State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Tony Evers, Governor
Preston D. Cole, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

February 11, 2020

Mr. Kurt Thiede
Regional Administrator
U.S. Environmental Protection Agency - Region 5 (R19J)
77 West Jackson Boulevard
Chicago, IL 60604-3507

Subject: Redesignation Request and Maintenance Plan for the Shoreline Sheboygan County, Wisconsin 1997 and 2008 8-Hour Ozone National Ambient Air Quality Standard (NAAQS) Nonattainment Area

Dear Regional Administrator Thiede:

The Wisconsin Department of Natural Resources (WDNR) requests approval of the enclosed Redesignation Request and Maintenance Plan for the Shoreline Sheboygan County, Wisconsin 1997 and 2008 ozone nonattainment area. Per Section 107(d)(3)(D) of the Clean Air Act (CAA), states may request that nonattainment areas be redesignated to attainment provided that certain criteria are met. The WDNR is requesting that EPA redesignate the Shoreline Sheboygan County nonattainment area to attainment and approve the maintenance plan for the 1997 and 2008 ozone NAAQS based on the attainment-level ozone concentrations measured at the Kohler Andrae monitor for the years 2017 through 2019.

The WDNR provided opportunity for public comment on this SIP submittal and conducted a public hearing in Sheboygan, Wisconsin on January 13, 2020. A copy of the public hearing notice is enclosed. A summary of the public comments the department received, and the department's responses, can be found in Section 8 and Appendix 12 of this submittal.

Section 182(b)(2) of the CAA requires nonattainment areas classified as moderate or higher to implement Reasonably Available Control Technology (RACT) for sources of volatile organic compounds (VOCs). In such areas, RACT is required for sources covered in control technique guidelines (CTGs) issued by EPA, as well as sources that meet the major stationary source definition after subtracting their CTG-applicable emissions (non-CTG major sources). The WDNR is submitting the demonstration of VOC RACT requirements in Appendix 10 of the redesignation request and maintenance plan. As noted in that appendix, RACT equivalency demonstrations for sources subject to some CTG requirements will be submitted as part of a separate SIP revision.

This SIP is being submitted using SPeCS. If you have any questions regarding this submittal, please contact Cami Peterson at 608-267-7546 or cami.peterson@wisconsin.gov.

Sincerely,

Gail E. Good

Gail E. Good
Director
Air Management

cc: Doug Aburano – U.S. EPA Region 5
David Bizot – AM/7
Cami Peterson – AM/7
James Bonar-Bridges – LS/8

Enclosures

REDESIGNATION REQUEST AND MAINTENANCE PLAN

FOR THE

SHORELINE SHEBOYGAN COUNTY, WISCONSIN 1997 AND 2008 8-HOUR OZONE NONATTAINMENT AREAS

Developed By:
The Wisconsin Department of Natural Resources

February 2020

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List of Acronyms

AQS	EPA's Air Quality System database
CAA	Clean Air Act
CSAPR	Cross-State Air Pollution Rule
CTG	Control Techniques Guideline
EGU	Electric Generating Unit
EPA	U.S. Environmental Protection Agency
I/M	Inspection and Maintenance
iSIP	Infrastructure SIP
LADCO	Lake Michigan Air Directors Consortium
MOVES	EPA's MOtor Vehicle Emission Simulator model
MVEB	Motor Vehicle Emissions Budget
NAAQS	National Ambient Air Quality Standard
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
SIP	State Implementation Plan
tpsd	tons per summer day
VOC	Volatile Organic Compounds
WDNR	Wisconsin Department of Natural Resources

1. INTRODUCTION

Wisconsin requests that the U.S. Environmental Protection Agency (EPA) redesignate the Shoreline Sheboygan County, Wisconsin, nonattainment area to attainment for the 2008 8-hour ozone National Ambient Air Quality Standard (NAAQS). The Kohler Andrae monitor in the Shoreline Sheboygan County nonattainment area has recorded three years of ambient air quality monitoring data for the years 2017 through 2019 that demonstrate attainment of the 2008 ozone NAAQS.

Wisconsin also requests that EPA redesignate the Shoreline Sheboygan County nonattainment area to attainment for the 1997 8-hour ozone NAAQS. In attaining the more stringent 2008 ozone NAAQS, as described in this document, the area has necessarily also attained the less stringent 1997 ozone NAAQS.[1]

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 Sheboygan County. Sheboygan County was designated nonattainment for both the 1979 and 1997 ozone NAAQS and was subsequently redesignated to attainment for the 1979 ozone NAAQS. Sheboygan County monitors have been attaining the 1997 ozone NAAQS since the 2012-2014 design value year (and had previously monitored attainment for the 2006-2008 through 2009-2011 design value years). This area was not redesignated to attainment before the 1997 ozone NAAQS was revoked, however. The history of nonattainment in Sheboygan County is shown below 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 May 2012, EPA published a final rulemaking that designated Sheboygan County as marginal nonattainment for the 2008 ozone NAAQS (77 FR 30088). This rulemaking was based on EPA's review of ozone monitoring data collected during the years 2008 to 2010. On December 19, 2016, EPA reclassified the Sheboygan County nonattainment area from marginal to moderate nonattainment status, effective that same day (81 FR 91841). This reclassification was based on 2013-2015 monitoring data.[2]

[1] Wisconsin has previously demonstrated that Sheboygan County had fulfilled all CAA requirements for the 1997 ozone NAAQS in its submission of a redesignation request and maintenance plan for this area, submitted to EPA in September 2009. EPA had proposed to approve the redesignation of the Sheboygan County nonattainment area to attainment in February 2012 (77 FR 6727).

[2] On August 7, 2019, EPA finalized an attainment date extension for the Inland and Shoreline Sheboygan County 2008 ozone nonattainment areas to July 20, 2019. The areas remain designated as moderate nonattainment, although EPA proposed to reclassify the Shoreline Sheboygan County area to serious nonattainment on February 5, 2020 (85 FR 6491).

Table 1.1. Sheboygan County nonattainment history for ozone NAAQS.

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
Area of Sheboygan County	Entire county	Inland Sheboygan County[b]	Shoreline Sheboygan County[b]	Inland Sheboygan County[b]	Shoreline Sheboygan County[b]	Shoreline Sheboygan County[f]
Classification	Serious/ moderate[a]	Moderate	Moderate	Marginal/ Moderate[e]	Marginal/ Moderate[e]	Marginal
Redesignation to Attainment	8/26/1996 61 FR 43668	TBD[c,d]	TBD[c]	TBD[d]	TBD	TBD

[a] The Sheboygan nonattainment area was originally classified as "serious" for the 1979 ozone NAAQS but was reclassified from "serious" to "moderate" in 1992 (57 FR 56762).

[b] In its "Revision of Sheboygan County, Wisconsin Nonattainment Designation for the 1997 and 2008 Ozone Standards and Clean Data Determination for the 2008 Standards" effective on July 15, 2019, EPA revised the 1997 and 2008 ozone NAAQS Sheboygan County nonattainment area designation to create two distinct nonattainment areas: the Inland Sheboygan County and Shoreline Sheboygan County nonattainment areas (84 FR 33699). The two distinct partial county nonattainment areas retain the moderate classification for the 1997 and 2008 ozone standards that the original whole county nonattainment area held prior to the split.

[c] EPA finalized a clean data determination for the 1997 ozone NAAQS for the Sheboygan nonattainment area in 2011 (76 FR 11080). However, the area's design value exceeded the 1997 ozone NAAQS for the 2010-2012 and 2011-2013 design value years. The area has attained the 1997 ozone NAAQS since the 2012-2014 design value year but was not redesignated before the 1997 ozone NAAQS was revoked in 2015. In this action, WDNR is requesting that EPA redesignate the Shoreline Sheboygan County nonattainment area to attainment for the 1997 ozone standard.

[d] WDNR submitted a redesignation request and maintenance plan to EPA on October 9, 2019 for the Inland Sheboygan County nonattainment area for the 1997 and 2008 ozone NAAQS.

[e] The Sheboygan nonattainment area was originally classified as "marginal" for the 2008 ozone NAAQS but was reclassified from "marginal" to "moderate" in 2016 (81 FR 91841). EPA proposed to reclassify the Shoreline Sheboygan County area to serious nonattainment on February 5, 2020 (85 FR 6491).

[f] The EPA designated a partial area in Sheboygan County as nonattainment for the 2015 ozone NAAQS in April 2018 (83 FR 25776); this geographic area is identical to the 1997 and 2008 ozone NAAQS Shoreline Sheboygan County nonattainment area.

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 Sheboygan County as nonattainment of the 2015 NAAQS based on 2014-2016 monitoring data (83 FR 25776). EPA designated the remainder of Sheboygan County as attainment for the 2015 NAAQS.

On July 15, 2019, EPA revised the Sheboygan County nonattainment area designation for the 1997 and the 2008 ozone NAAQS to create two distinct nonattainment areas: the Inland Sheboygan County and Shoreline Sheboygan County nonattainment areas (Figure 1.1) (84 FR 33699).The Inland and Shoreline Sheboygan County nonattainment areas together constitute the identical geographic area as the original Sheboygan County nonattainment area, and both areas retained their moderate nonattainment designation for the 1997 and 2008 ozone NAAQS. In the same action, EPA also finalized a clean data determination for the Inland Sheboygan County nonattainment area for the 2008 ozone NAAQS based on monitoring data from 2015-2017 from the Sheboygan Haven ozone monitor. On October 9, 2019, WDNR submitted a redesignation request and maintenance plan for the Inland Sheboygan County nonattainment area for the 1997 and 2008 ozone NAAQS.[3]

1.2. Geographical Description

Sheboygan County is located in eastern Wisconsin along the western shoreline of Lake Michigan (Figure 1.1). A set of roadways defines the boundary that splits the county into the Shoreline Sheboygan County and Inland Sheboygan County nonattainment areas.[4] The Shoreline Sheboygan County nonattainment area is comprised of a narrow strip of land within approximately two to three miles of the Lake Michigan shoreline, and includes the roadways that define the split boundary. The Inland Sheboygan County area is located west of the Shoreline Sheboygan County area and constitutes 88 percent of the county's total land area.

Sheboygan County's population was 115,510 in 2010 and was projected to decrease by 0.1 percent between 2010 and 2017.[5] Almost half of the residents (49,313) live in the largest city, Sheboygan, which is located within the Shoreline Sheboygan County area. Sheboygan County is mostly rural, with a population density of 226 persons/square mile in 2010.[5] This county is located just north of the Milwaukee-Waukesha-West Allis Metropolitan Statistical Area.

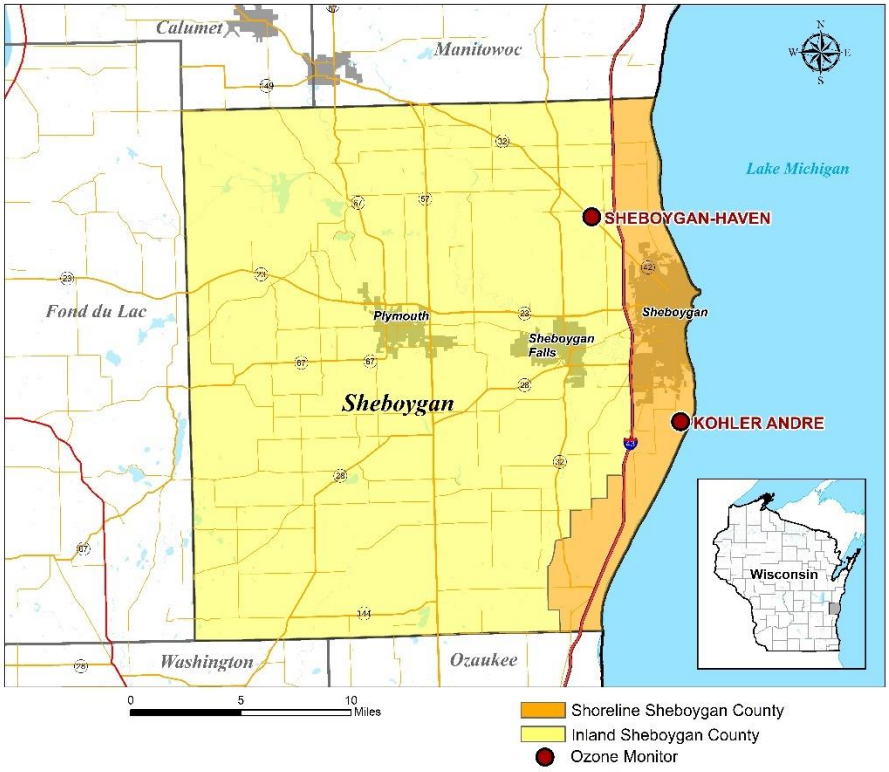
The Sheboygan County shoreline receives high concentrations of ozone transported from emissions sources in upwind regions located to the south, as described in greater detail in Section 4. As EPA stated in its December 19, 2016 reclassification notice, Sheboygan's Kohler Andrae monitor "…was not placed to monitor the maximum downwind impacts from the urbanized portion of the Sheboygan area, but to capture maximum downwind impacts from several urban areas along Lake Michigan, including Milwaukee, Wisconsin; Chicago, Illinois; and Gary, Indiana" (81 FR 91842). Ozone transported from out of state is the dominant source of ozone in Sheboygan County, accounting for approximately 88 percent of the measured ozone concentrations at the Kohler Andrae monitor in 2017 (Figure 4.1).

[3] The redesignation request and maintenance plan for the Inland Sheboygan County nonattainment area are available at https://dnr.wi.gov/topic/AirQuality/documents/RedesignationRequestInlandSheboygan2019.pdf

[4] The split boundary between Inland and Shoreline Sheboygan County areas is formed by the following roadways (from the northern county boundary to the southern county boundary): Highway 43, Wilson Lima Road, Minderhaud Road, County Road KK/Town Line Road, N 10th Street, County Road A S/Center Avenue, Gibbons Road, Hoftiezer Road, Highway 32, Palmer Road/Smies Road/Palmer Road, Amsterdam Road/County Road RR, Termaat Road. The roadways that define the split boundary are included in the Shoreline Sheboygan County area and excluded from the Inland Sheboygan County area.

[5] https://www.census.gov/quickfacts/fact/table/sheboygancountywisconsin,wi,US/PST120217

Figure 1.1. Map of the Shoreline Sheboygan County and Inland Sheboygan County 1997 and 2008 ozone nonattainment areas, with monitoring locations shown.[4]



1.3. Status of Ozone Air Quality

Ozone monitoring data from the Kohler Andrae monitor for the most recent three years, 2017 through 2019, demonstrate that air quality in the Shoreline Sheboygan County nonattainment area meets the 2008 ozone NAAQS, as discussed in more detail in Section 3. In addition, total summer emissions of ozone precursors—nitrogen oxides (NOx) and volatile organic compounds (VOC)— 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 the Shoreline Sheboygan County nonattainment area based on Section 107(d)(3)(E) of the CAA.

1.4. Requirements for Redesignation and Overview of this Redesignation Request

Sections 107(d)(3)(E)(i) through (v) of the CAA establish the following criteria to be met in order 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 list a number of criteria that must be met prior to consideration for redesignation of nonattainment areas to attainment. In addition, EPA has published detailed guidance in a document entitled "Procedures for Processing Requests to Redesignate Areas to Attainment," issued September 4, 1992 as a memo to EPA Regional Air Directors. This document is hereafter referred to as "Redesignation Guidance." This redesignation request and maintenance plan is based on the Redesignation Guidance, supplemented by additional guidance received from staff at EPA Region 5.

This redesignation request and maintenance plan shows that the Shoreline Sheboygan County nonattainment area has met these CAA criteria as demonstrated by all of the following:

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

- Emissions inventories for the nonattainment base year (2011) and attainment year (2017), 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 resulted 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 (2025 and 2032) 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).[6]
- EPA approved Wisconsin's state board requirements under section 128 of the CAA on January 21, 2016 (81 FR 3334).

[6] On December 6, 2018, EPA finalized a determination that the CSAPR Update fully addresses states' transport obligations for the 2008 ozone NAAQS.

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 December 19, 2016, EPA reclassified the Sheboygan nonattainment area to a classification of moderate (81 FR 91841). This same rulemaking established that the additional moderate nonattainment area SIP elements for areas "bumped up" to moderate status must be submitted by January 1, 2017. Guidance from EPA declares that in submitting a redesignation request, states must meet all Part D requirements that were applicable at the time the redesignation request was submitted.[7] The Shoreline Sheboygan County area has met all moderate area Part D requirements.

Subpart 1 Requirements

Section 172(c)(1) requires that states implement any reasonably available control measures (RACM) necessary for attainment of the NAAQS. WDNR submitted an evaluation of RACM in Section 6.4 of the Sheboygan County attainment plan.[8] 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 in the Subpart 2 section below.

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

[7] "Procedures for Processing Requests to Redesignate Areas to Attainment," memo from John Calcagni to EPA Regional Air Directors, September 4, 1992.
[8] Attainment Plan for the Sheboygan County, Wisconsin 2008 8-Hour Ozone Nonattainment Area, submitted to U.S. EPA September 25, 2017. http://dnr.wi.gov/topic/AirQuality/documents/SheboyganAttainmentPlan.pdf

approved additional 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 the standard. Section 3.2 of the Sheboygan attainment plan submitted to EPA included emission reductions that serve as the progress-related contingency measures under the 2008 ozone NAAQS.[8]

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 transportation conformity budgets that, once determined adequate by EPA, will be required for use in future transportation planning efforts.

Subpart 2 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 Sheboygan 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. On September 25, 2017, WDNR submitted to EPA the Attainment Plan for the Sheboygan County, Wisconsin 2008 8-Hour Ozone Nonattainment Area (the "Sheboygan attainment plan").[8] The WDNR affirmed in Section 6.6 of the Sheboygan attainment plan that the SIP contains approved emission statement rules that will remain in place after the area is redesignated to attainment of the 2008 ozone standard.[8]

Section 182(b) requires the submission of an attainment plan. The WDNR submitted an attainment plan for the Sheboygan County 2008 ozone NAAQS nonattainment area on September 25, 2017.[8]

Section 182(b)(1), in combination with Section 172(c)(2), requires states with ozone nonattainment areas classified as moderate to make a demonstration of RFP reductions in VOC

and/or NOx emissions in the area. WDNR submitted a demonstration that the RFP requirement is satisfied for Sheboygan County in Section 3 of the Sheboygan attainment plan.[8]

Section 182(b)(2) requires states with moderate nonattainment areas to implement VOC RACT. Appendix 10 of this submittal describes Wisconsin's VOC RACT program for the Shoreline Sheboygan County 2008 ozone nonattainment area. This appendix includes: (1) a list of the control techniques guidelines (CTGs) for which RACT requirements have been codified in Wisconsin Administrative Code, (2) negative declarations for CTGs whose recommendations have not been codified, and (3) a negative declaration that no non-CTG major source of VOC exists in the nonattainment area. As noted in Appendix 10, RACT equivalency demonstrations for sources subject to the CTG for Miscellaneous Metal and Plastic Parts Coatings will be submitted as part of a separate SIP revision.

Section 182(b)(4) requires a vehicle I/M program for moderate nonattainment areas. 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(b)(5) requires NOx and VOC emission offsets at a ratio of 1.15 to 1 for major source permits in moderate ozone nonattainment areas. These offset ratios are incorporated into Wisconsin's Nonattainment NSR permitting program, which was approved by EPA on January 18, 1995 (60 FR 3538).

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). The WDNR demonstrated in Section 6.2 of the Sheboygan attainment plan that Wisconsin's current NOx RACT program fulfills RACT requirements for the 2008 ozone NAAQS.[8]

When EPA approves the enclosed emissions inventory and the moderate nonattainment area requirements submitted in the Sheboygan County attainment plan,[8] Wisconsin will have met all the applicable SIP requirements for the purposes of redesignation.

3. OZONE MONITORING

3.1. Ozone Monitoring Network

The Kohler Andrae monitor within the Shoreline Sheboygan County area has been operating since 1997. This monitor is located on the Lake Michigan lakeshore (Figure 1.1). Table 3.1 shows the data collected over the last three years at the Kohler Andrae monitor.

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 the Kohler Andrae ozone monitor for 2017 through 2019, along with the 2017-2019 design value of 0.075 ppm. This design value meets the 2008 ozone NAAQS. The monitoring data for all three years met the completeness criteria. These data confirm that the Kohler Andrae monitor attained the 2008 ozone NAAQS.

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 6.6 and Appendix 11.

Table 3.1. Monitoring data for the Kohler Andrae monitor. The table shows annual fourth-highest daily maximum 8-hour concentrations and the design values in parts per million (ppm). Data were downloaded from EPA's Air Quality System (AQS) database.

Site (Site ID)	4th high 8-hr ozone (ppm)			Design value (ppm)
	2017	2018	2019	2017-19
Kohler Andrae (55-117-0006)	0.075	0.083	0.068	0.075

3.3. Quality Assurance

All available data for the years 2017 through 2019 for the Kohler Andrae monitor have been quality assured and archived in EPA's Air Quality System (AQS). 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. The 2017 through 2019 datasets have been certified and are available to the public.

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 the Kohler Andrae monitor meet EPA requirements for completeness (as described in Appendix P to 40 CFR Part 50) for the years 2017 through 2019. For these three years, the overall average data completeness for the monitor was 99 percent. The data completeness for each of the individual years was 99 percent to 100 percent. This ozone monitoring data meets EPA's data completeness criteria.

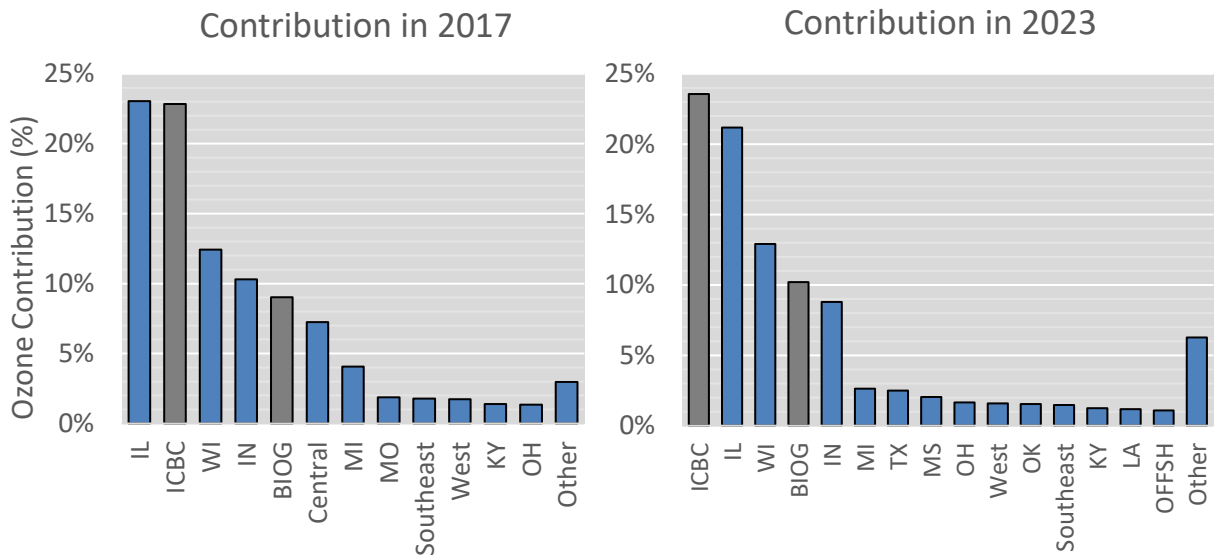
4. EMISSIONS INVENTORIES

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.

Sheboygan County sources have little to no ability to influence ozone concentrations at monitors in the county. The WDNR has previously shown, using photochemical modeling, that local emissions have relatively little impact on ozone concentrations measured at the Sheboygan Kohler Andrae monitor.[8] Furthermore, emissions from upwind states contribute much more ozone to this monitor 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 Kohler Andrae monitor, ozone design values within the Shoreline Sheboygan County 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 Kohler Andrae monitor.[9]



[9] Contributions are projected from a 2011 base year. Only source regions that contributed 1 percent 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 "boundary conditions", which are contributions from outside the U.S. BIOG represents biogenic emissions. OFFSH is offshore emissions.

WDNR is submitting comprehensive inventories of actual and projected emissions for the Shoreline Sheboygan County nonattainment area. WDNR also shows and discusses inventories from the three-state Chicago area. These inventories fulfill CAA requirements to demonstrate that reductions in emissions drove the air quality improvement. Section 6 documents the specific programs responsible for making the emissions reductions permanent and enforceable. It should be noted that these emission budgets do not result in a limitation on emissions for any specific source or source category in the future. The emission budgets 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 beyond the attainment year to demonstrate maintenance ("maintenance year"); and
4. An intermediate year between the attainment year and maintenance year ("interim year").

WDNR has developed the following NOx and VOC emission inventories for the Shoreline Sheboygan County nonattainment area as part of the redesignation request:

1. 2011 nonattainment year emissions inventory;
2. 2017 attainment year emissions inventory;
3. 2025 interim maintenance year emissions inventory; and
4. 2032 maintenance year emissions inventory.

The Shoreline Sheboygan County 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 2017-2019. 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 2025 as the interim projection year and 2032 as the maintenance year. The emission projections through 2032 are relied upon in the maintenance demonstration presented in section 7.

Tables 4.1 and 4.2 provide summaries of the Shoreline Sheboygan County nonattainment area emission inventories (in tons per summer day, or tpsd) for NOx and VOC for the different sectors. Appendices 2 through 8 contain details about how the inventories were constructed.

4.2. Nonattainment Year (2011) and Attainment Year (2017) Inventories

WDNR developed the following emissions information to satisfy EPA's redesignation requirements to submit nonattainment and attainment year inventories for NO_x and VOC. EPA has approved Wisconsin's 2011 emission inventories for the entirety of Sheboygan County and other nonattainment areas under the 2008 8-hour ozone standard (81 FR 11673). As part of this request, WDNR is submitting inventories for the Shoreline Sheboygan County nonattainment area for the 2011 nonattainment year to address the CAA section 182(1)(1) base year inventory requirement. WDNR requests that EPA replace the previously approved 2011 inventory for all of Sheboygan County with this inventory for the Shoreline Sheboygan County nonattainment area. Appendix 2 includes a discussion of the methodology used to estimate sector-specific emissions for 2011 and 2017 (shown in Tables 4.1 and 4.2). Between 2011 and 2017, NOx emissions decreased 48 percent, and VOC emissions decreased 15 percent in the Shoreline Sheboygan County nonattainment area. Reductions in NOx are primarily due to the retirement of one coal boiler and addition of control equipment to another coal boiler at the Edgewater power plant. Reductions in VOC are primarily from the onroad and nonroad mobile sectors provided by the federal and state mobile source control programs detailed in Sections 6.3 and 6.4.

4.3. Maintenance Year Inventories (2025 and 2032) and Projected Emissions Trends

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 tpsd) in 2025 and 2032 for electric generating unit (EGU) point, non-EGU point, area, onroad mobile, and nonroad mobile sources.

Comparison of emissions from 2017 to projected emissions from the maintenance year (2032) for Shoreline Sheboygan County shows that total NOx emissions in this area are projected to decrease by approximately 53 percent (5.21 tpsd) over this time (Table 4.1). The largest reductions are projected from the EGU sector due to the retirement of a coal boiler. VOC emissions are projected to decrease in Shoreline Sheboygan County by approximately 12 percent (or 0.52 tpsd) from 2017 to 2032 (Table 4.2). The largest VOC reductions are projected from the onroad sector (0.38 tpsd). This analysis shows that Shoreline Sheboygan County is expected to maintain the air quality standard for at least ten years into the future.

Table 4.1. Shoreline Sheboygan County area comparison of NOx emissions (tpsd) by source type.

Sector	2011 nonattainment year	2017 attainment year	2025 interim year	2032 maintenance year
Point - EGU	13.16	5.97	1.93	1.93
Point - Non-EGU	0.36	0.29	0.46	0.48
Area	0.86	0.85	0.81	0.78
Onroad	3.10	1.76	1.00	0.77
Nonroad	1.37	0.95	0.69	0.65
TOTAL	**18.85**	**9.82**	**4.90**	**4.62**

Table 4.2. Shoreline Sheboygan County area comparison of VOC emissions (tpsd) by source type.

Sector	2011 nonattainment year	2017 attainment year	2025 interim year	2032 maintenance year
Point - EGU	0.43	0.35	0.19	0.19
Point - Non-EGU	0.29	0.61	0.83	0.85
Area	2.41	2.19	2.13	2.09
Onroad	1.24	0.74	0.50	0.36
Nonroad	0.89	0.57	0.47	0.45
TOTAL	**5.26**	**4.47**	**4.12**	**3.95**

4.4. Trends in Emissions from Upwind Areas

NOx and VOC emissions from out-of-state sources located to the south are the largest contributors to ozone at the Kohler Andrae monitor (Figure 4.1).[10] Figure 4.1 shows that emissions sources in Wisconsin contributed only about 12 percent to concentrations at the Kohler Andrae monitor in 2017. Reductions in emissions from upwind areas are therefore likely to have a greater impact on ozone concentrations measured at this monitor than are those from Wisconsin sources, including those in Sheboygan County. Accordingly, the trends in NOx and VOC emissions in the Chicago metropolitan area are examined below.

Table 4.3 shows the NOx and VOC emissions from sources in the multistate Chicago 2008 ozone nonattainment area, which includes all or part of eight counties in Illinois, two counties in Indiana, and eastern Kenosha County in Wisconsin. Chicago-area emissions were approximately

[10] Both Sheboygan County monitors record high ozone concentrations almost exclusively with southerly winds that travel over Lake Michigan. For more information, see: Supplemental Information for 2015 Ozone National Ambient Air Quality Standard (NAAQS) Area Designations, submittal from WDNR to EPA on April 20, 2017. http://dnr.wi.gov/topic/AirQuality/documents/OzoneTSD20170420.pdf

50 to 100 times larger than those from Sheboygan County in 2017, and this area is located directly upwind from Sheboygan County on high ozone days. It is therefore relevant to consider trends in Chicago-area emissions.

NOx emissions from Chicago sources decreased by 33%, and VOC emissions decreased by 18% from 2011 to 2017. These reductions in ozone precursor emissions upwind of Sheboygan County likely helped reduce ozone concentrations in the area. Chicago emissions are projected to continue to decrease through 2030, with projected reductions in NOx emissions of 24% and in VOC emissions of 9% relative to 2017 emissions. These continued reductions in upwind emissions from important contributor states will help assure maintenance of the 2008 ozone NAAQS at the Kohler Andrae monitor. Wisconsin will continue to engage these states on strategies to reduction emissions further to address regional ozone levels.

Table 4.3. Emissions from the three-state Chicago 2008 ozone nonattainment area (tpsd).[11]

	2011	**2017**	**2025**	**2030**
NOx Emissions				
Chicago – Illinois	631.84	430.72	330.94	315.84
Chicago – Indiana	143.69	86.79	78.77	76.16
Chicago – Wisconsin	17.35	14.19	11.08	10.66
Chicago - Total	**792.88**	**531.7**	**420.79**	**402.66**
VOC Emissions				
Chicago – Illinois	518.91	434.05	399.9	392.52
Chicago – Indiana	59.54	40.05	40.02	38.64
Chicago – Wisconsin	7.97	6.05	5.58	5.37
Chicago - Total	**586.42**	**480.15**	**445.5**	**436.53**

[11] These emission inventories were developed in support of redesignation requests for the three-state Chicago 2008 ozone nonattainment area. Wisconsin submitted a redesignation request to EPA for the state's portion of the Chicago area (partial Kenosha County) on January 21, 2019.

5. TRANSPORTATION CONFORMITY BUDGETS

Transportation conformity is required under CAA section 176(c) (42 U.S.C. 7506(c)) to ensure that federally funded or approved highway and transit activities are consistent with ("conform to") the purpose of the SIP. "Conform to" the purpose of the SIP means that transportation activities will not cause or contribute to new air quality violations, worsen existing violations, or delay timely attainment of the relevant NAAQS or any interim milestones. Transportation conformity applies to designated nonattainment and maintenance areas for transportation-related criteria pollutants: ozone, fine particles, coarse particles, carbon monoxide, and nitrogen dioxide. EPA's transportation conformity rule (40 CFR Parts 51 and 93) establishes the criteria and procedures for determining whether metropolitan transportation plans, metropolitan transportation improvement programs, federally supported highways projects, and federally supported transit projects conform to the SIP.

Sheboygan County currently demonstrates transportation conformity using the "Motor Vehicle Emissions Budget (MVEB) Test" (40 CFR 93.119). EPA requirements outlined in 40 CFR 93.118(e)(4) stipulate that MVEBs for NOx and VOC are established as part of a control strategy implementation plan revision or maintenance plan. MVEBs are necessary to demonstrate conformance of transportation plans and improvement programs with the SIP.

5.1. Motor Vehicle Emissions Model

The MVEBs are developed using EPA's MOtor Vehicle Emission Simulator model (MOVES2014b) and a travel demand model. The MOVES2014b model is used to derive estimates of hot summer day emissions for the ozone precursors NOx and VOC. 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 MOVES2014b.[12]

5.2. Motor Vehicle Emissions Budgets

WDNR submitted a 2008 Ozone Standard Attainment Demonstration for Transportation Conformity Purposes for Sheboygan County with updated MVEBs for 2017 and 2018 on September 25, 2017. On April 20, 2018, EPA found the MVEBs for Wisconsin's 8-hour ozone nonattainment area were adequate for use in transportation conformity determinations (83 FR 14637).

In this submission, WDNR is submitting MVEBs for the Shoreline Sheboygan County 2008 ozone NAAQS maintenance area for the years 2025 and 2032. Once EPA determines that the budgets meet the adequacy criteria of the transportation conformity rule, the budgets will replace the MVEBs established for the 2008 Ozone Standard Attainment Demonstration (83 FR 14637).

[12] The complete set of inputs to MOVES2014b is too lengthy to include in this document. However, electronic copies of the inputs can be obtained from WDNR by sending an email to christopher.bovee@wisconsin.gov or by phone at (608) 266-5542.

Table 5.1 contains the MVEBs for the Shoreline Sheboygan County 2008 ozone NAAQS maintenance area for the years 2025 and 2032. These budgets 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 calculate a safety margin, WDNR increased the onroad mobile source portions of the 2025 and 2032 projected emissions inventories by 15 percent for the Shoreline Sheboygan County area. To ensure consistency between SIP inventories and photochemical modeling inventories, the vehicle miles traveled and vehicle population data for Sheboygan County provided by WDNR to EPA for the upcoming 2016 emissions modeling platform also include this 15 percent safety margin for the platform's projection years (2023 and 2028).

Table 5.1. Motor vehicle emissions budgets (MVEBs) for the Shoreline Sheboygan County area for 2025 and 2032.

Year	Emissions (tons per hot summer day)	
	VOC	NO_x
2025	0.50	1.00
2032	0.36	0.77

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. This section outlines the permanent and enforceable control measures that applied to sources in the Shoreline Sheboygan County area. These control measures significantly reduced emissions in this area by the 2017 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. Because a focus of this CAA requirement is to show that emission reductions occurred between 2011 (the base nonattainment year) and 2017 (the attainment year), this discussion highlights those control measures or a characterization of emission reductions that have occurred since 2011.

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

Sector	NOx Control Measures	VOC Control Measures
Point	-Consent Decree requirements applicable to Edgewater power plant -Wisconsin NOx RACT -Federal NOx Transport Rules	-VOC RACT / CTGs -National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules
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 I/M program	
Nonroad	-Numerous federal nonroad mobile source control programs[a]	

[a] See Appendix 9 for more details.

It is important to note that: (1) emissions sources located in the Shoreline Sheboygan County area are already very well-controlled in all respects; and (2) most of the ozone measured in the Shoreline Sheboygan County area comes from ozone and ozone precursors originating in upwind states. For these reasons, even though pollution control programs continue to decrease emissions within the Shoreline Sheboygan 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 (sources with a potential to emit 100 tons or greater per year) in the state's nonattainment areas for the 1997 ozone NAAQS. This area included the Shoreline Sheboygan County area.

Following a consent decree (W.D. Wis., Case No. 13-CV-266), Unit 3 (boiler B23) at the Alliant Energy Edgewater power plant became subject to a NOx cap of 250 tons per year and was required to retire, refuel or repower by December 31, 2015. Boiler B23 was retired in 2015. Under the same consent decree, Unit 4 (boiler B24) became subject to the limitation of 0.170 pounds per million British thermal units (MMBTU) on a 30-day rolling average and 0.150 lbs/MMBTU on a 12-month rolling average and was required to retire, refuel or repower by December 31, 2018. Boiler B24 operated selective non-catalytic reduction for NOx control from 2011 until the boiler's retirement on September 30, 2018. Similarly, Unit 5 (boiler B25) became subject to the limitation of 0.080 lbs/MMBTU on a 30-day rolling average and 0.070 lbs/MMBTU on a 12-month rolling average. Boiler B25 operated selective non-catalytic reduction from 2011 to 2013, and selective catalytic reduction since 2013. In addition, as part of the same consent decree, Edgewater boilers B23, B24 and B25 became subject to an annual NOx emissions cap of 3,600 tons in 2013 and 2,500 tons from 2014-2018. The consent decree control requirements are permanent and federally enforceable under the Title I permit 13-POY-154-R1, issued on May 26, 2016.

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, CSAPR and the CSAPR Update Rule. These rules contributed to a 24 percent reduction from 2008 to 2014 in total EGU NOx emissions across the states that contribute >0.75 ppb to Sheboygan County ozone concentrations (Appendix 9). The three states contributing the most to Sheboygan County ozone concentrations (in decreasing order): Illinois, Indiana, and Wisconsin, had proportionately larger individual EGU emission reductions of 42.7 percent, 24.1 percent, and 54.5 percent, respectively, from 2008 to 2014.

Wisconsin implemented VOC RACT to fulfill applicable CTG requirements for Wisconsin nonattainment areas under the 1997 ozone NAAQS. These nonattainment areas include the Shoreline Sheboygan County area. Appendix 10 of this submittal lists the CTGs for which Wisconsin has adopted RACT requirements. There are some more recently issued CTGs, however, which have not been codified into Wisconsin Administrative Code. All but one of these CTGs have been addressed with negative declarations certifying that no applicable sources exist within the Shoreline Sheboygan County area (Appendix 10). The WDNR will submit RACT equivalency demonstrations for sources subject to the remaining missing CTG, which covers miscellaneous metal and plastic parts coatings, as a separate SIP revision.

Non-combustion sources accounted for 64 percent of point source VOC emissions in the Shoreline Sheboygan County area in 2017. These sources are subject to source-specific National Emission Standards for Hazardous Air Pollutant (NESHAP) requirements and/or VOC RACT/CTG rules, as applicable. The non-combustion NESHAP rules were implemented prior to 2011 with no additional reductions expected after 2011, however. 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 Section 1 of Appendix 9 for more information about all of these federally enforceable control programs.

6.2. Area Source Control Measures

Wisconsin has implemented a number of VOC RACT/CTG rules limiting VOC emissions from area sources. These rules are listed in Appendix 10. 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 Section 2 of Appendix 9 for more information about all of these federally enforceable control programs.

6.3. Onroad Source Control Measures

Both NOx and VOC emissions from onroad mobile sources are substantially controlled through federal emission standard programs for new vehicles and low sulfur fuels. 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 in contributing ozone precursor transport areas. Wisconsin's vehicle I/M program also limits onroad VOC and NOx emissions in southeastern Wisconsin, including within the Shoreline Sheboygan County area. See Section 3 of Appendix 9 for more information about these federally enforceable control programs.

6.4. Nonroad Source Control Measures

VOC and NOx emitted by nonroad mobile sources are significantly controlled via a number of different federal standards for new engines and low sulfur fuels. 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 Section 4 of 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 attainment of the NAAQS, Rate of Progress, or 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 2017 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

Comparisons of trends in ozone concentrations and meteorology support the conclusion that the improvement in air quality shown in Section 3 derived from the permanent and enforceable control measures described in this section, rather than from unfavorable meteorology for ozone formation 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 each year. These data were compared with two measures of temperature: the number of days with temperatures above 80 °F and the average ozone season (May through September) temperature. All data were collected at the Kohler Andrae monitor within the Shoreline Sheboygan County nonattainment area. WDNR examined data for the last 19 years in order to minimize the influence of other meteorological variables affecting ozone formation, such as wind direction and wind speed.

Figure 6.1 shows that over the last 19 years, ozone concentrations at the Kohler Andrae monitor have decreased substantially. In contrast, temperatures have remained relatively constant, with an increase in the number of hot days and a slight decrease in the average season temperature. As noted above, high ozone concentrations are typically observed on relatively hot summer days. This finding suggests that reductions in emissions, rather than suboptimal meteorology for ozone production, led to the long-term reduction in ozone concentrations. Similarly, adverse economic conditions cannot account for the downward trends in ozone levels.

Figure 6.1 also demonstrates that temperatures during the 2017 to 2019 design value years were not unusual. The number of hot days in 2018 were among the highest observed since 2001, those from 2019 were slightly below average and the number of hot days in 2017 were in between. From this figure, it is clear that temperatures in the Shoreline Sheboygan County nonattainment area were not unusually low during this three-year period, so unusually cool temperatures were not a driver of the low ozone concentrations observed.

As WDNR has discussed extensively in other places,[13] ozone along Lake Michigan is heavily impacted by wind direction and other meteorological factors in addition to temperature. In order to account for the complex combination of meteorological influences on ozone, LADCO periodically conducts Classification and Regression Tree (CART) analyses. These analyses apply a statistical tool to ozone and meteorological data to group days together according to their unique meteorology.[14] This grouping allows evaluation of ozone concentration trends over time among days with similar meteorological conditions, providing insight into the impacts of non-meteorological factors, such as reductions in emissions, on ozone.

[13] See, for example, Section 2 ("The Unique Ozone Dynamics of the Lake Michigan Region") of the Attainment Plan for the Sheboygan County, Wisconsin 2008 8-Hour Ozone Nonattainment Area, submitted to EPA on September 25, 2017. https://dnr.wi.gov/topic/AirQuality/documents/SheboyganAttainmentPlan.pdf.

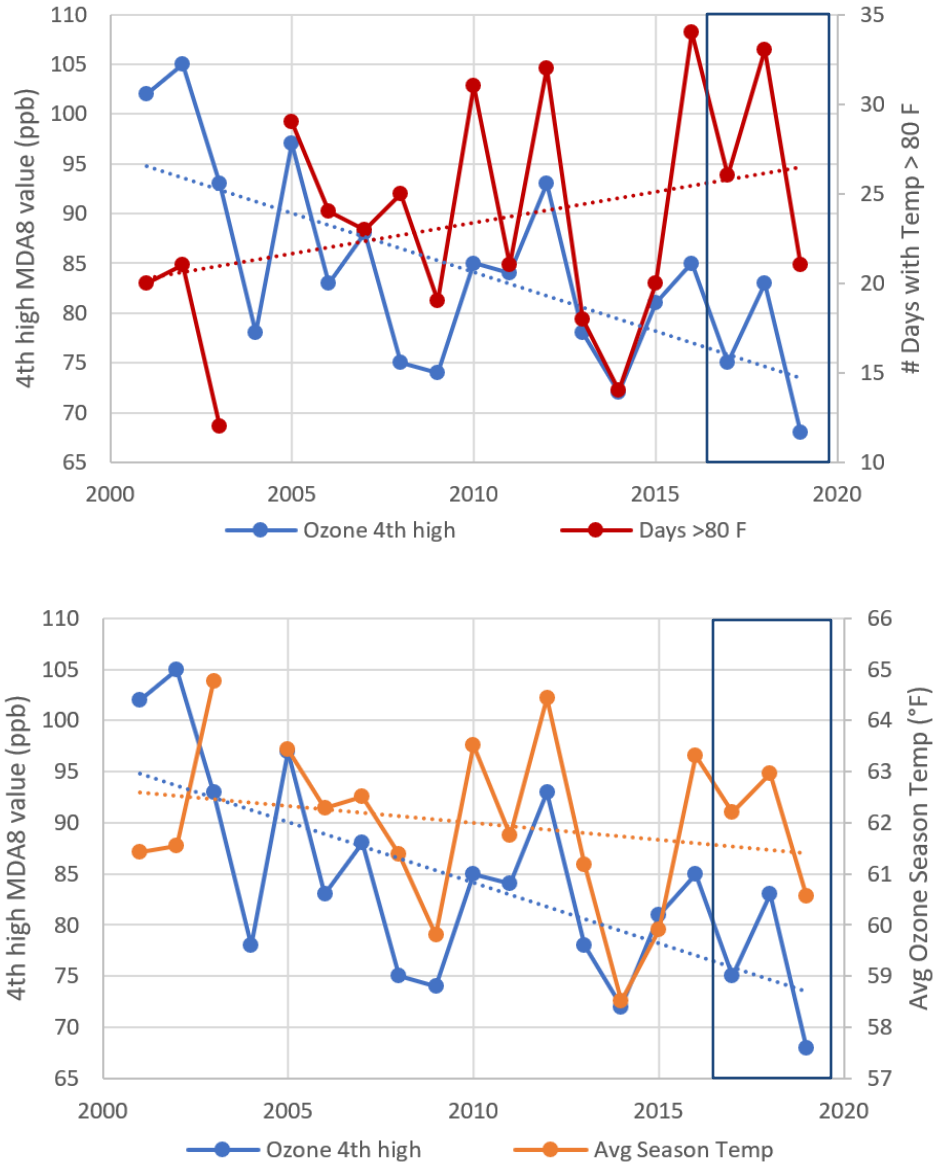
[14] For example, at the Kohler Andrae monitor, the group of days with the highest ozone concentrations had southerly transport, southerly winds in the afternoon and above-average temperatures aloft in the afternoon.

Appendix 11 includes the results of a CART analysis conducted by LADCO for this area using data from 2005 to 2018.[15] The CART analysis shows that ozone concentrations for the meteorologically distinct types of days decreased over this period, with the largest reductions from the group of days with the highest ozone concentrations. This provides additional evidence that the reductions in ozone concentrations in this area have been driven by non-meteorological factors. (See appendix 11 for details about this analysis.)

Taken together, the analyses described in this section support the conclusion that the long-term decreases in ozone levels in the Shoreline Sheboygan County area, including the reductions to attainment-level air quality monitored in 2017-2019, are due to the permanent and enforceable reductions in ozone precursor emissions discussed earlier in this section, rather than from unusual meteorology or adverse economic conditions.

[15] This analysis did not include data for 2019 because complete meteorological data for 2019 is not yet available. The meteorological data used in the CART analysis requires significant processing by the National Oceanic and Atmospheric Administration (NOAA), the National Weather Service and LADCO. This processing is time-consuming and results in a lag between the end of the year and when the data is available for use.

Figure 6.1. 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 to September temperatures for the Kohler Andrae monitor. Dotted lines are best-fit linear regressions. The boxes enclose the values for 2017 through 2019.



7. MAINTENANCE PLAN FOR SHORELINE SHEBOYGAN COUNTY

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 10 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 10 years following the initial 10-year period.

Based on monitored data, the Kohler Andrae monitor's 2017-2019 design value did not exceed the 2008 ozone NAAQS (Section 3). Comparison of nonattainment (2011) and attainment (2017) 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 of the Shoreline Sheboygan County 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. Demonstration of Maintenance via 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. 2017 was chosen as the representative attainment year inventory.[16] 2032 was chosen as the final maintenance year, and 2025 was chosen as the interim maintenance year.

The forecast maintenance inventories for 2025 and 2032 demonstrate that emissions of NOx and VOC are projected to decrease in future years relative to the 2017 attainment year for the Shoreline Sheboygan County area (Tables 7.1 and 7.2). Total ozone precursor emissions from the nonattainment area are projected to decrease 53 percent for NOx and 12 percent for VOC from 2017 to 2032. In addition, emissions of NOx and VOCs from the three-state Chicago area are also projected to continue to decrease through 2030 (Table 4.3). Since the monitor attained the standard in 2017-2019 and emissions are projected to decrease through 2032, this inventory analysis demonstrates that the Shoreline Sheboygan County area is expected to maintain the 2008 NAAQS for more than ten years into the future.

[16] 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. 2017 is the first year in the attainment design value (2017-2019) 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 CAA.

Table 7.1. NOx emissions in the Shoreline Sheboygan County area.

	Total NOx emissions (tons per summer day)			
	2017 attainment year	**2025 interim year**	**2032 maintenance year**	**Net Change (2017-2032)**
Point	6.26	2.40	2.41	-3.85
Area	0.85	0.81	0.78	-0.07
Onroad	1.76	1.00	0.77	-0.99
Nonroad	0.95	0.69	0.65	-0.30
Total	**9.82**	**4.90**	**4.62**	**-5.21**

Table 7.2. VOC emissions in the Shoreline Sheboygan County area.

	Total VOC emissions (tons per summer day)			
	2017 attainment year	**2025 interim year**	**2032 maintenance year**	**Net Change (2017-2032)**
Point	0.97	1.02	1.05	0.08
Area	2.19	2.13	2.09	-0.10
Onroad	0.74	0.50	0.36	0.38
Nonroad	0.57	0.47	0.45	-0.12
Total	**4.47**	**4.12**	**3.95**	**-0.52**

7.2. Verification of Continued Attainment

Per EPA's redesignation request guidance,[7] WDNR will verify continued attainment of the 2008 8-hour ozone NAAQS in the Shoreline Sheboygan County area during the maintenance period via continued ozone monitoring. WDNR commits to continue monitoring ozone levels in this area and will discuss any changes in siting that may become necessary with EPA Region 5 staff. WDNR will continue to quality assure the monitoring data to meet the requirements of 40 CFR 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 website,[17] providing real-time data and information about any NAAQS exceedances to the public.

In addition, ozone precursor inventories will be prepared for 2017, 2020, 2023, 2026, 2029, and 2032 as part of the CAA-required National Emissions Inventory program. These inventories will be compared with the 2017 attainment year inventory and projected 2025 interim and 2032 maintenance year inventories to assess emissions trends, as necessary, to assure continued attainment of the 2008 ozone NAAQS.

[17] Select "View Wisconsin's current air quality" from the webpage http://dnr.wi.gov/topic/AirQuality.

7.3. Maintenance Contingent Response Plan

EPA's Redesignation Guidance says 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 the Shoreline Sheboygan County 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 control measures necessary to ensure maintenance.

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; and
- 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 study 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 Shoreline Sheboygan County area due to the influence of emissions originating in upwind states. High ozone events at Sheboygan monitors occur almost exclusively when these sites are downwind of Chicago and other source areas to the south. Out-of-state sources of ozone overwhelm local sources at the Shoreline Sheboygan County area monitor (Figure 4.1). As a consequence, additional controls on NOx and VOC emissions from Wisconsin are likely to have very little, if any, impact on ozone concentrations in this 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 maintenance area. Federal regulatory programs may be more appropriate to limit the transport of ozone and its precursors to the Shoreline Sheboygan County 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 Shoreline Sheboygan County 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. 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

Wisconsin hereby commits to review its maintenance plan eight (8) years after redesignation, as required by Section 175(A) of the CAA. This revised SIP will provide for maintenance for an additional 10 years.

8. PUBLIC PARTICIPATION

In accordance with section 110(a)(2) of the CAA, WDNR published a notice on the internet https://dnr.wi.gov/calendar/hearings/?id=14763) on December 5, 2019 stating that it would hold a public hearing on the Redesignation Request and Maintenance Plan for the Shoreline Sheboygan County, Wisconsin 1997 and 2008 8-hour Ozone Nonattainment Area. A notice of availability was also posted on the website. The public hearing took place on January 13, 2020 at the Mead Public Library in Sheboygan (710 N. 8th St., Sheboygan, Wisconsin). The redesignation request was available for public comment through January 23, 2020.

The WDNR received 11 verbal comments at the public hearing. Five attendees who provided verbal comments also submitted written comments. Additionally, WDNR received six comments via email. In response to these comments, WDNR made minor adjustments to the emissions projections from EGUs (Section 4.3) and updated the discussion of the controls on the Edgewater EGU (Section 6.1). WDNR also added a table showing emissions trends in the Chicago area (Section 4.4). Finally, WDNR included a statistical analysis of meteorologically adjusted ozone trends (Section 6.6 and Appendix 11) to describe the impacts of complex meteorological factors on ozone concentrations. A more thorough discussion of WDNR's responses to public comments can be found in Appendix 12.

9. CONCLUSIONS

Air quality measured at the Kohler Andrae monitor in the Shoreline Sheboygan County nonattainment area in Wisconsin has attained the 2008 ozone NAAQS, as well as the less stringent 1997 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 Shoreline Sheboygan County area from nonattainment to attainment for the 1997 and 2008 ozone NAAQS.

APPENDIX 1

Wisconsin's Infrastructure SIP for the 2008 Ozone NAAQS

This appendix includes:

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

June 20, 2013

Ms. Susan Hedman
Regional Administrator - R19J
U.S. Environmental Protection Agency (EPA) - Region 5
77 W. Jackson Blvd.
Chicago IL 60604

Subject: Wisconsin Nitrogen Dioxide (NO_2), Ozone (O_3), and Sulfur Dioxide (SO_2) Infrastructure State Implementation Plan (SIP)

Dear Ms. Hedman:

The Wisconsin Department of Natural Resources (WDNR) hereby submits an infrastructure SIP for the 2008 O_3 and 2010 NO_2 and SO_2 National Ambient Air Quality Standards (NAAQS) in accordance with the requirements contained in Sections 110(a)(1) and 110(a)(2) of the Clean Air Act (CAA). This submittal describes the state's ability to implement, maintain, and enforce these NAAQS.

The WDNR has the legal authority under Wisconsin law to adopt and implement the requested SIP revisions. Section 285.11(6), *Wis. Stats.*, authorizes the WDNR to develop and revise a SIP for prevention, abatement, and control of air pollution. The WDNR conducted a public hearing on June 10, 2013 regarding this SIP submittal. A copy of the public hearing notice is included as an attachment. In addition, a summary of comments received during the WDNR's public comment process is included as an attachment.

In accordance with the April 6, 2011 McCabe Memo, one paper copy of the SIP documents is enclosed. In addition, an electronic copy of these documents is provided on an enclosed CD. If you have any questions regarding this submittal, please contact Joseph Hoch at (608) 267-7543 or Ralph Patterson at (608) 267-7546.

Sincerely,

Andrea M Stewart

Sor

Bart Sponseller, Director
Bureau of Air Management

cc: Patrick Stevens – AD/8
Joseph Hoch – AM/7
Ralph Patterson – AM/7
George Czerniak – U.S. EPA Region V (A-18J)
John Mooney – U.S. EPA Region V (A-18J)
Douglas Aburano – U.S. EPA Region V (AR-18J)

Attach: Wisconsin's NO_2, O_3, and SO_2 Infrastructure SIP
Infrastructure SIP public hearing notice
Proof of publication for the public comment period and public hearing
Summary and responses to public comments
EPA Region V SIP Submittal Checklist

Wisconsin's Infrastructure State Implementation Plan (SIP) Elements for Nitrogen Dioxide (NO_2), Ozone (O_3), and Sulfur Dioxide (SO_2)

1. 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 Wisconsin Department of Natural Resources (WDNR) continues to monitor, update, and implement revisions to Wisconsin's SIP as emission limits and/or other control measures are needed in order to meet National Ambient Air Quality Standards (NAAQS), including the 2008 O_3 NAAQS, 2010 NO_2 NAAQS, and 2010 SO_2 NAAQS. Authority for this effort is established under ss. 285.11 through 285.19, *Wis. Stats.* Authorities related to specific pollutants, including the establishment of ambient air quality standards and increments, identification of nonattainment areas, air resource allocations, and various performance and emissions standards, are contained in ss. 285.21 through 285.29, *Wis. Stats.*

2. 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 WDNR continues to operate an extensive air monitoring network. The data is used after full quality assurance to determine compliance with the NAAQS.

   Wisconsin's most recently adopted annual network plan for 2013 was approved by the United States Environmental Protection Agency (U.S. EPA) on October 31, 2012. All monitored data is submitted to the U.S. EPA's Air Quality System (AQS) in a timely manner in accordance with *40 CFR 51.320*. The WDNR continues to provide the U.S. EPA regional office notice of any planned changes to monitoring sites or to the network plan. In addition, the WDNR actively participated in the development of a five-year regional network assessment for U.S. EPA Region 5 States dated July 1, 2010. Authority for 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 the U.S. EPA under its Section 103 and 105 grant programs supporting federal monitoring requirements specified in *40 CFR 58.10*.

3. Section 110(a)(2)(C): Programs for enforcement, PSD, and NSR
   "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 WDNR Air Management and Environmental Enforcement Programs work together to ensure compliance with Air Management Program 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 WDNR follows a stepped enforcement process to address violations. The

enforcement response ranges from issuance of a Letter of Inquiry (the state counterpart of a U.S. EPA 114 request) where additional information is needed to confirm or assess the significance of a violation, up through referral to the Wisconsin Department of Justice (DOJ) for civil or criminal enforcement as appropriate.

The Environmental Performance Partnership Agreement (EnPPA) between the Wisconsin Air Management Program and U.S. EPA Region 5 addresses implementation of the U.S. EPA's High Priority Violation (HPV) policy. The process for prosecution of violations is also addressed in an Air Management Program Compliance and Enforcement Memorandum of Understanding (MOU) between U.S. EPA Region 5 and the WDNR 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 WDNR regulates modification and construction of stationary sources through its U.S. EPA approved nonattainment New Source Review (NSR), Prevention of Significant Deterioration (PSD), and Title V permits programs under s. 285.11, s. 285.13, s. 285.17, s. 285.19, and ss. 285.60 through 285.69, *Wis. Stats*. The WDNR collects revenue to support these permit programs through application of applicable fee requirements under s. 285.69, *Wis. Stats*.

On March 28, 2011, the WDNR transmitted a letter to the U.S. EPA clarifying that the infrastructure SIP before the U.S. EPA review at that time (with respect to the 1997 O_3 and 1997 fine particulate matter ($PM_{2.5}$) NAAQS) only included PSD regulations that remained approved after the U.S. EPA issued the PSD SIP narrowing rule. Thus, the greenhouse gas (GHG) PSD permitting requirement in Wisconsin's infrastructure SIP submittal consisted of only that portion of the PSD SIP program that applies PSD permitting requirements to GHG emissions at or above the tailoring rule thresholds. The WDNR made a subsequent submittal on May 4, 2011, asking that revisions to the State's PSD program with respect to aligning the state threshold for GHG emitting sources with the federal threshold be incorporated into the SIP. Therefore, Wisconsin retains all necessary resources and authority to permit GHG emitting sources at the federal tailoring rule threshold.

4. <u>Section 110(a)(2)(D)(i): Interstate transport provisions</u>
"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 WDNR has adopted and implemented the various major programs related to interstate transport of pollution, as required by the U.S. EPA. The WDNR developed implementation programs in ch. NR 432, *Wis. Adm. Code*, in 2007, for the state portions of the Clean Air Interstate Rule (CAIR), to address interstate transport of O_3 and $PM_{2.5}$ precursor emissions. Emissions of NO_2 and SO_2 are addressed regionally as $PM_{2.5}$ precursors, as well as locally within the state as described in section 110(a)(2)(K).

When the U.S. EPA finalizes a replacement to CAIR, as required by the U.S. Court of Appeals for the D.C. Circuit, the WDNR has the authority to develop refined control requirements to address that forthcoming federal program – either by adopting a Federal Implementation Plan (FIP) directly or through development of an approvable substitute regulation embodying a more unique state program. In addition, as part of the U.S. Court of Appeals for the D.C. Circuit August 21, 2012 decision regarding the Cross State Air Pollution Rule (CSAPR), the U.S. EPA must first define "significant contribution" before requiring states to eliminate that contribution.

In August 2012, the U.S. EPA fully approved Wisconsin's Regional Haze SIP, which satisfies the visibility protection requirements under 40 CFR Part 51 Subpart P. 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 address a continuing assessment and control strategy program to ensure multi-state nonattainment areas meet required Clean Air Act (CAA) timelines. Together these regulations and cooperative agreements address CAA and U.S. EPA concerns over the interstate transport of emissions of regulated pollutants.

If needed, ss. 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 and NSR regulations; these regulations satisfy all applicable elements of Section 110(a)(2)(D)(i), as well as those of Section 110(a)(2)(C).

5. Section 110(a)(2)(D)(ii): Interstate and International transport provisions
"Each such plan shall […] contain adequate provisions insuring compliance with the applicable requirements of sections 126 and 115 (relating to interstate and international pollution abatement)."

Wisconsin's Air Management Program contains adequate provisions to insure compliance with Section 126 of the CAA relating to interstate pollution abatement. Neighboring states and tribes are notified regarding new or modified sources. Additionally, Section 115 of the CAA relates to international pollution abatement. Wisconsin has no pending obligations under Section 115.

6. Section 110(a)(2)(E): Adequate personnel, funding, and authority
"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."

Funding and personnel for the WDNR is through the state's biennial budget process. The WDNR 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 Air Management Program receives is the Section 105 Air Pollution Control Grant. It is an annual grant that includes extensive review by the U.S. EPA. In addition, the WDNR and the U.S. EPA negotiate priorities and grant commitments under the EnPPA, which is a two year agreement itemizing performance measures and outcomes across the various funding sources and grants. Wisconsin's basic Air Management Program duties and authorities are ensured under s. 285.11, *Wis. Stats*.

As specified in the section addressing Section 110(a)(2)(C), the WDNR also retains both the legal authority and adequate personnel to permit GHG emitting sources at the appropriate federal tailoring threshold.

With respect to the requirements of Section 128, the WDNR notes that the Wisconsin Natural Resources Board (NRB) does not generally approve enforcement or permit orders. Therefore, only the second requirement of Section 128 applies to Wisconsin. Rules that apply to the Wisconsin NRB can be found in s. 15.34, *Wis. Stats*. Wisconsin Statute Chapter 19, "General Duties of Public Officials" contains provisions, specifically in s. 19.46, 19.47, and 19.48, *Wis. Stats.*, that address conflict of interest over public officials, which would include the NRB.

7. 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 source

(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 WDNR 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 in our emission statement SIP. Wisconsin has a web-based monitoring, reporting, permits and compliance database called the Wisconsin Air Resource Program (WARP) that substantially strengthens the integrity of each of its component units. Basic authority for this effort 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. Section 110(a)(2)(G): Emergency episodes:
"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 the WDNR to act upon a finding that episode or emergency conditions exist. This language authorizes the WDNR to seek immediate injunctive relief in circumstances of substantial danger to the environment or to public health.

9. Section 110(a)(2)(H): Future 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 the WDNR the authority to develop all rules, limits, and regulations necessary to meet NAAQS as they evolve and to respond to any U.S. EPA findings of inadequacy with the overall Wisconsin SIP and Air Management Programs.

10. Section 110(a)(2)(J): Consultation with government officials, public notification, 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 WDNR follows an administrative process for public input and legislative review on non-rule SIP revisions for air quality control programs or measures. In addition, the WDNR follows an administrative process for public input, adoption by the Wisconsin NRB, and legislative review on rule SIP revisions for air quality control programs or measures. These processes ensure that potentially impacted public entities are identified and allowed to become engaged in the SIP development process. The WDNR Air Management Program has effectively used formal stakeholder structures in the development and refinement of all major SIP revisions. The WDNR 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 the WDNR is the officially-charged agency.

The WDNR maintains an active and fully-approved monitoring network for criteria pollutants . As provided for under s. 285.11, *Wis. Stats.*, public notice is provided at levels associated with the extent of the monitored problem ranging from an advisory to alert levels. The State of Wisconsin actively participates in development of regional air quality forecasts and the U.S. EPA's AIRNow air quality data outreach program. The WDNR maintains an active multi-media outreach effort through a variety of partners to ensure adequate public notice of air quality and to advise the public of actions to reduce immediate exposure and improve air quality. Public notification is provided through the Department's website and through a contracted e-mail subscription service known as "GovDelivery".

The WDNR'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, the WDNR intends the same provisions to satisfy the applicable requirements of Section 110(a)(2)(J).

11. Section 110 (a)(2)(K): Air quality 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 WDNR has the authority and capability to perform source-oriented dispersion modeling of all criteria pollutants – including NO_2, O_3, and SO_2 – using models such as AERMOD. The WDNR works with LADCO and the U.S. EPA to perform regional modeling of O_3 and $PM_{2.5}$ precursors – including NO_2 and SO_2 – from consistent emissions inventory and meteorology platforms. This regional modeling supports SIP development for Wisconsin, nearby nonattainment areas, addresses interstate pollutant transport quantification, and supports visibility impact assessments. The WDNR requires source-specific modeling for PSD-NSR assessment and permitting for the construction of major and some minor sources. These authorities reside under ss. 285.11, 285.13 and 285.60 - 285.69, *Wis. Stats*.

12. 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 5 and NSR programs. The Title 5 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 effective January 1, 2011. Authority is established under s. 285.69, *Wis. Stats*.

13. Section 110(a)(2)(M): Consultation/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. In addition, the WDNR follows formal public hearing processes in developing and adopting all formal SIP revisions that entail new or revised air pollution control programs or strategies. The WDNR actively engages potentially impacted stakeholders and other interested parties including local governmental entities. The WDNR is required to adopt all formal emission control programs and strategies as rules following the state's formal regulatory processes of notice prior to adoption of rules. For any SIP revision not related to a single source, the WDNR is required to provide the standing committees of the Wisconsin State Legislature with jurisdiction over environmental matters, a 60-day review period, which effectively ensures local entities have been engaged in the program development process. The WDNR is obligated to respond to inquiries by the committee chairs within 15 days under s. 285.14, *Wis. Stats*.

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

WISCONSIN
DEPT. OF NATURAL RESOURCES

January 28, 2015

Ms Susan Hedman
USEPA Region V
77 West Jackson Boulevard
Chicago IL 60604

Subject: June 20, 2013 Infrastructure SIP Submission Clarification

Dear Ms. Hedman:

This letter is clarifying our June 20, 2013 Infrastructure SIP submission for the 2008 ozone and 2010 NO2 and SO2 National Ambient Air Quality Standards (NAAQS).

Our authority under Chapters 227 and 285, Wis. Stats, to create new rules and implement existing emission limits and controls allow us to meet the requirements on 110(a)(2)(A). The authority for WDNR to develop rules and regulations is found in Sections 227.11(2)(a), 285.11(1), and 285.21(1)(a), Wis. Stats. Section 227.11(2)(a), Stats., expressly confers rule making authority to an agency. Section 285.11(1) and (6) requires the WDNR promulgate rules and establish control strategies in order to prepare and implement the State Implementation Plan (SIP) for the prevention, abatement and control of air pollution in the state. Section 285.21(1)(a) requires that the WDNR promulgate by rule ambient air quality standards that are similar to, but not more restrictive than the NAAQS.

The current Wisconsin administrative code contains existing controls and emission limits that addresses the NAAQS supplied in the June 20, 2013 Infrastructure SIP submission.

- 2008 ozone NAAQS- Chapters NR 419 through NR 425, Wis. Adm. Code, control VOC as an ozone precursor and Chapter NR 428, Wis. Adm. Code, control NOx as an ozone precursor.
- 2010 NO2 NAAQS- Chapter NR 428, Wis. Adm. Code contains the controls and emission limits for nitrogen dioxide control.
- 2010 SO2 NAAQS - Chapter NR 418, Wis. Adm. Code, contain the controls and emissions limits for sulfur dioxide control.

If you should have any questions regarding this letter, please feel free to contact Ralph Patterson of my staff at 608-267-7546.

Sincerely,

Bart Sponseller
Director
Bureau of Air Management

Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by November 10, 2015. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. Parties with objections to this direct final rule are encouraged to file a comment in response to the parallel notice of proposed rulemaking for this action published in the proposed rules section of today's **Federal Register,** rather than file an immediate petition for judicial review of this direct final rule, so that EPA can withdraw this direct final rule and address the comment in the proposed rulemaking. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Emissions Reporting, Incorporation by reference, Reporting and recordkeeping requirements, Sulfur dioxide.

Dated: August 28, 2015.

Susan Hedman,

Regional Administrator, Region 5.

40 CFR part 52 is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

■ 2. Section 52.770, the table in paragraph (c) is amended by revising the entry for Rule 7–4.1–21 ''Walsh and Kelly sulfur dioxide emission limitations'' under the subheading entitled ''Rule 4.1 Lake County Sulfur Dioxide Emission Limitations'' under the heading entitled ''Article 7. Sulfur Dioxide Rules'' to read as follows:

§ 52.770 Identification of plan.

* * * * *

(c) * * *

EPA-APPROVED INDIANA REGULATIONS

Indiana citation	Subject	Indiana effective date	EPA Approval date	Notes
*	*	*	*	*
Article 7. Sulfur Dioxide Rules				
*	*	*	*	*
Rule 4.1 Lake County Sulfur Dioxide Emission Limitations				
*	*	*	*	*
7–4.1–21	Walsh and Kelly sulfur dioxide emission limitations ..	5/29/2015	9/11/2015, [insert **Federal Register** citation].	
*	*	*	*	*

* * * * *

[FR Doc. 2015–22716 Filed 9–10–15; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R05–OAR–2014–0704; FRL–9933–62–Region 5]

Air Plan Approval; Wisconsin; Infrastructure SIP Requirements for the 2008 Ozone, 2010 NO_2, and 2010 SO_2 NAAQS

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is taking final action to approve some elements of state implementation plan (SIP) submissions from Wisconsin regarding the infrastructure requirements of section 110 of the Clean Air Act (CAA) for the 2008 ozone, 2010 nitrogen dioxide (NO_2), and 2010 sulfur dioxide (SO_2) National Ambient Air Quality Standards (NAAQS). The infrastructure requirements are designed to ensure that the structural components of each state's air quality management program are adequate to meet the state's responsibilities under the CAA. The

proposed rulemaking associated with this final action was published on April 20, 2015, and EPA received no comments during the comment period, which ended on May 20, 2015.

DATES: This final rule is effective on October 13, 2015.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–R05–OAR–2014–0704. All documents in the docket are listed on the *www.regulations.gov* Web site. Although listed in the index, some information is not publicly available, *e.g.,* Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *www.regulations.gov* or in hard copy at the Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. This facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding Federal holidays. We recommend that you telephone Eric Svingen, Environmental Engineer, at (312) 353–4489 before visiting the Region 5 office.

FOR FURTHER INFORMATION CONTACT: Eric Svingen, Environmental Engineer, Attainment Planning and Maintenance Section, Air Programs Branch (AR–18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 353–4489, *svingen.eric@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document whenever ''we,'' ''us,'' or ''our'' is used, we mean EPA. This supplementary information section is arranged as follows:

I. What is the background of these SIP submissions?

A. What state submissions does this rulemaking address?

This rulemaking addresses June 20, 2013, submissions and a January 28, 2015, clarification from the Wisconsin Department of Natural Resources (WDNR) intended to address all applicable infrastructure requirements for the 2008 ozone, 2010 NO_2, and 2010 SO_2 NAAQS.

B. Why did the state make these SIP submissions?

Under section 110(a)(1) and (2) of the CAA, states are required to submit infrastructure SIPs to ensure that their SIPs provide for implementation, maintenance, and enforcement of the NAAQS, including the 2008 ozone, 2010 NO_2, and 2010 SO_2 NAAQS. These submissions must contain any revisions needed for meeting the applicable SIP requirements of section 110(a)(2), or certifications that their existing SIPs for the NAAQS already meet those requirements.

EPA has highlighted this statutory requirement in multiple guidance documents. The most recent, entitled ''Guidance on Infrastructure State Implementation Plan (SIP) Elements under CAA Sections 110(a)(1) and (2)'', was published on September 13, 2013.

C. What is the scope of this rulemaking?

EPA is acting upon the SIP submissions from Wisconsin that address the infrastructure requirements of CAA section 110(a)(1) and (2) for the 2008 ozone, 2010 NO_2, and 2010 SO_2 NAAQS. The requirement for states to make SIP submissions of this type arises out of CAA section 110(a)(1), which states that states must make SIP submissions ''within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national primary ambient air quality standard (or any revision thereof),'' and these SIP submissions are to provide for the ''implementation, maintenance, and enforcement'' of such NAAQS. The statute directly imposes on states the duty to make these SIP submissions, and the requirement to make the submissions is not conditioned upon EPA's taking any action other than promulgating a new or revised NAAQS. Section 110(a)(2) includes a list of specific elements that ''[e]ach such plan'' submission must address.

EPA has historically referred to these SIP submissions made for the purpose of satisfying the requirements of CAA section 110(a)(1) and (2) as ''infrastructure SIP'' submissions. Although the term ''infrastructure SIP'' does not appear in the CAA, EPA uses the term to distinguish this particular type of SIP submission from submissions that are intended to satisfy other SIP requirements under the CAA, such as SIP submissions that address the nonattainment planning requirements of part D and the Prevention of Significant Deterioration (PSD) requirements of part C of title I of the CAA, and ''regional haze SIP'' submissions required to address the visibility protection requirements of CAA section 169A.

This rulemaking will not cover three substantive areas because they are not integral to acting on a state's infrastructure SIP submissions: (i) Existing provisions related to excess emissions during periods of start-up, shutdown, or malfunction (''SSM'') at sources, that may be contrary to the CAA and EPA's policies addressing such excess emissions; (ii) existing provisions related to ''director's variance'' or ''director's discretion'' that purport to permit revisions to SIP approved emissions limits with limited public notice or without requiring further approval by EPA, that may be contrary to the CAA; and, (iii) existing provisions for PSD programs that may be inconsistent with current requirements of EPA's ''Final NSR Improvement Rule,'' 67 FR 80186 (December 31, 2002), as amended by 72 FR 32526 (June 13, 2007) (''NSR Reform''). Instead, EPA has the authority to address each one of these substantive areas in separate rulemakings. A detailed history, interpretation, and rationale as they relate to infrastructure SIP requirements can be found in EPA's May 13, 2014, proposed rule entitled, ''Infrastructure SIP Requirements for the 2008 Lead NAAQS'' in the section, ''What is the scope of this rulemaking?'' (*see* 79 FR 27241 at 27242–27245).

II. What action is EPA taking?

EPA is taking final action to approve most elements of submissions from Wisconsin certifying that its current SIP is sufficient to meet the required infrastructure elements under section 110(a)(1) and (2) for the 2008 ozone, 2010 NO_2, and 2010 SO_2 NAAQS.

The proposed rulemaking associated with this final action was published on April 20, 2015 (75 FR 21685), and EPA received no comments during the comment period, which ended on May 20, 2015. EPA is therefore taking final action to approve, as proposed, most elements of Wisconsin's submissions.

EPA's actions for the state's satisfaction of infrastructure SIP requirements, by element of section 110(a)(2) and NAAQS, are contained in the table below.

Element	2008 Ozone	2010 NO_2	2010 SO_2
(A)—Emission limits and other control measures	A	A	A
(B)—Ambient air quality monitoring/data system	A	A	A
(C)1—Program for enforcement of control measures	A	A	A
(C)2—PSD	NA	NA	NA
(D)1—I Prong 1: Interstate transport—significant contribution	NA	A	NA
(D)2—I Prong 2: Interstate transport—interfere with maintenance	NA	A	NA
(D)3—II Prong 3: Interstate transport—prevention of significant deterioration	NA	NA	NA
(D)4—II Prong 4: Interstate transport—protect visibility	A	A	A
(D)5—Interstate and international pollution abatement	A	A	A
(E)1—Adequate resources	A	A	A
(E)2—State board requirements	NA	NA	NA
(F)—Stationary source monitoring system	A	A	A
(G)—Emergency power	A	A	A
(H)—Future SIP revisions	A	A	A
(I)—Nonattainment planning requirements of part D	NA	NA	NA
(J)1—Consultation with government officials	A	A	A
(J)2—Public notification	A	A	A
(J)3—PSD	NA	NA	NA
(J)4—Visibility protection	A	A	A
(K)—Air quality modeling/data	A	A	A
(L)—Permitting fees	A	A	A
(M)—Consultation and participation by affected local entities	A	A	A

In the above table, the key is as follows:

A	Approve.
NA	No Action/Separate Rulemaking.

III. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by November 10, 2015. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Sulfur oxides.

Dated: August 27, 2015.

Susan Hedman,

Regional Administrator, Region 5.

40 CFR part 52 is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

■ 2. Section 52.2591 is amended by adding paragraphs (g), (h), and (i) to read as follows:

§ 52.2591 Section 110(a)(2) infrastructure requirements.

* * * * *

(g) Approval—In a June 20, 2013, submission with a January 28, 2015, clarification, Wisconsin certified that the state has satisfied the infrastructure SIP requirements of section 110(a)(2)(A) through (H), and (J) through (M) for the 2008 ozone NAAQS. We are not taking action on the prevention of significant deterioration requirements related to section 110(a)(2)(C), (D)(i)(II), and (J), the transport provisions in section 110(a)(2)(D)(i)(I), and the state board requirements of (E)(ii). We will address these requirements in a separate action.

(h) Approval—In a June 20, 2013, submission with a January 28, 2015, clarification, Wisconsin certified that the state has satisfied the infrastructure SIP requirements of section 110(a)(2)(A) through (H), and (J) through (M) for the 2010 nitrogen dioxide (NO_2) NAAQS. We are not taking action on the prevention of significant deterioration requirements related to section 110(a)(2)(C), (D)(i)(II), and (J), and the state board requirements of (E)(ii). We will address these requirements in a separate action.

(i) Approval—In a June 20, 2013, submission with a January 28, 2015, clarification, Wisconsin certified that the state has satisfied the infrastructure SIP requirements of section 110(a)(2)(A) through (H), and (J) through (M) for the 2010 sulfur dioxide (SO_2) NAAQS. We are not taking action on the prevention of significant deterioration requirements related to section 110(a)(2)(C), (D)(i)(II), and (J), the transport provisions in section 110(a)(2)(D)(i)(I), and the state board requirements of (E)(ii). We will address these requirements in a separate action.

[FR Doc. 2015–22864 Filed 9–10–15; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2011–0817; FRL–9933–76–OAR]

RIN 2060–AQ93

National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants; Correction

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; correcting amendments.

SUMMARY: The Environmental Protection Agency (EPA) published a final rule in the **Federal Register** on July 27, 2015, titled National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants. This final rule makes technical corrections and clarifications to the regulations published in that final rule. The rule also includes a provision describing performance testing requirements when a source demonstrates compliance with the hydrochloric acid (HCl) emissions standard using a continuous emissions monitoring system (CEMS) for sulfur dioxide measurement and reporting.

DATES: Effective September 9, 2015.

FOR FURTHER INFORMATION CONTACT: Ms. Sharon Nizich, Sector Policies and Programs Division (D243–04), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone number: (919) 541–2825; facsimile number: (919) 541–5450; email address: *nizich.sharon@epa.gov.* For information about the applicability of the national emission standards for hazardous air pollutants or new source performance standards, contact Mr. Patrick Yellin, Monitoring, Assistance and Media Programs Division (2227A), Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, Washington, DC 20460; telephone number (202) 564–2970; email address *yellin.patrick@epa.gov.*

SUPPLEMENTARY INFORMATION:

Summary of Technical Corrections

The EPA received communications from representatives of the Portland cement industry on five occasions in August 2015 (see memo to the docket (EPA–HQ–OAR–2011–0817) titled, ''Communications on Errors PCA August 2015''). These communications outlined several errors in the regulatory text of the final rule (80 FR 44772). These all pertain to monitoring requirements. The EPA agrees that these are errors (typographical and unintended phrasing or omissions), and is correcting these errors in this document. We are also removing two passages (which consisted of four sentences) that were inadvertently left in the final amendments, but were discussed by the EPA as being removed in the Response to Comment (RTC) document for the final amendments (see docket item EPA–HQ–OAR–2011–0817–0870, page 8). In the RTC, we discussed that data substitution is not an allowed practice when determining compliance, but these four sentences discuss procedures for data substitution. Leaving these sentences in the rule, thus, does not reflect the EPA's stated intention, and would lead to confusion given the direct conflict between the RTC document and the rule text.

We are making one further technical correction involving timing of performance tests. The correction keeps in place the specified time by which performance tests must be conducted, but will no longer set out a window of time in which the test must be conducted. The net effect is that performance tests can be conducted earlier than the window of time in the current rule text if a source desires to conduct its performance test earlier. The EPA had already indicated in the RTC document that it was making this change (see docket item EPA–HQ–OAR–2011–0817–0870, page 5). The EPA regards this amendment as a clarification (the current rule could be interpreted to allow earlier testing) so that the rule reads precisely as intended, as stated by the EPA in the RTC document.

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedure, Air pollution control, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements.

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is amended as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

■ 1. The authority citation for part 63 continues to read as follows:

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R05–OAR–2014–0242; FRL–9915–94–Region 5]

Approval and Promulgation of Air Quality Implementation Plans; Wisconsin; Revisions to PSD and NNSR Programs

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Pursuant to its authority under the Clean Air Act (CAA or Act), the Environmental Protection Agency (EPA) is approving a revision to the Wisconsin State Implementation Plan (SIP) for the Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR) programs.

DATES: This final rule is effective on November 5, 2014.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–R05–OAR–2014–0242. All documents in the docket are listed on the *www.regulations.gov* Web site. Although listed in the index, some information is not publicly available, i.e., Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *www.regulations.gov* or in hard copy at the Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. This facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding Federal holidays. We recommend that you telephone Anthony Maietta, Life Scientist, at (312) 353–8777 before visiting the Region 5 office.

FOR FURTHER INFORMATION CONTACT: Anthony Maietta, Life Scientist, Control Strategies Section, Air Programs Branch (AR–18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 353–8777, *maietta.anthony@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document whenever ''we,'' ''us,'' or ''our'' is used, we mean EPA. This supplementary information section is arranged as follows:

I. What is the background for this action?

On March 12, 2014, the Wisconsin Department of Natural Resources (WDNR) submitted a request to EPA to revise portions of its PSD and NNSR programs. The submittal requested that EPA approve the following revised rules into Wisconsin's SIP: (1) NR 400.02(123m) and (124); (2) NR 405.02(21)(b)5.a. and b. and 6; (3) NR 405.02(25i)(a); (4) NR 405.02(25i)(ag) and (ar)1–3; and (5) NR 408.02(20)(e) 5.a and b. and 6. On May 2, 2014, EPA published in the **Federal Register** (79 FR 25063) a proposal to take action on portions of the March 12, 2014, submittal that pertained to the definition of ''major modification'', and explicitly identify oxides of nitrogen (NO_X) as a precursor to ozone. Specifically, EPA's May 2, 2014, proposed rulemaking was limited to the following provisions: (1) NR 405.02(21)(b)5.a. and b. and 6; (2) NR 405.02(25i)(a); (3)NR 405.02(25i)(ar)(intro) and 1.; and, (4) NR 408.02(20)(e) 5.a and b. and 6. The remainder of WDNR's submission, as it relates to the identification of precursors to particulate matter of less than 2.5 micrometers ($PM_{2.5}$), and the definition of $PM_{2.5}$ and particulate matter of less than 10 micrometers, will be addressed in a separate rulemaking.

Because the SIP revision was not effective at the state level at the time of the March 12, 2014, submittal, Wisconsin requested that EPA parallel process the SIP revision. EPA's May 2, 2014, proposal was contingent upon both the effectiveness of amended rules at the state level and a formal, fully adopted SIP revision request.

II. Effective Date of Wisconsin's Adopted Rule and Formal SIP Submission

On June 30, 2014, revisions to Wisconsin's PSD and NNSR rules, as submitted in draft to EPA on March 12, 2014, were published in the Wisconsin Administrative Register, and became effective on July, 1, 2014. On August 11, 2014, Wisconsin formally submitted its request for EPA to take final action on our May 2, 2014 proposal.

III. What action is EPA taking?

EPA is approving revisions to Wisconsin rules NR 405.02(21)(b)5.a. and b. and 6; NR 405.02(25i)(a); NR 405.02(25i)(ar)(intro) and 1.; and NR 408.02(20)(e) 5.a and b. and 6., as submitted by WDNR on August 11, 2014, into the Wisconsin SIP.

IV. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a ''significant regulatory action'' subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by December 5, 2014. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen oxides, Ozone, Reporting and recordkeeping requirements, Sulfur oxides.

Dated: August 19, 2014.

Susan Hedman,

Regional Administrator, Region 5.

40 CFR part 52 is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

■ 2. Section 52.2570 is amended by adding paragraph (c)(131) to read as follows:

§ 52.2570 Identification of plan.

* * * * *

(c) * * *

(131) On August 11, 2014, the Wisconsin Department of Natural Resources submitted a request to revise Wisconsin's Prevention of Significant Deterioration and Nonattainment New Source Review rules.

(i) Incorporation by reference.

(A) Wisconsin Administrative Code, NR 405.02(21)(b)5.a. and b. and 6; NR 405.02(25i)(a); NR 405.02(25i)(ar)(intro) and 1., as published in the Wisconsin Administrative Register July 2014, No. 703, effective August 1, 2014.

(B) Wisconsin Administrative Code, NR 408.02(20)(e) 5.a and b. and 6., as published in the Wisconsin Administrative Register July 2014, No. 703, effective August 1, 2014.

[FR Doc. 2014–23769 Filed 10–3–14; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R05–OAR–2013–0273; FRL–9914–97–Region 5]

Approval and Promulgation of Air Quality Implementation Plans; Illinois; Amendments to Gasoline Volatility Standards and Motor Vehicle Refinishing Requirements for Illinois

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving state implementation plan (SIP) revisions submitted by the Illinois Environmental Protection Agency (IEPA) on March 19, 2013, concerning the state's gasoline volatility standards. The SIP revisions also include amendments to the state's motor vehicle refinishing regulations to allow for the alternative use of a high volume, low pressure (HVLP) equivalent coating applicator in motor vehicle refinishing operations, and repeal a registration program under these regulations that overlaps with Federal registration requirements.

DATES: This direct final rule is effective December 5, 2014, unless EPA receives adverse comments by November 5, 2014. If adverse comments are received, EPA will publish a timely withdrawal of the direct final rule in the **Federal Register** informing the public that the rule will not take effect.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R05–OAR–2013–0273, by one of the following methods:

1. *www.regulations.gov:* Follow the on-line instructions for submitting comments.

2. *Email: blakley.pamela@epa.gov.*

3. *Fax:* (312) 692–2450.

4. *Mail:* Pamela Blakley, Chief, Control Strategies Section, Air Programs Branch (AR–18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604.

5. *Hand Delivery:* Pamela Blakley, Chief, Control Strategies Section, Air Programs Branch (AR–18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604. Such deliveries are only accepted during the Regional Office normal hours of operation, and special arrangements should be made for deliveries of boxed information. The Regional Office official hours of business are Monday through Friday, 8:30 a.m. to 4:30 p.m., excluding Federal holidays.

Instructions: Direct your comments to Docket ID No. EPA–R05–OAR–2013–0273. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *www.regulations.gov* or email. The *www.regulations.gov* Web site is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through *www.regulations.gov* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the docket are listed in the *www.regulations.gov* index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available

Show, Detroit River, Detroit, MI. This security zone is intended to restrict vessels from a portion of the Detroit River in order to ensure the safety and security of participants, visitors, and public officials at the North American International Auto Show (NAIAS), which is being held at Cobo Hall in downtown Detroit, MI. Vessels in close proximity to the security zone will be subject to increased monitoring and boarding during the enforcement of the security zone. No person or vessel may enter the security zone while it is being enforced without permission of the Captain of the Port Detroit.

DATES: The security zone regulation described in 33 CFR 165.915(a)(3) is effective without actual notice from January 21, 2016 through 11:59 p.m. on January 24, 2016. For purposes of enforcement, actual notice will be used from 8 a.m. on January 11, 2016 through January 21, 2016.

FOR FURTHER INFORMATION CONTACT: If you have questions on this document, call or email LCDR Nicholas Seniuk, Prevention, U.S. Coast Guard Sector Detroit, 110 Mount Elliot Ave., Detroit, MI 48207; telephone (313) 568–9508; email *Nicholas.C.Seniuk@uscg.mil*.

SUPPLEMENTARY INFORMATION: The Coast Guard will enforce the *North American International Auto Show, Detroit River, Detroit, MI* security zone listed in 33 CFR 165.915(a)(3). This security zone includes all waters of the Detroit River encompassed by a line beginning at a point of origin on land adjacent to the west end of Joe Louis Arena at 42°19.44′ N., 083°03.11′ W.; then extending offshore approximately 150 yards to 42°19.39′ N., 083°03.07′ W.; then proceeding upriver approximately 2000 yards to a point at 42°19.72′ N., 083°01.88′ W.; then proceeding onshore to a point on land adjacent the Tricentennial State Park at 42°19.79′ N., 083°01.90′ W.; then proceeding downriver along the shoreline to connect back to the point of origin. All coordinates are North American Datum 1983.

All persons and vessels shall comply with the instructions of the Captain of the Port Detroit or his designated on-scene representative, who may be contacted via VHF Channel 16.

Under the provisions of 33 CFR 165.33, no person or vessel may enter or remain in this security zone without the permission of the Captain of the Port Detroit. Each person and vessel in this security zone shall obey any direction or order of the Captain of the Port Detroit. The Captain of the Port Detroit may take possession and control of any vessel in this security zone. The Captain of the Port Detroit may remove any person, vessel, article, or thing from this security zone. No person may board, or take or place any article or thing on board any vessel in this security zone without the permission of the Captain of Port Detroit. No person may take or place any article or thing upon any waterfront facility in this security zone without the permission of the Captain of the Port Detroit.

Vessels that wish to transit through this security zone shall request permission from the Captain of the Port Detroit or his designated representative. Requests must be made in advance and approved by the Captain of Port before transits will be authorized. Approvals may be granted on a case by case basis. The Captain of the Port may be contacted via U.S. Coast Guard Sector Detroit on channel 16, VHF–FM. The Coast Guard will give notice to the public via Local Notice to Mariners and VHF radio broadcasts that the regulation is in effect.

This document is issued under authority of 33 CFR 165.915 and 5 U.S.C. 552(a). If the Captain of the Port determines that this security zone need not be enforced for the full duration stated in this document; he may suspend such enforcement and notify the public of the suspension via a Broadcast Notice to Mariners.

Dated: January 8, 2016.

Raymond Negron,

Commander, U.S. Coast Guard, Acting Captain of the Port Detroit.

[FR Doc. 2016–01190 Filed 1–20–16; 8:45 am]

BILLING CODE 9110–04–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R05–OAR–2015–0464; FRL–9939–78–Region 5]

Air Plan Approval; Wisconsin; Wisconsin State Board Requirements

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is finalizing approval of state implementation plan (SIP) submissions from Wisconsin regarding the state board requirements under section 128 of the Clean Air Act (CAA). EPA is also approving elements of SIP submissions from Wisconsin regarding the infrastructure requirements of section 110, relating to state boards for the 1997 ozone, 1997 fine particulate ($PM_{2.5}$), 2006 $PM_{2.5}$, 2008 lead (Pb), 2008 ozone, 2010 nitrogen dioxide (NO_2), and 2010 sulfur dioxide (SO_2) National Ambient Air Quality Standards (NAAQS). The proposed rulemaking associated with this final action was published on September 11, 2015, and EPA received no comments during the comment period, which ended on October 13, 2015.

DATES: This final rule is effective on February 22, 2016.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–R05–OAR–2015–0464. All documents in the docket are listed on the *www.regulations.gov* Web site. Although listed in the index, some information is not publicly available, *i.e.,* Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *www.regulations.gov* or in hard copy at the Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. This facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding Federal holidays. We recommend that you telephone Eric Svingen, Environmental Engineer, at (312) 353–4489 before visiting the Region 5 office.

FOR FURTHER INFORMATION CONTACT: Eric Svingen, Environmental Engineer, Attainment Planning and Maintenance Section, Air Programs Branch (AR–18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 353–4489, *svingen.eric@epa.gov*.

SUPPLEMENTARY INFORMATION: Throughout this document whenever ''we,'' ''us,'' or ''our'' is used, we mean EPA. This supplementary information section is arranged as follows:

I. What is the background of these SIP submissions?

This rulemaking addresses submissions from the Wisconsin Department of Natural Resources (WDNR) dated July 2, 2015. These

submissions are intended to address CAA requirements relating to the state board requirements under section 128, as well as infrastructure requirements of section 110, relating to state boards for the 1997 ozone, 1997 $PM_{2.5}$, 2006 $PM_{2.5}$, 2008 Pb, 2008 ozone, 2010 NO_2, and 2010 SO_2 NAAQS.

The requirement for states to make infrastructure SIP submissions arises out of CAA section 110(a)(1). Pursuant to section 110(a)(1), states must make SIP submissions ''within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national primary ambient air quality standard (or any revision thereof),'' and these SIP submissions are to provide for the ''implementation, maintenance, and enforcement'' of such NAAQS. The statute directly imposes on states the duty to make these SIP submissions, and the requirement to make the submissions is not conditioned upon EPA's taking any action other than promulgating a new or revised NAAQS. Section 110(a)(2) includes a list of specific elements that ''[e]ach such plan'' submission must address.

EPA has historically referred to these SIP submissions made for the purpose of satisfying the requirements of CAA section 110(a)(1) and (2) as ''infrastructure SIP'' submissions. Although the term ''infrastructure SIP'' does not appear in the CAA, EPA uses the term to distinguish this particular type of SIP submission from submissions that are intended to satisfy other SIP requirements under the CAA. This specific rulemaking is only taking action on the CAA 110(a)(2)(E)(ii) element of these infrastructure SIP requirements, which is the only infrastructure SIP element addressed in WDNR's submittal dated July 2, 2015.

II. What guidance is EPA using to evaluate these SIP submissions?

EPA's guidance for these submissions is highlighted in an October 2, 2007, guidance document entitled ''Guidance on SIP Elements Required Under Sections 110(a)(1) and (2) for the 1997 8-hour Ozone and $PM_{2.5}$ [1] National Ambient Air Quality Standards'' (2007 Guidance). Further guidance is provided in a September 13, 2013, document entitled ''Guidance on Infrastructure State Implementation Plan (SIP) Elements under CAA Sections 110(a)(1) and (2)'' (2013 Guidance).

[1] $PM_{2.5}$ refers to particles with an aerodynamic diameter of less than or equal to 2.5 micrometers, oftentimes referred to as ''fine'' particles.

III. What is the result of EPA's review of these SIP submissions?

Pursuant to section 110(a), states must provide reasonable notice and opportunity for public hearing for all infrastructure SIP submissions. WDNR provided notice of a public comment period on May 9, 2015, held a public hearing at WDNR State Headquarters on June 9, 2015, and closed the public comment period on June 11, 2015. No comments were received.

Wisconsin provided a detailed synopsis of how various components of its SIP meet each of the applicable requirements in section 128 and 110(a)(2)(E)(ii) for the 1997 ozone, 1997 $PM_{2.5}$, 2006 $PM_{2.5}$, 2008 Pb, 2008 ozone, 2010 NO_2, and 2010 SO_2 NAAQS, as applicable.

On September 11, 2015 (80 FR 54744), EPA published a proposed rule that would approve these submissions into Wisconsin's SIP. This proposed rule contained a detailed evaluation of how Wisconsin's submissions satisfy certain requirements under CAA sections 110 and 128. No comments were received. Therefore, EPA is finalizing this rule as proposed.

IV. What action is EPA taking?

EPA is taking final action to incorporate *Wis. Stats.* 15.05, 19.45(2), and 19.46 into Wisconsin's SIP. EPA is further approving these submissions as meeting CAA obligations under section 128, as well as 110(a)(2)(E)(ii) for the 1997 ozone, 1997 $PM_{2.5,}$ 2006 $PM_{2.5}$, 2008 Pb, 2008 ozone, 2010 NO_2, and 2010 SO_2 NAAQS.

V. Incorporation by Reference

In this rule, EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is finalizing the incorporation by reference of the Wisconsin Regulations described in the amendments to 40 CFR part 52 set forth below. EPA has made, and will continue to make, these documents generally available electronically through *www.regulations.gov* and/or in hard copy at the appropriate EPA office (see the **ADDRESSES** section of this preamble for more information).

VI. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the

Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by March 21, 2016. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides.

Dated: November 23, 2015.

Susan Hedman,

Regional Administrator, Region 5.

40 CFR part 52 is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

■ 2. Section 52.2570 is amended by adding paragraph (c)(134) to read as follows:

§ 52.2570 Identification of plan.

* * * * *

(c) * * *

(134) On July 2, 2015, the Wisconsin Department of Natural Resources submitted a request to revise the State Implementation Plan to satisfy the state board requirements under section 128 of the Clean Air Act.

(i) Incorporation by reference.

(A) Wisconsin Statutes, section 15.05 Secretaries, as revised by 2013 Wisconsin Act 20, enacted on June 30, 2013. (A copy of 2013 Wisconsin Act 20 is attached to section 15.05 to verify the enactment date.)

(B) Wisconsin Statutes, section 19.45(2), as revised by 1989 Wisconsin Act 338, enacted on April 27, 1990. (A copy of 1989 Wisconsin Act 338 is attached to section 19.45(2) to verify the enactment date.)

(C) Wisconsin Statutes, section 19.46 Conflict of interest prohibited; exception, as revised by 2007 Wisconsin Act 1, enacted on February 2, 2007. (A copy of 2007 Wisconsin Act 1 is attached to section 19.46 to verify the enactment date.)

■ 3. Section 52.2591 is amended by adding paragraph (j) to read as follows:

§ 52.2591 Section 110(a)(2) infrastructure requirements.

* * * * *

(j) Approval—In a July 2, 2015, submission, Wisconsin certified that the state has satisfied the infrastructure SIP requirements of section 110(a)(2)(E)(ii) for the 1997 ozone, 1997 $PM_{2.5}$, 2006 $PM_{2.5}$, 2008 Pb, 2008 ozone, 2010 NO_2, and 2010 SO_2 NAAQS.

[FR Doc. 2016–01015 Filed 1–20–16; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

46 CFR Part 15

[Docket No. USCG–2015–0758]

RIN 1625–AC25

Offshore Supply Vessels, Towing Vessel, and Barge Engine Rating Watches

AGENCY: Coast Guard, DHS.

ACTION: Direct final rule; confirmation of effective date.

SUMMARY: On October 26, 2015, the Coast Guard published a direct final rule, which notified the public of our intent to amend merchant mariner manning regulations to align them with statutory changes made by the Howard Coble Coast Guard and Maritime Transportation Act of 2014. The Act allows oilers serving on certain offshore support vessels, towing vessels, and barges to be divided into at least two watches. The change would increase the sea service credit affected mariners are permitted to earn for each 12-hour period of work from one day to one and a half days. The rule will go into effect as scheduled.

DATES: The effective date of the direct final rule published at 80 FR 65165 on October 26, 2015 is confirmed as January 25, 2016.

FOR FURTHER INFORMATION CONTACT: Mr. Davis Breyer, Marine Personnel Qualifications Division (CG–OES–1), Coast Guard; email *Davis.J.Breyer@uscg.mil,* telephone (202) 372–1445.

SUPPLEMENTARY INFORMATION: We received two comments in response to the direct final rule (DFR). The two comments we received were either not adverse or separable from and not within the scope of the rulemaking.

One commenter supported the rule and thanked the Coast Guard for its prompt action. Another commenter titled its comment as ''adverse'' and requested that the Coast Guard withdraw the DFR. The commenter agreed that ''the Coast Guard is obliged to align Coast Guard regulations with the statutes'' and did not oppose the changes to the regulation. The commenter argued, rather, that the Coast Guard should delay the rulemaking indefinitely and seek new legislation from Congress that limits every merchant mariner to serving a uniform maximum of 12 hours in a 24 hour period, except in an emergency.

The DFR conforms Coast Guard regulations to existing law, under which affected mariners may earn one and a half days sea service credit for each 12-hour period of work. The commenter did not oppose granting such mariners such credit for time worked. Instead, the commenter took issue with the absence of *statutory* restrictions on *the length of time certain mariners may be required to work.* The commenter advocated that the Coast Guard delay updating the regulations and request that Congress amend the statute further.

The DFR stated that ''we may adopt, as final, those parts of this rule on which no adverse comment was received.'' 80 FR 65166. The commenter's requests are separable from the rule and raises issues well outside the scope of the rule. The rule will therefore go into effect as scheduled.

Dated: January 14, 2016.

J.G. Lantz,

Director, Commercial Regulations and Standards, U.S. Coast Guard.

[FR Doc. 2016–01101 Filed 1–20–16; 8:45 am]

BILLING CODE P

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

February 8, 2016

Mr. Robert Kaplan
Acting Regional Administrator
USEPA-Region V (R-19J)
77 West Jackson Boulevard
Chicago IL 60604-3507

Subject: Wisconsin State Implementation Plan (SIP) Revision – PM2.5 Increment and Various PSD Program Changes

Dear Mr. Kaplan:

The information contained in this SIP Revision request serves to address several issues for which Wisconsin's 1997 and 2006 $PM_{2.5}$ Infrastructure SIPs, 1997 ozone Infrastructure SIP, and Wisconsin's Prevention of Significant Deterioration (PSD) program were partially disapproved. Changes in this rule package address the following disapprovals and findings of failure:

1. June 15, 2012 Federal Register (77 FR 35870) Final disapproved of narrow portions of Wisconsin's SIP related to identification of NOx as a precursor to ozone under the PSD permit program. This notice also covered narrow disapproval of 1997 8-hour ozone NAAQS and 1997 24-hour $PM_{2.5}$ NAAQS infrastructure SIPs for identification of NOx as a precursor to ozone (EPA Docket ID EPA-R05-OAR-2007-1179)

2. August 11, 2014 Federal Register (79 FR 46704) Final Finding of Failure to Submit a PSD State Implementation Plan Revision for $PM_{2.5}$ (EPA Docket ID EPA-R05-OAR-2014-0517)

3. December 10 2015 Federal Register (80 FR 76637) Final Disapproval of Infrastructure SIP With Respect to Oxides of Nitrogen as a Precursor to Ozone Provisions for the 2006 $PM_{2.5}$ NAAQS (EPA Docket ID EPA-R05-OAR-2009-0805)

This submittal also serves to supplement infrastructure SIPs previously submitted for which the PSD portions have not yet been acted on, including the 2008 lead, 2008 ozone, 2010 Nitrogen Dioxide, 2010 Sulfur Dioxide, and 2012 $PM_{2.5}$ NAAQS. This supplement is necessary to show that Wisconsin's PSD permitting program incorporates all federal requirements including the requirement to properly regulate NOx as a precursor to ozone.

The WDNR in DNR Board Order AM-15-14 is completing rulemaking to address these deficiencies including identifying NOx as a precursor to ozone, adding $PM_{2.5}$ increment values, modifying select definitions in ch. NR 405, and changing the $PM_{2.5}$ significant monitoring concentration. The sections of AM-15-14 that address the deficiencies noted above include:

Board Order Section	Deficiency
Section 3, amending NR 404.05(2) (intro),	$PM_{2.5}$ increment
Section 4, creating NR 404.05(2)(am)	$PM_{2.5}$ increment
Section 5, amending NR 404.05(3)(intro),	$PM_{2.5}$ increment
Section 6, creating NR 404.05(3)(am)	$PM_{2.5}$ increment
Section 7, amending NR 404.05(4) (intro),	$PM_{2.5}$ increment

Section 8, creating NR 404.05(4)(am),	$PM_{2.5}$ increment
Section 9, amending NR 405.02(3),(21)(a), and (21m)(a)	Changes to "Baseline area", "major modification", and "Major source baseline date" definitions
Section 10, creating NR 405.02(21m)(c)	Changes to "Major source baseline date" definition
Section 11, amending NR 405.02(22)(b) and (22m)(a)1. and (b)1.,	Changes to address NOx as a precursor to ozone and changes to "Minor source baseline date"
Section 12, creating NR 405.02(22m)(a)3	Changes to "Minor source baseline date"
Section 13, creating NR 405.02(27)(a)6.,	Changes to address NOx as a precursor to ozone
Section 14, amending NR 405.07(8)(a)3m.,	$PM_{2.5}$ Significant Monitoring Concentration
Section 15, creating NR 405.07(8)(a)3m. (Note)	$PM_{2.5}$ Significant Monitoring Concentration
Section 16, amending NR 405.07(8)(a)5.(Note)	Changes to address NOx as a precursor to ozone

Wisconsin requests a SIP revision for only these sections of Board Order AM-15-14. AM-15-14 also contains amendments to the definition of volatile organic compounds in NR 400, changes to the rule language in NR 420, and repeal of several outdated code sections related to the vapor recovery program. Wisconsin is not requesting a SIP revision for these additional proposed rule changes at this time.

Because the changes to chs. NR 404 and NR 405, Wis. Adm. Code, have not been published in the Wisconsin Register and are not yet official, we are requesting that EPA begin parallel processing of this SIP revision so that EPA can be ready for rulemaking when the changes to chs. NR 404 and NR 405, Wis. Adm. Code are finalized. We also believe that the parallel processing will assist Wisconsin in meeting the 2-year timeframe to rectify the noted deficiencies. We are submitting attachments to this letter to assist EPA staff, which includes a promulgation schedule for the final rules. In accordance with EPA's final rule on CAA Section 110 submission requirements effective March 16, 2015 [80 FR 7336], this SIP is being submitted using EPA's electronic SIP (eSIP) submission system. We will supply EPA additional information when AM-15-14 is finalized.

We appreciate the willingness of your staff to address this issue through the parallel processing procedure. Please contact Ralph Patterson at 608-267-7546 if you have any questions.

Sincerely,

Gail Good,
Air Management Program Director

Cc: Doug Aburano, USEPA-Region V (AR-18J), 77 West Jackson Boulevard, Chicago, IL 60604-3507
Ralph Patterson, WDNR
Kristin Hart, WDNR

Attachments

1. The January 2016 Natural Resources Rule Package (also known as the Green Sheet Package) containing a background memo, fiscal estimate and economic impact analysis, and rule AM-15-14

2. Rule AM-15-14
3. SIP Checklist
4. AM-15-14 Public Hearing notice – DNR did not receive any comments on AM-15-14 at the November 5, 2015 public hearing
5. Newspaper tare sheet showing Class 1 public hearing notice
6. SIP certification
7. Schedule for Final Adoption of AM-15-14

See 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. EPA is determining that the prong 4 portion of the aforementioned SIP submission does not meet federal requirements. Therefore, this action does not impose additional requirements on the state beyond those imposed by state law. For that reason, this action:

- Is not a ''significant regulatory action'' subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

The SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), nor will it impose substantial direct costs on tribal governments or preempt tribal law.

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by April 10, 2017. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. *See* section 307(b)(2).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Particulate Matter, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: January 5, 2017.

Heather McTeer Toney,

Regional Administrator, Region 4.

40 CFR part 52 is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart B—Alabama

■ 2. Section 52.53 is amended by adding a reserved paragraph (d) and paragraph (e) to read as follows:

§ 52.53 Approval status.

* * * * *

(e) *Disapproval.* Portion of the state implementation plan (SIP) revision submitted by the State of Alabama, through the Alabama Department of Environmental Management (ADEM) on August 20, 2012, that addresses the visibility protection (prong 4) element of Clean Air Act section 110(a)(2)(D)(i) for the 2008 8-hour Ozone National Ambient Air Quality Standards (NAAQS). EPA is disapproving the prong 4 portion of ADEM's SIP submittal because it relies solely on the State having a fully approved regional haze SIP to satisfy the prong 4 requirements for the 2008 8-hour Ozone NAAQS.

[FR Doc. 2017–02303 Filed 2–6–17; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R05–OAR–2016–0134; FRL–9957–58–Region 5]

Air Plan Approval; Wisconsin; NO_X as a Precursor to Ozone, $PM_{2.5}$ Increment Rules and PSD Infrastructure SIP Requirements

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving a revision to Wisconsin's state implementation plan (SIP), revising portions of the State's Prevention of Significant Deterioration (PSD) and ambient air quality programs to address deficiencies identified in EPA's previous narrow infrastructure SIP disapprovals and Finding of Failure to Submit (FFS). This SIP revision request is consistent with the Federal PSD rules and addresses the required elements of the fine particulate matter ($PM_{2.5}$) PSD Increments, Significant Impact Levels (SILs) and Significant Monitoring Concentration (SMC) Rule. EPA is also approving elements of SIP submissions from Wisconsin regarding PSD infrastructure requirements of section 110 of the Clean Air Act (CAA) for the 1997 $PM_{2.5}$, 1997 ozone, 2006 $PM_{2.5}$, 2008 lead, 2008 ozone, 2010 nitrogen dioxide (NO_2), 2010 sulfur dioxide (SO_2), and 2012 $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS). The infrastructure requirements are designed to ensure that the structural components of each state's air quality management program are adequate to meet the state's responsibilities under the CAA.

DATES: This final rule is effective on March 9, 2017.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–R05–OAR–2016–0134. All documents in the docket are listed on

the *www.regulations.gov* Web site. Although listed in the index, some information is not publicly available, *i.e.,* Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either through *www.regulations.gov* or at the Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. This facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding Federal holidays. We recommend that you telephone Andrea Morgan, Environmental Engineer, at (312) 353–6058, before visiting the Region 5 office.

FOR FURTHER INFORMATION CONTACT: Andrea Morgan, Environmental Engineer, Air Permitting Section, Air Programs Branch (AR–18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 353–6058, *morgan.andrea@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document whenever ''we,'' ''us,'' or ''our'' is used, we mean EPA. This supplementary information section is arranged as follows:

I. What is the background of these SIP submissions?

On August 8, 2016, the Wisconsin Department of Natural Resources (WDNR) submitted a SIP revision request to EPA to revise portions of its PSD and ambient air quality programs to address deficiencies identified in EPA's previous narrow infrastructure SIP disapprovals and FFS. Final approval of this SIP revision request will be consistent with the Federal PSD requirements and will address the required elements of the $PM_{2.5}$ PSD Increments, SILs and SMC Rule. Wisconsin submitted revisions to its rules NR 404 and 405 of the Wisconsin Administrative Code. The submittal requests that EPA approve the following revisions to Wisconsin's SIP: (1) Amend NR 404.05(2)(intro); (2) create NR 404.05(2)(am); (3) amend NR 404.05(3)(intro); (4) create NR 404.05(3)(am); (5) amend NR 404.05(4)(intro); (6) create NR 404.05(4)(am); (7) amend NR 405.02(3), (21)(a), and (21m)(a); (8) create NR 405.02(21m)(c); (9) amend NR 405.02(22)(b) and (22m)(a)1. and (b)1.; (10) create NR 405.02(22m)(a)3.; (11) amend NR 405.02(27)(a)6.; (12) amend NR 405.07(8)(a)3m; (13) create NR 405.07(8)(a)3m (Note); and (14) amend NR 405.07(8)(a)5.(Note).

WDNR also requested that this SIP revision supplement the PSD portions of its previously submitted infrastructure submittals, including 1997 $PM_{2.5}$, 1997 ozone, 2006 $PM_{2.5}$, 2008 lead, 2008 ozone, 2010 NO_2, 2010 SO_2, and 2012 $PM_{2.5}$.

A. PSD Rule Revisions

1. $PM_{2.5}$ Increments

To implement the $PM_{2.5}$ NAAQS, EPA issued two separate final rules that establish the New Source Review (NSR) permitting requirements for $PM_{2.5}$: The NSR $PM_{2.5}$ Implementation Rule promulgated on May 16, 2008 (73 FR 28321), and the $PM_{2.5}$ PSD Increments, SILs and SMC Rule promulgated on October 20, 2010 (75 FR 64864). EPA's 2008 NSR $PM_{2.5}$ Implementation Rule required states to submit applicable SIP revisions to EPA no later than May 16, 2011, to address this rule's PSD and nonattainment NSR SIP requirements. This rule requires that the state submit revisions to its SIP, including the identification of precursors for $PM_{2.5}$, the significant emissions rates for $PM_{2.5}$ and the requirement to include emissions which may condense to form particulate matter at ambient temperatures, known as condensables, in permitting decisions. EPA published a final approval of a revision to Wisconsin's SIP on October 16, 2014, (79 FR 62008), which included all of the required elements of the 2008 NSR Implementation Rule.

The $PM_{2.5}$ PSD Increments, SILs and SMC Rule required states to submit SIP revisions to EPA by July 20, 2012, adopting provisions equivalent to or at least as stringent as the $PM_{2.5}$ PSD increments and associated implementing regulations. On August 11, 2014, EPA published a finding that Wisconsin had failed to submit the required elements of the $PM_{2.5}$ PSD Increments, SILs and SMC Rule (79 FR 46703).

The $PM_{2.5}$ PSD Increments, SILs and SMC Rule also allows states to discretionarily adopt and submit for EPA approval: (1) SILs, which are used as a screening tool to evaluate the impact a proposed new major source or major modification may have on the NAAQS or PSD increment; and (2) a SMC (also a screening tool), which is used to determine the subsequent level of data gathering required for a PSD permit application for emissions of $PM_{2.5}$. However, on January 22, 2013, the United States Court of Appeals for the District of Columbia (Court) granted a request from EPA to vacate and remand to EPA the portions of the $PM_{2.5}$ PSD Increments, SILs and SMC Rule $PM_{2.5}$ addressing the SILs for $PM_{2.5}$ so that EPA could voluntarily correct an error in these provisions. The Court also vacated parts of the $PM_{2.5}$ PSD Increments, SILs and SMC Rule establishing a $PM_{2.5}$ SMC, finding that EPA was precluded from using the $PM_{2.5}$ SMCs to exempt permit applicants from the statutory requirement to compile preconstruction monitoring data. *Sierra Club* v. *EPA,* 705 F.3d 458, 463–69. On December 9, 2013, EPA issued a good cause final rule formally removing the affected SILs and replacing the SMC with a numeric value of 0 micrograms per cubic meter ($\mu g/m^3$) and a note that no exemption is available with regard to $PM_{2.5}$. *See* 78 FR 73698. As a result, SIP submittals could no longer include the vacated $PM_{2.5}$ SILs at 40 CFR 51.166(k)(2) and 52.21(k)(2) and the $PM_{2.5}$ SMC must be revised to 0 $\mu g/m^3$, consistent with 40 CFR 51.166(i)(5)(i)(c) and 52.21(i)(5)(i)(c).

2. Ozone

On November 29, 2005, EPA published (70 FR 71612) in the **Federal Register** the ''Final Rule to Implement the 8-Hour Ozone National Ambient Air Quality Standard—Phase 2''. Part of this rule established, among other requirements, oxides of nitrogen (NO_X) as a precursor to ozone. The final rule became effective on January 30, 2006.

On October 6, 2014, EPA finalized approval of revisions to Wisconsin's SIP that included the identification of NO_X as a precursor to ozone in the definition of regulated NSR pollutant. *See* 79 FR 60064.

B. Infrastructure SIP Submittals

The requirement for states to make a SIP submission of this type arises out of CAA section 110(a)(1). Pursuant to section 110(a)(1), states must make SIP submissions ''within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national primary ambient air quality standard (or any revision thereof),'' and these SIP submissions are to provide for the ''implementation, maintenance, and enforcement'' of such NAAQS. The statute directly imposes on states the duty to make these SIP submissions,

and the requirement to make the submissions is not conditioned upon EPA's taking any action other than promulgating a new or revised NAAQS. Section 110(a)(2) includes a list of specific elements that ''[e]ach such plan'' submission must address.

This specific rulemaking is only taking action on the PSD elements of the Wisconsin infrastructure submittals. Separate action has been or will be taken on the non-PSD infrastructure elements in separate rulemakings. The infrastructure elements for PSD are found in CAA 110(a)(2)(C), 110(a)(2)(D), and 110(a)(2)(J) and will be discussed in detail below. For further discussion on the background of infrastructure submittals, *see* 77 FR 45992, August 2, 2012.

II. What action did EPA propose on the SIP submissions?

On September 30, 2016 (81 FR 67261), EPA proposed approval of a SIP revision from WDNR requesting EPA to revise portions of its PSD and ambient air quality programs to address $PM_{2.5}$ increment requirements and incorporating NO_X as an ozone precursor. EPA proposed that these revisions were made to meet EPA's requirements for Wisconsin's PSD and NSR program and are consistent with Federal regulations.

EPA proposed that the revisions pertaining to $PM_{2.5}$ increments are consistent with Federal regulations and fully address the requirements of the $PM_{2.5}$ PSD Increments, SILs, and SMC Rule. EPA also proposed that revisions pertaining to NO_X as a precursor to ozone, in conjunction with EPA's October 6, 2014 approval (79 FR 60064), will address all of the PSD requirements of the ''Final Rule to Implement the 8-Hour Ozone National Ambient Air Quality Standard—Phase 2''.

WDNR also requested that this SIP revision supplement the PSD portions of its previously submitted infrastructure submittals. EPA proposed that based on the approval of the PSD related SIP revisions mentioned above and previously approved SIP revisions (*see* 79 FR 62008, October 16, 2014), EPA is able to fully approve the PSD related infrastructure requirements found in CAA sections 110(a)(2)(C), (D)(i)(II), and (J) for Wisconsin's 1997 $PM_{2.5,}$ 1997 ozone, 2006 $PM_{2.5}$, 2008 lead, 2008 ozone, 2010 NO_2, 2010 SO_2, and 2012 $PM_{2.5}$ NAAQS submittals.

III. What comments were received on the proposed rulemaking?

The comment period for the proposed action associated with today's rulemaking (81 FR 67261) closed on October 31, 2016. EPA received two supportive comments.

IV. What action is EPA taking?

EPA is approving revisions to Wisconsin's SIP that implement the $PM_{2.5}$ increment requirements and also incorporate NO_X as an ozone precursor. These revisions were made to meet EPA's requirements for Wisconsin's PSD and NSR program and are consistent with Federal regulations. Specifically, EPA is approving the following:

(i) NR 404.05(2)(intro) and (am)
(ii) NR 404.05(3)(intro) and (am)
(iii) NR 404.05(4)(intro) and (am)
(iv) NR 405.02(3) and (21)(a)
(v) NR 405.02(21m)(a) and (c)
(vi) NR 405.02(22)(b)
(vii) NR 405.02(22m)(a)1. and 3., and (b)1.
(viii) NR 405.02(27)(a)6.
(ix) NR 405.07(8)(a)3m and 3m(Note)
(x) NR 405.07(8)(a)5.(Note)

The revisions pertaining to $PM_{2.5}$ increments will fully address the requirements of the $PM_{2.5}$ PSD Increments, SILs, and SMC Rule and the deficiencies identified in EPA's August 11, 2014, Finding of Failure to Submit. The revisions pertaining to NO_X as a precursor to ozone will, in conjunction with EPA's October 6, 2014 approval, address all of the PSD requirements of the ''Final Rule to Implement the 8-Hour Ozone National Ambient Air Quality Standard—Phase 2'' and stops the Federal Implementation Plan (FIP) clock triggered by the FFS mentioned above (79 FR 46704, August 11, 2014).

EPA is also approving the PSD related infrastructure requirements found in CAA sections 110(a)(2)(C), (D)(i)(II), and (J) for Wisconsin's 1997 $PM_{2.5}$, 1997 ozone, 2006 $PM_{2.5}$, 2008 lead, 2008 ozone, 2010 NO_2, 2010 SO_2, and 2012 $PM_{2.5}$ NAAQS submittals. This action stops the FIP clock triggered by the disapproval of NO_X as a precursor to ozone for the PSD provisions for the 1997 ozone and $PM_{2.5}$ infrastructure SIPs (77 FR 35870, June 15, 2012). This action requires significant revisions to existing portions of 40 CFR 52.2591. Because there will already be substantial revisions, EPA will also be revising additional portions of 40 CFR 52.2591 that are not related to PSD for clarification or consolidation purposes only. These additional edits will not change the meaning or intent of the original language.

V. Incorporation by Reference

In this rule, EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is finalizing the incorporation by reference of the Wisconsin Regulations described in the amendments to 40 CFR part 52 set forth below. EPA has made, and will continue to make, these documents generally available through *www.regulations.gov* and at the EPA Region 5 Office (please contact the person identified in the ''For Further Information Contact'' section of this preamble for more information).

VI. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible

methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by April 10, 2017. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (*See* section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides.

Dated: December 13, 2016.

Robert A. Kaplan,

Acting Regional Administrator, Region 5.

40 CFR part 52 is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

■ 2. Section 52.2570 is amended by adding paragraph (c)(135) to read as follows:

§ 52.2570 Identification of plan.

* * * * *

(c) * * *

(135) On August 8, 2016, WDNR submitted a request to revise portions of its Prevention of Significant Deterioration (PSD)and ambient air quality programs to address the required elements of the fine particulate matter ($PM_{2.5}$) PSD Increments, Significant Impact Levels (SILs) and Significant Monitoring Concentration (SMC) Rule and the Final Rule to Implement the 8-Hour Ozone National Ambient Air Quality Standard—Phase 2. Wisconsin submitted revisions to its rules NR 404 and 405 of the Wisconsin Administrative Code.

(i) Incorporation by reference.

(A) Wisconsin Administrative Code, NR 404.05 Ambient Air Increments. NR 404.05(2) introductory text; NR 404.05(2)(am); NR 404.05(3) introductory text; NR 404.05(3)(am); NR 404.05(4) introductory text; and NR 404.05(4)(am), as published in the Register, July 2016, No. 727, effective August 1, 2016.

(B) Wisconsin Administrative Code, NR 405.02 Definitions. NR 405.02(3); NR 405.02(21)(a); NR 405.02(21m), except (b); NR 405.02(22)(b); NR 405.02(22m)(a)1. and 3. and (b)1.; and NR 405.02(27)(a)6., as published in the Register, July 2016, No. 727, effective August 1, 2016.

(C) Wisconsin Administrative Code, NR 405.07 Review of major stationary sources and major modifications — source applicability and exemptions. NR 405.07(8)(a)3m; 405.07(8)(a)3m. Note; and NR 405.07(8)(a)5. Note, as published in the Register, July 2016, No. 727, effective August 1, 2016.

■ 3. Section 52.2591 is revised to read as follows:

§ 52.2591 Section 110(a)(2) infrastructure requirements.

(a) *Approval.* In a December 12, 2007 submittal, supplemented on January 24, 2011, March 28, 2011, July 2, 2015, and August 8, 2016, Wisconsin certified that the State has satisfied the infrastructure SIP requirements of section 110(a)(2)(A) through (C), (D)(ii), (E) through (H), and (J) through (M) for the 1997 8-hour ozone NAAQS.

(b) *Approval.* In a December 12, 2007 submittal, supplemented on January 24, 2011, March 28, 2011, July 2, 2015, and August 8, 2016, Wisconsin certified that the State has satisfied the infrastructure SIP requirements of section 110(a)(2)(A) through (C), (D)(ii), (E) through (H), and (J) through (M) for the 1997 $PM_{2.5}$ NAAQS.

(c) *Approval.* In a January 24, 2011, submittal, supplemented on March 28, 2011, June 29, 2012, July 2, 2015, and August 8, 2016, Wisconsin certified that the State has satisfied the infrastructure SIP requirements of section 110(a)(2)(A) through (H), and (J) through (M) for the 2006 24-hour $PM_{2.5}$ NAAQS. We are not finalizing action on (D)(i)(I) and will address these requirements in a separate action.

(d) *Approval.* In a July 26, 2012, submittal, supplemented July 2, 2015, and August 8, 2016, Wisconsin certified that the State has satisfied the infrastructure SIP requirements of section 110(a)(2)(A) through (H), and (J) through (M) for the 2008 lead (Pb) NAAQS.

(e) *Approval and Disapproval.* In a June 20, 2013, submittal with a January 28, 2015, clarification, supplemented July 2, 2015, and August 8, 2016, Wisconsin certified that the state has satisfied the infrastructure SIP requirements of section 110(a)(2)(A) through (H), and (J) through (M) for the 2008 ozone NAAQS. For 110(a)(2)(D)(i)(I), we are approving prong one and disapproving prong two.

(f) *Approval.* In a June 20, 2013, submission with a January 28, 2015, clarification, supplemented July 2, 2015, and August 8, 2016, Wisconsin certified that the state has satisfied the infrastructure SIP requirements of section 110(a)(2)(A) through (H), and (J) through (M) for the 2010 nitrogen dioxide (NO_2) NAAQS.

(g) *Approval.* In a June 20, 2013, submission with a January 28, 2015, clarification, supplemented July 2, 2015, and August 8, 2016, Wisconsin certified that the state has satisfied the infrastructure SIP requirements of section 110(a)(2)(A) through (H), and (J) through (M) for the 2010 sulfur dioxide (SO_2) NAAQS. We are not taking action on the transport provisions in section 110(a)(2)(D)(i)(I), and will address these requirements in a separate action.

(h) *Approval.* In a July 13, 2015, submission, supplemented August 8, 2016, WDNR certified that the state has satisfied the infrastructure SIP requirements of section 110(a)(2)(A) through (H), and (J) through (M) for the 2012 $PM_{2.5}$ NAAQS. We are not taking action on the transport provisions in section 110(a)(2)(D)(i)(I), and the

stationary source monitoring and reporting requirements of section 110(a)(2)(F). We will address these requirements in a separate action.

[FR Doc. 2017–02530 Filed 2–6–17; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[EPA–HQ–OPP–2016–0083; FRL–9957–68]

Propamocarb; Pesticide Tolerance

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation establishes a tolerance for residues of propamocarb in or on potato. Bayer CropScience requested these tolerances under the Federal Food, Drug, and Cosmetic Act (FFDCA).

DATES: This regulation is effective February 7, 2017. Objections and requests for hearings must be received on or before April 10, 2017, and must be filed in accordance with the instructions provided in 40 CFR part 178 (see also Unit I.C. of the **SUPPLEMENTARY INFORMATION**).

ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA–HQ–OPP–2016–0083, is available at *http://www.regulations.gov* or at the Office of Pesticide Programs Regulatory Public Docket (OPP Docket) in the Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW., Washington, DC 20460–0001. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the OPP Docket is (703) 305–5805. Please review the visitor instructions and additional information about the docket available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Registration Division (7505P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; main telephone number: (703) 305–7090; email address: *RDFRNotices@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you are an agricultural producer, food manufacturer, or pesticide manufacturer. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Crop production (NAICS code 111).
- Animal production (NAICS code 112).
- Food manufacturing (NAICS code 311).
- Pesticide manufacturing (NAICS code 32532).

B. How can I get electronic access to other related information?

You may access a frequently updated electronic version of EPA's tolerance regulations at 40 CFR part 180 through the Government Printing Office's e-CFR site at *http://www.ecfr.gov/cgi-bin/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl.*

C. How can I file an objection or hearing request?

Under FFDCA section 408(g), 21 U.S.C. 346a, any person may file an objection to any aspect of this regulation and may also request a hearing on those objections. You must file your objection or request a hearing on this regulation in accordance with the instructions provided in 40 CFR part 178. To ensure proper receipt by EPA, you must identify docket ID number EPA–HQ–OPP–2016–0083 in the subject line on the first page of your submission. All objections and requests for a hearing must be in writing, and must be received by the Hearing Clerk on or before April 10, 2017. Addresses for mail and hand delivery of objections and hearing requests are provided in 40 CFR 178.25(b).

In addition to filing an objection or hearing request with the Hearing Clerk as described in 40 CFR part 178, please submit a copy of the filing (excluding any Confidential Business Information (CBI)) for inclusion in the public docket. Information not marked confidential pursuant to 40 CFR part 2 may be disclosed publicly by EPA without prior notice. Submit the non-CBI copy of your objection or hearing request, identified by docket ID number EPA–HQ–OPP–2016–0083, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be CBI or other information whose disclosure is restricted by statute.
- *Mail:* OPP Docket, Environmental Protection Agency Docket Center (EPA/DC), (28221T), 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001.
- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.html.*

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

II. Summary of Petitioned-For Tolerance

In the **Federal Register** of October 27, 2016 (81 FR 74753) (FRL–9954–27), EPA issued a document pursuant to FFDCA section 408(d)(3), 21 U.S.C. 346a(d)(3), announcing the filing of a pesticide petition (PP 5F8430) by Bayer CropScience, 2 T.W. Alexander Drive, P.O. Box 12014, Research Triangle Park, NC 27709. The petition requested that 40 CFR 180.499 be amended by increasing the tolerance for residues of the fungicide propamocarb hydrochloride, in or on potato from 0.06 to 0.30 parts per million (ppm). That document referenced a summary of the petition prepared by Bayer CropScience, the registrant, which is available in the docket, *http://www.regulations.gov.* There were no comments received concerning this action for propamocarb in response to the notice of filing.

III. Aggregate Risk Assessment and Determination of Safety

Section 408(b)(2)(A)(i) of FFDCA allows EPA to establish a tolerance (the legal limit for a pesticide chemical residue in or on a food) only if EPA determines that the tolerance is ''safe.'' Section 408(b)(2)(A)(ii) of FFDCA defines ''safe'' to mean that ''there is a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposures and all other exposures for which there is reliable information.'' This includes exposure through drinking water and in residential settings, but does not include occupational exposure. Section 408(b)(2)(C) of FFDCA requires EPA to give special consideration to exposure of infants and children to the pesticide chemical residue in establishing a tolerance and to ''ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to the pesticide chemical residue. . . .''

Consistent with FFDCA section 408(b)(2)(D), and the factors specified in FFDCA section 408(b)(2)(D), EPA has

APPENDIX 2

2011 and 2017 Wisconsin Emission Inventories Documentation

Table of Contents

ABBREVIATIONS

AEI	Air Emissions Inventory
AADT	Average Annual Daily Traffic
CAMD	Clean Air Markets Division
DOE	Department of Energy
EGU	Electric Generating Unit
EIA	Energy Information Administration
EIs	Emission Inventories
EPA	Environmental Protection Agency
FID	Facility Identification Number
FIRE	Factor Information Retrieval
ICI	Industrial, Commercial and Institutional
LADCO	Lake Michigan Air Directors Consortium
MAR	Commercial Marine Aircraft and Rail Locomotive
MOVES	Motor Vehicle Emission Simulator
NAICS	North American Industrial Classification System
NEC	Not Elsewhere Classified
NEI	National Emissions Inventory
NOx	Nitrogen Oxides
OBD	On-Board Diagnostics
ORVR	On-Board Refueling Vapor Recovery
SCC	Source Classification Code
SED	State Energy Data
SIP	State Implementation Plan
tpsd	Tons per Summer Day
TSD	Technical Support Document
VHT	Vehicle-Hours of Travel
VMT	Vehicle-Miles of Travel
VOC	Volatile Organic Compounds
WDNR	Wisconsin Department of Natural Resources
WDOT	Wisconsin Department of Transportation

1. Introduction

This appendix provides additional information for the sector-specific nitrogen oxides (NOx) and volatile organic compounds (VOC) tons per summer day (tpsd) emission estimates in section 4.2 (Nonattainment Year (2011) and Attainment Year (2017) Inventories) of the Wisconsin Department of Natural Resources' (WDNR) Redesignation Request and Maintenance Plan for the Shoreline Sheboygan County, Wisconsin 1997 and 2008 8-hour Ozone Nonattainment Area (redesignation request from hereon). For U.S. Environmental Protection Agency (EPA) to redesignate an area from nonattainment to attainment for ozone, a state must show that improvement in air quality is due to permanent and enforceable reductions in emissions. This is accomplished in part by developing and comparing a nonattainment year (2011) emissions inventory and attainment year (2017) emissions inventory.

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 (EIs) include all reporting sources at that facility regardless of the magnitude of reported emissions. For this attainment demonstration, portable point sources, such as asphalt plants and rock crushers, were reported under nonpoint sources to be consistent with other states. The 2011 point source emission inventory was created using annually reported point source emissions, the EPA's Clean Air Markets Division (CAMD) database and approved EPA techniques for emissions calculation (e.g., emission factors).

Whenever feasible, federal, state and local controls were factored into the emission calculations. Emissions were estimated by collecting process-level information from each facility that qualifies for inclusion into the state's point source database. In Wisconsin, this information is normally collected via an internet or a computer diskette submittal, 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 Factor Information Retrieval (FIRE) database. 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 facility located in the Shoreline Sheboygan County area: the Edgewater 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 summer day emissions. The VOC summer day emissions were derived by multiplying the facility's ozone season heat input by an average VOC emission rate. Appendix 4 provides the detailed methodology used to calculate EGU summer day emissions.

The 2011 and 2017 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 Factor Information Retrieval 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 2017. These non-EGU point source facilities are assumed to operate steadily over 365 days each year. Therefore, summer day emissions are derived by dividing each facility's annual reported emissions by 365 days.

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, and 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 the residential and commercial portable fuel containers and Stage II refueling 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 (TSD).[1]

For the 2017 attainment year, nonpoint source emissions inventory estimates were based on the data interpolation between 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.[2]

The WDNR updated EPA nonpoint emissions estimates for stationary nonpoint sources for the following sectors: fuel combustion at 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.

[1] https://www.epa.gov/sites/production/files/2015-10/documents/nei2011v2_tsd_14aug2015.pdf
[2] http://views.cira.colostate.edu/wiki/wiki/10202

For the WDNR updated nonpoint fuel combustion sectors, the EPA provided Source Classification Code (SCC) cross-walk between nonpoint and their corresponding point source SCCs 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 (DOE)'s Energy Information Administration (EIA). This survey data is the source of activity data for the ICI fuel combustion. EIA's annual publication titled the State Energy Data (SED) report provided total consumption for most of the fuel oil and kerosene.[3]

In updating emission estimates for most of the solvent utilization for industrial surface coating categories, U.S. Census Bureau's employment and County business pattern data were used as activity data. [4]

In order to obtain the area source emissions for the shoreline Sheboygan County area, the whole county emission estimates were allocated to the partial county based on population data. The Sheboygan County population for 2017 was estimated by interpolating the population 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 shoreline Sheboygan County area compared with the entire county. For 2011 and 2017, 52% of the county's population was estimated to live in the shoreline Sheboygan County area. Appendix 6 includes table of area source emissions by source category.

Fuel Combustion: ICI

For the 2011 NEI, WDNR estimated emissions for ICI fuel combustion categories. For the 2014 NEI, EPA introduced ICI Tool to use in estimating area source emissions and WDNR used the Tool to develop the area source emissions estimates for ICI fuel combustion. However, for this redesignation request, WDNR staff back-calculated 2011 NOx emissions for selected SCCs of ICI fuel combustion from EPA's 2016 and 2023 emissions modeling estimates, which are based off the 2014 NEI. The selection was made as there is a significant discrepancy from 2011 to 2016 emission estimates for these SCCs. This was done due to a suspected methodology change by EPA for NOx emission estimates for these categories after 2011. Such methodology change led to significantly lower NOx emission estimates for 2102006000 and 2102008000 and significantly higher NOx emissions estimates for 2103004002. 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 staff back-calculated VOC emissions for selected SCCs of residential wood combustion from EPA's 2016 and 2023 emissions modeling

[3] U.S. Energy Information Administration, http://www.eia.gov
[4] https://www.census.gov/programs-surveys/cbp/data.html

estimates. The selection was made if there is 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.

Solvent Utilization: Agricultural Pesticides

For the 2011 NEI, WDNR adopted EPA estimated emissions for agricultural pesticide application. However, for this redesignation request, WDNR staff back-calculated VOC emissions for this source category from 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.

Solvent Utilization: Surface coating and degreasing

For the 2011 NEI, WDNR adopted EPA estimated emissions for surface coating and degreasing applications. However, for this redesignation request, WDNR staff back-calculated VOC emissions for two selected applications of solvent utilization in surface coating as well as for degreasing from EPA's 2016 and 2023 emissions modeling estimates. The decision was made based on significant discrepancies from 2011 to 2016 emission estimates for SCCs 2401020000, 2401025000 and 2415000000.

Miscellaneous NEC: Dairy Cattle

For the 2011 NEI, WDNR adopted EPA estimated emissions for miscellaneous NEC area source applications. However, for this redesignation request, WDNR staff back-calculated VOC emissions for a selected application of miscellaneous NEC from EPA's 2016 and 2023 emissions modeling estimates. The decision was made based on a significant discrepancy from 2011 to 2016 emission estimates for SCC 2805018000.

Gasoline Distribution, Stage I: Bulk Terminals and Pipelines

For the 2011 NEI, WDNR adopted EPA estimated emissions for gasoline distribution Stage I applications. However, for this redesignation request, WDNR staff back-calculated VOC emissions for two selected applications of Stage I gasoline distribution from EPA's 2016 and 2023 emissions modeling estimates. The decision was made based on significant discrepancies from 2011 to 2016 emission estimates for SCCs 2501050120 and 2505040120.

Gasoline Service Stations, Stage II: Total Refueling

The WDNR estimated emissions from vehicle refueling at gasoline stations (Stage II refueling) using EPA's MOVES2014b model with the same activity inputs used for the onroad modeling.

During 2011, a Stage II vapor recovery program (vapor recovery nozzles at gas pumps) was in effect in nine eastern Wisconsin counties, including Sheboygan County. This program, started

during the 1990s, was effective in reducing refueling emissions in older vehicles, but was redundant or even counter-productive in reducing emissions for newer vehicles, because the newer vehicles controlled refueling emissions through on-board refueling vapor recovery (ORVR) systems.[5] Wisconsin submitted a state implementation plan (SIP) revision removing Stage II requirements, and EPA approved the revision in November 2013. By 2017 most gasoline stations in the nine eastern Wisconsin counties had removed or decommissioned their Stage II vapor recovery systems. Because of this significant decrease in Stage II systems from 2011 to 2017, WDNR used different Stage II-related inputs to MOVES2014b for those two years.

To model the effects of a Stage II program, MOVES2014b provides the following two inputs: (1) vapor displacement reductions and (2) spillage reductions.

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).[6] Because of a near total removal of Stage II systems by the summer of 2017, WDNR used a value of 0% for 2017.

WDNR used a spillage reduction percentage of 50% for 2011. This percentage is the standard percentage used in the MOVES2014b model for all areas in the United States having a Stage II vapor recovery program. Again, WDNR used a value of 0% for 2017.

2.3 Onroad Mobile Sources

Onroad mobile sources are motorized mobile equipment that are primarily used on public roadways. Examples of onroad mobile sources include cars, trucks, buses and road motorcycles. The emissions reported in this document were estimated by the Motor Vehicle Emission Simulator (MOVES), the EPA's recommended mobile source model. The version used was MOVES2014b, the most recent version of the model, released in August 2018. All estimates were made in accordance with the following EPA technical guidance:

- MOVES2014a User's Guide (U.S. EPA, Office of Transportation and Air Quality, Assessment and Standards Division, November 2015, EPA 420-B-15-095). This user's guide also applies to MOVES2014b.
- MOVES2014, MOVES2014a, and MOVES2014b Technical Guidance: Using MOVES to Prepare Emission Inventories for State Implementation Plans and Transportation Conformity (U.S. EPA, Office of Transportation and Air Quality, Assessment and Standards Division, August 2018, EPA-420-B-18-039).

The onroad mobile NOx and VOC emissions for the shoreline Sheboygan County area for 2011 and 2017 (as well as the 2025 and 2032 projections) are presented in Appendix 8, broken down

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

[6] "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: "MOVES2014, MOVES2014a, and MOVES2014b Technical Guidance: Using MOVES to Prepare Emission Inventories for State Implementation Plans and Transportation Conformity", EPA-420-B-18-039, August 2018.)

by source type (vehicle class), fuel type and road type. A Table summarizing vehicle activity data is presented in Appendix 8 after the emissions tables.[7]

2.3.1 Transportation Data

The modeling inputs to MOVES include detailed transportation data (e.g., vehicle-miles of travel (VMT) by vehicle class, road class and hour of day, and average speed distributions), requiring support from the state agency conducting transportation modeling in Sheboygan County, the Wisconsin Department of Transportation (WDOT). WDOT maintains transportation network inventory data for the state. WDOT has developed and validated travel simulation models to estimate and forecast VMT and average speed distributions for the state, including detailed data for both the full Sheboygan County and the shoreline Sheboygan County area.

WDOT provided to WDNR their most recent transportation modeling data for both the full Sheboygan County and the shoreline Sheboygan County area on September 19, 2019. The data cover the two years of 2010 (base year) and 2045 (projection year). (Data for intermediate years are available by linear interpolation.) For each of these years, the data include average weekday vehicle-miles of travel (VMT), vehicle-hours of travel (VHT) and average speed; all broken down into 14 five-mph speed bins within 13 roadway classes within two general vehicle classes. For these data "weekday" includes only the three middle weekdays (Tuesday, Wednesday and Thursday).

The 14 speed bins are: 0-5 mph, 5-10 mph, … 60-65 mph and 65+ mph.

The 13 roadway classes are:

- Interstate
- Freeway
- Ramp
- Expressway
- Urban Principal Arterial
- Urban Minor Arterial
- Urban Collector
- Urban Local
- Rural Principal Arterial
- Rural Minor Arterial
- Rural Major Collector
- Rural Minor Collector
- Rural Local

The two general vehicle classes are: Auto and Truck

[7] The complete set of inputs to MOVES2014b is too lengthy to include in this document. However, electronic copies of the inputs can be obtained from WDNR by sending an email to christopher.bovee@wisconsin.gov or by phone at (608) 266-5542.

Besides WDOT transportation modeling data, WDNR utilized the following additional WDOT transportation data in developing inputs to MOVES:

- WDOT official VMT estimates posted at the WDOT webpage.[8] In addition, WDOT provided spreadsheets to WDNR which expand these posted estimates by breaking down each of the official county VMT estimates into roadway classes.
- Statewide day-of-week and month-of-year VMT adjustment factors developed by WDOT and provided by the Southeastern Wisconsin Regional Planning Commission (SEWRPC) for the 10 years of 2008 to 2017.

2.3.2 Descriptions of MOVES Modeling Inputs

2.3.2.1 Vehicle-Miles of Travel (VMT)

As specified in the EPA technical guidance, the onroad inventories for ozone SIPs should generally be based on summer *weekday* VMT, where "weekday" includes all five of the weekdays. WDNR defined "summer" as the three months of June, July and August. A summary of the procedures WDNR used to obtain summer weekday VMT estimates for input to MOVES follows. WDOT has previously agreed with these procedures.

• **Factors to Convert Annual Average Day VMT (AADT) to Summer Weekday VMT:** WDNR developed from the SEWRPC-provided day-of-week and month-of-year statewide VMT adjustment factors for 2011 and 2017, the following factors to convert AADT (annual VMT divided by 365) to summer weekday VMT:

Table A2.1. Factors to Convert AADT to Summer Weekday VMT.

MOVES Roadway Type	Year	
	2011	2017
Rural Restricted	1.157	1.143
Rural Unrestricted	1.154	1.150
Urban Restricted	1.153	1.147
Urban Unrestricted	1.146	1.158
Weighted Average for Shoreline Sheboygan Area	1.1523	1.1499

• **Estimation of Summer Weekday VMT:** A summary of the WDOT-provided and WDNR-estimated VMTs for Sheboygan County and the shoreline Sheboygan County area follows:

[8] http://wisconsindot.gov/Pages/projects/data-plan/veh-miles/default.aspx

Table A2.2. VMTs for Sheboygan County and Shoreline Sheboygan County Area.

Year	Vehicle-Miles of Travel (VMT)			
	Full Sheboygan County		Shoreline Sheboygan County Area	
	WDOT-Modeled (Tu-Th)	WDOT Official Posted[9] AADT (Su-Sa)	WDOT-Modeled (Tu-Th)	WDNR-Estimated Summer Weekday (Mo-Fr)
2010	2,402,400	2,706,644	1,142,453	-
2011	2,417,776	2,622,748	1,149,905	1,437,342
2017	2,510,034	2,945,270	1,194,618	1,611,860
2045	2,940,570	-	1,403,275	-

• 2011 Summer Weekday VMT: The WDOT-modeled VMT for an average weekday (Tuesday – Thursday) for the year 2011 is 1,149,905 for the shoreline Sheboygan County area (interpolated between 2010 and 2045). After adjusting to official WDOT annual average day VMT estimates (2,622,748/2,417,776 = about +8.48%) and then to summer weekday (about +15.23%), this value becomes 1,149,905 * ~1.0848 * ~1.1523 = 1,437,342.

• 2017 Summer Weekday VMT: The WDOT-modeled VMT for an average weekday (Tuesday – Thursday) for the year 2017 is 1,194,618 for the shoreline Sheboygan County area (interpolated between 2010 and 2045). After adjusting to official WDOT annual average day VMT estimates (2,945,270/2,510,034 = about +17.34%)[10] and then to summer weekday (about +14.99%), this value becomes 1,194,905 * ~1.1734 * ~1.1499 = 1,611,860.

• **Two vehicle classes to 13 classes:** WDOT provided VMT data for two general vehicle classes (Auto and Truck). The MOVES model requires that VMT be broken down further. WDNR broke down the VMT to the 13 MOVES vehicle classes of:

- 11 - Motorcycles
- 21 – Passenger Cars
- 31 – Passenger Trucks
- 32 – Light Commercial Trucks
- 41 – Intercity Buses
- 42 – Transit Buses
- 43 – School Buses
- 51 – Refuse Trucks
- 52 – Single Unit Short-haul Trucks
- 53 – Single Unit Long-haul Trucks
- 54 – Motor Homes

[9] http://wisconsindot.gov/Pages/projects/data-plan/veh-miles/default.aspx

[10] The reason why the adjustment factor to official average day was much higher for 2017 (+17.34%) than it was for 2011 (+8.48%) is that the official WDOT VMT for Sheboygan County decreased by 3.1% from 2010 to 2011 (making the linearly interpolated modeled VMT of 1,149,905 an overestimate), but then increased by 12.3% from 2011 to 2017 (making the linearly interpolated modeled VMT for 2017 of 1,194,618 an underestimate).

- 61 – Combination Short-haul Trucks
- 62 – Combination Long-haul Trucks

WDOT has previously verified to WDNR that their class of "Auto" corresponds to the MOVES classes of 11 through 32 and their class of "Truck" corresponds to the MOVES classes of 41 through 62. WDNR then allocated the VMT in each of the two WDOT classes to the corresponding MOVES classes by utilizing the MOVES2014b default VMT proportions for Sheboygan County by vehicle class.

The resulting summer weekday VMTs for the shoreline Sheboygan County area that WDNR input into MOVES2014b are:

Table A2.3. Summer Weekday VMT input into MOVES2014b.

MOVES Vehicle Class	Year	
	2011	**2017**
Motorcycles	12,588	14,008
Passenger Cars	654,561	739,111
Passenger Trucks	499,796	553,764
Light Commercial Trucks	126,493	141,336
Intercity Buses	724	841
Transit Buses	1,474	1,668
School Buses	3,991	4,641
Refuse Trucks	2,361	2,730
Single Unit Short-haul Trucks	42,657	51,529
Single Unit Long-haul Trucks	2,330	2,895
Motor Homes	1,466	1,785
Combination Short-haul Trucks	19,311	23,354
Combination Long-haul Trucks	69,591	74,197
TOTAL	**1,437,342**	**1,611,860**

The total summer weekday VMT in 2017 is 12.1% greater than the total summer weekday VMT in 2011.

2.3.2.2 VMT by Hour of Day

WDNR used the MOVES2014b default hourly VMT distributions.

2.3.2.3 Vehicle Population

WDNR estimated vehicle populations for each vehicle class by dividing annual VMT by the MOVES defaults for average annual mileage accumulation. For the shoreline Sheboygan County area, the total vehicle population in 2017 (44,498) is 10.9% greater than the total vehicle population in 2011 (40,122). A more-detailed breakdown of vehicle population data is provided in Appendix 8.

2.3.2.4 Average Speed Distribution

WDNR adjusted the 14-bin speed distribution provided by WDOT to the 16-bin speed distribution required by the MOVES model. Since the speed limit for interstate highways in Sheboygan County was lower in 2011 (65 mph) than for 2017 (70 mph), for the year 2011 WDNR did not allocate any of the VHT in WDOT's highest speed bin (65+ mph) to the highest speed bin in MOVES (72.5 mph to 77.5 mph).

2.3.2.5 Vehicle Age Distribution

Year 2011: During the year 2014 WDNR developed local vehicle age distributions for that year 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. WDNR calculated the local distributions from a file of select fields from the state's registration database as of March 2014, provided by the WDOT. WDNR calculated a 2014 distribution for a seven-county region including Sheboygan County. 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 Wisconsin Department of Transportation's (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). WDNR calculated a 2017 distribution for a seven-county region including Sheboygan County.

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

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

MOVES Vehicle Class	Year	
	2011	2017
Motorcycle	7.28	13.74
Passenger Car	9.67	9.37
Passenger Truck	8.18	7.44
Light Commercial Truck	10.33	10.27
Intercity Bus	9.18	11.29
Transit Bus	10.60	12.33
School Bus	6.71	7.42
Refuse Truck	10.64	10.95
Single Unit Short-haul Truck	11.32	11.14
Single Unit Long-haul Truck	11.84	11.95
Motor Home	10.76	15.29
Combination Short-haul Truck	13.46	13.55
Combination Long-haul Truck	7.53	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.

2.3.2.6 Road Type Distribution

MOVES requires that VMT for each of the 13 source types (see section 2.3.2.1) be allocated to the following four roadway classes:

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

For each of the two WDOT vehicle classes (Auto and Truck), WDNR allocated VMT from the 13 WDOT roadway classes to the 4 MOVES roadway classes as follows:

Table A2.5. Allocation of VMT in Shoreline Sheboygan County to the Four MOVES Roadway Classes.

WDOT Roadway Class	MOVES Roadway Class			
	Rural Restricted	**Rural Unrestricted**	**Urban Restricted**	**Urban Unrestricted**
Interstate	71.65% (2011) 58.77% (2017-32)		28.35% (2011) 41.23% (2017-32)	
Freeway	No Freeway VMT in Shoreline Sheboygan County			
Ramp	65.26% (2011) 52.81% (2017-32)		34.74% (2011) 47.19% (2017-32)	
Expressway			100%	
Urban Principal Arterial				100%
Urban Minor Arterial				100%
Urban Collector				100%
Urban Local				100%
Rural Principal Arterial		100%		
Rural Minor Arterial		100%		
Rural Major Collector		100%		
Rural Minor Collector		100%		
Rural Local		100%		

Since WDOT's four restricted access classes (Interstate, Freeway, Ramp and Expressway) do not have a rural/urban breakdown, WDNR calculated the rural/urban splits from WDOT-provided 2011 and 2017 VMT summaries which did break down their official posted[11] VMTs by county into rural and urban areas for those four restricted access classes.

The resulting road type distributions for the two vehicle classes of Auto and Truck were then allocated to distributions for each of the 13 MOVES source types by utilizing the MOVES2014b default road type distributions for Sheboygan County for those 13 source types.

A detailed breakdown of VMT by roadway class by MOVES source type is provided in Appendix 8.

2.3.2.7 Ramp Fraction

The WDOT transportation modeling data included VHT values for ramp travel, allowing WDNR to calculate the ramp fractions.

2.3.2.8 Fuel Formulation and Supply

The MOVES defaults currently provide the best available fuel data for the years 2011 and 2017 and therefore were used.

2.3.2.9 Vehicle Inspection and Maintenance Program

Sheboygan County is within the seven-county southeastern Wisconsin vehicle inspection program region. On-Board Diagnostic (OBD) checks were assumed for most model year 1996 and newer passenger cars, passenger trucks and light commercial trucks.

2.3.2.10 Meteorology Data

Temperatures conducive to peak ozone formation were assumed for the summer weekday modeling. The WDNR has consistently used the same minimum and maximum temperatures for onroad modeling for ozone SIPs since the early 1990s. The temperatures were developed from an analysis of peak ozone days and have minimum/maximum values of 65/93 degrees Fahrenheit for Sheboygan 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.

[11] http://wisconsindot.gov/Pages/projects/data-plan/veh-miles/default.aspx

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 2017 nonroad emissions for the non-MAR categories were developed using the EPA's MOVES2014b model, using the same hot summer day temperatures used for the onroad modeling. The model was run for Sheboygan County for the months of June, July and August. Hot summer day emissions were calculated by dividing the total emissions over these three months by 92 (the number of days in the three months). Emissions were then allocated from the full county to the shoreline Sheboygan 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

For the year 2011, the annual emissions estimates used for Sheboygan County are those in the EPA's 2011 NEI version 2.

For the year 2017, the annual emissions estimates used for Sheboygan County were obtained by linearly interpolating between the 2016 and 2023 values in the EPA's 2016 emissions modeling platform, version 1.

Summer day emissions for these two MAR categories were estimated by dividing the annual emissions by 365. This same value was used in the EPA's 2011 version 6.3 emissions modeling platform.

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

2.4.3 MAR Sources – Commercial Marine Vessels

For this category, the emissions from the EPA's 2011 NEI were not used since more current data, with a much more refined geographical allocation, were developed by the Lake Michigan Air Directors Consortium (LADCO) for the EPA's 2016 emissions modeling platform.

For the year 2017, WDNR linearly interpolated between the 2016 and 2023 values in the 2016 emissions modeling platform. For the year 2011, WDNR linearly back-calculated the 2023 and 2016 values to 2011, with the constraint that if the 2016 value is greater than the 2023 value, the 2011 value is set equal to the 2016 value. The purpose of this constraint is to avoid a possible overestimation of the emission reduction from 2011 to 2017.

Summer day emissions were estimated by dividing the annual emissions by 365 for category 1 and 2 engines and by 340.74 for the larger category 3 engines. These same values were used in EPA's 2011 version 6.3 emissions modeling platform.

2.4.4 Allocation of Emissions to shoreline Sheboygan County

Given the vast variety of nonroad mobile sources, several surrogates were employed to estimate the proportion of countywide emissions in the shoreline Sheboygan County area. The surrogates used are as follows:

2.4.4.1 Land Area

The land area in shoreline Sheboygan County comprises 11.8% of the total county land area.

The nonroad categories allocated to the shoreline Sheboygan County area based on land area are: **Agriculture**, **Logging**, **Oilfields**, **Recreational**, and **Underground Mining**. It should be noted that Sheboygan County has no emissions from oilfields or underground mining.

2.4.4.2 Population

As described in section 2.2 (Nonpoint (Area) Sources), for 2011 and 2017, 52% of the county's population was estimated to live in the shoreline Sheboygan County area. (To one decimal place these values are 52.4% for 2011 and 51.8% for 2017.)

The nonroad categories allocated to the shoreline Sheboygan County area based on these 52.4% and 51.8% population proportions are: **Commercial, Construction, Industrial, and Lawn & Garden**.

2.4.4.3 Water Area

Data were obtained from the database for the EPA's National Mobile Inventory Model (NMIM), version dated May 4, 2009, the EPA's nonroad emissions estimation model prior to MOVES. Based on the external file WI_WIB.ALO in that database, there are 145 square kilometers of water area in Sheboygan County for motor boats having inboard engines. And, based on the external file WI_WOB.ALO in that database, there are 28 square kilometers of water area in Sheboygan County for motor boats having outboard engines. The 145 square kilometer value for inboard engines contains Lake Michigan waters (117 square kilometers) and 28 square kilometers of water from several inland lakes (all outside the shoreline Sheboygan County area). The 28 square kilometer value for outboard engines contains only the water from the inland lakes. This indicates that motor boats with outboard engines are not assumed to travel on Lake Michigan whereas motor boats with inboard engines are assumed to travel on Lake Michigan, as well as on the inland lakes. Thus, for motor boats with inboard engines 117/145 = 80.7% of the associated water area is in the shoreline Sheboygan County area and for motor boats with outboard engines 0/28 = 0.0% of the associated water area is in the shoreline Sheboygan County area.

The nonroad category allocated to the shoreline Sheboygan County area based on water area is: **Pleasure Craft**. For pleasure craft with inboard engines, 80.7% of the full county emissions were allocated to the shoreline Sheboygan County area and for pleasure craft with outboard engines, 0.0% of the full county emissions were allocated to the shoreline Sheboygan County area.

2.4.4.4 Lake Michigan Shoreline

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

2.4.4.5 Airport Location

The EPA's 2011 emissions modeling platform, version 6.3, provides the emissions and geographical location (longitude and latitude) for each airport in the United States. Since the major airport in Sheboygan County, Sheboygan County Memorial Airport, is not located in the shoreline Sheboygan County area, very few of the full county aircraft emissions originate in the shoreline Sheboygan County area.

For Sheboygan County 0.7% of the aircraft NOx emissions and 0.8% of the aircraft VOC emissions in that modeling platform come from airports located in the shoreline Sheboygan County area. Thus, **Aircraft** emissions in the shoreline Sheboygan County area are those percentages of the total Sheboygan County aircraft emissions.

2.4.4.6 Railroad Link Location

The EPA's 2011 NEI, version 2, and 2011 emissions modeling platform, version 6.3, provide the emissions and location for each link of railway in the United States.

The percentage of Sheboygan County railroad emissions located in the shoreline Sheboygan County area is 20.5% for NOx and 24.0% for VOC in those inventories. These percentages were used to allocate both **Rail Locomotive** and **Railroad Maintenance** emissions in Sheboygan County to the shoreline Sheboygan County area.

APPENDIX 3

2025 and 2032 Wisconsin Emissions Projections Documentation – Methodology

This appendix provides information for the sector-specific NOx and VOC tons per summer day (tpsd) emission estimates in section 4.3 (Maintenance Year Inventories) of the Wisconsin Department of Natural Resources' (WDNR) Redesignation Request and Maintenance Plan for the Shoreline Sheboygan County 1997 and 2008 8-hour Ozone Nonattainment Area (redesignation request from hereon). For the U.S. Environmental Protection Agency (EPA) to redesignate a nonattainment area to attainment, a state 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 2025 as the interim projection year and 2032 as the maintenance year. The emission projections through 2032 are relied upon in the maintenance demonstration presented in Section 7 of the redesignation request.

This appendix includes:

1. EGU Inventory Methodology for 2025 and 2032

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

2. Point Non-EGU Inventory Methodology for 2025 and 2032

Non-EGU point source emissions are projected for 2025 and 2032 by applying growth factors to the 2017 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 2019 for Existing Sources

Non-EGU point source projected 2025 and 2032 emissions were derived by applying growth factors to the 2017 base year inventory. Growth factors were developed from Annual Energy Outlook (AEO) 2019 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 2019 Used for Projecting Wisconsin Non-EGU Point Source Emissions for the Shoreline Sheboygan County Area

NAICS	NAICS Description	AEO Industrial or Commercial Sub-sector	AEO Energy Consumption (trillion Btu)[1]				Growth Factors (from 2017)[2]		
			2017	2025	2030	2032	2025 GF	2030 GF	2032 GF
322222	Paper Bag and Coated and Treated Paper Manufacturing	Paper Industry	1,570	1,639	1,704	1,716	1.04	1.09	1.09
622110	General Medical and Surgical Hospitals[3]	Commercial sector energy consumption (natural gas and distillate fuel oil) for East North Central U.S.	763	764	763	766	1.00	1.00	1.00
311421	Food Manufacturing	Food Industry	1,220	1,393	1,515	1,555	1.14	1.24	1.27
332322	Fabricated Metal Product Manufacturing	Metal Based Durables Industry - Fabricated Metal Products	332	356	377	386	1.07	1.14	1.16
325510	Paint, Coating and Adhesive Manufacturing	Bulk Chemical Industry	3,065	3,673	3,845	3,881	1.20	1.25	1.27
331513	Foundries - Steel	Iron and Steel Industry	1,198	1,232	1,255	1,243	1.03	1.05	1.04
331523	Foundries - Aluminum	Aluminum Industry	209	230	243	245	1.10	1.16	1.17
333244	Printing Machinery and Equipment Manufacturing	Industrial Sector	27	31	32	33	1.15	1.20	1.23

[1] Source: http://www.eia.gov/forecasts/aeo/index.cfm.
[2] Growth factors for the entire 2017-2025 and 2017-2032 periods were calculated by dividing the 2025 or 2032 energy consumption values by the 2017 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.

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 WDNR reviewed permitting actions for sources in the Shoreline Sheboygan County area from 2014 to 2018 (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 2025 and 2032 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. This is consistent with the CAA which allows for the installation of new or modification of sources subject to requirements of the New Source Review (NSR) or Prevention of Significant Deterioration (PSD) programs.

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

Construction Permit Class	Year	Potential Emissions Increase (TPY)		Estimated Daily Average (TPD)[1]		Project Description	Construction Permit #
		NOx	VOC	NOx	VOC		
Minor action[2]	2014	50.0	57.1	0.137	0.156	Installation of 14 generator test cells	14-RSG-112
Minor action[2]	2015	0	0	0.000	0.000	N/A	
Minor action[2]	2016	0	0	0.000	0.000	N/A	
Minor action[2]	2017	0	0	0.000	0.000	N/A	
Minor action[2]	2018	0	0	0.000	0.000	N/A	
Total		**50.00**	**57.1**	**0.137**	**0.156**		

[1] Daily emissions (tons per day, or TPD) 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 of 100 tons per year (TPY) for PSD minor sources, or the significant emissions increase threshold of 40 TPY for PSD major sources.

3. Area Source Inventory Methodology for 2025 and 2032

EPA's 2016 Emissions Modeling Platform, Version 1 includes base year 2016 and projections for the years 2023 and 2028.[1] Wisconsin's 2025 area source emissions were estimated primarily by interpolating between EPA's 2023 and 2028 modeling inventories, while 2032 area source emissions were estimated primarily by extrapolating EPA's 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 MOVES2014b model with the same activity inputs used for the onroad modeling. As was done for 2017, no Stage II vapor recovery program was modeled for 2025 and 2032. Owing to most vehicles now having their own vapor recovery system, called 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 the projection years, emissions from Stage II refueling are less in 2025 and 2032 than in 2011 and 2017, owing to the larger percentage of vehicles having ORVR.

In order to obtain the areas source emissions for the Shoreline Sheboygan County area, the whole county emission estimates were allocated to the partial county area based on population data. The Sheboygan County population data projection for 2025 from the Wisconsin Department of Administration (DOA) was used to calculate the 2025 partial county emission estimates. The 2032 population data, interpolated based on the DOA's 2030 and 2035 projections, was used to calculate the 2032 partial county emission estimates. The partial-county population was identified based on the relative population of the Minor Civil Divisions in the Shoreline Sheboygan County area compared with the entire county. For 2025 and 2032, the county's population, estimated to live in the Shoreline Sheboygan area was 51% and 50% respectively. Appendix 6 includes tables of projected area source emissions for Shoreline Sheboygan County by source category.

[1] ftp://newftp.epa.gov/Air/emismod/2016/v1/

4. Onroad Inventory Methodology for 2025 and 2032

The 2025 and 2032 projected onroad emissions were developed using the MOVES2014b model, as was the case for the 2011 and 2017 emissions. Unless otherwise stated in this appendix, the methodology WDNR used for 2025 and 2032 is the same methodology WDNR used for years 2011 and 2017, as described in Appendix 2.

To convert average annual daily traffic (AADT) to summer weekday for 2025 and 2032, WDNR used the SEWRPC-provided day-of-week and month-of-year statewide VMT adjustment factors for the 10-year average of 2008 to 2017. The resulting factors for all four inventory years follow:

Table A3.3. Factors to Convert AADT to Summer Weekday VMT.

MOVES Roadway Type	Year			
	2011	2017	2025	2032
Rural Restricted	1.157	1.143	1.153	1.153
Rural Unrestricted	1.154	1.150	1.149	1.149
Urban Restricted	1.153	1.147	1.155	1.155
Urban Unrestricted	1.146	1.158	1.154	1.154
Weighted Average for Shoreline Sheboygan Area	1.1523	1.1499	1.1531	1.1531

A summary of the WDOT-provided and WDNR-estimated VMTs for Sheboygan County and the Shoreline Sheboygan County area follows:

Table A3.4. VMTs for Sheboygan County and Shoreline Sheboygan County Area.

Year	Vehicle-Miles of Travel (VMT)			
	Full Sheboygan County		Shoreline Sheboygan County Area	
	WDOT-Modeled (Tu-Th)	WDOT Official Posted[2] AADT (Su-Sa)	WDOT-Modeled (Tu-Th)	WDNR-Estimated Summer Weekday (Mo-Fr)
2010	2,402,400	2,706,644	1,142,453	-
2011	2,417,776	2,622,748	1,149,905	1,437,342
2017	2,510,034	2,945,270	1,194,618	1,611,860
2025	2,633,044	-	1,254,234	1,697,031
2032	2,740,678	-	1,306,399	1,767,650
2045	2,940,570	-	1,403,275	-

The adjustment factor of *WDOT-Modeled VMT (Tu-Th) to AADT* for the year 2017 (2,945,270/2,510,034 = 1.1734) was also applied to the years 2025 and 2032. These resulting AADTs were then multiplied by the above *AADT to summer weekday adjustment factor* (1.1531) to obtain summer weekday (Mo-Fr) VMT for 2025 and 2032.

Total VMT for the Shoreline Sheboygan County area was then allocated to MOVES vehicle class using the methodology described in Appendix 2. The resulting summer weekday VMTs WDNR input into MOVES2014b are:

Table A3.5. Summer Weekday VMT input into MOVES2014b.

MOVES Vehicle Class	Year			
	2011	**2017**	**2025**	**2032**
Motorcycles	12,588	14,008	14,713	15,301
Passenger Cars	654,561	739,111	781,937	817,335
Passenger Trucks	499,796	553,764	577,233	596,462
Light Commercial Trucks	126,493	141,336	146,988	152,035
Intercity Buses	724	841	903	952
Transit Buses	1,474	1,668	1,818	1,964
School Buses	3,991	4,641	4,959	5,215
Refuse Trucks	2,361	2,730	2,870	3,008
Single Unit Short-haul Trucks	42,657	51,529	54,907	57,277
Single Unit Long-haul Trucks	2,330	2,895	3,210	3,317
Motor Homes	1,466	1,785	1,723	1,733
Combination Short-haul Trucks	19,311	23,354	27,744	29,190
Combination Long-haul Trucks	69,591	74,197	78,077	83,861
TOTAL	**1,437,342**	**1,611,860**	**1,697,081**	**1,767,650**

The total summer weekday VMT increases by 12.1% from 2011 to 2017, increases by 5.3% from 2017 to 2025, and increases by 4.2% from 2025 to 2032. In terms of annual VMT growth rates, these rates are 1.93% from 2011 to 2017, 0.65% from 2017 to 2025, and 0.58% from 2025 to 2032.

The total vehicle population values are 40,122 in 2011, 44,498 in 2017 (10.9% increase from 2011), 46,780 in 2025 (5.1% increase from 2017) and 48,658 in 2032 (4.0% increase from 2025). A more-detailed breakdown of vehicle population data is provided in Appendix 8.

WDNR projected the 2017 vehicle age distribution to 2025 and 2032 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. Table A3.5 presents the resulting average vehicle ages for all four inventory years.

Table A3.5. Average Vehicle Ages (years old).

MOVES Vehicle Class	Year			
	2011	2017	2025	2032
Motorcycle	7.28	13.74	13.48	13.47
Passenger Car	9.67	9.37	9.24	9.29
Passenger Truck	8.18	7.44	7.39	7.45
Light Commercial Truck	10.33	10.27	10.13	10.19
Intercity Bus	9.18	11.29	10.60	10.86
Transit Bus	10.60	12.33	12.33	12.33
School Bus	6.71	7.42	7.32	7.39
Refuse Truck	10.64	10.95	10.55	10.67
Single Unit Short-haul Truck	11.32	11.14	10.79	10.86
Single Unit Long-haul Truck	11.84	11.95	11.55	11.56
Motor Home	10.76	15.29	15.00	14.92
Combination Short-haul Truck	13.46	13.55	13.49	13.44
Combination Long-haul Truck	7.53	10.42	10.42	10.42

One update was made to the MOVES2014b default fuel formulation inputs for the years 2025 and 2032. For gasoline blended with 15% ethanol (E15), WDNR used the MOVES Fuel Wizard to change the Reid Vapor Pressure (RVP) from the default value of 8.7 pounds per square inch (psi) to 9.7 psi. This change reflects EPA regulatory changes, finalized May 30, 2019[3], which allow gasoline blended with up to 15 percent ethanol to take advantage of the one-psi RVP waiver during the summer months. (Previously this waiver applied to only E10.) The effect of this change on total emissions (i.e., all fuels) was negligible for NOx and a slight increase for VOC (+0.2% to +1.3%), as shown below:

Table A3.6. Effect of One PSI RVP Waiver for E15 on Overall Emissions

Pollutant	Sector	Year	Emissions (tpsd)		Percent Change
			RVP = 8.7 for E15	RVP = 9.7 for E15	
NOx	Onroad	2025	1.0017	1.0018	+0.0%
NOx	Onroad	2032	0.7741	0.7741	-0.0%
VOC	Onroad	2025	0.5019	0.5028	+0.2%
VOC	Onroad	2032	0.3558	0.3572	+0.4%
VOC	Stage II	2025	0.0433	0.0436	+0.8%
VOC	Stage II	2032	0.0360	0.0365	+1.3%

Onroad emissions were increased by a 15% safety margin, as agreed through the transportation conformity consultative process.

The motor vehicle inspection and maintenance (I/M) program was assumed to remain in effect for 2025 and 2032.

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

[3] https://www.govinfo.gov/content/pkg/FR-2019-06-10/pdf/2019-11653.pdf

5. Nonroad Inventory Methodology for 2025 and 2032

The methodology for the 2025 and 2032 projected nonroad emissions is parallel to the methodology used for the 2011 and 2017 estimates, as described in Appendix 2.

For all source categories except commercial marine, aircraft and rail locomotive (MAR), the MOVES2014b model was run for Sheboygan County at hot summer day temperatures, assuming the model's default growth projections.

For the three MAR categories, the 2025 and 2032 emissions were calculated by linearly interpolating or extrapolating from the 2023 and 2028 values from EPA's 2016 Emissions Modeling Platform, Version 1. To avoid underestimating 2032 emissions, if the extrapolated emissions for 2032 were less than those for 2028, the 2032 emissions were set equal to those for 2028.

In allocating the full Sheboygan County emissions to the Shoreline Sheboygan County area, the only adjustment factor that was changed from those used for 2011 and 2017 was that for population. In 2011 and 2017, 52.4% and 51.8%, respectively, of the county's population was estimated to live in the Shoreline Sheboygan County area. However, for 2025 and 2032, the county's population estimated to live in the Shoreline Sheboygan County area was 51.0% and 50.2% respectively.

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

APPENDIX 4

EGU Inventory Methodology and Emissions for 2011, 2017, 2025 and 2032

This appendix provides the methodology for electric generating unit (EGU) sector NOx and VOC tons per summer day (tpsd) emission estimates in sections 4.2 (Nonattainment Year and Attainment Year Inventories) and 4.3 (Maintenance Year Inventories) of the Wisconsin Department of Natural Resources (WDNR) Shoreline Sheboygan County redesignation request and maintenance plan for the 1997 and 2008 ozone standards.

1. EGU 2011 and 2017 Base Year Emissions

The Edgewater coal-fired power plant is the only EGU point source facility located in the Shoreline Sheboygan County nonattainment area. The 2011 and 2017 NOx emissions, emission rates and fuel consumption for the generating units at these facilities were derived from data reported by the utility to EPA's Clean Air Markets Division (CAMD) database. WDNR used the ozone season (i.e., May 1 through September 30) day with the 99th percentile highest heat input for each unit during the ozone season to represent summer day operations during the 2011 and 2017 ozone seasons. Using this 99th percentile value provides a conservative but reasonable representation of maximum summer day operation. The summer day emissions were then calculated by multiplying the maximum summer day heat inputs in 2011 and 2017 by the average emission rates for the 2011 and 2017 ozone seasons. The NOx emission rates were derived from the CAMD emissions data for the 2011 and 2017 ozone seasons. This base data and the tons per summer day emissions calculated from this data are provided in Table A4.1. The total NOx emissions were 13.16 tpsd in 2011 and 5.97 tpsd in 2017. It should be noted that coal boiler B23 was retired in 2015 (last operated in 2013); coal boiler B24 operated selective non-catalytic reduction (SNCR) since 2011 for controlling NOx emissions; and coal boiler B25 operated SNCR from 2011 to 2013 and selective catalytic reduction (SCR) since 2014 for controlling NOx emissions.

The 2011 and 2017 VOC summer day emissions are also derived by multiplying the maximum day heat inputs by average VOC emission rates. The base data used in the calculation and the resulting emissions are provided in Table A4.1. In this case, however, VOC emissions are not monitored by continuous emissions monitors and reported to the CAMD database as is done for NOx. Therefore, the VOC emission rates was derived by dividing the annual VOC emissions reported to the WDNR Air Emissions Inventory by the annual heat input reported to the CAMD database for 2011 and 2017. The data applied in deriving the VOC emission rates are shown in Table A4.2. Multiplying these VOC emission rates for each year by the maximum heat input resulted in 0.43 tpsd of VOC in 2011 and 0.35 tpsd in 2017.

Note: emissions from non-electric generating emission units at the plant (i.e., units other than the three 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. Edgewater Summer Day Operation and Emissions in 2011 and 2017.

Variable	2011			2017		
	B23	B24	B25	B23	B24	B25
Summer Day Heat Input (mmBtu)[1]	14,994	68,770	93,778	Retired	63,979	95,271
NOx Rate (lbs/mmBtu)[2]	0.195	0.141	0.146		0.137	0.033
NOx (tpsd)	1.46	4.86	6.84		4.38	1.59
NOx Control	None	SNCR	SNCR		SNCR	SCR
VOC Rate (lbs/mmBtu)[3]	0.0060	0.0060	0.0037		0.0062	0.0032
VOC (tpsd)	0.05	0.21	0.17		0.20	0.15

SCR = Selective catalytic reduction
SNCR = Selective non-catalytic reduction
[1] Heat input is for the day with the 99th percentile highest heat input during each of the 2011 and 2017 ozone seasons. "Ozone Season" is defined here as May 1 through September 30.
[2] Emission rate derived from EPA CAMD ozone season NOx emissions and heat input.
[3] Calculated in Table A4.2.

Table A4.2. Edgewater VOC Annual Emissions and Emission Rates in 2011 and 2017.

Variable	2011			2017		
	B23	B24	B25	B23	B24	B25
Annual VOC (lbs)[1]	13,857	116,311	90,469	Retired	104,402	81,129
Annual Heat Input (mmBtu)[2]	2,291,102	19,236,917	24,517,391		16,770,170	25,224,079
VOC Rate (lbs/mmBtu)	0.0060	0.0060	0.0037		0.0062	0.0032

[1] Emissions reported to the WDNR Air Emissions Inventory.
[2] Heat input reported to the CAMD database.

2. EGU 2020 and 2032 Projected Emissions

The Edgewater power plant is anticipated to operate at less than its 2017 levels for 2025 and 2032, due to the retirement of B24 in 2018. Following the same methodology as used in calculating 2011 and 2017 emissions, WDNR projected summer day emissions for Edgewater by multiplying a projected maximum daily heat input by a projected average ozone season emission rate. The data used in this calculation and resulting emissions are summarized in Table A4.3.

To determine the appropriate projected maximum heat input, WDNR first evaluated historical maximum day ozone season values for 2011 through 2019 as listed in Table A4.4. The WDNR determined the maximum summer day heat inputs representative of recent operation to be the following: for B25, the highest 99th percentile daily value over the 2014-2019 period; and for B23 and B24, a heat input of "0".

The WDNR evaluated historical data and planned operational changes in determining an appropriate NOx emission rate for calculating projected emissions. B23 retired in 2015 (last operated in 2013) and B24 retired in 2018. B25 operated selective non-catalytic reduction (SNCR) from 2011 to 2013 and selective catalytic reduction (SCR) from 2013 to 2019 for controlling NOx emissions. Accordingly, the projected ozone season NOx emission rates in Tables A4.4 and A4.5 were determined by averaging the emission rates for the 2014-2019 period for B25. These rates reflect controls as of 2019 and are reasonable, conservative representations of the future expected emission rates.

Based on this information, NOx emissions projected for 2025 and 2032 are calculated to be 1.93 tpsd for Edgewater. It should be noted that these NOx tpsd values are not intended to constitute daily enforceable emission limitations on the power plants. The values represent the best reasonable approximation of the controls in place, a compliance margin, and projected maximum actual summer day emissions that could be expected going into the future. In particular, the NOx emission rate limitation for B25 is 0.080 lbs/mmBtu on a 30-day rolling average. Multiplying this emission limit by the highest 99th percentile daily heat input for the 2014-2019 period (112,385 mmBtu) allows for NOx emissions as high as 4.5 tons on any given day.

VOC emissions are calculated by assuming the VOC emission factor of 0.0034 lbs/mmBtu (B25) demonstrated during the 2018 ozone season will continue through 2032. There is no action anticipated that would significantly reduce these values. Multiplying this emission rate by the maximum day heat input value by this emission rates yields 0.19 tpsd of VOC. The base information used in these calculations and the resulting VOC emissions are shown in Table A4.3.

Table A4.3. Edgewater 2025 and 2032 Emissions (tpsd).

Variable	Projected Values					
	2025			2032		
	B23	B24	B25	B23	B24	B25
Summer Day Heat Input (mmBtu)[1]	Retired	Retired	112,385	Retired	Retired	112,385
NOx Rate (lbs/mmBtu)[2]			0.034			0.034
NOx (tpsd)			1.93			1.93
NOx Control			SCR			SCR
VOC Rate (lbs/mmBtu)[3]			0.0034			0.0034
VOC (tpsd)			0.19			0.19

SCR = Selective catalytic reduction
[1] Heat input for Edgewater B25 is the highest 99th percentile daily value over the 2014-2019 ozone seasons. "Ozone Season" is defined here as May 1 through September 30.
[2] Ozone season NOx emission rates derived from EPA CAMD ozone season NOx emissions and heat input.
[3] The VOC projected emission rates are assumed to be the same as the 2018 derived emission rate for B25 (0.0034 lbs/mmBtu). The 2018 rate was derived in the same manner as the 2011 and 2017 rates in Table A4.2, using for B25, annual VOC lbs of 76,040 and an annual heat input of 22,059,107 mmBtu.

Table A4.4. Ozone Season Maximum Daily Heat Input and NOx Emissions for Edgewater Power Plant.

Year	Ozone Season Average NOx Emission Rate (lbs/mmBtu)[1]			Ozone Season Maximum Daily Heat Input (mmBtu)[2]			Calculated NOx Emissions (tpsd)[3]		
	B23	B24	B25	B23	B24	B25	B23	B24	B25
2011	0.195	0.141	0.146	14,994	68,770	93,778	1.46	4.86	6.84
2012	0.159	0.142	0.152	8,729	73,762	94,452	0.69	5.24	7.19
2013		0.136	0.044		72,811	100,543		4.94	2.24
2014		0.140	0.032		66,905	102,911		4.68	1.63
2015		0.128	0.035		68,216	93,942		4.36	1.66
2016	Retired	0.139	0.036	Retired	69,754	112,385	Retired	4.85	2.05
2017		0.137	0.033		63,979	95,271		4.38	1.59
2018		0.139	0.032		63,033	94,398		4.39	1.51
2019		Retired	0.037		Retired	86,336		Retired	1.61

[1] Derived from ozone season heat input and NOx emissions reported to the CAMD database for each year. "Ozone Season" is defined here as May 1 through September 30.

[2] The heat input for the ozone season day with the 99th percentile highest daily heat input.

[3] Calculated by multiplying the ozone season average emission rate by the ozone season maximum daily heat input.

APPENDIX 5

Point Non-EGU Emissions for 2011, 2017, 2025 and 2032

This appendix provides a list of the Shoreline Sheboygan County area point source non-electric generating unit (non-EGU) tons per summer day (tpsd) emissions by facility identification number (FID) and facility name for 2011, 2017, 2025 and 2032. The sums of NOx and VOC emissions from these facilities were used for the non-EGU sector NOx and VOC tpsd emission estimates in sections 4.2 (Nonattainment Year and Attainment Year Inventories) and 4.3 (Maintenance Year Inventories) of the Wisconsin Department of Natural Resources' (WDNR) Shoreline Sheboygan County area redesignation request and maintenance plan for the 1997 and 2008 ozone standards.

Table A5.1 2011 and 2017 Point Non-EGU Emissions for the Shoreline Sheboygan County Area[1,2]

FID	Facility Name	Pollutant	2011 (tpsd)	2017 (tpsd)	2011 (tons)	2017 (tons)	2018 (tons)[3]
460006360	SHEBOYGAN WASTEWATER TREATMENT PLANT	NOX	N/A	4.67E-03	N/A	1.71	N/A
460008120	BW PAPERSYSTEMS	NOX	1.03E-03	No reporting	0.38	No reporting	No reporting
460008230	GEORGIA-PACIFIC CORRUGATED LLC	NOX	7.81E-03	No reporting	2.85	No reporting	2.59
460012740	OLD WISCONSIN SAUSAGE CO PLANT 2	NOX	3.72E-03	6.75E-03	1.36	2.46	N/A
460023520	MANNING LIGHTING INC	NOX	9.02E-04	1.06E-03	0.33	0.39	N/A
460023740	LAKESHORE DISPLAY CO INC	NOX	4.29E-04	1.63E-05	0.16	0.01	N/A
460029460	NEMSCHOFF CHAIRS INC	NOX	2.07E-04	Shut down	0.08	Shut down	Shut down
460029570	NEMSCHOFF CHAIRS INC	NOX	3.19E-03	2.33E-03	1.16	0.85	N/A
460034740	PLASTICS ENGINEERING CO N 15TH ST PLANT	NOX	4.24E-02	3.37E-02	15.49	12.29	N/A
460034960	AUSTIN GRAY IRON FOUNDRY	NOX	4.17E-04	5.16E-04	0.15	0.19	N/A
460035180	THE VOLLRATH COMPANY LLC	NOX	1.12E-02	1.29E-02	4.10	4.72	N/A
460035730	WILLMAN INDUSTRIES	NOX	5.30E-03	7.00E-03	1.94	2.56	N/A
460036170	THE MAYLINE CO (WOOD PLANT)	NOX	1.22E-03	Closure Process Ongoing	0.45	Closure Process Ongoing	Closure Process Ongoing
460036280	AURORA SHEBOYGAN MEMORIAL MEDICAL CENTER	NOX	8.28E-03	No reporting	3.02	No reporting	No reporting
460038700	KOHLER POWER SYSTEMS	NOX	6.52E-02	5.45E-02	23.80	19.88	N/A
460041230	NEMAK USA INC - TAYLOR DRIVE	NOX	2.78E-02	1.85E-04	10.16	0.07	N/A
460041670	HEXION INC	NOX	4.32E-02	5.30E-02	15.78	19.36	N/A
460106570	AMERICAN EXCELSIOR	NOX	4.70E-04	6.59E-04	0.17	0.24	N/A
460141330	NEMAK GATEWAY PLANT	NOX	1.36E-01	1.09E-01	49.50	39.61	N/A
460145840	SAFCO PRODUCTS CO	NOX	1.58E-03	2.36E-03	0.58	0.86	N/A
460006360	SHEBOYGAN WASTEWATER TREATMENT PLANT	VOC	4.67E-03	2.16E-03	1.71	0.79	N/A
460012740	OLD WISCONSIN SAUSAGE CO PLANT 2	VOC	6.75E-03	5.34E-03	2.46	1.95	N/A
460022530	SHEBOYGAN PAPERBOX CO	VOC	No reporting	8.47E-02	No reporting	30.92	N/A

FID	Facility Name	Pollutant	2011 (tpsd)	2017 (tpsd)	2011 (tons)	2017 (tons)	2018 (tons)[3]
460023520	MANNING LIGHTING INC	VOC	1.06E-03	1.51E-04	0.39	0.05	N/A
460023740	LAKESHORE DISPLAY CO INC	VOC	1.63E-05	2.82E-02	0.01	10.31	N/A
460027480	KIEFFER & CO INC	VOC	No reporting	1.33E-02	No reporting	4.86	N/A
460029570	NEMSCHOFF CHAIRS INC	VOC	2.33E-03	4.31E-02	0.85	15.73	N/A
460034740	PLASTICS ENGINEERING CO N 15TH ST PLANT	VOC	3.37E-02	1.11E-02	12.29	4.05	N/A
460034960	AUSTIN GRAY IRON FOUNDRY	VOC	5.16E-04	6.83E-03	0.19	2.49	N/A
460035180	THE VOLLRATH COMPANY LLC	VOC	1.29E-02	7.11E-04	4.72	0.26	N/A
460035730	WILLMAN INDUSTRIES	VOC	7.00E-03	4.02E-02	2.56	14.67	N/A
460038700	KOHLER POWER SYSTEMS	VOC	5.45E-02	2.58E-02	19.88	9.43	N/A
460038810	SHEBOYGAN PAINT CO	VOC	No reporting	1.13E-01	No reporting	41.30	N/A
460041230	NEMAK USA INC - TAYLOR DRIVE	VOC	1.85E-04	2.43E-02	0.07	8.88	N/A
460041670	HEXION INC	VOC	5.30E-02	9.14E-02	19.36	33.37	N/A
460106570	AMERICAN EXCELSIOR	VOC	6.59E-04	1.53E-02	0.24	5.58	N/A
460130440	SACO POLYMERS INC	VOC	No reporting	1.81E-02	No reporting	6.61	N/A
460141330	NEMAK GATEWAY PLANT	VOC	1.09E-01	2.76E-02	39.61	10.07	N/A
460145840	SAFCO PRODUCTS CO	VOC	2.36E-03	6.20E-02	0.86	22.62	N/A
Total		**NOX**	**0.36**	**0.29**	**131.45**	**105.18**	**N/A**
		VOC	**0.29**	**0.61**	**105.18**	**223.95**	**N/A**

[1] Tons per summer day (tpsd) emissions were calculated by dividing annual emissions by 365 days.
[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 "No reporting" for that year.
[3] Data from 2018 was used for sources that did not report for 2017.

Table A5.2 2025 and 2032 Point Non-EGU Emissions for the Shoreline Sheboygan County Area[1,2]

FID	Facility Name	Pollutant	2025 GF	2032 GF	2025 (tpsd)	2032 (tpsd)	2025 (tons)	2032 (tons)
460006360	SHEBOYGAN WASTEWATER TREATMENT PLANT	NOX	1.00	1.00	4.67E-03	4.67E-03	1.70594	1.70594
460008120	BW PAPERSYSTEMS	NOX	1.15	1.23	N/A	N/A	N/A	N/A
460008230	GEORGIA-PACIFIC CORRUGATED LLC	NOX	1.04	1.09	7.41E-03	7.76E-03	2.703139	2.830792
460012740	OLD WISCONSIN SAUSAGE CO PLANT 2	NOX	1.14	1.27	7.70E-03	8.60E-03	2.811713	3.140234
460023520	MANNING LIGHTING INC	NOX	1.07	1.16	1.14E-03	1.24E-03	0.416604	0.451799
460023740	LAKESHORE DISPLAY CO INC	NOX	1	1	1.63E-05	1.63E-05	0.005962	0.005962
460029460	NEMSCHOFF CHAIRS INC	NOX	1	1	N/A	N/A	N/A	N/A
460029570	NEMSCHOFF CHAIRS INC	NOX	1	1	2.33E-03	2.33E-03	0.85037	0.85037
460034740	PLASTICS ENGINEERING CO N 15TH ST PLANT	NOX	1.20	1.27	4.03E-02	4.26E-02	14.72015	15.55664
460034960	AUSTIN GRAY IRON FOUNDRY	NOX	1.03	1.04	5.31E-04	5.36E-04	0.193817	0.195611
460035180	THE VOLLRATH COMPANY LLC	NOX	1.07	1.16	1.39E-02	1.51E-02	5.065691	5.493638
460035730	WILLMAN INDUSTRIES	NOX	1.03	1.04	7.20E-03	7.27E-03	2.628452	2.652773
460036170	THE MAYLINE CO (WOOD PLANT)	NOX	1	1	N/A	N/A	N/A	N/A
460036280	AURORA SHEBOYGAN MEMORIAL MEDICAL CENTER	NOX	1.00	1.00	N/A	N/A	N/A	N/A
460038700	KOHLER POWER SYSTEMS	NOX	1	1	5.45E-02	5.45E-02	19.87992	19.87992
460041230	NEMAK USA INC - TAYLOR DRIVE	NOX	1.10	1.17	2.04E-04	2.17E-04	0.074451	0.079311
460041670	HEXION INC	NOX	1.20	1.27	6.35E-02	6.71E-02	23.19039	24.50821
460106570	AMERICAN EXCELSIOR	NOX	1.20	1.27	7.89E-04	8.34E-04	0.288157	0.304532
460141330	NEMAK GATEWAY PLANT	NOX	1.10	1.17	1.19E-01	1.27E-01	43.57059	46.41462
460145840	SAFCO PRODUCTS CO	NOX	1	1	2.36E-03	2.36E-03	0.8625	0.8625
460006360	SHEBOYGAN WASTEWATER TREATMENT PLANT	VOC	1.00	1.00	2.16E-03	2.16E-03	0.79	0.79
460012740	OLD WISCONSIN SAUSAGE CO PLANT 2	VOC	1.14	1.27	6.09E-03	6.80E-03	2.22	2.48
460022530	SHEBOYGAN PAPERBOX CO	VOC	1.04	1.09	8.84E-02	9.26E-02	32.27	33.80
460023520	MANNING LIGHTING INC	VOC	1.07	1.16	1.62E-04	1.75E-04	0.06	0.06
460023740	LAKESHORE DISPLAY CO INC	VOC	1	1	2.82E-02	2.82E-02	10.31	10.31
460027480	KIEFFER & CO INC	VOC	1	1	1.33E-02	1.33E-02	4.86	4.86
460029570	NEMSCHOFF CHAIRS INC	VOC	1	1	4.31E-02	4.31E-02	15.73	15.73
460034740	PLASTICS ENGINEERING CO N 15TH ST PLANT	VOC	1.20	1.27	1.33E-02	1.41E-02	4.85	5.13
460034960	AUSTIN GRAY IRON FOUNDRY	VOC	1.03	1.04	7.02E-03	7.09E-03	2.56	2.59
460035180	THE VOLLRATH COMPANY LLC	VOC	1.07	1.16	7.63E-04	8.28E-04	0.28	0.30
460035730	WILLMAN INDUSTRIES	VOC	1.03	1.04	4.13E-02	4.17E-02	15.08	15.22
460038700	KOHLER POWER SYSTEMS	VOC	1	1	2.58E-02	2.58E-02	9.43	9.43

FID	Facility Name	Pollutant	2025 GF	2032 GF	2025 (tpsd)	2032 (tpsd)	2025 (tons)	2032 (tons)
460038810	SHEBOYGAN PAINT CO	VOC	1.20	1.27	1.36E-01	1.43E-01	49.49	52.30
460041230	NEMAK USA INC - TAYLOR DRIVE	VOC	1.10	1.17	2.68E-02	2.85E-02	9.77	10.41
460041670	HEXION INC	VOC	1.20	1.27	1.10E-01	1.16E-01	39.98	42.25
460106570	AMERICAN EXCELSIOR	VOC	1	1	1.53E-02	1.53E-02	5.58	5.58
460130440	SACO POLYMERS INC	VOC	1.20	1.27	2.17E-02	2.29E-02	7.91	8.36
460141330	NEMAK GATEWAY PLANT	VOC	1.10	1.17	3.03E-02	3.23E-02	11.08	11.80
460145840	SAFCO PRODUCTS CO	VOC	1	1	6.20E-02	6.20E-02	22.62	22.62
Sub-total – Existing Sources		NOX	N/A	N/A	0.33	0.34	118.97	124.93
		VOC	N/A	N/A	0.67	0.70	244.89	254.04
New & Modified Sources								
N/A	N/A	NOX	N/A	N/A	0.137	0.137	50.00	50.00
N/A	N/A	VOC	N/A	N/A	0.156	0.156	57.10	57.10
TOTAL (Existing + New/Modified Sources)		**NOX**	**N/A**	**N/A**	**0.467**	**0.477**	**168.97**	**174.93**
		VOC	**N/A**	**N/A**	**0.826**	**0.856**	**301.99**	**311.14**

[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. Sources that chose not to report NOx and/or VOC for 2017 and 2018 are thus listed as "No reporting" for 2025 and 2032 as well.

[2] Growth factors of "1" in red font indicate that energy consumption values were not available from AEO for a NAICS category, and thus a growth factor of 1.00 (i.e., no growth) was applied.

APPENDIX 6

Area Source Emissions for 2011, 2017, 2025 and 2032

This appendix provides a list of the shoreline Sheboygan County area source tons per summer day (tpsd) emissions by source classification code (SCC) for 2011, 2017, 2025 and 2032. The sums of NOx and VOC emissions from the different SCCs were used for the area source sector NOx and VOC tpsd emission estimates in sections 4.2 (Nonattainment Year and Attainment Year Inventories) and 4.3 (Maintenance Year Inventories) of the Wisconsin Department of Natural Resources (WDNR) Shoreline Sheboygan County redesignation request and maintenance plan for the 1997 and 2008 ozone standards.

Table A6.1. Area Source 2011 and Projected 2017, 2025 and 2032 Emissions for the Shoreline Sheboygan County Ozone Nonattainment Area

FIPS	SCC	POLLUTANT	2011(tpsd)	2017(tpsd)	2025(tpsd)	2032(tpsd)
55117	2102001000	NOx	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2102002000	NOx	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2102004001	NOx	1.2E-03	2.6E-03	2.6E-03	2.7E-03
55117	2102004002	NOx	6.5E-03	1.6E-02	1.6E-02	1.7E-02
55117	2102005000	NOx	6.7E-04	0.0E+00	0.0E+00	0.0E+00
55117	2102006000	NOx	1.9E-01	1.7E-01	1.5E-01	1.4E-01
55117	2102007000	NOx	1.8E-04	2.5E-03	3.0E-03	3.3E-03
55117	2102008000	NOx	1.9E-01	1.8E-01	1.8E-01	1.9E-01
55117	2102011000	NOx	5.6E-05	0.0E+00	0.0E+00	0.0E+00
55117	2103001000	NOx	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2103002000	NOx	7.9E-03	0.0E+00	0.0E+00	0.0E+00
55117	2103004001	NOx	4.2E-03	8.5E-04	9.2E-04	9.5E-04
55117	2103004002	NOx	3.8E-03	4.2E-03	4.6E-03	4.7E-03
55117	2103005000	NOx	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2103006000	NOx	1.0E-01	1.2E-01	1.0E-01	8.8E-02
55117	2103007000	NOx	8.2E-03	5.8E-03	5.8E-03	5.7E-03
55117	2103008000	NOx	6.7E-05	6.9E-03	6.7E-03	6.6E-03
55117	2103011000	NOx	1.6E-08	3.1E-05	3.0E-05	3.0E-05
55117	2104001000	NOx	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2104002000	NOx	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2104004000	NOx	1.0E-02	7.8E-03	7.7E-03	7.6E-03
55117	2104006000	NOx	2.1E-01	2.3E-01	2.3E-01	2.2E-01
55117	2104007000	NOx	4.2E-02	4.0E-02	4.0E-02	3.9E-02
55117	2104008100	NOx	6.8E-03	1.4E-03	1.5E-03	1.5E-03
55117	2104008210	NOx	4.5E-03	9.5E-04	8.0E-04	7.0E-04
55117	2104008220	NOx	1.6E-03	4.2E-04	4.5E-04	4.6E-04
55117	2104008230	NOx	4.4E-04	1.1E-04	1.2E-04	1.3E-04
55117	2104008310	NOx	2.0E-02	4.1E-03	3.5E-03	3.1E-03
55117	2104008320	NOx	5.1E-03	3.4E-03	3.6E-03	3.7E-03
55117	2104008330	NOx	5.0E-03	2.0E-03	2.2E-03	2.3E-03
55117	2104008400	NOx	2.0E-03	2.9E-03	3.6E-03	4.1E-03
55117	2104008510	NOx	5.6E-03	2.1E-04	6.3E-05	3.5E-05
55117	2104008610	NOx	1.8E-03	3.9E-04	3.8E-04	3.7E-04
55117	2104008700	NOx	1.1E-02	1.2E-02	1.2E-02	1.3E-02
55117	2104009000	NOx	1.4E-04	1.4E-04	1.5E-04	1.5E-04
55117	2104011000	NOx	2.2E-04	1.3E-04	1.3E-04	1.3E-04
55117	2302002200	NOx	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2610000100	NOx	3.3E-04	3.2E-04	3.2E-04	3.1E-04

FIPS	SCC	POLLUTANT	2011(tpsd)	2017(tpsd)	2025(tpsd)	2032(tpsd)
55117	2610000400	NOx	2.7E-04	2.6E-04	2.6E-04	2.5E-04
55117	2610000500	NOx	8.4E-03	1.1E-02	1.0E-02	1.0E-02
55117	2610030000	NOx	1.4E-02	1.6E-02	1.6E-02	1.5E-02
55117	2801500000	NOx	5.0E-07	0.0E+00	0.0E+00	0.0E+00
55117	2810025000	NOx	0.0E+00	3.2E-03	3.3E-03	3.3E-03
55117	2810060100	NOx	5.4E-04	6.8E-04	6.9E-04	7.0E-04
55117	2102001000	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2102002000	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2102004001	VOC	1.2E-05	2.6E-05	2.6E-05	2.7E-05
55117	2102004002	VOC	0.0E+00	1.1E-03	1.1E-03	1.1E-03
55117	2102005000	VOC	3.4E-06	0.0E+00	0.0E+00	0.0E+00
55117	2102006000	VOC	3.9E-03	9.8E-03	1.1E-02	1.2E-02
55117	2102007000	VOC	6.7E-06	9.2E-05	1.1E-04	1.2E-04
55117	2102008000	VOC	0.0E+00	1.4E-02	1.4E-02	1.4E-02
55117	2102011000	VOC	5.5E-07	0.0E+00	0.0E+00	0.0E+00
55117	2103001000	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2103002000	VOC	3.6E-05	0.0E+00	0.0E+00	0.0E+00
55117	2103004001	VOC	7.1E-05	1.4E-05	1.6E-05	1.6E-05
55117	2103004002	VOC	0.0E+00	2.9E-04	3.2E-04	3.3E-04
55117	2103005000	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2103006000	VOC	5.5E-03	6.5E-03	6.4E-03	6.4E-03
55117	2103007000	VOC	3.0E-04	2.1E-04	2.1E-04	2.1E-04
55117	2103008000	VOC	5.2E-06	5.3E-04	5.2E-04	5.1E-04
55117	2103011000	VOC	2.7E-10	5.2E-07	5.2E-07	5.1E-07
55117	2104001000	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2104002000	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2104004000	VOC	4.1E-04	3.0E-04	3.0E-04	3.0E-04
55117	2104006000	VOC	1.2E-02	1.3E-02	1.3E-02	1.3E-02
55117	2104007000	VOC	1.6E-03	1.6E-03	1.6E-03	1.5E-03
55117	2104008100	VOC	4.9E-02	1.0E-02	1.1E-02	1.1E-02
55117	2104008210	VOC	2.0E-02	1.8E-02	1.5E-02	1.3E-02
55117	2104008220	VOC	8.2E-03	2.2E-03	2.3E-03	2.4E-03
55117	2104008230	VOC	3.3E-03	8.1E-04	8.9E-04	9.5E-04
55117	2104008310	VOC	8.6E-02	7.8E-02	6.8E-02	6.0E-02
55117	2104008320	VOC	2.7E-02	1.8E-02	1.9E-02	2.0E-02
55117	2104008330	VOC	3.7E-02	1.5E-02	1.6E-02	1.8E-02
55117	2104008400	VOC	2.1E-05	1.7E-03	2.1E-03	2.3E-03
55117	2104008510	VOC	3.6E-02	1.4E-03	4.0E-04	2.2E-04
55117	2104008610	VOC	6.5E-02	1.3E-02	1.3E-02	1.3E-02
55117	2104008700	VOC	8.3E-02	8.4E-02	8.8E-02	9.1E-02

FIPS	SCC	POLLUTANT	2011(tpsd)	2017(tpsd)	2025(tpsd)	2032(tpsd)
55117	2104009000	VOC	7.0E-04	7.2E-04	7.6E-04	7.8E-04
55117	2104011000	VOC	8.4E-06	5.1E-06	5.0E-06	4.9E-06
55117	2302002100	VOC	1.3E-03	1.4E-03	1.4E-03	1.4E-03
55117	2302002200	VOC	3.6E-03	3.7E-03	3.8E-03	3.9E-03
55117	2302003000	VOC	6.2E-04	6.5E-04	6.6E-04	6.7E-04
55117	2302003100	VOC	4.8E-04	5.0E-04	5.1E-04	5.2E-04
55117	2302003200	VOC	1.6E-05	1.6E-05	1.6E-05	1.7E-05
55117	2401001000	VOC	1.9E-01	1.9E-01	2.0E-01	2.0E-01
55117	2401005000	VOC	5.1E-02	4.8E-02	4.7E-02	4.6E-02
55117	2401008000	VOC	3.3E-04	3.4E-02	3.4E-02	3.3E-02
55117	2401015000	VOC	5.8E-03	0.0E+00	0.0E+00	0.0E+00
55117	2401020000	VOC	1.2E-01	1.2E-01	1.2E-01	1.2E-01
55117	2401025000	VOC	3.1E-02	3.1E-02	3.0E-02	3.0E-02
55117	2401055000	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2401065000	VOC	1.4E-03	0.0E+00	0.0E+00	0.0E+00
55117	2401070000	VOC	8.7E-03	0.0E+00	0.0E+00	0.0E+00
55117	2401075000	VOC	7.0E-05	0.0E+00	0.0E+00	0.0E+00
55117	2401090000	VOC	4.2E-02	0.0E+00	0.0E+00	0.0E+00
55117	2401100000	VOC	5.0E-02	4.9E-02	5.0E-02	5.1E-02
55117	2401200000	VOC	5.3E-03	4.9E-04	5.0E-04	5.1E-04
55117	2415000000	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2420000000	VOC	1.7E-07	0.0E+00	0.0E+00	0.0E+00
55117	2425000000	VOC	5.5E-02	0.0E+00	0.0E+00	0.0E+00
55117	2460100000	VOC	1.6E-01	1.6E-01	1.7E-01	1.7E-01
55117	2460200000	VOC	1.5E-01	1.8E-01	1.8E-01	1.9E-01
55117	2460400000	VOC	1.1E-01	1.1E-01	1.1E-01	1.2E-01
55117	2460500000	VOC	7.9E-02	7.8E-02	7.9E-02	8.0E-02
55117	2460600000	VOC	4.7E-02	4.7E-02	4.8E-02	4.8E-02
55117	2460800000	VOC	1.5E-01	1.5E-01	1.5E-01	1.5E-01
55117	2460900000	VOC	5.8E-03	5.7E-03	5.8E-03	5.9E-03
55117	2461021000	VOC	5.8E-02	8.1E-02	7.9E-02	7.8E-02
55117	2461022000	VOC	1.4E-02	4.5E-02	4.4E-02	4.3E-02
55117	2461850000	VOC	3.7E-02	3.6E-02	3.6E-02	3.5E-02
55117	2501011011	VOC	2.2E-02	4.3E-03	4.3E-03	4.4E-03
55117	2501011012	VOC	4.2E-02	4.8E-03	4.9E-03	4.9E-03
55117	2501011013	VOC	6.1E-03	6.1E-03	6.2E-03	6.3E-03
55117	2501011014	VOC	1.8E-03	8.9E-04	9.1E-04	9.2E-04
55117	2501011015	VOC	1.7E-04	1.7E-04	1.7E-04	1.7E-04
55117	2501012011	VOC	6.9E-04	1.9E-04	1.9E-04	1.9E-04
55117	2501012012	VOC	1.3E-03	1.5E-04	1.6E-04	1.6E-04

FIPS	SCC	POLLUTANT	2011(tpsd)	2017(tpsd)	2025(tpsd)	2032(tpsd)
55117	2501012013	VOC	8.4E-03	8.3E-03	8.5E-03	8.6E-03
55117	2501012014	VOC	3.5E-03	2.6E-03	2.6E-03	2.6E-03
55117	2501012015	VOC	3.3E-04	3.2E-04	3.3E-04	3.3E-04
55117	2501050120	VOC	1.0E-01	9.2E-02	7.8E-02	6.5E-02
55117	2501055120	VOC	8.0E-02	3.9E-02	3.3E-02	2.8E-02
55117	2501060051	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2501060052	VOC	0.0E+00	0.0E+00	0.0E+00	0.0E+00
55117	2501060053	VOC	3.1E-02	2.6E-02	2.2E-02	1.9E-02
55117	2501060100	VOC	7.4E-02	7.9E-02	4.4E-02	3.7E-02
55117	2501060201	VOC	3.5E-02	3.0E-02	2.5E-02	2.1E-02
55117	2501080050	VOC	2.3E-02	3.1E-02	3.0E-02	3.0E-02
55117	2501080100	VOC	1.2E-03	7.4E-04	7.3E-04	7.2E-04
55117	2505030120	VOC	2.3E-03	1.9E-03	1.7E-03	1.4E-03
55117	2505040120	VOC	2.4E-02	2.2E-02	1.9E-02	1.5E-02
55117	2610000100	VOC	1.5E-03	1.5E-03	1.4E-03	1.4E-03
55117	2610000400	VOC	1.0E-03	9.9E-04	9.7E-04	9.6E-04
55117	2610000500	VOC	1.9E-02	2.5E-02	2.4E-02	2.4E-02
55117	2610030000	VOC	2.0E-02	1.5E-02	1.5E-02	1.5E-02
55117	2630020000	VOC	3.1E-03	2.2E-03	2.3E-03	2.3E-03
55117	2680003000	VOC	0.0E+00	3.7E-02	3.7E-02	3.6E-02
55117	2801500000	VOC	8.2E-07	0.0E+00	0.0E+00	0.0E+00
55117	2805002000	VOC	0.0E+00	4.4E-03	4.5E-03	4.4E-03
55117	2805007100	VOC	0.0E+00	7.6E-05	8.4E-05	9.1E-05
55117	2805009100	VOC	0.0E+00	5.0E-05	5.4E-05	5.8E-05
55117	2805010100	VOC	0.0E+00	5.7E-05	5.6E-05	5.6E-05
55117	2805018000	VOC	8.8E-02	8.6E-02	8.4E-02	8.2E-02
55117	2805025000	VOC	0.0E+00	8.3E-04	9.1E-04	9.6E-04
55117	2805035000	VOC	0.0E+00	2.4E-03	2.3E-03	2.3E-03
55117	2805040000	VOC	0.0E+00	6.0E-04	5.8E-04	5.7E-04
55117	2805045000	VOC	0.0E+00	4.7E-04	4.7E-04	4.6E-04
55117	2810025000	VOC	0.0E+00	2.8E-03	2.8E-03	2.9E-03
55117	2810060100	VOC	1.9E-06	2.4E-06	2.4E-06	2.4E-06
TOTAL		**NOx**	**0.86**	**0.85**	**0.81**	**0.78**
		VOC	**2.41**	**2.19**	**2.13**	**2.09**

*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.

APPENDIX 7

Nonroad Emissions for 2011, 2017, 2025 and 2032

This appendix provides detailed listings of the estimated nonroad emissions data for over 200 subcategories for the shoreline Sheboygan County area, as well as the entire county, for 2011, 2017, 2025 and 2032. The sums of NOx and VOC emissions from the different nonroad source types were used for the nonroad sector NOx and VOC tons per summer day (tpsd) emission estimates in sections 4.2 (Nonattainment Year and Attainment Year Inventories) and 4.3 (Maintenance Year Inventories) of the Wisconsin Department of Natural Resources' (WDNR) shoreline Sheboygan County redesignation request and maintenance plan for the 1997 and 2008 ozone standard.

These inventories are based on two primary sources of data:

MOVES: The U.S. EPA's MOVES2014b model run by WDNR. This model was used for most source categories. The exceptions are cited below.

EPA: Emissions inventories prepared by EPA were used for commercial marine, aircraft and rail locomotive. For aircraft and rail locomotive, emissions for 2011 were obtained from the EPA's 2011 National Emissions Inventory (NEI), version 2, and emissions for 2017, 2025 and 2030 were derived from those in the EPA's 2016 emissions modeling platform, version 1 (which includes projections to 2023 and 2028). For commercial marine, emissions for all four years were derived from EPA's 2016 emissions modeling platform, version 1. EPA's 2011 NEI, version 2, was not used to obtain 2011 commercial marine emissions because EPA adopted a significantly improved methodology, developed by the Lake Michigan Air Directors Consortium (LADCO), for determining commercial marine emissions after the 2011 NEI, version 2, was completed.

Table A7.1. 2011 Nonroad NOx and VOC Emissions: tons per summer day (tpsd)
Sheboygan County and Shoreline Sheboygan County Area

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2011 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2011 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0013	0.2096	11.8%	11.8%	land area	0.0002	0.0247
2260001020	Recreational	2-Stroke Snowmobiles	MOVES	0.0000	0.0305	11.8%	11.8%	land area	0.0000	0.0036
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0007	0.0911	11.8%	11.8%	land area	0.0001	0.0108
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0011	0.0048	11.8%	11.8%	land area	0.0001	0.0006
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0001	0.0046	52.4%	52.4%	population	0.0001	0.0024
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0002	52.4%	52.4%	population	0.0000	0.0001
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0002	52.4%	52.4%	population	0.0000	0.0001
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0003	0.0115	52.4%	52.4%	population	0.0002	0.0060
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0005	52.4%	52.4%	population	0.0000	0.0003
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0000	0.0015	52.4%	52.4%	population	0.0000	0.0008
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0001	0.0031	52.4%	52.4%	population	0.0001	0.0016
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0003	0.0108	52.4%	52.4%	population	0.0002	0.0057
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0007	0.0336	52.4%	52.4%	population	0.0004	0.0176
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0008	0.0267	52.4%	52.4%	population	0.0004	0.0140
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0013	0.0341	52.4%	52.4%	population	0.0007	0.0179
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0005	0.0191	52.4%	52.4%	population	0.0003	0.0100
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0012	0.0340	52.4%	52.4%	population	0.0006	0.0178
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0038	52.4%	52.4%	population	0.0000	0.0020
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0003	52.4%	52.4%	population	0.0000	0.0002
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0006	11.8%	11.8%	land area	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0000	0.0008	52.4%	52.4%	population	0.0000	0.0004
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0002	0.0056	52.4%	52.4%	population	0.0001	0.0029
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0002	11.8%	11.8%	land area	0.0000	0.0000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0010	0.0092	11.8%	11.8%	land area	0.0001	0.0011
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0082	0.0954	11.8%	11.8%	land area	0.0010	0.0113
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0101	0.0319	11.8%	11.8%	land area	0.0012	0.0038
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0010	0.0045	11.8%	11.8%	land area	0.0001	0.0005
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0002	0.0004	52.4%	52.4%	population	0.0001	0.0002
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2011 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2011 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0002	0.0012	52.4%	52.4%	population	0.0001	0.0006
2265002015	Construction	4-Stroke Rollers	MOVES	0.0002	0.0006	52.4%	52.4%	population	0.0001	0.0003
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0005	0.0021	52.4%	52.4%	population	0.0003	0.0011
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0002	0.0007	52.4%	52.4%	population	0.0001	0.0004
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0006	0.0014	52.4%	52.4%	population	0.0003	0.0007
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0003	0.0009	52.4%	52.4%	population	0.0001	0.0005
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0007	0.0019	52.4%	52.4%	population	0.0004	0.0010
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0005	0.0031	52.4%	52.4%	population	0.0002	0.0016
2265002045	Construction	4-Stroke Cranes	MOVES	0.0001	0.0001	52.4%	52.4%	population	0.0001	0.0001
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0001	0.0002	52.4%	52.4%	population	0.0000	0.0001
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0002	0.0001	52.4%	52.4%	population	0.0001	0.0001
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0003	0.0002	52.4%	52.4%	population	0.0002	0.0001
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0003	0.0007	52.4%	52.4%	population	0.0001	0.0004
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0005	0.0007	52.4%	52.4%	population	0.0003	0.0003
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0001	0.0005	52.4%	52.4%	population	0.0000	0.0002
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0002	0.0002	52.4%	52.4%	population	0.0001	0.0001
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0069	0.0082	52.4%	52.4%	population	0.0036	0.0043
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0177	0.0108	52.4%	52.4%	population	0.0093	0.0057
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0024	0.0044	52.4%	52.4%	population	0.0013	0.0023
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0044	0.0208	52.4%	52.4%	population	0.0023	0.0109
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0004	0.0006	52.4%	52.4%	population	0.0002	0.0003
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	52.4%	52.4%	population	0.0000	0.0000
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0006	0.0004	52.4%	52.4%	population	0.0003	0.0002
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0101	0.1236	52.4%	52.4%	population	0.0053	0.0647
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0045	0.0342	52.4%	52.4%	population	0.0024	0.0179
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0009	0.0106	52.4%	52.4%	population	0.0005	0.0056
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0025	0.0212	52.4%	52.4%	population	0.0013	0.0111
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0001	0.0006	52.4%	52.4%	population	0.0000	0.0003
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0001	0.0007	52.4%	52.4%	population	0.0001	0.0004
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0001	0.0013	52.4%	52.4%	population	0.0001	0.0007
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0060	0.0152	52.4%	52.4%	population	0.0031	0.0080
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0078	52.4%	52.4%	population	0.0000	0.0041
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0007	52.4%	52.4%	population	0.0000	0.0004
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0023	0.0145	52.4%	52.4%	population	0.0012	0.0076
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0006	0.0016	52.4%	52.4%	population	0.0003	0.0008
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0008	0.0026	52.4%	52.4%	population	0.0004	0.0014
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0003	0.0026	52.4%	52.4%	population	0.0002	0.0014
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0302	0.1420	52.4%	52.4%	population	0.0158	0.0744
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0078	0.0200	52.4%	52.4%	population	0.0041	0.0105

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2011 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2011 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0014	0.0024	52.4%	52.4%	population	0.0008	0.0012
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0235	0.0701	52.4%	52.4%	population	0.0123	0.0367
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0011	0.0084	52.4%	52.4%	population	0.0006	0.0044
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0009	0.0065	52.4%	52.4%	population	0.0005	0.0034
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0001	0.0002	11.8%	11.8%	land area	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0005	0.0004	11.8%	11.8%	land area	0.0001	0.0001
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0017	0.0021	11.8%	11.8%	land area	0.0002	0.0002
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0001	0.0002	11.8%	11.8%	land area	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0023	0.0050	11.8%	11.8%	land area	0.0003	0.0006
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0033	0.0153	11.8%	11.8%	land area	0.0004	0.0018
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0027	0.0027	11.8%	11.8%	land area	0.0003	0.0003
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0030	0.0027	11.8%	11.8%	land area	0.0004	0.0003
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0006	0.0005	11.8%	11.8%	land area	0.0001	0.0001
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0084	0.0461	52.4%	52.4%	population	0.0044	0.0241
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0023	0.0098	52.4%	52.4%	population	0.0012	0.0051
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0013	0.0038	52.4%	52.4%	population	0.0007	0.0020
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0025	0.0064	52.4%	52.4%	population	0.0013	0.0034
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0034	0.0188	52.4%	52.4%	population	0.0018	0.0098
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0002	0.0006	52.4%	52.4%	population	0.0001	0.0003
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0002	11.8%	11.8%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0003	0.0001	11.8%	11.8%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0001	0.0000	52.4%	52.4%	population	0.0000	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0001	0.0000	52.4%	52.4%	population	0.0000	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0003	0.0001	52.4%	52.4%	population	0.0001	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0002	0.0000	52.4%	52.4%	population	0.0001	0.0000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0001	0.0000	52.4%	52.4%	population	0.0000	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0001	0.0000	52.4%	52.4%	population	0.0001	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0002	0.0000	52.4%	52.4%	population	0.0001	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0003	0.0001	52.4%	52.4%	population	0.0002	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0005	0.0001	52.4%	52.4%	population	0.0002	0.0001
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0002	0.0000	52.4%	52.4%	population	0.0001	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0064	0.0014	52.4%	52.4%	population	0.0034	0.0007
2267003020	Industrial	LPG Forklifts	MOVES	0.3170	0.0702	52.4%	52.4%	population	0.1661	0.0368
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0016	0.0003	52.4%	52.4%	population	0.0008	0.0002

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2011 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2011 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0006	0.0001	52.4%	52.4%	population	0.0003	0.0001
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0003	0.0001	52.4%	52.4%	population	0.0002	0.0000
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0006	0.0001	52.4%	52.4%	population	0.0003	0.0001
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0008	0.0002	52.4%	52.4%	population	0.0004	0.0001
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0038	0.0006	52.4%	52.4%	population	0.0020	0.0003
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0006	0.0001	52.4%	52.4%	population	0.0003	0.0001
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0006	0.0001	52.4%	52.4%	population	0.0003	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0008	0.0002	52.4%	52.4%	population	0.0004	0.0001
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0248	0.0196	52.4%	52.4%	population	0.0130	0.0102
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0001	0.0001	11.8%	11.8%	land area	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0011	0.0007	11.8%	11.8%	land area	0.0001	0.0001
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0014	0.0009	52.4%	52.4%	population	0.0007	0.0004
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0001	0.0000	52.4%	52.4%	population	0.0000	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0001	0.0000	52.4%	52.4%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0004	0.0002	52.4%	52.4%	population	0.0002	0.0001
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0028	0.0008	11.8%	11.8%	land area	0.0003	0.0001
2270002003	Construction	Diesel Pavers	MOVES	0.0081	0.0007	52.4%	52.4%	population	0.0042	0.0004
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0003	0.0000	52.4%	52.4%	population	0.0002	0.0000
2270002015	Construction	Diesel Rollers	MOVES	0.0215	0.0020	52.4%	52.4%	population	0.0113	0.0010
2270002018	Construction	Diesel Scrapers	MOVES	0.0249	0.0014	52.4%	52.4%	population	0.0131	0.0007
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0014	0.0001	52.4%	52.4%	population	0.0008	0.0001
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0011	0.0001	52.4%	52.4%	population	0.0006	0.0000
2270002027	Construction	Diesel Signal Boards	MOVES	0.0026	0.0003	52.4%	52.4%	population	0.0014	0.0002
2270002030	Construction	Diesel Trenchers	MOVES	0.0115	0.0012	52.4%	52.4%	population	0.0060	0.0006
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0154	0.0012	52.4%	52.4%	population	0.0081	0.0007
2270002036	Construction	Diesel Excavators	MOVES	0.0704	0.0053	52.4%	52.4%	population	0.0369	0.0028
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0008	0.0001	52.4%	52.4%	population	0.0004	0.0000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0006	0.0001	52.4%	52.4%	population	0.0003	0.0000
2270002045	Construction	Diesel Cranes	MOVES	0.0243	0.0016	52.4%	52.4%	population	0.0127	0.0008
2270002048	Construction	Diesel Graders	MOVES	0.0183	0.0014	52.4%	52.4%	population	0.0096	0.0007

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2011 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2011 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.0678	0.0037	52.4%	52.4%	population	0.0355	0.0020
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0045	0.0003	52.4%	52.4%	population	0.0024	0.0002
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0304	0.0031	52.4%	52.4%	population	0.0159	0.0016
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.1110	0.0077	52.4%	52.4%	population	0.0582	0.0040
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.0822	0.0175	52.4%	52.4%	population	0.0430	0.0092
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0885	0.0059	52.4%	52.4%	population	0.0464	0.0031
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.0568	0.0156	52.4%	52.4%	population	0.0297	0.0082
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0124	0.0008	52.4%	52.4%	population	0.0065	0.0004
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0002	0.0001	52.4%	52.4%	population	0.0001	0.0000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0127	0.0009	52.4%	52.4%	population	0.0066	0.0004
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0099	0.0026	52.4%	52.4%	population	0.0052	0.0014
2270003020	Industrial	Diesel Forklifts	MOVES	0.0797	0.0061	52.4%	52.4%	population	0.0418	0.0032
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0426	0.0036	52.4%	52.4%	population	0.0223	0.0019
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0500	0.0041	52.4%	52.4%	population	0.0262	0.0022
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0028	0.0005	52.4%	52.4%	population	0.0014	0.0003
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0369	0.0035	52.4%	52.4%	population	0.0194	0.0018
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0503	0.0040	52.4%	52.4%	population	0.0264	0.0021
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0102	0.0013	52.4%	52.4%	population	0.0053	0.0007
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0020	0.0003	52.4%	52.4%	population	0.0011	0.0001
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0161	0.0015	52.4%	52.4%	population	0.0084	0.0008
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0014	0.0001	52.4%	52.4%	population	0.0007	0.0001
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0000	0.0000	52.4%	52.4%	population	0.0000	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.6859	0.0639	11.8%	11.8%	land area	0.0809	0.0075
2270005020	Agriculture	Diesel Combines	MOVES	0.0827	0.0070	11.8%	11.8%	land area	0.0098	0.0008
2270005025	Agriculture	Diesel Balers	MOVES	0.0004	0.0001	11.8%	11.8%	land area	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0001	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0065	0.0008	11.8%	11.8%	land area	0.0008	0.0001
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0058	0.0007	11.8%	11.8%	land area	0.0007	0.0001
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0161	0.0016	11.8%	11.8%	land area	0.0019	0.0002
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0077	0.0008	11.8%	11.8%	land area	0.0009	0.0001
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0200	0.0026	52.4%	52.4%	population	0.0105	0.0014
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0048	0.0006	52.4%	52.4%	population	0.0025	0.0003
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0108	0.0010	52.4%	52.4%	population	0.0057	0.0005
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0060	0.0018	52.4%	52.4%	population	0.0031	0.0010
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0007	0.0001	52.4%	52.4%	population	0.0003	0.0000
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0005	0.0000	52.4%	52.4%	population	0.0002	0.0000

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2011 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2011 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidders	MOVES	0.0016	0.0001	11.8%	11.8%	land area	0.0002	0.0000
2275000000	Aircraft	All Aircraft	EPA	0.0077	0.0151	0.7%	0.8%	airport location (1)	0.0001	0.0001
2280002000	Comm. Mar.	Commercial Marine Vessels (c1&c2)	EPA	0.0877	0.0026	100.0%	100.0%	Lk. Mich. Shoreline	0.0877	0.0026
2280003000	Comm. Mar.	Commercial Marine Vessels (c3)	EPA	0.0726	0.0031	100.0%	100.0%	Lk. Mich. Shoreline	0.0726	0.0031
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0413	0.5391	0.0%	0.0%	water area (2)	0.0000	0.0000
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0167	0.1355	80.7%	80.7%	water area (2)	0.0135	0.1093
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.1894	0.2050	80.7%	80.7%	water area (2)	0.1528	0.1654
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.1540	0.0066	80.7%	80.7%	water area (2)	0.1243	0.0053
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0001	0.0000	0.0%	0.0%	water area (2)	0.0000	0.0000
2285002000	Railroad	All Diesel Line Haul Locomotives	EPA	0.0887	0.0039	20.5%	24.0%	rail links (1)	0.0181	0.0009
2285002015	Railroad	Diesel Railway Maintenance	MOVES	0.0004	0.0001	20.5%	24.0%	rail links (1)	0.0001	0.0000
2285004015	Railroad	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0000	20.5%	24.0%	rail links (1)	0.0000	0.0000
2285006015	Railroad	LPG Railway Maintenance	MOVES	0.0000	0.0000	20.5%	24.0%	rail links (1)	0.0000	0.0000
ALL (Total)	**ALL (Total)**	**ALL (Total)**		**3.0359**	**2.5174**				**1.3701**	**0.8915**

(1) Allocation based on data from EPA's 2011 Modeling Platform.

(2) Allocation based on surface water area from the NMIM2009 files WI_WIB.ALO and WI_WOB.ALO.

Table A7.2. 2017 Nonroad NOx and VOC Emissions: tons per summer day (tpsd)
Sheboygan County and Shoreline Sheboygan County Area

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2017 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0016	0.1554	11.8%	11.8%	land area	0.0002	0.0183
2260001020	Recreational	2-Stroke Snowmobiles	MOVES	0.0000	0.0235	11.8%	11.8%	land area	0.0000	0.0028
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0008	0.0420	11.8%	11.8%	land area	0.0001	0.0050
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0006	0.0030	11.8%	11.8%	land area	0.0001	0.0004
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0002	0.0062	51.8%	51.8%	population	0.0001	0.0032
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0002	51.8%	51.8%	population	0.0000	0.0001
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0003	51.8%	51.8%	population	0.0000	0.0001
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0004	0.0158	51.8%	51.8%	population	0.0002	0.0082
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0001	51.8%	51.8%	population	0.0000	0.0000
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0005	51.8%	51.8%	population	0.0000	0.0003
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0000	0.0012	51.8%	51.8%	population	0.0000	0.0006
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0001	0.0031	51.8%	51.8%	population	0.0001	0.0016
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0003	0.0108	51.8%	51.8%	population	0.0002	0.0056
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0008	0.0350	51.8%	51.8%	population	0.0004	0.0181
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0009	0.0227	51.8%	51.8%	population	0.0004	0.0118
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0014	0.0352	51.8%	51.8%	population	0.0007	0.0182
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0005	0.0156	51.8%	51.8%	population	0.0003	0.0081
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0013	0.0352	51.8%	51.8%	population	0.0007	0.0182
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0015	51.8%	51.8%	population	0.0000	0.0008
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0001	51.8%	51.8%	population	0.0000	0.0001
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0006	11.8%	11.8%	land area	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0000	0.0009	51.8%	51.8%	population	0.0000	0.0005
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0002	0.0062	51.8%	51.8%	population	0.0001	0.0032
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0003	11.8%	11.8%	land area	0.0000	0.0000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0009	0.0078	11.8%	11.8%	land area	0.0001	0.0009
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0069	0.0816	11.8%	11.8%	land area	0.0008	0.0096
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0079	0.0265	11.8%	11.8%	land area	0.0009	0.0031
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0009	0.0033	11.8%	11.8%	land area	0.0001	0.0004
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0001	0.0003	51.8%	51.8%	population	0.0001	0.0002
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2017 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0002	0.0008	51.8%	51.8%	population	0.0001	0.0004
2265002015	Construction	4-Stroke Rollers	MOVES	0.0002	0.0005	51.8%	51.8%	population	0.0001	0.0003
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0004	0.0017	51.8%	51.8%	population	0.0002	0.0009
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0002	0.0006	51.8%	51.8%	population	0.0001	0.0003
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0004	0.0010	51.8%	51.8%	population	0.0002	0.0005
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0002	0.0006	51.8%	51.8%	population	0.0001	0.0003
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0007	0.0021	51.8%	51.8%	population	0.0003	0.0011
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0004	0.0023	51.8%	51.8%	population	0.0002	0.0012
2265002045	Construction	4-Stroke Cranes	MOVES	0.0001	0.0001	51.8%	51.8%	population	0.0000	0.0000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0001	0.0002	51.8%	51.8%	population	0.0000	0.0001
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0001	0.0001	51.8%	51.8%	population	0.0000	0.0000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0001	0.0001	51.8%	51.8%	population	0.0001	0.0000
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0002	0.0007	51.8%	51.8%	population	0.0001	0.0004
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0003	0.0005	51.8%	51.8%	population	0.0002	0.0002
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0001	0.0004	51.8%	51.8%	population	0.0000	0.0002
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0001	0.0001	51.8%	51.8%	population	0.0001	0.0001
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0039	0.0051	51.8%	51.8%	population	0.0020	0.0026
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0070	0.0037	51.8%	51.8%	population	0.0036	0.0019
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0015	0.0029	51.8%	51.8%	population	0.0008	0.0015
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0030	0.0116	51.8%	51.8%	population	0.0015	0.0060
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0002	0.0003	51.8%	51.8%	population	0.0001	0.0002
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	51.8%	51.8%	population	0.0000	0.0000
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0005	0.0003	51.8%	51.8%	population	0.0003	0.0001
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0060	0.0593	51.8%	51.8%	population	0.0031	0.0307
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0029	0.0186	51.8%	51.8%	population	0.0015	0.0097
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0005	0.0052	51.8%	51.8%	population	0.0003	0.0027
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0016	0.0115	51.8%	51.8%	population	0.0008	0.0059
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0000	0.0004	51.8%	51.8%	population	0.0000	0.0002
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0001	0.0005	51.8%	51.8%	population	0.0000	0.0003
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0001	0.0006	51.8%	51.8%	population	0.0000	0.0003
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0031	0.0118	51.8%	51.8%	population	0.0016	0.0061
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0037	51.8%	51.8%	population	0.0000	0.0019
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0003	51.8%	51.8%	population	0.0000	0.0002
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0013	0.0093	51.8%	51.8%	population	0.0007	0.0048
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0003	0.0012	51.8%	51.8%	population	0.0002	0.0006
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0005	0.0019	51.8%	51.8%	population	0.0003	0.0010
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0002	0.0014	51.8%	51.8%	population	0.0001	0.0007
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0170	0.0914	51.8%	51.8%	population	0.0088	0.0474
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0044	0.0154	51.8%	51.8%	population	0.0023	0.0080

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2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0007	0.0017	51.8%	51.8%	population	0.0004	0.0009
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0142	0.0458	51.8%	51.8%	population	0.0074	0.0237
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0007	0.0048	51.8%	51.8%	population	0.0004	0.0025
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0006	0.0037	51.8%	51.8%	population	0.0003	0.0019
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0001	11.8%	11.8%	land area	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0002	0.0002	11.8%	11.8%	land area	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0013	0.0017	11.8%	11.8%	land area	0.0002	0.0002
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0002	11.8%	11.8%	land area	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0016	0.0030	11.8%	11.8%	land area	0.0002	0.0004
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0027	0.0120	11.8%	11.8%	land area	0.0003	0.0014
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0021	0.0022	11.8%	11.8%	land area	0.0003	0.0003
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0024	0.0021	11.8%	11.8%	land area	0.0003	0.0002
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0003	0.0002	11.8%	11.8%	land area	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0055	0.0315	51.8%	51.8%	population	0.0028	0.0163
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0014	0.0057	51.8%	51.8%	population	0.0007	0.0030
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0007	0.0023	51.8%	51.8%	population	0.0004	0.0012
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0015	0.0049	51.8%	51.8%	population	0.0008	0.0026
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0022	0.0117	51.8%	51.8%	population	0.0012	0.0060
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0001	0.0004	51.8%	51.8%	population	0.0001	0.0002
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0001	11.8%	11.8%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0002	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0001	0.0000	51.8%	51.8%	population	0.0000	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0001	0.0000	51.8%	51.8%	population	0.0001	0.0000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0001	0.0000	51.8%	51.8%	population	0.0000	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0001	0.0000	51.8%	51.8%	population	0.0000	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0001	0.0000	51.8%	51.8%	population	0.0001	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0003	0.0001	51.8%	51.8%	population	0.0001	0.0000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0001	0.0000	51.8%	51.8%	population	0.0001	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0035	0.0007	51.8%	51.8%	population	0.0018	0.0004
2267003020	Industrial	LPG Forklifts	MOVES	0.1129	0.0167	51.8%	51.8%	population	0.0585	0.0087
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0008	0.0001	51.8%	51.8%	population	0.0004	0.0001

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2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0002	0.0000	51.8%	51.8%	population	0.0001	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0002	0.0000	51.8%	51.8%	population	0.0001	0.0000
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0004	0.0001	51.8%	51.8%	population	0.0002	0.0000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0003	0.0000	51.8%	51.8%	population	0.0002	0.0000
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0027	0.0005	51.8%	51.8%	population	0.0014	0.0002
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0003	0.0001	51.8%	51.8%	population	0.0002	0.0000
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0002	0.0000	51.8%	51.8%	population	0.0001	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0003	0.0001	51.8%	51.8%	population	0.0001	0.0000
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0091	0.0048	51.8%	51.8%	population	0.0047	0.0025
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0001	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0005	0.0002	11.8%	11.8%	land area	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0011	0.0006	51.8%	51.8%	population	0.0006	0.0003
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0005	0.0002	51.8%	51.8%	population	0.0002	0.0001
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0022	0.0005	11.8%	11.8%	land area	0.0003	0.0001
2270002003	Construction	Diesel Pavers	MOVES	0.0047	0.0003	51.8%	51.8%	population	0.0024	0.0001
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0003	0.0000	51.8%	51.8%	population	0.0001	0.0000
2270002015	Construction	Diesel Rollers	MOVES	0.0133	0.0008	51.8%	51.8%	population	0.0069	0.0004
2270002018	Construction	Diesel Scrapers	MOVES	0.0119	0.0006	51.8%	51.8%	population	0.0062	0.0003
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0009	0.0001	51.8%	51.8%	population	0.0005	0.0000
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0008	0.0001	51.8%	51.8%	population	0.0004	0.0000
2270002027	Construction	Diesel Signal Boards	MOVES	0.0025	0.0002	51.8%	51.8%	population	0.0013	0.0001
2270002030	Construction	Diesel Trenchers	MOVES	0.0088	0.0007	51.8%	51.8%	population	0.0046	0.0003
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0120	0.0009	51.8%	51.8%	population	0.0062	0.0005
2270002036	Construction	Diesel Excavators	MOVES	0.0393	0.0020	51.8%	51.8%	population	0.0203	0.0010
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0006	0.0001	51.8%	51.8%	population	0.0003	0.0000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0005	0.0001	51.8%	51.8%	population	0.0003	0.0000
2270002045	Construction	Diesel Cranes	MOVES	0.0133	0.0007	51.8%	51.8%	population	0.0069	0.0004
2270002048	Construction	Diesel Graders	MOVES	0.0091	0.0005	51.8%	51.8%	population	0.0047	0.0003

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				NOx	VOC	NOx	VOC		NOx	VOC
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.0481	0.0020	51.8%	51.8%	population	0.0249	0.0010
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0029	0.0002	51.8%	51.8%	population	0.0015	0.0001
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0190	0.0013	51.8%	51.8%	population	0.0098	0.0007
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.0658	0.0036	51.8%	51.8%	population	0.0341	0.0019
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.0629	0.0117	51.8%	51.8%	population	0.0326	0.0061
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0484	0.0024	51.8%	51.8%	population	0.0251	0.0013
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.0481	0.0109	51.8%	51.8%	population	0.0249	0.0056
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0081	0.0004	51.8%	51.8%	population	0.0042	0.0002
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0002	0.0000	51.8%	51.8%	population	0.0001	0.0000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0085	0.0005	51.8%	51.8%	population	0.0044	0.0003
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0082	0.0019	51.8%	51.8%	population	0.0043	0.0010
2270003020	Industrial	Diesel Forklifts	MOVES	0.0494	0.0021	51.8%	51.8%	population	0.0256	0.0011
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0252	0.0015	51.8%	51.8%	population	0.0130	0.0008
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0316	0.0022	51.8%	51.8%	population	0.0164	0.0012
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0020	0.0003	51.8%	51.8%	population	0.0011	0.0002
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0302	0.0018	51.8%	51.8%	population	0.0157	0.0009
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0231	0.0012	51.8%	51.8%	population	0.0119	0.0006
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0086	0.0009	51.8%	51.8%	population	0.0045	0.0005
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0017	0.0002	51.8%	51.8%	population	0.0009	0.0001
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0132	0.0011	51.8%	51.8%	population	0.0068	0.0006
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0010	0.0001	51.8%	51.8%	population	0.0005	0.0000
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0000	0.0000	51.8%	51.8%	population	0.0000	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.4022	0.0321	11.8%	11.8%	land area	0.0475	0.0038
2270005020	Agriculture	Diesel Combines	MOVES	0.0612	0.0050	11.8%	11.8%	land area	0.0072	0.0006
2270005025	Agriculture	Diesel Balers	MOVES	0.0003	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0049	0.0005	11.8%	11.8%	land area	0.0006	0.0001
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0043	0.0005	11.8%	11.8%	land area	0.0005	0.0001
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0107	0.0009	11.8%	11.8%	land area	0.0013	0.0001
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0037	0.0003	11.8%	11.8%	land area	0.0004	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0167	0.0018	51.8%	51.8%	population	0.0087	0.0009
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0040	0.0004	51.8%	51.8%	population	0.0021	0.0002
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0079	0.0006	51.8%	51.8%	population	0.0041	0.0003
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0052	0.0012	51.8%	51.8%	population	0.0027	0.0006
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0006	0.0001	51.8%	51.8%	population	0.0003	0.0000
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0004	0.0000	51.8%	51.8%	population	0.0002	0.0000

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2017 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2017 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidders	MOVES	0.0007	0.0000	11.8%	11.8%	land area	0.0001	0.0000
2275000000	Aircraft	All Aircraft	EPA	0.0152	0.0186	0.7%	0.8%	airport location (1)	0.0001	0.0002
2280002000	Comm. Mar.	Commercial Marine Vessels (c1&c2)	EPA	0.0840	0.0025	100.0%	100.0%	Lk. Mich. Shoreline	0.0840	0.0025
2280003000	Comm. Mar.	Commercial Marine Vessels (c3)	EPA	0.0783	0.0036	100.0%	100.0%	Lk. Mich. Shoreline	0.0783	0.0036
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0466	0.3084	0.0%	0.0%	water area (2)	0.0000	0.0000
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0207	0.0534	80.7%	80.7%	water area (2)	0.0167	0.0431
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.1530	0.1637	80.7%	80.7%	water area (2)	0.1235	0.1321
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.1431	0.0073	80.7%	80.7%	water area (2)	0.1155	0.0059
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0001	0.0000	0.0%	0.0%	water area (2)	0.0000	0.0000
2285002000	Railroad	All Diesel Line Haul Locomotives	EPA	0.0652	0.0029	20.5%	24.0%	rail links (1)	0.0133	0.0007
2285002015	Railroad	Diesel Railway Maintenance	MOVES	0.0003	0.0001	20.5%	24.0%	rail links (1)	0.0001	0.0000
2285004015	Railroad	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0000	20.5%	24.0%	rail links (1)	0.0000	0.0000
2285006015	Railroad	LPG Railway Maintenance	MOVES	0.0000	0.0000	20.5%	24.0%	rail links (1)	0.0000	0.0000
ALL (Total)	**ALL (Total)**	**ALL (Total)**		**2.0123**	**1.6196**				**0.9512**	**0.5743**

(1) Allocation based on data from EPA's 2011 Modeling Platform.

(2) Allocation based on surface water area from the NMIM2009 files WI_WIB.ALO and WI_WOB.ALO.

Table A7.3. 2025 Nonroad NOx and VOC Emissions: tons per summer day (tpsd)
Sheboygan County and Shoreline Sheboygan County Area

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2025 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2025 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0017	0.1293	11.8%	11.8%	land area	0.0002	0.0153
2260001020	Recreational	2-Stroke Snowmobiles	MOVES	0.0000	0.0182	11.8%	11.8%	land area	0.0000	0.0021
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0009	0.0129	11.8%	11.8%	land area	0.0001	0.0015
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0005	0.0027	11.8%	11.8%	land area	0.0001	0.0003
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0002	0.0072	51.0%	51.0%	population	0.0001	0.0037
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0003	51.0%	51.0%	population	0.0000	0.0001
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0003	51.0%	51.0%	population	0.0000	0.0002
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0005	0.0181	51.0%	51.0%	population	0.0002	0.0092
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0001	51.0%	51.0%	population	0.0000	0.0000
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0007	51.0%	51.0%	population	0.0000	0.0004
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0001	51.0%	51.0%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0000	0.0011	51.0%	51.0%	population	0.0000	0.0006
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0001	0.0031	51.0%	51.0%	population	0.0001	0.0016
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0003	0.0107	51.0%	51.0%	population	0.0002	0.0054
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0008	0.0347	51.0%	51.0%	population	0.0004	0.0177
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0009	0.0224	51.0%	51.0%	population	0.0004	0.0114
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0014	0.0349	51.0%	51.0%	population	0.0007	0.0178
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0005	0.0154	51.0%	51.0%	population	0.0003	0.0079
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0013	0.0350	51.0%	51.0%	population	0.0006	0.0178
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0014	51.0%	51.0%	population	0.0000	0.0007
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0001	51.0%	51.0%	population	0.0000	0.0001
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0006	11.8%	11.8%	land area	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0000	0.0010	51.0%	51.0%	population	0.0000	0.0005
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0003	0.0071	51.0%	51.0%	population	0.0001	0.0036
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0003	11.8%	11.8%	land area	0.0000	0.0000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0009	0.0071	11.8%	11.8%	land area	0.0001	0.0008
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0062	0.0735	11.8%	11.8%	land area	0.0007	0.0087
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0078	0.0263	11.8%	11.8%	land area	0.0009	0.0031
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0006	0.0022	11.8%	11.8%	land area	0.0001	0.0003
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0001	0.0003	51.0%	51.0%	population	0.0001	0.0002
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2025 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2025 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0002	0.0009	51.0%	51.0%	population	0.0001	0.0005
2265002015	Construction	4-Stroke Rollers	MOVES	0.0002	0.0006	51.0%	51.0%	population	0.0001	0.0003
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0004	0.0018	51.0%	51.0%	population	0.0002	0.0009
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0002	0.0007	51.0%	51.0%	population	0.0001	0.0003
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0004	0.0011	51.0%	51.0%	population	0.0002	0.0006
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0002	0.0006	51.0%	51.0%	population	0.0001	0.0003
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0008	0.0024	51.0%	51.0%	population	0.0004	0.0012
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0004	0.0024	51.0%	51.0%	population	0.0002	0.0012
2265002045	Construction	4-Stroke Cranes	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0002	51.0%	51.0%	population	0.0000	0.0001
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0001	0.0000	51.0%	51.0%	population	0.0000	0.0000
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0002	0.0008	51.0%	51.0%	population	0.0001	0.0004
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0002	0.0004	51.0%	51.0%	population	0.0001	0.0002
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0001	0.0004	51.0%	51.0%	population	0.0000	0.0002
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0001	0.0000	51.0%	51.0%	population	0.0000	0.0000
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0027	0.0044	51.0%	51.0%	population	0.0014	0.0022
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0078	0.0040	51.0%	51.0%	population	0.0040	0.0020
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0019	0.0038	51.0%	51.0%	population	0.0010	0.0020
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0039	0.0155	51.0%	51.0%	population	0.0020	0.0079
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0002	0.0003	51.0%	51.0%	population	0.0001	0.0002
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	51.0%	51.0%	population	0.0000	0.0000
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0007	0.0004	51.0%	51.0%	population	0.0004	0.0002
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0054	0.0504	51.0%	51.0%	population	0.0028	0.0257
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0029	0.0185	51.0%	51.0%	population	0.0015	0.0094
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0005	0.0044	51.0%	51.0%	population	0.0002	0.0023
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0015	0.0108	51.0%	51.0%	population	0.0008	0.0055
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0000	0.0003	51.0%	51.0%	population	0.0000	0.0002
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0001	0.0005	51.0%	51.0%	population	0.0000	0.0003
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0001	0.0005	51.0%	51.0%	population	0.0000	0.0003
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0027	0.0115	51.0%	51.0%	population	0.0014	0.0059
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0034	51.0%	51.0%	population	0.0000	0.0017
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0003	51.0%	51.0%	population	0.0000	0.0002
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0011	0.0084	51.0%	51.0%	population	0.0006	0.0043
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0003	0.0012	51.0%	51.0%	population	0.0002	0.0006
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0004	0.0015	51.0%	51.0%	population	0.0002	0.0008
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0002	0.0013	51.0%	51.0%	population	0.0001	0.0006
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0147	0.0834	51.0%	51.0%	population	0.0075	0.0425
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0043	0.0152	51.0%	51.0%	population	0.0022	0.0077

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2025 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2025 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0007	0.0017	51.0%	51.0%	population	0.0004	0.0008
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0140	0.0454	51.0%	51.0%	population	0.0072	0.0231
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0005	0.0038	51.0%	51.0%	population	0.0003	0.0019
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0004	0.0030	51.0%	51.0%	population	0.0002	0.0015
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0001	11.8%	11.8%	land area	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0002	0.0002	11.8%	11.8%	land area	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0007	0.0008	11.8%	11.8%	land area	0.0001	0.0001
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0001	11.8%	11.8%	land area	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0009	0.0020	11.8%	11.8%	land area	0.0001	0.0002
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0016	0.0067	11.8%	11.8%	land area	0.0002	0.0008
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0011	0.0011	11.8%	11.8%	land area	0.0001	0.0001
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0012	0.0012	11.8%	11.8%	land area	0.0001	0.0001
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0003	0.0002	11.8%	11.8%	land area	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0054	0.0323	51.0%	51.0%	population	0.0027	0.0165
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0014	0.0064	51.0%	51.0%	population	0.0007	0.0032
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0007	0.0025	51.0%	51.0%	population	0.0004	0.0013
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0016	0.0056	51.0%	51.0%	population	0.0008	0.0028
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0025	0.0131	51.0%	51.0%	population	0.0013	0.0067
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0001	0.0004	51.0%	51.0%	population	0.0001	0.0002
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0001	11.8%	11.8%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0001	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0001	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0001	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0001	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0001	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0001	0.0000	51.0%	51.0%	population	0.0001	0.0000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0001	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0019	0.0003	51.0%	51.0%	population	0.0010	0.0002
2267003020	Industrial	LPG Forklifts	MOVES	0.1212	0.0142	51.0%	51.0%	population	0.0618	0.0072
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0009	0.0001	51.0%	51.0%	population	0.0005	0.0001

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2025 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2025 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0003	0.0000	51.0%	51.0%	population	0.0001	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0001	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0006	0.0001	51.0%	51.0%	population	0.0003	0.0000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0003	0.0000	51.0%	51.0%	population	0.0001	0.0000
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0014	0.0002	51.0%	51.0%	population	0.0007	0.0001
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0002	0.0000	51.0%	51.0%	population	0.0001	0.0000
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0001	0.0000	51.0%	51.0%	population	0.0001	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0002	0.0000	51.0%	51.0%	population	0.0001	0.0000
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0099	0.0042	51.0%	51.0%	population	0.0050	0.0021
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0005	0.0002	11.8%	11.8%	land area	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0006	0.0003	51.0%	51.0%	population	0.0003	0.0002
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0005	0.0003	51.0%	51.0%	population	0.0003	0.0001
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0015	0.0003	11.8%	11.8%	land area	0.0002	0.0000
2270002003	Construction	Diesel Pavers	MOVES	0.0021	0.0001	51.0%	51.0%	population	0.0011	0.0000
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0003	0.0000	51.0%	51.0%	population	0.0001	0.0000
2270002015	Construction	Diesel Rollers	MOVES	0.0069	0.0003	51.0%	51.0%	population	0.0035	0.0002
2270002018	Construction	Diesel Scrapers	MOVES	0.0036	0.0002	51.0%	51.0%	population	0.0019	0.0001
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0005	0.0000	51.0%	51.0%	population	0.0003	0.0000
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0005	0.0000	51.0%	51.0%	population	0.0002	0.0000
2270002027	Construction	Diesel Signal Boards	MOVES	0.0024	0.0002	51.0%	51.0%	population	0.0012	0.0001
2270002030	Construction	Diesel Trenchers	MOVES	0.0061	0.0002	51.0%	51.0%	population	0.0031	0.0001
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0075	0.0005	51.0%	51.0%	population	0.0038	0.0002
2270002036	Construction	Diesel Excavators	MOVES	0.0116	0.0005	51.0%	51.0%	population	0.0059	0.0003
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0005	0.0000	51.0%	51.0%	population	0.0002	0.0000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0004	0.0000	51.0%	51.0%	population	0.0002	0.0000
2270002045	Construction	Diesel Cranes	MOVES	0.0041	0.0002	51.0%	51.0%	population	0.0021	0.0001
2270002048	Construction	Diesel Graders	MOVES	0.0020	0.0001	51.0%	51.0%	population	0.0010	0.0001

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2025 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2025 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.0357	0.0007	51.0%	51.0%	population	0.0182	0.0004
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0013	0.0001	51.0%	51.0%	population	0.0007	0.0000
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0103	0.0004	51.0%	51.0%	population	0.0053	0.0002
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.0259	0.0011	51.0%	51.0%	population	0.0132	0.0006
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.0293	0.0038	51.0%	51.0%	population	0.0149	0.0020
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0200	0.0008	51.0%	51.0%	population	0.0102	0.0004
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.0377	0.0060	51.0%	51.0%	population	0.0192	0.0031
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0047	0.0002	51.0%	51.0%	population	0.0024	0.0001
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0001	0.0000	51.0%	51.0%	population	0.0001	0.0000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0031	0.0002	51.0%	51.0%	population	0.0016	0.0001
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0073	0.0010	51.0%	51.0%	population	0.0037	0.0005
2270003020	Industrial	Diesel Forklifts	MOVES	0.0377	0.0007	51.0%	51.0%	population	0.0192	0.0004
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0125	0.0004	51.0%	51.0%	population	0.0064	0.0002
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0143	0.0007	51.0%	51.0%	population	0.0073	0.0003
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0013	0.0002	51.0%	51.0%	population	0.0007	0.0001
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0342	0.0011	51.0%	51.0%	population	0.0174	0.0006
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0073	0.0003	51.0%	51.0%	population	0.0037	0.0001
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0069	0.0005	51.0%	51.0%	population	0.0035	0.0003
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0015	0.0001	51.0%	51.0%	population	0.0008	0.0001
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0082	0.0006	51.0%	51.0%	population	0.0042	0.0003
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0006	0.0000	51.0%	51.0%	population	0.0003	0.0000
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0000	0.0000	51.0%	51.0%	population	0.0000	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.1724	0.0111	11.8%	11.8%	land area	0.0203	0.0013
2270005020	Agriculture	Diesel Combines	MOVES	0.0276	0.0022	11.8%	11.8%	land area	0.0033	0.0003
2270005025	Agriculture	Diesel Balers	MOVES	0.0002	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0023	0.0002	11.8%	11.8%	land area	0.0003	0.0000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0021	0.0002	11.8%	11.8%	land area	0.0003	0.0000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0039	0.0003	11.8%	11.8%	land area	0.0005	0.0000
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0019	0.0001	11.8%	11.8%	land area	0.0002	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0127	0.0011	51.0%	51.0%	population	0.0065	0.0005
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0030	0.0003	51.0%	51.0%	population	0.0015	0.0001
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0049	0.0002	51.0%	51.0%	population	0.0025	0.0001
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0043	0.0006	51.0%	51.0%	population	0.0022	0.0003
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0004	0.0000	51.0%	51.0%	population	0.0002	0.0000
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0002	0.0000	51.0%	51.0%	population	0.0001	0.0000

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2025 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2025 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidders	MOVES	0.0001	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2275000000	Aircraft	All Aircraft	EPA	0.0152	0.0186	0.7%	0.8%	airport location (1)	0.0001	0.0002
2280002000	Comm. Mar.	Commercial Marine Vessels (c1&c2)	EPA	0.0566	0.0016	100.0%	100.0%	Lk. Mich. Shoreline	0.0566	0.0016
2280003000	Comm. Mar.	Commercial Marine Vessels (c3)	EPA	0.0875	0.0042	100.0%	100.0%	Lk. Mich. Shoreline	0.0875	0.0042
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0494	0.1448	0.0%	0.0%	water area (2)	0.0000	0.0000
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0235	0.0274	80.7%	80.7%	water area (2)	0.0190	0.0221
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0917	0.1161	80.7%	80.7%	water area (2)	0.0740	0.0937
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.1331	0.0087	80.7%	80.7%	water area (2)	0.1074	0.0070
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0001	0.0000	0.0%	0.0%	water area (2)	0.0000	0.0000
2285002000	Railroad	All Diesel Line Haul Locomotives	EPA	0.0621	0.0028	20.5%	24.0%	rail links (1)	0.0127	0.0007
2285002015	Railroad	Diesel Railway Maintenance	MOVES	0.0002	0.0000	20.5%	24.0%	rail links (1)	0.0000	0.0000
2285004015	Railroad	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0000	20.5%	24.0%	rail links (1)	0.0000	0.0000
2285006015	Railroad	LPG Railway Maintenance	MOVES	0.0000	0.0000	20.5%	24.0%	rail links (1)	0.0000	0.0000
ALL (Total)	**ALL (Total)**	**ALL (Total)**		**1.3584**	**1.2287**				**0.6921**	**0.4730**

(1) Allocation based on data from EPA's 2011 Modeling Platform.

(2) Allocation based on surface water area from the NMIM2009 files WI_WIB.ALO and WI_WOB.ALO.

Table A7.4. 2032 Nonroad NOx and VOC Emissions: tons per summer day (tpsd)
Sheboygan County and Shoreline Sheboygan County Area

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2032 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2032 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.0017	0.1252	11.8%	11.8%	land area	0.0002	0.0148
2260001020	Recreational	2-Stroke Snowmobiles	MOVES	0.0000	0.0172	11.8%	11.8%	land area	0.0000	0.0020
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.0009	0.0087	11.8%	11.8%	land area	0.0001	0.0010
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.0005	0.0027	11.8%	11.8%	land area	0.0001	0.0003
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.0002	0.0072	50.2%	50.2%	population	0.0001	0.0036
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.0000	0.0003	50.2%	50.2%	population	0.0000	0.0001
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.0000	0.0003	50.2%	50.2%	population	0.0000	0.0002
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.0005	0.0182	50.2%	50.2%	population	0.0002	0.0092
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0001	50.2%	50.2%	population	0.0000	0.0000
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.0000	0.0009	50.2%	50.2%	population	0.0000	0.0005
2260003040	Industrial	2-Stroke Other General Industrial Equipment	MOVES	0.0000	0.0001	50.2%	50.2%	population	0.0000	0.0000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0000	0.0011	50.2%	50.2%	population	0.0000	0.0006
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0001	0.0030	50.2%	50.2%	population	0.0001	0.0015
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.0003	0.0106	50.2%	50.2%	population	0.0002	0.0053
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.0008	0.0343	50.2%	50.2%	population	0.0004	0.0172
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0008	0.0222	50.2%	50.2%	population	0.0004	0.0111
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0013	0.0346	50.2%	50.2%	population	0.0007	0.0174
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0005	0.0152	50.2%	50.2%	population	0.0003	0.0077
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0012	0.0346	50.2%	50.2%	population	0.0006	0.0174
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0014	50.2%	50.2%	population	0.0000	0.0007
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0001	50.2%	50.2%	population	0.0000	0.0001
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.0000	0.0006	11.8%	11.8%	land area	0.0000	0.0001
2260006005	Commercial	2-Stroke Light Commercial Generator Set	MOVES	0.0000	0.0012	50.2%	50.2%	population	0.0000	0.0006
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.0003	0.0079	50.2%	50.2%	population	0.0001	0.0040
2260006015	Commercial	2-Stroke Light Commercial Air Compressors	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2260007005	Logging	2-Stroke Logging Equipment Chain Saws > 6 HP	MOVES	0.0000	0.0002	11.8%	11.8%	land area	0.0000	0.0000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.0009	0.0069	11.8%	11.8%	land area	0.0001	0.0008
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.0060	0.0717	11.8%	11.8%	land area	0.0007	0.0085
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.0077	0.0260	11.8%	11.8%	land area	0.0009	0.0031
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.0004	0.0017	11.8%	11.8%	land area	0.0001	0.0002
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.0001	0.0003	50.2%	50.2%	population	0.0001	0.0002
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2032 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2032 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.0002	0.0009	50.2%	50.2%	population	0.0001	0.0004
2265002015	Construction	4-Stroke Rollers	MOVES	0.0002	0.0006	50.2%	50.2%	population	0.0001	0.0003
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.0004	0.0018	50.2%	50.2%	population	0.0002	0.0009
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.0002	0.0007	50.2%	50.2%	population	0.0001	0.0003
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.0004	0.0011	50.2%	50.2%	population	0.0002	0.0006
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.0001	0.0006	50.2%	50.2%	population	0.0001	0.0003
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.0008	0.0024	50.2%	50.2%	population	0.0004	0.0012
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.0003	0.0024	50.2%	50.2%	population	0.0002	0.0012
2265002045	Construction	4-Stroke Cranes	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.0000	0.0002	50.2%	50.2%	population	0.0000	0.0001
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.0001	0.0000	50.2%	50.2%	population	0.0000	0.0000
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.0002	0.0008	50.2%	50.2%	population	0.0001	0.0004
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.0002	0.0004	50.2%	50.2%	population	0.0001	0.0002
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.0001	0.0003	50.2%	50.2%	population	0.0000	0.0002
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.0028	0.0050	50.2%	50.2%	population	0.0014	0.0025
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.0099	0.0050	50.2%	50.2%	population	0.0050	0.0025
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.0024	0.0049	50.2%	50.2%	population	0.0012	0.0024
2265003040	Industrial	4-Stroke Other General Industrial Equipment	MOVES	0.0050	0.0196	50.2%	50.2%	population	0.0025	0.0098
2265003050	Industrial	4-Stroke Other Material Handling Equipment	MOVES	0.0002	0.0004	50.2%	50.2%	population	0.0001	0.0002
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.0000	0.0001	50.2%	50.2%	population	0.0000	0.0000
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.0009	0.0004	50.2%	50.2%	population	0.0004	0.0002
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.0054	0.0499	50.2%	50.2%	population	0.0027	0.0251
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.0029	0.0183	50.2%	50.2%	population	0.0014	0.0092
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.0005	0.0044	50.2%	50.2%	population	0.0002	0.0022
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.0015	0.0107	50.2%	50.2%	population	0.0007	0.0054
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.0000	0.0003	50.2%	50.2%	population	0.0000	0.0002
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.0001	0.0005	50.2%	50.2%	population	0.0000	0.0002
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.0001	0.0005	50.2%	50.2%	population	0.0000	0.0003
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Commercial)	MOVES	0.0026	0.0114	50.2%	50.2%	population	0.0013	0.0057
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.0000	0.0034	50.2%	50.2%	population	0.0000	0.0017
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.0000	0.0003	50.2%	50.2%	population	0.0000	0.0002
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.0011	0.0083	50.2%	50.2%	population	0.0005	0.0042
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Comm.)	MOVES	0.0003	0.0012	50.2%	50.2%	population	0.0002	0.0006
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.0004	0.0014	50.2%	50.2%	population	0.0002	0.0007
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP (Commercial)	MOVES	0.0002	0.0012	50.2%	50.2%	population	0.0001	0.0006
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Residential)	MOVES	0.0145	0.0825	50.2%	50.2%	population	0.0073	0.0415
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Commercial)	MOVES	0.0043	0.0150	50.2%	50.2%	population	0.0022	0.0075

SCC	Segment Description	SCC Description	Emis-sions from	Sheboygan County 2032 Emissions		% in Shoreline Sheb. Area		Allocate by	Shoreline Sheb. 2032 Emissions	
				NOx	VOC	NOx	VOC		NOx	VOC
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders (Comm.)	MOVES	0.0007	0.0016	50.2%	50.2%	population	0.0003	0.0008
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment (Comm.)	MOVES	0.0139	0.0448	50.2%	50.2%	population	0.0070	0.0225
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.0005	0.0037	50.2%	50.2%	population	0.0003	0.0019
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.0004	0.0029	50.2%	50.2%	population	0.0002	0.0015
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.0000	0.0001	11.8%	11.8%	land area	0.0000	0.0000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.0002	0.0002	11.8%	11.8%	land area	0.0000	0.0000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.0003	0.0004	11.8%	11.8%	land area	0.0000	0.0000
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.0000	0.0001	11.8%	11.8%	land area	0.0000	0.0000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.0006	0.0016	11.8%	11.8%	land area	0.0001	0.0002
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.0011	0.0044	11.8%	11.8%	land area	0.0001	0.0005
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.0005	0.0005	11.8%	11.8%	land area	0.0001	0.0001
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.0006	0.0007	11.8%	11.8%	land area	0.0001	0.0001
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.0003	0.0002	11.8%	11.8%	land area	0.0000	0.0000
2265006005	Commercial	4-Stroke Light Commercial Generator Set	MOVES	0.0060	0.0361	50.2%	50.2%	population	0.0030	0.0181
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.0016	0.0071	50.2%	50.2%	population	0.0008	0.0036
2265006015	Commercial	4-Stroke Light Commercial Air Compressors	MOVES	0.0008	0.0028	50.2%	50.2%	population	0.0004	0.0014
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.0017	0.0062	50.2%	50.2%	population	0.0009	0.0031
2265006030	Commercial	4-Stroke Light Commercial Pressure Wash	MOVES	0.0028	0.0147	50.2%	50.2%	population	0.0014	0.0074
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.0001	0.0005	50.2%	50.2%	population	0.0001	0.0002
2265007010	Logging	4-Stroke Logging Equipment Shredders > 6 HP	MOVES	0.0000	0.0001	11.8%	11.8%	land area	0.0000	0.0000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.0001	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267002015	Construction	LPG Rollers	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267002021	Construction	LPG Paving Equipment	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267002030	Construction	LPG Trenchers	MOVES	0.0001	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.0001	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267002045	Construction	LPG Cranes	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.0001	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.0001	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.0018	0.0002	50.2%	50.2%	population	0.0009	0.0001
2267003020	Industrial	LPG Forklifts	MOVES	0.1534	0.0180	50.2%	50.2%	population	0.0771	0.0090
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.0012	0.0001	50.2%	50.2%	population	0.0006	0.0001

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				NOx	VOC	NOx	VOC		NOx	VOC
2267003040	Industrial	LPG Other General Industrial Equipment	MOVES	0.0004	0.0000	50.2%	50.2%	population	0.0002	0.0000
2267003050	Industrial	LPG Other Material Handling Equipment	MOVES	0.0001	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.0007	0.0001	50.2%	50.2%	population	0.0004	0.0000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders (Commercial)	MOVES	0.0002	0.0000	50.2%	50.2%	population	0.0001	0.0000
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.0009	0.0001	50.2%	50.2%	population	0.0005	0.0001
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.0001	0.0000	50.2%	50.2%	population	0.0001	0.0000
2267006015	Commercial	LPG Light Commercial Air Compressors	MOVES	0.0002	0.0000	50.2%	50.2%	population	0.0001	0.0000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.0002	0.0000	50.2%	50.2%	population	0.0001	0.0000
2267006030	Commercial	LPG Light Commercial Pressure Washers	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2268003020	Industrial	CNG Forklifts	MOVES	0.0125	0.0053	50.2%	50.2%	population	0.0063	0.0027
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2268003040	Industrial	CNG Other General Industrial Equipment	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.0001	0.0000	50.2%	50.2%	population	0.0000	0.0000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.0005	0.0002	11.8%	11.8%	land area	0.0001	0.0000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.0004	0.0002	50.2%	50.2%	population	0.0002	0.0001
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2268006015	Commercial	CNG Light Commercial Air Compressors	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2268006020	Commercial	CNG Light Commercial Gas Compressors	MOVES	0.0006	0.0003	50.2%	50.2%	population	0.0003	0.0001
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.0010	0.0001	30.9%	30.9%	land area	0.0003	0.0000
2270002003	Construction	Diesel Pavers	MOVES	0.0016	0.0000	50.2%	50.2%	population	0.0008	0.0000
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.0003	0.0000	50.2%	50.2%	population	0.0001	0.0000
2270002015	Construction	Diesel Rollers	MOVES	0.0053	0.0002	50.2%	50.2%	population	0.0027	0.0001
2270002018	Construction	Diesel Scrapers	MOVES	0.0012	0.0001	50.2%	50.2%	population	0.0006	0.0000
2270002021	Construction	Diesel Paving Equipment	MOVES	0.0004	0.0000	50.2%	50.2%	population	0.0002	0.0000
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.0003	0.0000	50.2%	50.2%	population	0.0002	0.0000
2270002027	Construction	Diesel Signal Boards	MOVES	0.0024	0.0002	50.2%	50.2%	population	0.0012	0.0001
2270002030	Construction	Diesel Trenchers	MOVES	0.0051	0.0001	50.2%	50.2%	population	0.0026	0.0001
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.0037	0.0002	50.2%	50.2%	population	0.0019	0.0001
2270002036	Construction	Diesel Excavators	MOVES	0.0092	0.0004	50.2%	50.2%	population	0.0046	0.0002
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.0004	0.0000	50.2%	50.2%	population	0.0002	0.0000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.0002	0.0000	50.2%	50.2%	population	0.0001	0.0000
2270002045	Construction	Diesel Cranes	MOVES	0.0019	0.0001	50.2%	50.2%	population	0.0010	0.0001
2270002048	Construction	Diesel Graders	MOVES	0.0011	0.0001	50.2%	50.2%	population	0.0005	0.0000

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				NOx	VOC	NOx	VOC		NOx	VOC
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.0349	0.0006	50.2%	50.2%	population	0.0176	0.0003
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.0009	0.0000	50.2%	50.2%	population	0.0005	0.0000
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.0070	0.0002	50.2%	50.2%	population	0.0035	0.0001
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.0158	0.0006	50.2%	50.2%	population	0.0079	0.0003
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.0195	0.0016	50.2%	50.2%	population	0.0098	0.0008
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.0133	0.0004	50.2%	50.2%	population	0.0067	0.0002
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.0263	0.0024	50.2%	50.2%	population	0.0132	0.0012
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.0035	0.0001	50.2%	50.2%	population	0.0018	0.0000
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.0001	0.0000	50.2%	50.2%	population	0.0000	0.0000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.0015	0.0001	50.2%	50.2%	population	0.0008	0.0000
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.0071	0.0006	50.2%	50.2%	population	0.0036	0.0003
2270003020	Industrial	Diesel Forklifts	MOVES	0.0476	0.0009	50.2%	50.2%	population	0.0239	0.0005
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.0136	0.0004	50.2%	50.2%	population	0.0069	0.0002
2270003040	Industrial	Diesel Other General Industrial Equipment	MOVES	0.0106	0.0004	50.2%	50.2%	population	0.0053	0.0002
2270003050	Industrial	Diesel Other Material Handling Equipment	MOVES	0.0009	0.0001	50.2%	50.2%	population	0.0005	0.0000
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.0429	0.0013	50.2%	50.2%	population	0.0216	0.0007
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.0085	0.0003	50.2%	50.2%	population	0.0043	0.0002
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums (Commercial)	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.0062	0.0004	50.2%	50.2%	population	0.0031	0.0002
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors (Commercial)	MOVES	0.0015	0.0001	50.2%	50.2%	population	0.0008	0.0001
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders (Commercial)	MOVES	0.0045	0.0003	50.2%	50.2%	population	0.0023	0.0001
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Comm.)	MOVES	0.0005	0.0000	50.2%	50.2%	population	0.0003	0.0000
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equipment	MOVES	0.0000	0.0000	50.2%	50.2%	population	0.0000	0.0000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.0854	0.0044	11.8%	11.8%	land area	0.0101	0.0005
2270005020	Agriculture	Diesel Combines	MOVES	0.0114	0.0009	11.8%	11.8%	land area	0.0013	0.0001
2270005025	Agriculture	Diesel Balers	MOVES	0.0001	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.0010	0.0001	11.8%	11.8%	land area	0.0001	0.0000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.0000	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2270005045	Agriculture	Diesel Swathers	MOVES	0.0011	0.0001	11.8%	11.8%	land area	0.0001	0.0000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.0018	0.0001	11.8%	11.8%	land area	0.0002	0.0000
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.0010	0.0000	11.8%	11.8%	land area	0.0001	0.0000
2270006005	Commercial	Diesel Light Commercial Generator Sets	MOVES	0.0101	0.0007	50.2%	50.2%	population	0.0051	0.0003
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.0023	0.0002	50.2%	50.2%	population	0.0012	0.0001
2270006015	Commercial	Diesel Light Commercial Air Compressors	MOVES	0.0041	0.0001	50.2%	50.2%	population	0.0020	0.0001
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.0038	0.0003	50.2%	50.2%	population	0.0019	0.0002
2270006030	Commercial	Diesel Light Commercial Pressure Washer	MOVES	0.0003	0.0000	50.2%	50.2%	population	0.0002	0.0000
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.0002	0.0000	50.2%	50.2%	population	0.0001	0.0000

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				NOx	VOC	NOx	VOC		NOx	VOC
2270007015	Logging	Diesel Logging Equip Fell/Bunch/Skidders	MOVES	0.0001	0.0000	11.8%	11.8%	land area	0.0000	0.0000
2275000000	Aircraft	All Aircraft	EPA	0.0152	0.0186	0.7%	0.8%	airport location (1)	0.0001	0.0002
2280002000	Comm. Mar.	Commercial Marine Vessels (c1&c2)	EPA	0.0486	0.0014	100.0%	100.0%	Lk. Mich. Shoreline	0.0486	0.0014
2280003000	Comm. Mar.	Commercial Marine Vessels (c3)	EPA	0.0995	0.0049	100.0%	100.0%	Lk. Mich. Shoreline	0.0995	0.0049
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.0506	0.1030	0.0%	0.0%	water area (2)	0.0000	0.0000
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.0242	0.0267	80.7%	80.7%	water area (2)	0.0195	0.0216
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.0597	0.0939	80.7%	80.7%	water area (2)	0.0482	0.0758
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.1370	0.0096	80.7%	80.7%	water area (2)	0.1105	0.0078
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.0001	0.0000	0.0%	0.0%	water area (2)	0.0000	0.0000
2285002000	Railroad	All Diesel Line Haul Locomotives	EPA	0.0613	0.0027	20.5%	24.0%	rail links (1)	0.0125	0.0007
2285002015	Railroad	Diesel Railway Maintenance	MOVES	0.0001	0.0000	20.5%	24.0%	rail links (1)	0.0000	0.0000
2285004015	Railroad	4-Stroke Gasoline Railway Maintenance	MOVES	0.0000	0.0000	20.5%	24.0%	rail links (1)	0.0000	0.0000
2285006015	Railroad	LPG Railway Maintenance	MOVES	0.0000	0.0000	20.5%	24.0%	rail links (1)	0.0000	0.0000
ALL (Total)	**ALL (Total)**	**ALL (Total)**		**1.2086**	**1.1457**				**0.6490**	**0.4509**

(1) Allocation based on data from EPA's 2011 Modeling Platform.

(2) Allocation based on surface water area from the NMIM2009 files WI_WIB.ALO and WI_WOB.ALO.

APPENDIX 8

Onroad Emissions and Activity Data for 2011, 2017, 2025 and 2032

This appendix provides detailed listings of the estimated onroad daily emissions and activity data for the shoreline Sheboygan County area for 2011, 2017, 2025 and 2032. The sums of NOx and VOC emissions from the different onroad source types were used for the onroad sector NOx and VOC tons per summer weekday (tpswd) emission estimates in sections 4.2 (Nonattainment Year and Attainment Year Inventories) and 4.3 (Maintenance Year Inventories) of the Wisconsin Department of Natural Resources' (WDNR) shoreline Sheboygan County redesignation request and maintenance plan for the 1997 and 2008 ozone standard.

Table A8.1. 2011 Onroad NO_X and VOC Emissions: tons per summer weekday (tpswd) for the Shoreline Sheboygan County Area.

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2011			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
Motorcycle	Gasoline	Off-Network	0.0001	0.0002	0.0164	0.0166
Motorcycle	Gasoline	Rural Restricted	0.0034	0.0034	0.0014	0.0047
Motorcycle	Gasoline	Rural Unrestricted	0.0013	0.0018	0.0011	0.0029
Motorcycle	Gasoline	Urban Restricted	0.0013	0.0013	0.0005	0.0018
Motorcycle	Gasoline	Urban Unrestricted	0.0028	0.0040	0.0025	0.0065
Passenger Car	Gasoline	Off-Network	0.1446	0.1584	0.1948	0.3532
Passenger Car	Gasoline	Rural Restricted	0.1498	0.0298	0.0096	0.0394
Passenger Car	Gasoline	Rural Unrestricted	0.0443	0.0108	0.0057	0.0165
Passenger Car	Gasoline	Urban Restricted	0.0657	0.0132	0.0044	0.0177
Passenger Car	Gasoline	Urban Unrestricted	0.1284	0.0319	0.0169	0.0488
Passenger Car	Diesel	Off-Network	0.0006	0.0013	0.0000	0.0013
Passenger Car	Diesel	Rural Restricted	0.0006	0.0003	0.0000	0.0003
Passenger Car	Diesel	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
Passenger Car	Diesel	Urban Restricted	0.0003	0.0001	0.0000	0.0001
Passenger Car	Diesel	Urban Unrestricted	0.0005	0.0004	0.0000	0.0004
Passenger Car	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0000	0.0000
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 Truck	Gasoline	Off-Network	0.1437	0.1695	0.0816	0.2510
Passenger Truck	Gasoline	Rural Restricted	0.1804	0.0335	0.0043	0.0378
Passenger Truck	Gasoline	Rural Unrestricted	0.0560	0.0132	0.0030	0.0161
Passenger Truck	Gasoline	Urban Restricted	0.0712	0.0134	0.0018	0.0152
Passenger Truck	Gasoline	Urban Unrestricted	0.1323	0.0316	0.0071	0.0387
Passenger Truck	Diesel	Off-Network	0.0020	0.0015	0.0000	0.0015
Passenger Truck	Diesel	Rural Restricted	0.0073	0.0013	0.0000	0.0013
Passenger Truck	Diesel	Rural Unrestricted	0.0031	0.0007	0.0000	0.0007
Passenger Truck	Diesel	Urban Restricted	0.0029	0.0005	0.0000	0.0005
Passenger Truck	Diesel	Urban Unrestricted	0.0074	0.0016	0.0000	0.0016
Passenger Truck	Ethanol (E-85)	Off-Network	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0498	0.0593	0.0313	0.0905
Light Commercial Truck	Gasoline	Rural Restricted	0.0634	0.0134	0.0021	0.0156
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0210	0.0062	0.0014	0.0077
Light Commercial Truck	Gasoline	Urban Restricted	0.0249	0.0054	0.0009	0.0063
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0492	0.0149	0.0035	0.0183
Light Commercial Truck	Diesel	Off-Network	0.0019	0.0016	0.0000	0.0016
Light Commercial Truck	Diesel	Rural Restricted	0.0072	0.0014	0.0000	0.0014
Light Commercial Truck	Diesel	Rural Unrestricted	0.0031	0.0007	0.0000	0.0007
Light Commercial Truck	Diesel	Urban Restricted	0.0029	0.0006	0.0000	0.0006
Light Commercial Truck	Diesel	Urban Unrestricted	0.0073	0.0018	0.0000	0.0018
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

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2011			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Intercity Bus	Diesel	Off-Network	0.0000	0.0000	0.0000	0.0000
Intercity Bus	Diesel	Rural Restricted	0.0037	0.0002	0.0000	0.0002
Intercity Bus	Diesel	Rural Unrestricted	0.0010	0.0001	0.0000	0.0001
Intercity Bus	Diesel	Urban Restricted	0.0021	0.0001	0.0000	0.0001
Intercity Bus	Diesel	Urban Unrestricted	0.0027	0.0002	0.0000	0.0002
Transit Bus	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000
Transit Bus	Diesel	Rural Restricted	0.0065	0.0004	0.0000	0.0004
Transit Bus	Diesel	Rural Unrestricted	0.0013	0.0001	0.0000	0.0001
Transit Bus	Diesel	Urban Restricted	0.0037	0.0002	0.0000	0.0002
Transit Bus	Diesel	Urban Unrestricted	0.0037	0.0003	0.0000	0.0003
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0005	0.0001	0.0000	0.0001
Transit Bus	CNG	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0003	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	0.0001
School Bus	Gasoline	Rural Restricted	0.0001	0.0000	0.0000	0.0000
School Bus	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
School Bus	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
School Bus	Diesel	Off-Network	0.0000	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Restricted	0.0089	0.0009	0.0000	0.0009
School Bus	Diesel	Rural Unrestricted	0.0018	0.0003	0.0000	0.0003
School Bus	Diesel	Urban Restricted	0.0051	0.0005	0.0000	0.0005
School Bus	Diesel	Urban Unrestricted	0.0052	0.0009	0.0000	0.0009
Refuse Truck	Gasoline	Off-Network	0.0000	0.0001	0.0000	0.0001
Refuse Truck	Gasoline	Rural Restricted	0.0003	0.0001	0.0000	0.0001
Refuse Truck	Gasoline	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Restricted	0.0001	0.0000	0.0000	0.0000
Refuse Truck	Gasoline	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Off-Network	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Restricted	0.0142	0.0006	0.0000	0.0006
Refuse Truck	Diesel	Rural Unrestricted	0.0022	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Urban Restricted	0.0054	0.0003	0.0000	0.0003
Refuse Truck	Diesel	Urban Unrestricted	0.0042	0.0003	0.0000	0.0003
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0084	0.0082	0.0066	0.0147
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0173	0.0032	0.0003	0.0034
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0039	0.0011	0.0001	0.0013
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0091	0.0017	0.0001	0.0019
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0093	0.0028	0.0003	0.0030
Single Unit Short-haul Truck	Diesel	Off-Network	0.0022	0.0002	0.0000	0.0002
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0693	0.0080	0.0000	0.0080
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0185	0.0030	0.0000	0.0030
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0364	0.0043	0.0000	0.0043
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.0446	0.0073	0.0000	0.0073
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0002	0.0003	0.0002	0.0005
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0007	0.0001	0.0000	0.0002
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2011			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0004	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0004	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0041	0.0005	0.0000	0.0005
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0011	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0022	0.0003	0.0000	0.0003
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0027	0.0005	0.0000	0.0005
Motor Home	Gasoline	Off-Network	0.0005	0.0006	0.0018	0.0024
Motor Home	Gasoline	Rural Restricted	0.0015	0.0003	0.0000	0.0004
Motor Home	Gasoline	Rural Unrestricted	0.0004	0.0001	0.0000	0.0002
Motor Home	Gasoline	Urban Restricted	0.0010	0.0002	0.0000	0.0003
Motor Home	Gasoline	Urban Unrestricted	0.0011	0.0004	0.0001	0.0004
Motor Home	Diesel	Off-Network	0.0000	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0012	0.0001	0.0000	0.0001
Motor Home	Diesel	Rural Unrestricted	0.0004	0.0001	0.0000	0.0001
Motor Home	Diesel	Urban Restricted	0.0008	0.0001	0.0000	0.0001
Motor Home	Diesel	Urban Unrestricted	0.0010	0.0002	0.0000	0.0002
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	0.0000	0.0001	0.0000	0.0001
Combination Short-haul Truck	Diesel	Rural Restricted	0.1356	0.0060	0.0000	0.0060
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0212	0.0013	0.0000	0.0013
Combination Short-haul Truck	Diesel	Urban Restricted	0.0519	0.0024	0.0000	0.0024
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0401	0.0025	0.0000	0.0025
Combination Long-haul Truck	Diesel	Off-Network	0.4498	0.1163	0.0000	0.1163
Combination Long-haul Truck	Diesel	Rural Restricted	0.3905	0.0175	0.0000	0.0175
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0603	0.0038	0.0000	0.0038
Combination Long-haul Truck	Diesel	Urban Restricted	0.1450	0.0067	0.0000	0.0067
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.1111	0.0070	0.0000	0.0070
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**3.0993**	**0.8427**	**0.3998**	**1.2425**
Motorcycle	ALL	ALL	0.0087	0.0107	0.0218	0.0326
Passenger Car	ALL	ALL	0.5351	0.2464	0.2313	0.4777
Passenger Truck	ALL	ALL	0.6066	0.2668	0.0978	0.3646
Light Commercial Truck	ALL	ALL	0.2307	0.1053	0.0392	0.1445
Intercity Bus	ALL	ALL	0.0094	0.0006	0.0000	0.0006
Transit Bus	ALL	ALL	0.0166	0.0012	0.0000	0.0012
School Bus	ALL	ALL	0.0212	0.0027	0.0000	0.0028
Refuse Truck	ALL	ALL	0.0266	0.0015	0.0000	0.0015
Single Unit Short-haul Truck	ALL	ALL	0.2190	0.0397	0.0073	0.0470
Single Unit Long-haul Truck	ALL	ALL	0.0120	0.0022	0.0002	0.0024
Motor Home	ALL	ALL	0.0078	0.0022	0.0019	0.0041
Combination Short-haul Truck	ALL	ALL	0.2488	0.0123	0.0000	0.0123
Combination Long-haul Truck	ALL	ALL	1.1567	0.1512	0.0000	0.1512
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**3.0993**	**0.8427**	**0.3998**	**1.2425**
ALL	Gasoline	ALL	1.3890	0.6349	0.3998	1.0347
ALL	Diesel	ALL	1.7090	0.2076	0.0000	0.2076
ALL	CNG	ALL	0.0012	0.0002	0.0000	0.0002

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2011			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
ALL	Ethanol (E-85)	ALL	0.0001	0.0000	0.0000	0.0001
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**3.0993**	**0.8427**	**0.3998**	**1.2425**
ALL	ALL	Off-Network	0.8041	0.5174	0.3326	0.8501
ALL	ALL	Rural Restricted	1.0665	0.1212	0.0178	0.1389
ALL	ALL	Rural Unrestricted	0.2414	0.0439	0.0113	0.0552
ALL	ALL	Urban Restricted	0.4328	0.0515	0.0078	0.0593
ALL	ALL	Urban Unrestricted	0.5545	0.1087	0.0303	0.1390
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**3.0993**	**0.8427**	**0.3998**	**1.2425**

Table A8.2. 2017 Onroad NO_X and VOC Emissions: tons per summer weekday (tpswd) for the Shoreline Sheboygan County Area.

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2017			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
Motorcycle	Gasoline	Off-Network	0.0001	0.0003	0.0219	0.0222
Motorcycle	Gasoline	Rural Restricted	0.0030	0.0029	0.0012	0.0041
Motorcycle	Gasoline	Rural Unrestricted	0.0014	0.0020	0.0013	0.0033
Motorcycle	Gasoline	Urban Restricted	0.0019	0.0019	0.0008	0.0027
Motorcycle	Gasoline	Urban Unrestricted	0.0031	0.0044	0.0028	0.0072
Passenger Car	Gasoline	Off-Network	0.0900	0.1007	0.1375	0.2382
Passenger Car	Gasoline	Rural Restricted	0.0514	0.0107	0.0039	0.0146
Passenger Car	Gasoline	Rural Unrestricted	0.0166	0.0040	0.0031	0.0071
Passenger Car	Gasoline	Urban Restricted	0.0389	0.0081	0.0031	0.0113
Passenger Car	Gasoline	Urban Unrestricted	0.0472	0.0115	0.0091	0.0206
Passenger Car	Diesel	Off-Network	0.0004	0.0006	0.0000	0.0006
Passenger Car	Diesel	Rural Restricted	0.0004	0.0001	0.0000	0.0001
Passenger Car	Diesel	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Restricted	0.0003	0.0001	0.0000	0.0001
Passenger Car	Diesel	Urban Unrestricted	0.0003	0.0001	0.0000	0.0001
Passenger Car	Ethanol (E-85)	Off-Network	0.0001	0.0002	0.0002	0.0003
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0001	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 Truck	Gasoline	Off-Network	0.0699	0.0746	0.0549	0.1295
Passenger Truck	Gasoline	Rural Restricted	0.0530	0.0103	0.0018	0.0121
Passenger Truck	Gasoline	Rural Unrestricted	0.0167	0.0037	0.0017	0.0054
Passenger Truck	Gasoline	Urban Restricted	0.0361	0.0070	0.0013	0.0083
Passenger Truck	Gasoline	Urban Unrestricted	0.0390	0.0088	0.0039	0.0127
Passenger Truck	Diesel	Off-Network	0.0020	0.0007	0.0000	0.0007
Passenger Truck	Diesel	Rural Restricted	0.0037	0.0005	0.0000	0.0005
Passenger Truck	Diesel	Rural Unrestricted	0.0019	0.0003	0.0000	0.0003
Passenger Truck	Diesel	Urban Restricted	0.0026	0.0003	0.0000	0.0003
Passenger Truck	Diesel	Urban Unrestricted	0.0045	0.0007	0.0000	0.0007
Passenger Truck	Ethanol (E-85)	Off-Network	0.0003	0.0003	0.0003	0.0006
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0002	0.0000	0.0000	0.0001
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0002	0.0000	0.0000	0.0000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
Light Commercial Truck	Gasoline	Off-Network	0.0357	0.0405	0.0245	0.0649
Light Commercial Truck	Gasoline	Rural Restricted	0.0261	0.0057	0.0010	0.0067
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0096	0.0028	0.0009	0.0037
Light Commercial Truck	Gasoline	Urban Restricted	0.0177	0.0039	0.0007	0.0046
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0222	0.0065	0.0021	0.0086
Light Commercial Truck	Diesel	Off-Network	0.0017	0.0011	0.0000	0.0011
Light Commercial Truck	Diesel	Rural Restricted	0.0038	0.0006	0.0000	0.0006
Light Commercial Truck	Diesel	Rural Unrestricted	0.0020	0.0004	0.0000	0.0004
Light Commercial Truck	Diesel	Urban Restricted	0.0026	0.0004	0.0000	0.0004
Light Commercial Truck	Diesel	Urban Unrestricted	0.0045	0.0009	0.0000	0.0009
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0001	0.0001	0.0001	0.0002
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0001	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

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2017			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Intercity Bus	Diesel	Off-Network	0.0000	0.0000	0.0000	0.0000
Intercity Bus	Diesel	Rural Restricted	0.0026	0.0001	0.0000	0.0001
Intercity Bus	Diesel	Rural Unrestricted	0.0008	0.0001	0.0000	0.0001
Intercity Bus	Diesel	Urban Restricted	0.0025	0.0001	0.0000	0.0001
Intercity Bus	Diesel	Urban Unrestricted	0.0022	0.0002	0.0000	0.0002
Transit Bus	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000
Transit Bus	Diesel	Rural Restricted	0.0041	0.0002	0.0000	0.0002
Transit Bus	Diesel	Rural Unrestricted	0.0010	0.0001	0.0000	0.0001
Transit Bus	Diesel	Urban Restricted	0.0040	0.0002	0.0000	0.0002
Transit Bus	Diesel	Urban Unrestricted	0.0026	0.0002	0.0000	0.0002
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0004	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0004	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0002	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Restricted	0.0044	0.0004	0.0000	0.0004
School Bus	Diesel	Rural Unrestricted	0.0010	0.0002	0.0000	0.0002
School Bus	Diesel	Urban Restricted	0.0043	0.0004	0.0000	0.0004
School Bus	Diesel	Urban Unrestricted	0.0029	0.0005	0.0000	0.0005
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	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Restricted	0.0085	0.0004	0.0000	0.0004
Refuse Truck	Diesel	Rural Unrestricted	0.0017	0.0001	0.0000	0.0001
Refuse Truck	Diesel	Urban Restricted	0.0056	0.0002	0.0000	0.0002
Refuse Truck	Diesel	Urban Unrestricted	0.0032	0.0002	0.0000	0.0002
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0067	0.0065	0.0052	0.0117
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0054	0.0011	0.0001	0.0012
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0015	0.0005	0.0001	0.0006
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0049	0.0010	0.0001	0.0011
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0035	0.0012	0.0002	0.0014
Single Unit Short-haul Truck	Diesel	Off-Network	0.0033	0.0002	0.0000	0.0002
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0325	0.0030	0.0000	0.0030
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0104	0.0015	0.0000	0.0015
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0293	0.0028	0.0000	0.0028
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.0246	0.0035	0.0000	0.0035
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0002	0.0002	0.0002	0.0004
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.0002	0.0000	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2017			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0002	0.0000	0.0000	0.0001
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0001	0.0000	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0019	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0006	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0017	0.0002	0.0000	0.0002
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0015	0.0002	0.0000	0.0002
Motor Home	Gasoline	Off-Network	0.0006	0.0008	0.0028	0.0036
Motor Home	Gasoline	Rural Restricted	0.0012	0.0003	0.0000	0.0004
Motor Home	Gasoline	Rural Unrestricted	0.0004	0.0002	0.0000	0.0002
Motor Home	Gasoline	Urban Restricted	0.0014	0.0004	0.0000	0.0004
Motor Home	Gasoline	Urban Unrestricted	0.0011	0.0004	0.0001	0.0005
Motor Home	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0012	0.0001	0.0000	0.0001
Motor Home	Diesel	Rural Unrestricted	0.0004	0.0001	0.0000	0.0001
Motor Home	Diesel	Urban Restricted	0.0013	0.0001	0.0000	0.0001
Motor Home	Diesel	Urban Unrestricted	0.0011	0.0002	0.0000	0.0002
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	0.0000	0.0001	0.0000	0.0001
Combination Short-haul Truck	Diesel	Rural Restricted	0.0625	0.0025	0.0000	0.0025
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0117	0.0007	0.0000	0.0007
Combination Short-haul Truck	Diesel	Urban Restricted	0.0413	0.0017	0.0000	0.0017
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0217	0.0014	0.0000	0.0014
Combination Long-haul Truck	Diesel	Off-Network	0.3524	0.0766	0.0000	0.0766
Combination Long-haul Truck	Diesel	Rural Restricted	0.2190	0.0084	0.0000	0.0084
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0401	0.0024	0.0000	0.0024
Combination Long-haul Truck	Diesel	Urban Restricted	0.1399	0.0055	0.0000	0.0055
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.0723	0.0042	0.0000	0.0042
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**1.7631**	**0.4498**	**0.2871**	**0.7370**
Motorcycle	ALL	ALL	0.0095	0.0115	0.0280	0.0395
Passenger Car	ALL	ALL	0.2459	0.1361	0.1570	0.2931
Passenger Truck	ALL	ALL	0.2301	0.1073	0.0639	0.1712
Light Commercial Truck	ALL	ALL	0.1262	0.0628	0.0293	0.0921
Intercity Bus	ALL	ALL	0.0082	0.0005	0.0000	0.0005
Transit Bus	ALL	ALL	0.0128	0.0009	0.0000	0.0009
School Bus	ALL	ALL	0.0127	0.0014	0.0000	0.0014
Refuse Truck	ALL	ALL	0.0192	0.0010	0.0000	0.0010
Single Unit Short-haul Truck	ALL	ALL	0.1221	0.0213	0.0057	0.0270
Single Unit Long-haul Truck	ALL	ALL	0.0067	0.0011	0.0002	0.0013
Motor Home	ALL	ALL	0.0087	0.0025	0.0030	0.0055
Combination Short-haul Truck	ALL	ALL	0.1373	0.0063	0.0000	0.0063
Combination Long-haul Truck	ALL	ALL	0.8237	0.0972	0.0000	0.0972
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**1.7631**	**0.4498**	**0.2871**	**0.7370**
ALL	Gasoline	ALL	0.6073	0.3231	0.2865	0.6096
ALL	Diesel	ALL	1.1535	0.1258	0.0000	0.1258
ALL	CNG	ALL	0.0010	0.0001	0.0000	0.0001

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2017			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
ALL	Ethanol (E-85)	ALL	0.0013	0.0007	0.0006	0.0014
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**1.7631**	**0.4498**	**0.2871**	**0.7370**
ALL	ALL	Off-Network	0.5635	0.3034	0.2475	0.5510
ALL	ALL	Rural Restricted	0.4858	0.0475	0.0081	0.0556
ALL	ALL	Rural Unrestricted	0.1183	0.0191	0.0071	0.0263
ALL	ALL	Urban Restricted	0.3374	0.0345	0.0061	0.0406
ALL	ALL	Urban Unrestricted	0.2581	0.0453	0.0182	0.0635
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**1.7631**	**0.4498**	**0.2871**	**0.7370**

Table A8.3. 2025 Onroad NO_X and VOC Emissions: tons per summer weekday (tpswd) for the Shoreline Sheboygan County Area.

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2025			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
Motorcycle	Gasoline	Off-Network	0.0001	0.0004	0.0209	0.0213
Motorcycle	Gasoline	Rural Restricted	0.0030	0.0023	0.0013	0.0036
Motorcycle	Gasoline	Rural Unrestricted	0.0014	0.0016	0.0014	0.0030
Motorcycle	Gasoline	Urban Restricted	0.0019	0.0015	0.0008	0.0024
Motorcycle	Gasoline	Urban Unrestricted	0.0030	0.0034	0.0029	0.0063
Passenger Car	Gasoline	Off-Network	0.0450	0.0603	0.0974	0.1577
Passenger Car	Gasoline	Rural Restricted	0.0246	0.0053	0.0030	0.0082
Passenger Car	Gasoline	Rural Unrestricted	0.0065	0.0016	0.0024	0.0040
Passenger Car	Gasoline	Urban Restricted	0.0185	0.0040	0.0024	0.0063
Passenger Car	Gasoline	Urban Unrestricted	0.0178	0.0042	0.0066	0.0109
Passenger Car	Diesel	Off-Network	0.0004	0.0004	0.0000	0.0004
Passenger Car	Diesel	Rural Restricted	0.0003	0.0001	0.0000	0.0001
Passenger Car	Diesel	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Unrestricted	0.0002	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Off-Network	0.0004	0.0007	0.0009	0.0016
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0002	0.0000	0.0000	0.0001
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0001	0.0000	0.0000	0.0001
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0001	0.0001
Passenger Truck	Gasoline	Off-Network	0.0254	0.0314	0.0363	0.0678
Passenger Truck	Gasoline	Rural Restricted	0.0235	0.0046	0.0013	0.0060
Passenger Truck	Gasoline	Rural Unrestricted	0.0055	0.0011	0.0013	0.0024
Passenger Truck	Gasoline	Urban Restricted	0.0158	0.0031	0.0010	0.0041
Passenger Truck	Gasoline	Urban Unrestricted	0.0124	0.0026	0.0028	0.0054
Passenger Truck	Diesel	Off-Network	0.0016	0.0003	0.0000	0.0003
Passenger Truck	Diesel	Rural Restricted	0.0015	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Rural Unrestricted	0.0008	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Urban Restricted	0.0010	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Urban Unrestricted	0.0018	0.0002	0.0000	0.0002
Passenger Truck	Ethanol (E-85)	Off-Network	0.0010	0.0014	0.0017	0.0031
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0009	0.0002	0.0001	0.0003
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0002	0.0000	0.0001	0.0001
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0006	0.0001	0.0001	0.0002
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0004	0.0001	0.0001	0.0002
Light Commercial Truck	Gasoline	Off-Network	0.0144	0.0182	0.0154	0.0337
Light Commercial Truck	Gasoline	Rural Restricted	0.0103	0.0020	0.0006	0.0027
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0031	0.0008	0.0006	0.0014
Light Commercial Truck	Gasoline	Urban Restricted	0.0069	0.0014	0.0005	0.0018
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0070	0.0018	0.0013	0.0031
Light Commercial Truck	Diesel	Off-Network	0.0013	0.0006	0.0000	0.0006
Light Commercial Truck	Diesel	Rural Restricted	0.0016	0.0002	0.0000	0.0002
Light Commercial Truck	Diesel	Rural Unrestricted	0.0008	0.0001	0.0000	0.0001
Light Commercial Truck	Diesel	Urban Restricted	0.0011	0.0001	0.0000	0.0001
Light Commercial Truck	Diesel	Urban Unrestricted	0.0018	0.0003	0.0000	0.0003
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0003	0.0004	0.0005	0.0009
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0002	0.0000	0.0000	0.0001
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0002	0.0000	0.0000	0.0000

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2025			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0000	0.0001
Intercity Bus	Diesel	Off-Network	0.0000	0.0000	0.0000	0.0000
Intercity Bus	Diesel	Rural Restricted	0.0010	0.0000	0.0000	0.0000
Intercity Bus	Diesel	Rural Unrestricted	0.0003	0.0000	0.0000	0.0000
Intercity Bus	Diesel	Urban Restricted	0.0010	0.0000	0.0000	0.0000
Intercity Bus	Diesel	Urban Unrestricted	0.0008	0.0001	0.0000	0.0001
Transit Bus	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000
Transit Bus	Diesel	Rural Restricted	0.0018	0.0001	0.0000	0.0001
Transit Bus	Diesel	Rural Unrestricted	0.0004	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Restricted	0.0017	0.0001	0.0000	0.0001
Transit Bus	Diesel	Urban Unrestricted	0.0011	0.0001	0.0000	0.0001
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0003	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0003	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0002	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Restricted	0.0017	0.0001	0.0000	0.0001
School Bus	Diesel	Rural Unrestricted	0.0004	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Restricted	0.0017	0.0001	0.0000	0.0001
School Bus	Diesel	Urban Unrestricted	0.0012	0.0001	0.0000	0.0001
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	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Restricted	0.0018	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Unrestricted	0.0004	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Restricted	0.0012	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Unrestricted	0.0007	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0029	0.0030	0.0030	0.0061
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0026	0.0005	0.0001	0.0006
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0007	0.0002	0.0000	0.0003
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0023	0.0004	0.0001	0.0005
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0016	0.0005	0.0001	0.0006
Single Unit Short-haul Truck	Diesel	Off-Network	0.0036	0.0002	0.0000	0.0002
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0127	0.0008	0.0000	0.0008
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0042	0.0004	0.0000	0.0004
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0114	0.0008	0.0000	0.0008
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.0095	0.0009	0.0000	0.0009
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0001
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

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2025			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0011	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0004	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0010	0.0001	0.0000	0.0001
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0008	0.0001	0.0000	0.0001
Motor Home	Gasoline	Off-Network	0.0003	0.0004	0.0016	0.0021
Motor Home	Gasoline	Rural Restricted	0.0005	0.0001	0.0000	0.0002
Motor Home	Gasoline	Rural Unrestricted	0.0002	0.0001	0.0000	0.0001
Motor Home	Gasoline	Urban Restricted	0.0006	0.0002	0.0000	0.0002
Motor Home	Gasoline	Urban Unrestricted	0.0005	0.0002	0.0000	0.0002
Motor Home	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0007	0.0001	0.0000	0.0001
Motor Home	Diesel	Rural Unrestricted	0.0003	0.0000	0.0000	0.0000
Motor Home	Diesel	Urban Restricted	0.0008	0.0001	0.0000	0.0001
Motor Home	Diesel	Urban Unrestricted	0.0007	0.0001	0.0000	0.0001
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	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Rural Restricted	0.0274	0.0009	0.0000	0.0009
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0054	0.0003	0.0000	0.0003
Combination Short-haul Truck	Diesel	Urban Restricted	0.0181	0.0006	0.0000	0.0006
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0096	0.0005	0.0000	0.0005
Combination Long-haul Truck	Diesel	Off-Network	0.3138	0.0531	0.0000	0.0531
Combination Long-haul Truck	Diesel	Rural Restricted	0.0706	0.0019	0.0000	0.0019
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0138	0.0006	0.0000	0.0006
Combination Long-haul Truck	Diesel	Urban Restricted	0.0452	0.0012	0.0000	0.0012
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.0238	0.0010	0.0000	0.0010
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.8711**	**0.2281**	**0.2091**	**0.4372**
Motorcycle	ALL	ALL	0.0095	0.0093	0.0273	0.0366
Passenger Car	ALL	ALL	0.1144	0.0767	0.1129	0.1896
Passenger Truck	ALL	ALL	0.0925	0.0454	0.0447	0.0901
Light Commercial Truck	ALL	ALL	0.0491	0.0260	0.0191	0.0451
Intercity Bus	ALL	ALL	0.0031	0.0002	0.0000	0.0002
Transit Bus	ALL	ALL	0.0058	0.0004	0.0000	0.0004
School Bus	ALL	ALL	0.0051	0.0003	0.0000	0.0003
Refuse Truck	ALL	ALL	0.0041	0.0001	0.0000	0.0001
Single Unit Short-haul Truck	ALL	ALL	0.0516	0.0078	0.0033	0.0112
Single Unit Long-haul Truck	ALL	ALL	0.0036	0.0004	0.0000	0.0004
Motor Home	ALL	ALL	0.0046	0.0013	0.0017	0.0030
Combination Short-haul Truck	ALL	ALL	0.0605	0.0023	0.0000	0.0023
Combination Long-haul Truck	ALL	ALL	0.4672	0.0579	0.0000	0.0579
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.8711**	**0.2281**	**0.2091**	**0.4372**
ALL	Gasoline	ALL	0.2585	0.1576	0.2054	0.3630
ALL	Diesel	ALL	0.6070	0.0673	0.0000	0.0673
ALL	CNG	ALL	0.0008	0.0001	0.0000	0.0001

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2025			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
ALL	Ethanol (E-85)	ALL	0.0048	0.0031	0.0036	0.0068
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.8711**	**0.2281**	**0.2091**	**0.4372**
ALL	ALL	Off-Network	0.4108	0.1709	0.1779	0.3488
ALL	ALL	Rural Restricted	0.1883	0.0195	0.0065	0.0260
ALL	ALL	Rural Unrestricted	0.0451	0.0072	0.0058	0.0131
ALL	ALL	Urban Restricted	0.1318	0.0141	0.0048	0.0189
ALL	ALL	Urban Unrestricted	0.0950	0.0163	0.0141	0.0304
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.8711**	**0.2281**	**0.2091**	**0.4372**
Safety Margin			15%			15%
Emissions Budget			**1.0018**			**0.5028**

Table A8.4. 2032 Onroad NO_X and VOC Emissions: tons per summer weekday (tpswd) for the Shoreline Sheboygan County Area.

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2032			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
Motorcycle	Gasoline	Off-Network	0.0001	0.0004	0.0189	0.0194
Motorcycle	Gasoline	Rural Restricted	0.0031	0.0023	0.0013	0.0036
Motorcycle	Gasoline	Rural Unrestricted	0.0015	0.0016	0.0015	0.0031
Motorcycle	Gasoline	Urban Restricted	0.0020	0.0015	0.0009	0.0024
Motorcycle	Gasoline	Urban Unrestricted	0.0031	0.0033	0.0029	0.0062
Passenger Car	Gasoline	Off-Network	0.0266	0.0327	0.0689	0.1016
Passenger Car	Gasoline	Rural Restricted	0.0141	0.0028	0.0023	0.0051
Passenger Car	Gasoline	Rural Unrestricted	0.0027	0.0006	0.0019	0.0026
Passenger Car	Gasoline	Urban Restricted	0.0105	0.0021	0.0018	0.0039
Passenger Car	Gasoline	Urban Unrestricted	0.0071	0.0016	0.0051	0.0068
Passenger Car	Diesel	Off-Network	0.0003	0.0003	0.0000	0.0003
Passenger Car	Diesel	Rural Restricted	0.0002	0.0000	0.0000	0.0000
Passenger Car	Diesel	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Restricted	0.0002	0.0000	0.0000	0.0000
Passenger Car	Diesel	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Off-Network	0.0004	0.0006	0.0011	0.0017
Passenger Car	Ethanol (E-85)	Rural Restricted	0.0002	0.0000	0.0000	0.0001
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.0001	0.0000	0.0000	0.0001
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0001	0.0001
Passenger Truck	Gasoline	Off-Network	0.0145	0.0170	0.0279	0.0450
Passenger Truck	Gasoline	Rural Restricted	0.0142	0.0026	0.0012	0.0038
Passenger Truck	Gasoline	Rural Unrestricted	0.0028	0.0006	0.0011	0.0017
Passenger Truck	Gasoline	Urban Restricted	0.0095	0.0018	0.0008	0.0026
Passenger Truck	Gasoline	Urban Unrestricted	0.0062	0.0013	0.0024	0.0037
Passenger Truck	Diesel	Off-Network	0.0015	0.0002	0.0000	0.0002
Passenger Truck	Diesel	Rural Restricted	0.0009	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Rural Unrestricted	0.0005	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Urban Restricted	0.0006	0.0001	0.0000	0.0001
Passenger Truck	Diesel	Urban Unrestricted	0.0011	0.0001	0.0000	0.0001
Passenger Truck	Ethanol (E-85)	Off-Network	0.0008	0.0011	0.0019	0.0030
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.0007	0.0001	0.0001	0.0002
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.0001	0.0000	0.0001	0.0001
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.0005	0.0001	0.0001	0.0002
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.0003	0.0001	0.0002	0.0003
Light Commercial Truck	Gasoline	Off-Network	0.0069	0.0075	0.0115	0.0190
Light Commercial Truck	Gasoline	Rural Restricted	0.0053	0.0010	0.0005	0.0015
Light Commercial Truck	Gasoline	Rural Unrestricted	0.0012	0.0003	0.0005	0.0008
Light Commercial Truck	Gasoline	Urban Restricted	0.0035	0.0007	0.0004	0.0010
Light Commercial Truck	Gasoline	Urban Unrestricted	0.0027	0.0005	0.0011	0.0016
Light Commercial Truck	Diesel	Off-Network	0.0011	0.0002	0.0000	0.0002
Light Commercial Truck	Diesel	Rural Restricted	0.0008	0.0001	0.0000	0.0001
Light Commercial Truck	Diesel	Rural Unrestricted	0.0004	0.0000	0.0000	0.0000
Light Commercial Truck	Diesel	Urban Restricted	0.0005	0.0001	0.0000	0.0001
Light Commercial Truck	Diesel	Urban Unrestricted	0.0008	0.0001	0.0000	0.0001
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.0003	0.0004	0.0007	0.0012
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.0002	0.0000	0.0000	0.0001
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.0001	0.0000	0.0000	0.0001

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2032			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.0001	0.0000	0.0001	0.0001
Intercity Bus	Diesel	Off-Network	0.0000	0.0000	0.0000	0.0000
Intercity Bus	Diesel	Rural Restricted	0.0005	0.0000	0.0000	0.0000
Intercity Bus	Diesel	Rural Unrestricted	0.0002	0.0000	0.0000	0.0000
Intercity Bus	Diesel	Urban Restricted	0.0005	0.0000	0.0000	0.0000
Intercity Bus	Diesel	Urban Unrestricted	0.0004	0.0000	0.0000	0.0000
Transit Bus	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000
Transit Bus	Diesel	Rural Restricted	0.0009	0.0000	0.0000	0.0000
Transit Bus	Diesel	Rural Unrestricted	0.0002	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Restricted	0.0009	0.0000	0.0000	0.0000
Transit Bus	Diesel	Urban Unrestricted	0.0006	0.0000	0.0000	0.0000
Transit Bus	CNG	Off-Network	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Restricted	0.0002	0.0000	0.0000	0.0000
Transit Bus	CNG	Rural Unrestricted	0.0000	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Restricted	0.0002	0.0000	0.0000	0.0000
Transit Bus	CNG	Urban Unrestricted	0.0001	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Restricted	0.0014	0.0000	0.0000	0.0000
School Bus	Diesel	Rural Unrestricted	0.0004	0.0000	0.0000	0.0000
School Bus	Diesel	Urban Restricted	0.0014	0.0001	0.0000	0.0001
School Bus	Diesel	Urban Unrestricted	0.0009	0.0001	0.0000	0.0001
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	0.0000	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Restricted	0.0018	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Rural Unrestricted	0.0004	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Restricted	0.0012	0.0000	0.0000	0.0000
Refuse Truck	Diesel	Urban Unrestricted	0.0006	0.0000	0.0000	0.0000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.0017	0.0019	0.0023	0.0042
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.0020	0.0004	0.0001	0.0004
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.0005	0.0002	0.0000	0.0002
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.0018	0.0003	0.0001	0.0004
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.0012	0.0004	0.0001	0.0005
Single Unit Short-haul Truck	Diesel	Off-Network	0.0037	0.0002	0.0000	0.0002
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.0086	0.0005	0.0000	0.0005
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.0029	0.0003	0.0000	0.0003
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.0077	0.0005	0.0000	0.0005
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.0064	0.0006	0.0000	0.0006
Single Unit Long-haul Truck	Gasoline	Off-Network	0.0000	0.0000	0.0000	0.0000
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

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2032			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.0000	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.0007	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.0003	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.0007	0.0000	0.0000	0.0000
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.0006	0.0001	0.0000	0.0001
Motor Home	Gasoline	Off-Network	0.0002	0.0002	0.0008	0.0010
Motor Home	Gasoline	Rural Restricted	0.0002	0.0000	0.0000	0.0000
Motor Home	Gasoline	Rural Unrestricted	0.0001	0.0000	0.0000	0.0000
Motor Home	Gasoline	Urban Restricted	0.0002	0.0000	0.0000	0.0001
Motor Home	Gasoline	Urban Unrestricted	0.0001	0.0001	0.0000	0.0001
Motor Home	Diesel	Off-Network	0.0001	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Restricted	0.0004	0.0000	0.0000	0.0000
Motor Home	Diesel	Rural Unrestricted	0.0002	0.0000	0.0000	0.0000
Motor Home	Diesel	Urban Restricted	0.0005	0.0000	0.0000	0.0000
Motor Home	Diesel	Urban Unrestricted	0.0004	0.0001	0.0000	0.0001
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	0.0000	0.0000	0.0000	0.0000
Combination Short-haul Truck	Diesel	Rural Restricted	0.0177	0.0005	0.0000	0.0005
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.0036	0.0002	0.0000	0.0002
Combination Short-haul Truck	Diesel	Urban Restricted	0.0117	0.0003	0.0000	0.0003
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.0062	0.0003	0.0000	0.0003
Combination Long-haul Truck	Diesel	Off-Network	0.3238	0.0526	0.0000	0.0526
Combination Long-haul Truck	Diesel	Rural Restricted	0.0485	0.0012	0.0000	0.0012
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.0096	0.0004	0.0000	0.0004
Combination Long-haul Truck	Diesel	Urban Restricted	0.0310	0.0008	0.0000	0.0008
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.0160	0.0007	0.0000	0.0007
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.6731**	**0.1496**	**0.1611**	**0.3106**
Motorcycle	ALL	ALL	0.0098	0.0091	0.0255	0.0346
Passenger Car	ALL	ALL	0.0628	0.0409	0.0815	0.1224
Passenger Truck	ALL	ALL	0.0544	0.0252	0.0358	0.0610
Light Commercial Truck	ALL	ALL	0.0241	0.0110	0.0149	0.0259
Intercity Bus	ALL	ALL	0.0016	0.0001	0.0000	0.0001
Transit Bus	ALL	ALL	0.0033	0.0002	0.0000	0.0002
School Bus	ALL	ALL	0.0040	0.0002	0.0000	0.0002
Refuse Truck	ALL	ALL	0.0039	0.0001	0.0000	0.0001
Single Unit Short-haul Truck	ALL	ALL	0.0365	0.0051	0.0025	0.0077
Single Unit Long-haul Truck	ALL	ALL	0.0024	0.0002	0.0000	0.0002
Motor Home	ALL	ALL	0.0023	0.0006	0.0008	0.0014
Combination Short-haul Truck	ALL	ALL	0.0392	0.0013	0.0000	0.0013
Combination Long-haul Truck	ALL	ALL	0.4289	0.0556	0.0000	0.0556
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.6731**	**0.1496**	**0.1611**	**0.3106**
ALL	Gasoline	ALL	0.1458	0.0859	0.1565	0.2424
ALL	Diesel	ALL	0.5226	0.0610	0.0000	0.0610
ALL	CNG	ALL	0.0006	0.0000	0.0000	0.0000

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County – Year 2032			
			NO_x Emissions (tpswd)	VOC Emissions (tpswd)		
			Total	Exhaust	Evaporative	**Total**
ALL	Ethanol (E-85)	ALL	0.0042	0.0026	0.0046	0.0072
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.6731**	**0.1496**	**0.1611**	**0.3106**
ALL	ALL	Off-Network	0.3820	0.1155	0.1341	0.2495
ALL	ALL	Rural Restricted	0.1226	0.0118	0.0056	0.0175
ALL	ALL	Rural Unrestricted	0.0277	0.0044	0.0052	0.0096
ALL	ALL	Urban Restricted	0.0855	0.0085	0.0042	0.0126
ALL	ALL	Urban Unrestricted	0.0553	0.0094	0.0120	0.0214
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**0.6731**	**0.1496**	**0.1611**	**0.3106**
Safety Margin			15%			15%
Emissions Budget			**0.7741**			**0.3572**

Table A8.5. Vehicle Activity Data Output from the MOVES2014b Model for Years 2011, 2017, 2025 and 2032 for the Shoreline Sheboygan County Area.

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County							
			Vehicle Population				Vehicle-Miles of Travel Summer Weekday			
			2011	2017	2025	2032	2011	2017	2025	2032
Motorcycle	Gasoline	Off-Network	1,310	1,439	1,512	1,572				
Motorcycle	Gasoline	Rural Restricted					4,436	4,058	4,302	4,486
Motorcycle	Gasoline	Rural Unrestricted					2,001	2,278	2,440	2,582
Motorcycle	Gasoline	Urban Restricted					1,664	2,639	2,791	2,907
Motorcycle	Gasoline	Urban					4,487	5,033	5,180	5,327
Passenger Car	Gasoline	Off-Network	20,036	22,050	22,855	23,651				
Passenger Car	Gasoline	Rural Restricted					235,007	214,791	226,633	236,777
Passenger Car	Gasoline	Rural Unrestricted					78,173	88,935	94,785	100,489
Passenger Car	Gasoline	Urban Restricted					103,872	164,662	173,286	180,837
Passenger Car	Gasoline	Urban					234,791	263,152	269,550	277,716
Passenger Car	Diesel	Off-Network	85	159	241	278				
Passenger Car	Diesel	Rural Restricted					959	1,691	2,509	2,816
Passenger Car	Diesel	Rural Unrestricted					319	700	1,049	1,195
Passenger Car	Diesel	Urban Restricted					424	1,297	1,918	2,151
Passenger Car	Diesel	Urban					958	2,072	2,984	3,303
Passenger Car	Ethanol (E-85)	Off-Network	2	50	271	357				
Passenger Car	Ethanol (E-85)	Rural Restricted					21	532	2,735	3,585
Passenger Car	Ethanol (E-85)	Rural Unrestricted					7	220	1,144	1,521
Passenger Car	Ethanol (E-85)	Urban Restricted					9	408	2,091	2,738
Passenger Car	Ethanol (E-85)	Urban					21	651	3,253	4,205
Passenger Truck	Gasoline	Off-Network	13,404	14,496	14,649	15,042				
Passenger Truck	Gasoline	Rural Restricted					180,541	162,190	164,357	168,214
Passenger Truck	Gasoline	Rural Unrestricted					69,545	77,767	79,601	82,672
Passenger Truck	Gasoline	Urban Restricted					72,188	112,478	113,684	116,220
Passenger Truck	Gasoline	Urban					168,815	185,973	182,953	184,654
Passenger Truck	Diesel	Off-Network	226	282	309	325				
Passenger Truck	Diesel	Rural Restricted					3,155	3,207	3,479	3,637
Passenger Truck	Diesel	Rural Unrestricted					1,215	1,538	1,685	1,787
Passenger Truck	Diesel	Urban Restricted					1,262	2,224	2,406	2,513
Passenger Truck	Diesel	Urban					2,950	3,677	3,873	3,992
Passenger Truck	Ethanol (E-85)	Off-Network	3	117	676	892				
Passenger Truck	Ethanol (E-85)	Rural Restricted					46	1,419	7,660	9,992
Passenger Truck	Ethanol (E-85)	Rural Unrestricted					18	680	3,710	4,911
Passenger Truck	Ethanol (E-85)	Urban Restricted					18	984	5,298	6,903

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County							
			Vehicle Population				Vehicle-Miles of Travel Summer Weekday			
			2011	2017	2025	2032	2011	2017	2025	2032
Passenger Truck	Ethanol (E-85)	Urban					43	1,627	8,526	10,968
Light Commercial Truck	Gasoline	Off-Network	3,159	3,550	3,630	3,720				
Light Commercial Truck	Gasoline	Rural Restricted					44,243	40,281	40,865	41,827
Light Commercial Truck	Gasoline	Rural Unrestricted					16,913	19,167	19,642	20,401
Light Commercial Truck	Gasoline	Urban Restricted					17,560	27,728	28,057	28,685
Light Commercial Truck	Gasoline	Urban					40,916	45,681	44,990	45,411
Light Commercial Truck	Diesel	Off-Network	178	200	211	218				
Light Commercial Truck	Diesel	Rural Restricted					2,528	2,280	2,379	2,465
Light Commercial Truck	Diesel	Rural Unrestricted					966	1,085	1,143	1,202
Light Commercial Truck	Diesel	Urban Restricted					1,003	1,569	1,633	1,691
Light Commercial Truck	Diesel	Urban					2,338	2,585	2,619	2,676
Light Commercial Truck	Ethanol (E-85)	Off-Network	1	22	147	208				
Light Commercial Truck	Ethanol (E-85)	Rural Restricted					9	291	1,732	2,356
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted					4	138	832	1,149
Light Commercial Truck	Ethanol (E-85)	Urban Restricted					4	200	1,189	1,616
Light Commercial Truck	Ethanol (E-85)	Urban					9	330	1,907	2,558
Intercity Bus	Diesel	Off-Network	3	3	3	4				
Intercity Bus	Diesel	Rural Restricted					275	259	282	298
Intercity Bus	Diesel	Rural Unrestricted					77	88	95	101
Intercity Bus	Diesel	Urban Restricted					156	252	274	290
Intercity Bus	Diesel	Urban					216	242	252	262
Transit Bus	Gasoline	Off-Network	0	0	0	0				
Transit Bus	Gasoline	Rural Restricted					7	9	12	14
Transit Bus	Gasoline	Rural Unrestricted					2	3	4	5
Transit Bus	Gasoline	Urban Restricted					4	9	12	14
Transit Bus	Gasoline	Urban					6	8	11	13
Transit Bus	Diesel	Off-Network	8	10	11	11				
Transit Bus	Diesel	Rural Restricted					482	432	462	498
Transit Bus	Diesel	Rural Unrestricted					137	149	159	172
Transit Bus	Diesel	Urban Restricted					277	428	457	493
Transit Bus	Diesel	Urban					386	414	424	448
Transit Bus	CNG	Off-Network	1	1	2	2				
Transit Bus	CNG	Rural Restricted					65	66	85	95
Transit Bus	CNG	Rural Unrestricted					18	23	29	33
Transit Bus	CNG	Urban Restricted					37	65	85	94
Transit Bus	CNG	Urban					52	63	78	85
School Bus	Gasoline	Off-Network	1	1	1	1				
School Bus	Gasoline	Rural Restricted					26	15	15	16
School Bus	Gasoline	Rural Unrestricted					7	5	5	6

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County							
			Vehicle Population				Vehicle-Miles of Travel Summer Weekday			
			2011	2017	2025	2032	2011	2017	2025	2032
School Bus	Gasoline	Urban Restricted					15	15	15	16
School Bus	Gasoline	Urban					21	14	14	15
School Bus	Diesel	Off-Network	84	106	114	121				
School Bus	Diesel	Rural Restricted					1,473	1,393	1,509	1,595
School Bus	Diesel	Rural Unrestricted					418	482	519	551
School Bus	Diesel	Urban Restricted					848	1,381	1,494	1,582
School Bus	Diesel	Urban					1,182	1,336	1,387	1,435
Refuse Truck	Gasoline	Off-Network	2	0	0	0				
Refuse Truck	Gasoline	Rural Restricted					54	6	4	4
Refuse Truck	Gasoline	Rural Unrestricted					9	1	1	1
Refuse Truck	Gasoline	Urban Restricted					21	4	3	3
Refuse Truck	Gasoline	Urban					16	2	1	1
Refuse Truck	Diesel	Off-Network	29	39	42	44				
Refuse Truck	Diesel	Rural Restricted					1,226	1,227	1,303	1,369
Refuse Truck	Diesel	Rural Unrestricted					194	237	250	264
Refuse Truck	Diesel	Urban Restricted					469	808	856	901
Refuse Truck	Diesel	Urban					372	445	453	466
Single Unit Short-haul	Gasoline	Off-Network	305	366	384	410				
Single Unit Short-haul	Gasoline	Rural Restricted					5,525	5,482	6,098	6,454
Single Unit Short-haul	Gasoline	Rural Unrestricted					1,354	1,636	1,810	1,923
Single Unit Short-haul	Gasoline	Urban Restricted					2,877	4,914	5,460	5,785
Single Unit Short-haul	Gasoline	Urban					3,277	3,888	4,143	4,292
Single Unit Short-haul	Diesel	Off-Network	602	783	836	863				
Single Unit Short-haul	Diesel	Rural Restricted					12,558	12,262	13,024	13,578
Single Unit Short-haul	Diesel	Rural Unrestricted					3,078	3,660	3,865	4,046
Single Unit Short-haul	Diesel	Urban Restricted					6,539	10,992	11,660	12,170
Single Unit Short-haul	Diesel	Urban					7,449	8,696	8,847	9,029
Single Unit Long-haul Truck	Gasoline	Off-Network	10	8	2	0				
Single Unit Long-haul Truck	Gasoline	Rural Restricted					185	59	9	0
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted					45	18	3	0
Single Unit Long-haul Truck	Gasoline	Urban Restricted					96	53	8	0
Single Unit Long-haul Truck	Gasoline	Urban					109	42	6	0
Single Unit Long-haul Truck	Diesel	Off-Network	28	41	49	52				
Single Unit Long-haul Truck	Diesel	Rural Restricted					804	939	1,111	1,162
Single Unit Long-haul Truck	Diesel	Rural Unrestricted					197	280	329	346
Single Unit Long-haul Truck	Diesel	Urban Restricted					418	841	993	1,040
Single Unit Long-haul Truck	Diesel	Urban					475	664	752	770
Motor Home	Gasoline	Off-Network	138	177	165	158				
Motor Home	Gasoline	Rural Restricted					330	321	273	251

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County							
			Vehicle Population				Vehicle-Miles of Travel Summer Weekday			
			2011	2017	2025	2032	2011	2017	2025	2032
Motor Home	Gasoline	Rural Unrestricted					108	127	107	100
Motor Home	Gasoline	Urban Restricted					219	366	311	287
Motor Home	Gasoline	Urban					300	348	283	256
Motor Home	Diesel	Off-Network	73	95	127	148				
Motor Home	Diesel	Rural Restricted					176	172	210	236
Motor Home	Diesel	Rural Unrestricted					57	68	83	93
Motor Home	Diesel	Urban Restricted					117	197	239	270
Motor Home	Diesel	Urban					159	187	218	240
Combination Short-haul	Gasoline	Off-Network	0	0	0	0				
Combination Short-haul	Gasoline	Rural Restricted					4	1	0	0
Combination Short-haul	Gasoline	Rural Unrestricted					1	0	0	0
Combination Short-haul	Gasoline	Urban Restricted					1	0	0	0
Combination Short-haul	Gasoline	Urban					1	0	0	0
Combination Short-haul	Diesel	Off-Network	210	233	234	244				
Combination Short-haul	Diesel	Rural Restricted					10,398	10,470	12,537	13,225
Combination Short-haul	Diesel	Rural Unrestricted					1,684	2,065	2,458	2,604
Combination Short-haul	Diesel	Urban Restricted					4,013	6,955	8,318	8,785
Combination Short-haul	Diesel	Urban					3,209	3,863	4,431	4,576
Combination Long-haul	Diesel	Off-Network	224	267	309	336				
Combination Long-haul	Diesel	Rural Restricted					38,483	34,258	36,320	39,108
Combination Long-haul	Diesel	Rural Unrestricted					5,873	6,367	6,711	7,256
Combination Long-haul	Diesel	Urban Restricted					14,345	21,984	23,277	25,093
Combination Long-haul	Diesel	Urban					10,889	11,589	11,769	12,405
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**40,122**	**44,498**	**46,780**	**48,658**	**1,437,342**	**1,611,860**	**1,697,081**	**1,767,649**
Motorcycle	ALL	ALL	1,310	1,439	1,512	1,572	12,588	14,008	14,713	15,301
Passenger Car	ALL	ALL	20,122	22,259	23,367	24,286	654,560	739,111	781,937	817,334
Passenger Truck	ALL	ALL	13,633	14,894	15,633	16,259	499,796	553,764	577,233	596,462
Light Commercial Truck	ALL	ALL	3,337	3,773	3,988	4,146	126,493	141,336	146,988	152,035
Intercity Bus	ALL	ALL	3	3	3	4	724	841	903	952
Transit Bus	ALL	ALL	10	12	13	14	1,474	1,668	1,818	1,964
School Bus	ALL	ALL	86	107	115	122	3,991	4,641	4,959	5,215
Refuse Truck	ALL	ALL	31	39	42	44	2,361	2,730	2,870	3,008
Single Unit Short-haul	ALL	ALL	907	1,149	1,221	1,273	42,657	51,529	54,907	57,277
Single Unit Long-haul Truck	ALL	ALL	38	49	50	52	2,330	2,895	3,210	3,317
Motor Home	ALL	ALL	211	272	292	306	1,466	1,785	1,723	1,733
Combination Short-haul	ALL	ALL	210	233	234	244	19,311	23,354	27,744	29,190
Combination Long-haul	ALL	ALL	224	267	309	336	69,591	74,197	78,077	83,861

Source Type	Fuel Type	Road Type	Shoreline Sheboygan County							
			Vehicle Population				Vehicle-Miles of Travel Summer Weekday			
			2011	2017	2025	2032	2011	2017	2025	2032
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**40,122**	**44,498**	**46,780**	**48,658**	**1,437,342**	**1,611,860**	**1,697,081**	**1,767,649**
ALL	Gasoline	ALL	38,365	42,088	43,198	44,555	1,289,774	1,434,158	1,471,723	1,518,659
ALL	Diesel	ALL	1,751	2,219	2,486	2,644	147,188	170,005	185,003	196,182
ALL	CNG	ALL	1	1	2	2	173	217	278	307
ALL	Ethanol (E-85)	ALL	5	189	1,093	1,456	207	7,480	40,077	52,501
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**40,122**	**44,498**	**46,780**	**48,658**	**1,437,342**	**1,611,860**	**1,697,081**	**1,767,649**
ALL	ALL	Off-Network	40,122	44,498	46,780	48,658				
ALL	ALL	Rural Restricted					543,017	498,108	529,903	554,059
ALL	ALL	Rural Unrestricted					182,421	207,717	222,459	235,407
ALL	ALL	Urban Restricted					228,456	363,452	385,815	403,082
ALL	ALL	Urban					483,447	542,582	558,903	575,101
ALL (Total)	**ALL (Total)**	**ALL (Total)**	**40,122**	**44,498**	**46,780**	**48,658**	**1,437,342**	**1,611,860**	**1,697,081**	**1,767,649**

APPENDIX 9

Permanent and Enforceable Control Measures in the Shoreline Sheboygan County Area

This appendix provides additional details about the permanent and enforceable control measures that have reduced emissions of ozone precursors from the Shoreline Sheboygan County area. This information expands upon that presented in Section 6 of the Redesignation Request and Maintenance Plan for the Shoreline Sheboygan County, Wisconsin 1997 and 2008 8-hour Ozone Nonattainment Area.

1. Point Source Control Measures

NO_x Control Measures

Wisconsin NO_x RACT – Wisconsin has implemented RACT for major NO_x sources (sources with a potential to emit, PTE, of 100 tons or greater per year) in Wisconsin as part of compliance requirements for the 1997 ozone NAAQS. NOx RACT applies to all of Sheboygan County. The NOx RACT requirements are codified under ss. NR 428.20 to 428.25, Wis. Adm. Code and became applicable May 1, 2009.

In 2017, there were 1,570.6 tons of NOx emissions from Alliant Energy - Edgewater Generating Station (FID #460033090) and 105.2 tons of NOx emissions from 44 individual NOx emission units in the Shoreline Sheboygan County area (Table A9.1). The Alliant Energy - Edgewater Generating Station contributed 93.7% of total point source NOx emissions in the Shoreline Sheboygan County area in 2017.

Edgewater's boilers have been subject to NOx emissions limitations under a consent decree since 2013. Under the consent decree (E.D. Wis., Case No. 13-CV-266), boiler B23 had a NOx cap of 250 tons per year and was required to retire, refuel or repower by December 31, 2015. Boiler B23 was retired in 2015. Boiler B24 had a limitation of 0.170 pounds per million British thermal units (MMBTU) on a 30-day rolling average and 0.150 lbs/MMBTU on a 12-month rolling average and was required to retire, refuel or repower by December 31, 2018. Boiler B24 operated selective non-catalytic reduction for NOx control from 2011 until the boiler's retirement on September 30, 2018. Boiler B25 had a limitation of 0.080 lbs/MMBTU on a 30-day rolling average and 0.070 lbs/MMBTU on a 12-month rolling average. Boiler B25 operated selective non-catalytic reduction from 2011 to 2013, and selective catalytic reduction since 2014. The consent decree control requirements are permanent and federally enforceable under the Title I permit 13-POY-154-R1, issued on May 26, 2016.

The remainder of the NOx emission units are located at smaller facilities that have PTEs below major source thresholds or individual emissions units that have relatively small PTE or operate infrequently (e.g., small boilers, drying ovens, or emergency generators) and therefore are not subject to NOx RACT requirements. If the owners of these facilities modify or add sources such that total facility potential emissions increase above 100 tons per year, the facilities and emission units become subject to state NOx RACT requirements. In addition, any new emission units at these facilities would be subject to performance standards under s. NR 428.05, Wis. Adm. Code, as discussed in section 5.

Table A9.1. 2008-2017 NOx emissions and requirements for point sources in the Shoreline Sheboygan County area.

FID	Facility	2008 NOx (Annual Tons)	2011 NOx (Annual Tons)	2017 NOx (Annual Tons)	2008 – 2017 Emissions Change	Permanent and Enforceable Control Measures
460033090	WPL-Edgewater Power Plant: Boilers B23, B24 & B25	4,503.0	3,297.6	1,570.6	-65.1%	Boiler B23: retired in 2015 Boiler B24: retired in 2018 Boiler B25: 0.07 lb/mmBTU (May 2013)
	Percent of Total	97.8%	96.2%	93.7%		
Multiple	Balance of Emission Units (NOx tons)	102.3	131.45	105.2	2.8%	Emission units become subject to NOx RACT if facilities exceed 100 TPY PTE in the future.
	Percent of Total	2.2%	3.8%	6.3%		
	Number of Emission Units[1]	50	52	48		
Total		**4,605.3**	**3,429.1**	**1,675.8**	**-63.6%**	

[1] This only includes the emission units that have NOx emissions in that year.

Federal NOx Transport Rules – Beginning January 1, 2009, EGUs in 22 states east of the Mississippi (including Wisconsin) became subject to ozone season NOx emission budgets under the Clean Air Interstate Rule (CAIR). CAIR addresses the broad regional interstate transport of NOx affecting attainment and maintenance of the 1997 ozone NAAQS as required under CAA s. 110(a)(2)(D). CAIR resulted in a significant reduction of NOx emissions during the ozone season in areas contributing to Sheboygan County over the 2009-2014 period.

Table A9.2 shows emission levels for EGUs affected by the CAIR rule through 2014 for states upwind of the Shoreline Sheboygan County area. The states listed (in decreasing order of contribution) are those states contributing more than 1% of the 2008 standard (0.75 ppb) to the Sheboygan Kohler Andrae monitor. Between 2008 and 2014, total EGU emissions across these states decreased by approximately 24%. Emission reductions were proportionately larger, ranging from 24.1% to 54.5%, for the three states contributing the most to Shoreline Sheboygan County area ozone concentrations: Illinois, Indiana, and Wisconsin.

Table A9.2. EGU NOx emitted under the CAIR program in states contributing > 0.75 ppb (1% of the 2008 NAAQS) to the Shoreline Sheboygan County nonattainment area.

State	CSAPR Modeled Contribution to Sheboygan County[1] (ppb)	Ozone Season NOx Emissions (Tons)			Percent Reduction		
		2008	2011	2014	2008 - 2011	2011 – 2014	2008 – 2014
Illinois	28.209	29,891	25,755	17,132	13.8%	33.5%	42.7%
Indiana	11.244	53,016	48,926	40,247	7.7%	17.7%	24.1%
Wisconsin	8.437	19,947	13,818	9,087	30.7%	34.2%	54.4%
Michigan	3.117	38,437	32,780	24,981	14.7%	23.8%	35.0%
Ohio	3.027	52,479	43,346	32,181	17.4%	25.8%	38.7%
Kentucky	2.007	39,324	40,055	33,896	-1.9%	15.4%	13.8%
Missouri	1.812	34,820	26,912	31,235	22.7%	-16.1%	10.3%
W. Virginia	1.167	25,398	23,431	28,681	7.7%	-22.4%	-12.9%
Pennsylvania	1.159	53,545	64,885	44,005	-21.2%	32.2%	17.8%
Virginia	0.865	17,392	15,620	9,695	10.2%	37.9%	44.3%
Arkansas	0.840	16,561	17,868	18,135	-7.9%	-1.5%	-9.5%
Louisiana	0.767	24,031	22,785	18,278	5.2%	19.8%	23.9%
Total		**404,842**	**376,180**	**307,554**	**7.1%**	**18.2%**	**24.0%**

[1] Ozone contributions as determined by EPA in the final CSAPR rule, 76 FR 48208, August 8, 2011.

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

Starting with the 2015 ozone season, the Cross-State Air Pollution Rule (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 limits 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 establishes Phase II NOx budgets starting with the 2017 ozone season.

VOC Control Measures

VOC RACT / CTG – The 2008 Ozone Implementation Rule states that RACT requirements can be met through previously adopted RACT controls approved by EPA under prior ozone NAAQS (80 FR 12264). Wisconsin has implemented VOC Control Techniques Guidelines (CTG) to fulfill RACT requirements for Wisconsin nonattainment areas, including the Shoreline Sheboygan County area, under the 1997 ozone NAAQS. These VOC RACT / CTG requirements are codified under chapters NR 419 through 424, Wis. Adm. Code. The list of the CTGs in place in Wisconsin are provided in Appendix 10. All of these CTG requirements were implemented and effective prior to the 2011 base year.

Shoreline Sheboygan County – Table A9.3 lists the point sources emitting VOCs in the Shoreline Sheboygan County area in 2017. This assessment shows that approximately 36% of 2017 VOC emissions come from combustion sources. The majority of these combustion-related emissions were from two utility boilers at the Alliant Energy Edgewater Generating Station. Other combustion emissions originated from a number of 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 shows that approximately 64% of VOC emissions in 2017 came from non-combustion activities or processes, which are subject to specific NESHAPS and/or VOC RACT rules codified under chapters NR 419 through 424, Wis. Adm. Code. These rules aid in controlling VOC emissions but were implemented prior to 2011 with no additional incremental reduction expected between 2011 and 2017.

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.

Table A9.3. 2017 VOC emissions and requirements for point sources in the Shoreline Sheboygan County area.

FID	Facility	Unit	Annual VOC (Tons)	Percent of Total	Permanent and Enforceable Control Measures
Combustion Sources					
230006260	Alliant-Edgewater Power Plant	B24 & B25	92.8	29.3%	MATS Combustion Requirements
Multiple	Industrial, Commercial and Institutional Boilers and Process Heaters	73 units	16.0	5.0%	ICI Boiler and process heater NESHAP combustion requirements[a]
Multiple	Reciprocating Engines	5 units	5.2	1.6%	RICE NESHAP requirements[a]
Subtotal =		**80 units**	**113.9**	**35.9%**	
Non-Combustion Sources					
460038810	Sheboygan Paint Company	2 units	41.2	13.0%	Miscellaneous Coating Manufacturing NESHAP requirements[a]
460041230 460141330	Nemak (2 plants)	11 units	18.6	5.9%	Secondary Aluminum Production NESHAP requirements[a]
Multiple	Iron Foundries (2)	12 units	17.0	5.4%	Iron and Steel Foundries Area Source NESHAP requirements[a]
Multiple	Individual emission units subject to VOC RACT / CTGs as applicable	87 units	126.0	39.8%	Individual emission units subject to VOC RACT / CTGs as applicable
Subtotal =		**112 units**	**202.8**	**64.1%**	
Total =		**192 units**	**316.7**	**100.0%**	

MATS = Mercury and Air Toxics, ICI = Industrial, Commercial and Institutional, RICE = Reciprocating Internal Combustion Engine.

[a] 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.

These NESHAP measures apply to sources within the Shoreline Sheboygan County area but also apply nationally, thereby reducing the transport of VOC emissions into the nonattainment area. The NESHAP rules that have likely contributed to attainment by 2017 include the following:

- *Mercury and Air Toxics (MATS) NESHAP* – On February 16, 2012 EPA promulgated the MATS rule under part 63 subpart UUUUU. Emission requirements were fully applicable by April 16, 2015. Affected sources were required to conduct energy assessments and combustion tuning to ensuring complete combustion.

- *Major Source Industrial, Commercial, and Institutional (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.

- *Other NESHAPs Applicable to Sources in the Shoreline Sheboygan County Nonattainment Area* – Since the mid-1990s EPA has promulgated multiple NESHAPs for major and area stationary sources. Theses NESHAPs require controls or other types of hazardous air pollutant emissions reductions from specific types of emission units. The following non-combustion NESHAPs are applicable to sources in the Shoreline Sheboygan County nonattainment area:
    - Secondary Aluminum Production under part 63, subpart RRR (major and area sources), promulgated on March 23, 2000.
    - Miscellaneous Coating Manufacturing under part 63, subpart HHHHH (major source), promulgated on December 11, 2003.

2. Area Source Control Measures

As noted for point sources, Wisconsin has implemented VOC RACT / CTG rules under chs. NR 419 through 424, Wis. Adm. Code. A number of these rules limit VOC emissions from area sources as noted in Appendix 10. 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. Another federal rule, the area source hazardous air pollutant control rule, also controls area VOC emissions associated with fuel storage and transfer activities (40 CFR 63, Subpart R, BBBBBB, and CCCCCC).

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.

The Wisconsin-administered I/M program also limits on-road VOC and NOx emissions from onroad sources and is required for Shoreline Sheboygan 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.

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
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.

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 Shoreline Sheboygan 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.

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 NSR program. For areas designated or redesignated attainment, the NSR 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 main document. 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.

6. Section 110(l) Noninterference Requirements

When revising rules and regulations in the SIP, the state is responsible for demonstrating that such a change will not interfere with attainment of the NAAQS, Rate of Progress (ROP), or 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 2017 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 from the Shoreline Sheboygan County 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.

APPENDIX 10

Wisconsin VOC RACT Regulations and Negative Declarations for the Shoreline Sheboygan County Nonattainment Area

Background

Reasonably Available Control Technology (RACT) represents the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility (44 FR 53761). Section 182(b)(2) of the Clean Air Act (CAA) requires nonattainment areas classified as Moderate or worse to implement RACT for sources of volatile organic compounds (VOCs). In such areas, RACT is required for sources covered in Control Technique Guidelines (CTGs) issued by EPA, as well as sources that meet the major stationary source definition after subtracting their CTG-applicable emissions (non-CTG major sources). The Wisconsin Department of Natural Resources (WDNR) has implemented a VOC RACT program for the Shoreline Sheboygan County area through:

(1) adoption of CTG-recommended controls to limit VOC emissions from specific source categories,

(2) negative declarations that no sources exist in the nonattainment area that are applicable to the CTGs whose recommendations have not been codified, and

(3) a negative declaration that no non-CTG major source of VOC exists in the nonattainment area.

These three components of the Shoreline Sheboygan County area's VOC RACT program are described herein.

1. RACT Requirements for CTG Sources

Section 183 of the CAA requires EPA to issue guidance for RACT controls for reducing emissions from stationary sources. EPA has issued such guidance in the form of CTGs, which represent "presumptive norms" for RACT for specific source categories of VOCs. States with nonattainment areas subject to section 182(b)(2) are required to implement RACT for CTGs issued between the date of the CAA Amendments of 1990 and the date of attainment (section 182(b)(2)(A)), and for CTGs issued before the date of enactment of the CAA Amendments of 1990 (section 182(b)(2)(B)). Generally, states meet RACT requirements by codifying control requirements established in CTG documents. Table A10-1 lists the CTGs and source categories for which Wisconsin has codified control requirements.

Table A10-1. Volatile Organic Compounds (VOC) Control Technique Guidelines Incorporated into Wisconsin Administrative Code.

Source	Title (Description)	EPA CTG Report No.	Wis. Adm. Code Incorporation	Emissions Inventory Classification[1]
Petroleum and Gasoline Sources				
Bulk Gasoline Plants	Control of Volatile Organic Emissions from Bulk Gasoline Plants [bulk gasoline plant unloading, loading and storage]	EPA-450/2-77-035	NR 420.04(2)	Stationary Point Source
Refinery Equipment - Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds	Control of Refinery Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds	EPA-450/2-77-025	NR 420.05(1), (2) and (3)	Stationary Point Source
Refinery Equipment - Control of VOC Leaks	Control of Volatile Organic Compound Leaks from Petroleum Refinery Equipment	EPA-450/2-78-036	NR 420.05(4)	Stationary Point Source
Refinery Equipment - Control of VOC Leaks	Control of Volatile Organic Compound Equipment Leaks from Natural Gas/Gasoline Processing Plants	EPA-450/3-83-007	NR 420.05(4)	Stationary Point Source
Tanks - Fixed Roof	Control of Volatile Organic Emissions from Storage of Petroleum Liquids in Fixed-Roof Tanks	EPA-450/2-77-036	NR 420.03(5)	Stationary Point Source
Tanks - External Floating Roofs	Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks	EPA-450/2-78-047	NR 420.03(6) and (7)	Stationary Point Source
Gasoline Loading Terminals	Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals	EPA-450/2-77-026	NR 420.04(1)	Stationary Point Source
Tank Trucks	Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems	EPA-450/2-78-051	NR 420.04(4)	Stationary Area Source

Source	Title (Description)	EPA CTG Report No.	Wis. Adm. Code Incorporation	Emissions Inventory Classification[1]
Gasoline Delivery - Stage I Vapor Control Systems	Design Criteria for Stage I Vapor Control Systems – Gasoline Service Stations	EPA-450/R-75-102	NR 420.04(3)	Stationary Area Source
Surface Coating				
Automobile & Light-duty Truck	Control Techniques Guidelines for Automobile and Light-Duty Truck Assembly Coatings	EPA 453/R-08-006	NR 422.09	Stationary Point Source
Cans	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks	EPA-450/2-77-008	NR 422.05	Stationary Point Source
Coils	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks	EPA-450/2-77-008	NR 422.06	Stationary Point Source
Fabric & Vinyl	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks	EPA-450/2-77-008	NR 422.08	Stationary Point Source
Flat Wood Paneling	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VII: Factory Surface Coating of Flat Wood Paneling	EPA-450/2-78-032	NR 422.13	Stationary Point Source
	Control Techniques Guidelines for Flat Wood Paneling Coatings	EPA-453/R-06-004	NR 422.131	Stationary Point Source
Large Appliances	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume V: Surface Coating of Large	EPA-450/2-77-034	NR 422.11	Stationary Point Source

Source	Title (Description)	EPA CTG Report No.	Wis. Adm. Code Incorporation	Emissions Inventory Classification[1]
	Appliances			
	Control Techniques Guidelines for Large Appliance Coatings	EPA 453/R-07-004	NR 422.115	Stationary Point Source
Magnet Wire	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume IV: Surface Coating of Insulation of Magnet Wire	EPA-450/2-77-033	NR 422.12	Stationary Point Source
Metal Furniture	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume III: Surface Coating of Metal Furniture	EPA-450/2-77-032	NR 422.1	Stationary Point Source
	Control Techniques Guidelines for Metal Furniture Coatings	EPA 453/R-07-005	NR 422.105	Stationary Point Source
Metal Parts, miscellaneous	Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings	EPA 453/R-08-003	NR 422.15	Stationary Point Source
	Fire Truck and Emergency Response Vehicle Manufacturing - surface coating	(covered under Misc. Metal Parts CTG)	NR 422.151	Stationary Point Source
Paper, Film and Foil	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks	EPA-450/2-77-008	NR 422.07	Stationary Point Source
	Control Techniques Guidelines for Paper, Film, and Foil Coatings	EPA 453/R-07-003	NR 422.075	Stationary Point Source
Plastic Parts - Coatings	Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings	EPA 453/R-08-003	NR 422.083	Stationary Point Source

Source	Title (Description)	EPA CTG Report No.	Wis. Adm. Code Incorporation	Emissions Inventory Classification[1]
Traffic Markings	Reduction of Volatile Organic Compound Emissions from the Application of Traffic Markings	EPA-450/3-88-007	NR 422.17	Stationary Area Source
Wood Furniture	Control of Volatile Organic Compound Emissions from Wood Furniture Manufacturing Operations	EPA-453/R-96-007	NR 422.125	Stationary Point Source
Graphic Arts				
Rotogravure & Flexography	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VIII: Graphic Arts-Rotogravure and Flexography	EPA-450/2-78-033	NR 422.14	Stationary Point Source
Flexible Packaging	Control Techniques Guidelines for Flexible Package Printing	EPA-453/R-06-003	NR 422.141	Stationary Point Source
Letterpress	Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing	EPA-453/R-06-002	NR 422.144	Stationary Point Source
Lithographic	Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing	EPA-453/R-06-002	NR 422.142 and 422.143	Stationary Point Source
Solvents				
Dry Cleaning	Control of Volatile Organic Emissions from Perchloroethylene Dry Cleaning Systems	EPA-450/2-78-050	NR 423.05	Stationary Area Source
Dry Cleaning	Control of Volatile Organic Compound Emissions from Large Petroleum Dry Cleaners	EPA-450/3-82-009	NR 423.05	Stationary Area Source
Industrial Cleaning	Control Techniques Guidelines for Industrial Cleaning Solvents	EPA-453/R-06-001	NR 423.035 and 423.037	Stationary Area Source
Metal Cleaning	Control of Volatile Organic Emissions from Solvent Metal Cleaning	EPA-450/2-77-022	NR 423.03	Stationary Area Source

Source	Title (Description)	EPA CTG Report No.	Wis. Adm. Code Incorporation	Emissions Inventory Classification[1]
Chemical				
Pharmaceutical	Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products	EPA-450/2-78-029	NR 421.03	Stationary Point Source
Polystyrene	Control of Volatile Organic Compound Emissions from Manufacture of High-Density Polyethylene, Polypropylene, and Polystyrene Resins	EPA-450/3-83-008	NR 421.05	Stationary Point Source
Rubber	Control of Volatile Organic Emissions from Manufacture of Pneumatic Rubber Tires	EPA-450/2-78-030	NR 421.04	Stationary Point Source
Synthetic Organic	Control of Volatile Organic Compound Emissions from Air Oxidation Processes in Synthetic Organic Chemical Manufacturing Industry	EPA-450/3-84-015	NR 421.07	Stationary Point Source
Synthetic Organic	Control of Volatile Organic Compound Emissions from Reactor Processes and Distillation Operations in Synthetic Organic Chemical Manufacturing Industry	EPA-450/4-91-031	NR 421.07	Stationary Point Source
Synthetic Resin	Control of Volatile Organic Compound Leaks from Synthetic Organic Chemical Polymer and Resin Manufacturing Equipment	EPA-450/3-83-006	NR 421.05	Stationary Point Source
Manufacturing				
Asphalt	Control of Volatile Organic Emissions from Use of Cutback Asphalt	EPA-450/2-77-037	NR 422.16	Stationary Area Source

[1]For purposes of this table, an "Area" source is defined as a nonpoint or fugitive emission source.

2. Negative Declarations for Control Technique Guidelines

To satisfy Section 182(b)(2)(A) and (B) requirements for the Shoreline Sheboygan County area, WDNR must officially certify with negative declarations that there are no Shoreline Sheboygan County facilities for which RACT requirements have not be codified or for which Wisconsin's Administrative Code does not reflect the most recently published CTG.

Wisconsin has not adopted VOC RACT requirements covered by the following four CTGs (year published):

- Shipbuilding and Ship Repair (1996),
- Aerospace Manufacturing (1997),
- Fiberglass Boat Manufacturing (2008), and
- Oil and Natural Gas Industry (2016).

Wisconsin previously promulgated RACT requirements for industrial adhesive use (NR 422.127), metal (NR 422.15) and plastic parts coatings (NR 422.083), and automobile and light-duty truck manufacturing (NR 422.09). However, Wisconsin's Administrative Code does not currently reflect the following most recently published CTGs for these source categories (year published):

- Miscellaneous Industrial Adhesives (2008),
- Automobile and Light-Duty Truck Assembly Coatings (2008), and
- Miscellaneous Metal and Plastic Parts Coatings (2008).

WDNR's VOC RACT applicability analysis is described step-wise below for each CTG category for which Wisconsin has not adopted/updated RACT requirements. Negative declarations are provided below for Wisconsin's missing CTGs, with the exception of the 2008 CTG for Miscellaneous Metal and Plastic Parts Coatings, which will be addressed in a separate SIP revision.

Shipbuilding and Ship Repair Operations CTG

WDNR determined that there are no facilities in the Shoreline Sheboygan County area that satisfy the CTG for Shipbuilding and Ship Repair Operations' (SSRO) applicability criteria for a major VOC source. Under the SSRO CTG, major sources are facilities that have the potential to emit (PTE) equal to or greater than 25 tons per year (TPY).

Methodology

WDNR took the following steps to make this determination:

1. WDNR queried the Wisconsin Air Emissions Inventory[1] to create a list of all the VOC-emitting facilities in the Shoreline Sheboygan County area. WDNR searched this list for facilities with the following ship building and ship repair-related Standard Industrial Classification (SIC) codes:
    a. 3731 – Ship Building and Repairing
    b. 1721 – Ship Painting Contractors
    c. 4491 – Ship Hold Cleaning
    d. 4499 – Ship Cleaning (except holds)
    e. 7699 – Ship Scaling

2. WDNR searched the Wisconsin Air Resource Program (WARP) database, which contains facility and emissions information about all Wisconsin companies that have obtained an air pollution control permit, for sources located within the partial county nonattainment area with the SIC codes identified above.

3. WDNR searched the membership directories found on the following organizations' websites:
    a. WorkBoat Associations and Organizations Directory
    b. Chamber of Shipping of America
    c. Sheboygan County Chamber of Commerce

4. WDNR also searched the ReferenceUSA Database for facilities located within the partial county nonattainment area with the SIC codes listed above. ReferenceUSA provides SIC code-searchable directories of U.S. companies. This step would identify facilities not listed in the Wisconsin Air Emissions Inventory or WARP database.

After reviewing information from the sources listed above, WDNR did not identify any facilities in the Shoreline Sheboygan County area that engage in ship building or ship repair.

[1] Wisconsin State Code Chapter NR 438.03(a) requires facilities that emit equal to or greater than 3 tons of VOC per year to submit annual emission inventory reports to the State.

Aerospace Manufacturing and Rework Operations CTG

WDNR determined that there are no facilities in the Shoreline Sheboygan County area that satisfy the applicability criteria for a major VOC source defined by the Coating Operations at Aerospace Manufacturing and Rework Operations (Aerospace) CTG. Under the Aerospace CTG, major sources are facilities that have a PTE equal to or greater than 25 TPY.

Methodology

The WDNR took the following steps to make this determination:

1. WDNR queried the Wisconsin Air Emissions Inventory[1] to create a list of all the VOC-emitting facilities in the Shoreline Sheboygan County area. WDNR searched this list for facilities with the following aerospace-related SIC codes:
    a. 3720 – Aircraft and Parts
    b. 3721 – Aircraft
    c. 3724 – Aircraft Engines and Engine Parts
    d. 3728 – Aircraft Parts and Equipment
    e. 3760 – Guided Missiles, Space Vehicles, and Parts
    f. 3761 – Guided Missiles and Space Vehicles
    g. 3764 – Space Propulsion Units and Parts
    h. 3769 – Space Vehicle Equipment
    i. 4512 – Air Transportation, Scheduled
    j. 4581 – Airports, Flying Fields, and Services
    k. 9711 – National Security

2. WDNR searched the WARP database for facilities located within the partial county nonattainment area with the SIC codes identified above.

3. WDNR searched the membership directories found on the following organizations' websites:
    a. Wisconsin Aerospace Partners
    b. In Wisconsin Aerospace Company Directory
    c. Sheboygan County Chamber of Commerce
    d. The New North, Inc.

4. WDNR also searched the ReferenceUSA database for facilities located within the partial county nonattainment area with the SIC codes listed above.

After reviewing information from the sources listed above, WDNR did not identify any facilities in the Shoreline Sheboygan County area that engage in aerospace manufacturing operations.

Fiberglass Boat Manufacturing CTG

WDNR determined that there are no facilities in the Shoreline Sheboygan County area that meet the applicability threshold of 15 lb VOC emitted per day, or equivalently 3 TPY, specified by the CTG for Fiberglass Boat Manufacturing.

Methodology

WDNR took the following steps to make this determination:

1. WDNR queried the Wisconsin Air Emissions Inventory[1] to create a list of all the VOC-emitting facilities in the Shoreline Sheboygan County area. The WDNR searched this list for facilities with the following SIC code:
    a. 3732 – Boat Building and Repair

2. WDNR searched the WARP database for facilities located within the partial county nonattainment area with the SIC code identified above.

3. WDNR searched the membership directories found on the following organizations' websites:
    a. National Marine Manufacturers Association's website
    b. Sheboygan County Chamber of Commerce website

4. WDNR also searched the ReferenceUSA database for facilities located within the partial county nonattainment area with the SIC code listed above.

After reviewing information from the sources listed above, WDNR did not identify any facilities in the Shoreline Sheboygan County area that engage in fiberglass boat manufacturing operations.

Miscellaneous Industrial Adhesives

VOC emissions from adhesive application processes are limited for some source categories per ss. NR 422.127, Wis. Admin. Code. The VOC content limits defined in ss. NR 422.127, Wis. Admin. Code, only apply to some of the source categories recommended for control by the Miscellaneous Industrial Adhesive (Adhesives) CTG. In order to certify that no sources are subject to the Adhesives CTG in the Shoreline Sheboygan County area, the WDNR analyzed process-level adhesive emissions from the nonattainment area's applicable sources and determined that no sources satisfy the Adhesive CTG's applicability threshold of 15 lb VOC emitted per day, or equivalently 3 TPY.

Methodology

WDNR took the following steps to make this determination:

1. WDNR queried the Wisconsin Air Emissions Inventory[1] to create a list of all the VOC-emitting facilities in the Shoreline Sheboygan County area. WDNR searched this list for facilities that work with industrial adhesives based on the following Standard Classification Codes (SCCs):
    a. 40200701 – Adhesive Application
    b. 40200706 – Adhesive: Solvent Mixing
    c. 40200707 – Adhesive: Solvent Storage
    d. 40200710 – Adhesive: General
    e. 40200711 – Adhesive: Spray
    f. 40200712 – Adhesive: Roll-on

2. WDNR searched the WARP database for facilities located within the partial county nonattainment area with the SCCs identified above.

After completing these steps, WDNR identified two facilities within the Shoreline Sheboygan County area that conduct adhesive application operations. WDNR calculated the total actual VOC emissions from adhesive-related processes for these facilities for the most recent complete inventory year (2018) and found them to be below the CTG threshold of 3 TPY (Table A10-2).

Table A10-2. Sources Analyzed for Miscellaneous Industrial Adhesives CTG Applicability

Facility	Facility Identification (FID)	2018 VOC Emissions
Lakeshore Display Co., Inc.	460023740	0.81 TPY VOC-Adhesives
Nemschoff Chairs, Inc.	460029570	0.30 TPY VOC-Adhesives

After reviewing information from the sources listed above, WDNR did not identify any facilities in the Shoreline Sheboygan County area whose total actual adhesive-related emissions exceed the Adhesives CTG threshold.

Automobile and Light-Duty Truck Assembly Coatings CTG

WDNR determined that there are no facilities in the Shoreline Sheboygan County area that satisfy the applicability threshold of 15 lb VOC emitted per day, or equivalently 3 TPY, specified by the Automobile and Light-Duty Truck Assembly Coatings (Auto Coatings) CTG.

Methodology

WDNR took the following steps to make this determination:

1. WDNR queried the Wisconsin Air Emissions Inventory[1] to create a list of all the VOC-emitting facilities in the Shoreline Sheboygan County area. WDNR searched this list for facilities with the following coating-related SIC codes:
    a. 3711 – Motor Vehicles and Passenger Car Bodies
    b. 3714 – Motor Vehicle Parts and Accessories
    c. 7532 – Top, Body, and Upholstery Repair Shops and Paint Shops
    d. 7549 – Automotive Services, Except Repair and Carwashes

2. WDNR searched the WARP database for facilities located within the partial county nonattainment area with the SIC codes listed above. WDNR also searched the WARP database for facilities located within the partial county nonattainment area that have the following automobile coating-related SCCs:
    a. 40201621 – Prime Coating: Solvent-borne – Automobiles
    b. 40201622 – Prime Coating: Electro-deposition – Automobiles
    c. 40201623 – Guide Coating: Solvent-borne – Automobiles
    d. 40201624 – Guide Coating: Water-borne – Automobiles

3. WDNR also searched the ReferenceUSA database for facilities located within the partial county nonattainment area with the SIC codes listed above.

After reviewing information from the sources listed above, WDNR did not identify any facilities in the Shoreline Sheboygan County area that conduct automobile or light-duty truck assembly coating operations.

Oil and Natural Gas Industry CTG

WDNR determined that there are no facilities in the Shoreline Sheboygan County area that are applicable to the Oil and Natural Gas Industry (O&NG) CTG. The O&NG CTG covers select sources of VOC emissions in the onshore production and processing of oil and natural gas, including: pneumatic controllers, pneumatic pumps, compressors, equipment leaks, fugitive emissions, and storage vessels.

Methodology

WDNR took the following steps to make this determination:

1. WDNR queried the Wisconsin Air Emissions Inventory[1] to create a list of all the VOC-emitting facilities in the Shoreline Sheboygan County area. WDNR searched this list for facilities with the following oil and natural gas industry-related SIC codes:
    a. 1311 – Crude Petroleum and Natural Gas
    b. 1321 – Natural Gas Liquids
    c. 1389 – Oil and Gas Field Services
    d. 4619 – Pipelines
    e. 4922 – Natural Gas Transmission
    f. 4923 – Natural Gas Transmission and Distribution

2. WDNR searched the WARP database for facilities located within the partial county nonattainment area with the SIC codes listed above.

After completing these steps, WDNR did not identify any O&NG facilities in the Shoreline Sheboygan County area.

3. Negative Declaration for VOC Non-CTG Major Sources

Section 182(b)(2)(C) of the CAA requires ozone nonattainment areas classified as Moderate or higher to implement VOC RACT for non-CTG major stationary sources, or sources that have the potential to emit (PTE) 100 TPY or more of VOC from non-CTG applicable processes. Wisconsin's RACT for non-CTG major sources in all of Sheboygan County was previously approved for the 1997 ozone National Ambient Air Quality Standard (NAAQS) (77 FR 46961). To ensure that RACT requirements continue to be met for the 2008 ozone NAAQS, WDNR re-calculated each of the Shoreline Sheboygan County area facilities' potential VOC emissions, and found that none of them have the potential to emit 100 TPY of VOC. WDNR certifies that no non-CTG major sources of VOC exist in the Shoreline Sheboygan County area.

APPENDIX 11

Classification and Regression Tree (CART) Analysis for the Shoreline Sheboygan County Nonattainment Area

A classification and regression tree (CART) analysis is a statistical tool to classify data. Here, it is applied to 8-hour ozone and meteorological data to determine the meteorological conditions most commonly associated with high ozone days in the Shoreline Sheboygan County ozone nonattainment area. Once days are classified by their unique, shared meteorological characteristics, ozone concentration trends among days with similar meteorological conditions can be examined. This process minimizes the influence of year-to-year meteorological variability on ozone concentrations, and any remaining trend is assumed to be the result of reductions in emissions of ozone precursors and other non-meteorological factors.

This CART analysis was conducted by the Lake Michigan Air Directors Consortium (LADCO) using 8-hour ozone monitoring data from the Kohler Andrae monitor in the Shoreline Sheboygan County ozone nonattainment area. The analysis included data from the years 2005 – 2018 and therefore explores long-term trends in ambient ozone concentrations after adjustment for meteorology. This analysis does not include data for 2019 because the meteorological data for this year is not yet complete.[1] The goal of the analysis was to determine the meteorological conditions associated with high ozone episodes in the Shoreline Sheboygan County area and to construct trends for the days identified as sharing similar meteorological characteristics.

The CART analysis processed multiple meteorological variables for each day to determine which are the most effective at predicting ozone concentrations. Meteorological data collected for the analysis was taken from the Sheboygan Airport National Weather Service (NWS) station and processed by LADCO. Upper air observations were downloaded from the National Climatic Data Center (NCDC) Integrated Global Radiosonde Archive. Meteorological variables included:

- Daily precipitation
- Cloud cover
- 850 and 700 millibar (mb) temperatures at 6 a.m.
- Maximum daily temperature, dew point, relative humidity, and pressure
- Average daily wind speed
- Average wind direction during the day, morning and afternoon as North/South, East/West wind vectors
- The distance air masses traveled in 24 hours
- Morning, afternoon, and evening dew point and pressure
- Day of the week
- Previous day's average temperature, pressure, wind speed, and wind direction
- Change in temperature and pressure from previous day
- 2- and 3-day average wind speed and temperature
- Other meteorological parameters.

Regression trees, where each branch describes the meteorological conditions associated with different ozone concentrations, were developed to classify each summer day (May – September). Meteorologically similar days were assigned to day type groups (known as "nodes"), which are

[1] The meteorological data used in the CART analysis requires significant processing by the National Oceanic and Atmospheric Administration (NOAA), the National Weather Service and LADCO. This processing is time-consuming and results in a lag between the end of the year and when the data is available for use.

equivalent to branches of the regression tree. By grouping days with similar meteorology, the influence of meteorological variability on the underlying trend in ozone concentrations is largely removed; the remaining trend can be presumed to be due to trends in precursor emissions or other non-meteorological influences. Ozone trends of these day types were then plotted.

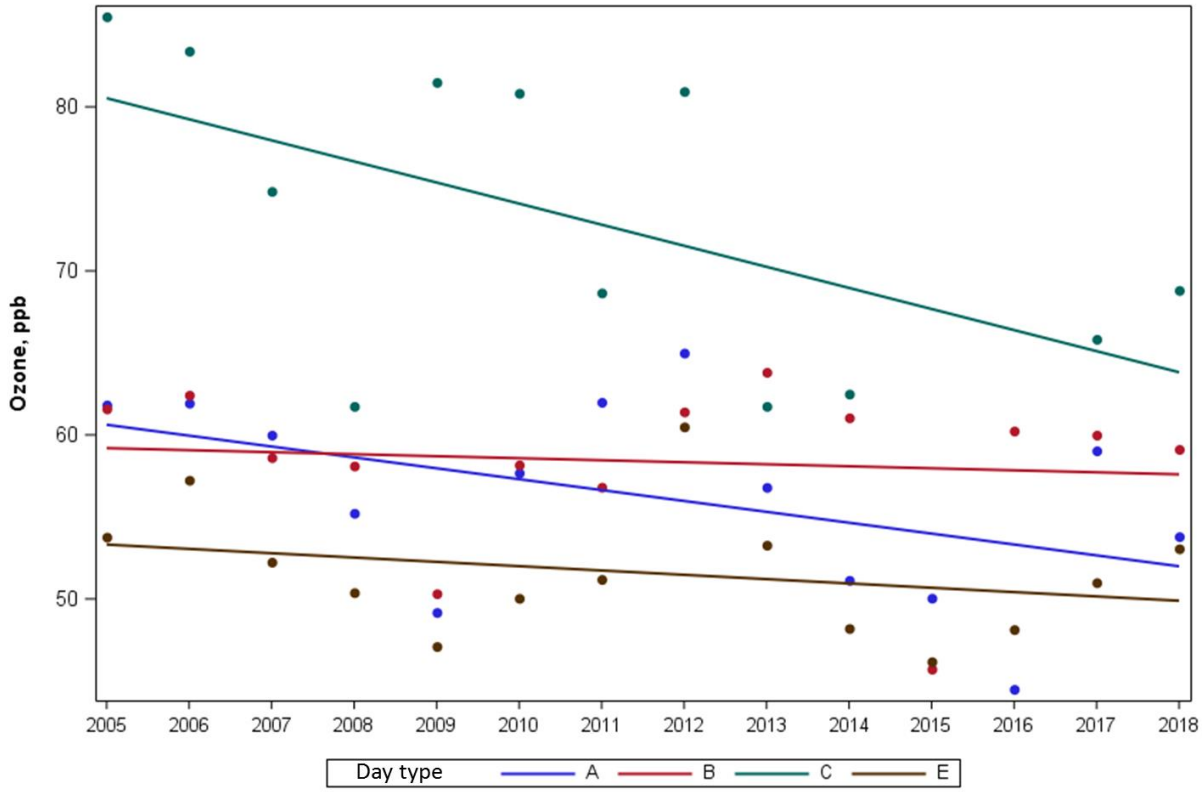
The CART analysis determined that there were four types of days from the Kohler Andrae monitor that had average ozone concentrations of 50 parts per billion (ppb) or higher. Day type "C" had average ozone concentrations of 75 ppb; this was the only type of day that had average ozone concentrations over 60 ppb.[2] Type C days were characterized by southerly transport, southerly winds in the afternoon and above-average temperatures aloft in the afternoon.[3] The other types of days all had southerly transport but also had weaker southerly winds and/or lower temperatures than did type C days.

Figure A11-1 shows the trends in ozone concentrations from 2005 to 2018 for the four meteorological types of days with highest average ozone concentrations. This figure shows that ozone concentrations for all four day types have decreased over the last 14 years, and the largest ozone reductions occurred on days with the highest ozone (type C days). This analysis demonstrates that, on days with similar meteorology, ozone concentrations at the Kohler Andrae monitor have decreased substantially since 2005.

By using a CART analysis to analyze 8-hour ozone data in the Shoreline Sheboygan area, the influence of variations in meteorology was removed to allow determination of whether ozone values have decreased over time due to anthropogenic emission reductions. This analysis demonstrates that the observed reductions in ozone concentrations were not driven by suboptimal meteorological conditions for ozone production. Instead, the observed reductions must have derived from non-meteorological factors, such as decreasing emissions. These results further suggest that progress in reducing ozone precursor emissions is likely an important driver of the observed reductions in 8-hour ozone concentrations in the Shoreline Sheboygan County nonattainment area.

[2] Average concentrations were 58 ppb for type B, 57 ppb for type A and 50 ppb for type E.
[3] Type C days had transport from the south over the last 24 hours, afternoon winds of at least 4.7 m/s from the south and afternoon temperatures aloft (at roughly 5000 feet elevation) that were at least 4.1 °F above average.

Figure A11-1. Trends by the meteorological day type for the Kohler Andrae monitor. This figure only shows the day types with average ozone concentrations of 50 ppb or higher.



APPENDIX 12

Response to Public Comments

This appendix contains responses by the Wisconsin Department of Natural Resources (WDNR) to the public comments received on the draft Redesignation Request and Maintenance Plan for the Shoreline Sheboygan County, Wisconsin 1997 and 2008 8-Hour Ozone Nonattainment Area ("redesignation request"). WDNR did not make any changes in response to a comment unless noted in the response below.

General Comments on Ozone

1. Numerous commenters expressed concern over the health impacts of ozone, including the impacts of ozone on certain high-risk population categories in the county, as well as the impact on plants and ecosystems. A related comment asked for a health study of ozone in Sheboygan County.

Department response:
The CAA requires EPA to set national ambient air quality standards (NAAQS) for ozone and five other pollutants considered harmful to public health and the environment. EPA sets a primary NAAQS for each pollutant to protect human health, including sensitive populations such as children, the elderly, and individuals suffering from respiratory diseases. EPA also sets a secondary standard to protect public welfare, including the health of plants. The CAA also requires EPA to periodically review the standards to ensure that they provide adequate protection for human health and the environment and to update those standards as necessary. Both state and federal law require WDNR to take action to meet EPA's air quality standards.

In 2008, EPA revised the primary and secondary NAAQS to 75 ppb. As described in Section 3.2 of the redesignation request, data recorded by the Kohler Andrae monitor shows that the Shoreline Sheboygan County area is attaining this health-based ozone NAAQS.

In 2015, EPA further revised the primary and secondary ozone NAAQS to 70 ppb. The Shoreline Sheboygan County area was determined to be in nonattainment of this standard. The WDNR is working to bring the county into attainment of this standard.

The WDNR does not have the authority to set air quality standards that are more stringent than federal requirements. WDNR provided the commenter with a contact at the Wisconsin Department of Health Services regarding health impacts.

2. The department received several comments asking what can be done to address transport of ozone from sources upwind of Sheboygan County. Commenters noted that the majority of the ozone-causing agents in Sheboygan County originate from outside the county.

Department response:
The WDNR has been a member of the Lake Michigan Air Directors Consortium (LADCO), a multi-state organization devoted to improving air quality in the Great Lakes region, for thirty years. LADCO member states (Wisconsin, Illinois, Indiana, Michigan, Ohio and Minnesota) work together to address air pollution in the region, including ozone issues. Additionally, Section 110(a)(2)(D)(i) of the CAA prohibits states from contributing significantly to nonattainment, or interfering with maintenance, of a NAAQS in another state, and states are required to implement

programs to address transport of emissions across state boundaries. WDNR has routinely engaged its neighbor states and EPA on researching and addressing regional ozone issues and will continue to do so; however, WDNR only has the authority to implement programs in Wisconsin.

3. Several commenters noted that climate change is anticipated to increase ozone concentrations in the future.

Department response:
If climate change increases ozone concentrations to levels that violate the NAAQS, the maintenance contingent response plan developed as part of the redesignation request (Section 7.3) will take effect. This contingency response plan is designed to address such potential future violations of the NAAQS and bring air quality back into attainment of the NAAQS, no matter the cause of the violation.

4. One commenter asked how we can ensure that vehicle emissions continue to decrease, particularly if federal emissions standards are relaxed.

Department response:
Regulation of vehicular emissions (tailpipe and evaporative) is largely the responsibility of the federal government, which develops regulations that automakers implement in production of new vehicles. Based on current federal regulations, vehicle emissions will continue to decrease for at least the next decade, as new, cleaner vehicles are purchased by consumers to replace older vehicles. In addition, while EPA has proposed to change vehicle fuel efficiency standards for greenhouse gases (via the proposed SAFE Vehicles Rule), EPA has not announced plans to change any of the regulations that regulate NOx or VOC emissions from vehicles, which are the compounds responsible for ozone.

5. One commenter requested that WDNR place the Mobile Air Monitoring Laboratory (MAML) trailer in Door County in 2021 and add a second MAML. They would also like this data made public.

Department response:
Understanding ozone formation in along the lakeshore is a priority for the WDNR. Given that the Kohler Andrae ozone monitor often measures the highest ozone concentrations in the state, locating the MAML in Sheboygan has been a priority. MAML locations are determined and planned for based on needs identified through the enhanced ozone monitoring planning team which consists of WDNR, EPA, and other research partners. In addition to locating the MAML in Sheboygan, WDNR is expanding sampling capabilities at the Chiwaukee Prairie monitoring site, which is located in Wisconsin's other 2008 ozone nonattainment area. With the expansion of sampling capabilities at Chiwaukee Prairie, Wisconsin will, in practice, have two sites producing data comparable to MAML data, including ozone precursor data (VOCs and NO_2). Given the expanded enhanced ozone monitoring plan for 2020, the WDNR has reached capacity for operations with current resources.

WDNR is working on developing a more streamlined process for sharing special purpose and special study monitoring data. Currently, individuals can request that data from WDNR via an open records request.

6. One commenter asked if Secretary Cole has a plan to combat air pollution.

Department response:
The department is currently working on a number of initiatives to address air pollution in the state. Addressing the impact of out-of-state emissions on Wisconsin's ozone levels has been a regional air quality challenge that has involved not only Wisconsin, but EPA and upwind states. Currently, discussions at the agency secretary level among the Lake Michigan states are occurring to determine what additional, multistate efforts and actions are necessary to address resolve ozone nonattainment issues throughout the region, including at Sheboygan.

Since WDNR only has the authority to implement programs in Wisconsin, the WDNR continues to make it a priority to conduct research to determine actions needed across the region to address ozone issues. For example, WDNR participated in a collaborative, multi-organization field study of ozone chemistry and meteorology along the Wisconsin-Illinois lakeshore in 2017. Besides WDNR, participants in the Lake Michigan Ozone Study 2017 (LMOS 2017) included LADCO, federal agencies (NOAA, NASA and EPA), environmental agencies in Illinois and Indiana, and four universities (including the University of Wisconsin). Similar research campaigns were done in the late 1990s and were successful in that they facilitated a better understanding among policymakers of the complex meteorology associated with ozone transport. Actions resulting from this previous study resulted in reduced ozone concentrations in the region.

The WDNR is currently focusing resources on initiatives that continue to help decisionmakers better understand the science behind why the lakeshore areas continue to experience elevated ozone concentrations, even though regional emissions of ozone precursors (NOx and VOCs) have significantly decreased. These include:

- Implementing an enhanced ozone monitoring plan, which includes collecting additional ozone and ozone precursor measurements along the lakeshore.
- Analyzing the data collected through enhanced ozone monitoring and the LMOS 2017 field campaign to better understand what is happening chemically and atmospherically along the lakeshore during high ozone episodes.
- Working with LADCO, NASA, NOAA, the University of Wisconsin and other partners on a two-year project to improve the long-term ozone models on which attainment planning is based.
- Participating in the 5-year air monitoring network assessment with the other LADCO states. This assessment is required by federal regulations and takes a regional view of monitoring networks.

These actions will help improve ozone models and forecasting, as well as informing policy decisions related what emissions control efforts and programs would be effective in addressing elevated ozone levels in Sheboygan and elsewhere.

General Comments on the Redesignation Request

7. Several commenters said that the Kohler Andrae monitor is barely meeting the standard and there is insufficient data to establish any long-term trends. Commenters note that the design value at this monitor fluctuated over time and it is possible an upward trend will continue due to climate change. These commenters asked WDNR to suspend the redesignation request until the data show that the lower ozone concentrations are permanent or long-term.

Department response:
The Shoreline Sheboygan County area meets EPA's eligibility requirements for redesignation. Data from the Kohler Andrae monitor shows that the area's air quality has attained the 1997 and 2008 ozone NAAQS based on the three-year design value for 2017-2019 (Section 3.2) and that this is not the result of unusual meteorological conditions (Section 6.6). If ozone concentrations in this area violate the NAAQS in the future, the maintenance contingent response plan included in the request (Section 7.3) will take effect. This contingency response plan is designed to address such potential future violations of the NAAQS and bring air quality back into attainment.

8. The department received several comments questioning the meteorological support for the redesignation. A commenter stated that weather maps (the graphics included in a WDNR-provided frequently asked questions document) don't match the temperature trends shown on page 21 and 22. Other commenters suggested that meteorological factors besides temperatures (e.g., wind direction or precipitation) may have driven the lower ozone concentrations observed in 2019.

Department response:
The maps provided in the frequently asked questions document and the two figures shown on page 22 of the request show three different measures of temperatures for these years. Because these figures are considering temperature in different ways, the trends will not match exactly. However, these figures all support the same conclusion: in the 2017-2019 period, the hottest temperatures in this area and region were in 2018, the lowest temperatures were in 2019, and 2017 temperatures were in between.

In response to the second concern, WDNR has acknowledged that meteorological factors besides temperature (most notably the presence of southerly wind) are important drivers of ozone formation along Wisconsin's lakeshore. In order to more completely describe the impacts of the complex combination of meteorological factors on ozone concentrations in the Shoreline Sheboygan area, WDNR has added the results of a classification and regression tree (CART) analysis conducted by LADCO to Section 6.6 and Appendix 11 of the redesignation request. This analysis considers a multitude of meteorological factors and other variables, including temperature, wind, humidity, precipitation, cloud cover, and air mass movement. This analysis shows that ozone concentrations on meteorologically distinct types of days have decreased over time and confirms that the observed reductions in ozone concentrations have been driven by factors other than meteorological conditions unfavorable to ozone formation.

9. One commenter questioned whether WDNR might have miscalculated the annual fourth high ozone concentration for the Kohler Andrae monitor. This comment suggested the value should be 0.069 ppm rather than 0.068 ppm, as WDNR presented in the document.

Department response:
The value of 0.068 ppm is correct. The WDNR website notes that the data reports may not follow all rounding/truncation conventions required for comparison to the regulatory National Ambient Air Quality Standards. Specifically, the 8-hour average ozone concentrations on the website have been rounded rather than truncated, so the values listed may be one ppb (0.001 ppm) higher than their regulatory values. This difference exists because federally defined quality assurance practices require reporting of four decimal places to allow for precision in monitoring instrument calibrations and verifications. On the day in question, rounding the monitored values yields a value of 0.069 ppb, whereas truncating the monitored values (the correct regulatory approach) yields a value of 0.068 ppb.

The WDNR provides updated design values on a weekly basis on the website throughout the ozone season in Wisconsin at: https://dnr.wi.gov/topic/AirQuality/Ozone.html. The data posted at this location follows the proper truncation conventions.

10. One commenter asked how permitting will change upon redesignation. The same commenter expressed concern about the increased emissions that will result from redesignation and permitting changes to Sheboygan, Manitowoc and Racine counties.

Department response:
The Shoreline Sheboygan County area is nonattainment for the 2015 ozone standard and will remain so even if the area is redesignated relative to the 1997 and 2008 standard, so air permitting requirements will not change in this area because of this redesignation request. New major sources of emissions or sources undertaking major modifications in this area will remain subject to Nonattainment New Source Review (NNSR) permits. In addition, existing NNSR requirements in permits (including offsets and lowest achievable emission rate requirements) are permanent and must be complied with even after an area is redesignated to attainment. Minor source permitting will also continue to apply in the area for those sources whose emissions are below the thresholds for major source permitting.

Existing sources are not allowed to pollute more once an area is redesignated to attainment. State and federal regulations dictate that NNSR permit requirements that are in place at the time of redesignation continue to apply. Sources are not allowed to remove pollution controls simply because an area is redesignated to attainment. Other existing emissions control programs, like the vehicle inspection and maintenance program, will also continue.

Any future permitting in Wisconsin counties, including Manitowoc and Racine, would have to evaluate the impacts of the proposed actions on air quality, as required by those permitting programs.

11. One commenter asked about the costs of nonattainment new source review (NNSR) permitting and asked whether it would prohibit business.

Department response:
The Clean Air Act specifically lays out a pathway for sources to construct and modify in nonattainment areas, through NNSR permitting. The fees WDNR charges for NNSR permits are nearly identical to those WDNR charges for a major source permit outside a nonattainment area. There could be additional costs associated with the installation of controls a source may need to meet lowest achievable emission rate (LAER) requirements; the requirement to obtain emissions offsets could also add to costs. It should be noted that only new major sources of emissions, or existing sources making major modifications, are subject to these additional requirements. The Air Program issues about a hundred construction permits statewide each year, of which only about 5-10 are major source permits.

12. One commenter asked whether projected emissions reductions in NOx will be enough to reduce high ozone days.

Department response:
Ozone precursors are projected to continue to decrease substantially through 2032, with additional reductions of 24 percent of NOx emissions and 9 percent of VOC emissions from the upwind Chicago area (see Table 4.3 in the main document). This is in addition to emissions reductions in the Shoreline Sheboygan County area. Such continued reductions in ozone precursor emissions, particularly from contributing upwind areas, are expected to reduce atmospheric ozone concentrations in the Shoreline Sheboygan area. WDNR is working with LADCO and neighboring states to conduct and improve regional ozone modeling in order to more specifically predict how future ozone levels may change as a result of these reductions.

13. Several comments were received supporting the proposed redesignation request.

Department response:
No response required.

Comments on Emissions Inventories

14. Several comments stated that the redesignation request seemed to both say that Sheboygan County emissions had almost no impact on local ozone levels and that reductions in Shoreline Sheboygan County emissions demonstrated that attainment was due to permanent and enforceable control measures and would be maintained in the future. This is contradictory.

Department response:
The draft request noted that “Reductions in emissions from upwind areas are therefore likely to have a greater impact on ozone concentrations measured at this monitor than are those from Wisconsin sources, including those in Sheboygan County” (page 15). To address this comment and further clarify this point, WDNR added a table showing and discussing emissions from the upwind Chicago area to Section 4.4. This table shows that emissions from this major upwind source area have decreased significantly from 2011 to 2017 and are projected to continue to

decrease through at least 2030. Sources in the Chicago area are subject to similar permanent and enforceable control measures as are those in the Shoreline Sheboygan area, and these control measures likely contributed to the reductions in ozone concentrations during this time period. Similarly, future reductions in the Chicago area will help ensure maintenance of the NAAQS in the Shoreline Sheboygan area.

15. One commenter questioned whether emissions in 2018 and 2019 continued decreasing and said it was unknown since WDNR has not provided that data.

Department response:
WDNR is not required to include an emissions inventory for every past year (see Section 4.1 for a description of the inventory year requirements). WDNR selected 2017 as the attainment year because it was a year that met EPA requirements and for which WDNR already had inventory data for this area. The inventories provided for 2025 and 2030 represent the program's projections for future emissions and consider the regulatory programs impacting emissions that are currently in effect. The department uses widely-accepted inventory methodology that is consistent with that used by other states and U.S. EPA. Accordingly, these inventories represent the best available estimates of emissions in these future years.

16. Another commenter requested changes to the characterization of NOx emissions and controls at the Edgewater Generating Station.

Department response:
WDNR made the requested changes to the description of past emission reductions and controls at this facility. WDNR also adjusted the projected maximum summer day heat input for Edgewater Unit 5 for 2025 and 2032 to be more conservative. The change in the projected maximum summer day heat input resulted in a slight increase in the projected emissions from the Edgewater facility, which does not affect any conclusions associated with the redesignation request or maintenance plan.

WDNR did not change the NOx emission rate used to project emissions from Unit 5, as was requested. WDNR has traditionally used demonstrated ozone season average NOx emission rates to project emissions in SIP inventories. If WDNR was to assume a higher NOx emission rate using the requested 99th percentile of the daily emission rates for May – September of 2017-2019 when projecting emissions, WDNR also would need to use 99th percentile emission rates for the 2011 and 2017 inventories to ensure consistency. Since the relative reductions between historical and projected emissions would not meaningfully change, in order to be consistent with past practice and previously approved SIP inventories, WDNR did not make this methodological change. However, as stated in Appendix 4 for the proposed SIP revision, the projected NOx emissions do not constitute enforceable emission limitations on the power plant.

17. Another commenter expressed a concern that the data used to show emissions reductions is inaccurate, comparing the SIP inventories with the EPA's National Emissions Inventory (NEI) as well as inventories from other WDNR SIPs.

Department response:

It is common for emissions data to differ between inventories, particularly if the inventories are created at different points in time. This is because inventories are created for specific purposes (often having different requirements or reporting thresholds) and are always being updated by both EPA and DNR to reflect the latest methods and data. Inventory data is therefore not always directly comparable. Regarding the apparent difference in Edgewater Power Plant emissions, for example, ozone SIP emission inventories (such as the one contained in this request), must report emissions in tons per summer day. National Emissions Inventory emissions, in contrast, must be reported as tons per year. Therefore, the two emissions figures for Edgewater, while different, are not inconsistent.

18. Two commenters expressed related concerns that 1) some facilities are not included in WDNR's external emission information website, and 2) several major emitters are omitted online in the NEI.

Department response:
WDNR's emissions inventory website only includes facilities with NOx emissions over five tons per year (the reporting threshold in NR 438), so some sources with emissions smaller than that threshold will not be included there. The inventory in this request is based on WDNR's internal database, which includes those facilities with emissions smaller than the reporting threshold; this therefore constitutes the more complete area emissions inventory required by EPA for SIP purposes. This also explains differences between NEI data and the emissions inventory data contained in this request. This approach is consistent with widely-accepted inventory methodology used by other states and U.S. EPA.

19. One commenter asked for information about the modeling of future emissions from non-EGU point sources in future years. Another commenter said that WDNR did not provide sufficient data demonstrating that point sources had actually reduced their emissions and that WDNR did not provide information about how future emissions reductions will be ensured.

Department response:
The methodology used to develop the inventories for past years (2011 and 2017) is described in Appendix 2, and that for future years (2025 and 2032) is described in Appendix 3. Appendix 5 includes tables showing the historical and projected emissions for each non-EGU point source in the Shoreline Sheboygan County area. The approaches described in these appendices are widely accepted and used by EPA and states nationwide as providing a technically sound and reliable determination of past and anticipated future emissions. In addition, Section 6 of the main document describes the emission reduction programs that are in place that have already reduced emissions. These programs will remain in place and many are expected to ensure additional reductions in the future. These programs are described in greater detail in Appendix 9.

Comments on the Maintenance Plan

20. One commenter requested that WDNR add mobile source electrification efforts to the list of potential control measures under the action level response of the maintenance plan.

Department response:
The maintenance plan states that "this list is neither comprehensive nor in order of priority". If an action level response is needed, WDNR will consider all available control measures. WDNR would consider other potential emission reduction controls beyond those listed, if determined appropriate.

21. One commenter requested additional clarification on the feasibility and basis for the proposed 18-month timeframe for implementation of control measures under an action level response of the maintenance plan given the roughly 31-month timeframe for state rulemaking.

Department response:
WDNR acknowledges that state rulemakings could likely not be completed within the 18-month timeframe required by the maintenance plan. However, as stated in the maintenance plan, "priority will be given to measures that can be in place within 18 months." There may be control measures available that would not require a state rulemaking, and WDNR would prioritize such measures.

22. One comment asked whether WDNR could develop an effective maintenance plan relying on controls from within the Shoreline Sheboygan area since emissions from the largest source is already well-controlled.

Department response:
WDNR acknowledges in the maintenance plan (page 28) that the action level study may find that in-state emission reductions may not help the area return to attainment because of the large impact of transport on this site. In addition to considering actions that can be taken within the Shoreline Sheboygan County area, WDNR will continue to work with upwind states on actions they can take to mitigate the impact of their emissions on this area.