0.8563	0.8104	1.6668
ALL	Diesel	ALL	2.2495	0.2352	0.0000	0.2352
ALL	CNG	ALL	0.0047	0.0009	0.0000	0.0009

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2011			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
ALL	Ethanol (E-85)	ALL	0.0007	0.0002	0.0002	0.0004
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**4.8224**	**1.0926**	**0.8107**	**1.9033**
ALL	ALL	Off-Network	0.6163	0.3481	0.6573	1.0054
ALL	ALL	Rural Restricted	1.5349	0.1699	0.0260	0.1958
ALL	ALL	Rural Unrestricted	0.6712	0.1212	0.0240	0.1452
ALL	ALL	Urban Restricted	0.0071	0.0013	0.0003	0.0016
ALL	ALL	Urban Unrestricted	1.9929	0.4522	0.1032	0.5553
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**4.8224**	**1.0926**	**0.8107**	**1.9033**

Table A8.2. 2019 Onroad NOx and VOC Emissions: tons per ozone season weekday (tposwd) for the Partial Kenosha County 2008 Ozone NAAQS area.

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2019			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
Motorcycle	Gasoline	Off-Network	0.0000	0.0003	0.0349	0.0351
Motorcycle	Gasoline	Rural Restricted	0.0016	0.0017	0.0006	0.0023
Motorcycle	Gasoline	Rural Unrestricted	0.0029	0.0035	0.0016	0.0051
Motorcycle	Gasoline	Urban Restricted	0.0004	0.0004	0.0002	0.0006
Motorcycle	Gasoline	Urban Unrestricted	0.0075	0.0138	0.0081	0.0219
Passenger Car	Gasoline	Off-Network	0.0555	0.0733	0.2233	0.2966
Passenger Car	Gasoline	Rural Restricted	0.0472	0.0111	0.0058	0.0169
Passenger Car	Gasoline	Rural Unrestricted	0.0269	0.0079	0.0053	0.0132
Passenger Car	Gasoline	Urban Restricted	0.0107	0.0026	0.0014	0.0040
Passenger Car	Gasoline	Urban Unrestricted	0.0896	0.0335	0.0268	0.0603
Passenger Car	Diesel	Off-Network	0.0004	0.0007	0.0000	0.0007
Passenger Car	Diesel	Rural Restricted	0.0003	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	0.0006	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	0.0635	0.0648	0.1136	0.1784
Passenger Truck	Gasoline	Rural Restricted	0.0435	0.0082	0.0036	0.0118
Passenger Truck	Gasoline	Rural Unrestricted	0.0242	0.0059	0.0033	0.0092
Passenger Truck	Gasoline	Urban Restricted	0.0099	0.0019	0.0009	0.0028
Passenger Truck	Gasoline	Urban Unrestricted	0.0779	0.0258	0.0166	0.0424
Passenger Truck	Diesel	Off-Network	0.0250	0.0017	0.0000	0.0017
Passenger Truck	Diesel	Rural Restricted	0.0123	0.0018	0.0000	0.0018
Passenger Truck	Diesel	Rural Unrestricted	0.0095	0.0014	0.0000	0.0014
Passenger Truck	Diesel	Urban Restricted	0.0029	0.0004	0.0000	0.0004
Passenger Truck	Diesel	Urban Unrestricted	0.0429	0.0061	0.0000	0.0061
Passenger Truck	Ethanol (E-85)	Off-Network	0.0001	0.0002	0.0003	0.0004
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	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	0.0000	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	0.0202	0.0166	0.0230	0.0395
Light Commercial Truck	Gasoline	Rural Restricted	0.0159	0.0025	0.0007	0.0032
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0096	0.0023	0.0007	0.0029
Light Commercial Truck	Gasoline	Urban Restricted	0.0036	0.0006	0.0002	0.0008
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0320	0.0117	0.0034	0.0151

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2019			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
Light Commercial Truck	Diesel	Off-Network	0.0083	0.0006	0.0000	0.0006
Light Commercial Truck	Diesel	Rural Restricted	0.0050	0.0008	0.0000	0.0008
Light Commercial Truck	Diesel	Rural Unrestricted	0.0037	0.0007	0.0000	0.0007
Light Commercial Truck	Diesel	Urban Restricted	0.0012	0.0002	0.0000	0.0002
Light Commercial Truck	Diesel	Urban Unrestricted	0.0162	0.0028	0.0000	0.0028
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	0.0001	0.0001	0.0000	0.0002
Other Buses	Gasoline	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Other Buses	Gasoline	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Other Buses	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Urban Unrestricted	0.0002	0.0002	0.0000	0.0002
Other Buses	Diesel	Off-Network	0.0033	0.0004	0.0000	0.0004
Other Buses	Diesel	Rural Restricted	0.0052	0.0002	0.0000	0.0002
Other Buses	Diesel	Rural Unrestricted	0.0040	0.0002	0.0000	0.0002
Other Buses	Diesel	Urban Restricted	0.0012	0.0001	0.0000	0.0001
Other Buses	Diesel	Urban Unrestricted	0.0152	0.0010	0.0000	0.0010
Other Buses	CNG	Off-Network	0.0001	0.0001	0.0000	0.0001
Other Buses	CNG	Rural Restricted	0.0003	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0002	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0008	0.0002	0.0000	0.0002
Transit Bus	Gasoline	Off-Network	0.0000	0.0000	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	0.0001	0.0000	0.0000	0.0000
Transit Bus	Diesel	Off-Network	0.0011	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Restricted	0.0019	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Unrestricted	0.0015	0.0001	0.0000	0.0001
Transit Bus	Diesel	Urban Restricted	0.0004	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Unrestricted	0.0057	0.0005	0.0000	0.0005
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0003	0.0001	0.0000	0.0001
School Bus	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
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	0.0007	0.0001	0.0000	0.0001
School Bus	Diesel	Rural Restricted	0.0010	0.0001	0.0000	0.0001
School Bus	Diesel	Rural Unrestricted	0.0009	0.0001	0.0000	0.0001
School Bus	Diesel	Urban Restricted	0.0003	0.0000	0.0000	0.0000

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2019			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
School Bus	Diesel	Urban Unrestricted	0.0039	0.0004	0.0000	0.0004
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
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	0.0013	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Rural Restricted	0.0020	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Rural Unrestricted	0.0011	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Urban Restricted	0.0005	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Unrestricted	0.0044	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
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0122	0.0091	0.0133	0.0225
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0041	0.0011	0.0001	0.0012
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0023	0.0008	0.0001	0.0010
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0009	0.0003	0.0000	0.0003
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0074	0.0045	0.0006	0.0051
Single Unit Short-haul Truck	Diesel	Off-Network	0.0521	0.0049	0.0000	0.0049
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0533	0.0039	0.0000	0.0039
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0342	0.0031	0.0000	0.0031
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0125	0.0009	0.0000	0.0009
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.1441	0.0127	0.0000	0.0127
Single Unit Short-haul Truck	CNG	Off-Network	0.0003	0.0001	0.0000	0.0001
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0002	0.0001	0.0000	0.0001
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0006	0.0004	0.0000	0.0004
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	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0004	0.0003	0.0000	0.0003
Single Unit Long-haul Truck	Diesel	Off-Network	0.0022	0.0003	0.0000	0.0003
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0029	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0019	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0007	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0082	0.0007	0.0000	0.0007
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
Motor Home	Gasoline	Off-Network	0.0005	0.0008	0.0038	0.0046
Motor Home	Gasoline	Rural Restricted	0.0021	0.0004	0.0001	0.0005
Motor Home	Gasoline	Rural Unrestricted	0.0012	0.0004	0.0001	0.0004

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2019			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
Motor Home	Gasoline	Urban Restricted	0.0005	0.0001	0.0000	0.0001
Motor Home	Gasoline	Urban Unrestricted	0.0038	0.0019	0.0003	0.0022
Motor Home	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0025	0.0002	0.0000	0.0002
Motor Home	Diesel	Rural Unrestricted	0.0016	0.0002	0.0000	0.0002
Motor Home	Diesel	Urban Restricted	0.0006	0.0001	0.0000	0.0001
Motor Home	Diesel	Urban Unrestricted	0.0064	0.0008	0.0000	0.0008
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
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	0.0093	0.0008	0.0000	0.0008
Combination Short-haul Truck	Diesel	Rural Restricted	0.0523	0.0020	0.0000	0.0020
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0081	0.0004	0.0000	0.0004
Combination Short-haul Truck	Diesel	Urban Restricted	0.0118	0.0005	0.0000	0.0005
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0319	0.0016	0.0000	0.0016
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 Long-haul Truck	Diesel	Off-Network	0.0422	0.0045	0.0000	0.0045
Combination Long-haul Truck	Diesel	Rural Restricted	0.2803	0.0100	0.0000	0.0100
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0439	0.0019	0.0000	0.0019
Combination Long-haul Truck	Diesel	Urban Restricted	0.0632	0.0023	0.0000	0.0023
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.1729	0.0078	0.0000	0.0078
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**1.8070**	**0.3922**	**0.4936**	**0.8858**
Motorcycle	ALL	ALL	0.0124	0.0197	0.0453	0.0650
Passenger Car	ALL	ALL	0.2317	0.1296	0.2627	0.3924
Passenger Truck	ALL	ALL	0.3120	0.1183	0.1383	0.2566
Light Commercial Truck	ALL	ALL	0.1157	0.0387	0.0280	0.0667
Other Buses	ALL	ALL	0.0310	0.0027	0.0001	0.0027
Transit Bus	ALL	ALL	0.0113	0.0011	0.0000	0.0011
School Bus	ALL	ALL	0.0069	0.0007	0.0000	0.0007
Refuse Truck	ALL	ALL	0.0093	0.0006	0.0000	0.0006
Single Unit Short-haul Truck	ALL	ALL	0.3243	0.0419	0.0142	0.0562
Single Unit Long-haul Truck	ALL	ALL	0.0168	0.0020	0.0007	0.0027
Motor Home	ALL	ALL	0.0192	0.0049	0.0043	0.0092
Combination Short-haul Truck	ALL	ALL	0.1138	0.0054	0.0000	0.0054
Combination Long-haul Truck	ALL	ALL	0.6026	0.0266	0.0000	0.0266
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**1.8070**	**0.3922**	**0.4936**	**0.8858**
ALL	Gasoline	ALL	0.5795	0.3088	0.4931	0.8018
ALL	Diesel	ALL	1.2232	0.0817	0.0000	0.0817
ALL	CNG	ALL	0.0039	0.0015	0.0000	0.0015

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2019			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
ALL	Ethanol (E-85)	ALL	0.0004	0.0003	0.0005	0.0008
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**1.8070**	**0.3922**	**0.4936**	**0.8858**
ALL	ALL	Off-Network	0.2989	0.1798	0.4129	0.5927
ALL	ALL	Rural Restricted	0.5346	0.0450	0.0110	0.0560
ALL	ALL	Rural Unrestricted	0.1784	0.0295	0.0111	0.0406
ALL	ALL	Urban Restricted	0.1216	0.0105	0.0027	0.0132
ALL	ALL	Urban Unrestricted	0.6735	0.1274	0.0558	0.1833
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**1.8070**	**0.3922**	**0.4936**	**0.8858**

Table A8.3. 2030 Onroad NOx and VOC Emissions: tons per ozone season weekday (tposwd) for the Partial Kenosha County 2008 Ozone NAAQS area.

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2030			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
Motorcycle	Gasoline	Off-Network	0.0001	0.0004	0.0297	0.0301
Motorcycle	Gasoline	Rural Restricted	0.0015	0.0013	0.0006	0.0019
Motorcycle	Gasoline	Rural Unrestricted	0.0029	0.0029	0.0016	0.0046
Motorcycle	Gasoline	Urban Restricted	0.0006	0.0006	0.0003	0.0008
Motorcycle	Gasoline	Urban Unrestricted	0.0083	0.0127	0.0090	0.0217
Passenger Car	Gasoline	Off-Network	0.0262	0.0364	0.1382	0.1746
Passenger Car	Gasoline	Rural Restricted	0.0086	0.0034	0.0037	0.0071
Passenger Car	Gasoline	Rural Unrestricted	0.0052	0.0025	0.0036	0.0061
Passenger Car	Gasoline	Urban Restricted	0.0035	0.0014	0.0016	0.0030
Passenger Car	Gasoline	Urban Unrestricted	0.0189	0.0114	0.0197	0.0311
Passenger Car	Diesel	Off-Network	0.0003	0.0005	0.0000	0.0005
Passenger Car	Diesel	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Passenger Car	Diesel	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Unrestricted	0.0002	0.0002	0.0000	0.0002
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	0.0261	0.0311	0.0796	0.1106
Passenger Truck	Gasoline	Rural Restricted	0.0070	0.0032	0.0026	0.0058
Passenger Truck	Gasoline	Rural Unrestricted	0.0041	0.0023	0.0025	0.0048
Passenger Truck	Gasoline	Urban Restricted	0.0029	0.0014	0.0011	0.0025
Passenger Truck	Gasoline	Urban Unrestricted	0.0147	0.0105	0.0138	0.0243
Passenger Truck	Diesel	Off-Network	0.0205	0.0010	0.0000	0.0010
Passenger Truck	Diesel	Rural Restricted	0.0020	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Rural Unrestricted	0.0020	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Urban Restricted	0.0009	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Urban Unrestricted	0.0119	0.0010	0.0000	0.0010
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	0.0001	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	0.0059	0.0065	0.0151	0.0216
Light Commercial Truck	Gasoline	Rural Restricted	0.0022	0.0005	0.0005	0.0010
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0014	0.0005	0.0005	0.0009
Light Commercial Truck	Gasoline	Urban Restricted	0.0009	0.0002	0.0002	0.0004
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0051	0.0026	0.0026	0.0052

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2030			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
Light Commercial Truck	Diesel	Off-Network	0.0039	0.0001	0.0000	0.0001
Light Commercial Truck	Diesel	Rural Restricted	0.0007	0.0001	0.0000	0.0001
Light Commercial Truck	Diesel	Rural Unrestricted	0.0007	0.0001	0.0000	0.0001
Light Commercial Truck	Diesel	Urban Restricted	0.0003	0.0000	0.0000	0.0000
Light Commercial Truck	Diesel	Urban Unrestricted	0.0036	0.0004	0.0000	0.0004
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	0.0001	0.0001	0.0000	0.0002
Other Buses	Gasoline	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Other Buses	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Other Buses	Diesel	Off-Network	0.0032	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Restricted	0.0016	0.0000	0.0000	0.0000
Other Buses	Diesel	Rural Unrestricted	0.0015	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Restricted	0.0007	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Unrestricted	0.0083	0.0002	0.0000	0.0002
Other Buses	CNG	Off-Network	0.0002	0.0001	0.0000	0.0001
Other Buses	CNG	Rural Restricted	0.0001	0.0000	0.0000	0.0000
Other Buses	CNG	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	CNG	Urban Unrestricted	0.0003	0.0002	0.0000	0.0002
Transit Bus	Gasoline	Off-Network	0.0000	0.0000	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	0.0007	0.0000	0.0000	0.0000
Transit Bus	Diesel	Rural Restricted	0.0005	0.0000	0.0000	0.0000
Transit Bus	Diesel	Rural Unrestricted	0.0005	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Unrestricted	0.0024	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	0.0001	0.0001	0.0000	0.0001
School Bus	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
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	0.0008	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Restricted	0.0003	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Unrestricted	0.0004	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2030			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
School Bus	Diesel	Urban Unrestricted	0.0022	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
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	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Restricted	0.0005	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Unrestricted	0.0003	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Unrestricted	0.0021	0.0000	0.0000	0.0000
Refuse Truck	CNG	Off-Network	0.0003	0.0001	0.0000	0.0001
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	0.0002	0.0002	0.0000	0.0002
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0077	0.0074	0.0050	0.0123
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0007	0.0006	0.0001	0.0007
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0004	0.0004	0.0001	0.0005
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0003	0.0003	0.0000	0.0003
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0015	0.0022	0.0004	0.0026
Single Unit Short-haul Truck	Diesel	Off-Network	0.0454	0.0011	0.0000	0.0011
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0152	0.0004	0.0000	0.0004
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0136	0.0004	0.0000	0.0004
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0068	0.0002	0.0000	0.0002
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.0795	0.0022	0.0000	0.0022
Single Unit Short-haul Truck	CNG	Off-Network	0.0006	0.0003	0.0000	0.0003
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0002	0.0002	0.0000	0.0002
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0001	0.0002	0.0000	0.0002
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0001	0.0001	0.0000	0.0001
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0007	0.0008	0.0000	0.0008
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0002	0.0003
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	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Off-Network	0.0017	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0010	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0009	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0005	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0051	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
Motor Home	Gasoline	Off-Network	0.0003	0.0005	0.0010	0.0015
Motor Home	Gasoline	Rural Restricted	0.0004	0.0002	0.0000	0.0002
Motor Home	Gasoline	Rural Unrestricted	0.0003	0.0001	0.0000	0.0001

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2030			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
Motor Home	Gasoline	Urban Restricted	0.0002	0.0001	0.0000	0.0001
Motor Home	Gasoline	Urban Unrestricted	0.0010	0.0007	0.0001	0.0008
Motor Home	Diesel	Off-Network	0.0002	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0013	0.0001	0.0000	0.0001
Motor Home	Diesel	Rural Unrestricted	0.0010	0.0001	0.0000	0.0001
Motor Home	Diesel	Urban Restricted	0.0006	0.0000	0.0000	0.0000
Motor Home	Diesel	Urban Unrestricted	0.0048	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
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	0.0093	0.0004	0.0000	0.0004
Combination Short-haul Truck	Diesel	Rural Restricted	0.0207	0.0007	0.0000	0.0007
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0039	0.0001	0.0000	0.0001
Combination Short-haul Truck	Diesel	Urban Restricted	0.0088	0.0003	0.0000	0.0003
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0207	0.0006	0.0000	0.0006
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	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Urban Restricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0002	0.0002	0.0000	0.0002
Combination Long-haul Truck	Diesel	Off-Network	0.0300	0.0014	0.0000	0.0014
Combination Long-haul Truck	Diesel	Rural Restricted	0.1033	0.0032	0.0000	0.0032
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0204	0.0006	0.0000	0.0006
Combination Long-haul Truck	Diesel	Urban Restricted	0.0440	0.0014	0.0000	0.0014
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.1118	0.0029	0.0000	0.0029
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.7886**	**0.1699**	**0.3342**	**0.5040**
Motorcycle	ALL	ALL	0.0134	0.0179	0.0412	0.0591
Passenger Car	ALL	ALL	0.0632	0.0561	0.1669	0.2230
Passenger Truck	ALL	ALL	0.0922	0.0510	0.1000	0.1511
Light Commercial Truck	ALL	ALL	0.0247	0.0110	0.0189	0.0300
Other Buses	ALL	ALL	0.0161	0.0012	0.0001	0.0012
Transit Bus	ALL	ALL	0.0046	0.0004	0.0000	0.0004
School Bus	ALL	ALL	0.0040	0.0001	0.0000	0.0001
Refuse Truck	ALL	ALL	0.0048	0.0006	0.0000	0.0006
Single Unit Short-haul Truck	ALL	ALL	0.1727	0.0166	0.0056	0.0221
Single Unit Long-haul Truck	ALL	ALL	0.0095	0.0007	0.0003	0.0010
Motor Home	ALL	ALL	0.0100	0.0023	0.0011	0.0034
Combination Short-haul Truck	ALL	ALL	0.0640	0.0026	0.0000	0.0026
Combination Long-haul Truck	ALL	ALL	0.3095	0.0095	0.0000	0.0095
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.7886**	**0.1699**	**0.3342**	**0.5040**
ALL	Gasoline	ALL	0.1595	0.1448	0.3336	0.4783
ALL	Diesel	ALL	0.6252	0.0218	0.0000	0.0218
ALL	CNG	ALL	0.0037	0.0031	0.0000	0.0031

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2030			
			NO_x Emissions (tposwd)	**VOC Emissions (tposwd)**		
			Total	Exhaust	Evaporative	**Total**
ALL	Ethanol (E-85)	ALL	0.0002	0.0002	0.0006	0.0008
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.7886**	**0.1699**	**0.3342**	**0.5040**
ALL	ALL	Off-Network	0.1850	0.0880	0.2693	0.3573
ALL	ALL	Rural Restricted	0.1682	0.0147	0.0075	0.0222
ALL	ALL	Rural Unrestricted	0.0597	0.0107	0.0083	0.0190
ALL	ALL	Urban Restricted	0.0718	0.0062	0.0033	0.0095
ALL	ALL	Urban Unrestricted	0.3038	0.0502	0.0458	0.0960
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.7886**	**0.1699**	**0.3342**	**0.5040**
Safety Margin			7½%			7½%
Emissions Budget			**0.8477**			**0.5418**

Table A8.4. 2035 Onroad NOx and VOC Emissions: tons per ozone season weekday (tposwd) for the Partial Kenosha County 2008 Ozone NAAQS area.

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2035			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	Total
Motorcycle	Gasoline	Off-Network	0.0001	0.0004	0.0312	0.0316
Motorcycle	Gasoline	Rural Restricted	0.0015	0.0013	0.0006	0.0019
Motorcycle	Gasoline	Rural Unrestricted	0.0027	0.0027	0.0016	0.0043
Motorcycle	Gasoline	Urban Restricted	0.0006	0.0006	0.0003	0.0009
Motorcycle	Gasoline	Urban Unrestricted	0.0089	0.0130	0.0095	0.0225
Passenger Car	Gasoline	Off-Network	0.0202	0.0269	0.1202	0.1470
Passenger Car	Gasoline	Rural Restricted	0.0034	0.0026	0.0035	0.0060
Passenger Car	Gasoline	Rural Unrestricted	0.0019	0.0017	0.0031	0.0048
Passenger Car	Gasoline	Urban Restricted	0.0014	0.0011	0.0015	0.0026
Passenger Car	Gasoline	Urban Unrestricted	0.0076	0.0086	0.0187	0.0273
Passenger Car	Diesel	Off-Network	0.0004	0.0005	0.0000	0.0005
Passenger Car	Diesel	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Passenger Car	Diesel	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Unrestricted	0.0001	0.0002	0.0000	0.0002
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	0.0207	0.0236	0.0689	0.0925
Passenger Truck	Gasoline	Rural Restricted	0.0031	0.0026	0.0024	0.0050
Passenger Truck	Gasoline	Rural Unrestricted	0.0017	0.0017	0.0022	0.0039
Passenger Truck	Gasoline	Urban Restricted	0.0013	0.0011	0.0011	0.0022
Passenger Truck	Gasoline	Urban Unrestricted	0.0066	0.0084	0.0131	0.0216
Passenger Truck	Diesel	Off-Network	0.0213	0.0010	0.0000	0.0010
Passenger Truck	Diesel	Rural Restricted	0.0017	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Rural Unrestricted	0.0016	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Urban Restricted	0.0007	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Urban Unrestricted	0.0106	0.0009	0.0000	0.0009
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	0.0001
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	0.0039	0.0046	0.0138	0.0185
Light Commercial Truck	Gasoline	Rural Restricted	0.0008	0.0004	0.0005	0.0009
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0005	0.0003	0.0004	0.0007
Light Commercial Truck	Gasoline	Urban Restricted	0.0004	0.0002	0.0002	0.0004
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0021	0.0018	0.0026	0.0043

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2035			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
Light Commercial Truck	Diesel	Off-Network	0.0035	0.0001	0.0000	0.0001
Light Commercial Truck	Diesel	Rural Restricted	0.0004	0.0000	0.0000	0.0000
Light Commercial Truck	Diesel	Rural Unrestricted	0.0004	0.0000	0.0000	0.0000
Light Commercial Truck	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000
Light Commercial Truck	Diesel	Urban Unrestricted	0.0022	0.0002	0.0000	0.0002
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	0.0001	0.0001	0.0000	0.0002
Other Buses	Gasoline	Rural Restricted	0.0001	0.0001	0.0000	0.0001
Other Buses	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Other Buses	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Other Buses	Diesel	Off-Network	0.0033	0.0001	0.0000	0.0001
Other Buses	Diesel	Rural Restricted	0.0013	0.0000	0.0000	0.0000
Other Buses	Diesel	Rural Unrestricted	0.0012	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Restricted	0.0006	0.0000	0.0000	0.0000
Other Buses	Diesel	Urban Unrestricted	0.0078	0.0001	0.0000	0.0001
Other Buses	CNG	Off-Network	0.0002	0.0001	0.0000	0.0001
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	0.0002	0.0002	0.0000	0.0002
Transit Bus	Gasoline	Off-Network	0.0000	0.0000	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	0.0007	0.0000	0.0000	0.0000
Transit Bus	Diesel	Rural Restricted	0.0004	0.0000	0.0000	0.0000
Transit Bus	Diesel	Rural Unrestricted	0.0003	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Unrestricted	0.0021	0.0000	0.0000	0.0000
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
School Bus	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
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	0.0009	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Restricted	0.0003	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Unrestricted	0.0004	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2035			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
School Bus	Diesel	Urban Unrestricted	0.0022	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
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	0.0013	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Restricted	0.0005	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Unrestricted	0.0003	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Unrestricted	0.0021	0.0000	0.0000	0.0000
Refuse Truck	CNG	Off-Network	0.0003	0.0001	0.0000	0.0001
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	0.0002	0.0003	0.0000	0.0003
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0074	0.0072	0.0044	0.0116
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0006	0.0006	0.0001	0.0007
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0003	0.0004	0.0001	0.0004
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0002	0.0003	0.0000	0.0003
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0012	0.0020	0.0004	0.0025
Single Unit Short-haul Truck	Diesel	Off-Network	0.0457	0.0009	0.0000	0.0009
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0134	0.0003	0.0000	0.0003
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0119	0.0003	0.0000	0.0003
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0061	0.0001	0.0000	0.0001
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.0775	0.0017	0.0000	0.0017
Single Unit Short-haul Truck	CNG	Off-Network	0.0006	0.0003	0.0000	0.0003
Single Unit Short-haul Truck	CNG	Rural Restricted	0.0002	0.0002	0.0000	0.0002
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.0001	0.0002	0.0000	0.0002
Single Unit Short-haul Truck	CNG	Urban Restricted	0.0001	0.0001	0.0000	0.0001
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.0008	0.0009	0.0000	0.0009
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0002	0.0002
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	0.0000	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	0.0017	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0008	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0007	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0004	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0048	0.0001	0.0000	0.0001
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
Motor Home	Gasoline	Off-Network	0.0003	0.0005	0.0008	0.0012
Motor Home	Gasoline	Rural Restricted	0.0002	0.0002	0.0000	0.0002
Motor Home	Gasoline	Rural Unrestricted	0.0001	0.0001	0.0000	0.0001

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2035			
			NO_x Emissions (tposwd)	VOC Emissions (tposwd)		
			Total	Exhaust	Evaporative	**Total**
Motor Home	Gasoline	Urban Restricted	0.0001	0.0001	0.0000	0.0001
Motor Home	Gasoline	Urban Unrestricted	0.0005	0.0005	0.0001	0.0006
Motor Home	Diesel	Off-Network	0.0002	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0011	0.0001	0.0000	0.0001
Motor Home	Diesel	Rural Unrestricted	0.0008	0.0001	0.0000	0.0001
Motor Home	Diesel	Urban Restricted	0.0005	0.0000	0.0000	0.0000
Motor Home	Diesel	Urban Unrestricted	0.0046	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
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	0.0097	0.0003	0.0000	0.0003
Combination Short-haul Truck	Diesel	Rural Restricted	0.0187	0.0006	0.0000	0.0006
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0034	0.0001	0.0000	0.0001
Combination Short-haul Truck	Diesel	Urban Restricted	0.0080	0.0003	0.0000	0.0003
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0202	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	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	CNG	Urban Restricted	0.0001	0.0001	0.0000	0.0001
Combination Short-haul Truck	CNG	Urban Unrestricted	0.0002	0.0002	0.0000	0.0002
Combination Long-haul Truck	Diesel	Off-Network	0.0292	0.0012	0.0000	0.0012
Combination Long-haul Truck	Diesel	Rural Restricted	0.0943	0.0030	0.0000	0.0030
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0182	0.0005	0.0000	0.0005
Combination Long-haul Truck	Diesel	Urban Restricted	0.0408	0.0013	0.0000	0.0013
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.1108	0.0027	0.0000	0.0027
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.6977**	**0.1380**	**0.3022**	**0.4403**
Motorcycle	ALL	ALL	0.0139	0.0181	0.0431	0.0612
Passenger Car	ALL	ALL	0.0352	0.0418	0.1471	0.1889
Passenger Truck	ALL	ALL	0.0693	0.0398	0.0881	0.1279
Light Commercial Truck	ALL	ALL	0.0144	0.0076	0.0176	0.0253
Other Buses	ALL	ALL	0.0149	0.0010	0.0001	0.0011
Transit Bus	ALL	ALL	0.0039	0.0003	0.0000	0.0003
School Bus	ALL	ALL	0.0040	0.0001	0.0000	0.0001
Refuse Truck	ALL	ALL	0.0049	0.0006	0.0000	0.0006
Single Unit Short-haul Truck	ALL	ALL	0.1661	0.0154	0.0050	0.0204
Single Unit Long-haul Truck	ALL	ALL	0.0087	0.0005	0.0002	0.0008
Motor Home	ALL	ALL	0.0084	0.0017	0.0010	0.0027
Combination Short-haul Truck	ALL	ALL	0.0606	0.0023	0.0000	0.0023
Combination Long-haul Truck	ALL	ALL	0.2933	0.0087	0.0000	0.0087
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.6977**	**0.1380**	**0.3022**	**0.4403**
ALL	Gasoline	ALL	0.1010	0.1161	0.3017	0.4178
ALL	Diesel	ALL	0.5929	0.0186	0.0000	0.0186
ALL	CNG	ALL	0.0036	0.0033	0.0000	0.0033

Source Type	Fuel Type	Road Type	Partial Kenosha County Area – Year 2035			
			NO_x Emissions (tposwd)	**VOC Emissions (tposwd)**		
			Total	Exhaust	Evaporative	**Total**
ALL	Ethanol (E-85)	ALL	0.0001	0.0001	0.0005	0.0006
ALL	Electricity	ALL	0.0000	0.0000	0.0000	0.0000
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.6977**	**0.1380**	**0.3022**	**0.4403**
ALL	ALL	Off-Network	0.1718	0.0685	0.2399	0.3085
ALL	ALL	Rural Restricted	0.1432	0.0124	0.0071	0.0196
ALL	ALL	Rural Unrestricted	0.0468	0.0085	0.0074	0.0159
ALL	ALL	Urban Restricted	0.0622	0.0053	0.0032	0.0085
ALL	ALL	Urban Unrestricted	0.2737	0.0433	0.0446	0.0879
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.6977**	**0.1380**	**0.3022**	**0.4403**
Safety Margin			7½%			7½%
Emissions Budget			**0.7500**			**0.4733**

Table A8.5. Vehicle Activity Data Output from the MOVES3.0.2 Model for Years 2011, 2019, 2030 and 2035 for the Partial Kenosha County 2008 Ozone NAAQS area.

Source Type	Fuel Type	Road Type	Partial Kenosha County Area							
			Vehicle Population				Vehicle-Miles of Travel Ozone Season Weekday			
			2011	2019	2030	2035	2011	2019	2030	2035
Motorcycle	Gasoline	Off-Network	2,999	2,941	3,382	3,635				
Motorcycle	Gasoline	Rural Restricted					2,536	2,337	2,264	2,378
Motorcycle	Gasoline	Rural Unrestricted					5,013	4,558	4,700	4,539
Motorcycle	Gasoline	Urban Restricted					10	574	968	1,018
Motorcycle	Gasoline	Urban					13,704	14,675	16,833	17,977
Passenger Car	Gasoline	Off-Network	42,176	43,455	47,888	49,165				
Passenger Car	Gasoline	Rural Restricted					425,916	389,925	370,601	383,565
Passenger Car	Gasoline	Rural Unrestricted					272,642	244,188	248,646	236,536
Passenger Car	Gasoline	Urban Restricted					1,742	89,439	154,226	159,908
Passenger Car	Gasoline	Urban					744,588	785,620	889,900	936,300
Passenger Car	Diesel	Off-Network	185	304	553	822				
Passenger Car	Diesel	Rural Restricted					1,816	2,885	4,602	7,015
Passenger Car	Diesel	Rural Unrestricted					1,162	1,806	3,088	4,326
Passenger Car	Diesel	Urban Restricted					7	662	1,915	2,925
Passenger Car	Diesel	Urban					3,174	5,812	11,050	17,124
Passenger Car	Ethanol (E-85)	Off-Network	14	28	30	31				
Passenger Car	Ethanol (E-85)	Rural Restricted					168	263	226	241
Passenger Car	Ethanol (E-85)	Rural Unrestricted					108	165	152	149
Passenger Car	Ethanol (E-85)	Urban Restricted					1	60	94	100
Passenger Car	Ethanol (E-85)	Urban					294	529	543	588
Passenger Car	Electricity	Off-Network	0	0	0	0				
Passenger Car	Electricity	Rural Restricted					0	0	0	0
Passenger Car	Electricity	Rural Unrestricted					0	0	0	0
Passenger Car	Electricity	Urban Restricted					0	0	0	0
Passenger Car	Electricity	Urban					0	0	0	0
Passenger Truck	Gasoline	Off-Network	32,390	36,998	40,482	42,204				
Passenger Truck	Gasoline	Rural Restricted					380,470	390,043	366,805	386,411
Passenger Truck	Gasoline	Rural Unrestricted					243,551	244,402	246,041	238,229
Passenger Truck	Gasoline	Urban Restricted					1,556	89,465	152,654	161,109
Passenger Truck	Gasoline	Urban					665,140	786,222	880,565	943,073
Passenger Truck	Diesel	Off-Network	1,137	1,297	2,503	2,936				
Passenger Truck	Diesel	Rural Restricted					13,160	13,905	23,775	27,309
Passenger Truck	Diesel	Rural Unrestricted					8,424	8,713	15,947	16,837
Passenger Truck	Diesel	Urban Restricted					54	3,189	9,894	11,386
Passenger Truck	Diesel	Urban					23,007	28,029	57,074	66,650
Passenger Truck	Ethanol (E-85)	Off-Network	43	98	103	109				

Source Type	Fuel Type	Road Type	Partial Kenosha County Area							
			Vehicle Population				Vehicle-Miles of Travel Ozone Season Weekday			
			2011	2019	2030	2035	2011	2019	2030	2035
Passenger Truck	Ethanol (E-85)	Rural Restricted					557	1,076	915	1,015
Passenger Truck	Ethanol (E-85)	Rural Unrestricted					356	674	614	626
Passenger Truck	Ethanol (E-85)	Urban Restricted					2	247	381	423
Passenger Truck	Ethanol (E-85)	Urban					974	2,169	2,197	2,477
Passenger Truck	Electricity	Off-Network	0	0	0	0				
Passenger Truck	Electricity	Rural Restricted					0	0	0	0
Passenger Truck	Electricity	Rural Unrestricted					0	0	0	0
Passenger Truck	Electricity	Urban Restricted					0	0	0	0
Passenger Truck	Electricity	Urban					0	0	0	0
Light Commercial Truck	Gasoline	Off-Network	3,528	4,111	4,635	4,845				
Light Commercial Truck	Gasoline	Rural Restricted					38,591	39,738	38,452	40,532
Light Commercial Truck	Gasoline	Rural Unrestricted					24,704	24,900	25,793	24,989
Light Commercial Truck	Gasoline	Urban Restricted					158	9,115	16,003	16,899
Light Commercial Truck	Gasoline	Urban					67,466	80,101	92,310	98,922
Light Commercial Truck	Diesel	Off-Network	311	274	285	323				
Light Commercial Truck	Diesel	Rural Restricted					3,376	2,440	2,440	2,779
Light Commercial Truck	Diesel	Rural Unrestricted					2,161	1,529	1,637	1,714
Light Commercial Truck	Diesel	Urban Restricted					14	560	1,016	1,159
Light Commercial Truck	Diesel	Urban					5,902	4,919	5,858	6,783
Light Commercial Truck	Ethanol (E-85)	Off-Network	4	11	14	13				
Light Commercial Truck	Ethanol (E-85)	Rural Restricted					56	117	109	109
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted					36	73	73	67
Light Commercial Truck	Ethanol (E-85)	Urban Restricted					0	27	45	45
Light Commercial Truck	Ethanol (E-85)	Urban					98	235	261	266
Light Commercial Truck	Electricity	Off-Network	0	0	0	0				
Light Commercial Truck	Electricity	Rural Restricted					0	0	0	0
Light Commercial Truck	Electricity	Rural Unrestricted					0	0	0	0
Light Commercial Truck	Electricity	Urban Restricted					0	0	0	0
Light Commercial Truck	Electricity	Urban					0	0	0	0
Other Buses	Gasoline	Off-Network	6	7	8	8				
Other Buses	Gasoline	Rural Restricted					123	151	147	153
Other Buses	Gasoline	Rural Unrestricted					104	125	129	123
Other Buses	Gasoline	Urban Restricted					0	35	61	64
Other Buses	Gasoline	Urban					275	389	450	476
Other Buses	Diesel	Off-Network	46	43	46	48				
Other Buses	Diesel	Rural Restricted					898	863	836	877
Other Buses	Diesel	Rural Unrestricted					759	711	735	707
Other Buses	Diesel	Urban Restricted					4	200	350	367
Other Buses	Diesel	Urban					1,999	2,219	2,563	2,737

Source Type	Fuel Type	Road Type	Partial Kenosha County Area							
			Vehicle Population				Vehicle-Miles of Travel Ozone Season Weekday			
			2011	2019	2030	2035	2011	2019	2030	2035
Other Buses	CNG	Off-Network	4	4	4	4				
Other Buses	CNG	Rural Restricted					71	72	65	65
Other Buses	CNG	Rural Unrestricted					60	59	57	53
Other Buses	CNG	Urban Restricted					0	17	27	27
Other Buses	CNG	Urban					157	184	198	204
Transit Bus	Gasoline	Off-Network	1	2	3	3				
Transit Bus	Gasoline	Rural Restricted					31	43	44	46
Transit Bus	Gasoline	Rural Unrestricted					26	35	38	37
Transit Bus	Gasoline	Urban Restricted					0	10	18	19
Transit Bus	Gasoline	Urban					69	111	134	145
Transit Bus	Diesel	Off-Network	14	14	14	15				
Transit Bus	Diesel	Rural Restricted					256	266	249	267
Transit Bus	Diesel	Rural Unrestricted					216	219	219	215
Transit Bus	Diesel	Urban Restricted					1	62	104	112
Transit Bus	Diesel	Urban					569	684	763	834
Transit Bus	CNG	Off-Network	1	1	1	1				
Transit Bus	CNG	Rural Restricted					20	22	19	20
Transit Bus	CNG	Rural Unrestricted					17	18	17	16
Transit Bus	CNG	Urban Restricted					0	5	8	9
Transit Bus	CNG	Urban					44	56	59	63
School Bus	Gasoline	Off-Network	2	1	1	1				
School Bus	Gasoline	Rural Restricted					14	10	5	5
School Bus	Gasoline	Rural Unrestricted					12	8	5	4
School Bus	Gasoline	Urban Restricted					0	2	2	2
School Bus	Gasoline	Urban					30	26	16	15
School Bus	Diesel	Off-Network	88	74	81	84				
School Bus	Diesel	Rural Restricted					645	569	556	584
School Bus	Diesel	Rural Unrestricted					545	469	489	471
School Bus	Diesel	Urban Restricted					3	132	232	245
School Bus	Diesel	Urban					1,436	1,464	1,704	1,823
School Bus	CNG	Off-Network	0	1	1	1				
School Bus	CNG	Rural Restricted					3	7	8	9
School Bus	CNG	Rural Unrestricted					3	6	7	7
School Bus	CNG	Urban Restricted					0	2	4	4
School Bus	CNG	Urban					7	18	26	28
Refuse Truck	Gasoline	Off-Network	2	0	0	0				
Refuse Truck	Gasoline	Rural Restricted					25	3	0	0
Refuse Truck	Gasoline	Rural Unrestricted					15	2	0	0
Refuse Truck	Gasoline	Urban Restricted					0	1	0	0

Source Type	Fuel Type	Road Type	Partial Kenosha County Area							
			Vehicle Population				Vehicle-Miles of Travel Ozone Season Weekday			
			2011	2019	2030	2035	2011	2019	2030	2035
Refuse Truck	Gasoline	Urban					39	5	0	0
Refuse Truck	Diesel	Off-Network	24	23	20	20				
Refuse Truck	Diesel	Rural Restricted					544	388	312	322
Refuse Truck	Diesel	Rural Unrestricted					327	226	195	184
Refuse Truck	Diesel	Urban Restricted					2	89	130	134
Refuse Truck	Diesel	Urban					864	708	679	714
Refuse Truck	CNG	Off-Network	0	1	6	6				
Refuse Truck	CNG	Rural Restricted					1	18	92	97
Refuse Truck	CNG	Rural Unrestricted					0	11	58	55
Refuse Truck	CNG	Urban Restricted					0	4	38	40
Refuse Truck	CNG	Urban					1	33	201	214
Single Unit Short-haul	Gasoline	Off-Network	849	829	779	777				
Single Unit Short-haul	Gasoline	Rural Restricted					9,948	8,706	7,998	8,374
Single Unit Short-haul	Gasoline	Rural Unrestricted					5,984	5,083	4,990	4,788
Single Unit Short-haul	Gasoline	Urban Restricted					41	1,994	3,327	3,489
Single Unit Short-haul	Gasoline	Urban					15,796	15,882	17,419	18,561
Single Unit Short-haul	Diesel	Off-Network	1,982	2,590	2,878	2,919				
Single Unit Short-haul	Diesel	Rural Restricted					29,829	31,010	30,022	31,553
Single Unit Short-haul	Diesel	Rural Unrestricted					17,942	18,105	18,729	18,040
Single Unit Short-haul	Diesel	Urban Restricted					122	7,104	12,488	13,147
Single Unit Short-haul	Diesel	Urban					47,364	56,573	65,382	69,931
Single Unit Short-haul	CNG	Off-Network	3	17	36	40				
Single Unit Short-haul	CNG	Rural Restricted					56	311	433	466
Single Unit Short-haul	CNG	Rural Unrestricted					34	181	270	266
Single Unit Short-haul	CNG	Urban Restricted					0	71	180	194
Single Unit Short-haul	CNG	Urban					88	566	942	1,033
Single Unit Long-haul Truck	Gasoline	Off-Network	39	36	35	34				
Single Unit Long-haul Truck	Gasoline	Rural Restricted					631	546	507	533
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted					380	319	316	305
Single Unit Long-haul Truck	Gasoline	Urban Restricted					3	125	211	222
Single Unit Long-haul Truck	Gasoline	Urban					1,003	996	1,104	1,181
Single Unit Long-haul Truck	Diesel	Off-Network	87	115	128	130				
Single Unit Long-haul Truck	Diesel	Rural Restricted					1,753	1,953	1,901	2,010
Single Unit Long-haul Truck	Diesel	Rural Unrestricted					1,054	1,140	1,186	1,149
Single Unit Long-haul Truck	Diesel	Urban Restricted					7	447	791	837
Single Unit Long-haul Truck	Diesel	Urban					2,784	3,563	4,141	4,454
Single Unit Long-haul Truck	CNG	Off-Network	0	1	1	2				
Single Unit Long-haul Truck	CNG	Rural Restricted					3	22	27	29
Single Unit Long-haul Truck	CNG	Rural Unrestricted					2	13	17	17

Source Type	Fuel Type	Road Type	Partial Kenosha County Area							
			Vehicle Population				Vehicle-Miles of Travel Ozone Season Weekday			
			2011	2019	2030	2035	2011	2019	2030	2035
Single Unit Long-haul Truck	CNG	Urban Restricted					0	5	11	12
Single Unit Long-haul Truck	CNG	Urban					5	41	59	65
Motor Home	Gasoline	Off-Network	218	225	214	207				
Motor Home	Gasoline	Rural Restricted					1,213	951	826	846
Motor Home	Gasoline	Rural Unrestricted					729	555	515	484
Motor Home	Gasoline	Urban Restricted					5	218	344	353
Motor Home	Gasoline	Urban					1,925	1,735	1,799	1,875
Motor Home	Diesel	Off-Network	121	121	158	170				
Motor Home	Diesel	Rural Restricted					740	555	610	673
Motor Home	Diesel	Rural Unrestricted					445	324	381	385
Motor Home	Diesel	Urban Restricted					3	127	254	280
Motor Home	Diesel	Urban					1,175	1,012	1,329	1,492
Motor Home	CNG	Off-Network	0	0	0	0				
Motor Home	CNG	Rural Restricted					0	0	0	0
Motor Home	CNG	Rural Unrestricted					0	0	0	0
Motor Home	CNG	Urban Restricted					0	0	0	0
Motor Home	CNG	Urban					0	0	0	0
Combination Short-haul	Gasoline	Off-Network	0	0	0	0				
Combination Short-haul	Gasoline	Rural Restricted					3	1	0	0
Combination Short-haul	Gasoline	Rural Unrestricted					1	0	0	0
Combination Short-haul	Gasoline	Urban Restricted					0	0	0	0
Combination Short-haul	Gasoline	Urban					1	0	0	0
Combination Short-haul	Diesel	Off-Network	188	196	199	201				
Combination Short-haul	Diesel	Rural Restricted					10,318	10,650	10,102	10,566
Combination Short-haul	Diesel	Rural Unrestricted					1,676	1,668	1,694	1,624
Combination Short-haul	Diesel	Urban Restricted					43	2,382	4,163	4,363
Combination Short-haul	Diesel	Urban					4,419	5,208	5,908	6,290
Combination Short-haul	CNG	Off-Network	0	2	5	6				
Combination Short-haul	CNG	Rural Restricted					18	227	350	383
Combination Short-haul	CNG	Rural Unrestricted					3	36	59	59
Combination Short-haul	CNG	Urban Restricted					0	51	144	158
Combination Short-haul	CNG	Urban					8	111	205	228
Combination Long-haul	Diesel	Off-Network	273	339	349	355				
Combination Long-haul	Diesel	Rural Restricted					52,903	51,844	49,567	52,139
Combination Long-haul	Diesel	Rural Unrestricted					8,595	8,119	8,310	8,012
Combination Long-haul	Diesel	Urban Restricted					220	11,595	20,424	21,531
Combination Long-haul	Diesel	Urban					22,657	25,349	28,989	31,039
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**86,735**	**94,158**	**104,841**	**109,115**	**3,204,835**	**3,563,619**	**3,971,134**	**4,160,529**

Source Type	Fuel Type	Road Type	Partial Kenosha County Area							
			Vehicle Population				Vehicle-Miles of Travel Ozone Season Weekday			
			2011	2019	2030	2035	2011	2019	2030	2035
Motorcycle	ALL	ALL	2,999	2,941	3,382	3,635	21,263	22,144	24,765	25,912
Passenger Car	ALL	ALL	42,375	43,786	48,470	50,017	1,451,618	1,521,353	1,685,042	1,748,777
Passenger Truck	ALL	ALL	33,570	38,393	43,088	45,249	1,337,252	1,568,135	1,756,861	1,855,545
Light Commercial Truck	ALL	ALL	3,844	4,396	4,934	5,182	142,562	163,754	183,995	194,265
Other Buses	ALL	ALL	55	54	58	60	4,450	5,025	5,617	5,853
Transit Bus	ALL	ALL	16	17	18	19	1,248	1,532	1,673	1,784
School Bus	ALL	ALL	90	76	83	86	2,697	2,713	3,054	3,195
Refuse Truck	ALL	ALL	26	24	26	26	1,818	1,488	1,705	1,762
Single Unit Short-haul	ALL	ALL	2,834	3,436	3,693	3,736	127,202	145,585	162,178	169,843
Single Unit Long-haul Truck	ALL	ALL	126	152	164	166	7,624	9,172	10,270	10,815
Motor Home	ALL	ALL	339	346	372	377	6,235	5,478	6,058	6,388
Combination Short-haul	ALL	ALL	188	198	204	207	16,491	20,332	22,625	23,671
Combination Long-haul	ALL	ALL	273	339	349	355	84,374	96,906	107,290	112,721
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**86,735**	**94,158**	**104,841**	**109,115**	**3,204,835**	**3,563,619**	**3,971,134**	**4,160,529**
ALL	Gasoline	ALL	82,209	88,606	97,425	100,879	2,926,212	3,233,370	3,547,164	3,694,485
ALL	Diesel	ALL	4,457	5,389	7,214	8,023	275,375	322,448	414,781	456,114
ALL	CNG	ALL	8	26	55	61	600	2,166	3,582	3,823
ALL	Ethanol (E-85)	ALL	62	136	147	153	2,649	5,635	5,608	6,107
ALL	Electricity	ALL	0	0	0	0	0	0	0	0
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**86,735**	**94,158**	**104,841**	**109,115**	**3,204,835**	**3,563,619**	**3,971,134**	**4,160,529**
ALL	ALL	Off-Network	86,735	94,158	104,841	109,115				
ALL	ALL	Rural Restricted					976,691	951,915	914,865	961,372
ALL	ALL	Rural Unrestricted					597,085	568,440	585,103	565,010
ALL	ALL	Urban Restricted					3,999	218,016	380,506	400,584
ALL	ALL	Urban					1,627,061	1,825,248	2,090,659	2,233,563
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**86,735**	**94,158**	**104,841**	**109,115**	**3,204,835**	**3,563,619**	**3,971,134**	**4,160,529**

APPENDIX 9

Permanent and Enforceable Control Measures

This appendix provides additional details about the permanent and enforceable control measures that have reduced emissions of ozone precursors from the partial Kenosha County 2008 ozone NAAQS area. This information expands upon that presented in Section 6 of WDNR's Redesignation Request and Maintenance Plan for the Partial Kenosha County, Wisconsin 2008 Ozone NAAQS Nonattainment Area.

1. Point Source Control Measures

Nitrogen Oxides (NOx) Control Measures

Wisconsin NO_x Reasonably Available Control Technology (RACT) – Wisconsin has implemented RACT for major NO_x sources in nonattainment areas in southeastern Wisconsin to meet requirements for the 1997 ozone NAAQS and the 2008 ozone NAAQS. NOx RACT applies to all of Kenosha County. The NOx RACT requirements are codified under ss. NR 428.20 to 428.26, Wis. Adm. Code.

Wisconsin NO_x Reasonably Available Control Measures (RACM) – Wisconsin has implemented RACM for NO_x sources in nonattainment areas to meet requirements for the 1997 ozone NAAQS. The NOx RACM requirements are codified under ss. NR 428.01 to 428.12, Wis. Adm. Code, and apply to new and existing NOx emission units located in southeastern Wisconsin. Section NR 428.04, Wis. Adm. Code, lists NOx performance standards for the NOx emission 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 NOx performance standards for NOx emission units constructed on or before February 1, 2001 that exceed the provision's capacity threshold. All emission units subject to this section are required to install continuous emission monitoring equipment to demonstrate compliance with the NOx emission limit specified in this rule.

In the attainment year of 2019, there were no NOx emissions from the We Energies - Pleasant Prairie Power Plant (FID #230006260) due to that facility's retirement in 2018. There were otherwise 42.5 tons of NOx from other emission units in the partial Kenosha County 2008 ozone NAAQS area (Table A9.1). The NOx emissions from these units are limited by one or more of the following:

- NOx RACM/RACT
- Federal emission standards, e.g., New Source Performance Standards (NSPS)
- Nonattainment New Source Review (NNSR) permitting program

The NOx emission units at Pleasant Prairie Power Plant included two coal fired boilers (B20 and B21), two auxiliary natural gas fired boilers (B22 and B23), and four emergency generators (P30-P33). Boilers B20 and B21 were subject to the NOx RACT requirements in s. NR 428.22(1)(a)1.a., Wis. Adm. Code, and were required to comply with the NOx emission limit of 0.1 lbs/MMBtu, based on a 30-day rolling average, by May 1, 2009. Pursuant to a consent decree (Civil Action No. 03-C-0371), Boilers B20 and B21 became subject to the NOx emission limit of 0.08 lbs/MMBtu, based on a 12-month rolling average, by December 31, 2006 and December 31, 2003, respectively. As noted in the source's construction permit #18-RAB-05-ERC, issued on September 7, 2018, boilers B20-B23 were permanently shut down on or around April 10, 2018.

Since 2008, point source NOx emissions from sources other than the Pleasant Prairie Power Plant in the partial Kenosha County 2008 ozone NAAQS area have decreased by 19.8% (Table A9.1).

Table A9.1. 2008-2019 NOx emissions and requirements for point sources in the partial Kenosha County 2008 ozone NAAQS area.

Facility		2008	2011	2017	2019	2008 – 2019 Change	Permanent and Enforceable Control Measures
We Energies - Pleasant Prairie Power Plant (FID #230006260)	Annual NOx Emissions (TPY)	2,861.7	2,498.5	2,128.5	0.0	-100%	Permanently Retired April 2018
Other NOx Emissions Units	Annual NOx Emissions (TPY)	53.0	32.3	48.4	42.5	-19.8%	Emission units become subject to NOx RACT if facilities exceed major source threshold
	Number of Units	52	36	44	43	-9	
Total NOx Emissions (TPY)		2,914.7	2,530.8	2,176.9	42.5	-98.5%	

Federal NOx Transport Rules – EGUs in 23 states east of the Mississippi, including 9 states that significantly contribute over the 1 percent significance threshold to the Chiwaukee Prairie monitor, have been subject to a series of federal NOx transport rules since 2009.[1] These rules have included the Clean Air Interstate Rule (CAIR), the Cross-State Air Pollution Rule (CSAPR) and the CSAPR Update Rule.

Beginning January 1, 2009, EGUs in 22 states east of the Mississippi (including Wisconsin) became subject to ozone season NOx emission budgets under CAIR. CAIR addressed the broad regional interstate transport of NOx affecting attainment and maintenance of the 1997 ozone NAAQS as required under CAA section 110(a)(2)(D). For the three states contributing most to ozone concentrations in the partial Kenosha County 2008 ozone NAAQS area (Illinois, Indiana, and Wisconsin), CAIR resulted in a 35% reduction of total EGU NOx emissions across the three states during the ozone season over the 2008-2014 period (Table A9.2).

[1] EPA determined in the final CSAPR rule (76 FR 48208, August 8, 2011) that Illinois, Indiana, Wisconsin, Ohio, Kentucky, Missouri, West Virginia, Virginia and Pennsylvania all contribute significantly to the ozone measured in Kenosha County.

Starting with the 2015 ozone season, CSAPR replaced CAIR to reduce interstate NOx transport relative to the 1997 ozone NAAQS. CSAPR implemented NOx budgets for the impacted states in two phases. Phase I limited NOx emissions in 2015 and 2016. EPA published the CSAPR Update (81 FR 74504) in 2016 to address NOx transport affecting the attainment and maintenance of the 2008 ozone NAAQS (79 FR 16436). The CSAPR Update established Phase II NOx budgets starting with the 2017 ozone season. For the three-state area of Illinois, Indiana and Wisconsin, CSAPR and the CSAPR Update resulted in a 39% reduction of total EGU NOx emissions across the three states during the ozone season over the 2014-2017 period, and a 19% reduction over the 2017-2019 period (Table A9.2).

On April 30, 2021, EPA finalized the Revised CSAPR Update rule to fully address 21 states' outstanding interstate pollution transport obligations for the 2008 ozone NAAQS (86 FR 23054).[2] The rule further reduced EGU NOx emissions in 12 states starting in the 2021 ozone season. Due to this rule and other changes already underway in the power sector, EPA expects ozone season NOx emissions will be nearly 25,000 tons lower in 2021 than in 2019, a reduction of 19 percent.[3]

Table A9.2. EGU NOx emitted under the CAIR and CSAPR programs in Illinois, Indiana and Wisconsin.

State	Ozone Season NOx Emissions (Tons)				Percent Reduction		
	2008	2014	2017	2019	2008 – 2014	2014 – 2017	2017 – 2019
Illinois	31,106	18,489	13,039	11,877	41%	29%	9%
Indiana	53,016	40,247	20,396	16,594	24%	49%	19%
Wisconsin	19,951	9,087	8,103	5,186	55%	11%	36%
Total	**104,073**	**67,823**	**41,538**	**33,657**	**35%**	**39%**	**19%**

Source: EPA Clean Air Markets Division, database of reported emissions.

VOC Control Measures

VOC RACT – EPA approved moderate area VOC RACT requirements for the partial Kenosha County 2008 ozone NAAQS nonattainment area on September 16, 2020 (85 FR 57729). The December 2020 serious area attainment plan describes the partial Kenosha County 2008 ozone NAAQS area's VOC RACT program, which includes codified Control Techniques Guidelines (CTGs), SIP-approved RACT equivalency measures for a source covered by one of a CTG that has not been incorporated into state code, and negative declarations that no other sources exist within the partial Kenosha County area that are applicable to any unincorporated CTGs or that meet VOC serious area major source criteria.

[2] The rulemaking responds to a September 2019 ruling by the U.S. Court of Appeals for the D.C. Circuit, *Wisconsin v. EPA*, which remanded the CSAPR Update to EPA for failing to fully eliminate significant contribution to nonattainment and interference with maintenance of the 2008 ozone NAAQS from upwind states by downwind areas' attainment dates.

[3] https://www.epa.gov/sites/default/files/2021-03/documents/revised_csapr_update_factsheet_for_final_rule.pdf.

Partial Kenosha County 2008 ozone NAAQS nonattainment area – Table A9.3 provides a breakdown of VOC point source units in the partial Kenosha County 2008 ozone NAAQS nonattainment area in 2019. With the shutdown of the We Energies Pleasant Prairie Power Plant in 2018, only about 4% of the area's VOC emissions in 2019 are attributed to combustion emissions originating from industrial boilers, reciprocating engines, and various space and process heating units. As indicated in Table A9.3, the majority of these combustion-related emissions are subject to various National Emission Standards for Hazardous Air Pollutant (NESHAP) rules that have become effective since 2011. These NESHAP rules implement good combustion practices that minimize VOC emissions or apply direct emission limitations on total hydrocarbons (including VOCs). The specifics of the NESHAP rules are further described below in the section "Federal/Regional VOC Control Measures". It should be noted, however, that although the combustion NESHAP requirements are expected to minimize VOC emissions, the incremental emission reductions due to these rules are expected to be relatively small and difficult to quantify.

Table A9.3. 2019 VOC emissions and requirements for point sources in the partial Kenosha County 2008 ozone NAAQS nonattainment area.

FID	Facility	Unit	Annual VOC (Tons)	Percent of Total	Permanent and Enforceable Control Measures
Combustion Sources					
Multiple	Reciprocating Engines	6 units	0.03	0.05%	RICE NESHAP requirements[1]
Multiple	Natural Gas-Fired Boilers, Fuel Oil-Fired Boilers, Process Heaters	31 units	2.1	3.6%	ICI boiler and process heater NESHAP combustion requirements[1]
Non-Combustion Sources					
Multiple	Non-combustion units	31 units	55.9	96.3%	Individual emission units subject to VOC RACT rules as applicable
Total =		**68 units**	**58.0**	**100.0%**	

ICI = Industrial, Commercial and Institutional
RICE = Reciprocating Internal Combustion Engine
[1] The emissions units are subject to either major source or area source NESHAP emission requirements based on size thresholds. The applicability of requirements and exemptions for each unit has not been determined for purposes of this assessment. Natural gas-fired boilers and processes at area sources are not subject to requirements.

Table A9.3 shows that approximately 96% of VOC emissions in 2019 came from non-combustion activities or processes, which are subject to VOC RACT rules codified under chapters NR 419 through 424, Wis. Adm. Code.

Federal VOC Control Measures for Point Sources

A number of federal NESHAP rules were 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.

These NESHAP measures apply to sources within the partial Kenosha County 2008 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 attainment by 2019 include the following:

- *Major Source ICI Boiler and Process Heater NESHAP* – On March 21, 2011, EPA promulgated the "National Emission Standards for Hazardous Air Pollutants for Major 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 EPA promulgated the "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers" under part 63 subpart JJJJJJ. 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* – 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.

2. Area Source Control Measures

As noted for point sources, Wisconsin has incorporated all of the necessary CTGs as rules under chs. NR 419 through 424, Wis. Adm. Code.

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) with EPA approval because the equipment was found to defeat onboard vapor recovery systems for some new vehicles. As stage 2 equipment is removed, actual VOC emissions are anticipated to decrease slightly. This SIP revision was based on a technical showing of net benefit as required under the CAA in order to prevent SIP backsliding.

There are also a number of 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 2011 and will continue to maintain reduced VOCs emitted from this source category. Actual emission levels going into the future will vary depending on population and activity use factors. Two other federal rules, the NESHAPs for Gasoline Distribution (Stage I) and Area Source ICI Boilers, also control area source VOC emissions associated with fuel storage and transfer activities.

3. Onroad Source Control Measures

Both NOx and VOC emissions from onroad mobile sources are substantially controlled through federal new vehicle emission standards programs and fuel standards. Although initial compliance dates in many cases were prior to 2011, these regulations have continued to reduce area-wide emissions as fleets turn over to newer vehicles. All of these programs apply nationally and have reduced emissions both within the nonattainment area and contributing ozone precursor transport areas. The federal programs contributing to attainment of the 2008 ozone NAAQS include those listed in Table A9.4.

Table A9.4. Federal onroad mobile source regulations contributing to attainment.

On-road Control Program	Pollutants	Model Year[1]	Regulation
Passenger vehicles, SUVs, and light duty trucks – emissions and fuel standards	VOC & NOx	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 & NOx	2007+	40 CFR Part 86
Heavy-duty spark ignition engines	VOC & NOx	2005 – 2008+	40 CFR Part 86
Motorcycles	VOC & NOx	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

On-road Control Program	Pollutants	Model Year[1]	Regulation
Light duty vehicle corporate average fuel economy (CAFE) standards	Fuel efficiency (VOC and NOx)	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 emission requirements as well as the phasing by vehicle size and type.

The Wisconsin-administered enhanced I/M program also limits on-road VOC and NOx emissions from onroad sources and is required within Kenosha County. The Wisconsin I/M program was first implemented in 1984 and has gone through several modifications and enhancements since that time. The I/M program requirements are codified in chs. NR 485 and Trans 131, Wis. Adm. Code. The I/M program reduces average vehicle VOC and NOx emissions and garners some level of continued incremental reduction as fleets turn over to new vehicles. A modeled demonstration that Wisconsin's current I/M program meets EPA's enhanced I/M program performance standard was completed as part of this redesignation request and confirms that the program continues to meet enhanced I/M program performance requirements (see Appendix 10).

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)]. Wisconsin counties are in Phase II of the RFG program, which began in 2000, and builds upon the initial phase of the RFG program to further improve air quality. As with the I/M program, the RFG program reduces average vehicle NOx and VOC emissions and offers some level of continued incremental reduction as fleets turn over to new vehicles.

4. Nonroad Source Control Measures

Similar to onroad sources, VOC and NOx emitted by nonroad mobile sources are significantly controlled via federal standards for new engines. These programs therefore reduce ozone precursor emissions generated within Kenosha County and in the broader regional areas contributing to ozone transport. Table A9.5 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 NOx emission limits. The RFG program also contributes to lower NOx and VOC emissions from the nonroad mobile sector.

Table A9.5. Federal nonroad mobile source regulations contributing to attainment.

Nonroad Control Program	Pollutants	Model Year[1]	Regulation
Aircraft	HC & NOx	2000 – 2005+	40 CFR Part 87
Compression Ignition[2]	NMHC & NOx	2000 – 2015+ (Tier 4)	40 CFR Part 89 & 1039
Large Spark Ignition	HC & NOx	2007+	40 CFR Part 1048
Locomotive Engines	HC & NOx	2012 – 2014 (Tier 3) 2015+ (Tier 4)	40 CFR Part 1033
Marine Compression Ignition	HC & NOx	2012 – 2018	40 CFR Part 1042
Marine Spark Ignition	HC & NOx	2010+	40 CFR Part 1045
Recreational Vehicle[3]	HC & NOx	2006 – 2012 (Tier 1 – 3) (phasing dependent on vehicle type)	40 CFR Part 1051
Small Spark Ignition Engine[4] < 19d Kw – emission standards	HC & NOx	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.

5. New Source Requirements

Wisconsin has a fully approved NNSR program. For areas designated or redesignated attainment, the program implements PSD requirements as codified under ch. NR 405, Wis. Adm. Code. The state's PSD program has also been approved by EPA, as discussed in section 2.1 of the redesignation request. Under the PSD program, any new major source or an existing major source undergoing a major modification will be required to apply Best Available Control Technology. A major modification is defined as a major source increasing net emissions or potential-to-emit of an air contaminant above the applicable thresholds of 40 tons NOx per year and/or 40 tons VOC per year.

APPENDIX 10

Enhanced I/M Program Assessment

This appendix provides a modeling 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 by emissions modeling with the state I/M program being assessed. The requirements for the program being assessed are specified in 40 CFR 51.351(i)(13), as follows:

> 40 CFR 51.351(i)(13) *Evaluation date.* Enhanced I/M program areas subject to the provisions of this paragraph (i) shall be shown to obtain the same or lower emission levels for HC and NO_X as the model program described in this paragraph assuming an evaluation date set 6 years after the effective date of designation and classification under the 8-hour ozone standard (rounded to the nearest July) to within ±0.02 gpm. Subject programs shall demonstrate through modeling the ability to maintain this percent level of emission reduction (or better) through their applicable attainment date for the 8-hour ozone standard, also rounded to the nearest July.

Since the EPA reclassified the partial Kenosha County 2008 ozone NAAQS nonattainment area from moderate to serious effective September 23, 2019, the evaluation date under 40 CFR 51.351(i)(13) is six years later rounded to the nearest July (that is, July 2025). No additional years need to be modeled under 40 CFR 51.351(i)(13), since the applicable attainment date, July 20, 2021, is prior to July 2025.

1. Description of the Modeling Demonstration

The Wisconsin Department of Natural Resources (WDNR) conducted this modeling demonstration using the most recent version of EPA's mobile source emissions model, MOVES3.0.2, released in September 2021. 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-14-006, January 2014.
- MOVES3 Technical Guidance: Using MOVES to Prepare Emission Inventories for State Implementation Plans and Transportation Conformity, EPA-420-B-20-052, November 2020.

EPA provided guidance to WDNR as to how to apply the January 2014 guidance when using MOVES3.0.2, and those recommendations were followed when completing this modeling.

The demonstration involves a comparison of emission reductions from the EPA's model program specified in 40 CFR 51.351(i) and Wisconsin's actual program. Since MOVES needs to be run separately for different fuel regions, WDNR did separate demonstrations for the two fuel regions in Wisconsin's seven county I/M program area:

- The six reformulated gasoline counties of Kenosha, Milwaukee, Ozaukee, Racine, Washington and Waukesha.
- The single conventional gasoline county of Sheboygan.

In addition, WDNR did a demonstration for the subject area of this redesignation request (the partial Kenosha County 2008 serious ozone NAAQS nonattainment area).

The following table summarizes the MOVES3.0.2 modeling assumptions used, other than those inputs pertaining to I/M programs.

Table A10.1. Assumptions, Other than I/M Program Parameters, Associated with MOVES3.0.2 I/M Performance Standard Modeling.

Category	Area		
	Six County Area	Sheboygan County	Partial Kenosha County Area
Calendar Year	2025	2025	2025
Month	July	July	July
Day Type	Weekday	Weekday	Weekday
Age Distribution	WDNR 2025 projections for the 7 I/M counties combined	WDNR 2025 projections for the 7 I/M counties combined	WDNR 2025 projections for the 7 I/M counties combined
Vehicle Miles of Travel	2017 NEI VMT grown to 2025	2025 VMT projections by WDOT and WDNR	Interpolated between SEWRPC 2019 and 2030 VMTs
Vehicle Population	2017 NEI population grown to 2025	2025 population projected by WDNR	Interpolated between SEWRPC 2019 and 2030 populations
Fuel Inputs	MOVES3.0.2 Default (reformulated gasoline area)	MOVES3.0.2 Default (conventional gasoline area)	MOVES3.0.2 Default (reformulated gasoline area)
Road Type Distribution	2017 NEI distribution	2025 projections by WDOT and WDNR	Interpolated between SEWRPC 2019 and 2030 distributions
Average Speed Distribution	2017 NEI distribution	2017 NEI distribution	Interpolated between SEWRPC 2019 and 2030 distributions
Daily Temperature Range	70 to 94 degrees Fahrenheit	65 to 93 degrees Fahrenheit	70 to 94 degrees Fahrenheit
Daily Humidity Range	57.0% to 85.8%	55.5% to 87.0%	57.0% to 85.8%

Note: The following abbreviations are used in this table: I/M = Inspection/Maintenance; MOVES3.0.2 = United States Environmental Protection Agency's Motor Vehicle Emissions Simulator Model (Version 3.0.2); 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 the following table.

Table A10.2. I/M Program Parameters Associated with MOVES3.0.2 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 Trucks Single Unit Short-haul Trucks Single Unit Long-haul Trucks	Not Included	Gasoline Only
Waiver Rate	3.00%	0.37%
Compliance Rate	96.0%	84.7%
Failure Rate	4.21%	4.21%
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	0.9612	0.9612
MYs 2007 and Newer	0.9612	1.0000
Light Commercial Trucks		
MYs 2006 and Older	0.7526	0.7526
MYs 2007 and Newer	0.7526	1.0000
School Buses		
MYs 2006 and Older	0.0000	0.0000

Category	I/M Program	
	Enhanced I/M Performance Standard	Wisconsin I/M Program
MYs 2007 and Newer	0.0000	0.0026
Refuse Trucks		
MYs 2006 and Older	0.0000	0.0000
MYs 2007 and Newer	0.0000	0.0728
Single Unit Short-haul Trucks		
MYs 2006 and Older	0.0000	0.0000
MYs 2007 and Newer	0.0000	0.5676
Single Unit Long-haul Trucks		
MYs 2006 and Older	0.0000	0.0000
MYs 2007 and Newer	0.0000	0.5807
Final Compliance Factor		
Passenger Cars		
All MYs	95.88	84.69
Passenger Trucks		
MYs 2006 and Older	92.16	81.40
MYs 2007 and Newer	92.16	84.69
Light Commercial Trucks		
MYs 2006 and Older	72.16	63.74
MYs 2007 and Newer	72.16	84.69
School Buses		
MYs 2006 and Older	0.00	0.00
MYs 2007 and Newer	0.00	0.22
Refuse Trucks		
MYs 2006 and Older	0.00	0.00
MYs 2007 and Newer	0.00	6.17
Single Unit Short-haul Trucks		
MYs 2006 and Older	0.00	0.00
MYs 2007 and Newer	0.00	48.07
Single Unit Long-haul Trucks		
MYs 2006 and Older	0.00	0.00
MYs 2007 and Newer	0.00	49.18

Note 1: The following abbreviations are used in this table: 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 (4.21%) is used.

Note 3: For Wisconsin's actual program, the waiver rate, compliance rate, and failure rate are obtained from the Wisconsin Vehicle Inspection Program Annual Report, 2019. See pages 10 and 20 for waiver rate, page 40 for compliance rate, and page 10 for failure rate.

Note 4: The Regulatory Class Coverage Adjustments are obtained from EPA's MOVES3 Technical Guidance. See Appendix A stating on page 67.

Note 5: The Final Compliance Factors are calculated as specified in EPA's MOVES3 Technical Guidance. See pages 47 to 49.
Note 6: Although Wisconsin's I/M program does test some school buses, refuse trucks, single unit short-haul trucks and single unit long-haul trucks, the MOVES model currently does not provide any I/M emission reductions for the OBD testing of these vehicles.

2. Modeling Results

The following six tables provide the modeling results. In all cases, the emission reductions from Wisconsin's actual I/M program are within the 0.02 gram per mile buffer of the emission reductions from the EPA model program under 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, including the partial Kenosha County serious nonattainment area for the 2008 ozone NAAQS.

The MOVES data files used in this assessment is available from DNR upon request.

Table A10.3. I/M Performance Standard Modeling Results for Six County Southeastern Wisconsin Reformulated Gasoline Area For Oxides of Nitrogen (NOx).

Source Type	Fuel Type	Vehicle-Miles of Travel	Emissions (grams)			Em. Fac. (grams/mile)			I/M Reduction (grams/mile)		Wis I/M Shortfall (gms/mi)	Allow-able Shortfall (gms/mi)	% of Allow-able Shortfall	Meets Perf. Std?
			No I/M	Perf Std I/M	Wis I/M	No I/M	Perf Std I/M	Wis I/M	Perf Std I/M	Wis I/M				
Motorcycle	Gasoline	335,302	161,472	161,472	161,472	0.4816	0.4816	0.4816	0.0000	0.0000	0.0000			
Passenger Car	Gasoline	23,345,480	1,687,047	1,494,243	1,520,787	0.0723	0.0640	0.0651	0.0083	0.0071	0.0011			
	Diesel	190,684	14,806	14,806	14,806	0.0776	0.0776	0.0776	0.0000	0.0000	0.0000			
	E-85	15,167	749	624	647	0.0494	0.0412	0.0427	0.0082	0.0067	0.0015			
Passenger Truck	Gasoline	19,841,130	1,198,577	1,028,685	1,058,764	0.0604	0.0518	0.0534	0.0086	0.0070	0.0015			
	Diesel	1,062,490	542,212	542,212	542,212	0.5103	0.5103	0.5103	0.0000	0.0000	0.0000			
	E-85	53,318	2,984	2,494	2,581	0.0560	0.0468	0.0484	0.0092	0.0076	0.0016			
Light Commercial Truck	Gasoline	4,549,333	872,056	830,873	829,968	0.1917	0.1826	0.1824	0.0091	0.0093	-0.0002			
	Diesel	279,544	418,577	418,577	418,577	1.4974	1.4974	1.4974	0.0000	0.0000	0.0000			
	E-85	14,085	1,063	929	918	0.0755	0.0660	0.0652	0.0095	0.0103	-0.0008			
Other Bus	Gasoline	1,133	481	481	481	0.4244	0.4244	0.4244	0.0000	0.0000	0.0000			
	Diesel	6,362	26,063	26,063	26,063	4.0966	4.0966	4.0966	0.0000	0.0000	0.0000			
	CNG	513	1,191	1,191	1,191	2.3216	2.3216	2.3216	0.0000	0.0000	0.0000			
Transit Bus	Gasoline	3,933	1,946	1,946	1,946	0.4948	0.4948	0.4948	0.0000	0.0000	0.0000			
	Diesel	22,634	100,392	100,392	100,392	4.4355	4.4355	4.4355	0.0000	0.0000	0.0000			
	CNG	1,824	5,972	5,972	5,972	3.2743	3.2743	3.2743	0.0000	0.0000	0.0000			
School Bus	Gasoline	1,159	314	314	314	0.2706	0.2706	0.2706	0.0000	0.0000	0.0000			
	Diesel	100,148	145,040	145,040	145,040	1.4483	1.4483	1.4483	0.0000	0.0000	0.0000			
	CNG	1,429	1,182	1,182	1,182	0.8272	0.8272	0.8272	0.0000	0.0000	0.0000			
Refuse Truck	Gasoline	56	19	19	19	0.3336	0.3336	0.3336	0.0000	0.0000	0.0000			
	Diesel	69,955	245,825	245,825	245,825	3.5140	3.5140	3.5140	0.0000	0.0000	0.0000			
	CNG	16,723	21,470	21,470	21,470	1.2839	1.2839	1.2839	0.0000	0.0000	0.0000			
Single Unit Short-haul Truck	Gasoline	423,349	161,106	161,106	161,106	0.3806	0.3806	0.3806	0.0000	0.0000	0.0000			
	Diesel	1,572,529	2,348,371	2,348,371	2,348,371	1.4934	1.4934	1.4934	0.0000	0.0000	0.0000			
	CNG	21,029	19,500	19,500	19,500	0.9273	0.9273	0.9273	0.0000	0.0000	0.0000			
Single Unit Long-haul Truck	Gasoline	25,842	5,347	5,347	5,347	0.2069	0.2069	0.2069	0.0000	0.0000	0.0000			
	Diesel	95,390	129,675	129,675	129,675	1.3594	1.3594	1.3594	0.0000	0.0000	0.0000			
	CNG	1,287	1,132	1,132	1,132	0.8795	0.8795	0.8795	0.0000	0.0000	0.0000			
Motor Home	Gasoline	114,954	130,513	130,513	130,513	1.1353	1.1353	1.1353	0.0000	0.0000	0.0000			
	Diesel	78,562	292,572	292,572	292,572	3.7241	3.7241	3.7241	0.0000	0.0000	0.0000			
	CNG	0	5	5	5	11.3295	11.3295	11.3295	0.0000	0.0000	0.0000			
Combination Short-haul Truck	Gasoline	4	14	14	14	3.7740	3.7740	3.7740	0.0000	0.0000	0.0000			
	Diesel	428,787	1,456,370	1,456,370	1,456,370	3.3965	3.3965	3.3965	0.0000	0.0000	0.0000			
	CNG	13,275	9,939	9,939	9,939	0.7487	0.7487	0.7487	0.0000	0.0000	0.0000			
Comb. Long-haul Tk.	Diesel	1,373,727	4,757,846	4,757,846	4,757,846	3.4635	3.4635	3.4635	0.0000	0.0000	0.0000			
ALL	**ALL**	**54,061,136**	**14,761,827**	**14,357,200**	**14,413,017**	**0.2731**	**0.2656**	**0.2666**	**0.0075**	**0.0065**	**0.0010**	**0.0200**	**5.2%**	**YES**

Table A10.4. I/M Performance Standard Modeling Results for Six County Southeastern Wisconsin Reformulated Gasoline Area For Volatile Organic Compounds (VOC).

Source Type	Fuel Type	Vehicle-Miles of Travel	Emissions (grams)			Em. Fac. (grams/mile)			I/M Reduction (grams/mile)		Wis I/M Shortfall (gms/mi)	Allow-able Shortfall (gms/mi)	% of Allow-able Shortfall	Meets Perf. Std?
			No I/M	Perf Std I/M	Wis I/M	No I/M	Perf Std I/M	Wis I/M	Perf Std I/M	Wis I/M				
Motorcycle	Gasoline	335,302	860,179	860,179	860,179	2.5654	2.5654	2.5654	0.0000	0.0000	0.0000			
Passenger Car	Gasoline	23,345,480	4,430,433	3,968,132	4,130,049	0.1898	0.1700	0.1769	0.0198	0.0129	0.0069			
	Diesel	190,684	14,040	14,040	14,040	0.0736	0.0736	0.0736	0.0000	0.0000	0.0000			
	E-85	15,167	2,783	2,460	2,566	0.1835	0.1622	0.1692	0.0213	0.0144	0.0070			
Passenger Truck	Gasoline	19,841,130	2,352,739	2,072,717	2,156,908	0.1186	0.1045	0.1087	0.0141	0.0099	0.0042			
	Diesel	1,062,490	40,719	40,719	40,719	0.0383	0.0383	0.0383	0.0000	0.0000	0.0000			
	E-85	53,318	7,775	6,874	7,138	0.1458	0.1289	0.1339	0.0169	0.0119	0.0049			
Light Commercial Truck	Gasoline	4,549,333	1,081,807	1,019,848	1,028,903	0.2378	0.2242	0.2262	0.0136	0.0116	0.0020			
	Diesel	279,544	43,801	43,801	43,801	0.1567	0.1567	0.1567	0.0000	0.0000	0.0000			
	E-85	14,085	2,869	2,617	2,639	0.2037	0.1858	0.1874	0.0179	0.0163	0.0016			
Other Bus	Gasoline	1,133	529	529	529	0.4667	0.4667	0.4667	0.0000	0.0000	0.0000			
	Diesel	6,362	1,053	1,053	1,053	0.1655	0.1655	0.1655	0.0000	0.0000	0.0000			
	CNG	513	551	551	551	1.0736	1.0736	1.0736	0.0000	0.0000	0.0000			
Transit Bus	Gasoline	3,933	1,893	1,893	1,893	0.4814	0.4814	0.4814	0.0000	0.0000	0.0000			
	Diesel	22,634	6,751	6,751	6,751	0.2983	0.2983	0.2983	0.0000	0.0000	0.0000			
	CNG	1,824	1,960	1,960	1,960	1.0747	1.0747	1.0747	0.0000	0.0000	0.0000			
School Bus	Gasoline	1,159	442	442	442	0.3817	0.3817	0.3817	0.0000	0.0000	0.0000			
	Diesel	100,148	5,376	5,376	5,376	0.0537	0.0537	0.0537	0.0000	0.0000	0.0000			
	CNG	1,429	1,042	1,042	1,042	0.7287	0.7287	0.7287	0.0000	0.0000	0.0000			
Refuse Truck	Gasoline	56	36	36	36	0.6428	0.6428	0.6428	0.0000	0.0000	0.0000			
	Diesel	69,955	5,785	5,785	5,785	0.0827	0.0827	0.0827	0.0000	0.0000	0.0000			
	CNG	16,723	20,698	20,698	20,698	1.2377	1.2377	1.2377	0.0000	0.0000	0.0000			
Single Unit Short-haul Truck	Gasoline	423,349	244,029	244,029	244,029	0.5764	0.5764	0.5764	0.0000	0.0000	0.0000			
	Diesel	1,572,529	103,400	103,400	103,400	0.0658	0.0658	0.0658	0.0000	0.0000	0.0000			
	CNG	21,029	16,201	16,201	16,201	0.7704	0.7704	0.7704	0.0000	0.0000	0.0000			
Single Unit Long-haul Truck	Gasoline	25,842	8,276	8,276	8,276	0.3202	0.3202	0.3202	0.0000	0.0000	0.0000			
	Diesel	95,390	7,129	7,129	7,129	0.0747	0.0747	0.0747	0.0000	0.0000	0.0000			
	CNG	1,287	862	862	862	0.6695	0.6695	0.6695	0.0000	0.0000	0.0000			
Motor Home	Gasoline	114,954	154,613	154,613	154,613	1.3450	1.3450	1.3450	0.0000	0.0000	0.0000			
	Diesel	78,562	28,188	28,188	28,188	0.3588	0.3588	0.3588	0.0000	0.0000	0.0000			
	CNG	0	1	1	1	2.1677	2.1677	2.1677	0.0000	0.0000	0.0000			
Combination Short-haul Truck	Gasoline	4	24	24	24	6.5174	6.5174	6.5174	0.0000	0.0000	0.0000			
	Diesel	428,787	58,430	58,430	58,430	0.1363	0.1363	0.1363	0.0000	0.0000	0.0000			
	CNG	13,275	8,235	8,235	8,235	0.6203	0.6203	0.6203	0.0000	0.0000	0.0000			
Comb. Long-haul Tk.	Diesel	1,373,727	171,381	171,381	171,381	0.1248	0.1248	0.1248	0.0000	0.0000	0.0000			
ALL	**ALL**	**54,061,136**	**9,684,030**	**8,878,272**	**9,133,827**	**0.1791**	**0.1642**	**0.1690**	**0.0149**	**0.0102**	**0.0047**	**0.0200**	**23.6%**	**YES**

Table A10.5. I/M Performance Standard Modeling Results for Sheboygan County Conventional Gasoline Area For Oxides of Nitrogen (NOx).

Source Type	Fuel Type	Vehicle-Miles of Travel	Emissions (grams)			Em. Fac. (grams/mile)			I/M Reduction (grams/mile)		Wis I/M Shortfall (gms/mi)	Allow-able Shortfall (gms/mi)	% of Allow-able Shortfall	Meets Perf. Std?
			No I/M	Perf Std I/M	Wis I/M	No I/M	Perf Std I/M	Wis I/M	Perf Std I/M	Wis I/M				
Motorcycle	Gasoline	32,907	18,130	18,130	18,130	0.5509	0.5509	0.5509	0.0000	0.0000	0.0000			
Passenger Car	Gasoline	1,249,596	96,677	85,531	87,096	0.0774	0.0684	0.0697	0.0089	0.0077	0.0013			
	Diesel	10,207	789	789	789	0.0773	0.0773	0.0773	0.0000	0.0000	0.0000			
	E-85	812	44	36	38	0.0538	0.0449	0.0466	0.0089	0.0072	0.0017			
Passenger Truck	Gasoline	1,648,387	108,115	92,804	95,525	0.0656	0.0563	0.0580	0.0093	0.0076	0.0017			
	Diesel	88,271	41,224	41,224	41,224	0.4670	0.4670	0.4670	0.0000	0.0000	0.0000			
	E-85	4,430	271	227	235	0.0612	0.0512	0.0530	0.0100	0.0082	0.0018			
Light Commercial Truck	Gasoline	164,936	33,444	31,831	31,790	0.2028	0.1930	0.1927	0.0098	0.0100	-0.0003			
	Diesel	10,135	13,869	13,869	13,869	1.3684	1.3684	1.3684	0.0000	0.0000	0.0000			
	E-85	511	42	37	36	0.0825	0.0722	0.0714	0.0104	0.0112	-0.0008			
Other Bus	Gasoline	1,234	634	634	634	0.5139	0.5139	0.5139	0.0000	0.0000	0.0000			
	Diesel	6,929	25,581	25,581	25,581	3.6920	3.6920	3.6920	0.0000	0.0000	0.0000			
	CNG	559	1,190	1,190	1,190	2.1300	2.1300	2.1300	0.0000	0.0000	0.0000			
Transit Bus	Gasoline	374	225	225	225	0.6011	0.6011	0.6011	0.0000	0.0000	0.0000			
	Diesel	2,155	8,905	8,905	8,905	4.1329	4.1329	4.1329	0.0000	0.0000	0.0000			
	CNG	174	536	536	536	3.0890	3.0890	3.0890	0.0000	0.0000	0.0000			
School Bus	Gasoline	54	18	18	18	0.3441	0.3441	0.3441	0.0000	0.0000	0.0000			
	Diesel	4,645	6,106	6,106	6,106	1.3144	1.3144	1.3144	0.0000	0.0000	0.0000			
	CNG	66	48	48	48	0.7252	0.7252	0.7252	0.0000	0.0000	0.0000			
Refuse Truck	Gasoline	1	0	0	0	0.3845	0.3845	0.3845	0.0000	0.0000	0.0000			
	Diesel	881	2,712	2,712	2,712	3.0793	3.0793	3.0793	0.0000	0.0000	0.0000			
	CNG	210	231	231	231	1.0989	1.0989	1.0989	0.0000	0.0000	0.0000			
Single Unit Short-haul Truck	Gasoline	21,744	9,582	9,582	9,582	0.4407	0.4407	0.4407	0.0000	0.0000	0.0000			
	Diesel	80,769	107,720	107,720	107,720	1.3337	1.3337	1.3337	0.0000	0.0000	0.0000			
	CNG	1,080	858	858	858	0.7947	0.7947	0.7947	0.0000	0.0000	0.0000			
Single Unit Long-haul Truck	Gasoline	1,370	297	297	297	0.2171	0.2171	0.2171	0.0000	0.0000	0.0000			
	Diesel	5,058	6,058	6,058	6,058	1.1979	1.1979	1.1979	0.0000	0.0000	0.0000			
	CNG	68	52	52	52	0.7596	0.7596	0.7596	0.0000	0.0000	0.0000			
Motor Home	Gasoline	2,248	2,680	2,680	2,680	1.1921	1.1921	1.1921	0.0000	0.0000	0.0000			
	Diesel	1,537	5,206	5,206	5,206	3.3881	3.3881	3.3881	0.0000	0.0000	0.0000			
	CNG	0	0	0	0	10.4027	10.4027	10.4027	0.0000	0.0000	0.0000			
Combination Short-haul Truck	Gasoline	0	1	1	1	3.9873	3.9873	3.9873	0.0000	0.0000	0.0000			
	Diesel	30,166	101,693	101,693	101,693	3.3711	3.3711	3.3711	0.0000	0.0000	0.0000			
	CNG	934	675	675	675	0.7223	0.7223	0.7223	0.0000	0.0000	0.0000			
Comb. Long-haul Tk.	Diesel	146,837	480,884	480,884	480,884	3.2750	3.2750	3.2750	0.0000	0.0000	0.0000			
ALL	**ALL**	**3,519,283**	**1,074,498**	**1,046,372**	**1,050,624**	**0.3053**	**0.2973**	**0.2985**	**0.0080**	**0.0068**	**0.0012**	**0.0200**	**6.0%**	**YES**

Table A10.6. I/M Performance Standard Modeling Results for Sheboygan County Conventional Gasoline Area For Volatile Organic Compounds (VOC).

Source Type	Fuel Type	Vehicle-Miles of Travel	Emissions (grams)			Em. Fac. (grams/mile)			I/M Reduction (grams/mile)		Wis I/M Shortfall (gms/mi)	Allow-able Shortfall (gms/mi)	% of Allow-able Shortfall	Meets Perf. Std?
			No I/M	Perf Std I/M	Wis I/M	No I/M	Perf Std I/M	Wis I/M	Perf Std I/M	Wis I/M				
Motorcycle	Gasoline	32,907	72,736	72,736	72,736	2.2104	2.2104	2.2104	0.0000	0.0000	0.0000			
Passenger Car	Gasoline	1,249,596	247,869	222,060	231,501	0.1984	0.1777	0.1853	0.0207	0.0131	0.0076			
	Diesel	10,207	755	755	755	0.0740	0.0740	0.0740	0.0000	0.0000	0.0000			
	E-85	812	142	126	131	0.1748	0.1547	0.1613	0.0201	0.0134	0.0067			
Passenger Truck	Gasoline	1,648,387	196,817	173,496	180,861	0.1194	0.1053	0.1097	0.0141	0.0097	0.0045			
	Diesel	88,271	3,259	3,259	3,259	0.0369	0.0369	0.0369	0.0000	0.0000	0.0000			
	E-85	4,430	609	539	560	0.1375	0.1218	0.1264	0.0157	0.0111	0.0046			
Light Commercial Truck	Gasoline	164,936	37,802	35,603	35,952	0.2292	0.2159	0.2180	0.0133	0.0112	0.0021			
	Diesel	10,135	1,472	1,472	1,472	0.1453	0.1453	0.1453	0.0000	0.0000	0.0000			
	E-85	511	98	90	91	0.1929	0.1762	0.1777	0.0167	0.0152	0.0015			
Other Bus	Gasoline	1,234	584	584	584	0.4733	0.4733	0.4733	0.0000	0.0000	0.0000			
	Diesel	6,929	1,028	1,028	1,028	0.1484	0.1484	0.1484	0.0000	0.0000	0.0000			
	CNG	559	502	502	502	0.8990	0.8990	0.8990	0.0000	0.0000	0.0000			
Transit Bus	Gasoline	374	191	191	191	0.5102	0.5102	0.5102	0.0000	0.0000	0.0000			
	Diesel	2,155	589	589	589	0.2732	0.2732	0.2732	0.0000	0.0000	0.0000			
	CNG	174	160	160	160	0.9213	0.9213	0.9213	0.0000	0.0000	0.0000			
School Bus	Gasoline	54	23	23	23	0.4221	0.4221	0.4221	0.0000	0.0000	0.0000			
	Diesel	4,645	230	230	230	0.0495	0.0495	0.0495	0.0000	0.0000	0.0000			
	CNG	66	41	41	41	0.6176	0.6176	0.6176	0.0000	0.0000	0.0000			
Refuse Truck	Gasoline	1	0	0	0	0.6101	0.6101	0.6101	0.0000	0.0000	0.0000			
	Diesel	881	65	65	65	0.0743	0.0743	0.0743	0.0000	0.0000	0.0000			
	CNG	210	221	221	221	1.0496	1.0496	1.0496	0.0000	0.0000	0.0000			
Single Unit Short-haul Truck	Gasoline	21,744	12,207	12,207	12,207	0.5614	0.5614	0.5614	0.0000	0.0000	0.0000			
	Diesel	80,769	4,784	4,784	4,784	0.0592	0.0592	0.0592	0.0000	0.0000	0.0000			
	CNG	1,080	722	722	722	0.6685	0.6685	0.6685	0.0000	0.0000	0.0000			
Single Unit Long-haul Truck	Gasoline	1,370	410	410	410	0.2993	0.2993	0.2993	0.0000	0.0000	0.0000			
	Diesel	5,058	336	336	336	0.0664	0.0664	0.0664	0.0000	0.0000	0.0000			
	CNG	68	40	40	40	0.5877	0.5877	0.5877	0.0000	0.0000	0.0000			
Motor Home	Gasoline	2,248	3,701	3,701	3,701	1.6459	1.6459	1.6459	0.0000	0.0000	0.0000			
	Diesel	1,537	485	485	485	0.3156	0.3156	0.3156	0.0000	0.0000	0.0000			
	CNG	0	0	0	0	1.7982	1.7982	1.7982	0.0000	0.0000	0.0000			
Combination Short-haul Truck	Gasoline	0	2	2	2	6.8044	6.8044	6.8044	0.0000	0.0000	0.0000			
	Diesel	30,166	4,070	4,070	4,070	0.1349	0.1349	0.1349	0.0000	0.0000	0.0000			
	CNG	934	568	568	568	0.6077	0.6077	0.6077	0.0000	0.0000	0.0000			
Comb. Long-haul Tk.	Diesel	146,837	17,140	17,140	17,140	0.1167	0.1167	0.1167	0.0000	0.0000	0.0000			
ALL	**ALL**	**3,519,283**	**609,657**	**558,233**	**575,415**	**0.1732**	**0.1586**	**0.1635**	**0.0146**	**0.0097**	**0.0049**	**0.0200**	**24.4%**	**YES**

Table A10.7. I/M Performance Standard Modeling Results for Partial Kenosha County 2008 Ozone NAAQS Nonattainment Area For Oxides of Nitrogen (NOx).

Source Type	Fuel Type	Vehicle-Miles of Travel	Emissions (grams)			Em. Fac. (grams/mile)			I/M Reduction (grams/mile)		Wis I/M Shortfall (gms/mi)	Allow-able Shortfall (gms/mi)	% of Allow-able Shortfall	Meets Perf. Std?
			No I/M	Perf Std I/M	Wis I/M	No I/M	Perf Std I/M	Wis I/M	Perf Std I/M	Wis I/M				
Motorcycle	Gasoline	23,537	11,590	11,590	11,590	0.4924	0.4924	0.4924	0.0000	0.0000	0.0000			
Passenger Car	Gasoline	1,594,651	115,665	102,498	104,285	0.0725	0.0643	0.0654	0.0083	0.0071	0.0011			
	Diesel	13,025	1,017	1,017	1,017	0.0781	0.0781	0.0781	0.0000	0.0000	0.0000			
	E-85	1,036	51	43	44	0.0493	0.0411	0.0426	0.0082	0.0067	0.0015			
Passenger Truck	Gasoline	1,578,909	95,635	82,079	84,459	0.0606	0.0520	0.0535	0.0086	0.0071	0.0015			
	Diesel	84,550	41,924	41,924	41,924	0.4958	0.4958	0.4958	0.0000	0.0000	0.0000			
	E-85	4,243	238	199	205	0.0560	0.0468	0.0484	0.0092	0.0076	0.0016			
Light Commercial Truck	Gasoline	164,086	31,429	29,939	29,903	0.1915	0.1825	0.1822	0.0091	0.0093	-0.0002			
	Diesel	10,083	14,788	14,788	14,788	1.4666	1.4666	1.4666	0.0000	0.0000	0.0000			
	E-85	508	38	33	33	0.0754	0.0659	0.0651	0.0095	0.0103	-0.0008			
Other Bus	Gasoline	759	359	359	359	0.4731	0.4731	0.4731	0.0000	0.0000	0.0000			
	Diesel	4,259	16,935	16,935	16,935	3.9763	3.9763	3.9763	0.0000	0.0000	0.0000			
	CNG	344	780	780	780	2.2696	2.2696	2.2696	0.0000	0.0000	0.0000			
Transit Bus	Gasoline	221	121	121	121	0.5491	0.5491	0.5491	0.0000	0.0000	0.0000			
	Diesel	1,273	5,519	5,519	5,519	4.3341	4.3341	4.3341	0.0000	0.0000	0.0000			
	CNG	103	331	331	331	3.2302	3.2302	3.2302	0.0000	0.0000	0.0000			
School Bus	Gasoline	33	10	10	10	0.3117	0.3117	0.3117	0.0000	0.0000	0.0000			
	Diesel	2,809	3,958	3,958	3,958	1.4088	1.4088	1.4088	0.0000	0.0000	0.0000			
	CNG	40	31	31	31	0.7845	0.7845	0.7845	0.0000	0.0000	0.0000			
Refuse Truck	Gasoline	1	0	0	0	0.3707	0.3707	0.3707	0.0000	0.0000	0.0000			
	Diesel	1,299	4,344	4,344	4,344	3.3439	3.3439	3.3439	0.0000	0.0000	0.0000			
	CNG	311	372	372	372	1.1973	1.1973	1.1973	0.0000	0.0000	0.0000			
Single Unit Short-haul Truck	Gasoline	32,413	12,605	12,605	12,605	0.3889	0.3889	0.3889	0.0000	0.0000	0.0000			
	Diesel	120,399	170,711	170,711	170,711	1.4179	1.4179	1.4179	0.0000	0.0000	0.0000			
	CNG	1,610	1,393	1,393	1,393	0.8651	0.8651	0.8651	0.0000	0.0000	0.0000			
Single Unit Long-haul Truck	Gasoline	2,066	429	429	429	0.2078	0.2078	0.2078	0.0000	0.0000	0.0000			
	Diesel	7,626	9,766	9,766	9,766	1.2805	1.2805	1.2805	0.0000	0.0000	0.0000			
	CNG	103	84	84	84	0.8205	0.8205	0.8205	0.0000	0.0000	0.0000			
Motor Home	Gasoline	3,392	3,849	3,849	3,849	1.1346	1.1346	1.1346	0.0000	0.0000	0.0000			
	Diesel	2,318	8,325	8,325	8,325	3.5912	3.5912	3.5912	0.0000	0.0000	0.0000			
	CNG	0	0	0	0	11.0238	11.0238	11.0238	0.0000	0.0000	0.0000			
Combination Short-haul Truck	Gasoline	0	1	1	1	3.9087	3.9087	3.9087	0.0000	0.0000	0.0000			
	Diesel	20,898	67,738	67,738	67,738	3.2414	3.2414	3.2414	0.0000	0.0000	0.0000			
	CNG	647	422	422	422	0.6528	0.6528	0.6528	0.0000	0.0000	0.0000			
Comb. Long-haul Tk.	Diesel	102,409	338,053	338,053	338,053	3.3010	3.3010	3.3010	0.0000	0.0000	0.0000			
ALL	**ALL**	**3,779,961**	**958,512**	**930,246**	**934,386**	**0.2536**	**0.2461**	**0.2472**	**0.0075**	**0.0064**	**0.0011**	**0.0200**	**5.5%**	**YES**

Table A10.8. I/M Performance Standard Modeling Results for Partial Kenosha County 2008 Ozone NAAQS Nonattainment Area For Volatile Organic Compounds (VOC).

Source Type	Fuel Type	Vehicle-Miles of Travel	Emissions (grams)			Em. Fac. (grams/mile)			I/M Reduction (grams/mile)		Wis I/M Shortfall (gms/mi)	Allow-able Shortfall (gms/mi)	% of Allow-able Shortfall	Meets Perf. Std?
			No I/M	Perf Std I/M	Wis I/M	No I/M	Perf Std I/M	Wis I/M	Perf Std I/M	Wis I/M				
Motorcycle	Gasoline	23,537	57,719	57,719	57,719	2.4523	2.4523	2.4523	0.0000	0.0000	0.0000			
Passenger Car	Gasoline	1,594,651	291,693	261,158	271,838	0.1829	0.1638	0.1705	0.0191	0.0125	0.0067			
	Diesel	13,025	935	935	935	0.0718	0.0718	0.0718	0.0000	0.0000	0.0000			
	E-85	1,036	183	162	169	0.1769	0.1563	0.1630	0.0206	0.0139	0.0067			
Passenger Truck	Gasoline	1,578,909	180,777	159,178	165,652	0.1145	0.1008	0.1049	0.0137	0.0096	0.0041			
	Diesel	84,550	3,149	3,149	3,149	0.0372	0.0372	0.0372	0.0000	0.0000	0.0000			
	E-85	4,243	597	528	548	0.1408	0.1244	0.1292	0.0164	0.0116	0.0048			
Light Commercial Truck	Gasoline	164,086	37,545	35,380	35,694	0.2288	0.2156	0.2175	0.0132	0.0113	0.0019			
	Diesel	10,083	1,537	1,537	1,537	0.1524	0.1524	0.1524	0.0000	0.0000	0.0000			
	E-85	508	100	91	92	0.1964	0.1791	0.1806	0.0173	0.0158	0.0015			
Other Bus	Gasoline	759	402	402	402	0.5294	0.5294	0.5294	0.0000	0.0000	0.0000			
	Diesel	4,259	676	676	676	0.1588	0.1588	0.1588	0.0000	0.0000	0.0000			
	CNG	344	347	347	347	1.0103	1.0103	1.0103	0.0000	0.0000	0.0000			
Transit Bus	Gasoline	221	123	123	123	0.5566	0.5566	0.5566	0.0000	0.0000	0.0000			
	Diesel	1,273	365	365	365	0.2866	0.2866	0.2866	0.0000	0.0000	0.0000			
	CNG	103	104	104	104	1.0147	1.0147	1.0147	0.0000	0.0000	0.0000			
School Bus	Gasoline	33	15	15	15	0.4559	0.4559	0.4559	0.0000	0.0000	0.0000			
	Diesel	2,809	144	144	144	0.0513	0.0513	0.0513	0.0000	0.0000	0.0000			
	CNG	40	27	27	27	0.6772	0.6772	0.6772	0.0000	0.0000	0.0000			
Refuse Truck	Gasoline	1	1	1	1	0.7034	0.7034	0.7034	0.0000	0.0000	0.0000			
	Diesel	1,299	103	103	103	0.0790	0.0790	0.0790	0.0000	0.0000	0.0000			
	CNG	311	355	355	355	1.1425	1.1425	1.1425	0.0000	0.0000	0.0000			
Single Unit Short-haul Truck	Gasoline	32,413	18,817	18,817	18,817	0.5805	0.5805	0.5805	0.0000	0.0000	0.0000			
	Diesel	120,399	7,452	7,452	7,452	0.0619	0.0619	0.0619	0.0000	0.0000	0.0000			
	CNG	1,610	1,149	1,149	1,149	0.7138	0.7138	0.7138	0.0000	0.0000	0.0000			
Single Unit Long-haul Truck	Gasoline	2,066	649	649	649	0.3141	0.3141	0.3141	0.0000	0.0000	0.0000			
	Diesel	7,626	536	536	536	0.0703	0.0703	0.0703	0.0000	0.0000	0.0000			
	CNG	103	64	64	64	0.6215	0.6215	0.6215	0.0000	0.0000	0.0000			
Motor Home	Gasoline	3,392	4,534	4,534	4,534	1.3368	1.3368	1.3368	0.0000	0.0000	0.0000			
	Diesel	2,318	782	782	782	0.3375	0.3375	0.3375	0.0000	0.0000	0.0000			
	CNG	0	0	0	0	2.0198	2.0198	2.0198	0.0000	0.0000	0.0000			
Combination Short-haul Truck	Gasoline	0	1	1	1	6.2195	6.2195	6.2195	0.0000	0.0000	0.0000			
	Diesel	20,898	2,644	2,644	2,644	0.1265	0.1265	0.1265	0.0000	0.0000	0.0000			
	CNG	647	345	345	345	0.5337	0.5337	0.5337	0.0000	0.0000	0.0000			
Comb. Long-haul Tk.	Diesel	102,409	12,017	12,017	12,017	0.1173	0.1173	0.1173	0.0000	0.0000	0.0000			
ALL	**ALL**	**3,779,961**	**625,889**	**571,490**	**588,986**	**0.1656**	**0.1512**	**0.1558**	**0.0144**	**0.0098**	**0.0046**	**0.0200**	**23.1%**	**YES**