

**Redesignation Request and Maintenance Plan
for the
Partial Oneida County 2010 1-Hour Sulfur Dioxide
National Ambient Air Quality Standard
Nonattainment Area**

Prepared by the Wisconsin Department of Natural Resources

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List of Acronyms

AQS	EPA's Air Quality System database
CAA	Clean Air Act
EPA	U.S. Environmental Protection Agency
iSIP	Infrastructure SIP
MOVES	EPA's Motor Vehicle Emissions Simulator model
NAAQS	National Ambient Air Quality Standard
NEI	National Emissions Inventory
NSR	New Source Review
ppb	parts per billion
PSD	Prevention of Significant Deterioration
RACM	Reasonably Available Control Measures
RACT	Reasonably Available Control Technology
RFP	Reasonable Further Progress
SIP	State Implementation Plan
SO ₂	sulfur dioxide
tpd	tons per day
WDNR	Wisconsin Department of Natural Resources

1. INTRODUCTION

The Wisconsin Department of Natural Resources (WDNR) requests that the U.S. Environmental Protection Agency (EPA) redesignate the partial Oneida County, Wisconsin nonattainment area to attainment for the 2010 1-hour sulfur dioxide (SO₂) National Ambient Air Quality Standard (NAAQS). The Rhinelander municipal water tower monitoring site (Rhinelander Tower monitor, AQS site ID 55-085-0996) has recorded complete, quality-assured ambient air quality monitoring data since 2018 that demonstrate attainment of the 2010 1-hour SO₂ NAAQS in this area.

1.1. Background

The federal Clean Air Act (CAA) requires an area designated as nonattainment for 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 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 NAAQS for SO₂ have been monitored in parts of Oneida County. The primary source of SO₂ emissions in the county is the Ahlstrom-Munksjo paper mill, which is located in the town of Rhinelander.¹

A portion of Oneida County was designated nonattainment for the 1971 primary 24-hour SO₂ NAAQS. In order to demonstrate attainment and maintenance of the standard in this area, WDNR developed and submitted to EPA the required attainment demonstration; this submittal included enforceable Consent Order AM-94-38, which limited SO₂ emissions at the Ahlstrom-Munksjo mill. EPA approved this attainment plan on December 7, 1994.²

On June 22, 2010, EPA promulgated a new primary NAAQS for SO₂.³ This NAAQS is met when the 3-year average of the annual 99th percentile of the daily maximum 1-hour average concentration at any ambient air quality monitor in an area does not exceed 75 ppb. On August 5, 2013, EPA designated a portion of Oneida County as nonattainment of the 2010 1-hour SO₂ NAAQS.⁴ This nonattainment area consists of four townships within Oneida County, including the city of Rhinelander (see Figure 1). The nonattainment designation was based on ambient air quality data collected at the Rhinelander Tower monitor from 2009 through 2011. The design value for this 3-year period was 151 ppb.

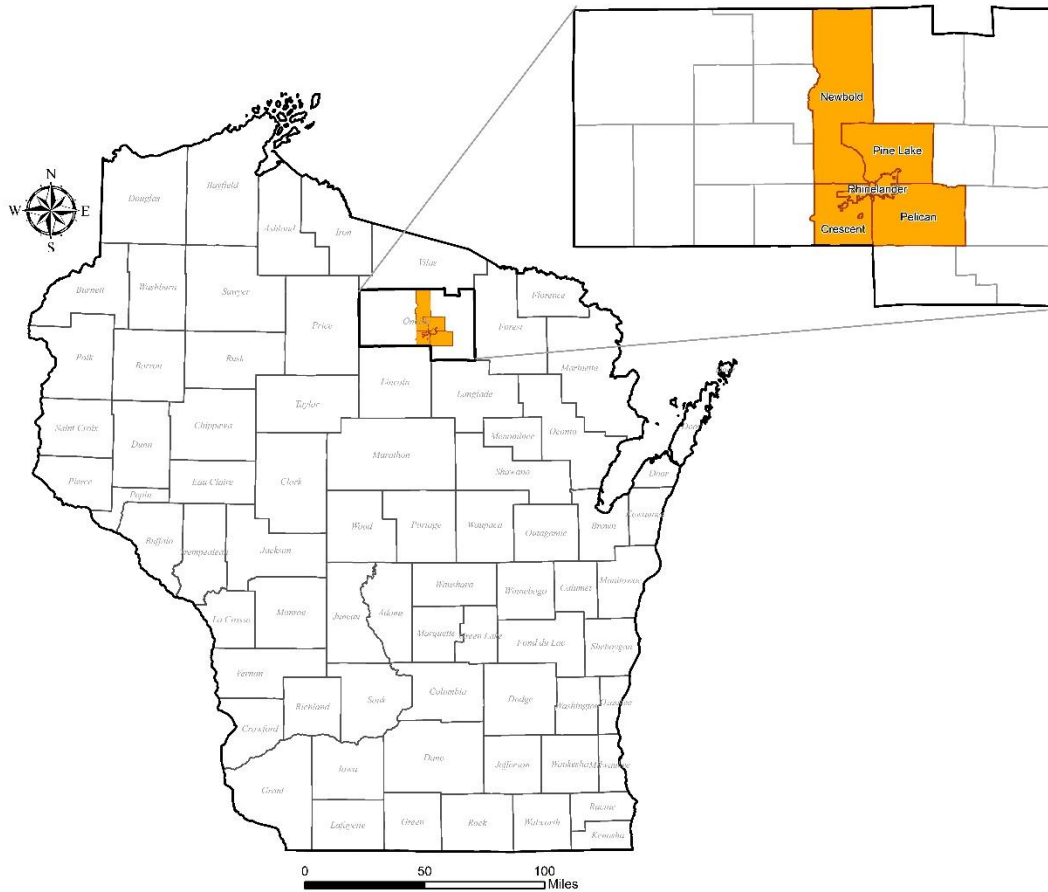
¹ The former owners of the facility since 2012 were Wausau Paper Mills, LLC and Expera Specialty Solutions, Inc.

² 59 FR 63046 (December 7, 1994)

³ 75 FR 35520 (June 22, 2010)

⁴ 78 FR 47191 (August 5, 2013)

Figure 1. Partial Oneida County 2010 1-Hour SO₂ NAAQS Nonattainment Area.



1.2. Status of Air Quality

Section 107(d)(3)(E) of the CAA allows for redesignation of any area or portion of an area within a state based on air quality data and planning and control measures. SO₂ monitoring data demonstrate that the air quality meets the 2010 1-hour SO₂ NAAQS at the Rhinelander Tower monitor, which is located within the nonattainment area. This current monitoring data, along with the permanent and enforceable emission control measures discussed in Section 2, support a redesignation to attainment for the partial Oneida County nonattainment area.

2. REQUIREMENTS FOR REDESIGNATION

EPA published redesignation guidance in the document “Procedures for Processing Requests to Redesignate Areas to Attainment,” issued September 4, 1992 to EPA Regional Air Directors.⁵ In addition, on April 23, 2014, EPA published guidance specific to SO₂ titled “Guidance for 1-Hour SO₂ Nonattainment Area SIP Submissions.” This request for redesignation and submittal of a maintenance plan is based on these guidance documents, as well as on additional guidance received from EPA Region 5 staff. The 2014 SO₂ guidance and Section 107(d)(3)(E) of the CAA list the

⁵ Available at: https://www.epa.gov/sites/production/files/2016-03/documents/calagni_memo_-_procedures_for_processing_requests_to_redesignate_areas_to_attainment_090492.pdf.

requirements that must be met by nonattainment areas prior to consideration for redesignation to attainment. These criteria are:

- (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.

These requirements are addressed in sections 2.1 through 2.5.

2.1. Determination that the area has attained the NAAQS (CAA Section 107(d)(3)(E)(i))

In order to monitor attainment status with the 1971 standard, WDNR began operating several SO₂ air quality monitors in Oneida County in the early 1980s. Since SO₂ concentrations measured at the Rhinelander Tower monitor were consistently among the highest measured in the county, monitoring at other locations was eventually discontinued. The location of the Rhinelander Tower monitor relative to the Ahlstrom-Munksjo paper mill is shown in Figure 2.

Figure 2. Location of Rhinelander Tower SO₂ Monitor and Ahlstrom-Munksjo paper mill.



The 2010 1-hour SO₂ standard is met at an ambient air quality monitoring site when the three-year average of the annual 99th percentile of 1-hour daily maximum concentrations is less than or equal to 75 ppb. The three-year average of the annual 99th percentile of 1-hour daily maximum concentrations is also called the site's "design value." While calculating design values, one decimal place must be carried in the computations, with final values rounded to the nearest 1 ppb. Decimals 0.5 or greater are rounded up, and those less than 0.5 are rounded down. Values at or below 75 ppb meet the standard. Values greater than 75 ppb exceed the standard. An area is in compliance with the 1-hour SO₂ standard only if every monitoring site in the area meets the NAAQS. The air quality design value for an area is the highest design value among all monitor sites located in that area.

Tables 1 and 2 show the 99th percentile values and 3-year design values for the Rhinelander Tower monitor. Using the above methodology, the design value for the Rhinelander Tower monitor has been below the level of the 2010 1-hour SO₂ NAAQS (75 ppb) since 2018.

Table 1. Rhinelander Tower Monitor SO₂ 99th Percentile Values

Site ID	99th Percentile Value (ppb)											
550850996	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	144	162	147	174	153	162	156	129	38	40	29	39

Table 2. Rhinelander Tower Monitor SO₂ Design Values

Site ID	3-Year Design Value (ppb)									
550850996	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2017-2019	2018-2020
	151	161	158	163	157	149	108	69	36	36

Hourly SO₂ data are reported to EPA's Air Quality System (AQS). All available data for the Rhinelander Tower SO₂ monitoring site have been quality assured and archived in AQS in accordance with 40 CFR Part 58. The full dataset has been certified and is available to the public. The average data completeness for the Rhinelander Tower site for the years 2018 to 2020 was 98%.⁶ The data for this period also satisfied EPA's data completeness criteria in accordance with the procedures described in Appendix T of 40 CFR Part 50.

2.2. Approved SIP for the area under CAA Section 110(k) (CAA Section 107(d)(3)(E)(ii))

The WDNR submitted the required attainment demonstration SIP for this area on January 22, 2016 and supplemented this submittal with additional information on July 18, 2016 and November 29, 2016. EPA partially approved and partially disapproved WDNR's 2016 attainment plan submittals on March 23, 2021.⁷

⁶ Data completeness was determined from AMP 430 Data Completeness reports downloaded from AQS.

⁷ 86 FR 15418 (March 23, 2021)

On March 29, 2021, WDNR submitted a supplemental attainment plan to address the remaining elements requiring EPA approval. As described in Section 2.3, this plan is based on a new permit containing updated emissions control requirements. Once EPA finalizes this approval, the CAA Section 172 general requirements for areas designated as nonattainment for all NAAQS and the CAA Sections 191 and 192 nonattainment area requirements specific to SO₂ will be satisfied.

2.3. Determination that the improvement in air quality is due to permanent and enforceable reductions in emissions (CAA Section 107(d)(3)(E)(iii))

The state must be able to reasonably attribute the improvement in air quality to emission reductions which are permanent and enforceable. The state should estimate the percent reduction achieved from federal measures, as well as control measures that have been adopted and implemented by the state.

In January 2016, Administrative Order AM-15-01 established new emissions limits and requirements on the Ahlstrom-Munksjo mill. Under this order, boiler B26 became subject to a more stringent emission rate limit of 3.00 pounds per mmBtu on a 24-hour basis (equivalent to 3.20 pounds per mmBtu on an hourly basis). Specific emissions requirements contained in this order were approved by EPA into Wisconsin's SIP on March 23, 2021 as a "SIP-strengthening" measure. As noted in Section 2.1, the air quality in the area first attained the NAAQS in 2018, based on source compliance with Administrative Order AM-15-01.

Additional emissions requirements for the Ahlstrom-Munksjo mill were made permanent and enforceable through incorporation in Air Pollution Control Construction Permit Revision 15-DMM-128-R1, issued on March 25, 2021 with an effective date of December 31, 2021. This permit established the following requirements for boiler B26 at the Ahlstrom-Munksjo facility:

- SO₂ emissions may not exceed 2.38 pounds per mmBtu (lb/mmBtu) heat input on a 24-hour average basis;
- The heat input to the boiler may not exceed 260 mmBtu per hour; and
- The height of boiler stack S09 shall be at least 246 feet above ground level and the flue gas shall be discharged vertically and without obstruction.

Dispersion modeling conducted by WDNR demonstrated that implementation of these limits and engineering changes at the facility, with all other SO₂ emission sources within 50 kilometers operating under permitted conditions, would result in the NAAQS being attained and maintained throughout the nonattainment area. This modeling, along with the SO₂ emissions limitations and associated monitoring, recordkeeping, and reporting requirements in permit 15-DMM-128-R1 needed to ensure continued attainment of the 2010 SO₂ NAAQS, were included in WDNR's March 2021 supplemental attainment plan SIP submittal to EPA. This submittal is currently under review by EPA.

To address anti-backsliding and ensure continued maintenance of the 2010 SO₂ NAAQS in this area, WDNR will submit any changes to its rules or emissions control requirements applicable to the Ahlstrom-Munksjo mill or other SO₂ sources to EPA for approval as a SIP revision consistent with Section 110(l) of the CAA.

2.4. Maintenance plan under Section 175A that is fully approved (CAA Section 107(d)(3)(E)(iv))

A maintenance plan provides for the continued attainment of the air quality standard for a period of ten years after EPA has redesignated the area to attainment. The plan also provides assurances, through specific measures, that a subsequent violation of the air quality standard will be corrected.

The WDNR is submitting a maintenance plan for this area in Section 3 of this document. When EPA approves this maintenance plan, the area will have a fully approved maintenance plan under CAA Section 110(k).

2.5. Determination that all applicable requirements for the area under Section 110 and Part D of the CAA have been met

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 for the area under Section 110(k) (per CAA Section 107(d)(3)(E)(ii)).

2.5.1. Satisfying CAA Section 110(a) 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 for 2010 1-hour SO₂ 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.⁸ EPA subsequently approved the three remaining iSIP components, as follows:

- Most elements relating to Wisconsin's PSD program were approved October 6, 2014.⁹

⁸ 80 FR 54725 (September 11, 2015)

⁹ 79 FR 60064 (October 6, 2014)

- EPA approved the remaining components on February 7, 2017.¹⁰ EPA approved Wisconsin's state board requirements under Section 128 of the CAA on January 21, 2016.¹¹

See Appendix 1 for additional details regarding Wisconsin's approved iSIP for the 2010 1-hour SO₂ NAAQS.

2.5.2. Satisfying CAA Part D Requirements

Part D of the CAA sets forth the basic nonattainment requirements applicable to all nonattainment areas. SO₂ nonattainment areas must meet the general provisions of Subpart 1 and the specific SO₂ provisions of Subpart 5. The maintenance plan associated with this request for the partial Oneida County nonattainment area is a SIP revision for an area designated as nonattainment and meets the applicable requirements of Part D of Title I of the CAA.

CAA Section 172(c) requirements

Section 172(c) of the CAA contains general requirements for nonattainment plans. These requirements include reasonable further progress (RFP), emission inventories, permitting provisions, and other measures associated with attainment. These requirements were addressed in the attainment plan SIP revisions submitted to EPA in November 2016 and March 2021.

CAA Section 173 requirements

Section 173 requires provisions related to permitting of air pollution sources in nonattainment areas. The WDNR regulates modification and construction of stationary sources through its nonattainment New Source Review (NNSR) and Prevention of Significant Deterioration (PSD) permitting programs under ss. 285.11, 285.13, 285.17, 285.19, and 285.60 through 285.69, Wis. Stats. These requirements were adopted to implement the federally-mandated requirements in Sections 110, 172, 173, and 182(a) of the CAA.

CAA Section 176(c) requirements

Section 176(c) requires states to establish criteria and procedures to ensure that federally supported or funded activities 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). EPA approved Wisconsin's general conformity SIP on July 29, 1996 (61 FR 39329).

As described in the SO₂ nonattainment area SIP guidance, EPA's transportation conformity rules do not apply to SO₂ unless transportation conformity budgets exist for other reasons, such as that SO₂ is found to be a significant contributor to a PM_{2.5} nonattainment problem, or if the SIP has established an approved or adequate budget for such emissions as part of the RFP, attainment or maintenance strategy. Neither circumstance applies here.

¹⁰ 82 FR 9515 (February 7, 2017)

¹¹ 81 FR 3334 (January 21, 2016)

3. MAINTENANCE PLAN FOR THE PARTIAL ONEIDA COUNTY 2010 1-HOUR SO₂ NAAQS NONATTAINMENT AREA

In order for the partial Oneida County nonattainment area to be redesignated to attainment, WDNR must submit, and EPA must approve, a SIP showing maintenance of the 2010 SO₂ NAAQS within the nonattainment area for at least ten years after redesignation. The following plan has been developed in support of Wisconsin's request for redesignation.

EPA's 1992 redesignations guidance states that the maintenance plan must consist of the following criteria:

- An attainment inventory;
- A demonstration of maintenance (for ten years after area is redesignated);
- Continued operation of a monitoring network;
- A verification of continued attainment; and
- A contingency plan.

These elements are addressed below.

3.1. Attainment inventory

In consultation with EPA, WDNR selected 2011 as the nonattainment year and 2018 as the attainment year for this request. Table 3 compares SO₂ emissions for all sources (i.e., point sources, non-point (area) sources, onroad sources, and nonroad sources) for the 2011 nonattainment year and the 2018 attainment year for the partial Oneida County nonattainment area. Between 2011 and 2018, SO₂ emissions decreased 25% (tons/day basis) in this area. These reductions are almost entirely due to decreases in SO₂ emissions from the Ahlstrom-Munksjo paper mill, provided by the retirement of four coal boilers, slightly reduced coal sulfur content for boiler B26, and the Administrative Order AM-15-01 SO₂ limits described in Section 2.3 (see Appendix 4).

Point source emissions were developed from the state point source inventory database. As described in detail in Appendix 4, the projected 2025 and 2032 emissions for the Ahlstrom-Munksjo mill are less than the SO₂ potential-to-emit (PTE) in permit 15-DMM-128-R1, which is effective December 31, 2021. However, as described in Section 2.3, modeling of the area shows it will continue to attain the 2010 SO₂ NAAQS based on the PTE and emissions control requirements in permit 15-DMM-128-R1. All modeled sources are in compliance with their emission limits, with Ahlstrom-Munksjo required to be in compliance with the PTE requirements of permit 15-DMM-128-R1 beginning December 31, 2021.

Area source emissions were developed from EPA estimates and projections (2014 National Emissions Inventory (NEI) version 2, and its associated 2016 Air Emissions Modeling Platform, version 1). Mobile source (on-road and non-road) emissions were developed using EPA's MOVES3 mobile source emissions model for most source categories except for airport and rail locomotive emissions, which were developed using the 2014 NEI version 2, and EPA's 2016 Air Emissions Modeling Platform, version 1. Appendices 2 through 4 include discussions of the methodology used to estimate sector-specific emissions for 2011 and 2018.

Table 3. Emission inventories for the partial Oneida County nonattainment area by source type. Emissions are in tons of SO₂.

Sector	2011 Nonattainment Year		2018 Attainment Year		2025 Interim Year		2032 Maintenance Year	
	Annual	Average day	Annual	Average day	Annual	Average day	Annual	Average day
Point*	2,431	8.199	1,281	6.129	2,196	6.130	2,196	6.131
Area	6.705	0.018	6.426	0.018	6.062	0.167	5.906	0.016
Onroad	2.010	0.006	1.069	0.003	0.628	0.002	0.572	0.002
Nonroad	1.107	0.003	1.174	0.003	1.205	0.003	1.290	0.004
TOTAL	2,440	8.226	1,289	6.152	2,203	6.152	2,204	6.152
Change from 2011 (tons)	-	-	-1,151	-2.07	-236.5	-2.07	-236.3	-2.07
Change from 2011 (%)			-47%	-25%	-10%	-25%	-10%	-25%
Change from 2018 (tons)	-	-	-	-	+914.5	0.00	+914.5	0.00
Change from 2018 (%)					+71%	0%	+71%	0%

* Ahlstrom-Munksjo paper mill coal boiler B26 did not operate from mid-May to mid-October 2018. The 2025 and 2032 projections therefore conservatively assume full-year operation for B26. In addition, as noted in text, 2025 and 2032 projections are less than the PTE in permit 15-DMM-128-R1. See Appendix 4 for details.

3.2. Demonstration of maintenance

In consultation with EPA, WDNR selected 2025 as the interim year and 2032 as the maintenance year for this request. Table 3 provides summaries of the partial Oneida County nonattainment area SO₂ emission inventory projections for the different sectors for both 2025 and 2032. Emissions are presented in both annual tons and average tons/day, to better account for the operational and fuel changes over the 2011-2032 period at the Ahlstrom-Munksjo paper mill, the primary source of SO₂ emissions in the Oneida County nonattainment area. Appendices 2 through 8 contain details about how the inventories were developed.

It should be noted that these emission budgets do not in themselves impose 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.

The 2025 and 2032 inventories project that, while SO₂ emissions could potentially increase in future years to a level reflective of normal operation at the Ahlstrom-Munksjo paper mill, those emissions would still be below 2011 levels (see Table 3 and Appendix 4).¹² This potential increase in future emissions is acceptable under EPA guidance for redesignation requests, if appropriate modeling shows that the NAAQS will not be violated in the future.¹³ The WDNR's March 2021 supplemental attainment plan SIP submittal includes modeling that satisfies this requirement; specifically, this modeling shows the entire area will attain and maintain the NAAQS given the emissions control requirements contained in permit 15-DMM-128-R1. Therefore, this emissions inventory analysis, combined with WDNR's attainment demonstration modeling of permanent and enforceable control measures (see Section 2.3), shows that the partial Oneida County nonattainment area is expected to maintain the air quality standard for more than ten years into the future.

3.3. Commitment to monitoring

The WDNR commits to continue monitoring SO₂ levels in this area. The WDNR will consult with EPA Region 5 prior to making changes to the existing monitoring network, including the Rhinelander Tower monitoring site, should changes become necessary in the future. The WDNR will continue to quality assure the monitoring data to meet the requirements of 40 CFR Part 58. The WDNR will enter all data into AQS in a timely manner in accordance with federal guidelines.

¹² Note that the Rhinelander Tower monitor was already attaining the NAAQS at these more conservative 2018 coal sulfur levels for Ahlstrom-Munksjo paper mill boiler B26, after the 3.00 lbs/mmBtu SO₂ limit from Administrative Order AM-15-01 was in effect.

¹³ See page 67 of EPA's April 23, 2014 *Guidance for 1-Hour SO₂ Nonattainment Area SIP Submissions*: "An air agency may generally demonstrate maintenance of the NAAQS by either showing that future emissions of SO₂ will not exceed the level of the attainment inventory, or by modeling to show that the future mix of sources and emission rates will not cause a violation of the NAAQS...Where the state has submitted an attainment plan, this plan in many cases can also serve as a maintenance plan for the area."

3.4. Verification of continued attainment

Continued attainment of the 2010 1-hour SO₂ NAAQS in this area will be assured through continued implementation of the attainment plan and the controls on the Ahlstrom-Munksjo mill contained in permit 15-DMM-128-R1 and incorporated into Wisconsin's SIP. As previously noted, the modeling submitted in the attainment plan for this area, which includes the emissions requirements contained in this permit, shows that attainment of the NAAQS will be maintained throughout the area.

Wisconsin also requires annual reporting of SO₂ emissions by point sources. Emissions information in this area will be compared to the projected maintenance year inventories to assess emissions trends, as necessary, to assure continued compliance with the 2010 1-hour SO₂ NAAQS.

Finally, as described in Section 3.3, WDNR commits to continue monitoring SO₂ levels in this area and meeting all applicable data handling requirements. WDNR will consult with EPA through the annual review of Wisconsin's monitoring network prior to making any changes to the network.

3.5. Contingency measures

As required by Section 175A(b) of the CAA, WDNR commits to submit to EPA, eight years after redesignation, an additional revision of the SIP. The revision will contain Wisconsin's plan for maintaining the 2010 SO₂ NAAQS for an additional ten years beyond the first ten-year maintenance period after redesignation.

Section 175A(d) requires contingency provisions to promptly correct any violation of the SO₂ NAAQS that occur after redesignation. Unlike Section 172(c)(9), Section 175A does not explicitly require contingency measures take effect without further action by the state. Rather, the maintenance plan should ensure contingency measures are adopted and implemented as expeditiously as practicable once they are triggered. The plan should clearly identify the measures to be adopted, provide a schedule and associated procedures for adoption and implementation, and provide a specific time limit for action.

The General Preamble for the Implementation of Title I of the CAA Amendments of 1990 and the SO₂ nonattainment area SIP guidance (pages 41-42) provides further discussion on contingency measures specifically for SO₂.¹⁴ In many cases, including this one, attainment revolves around compliance of a single source, or small set of sources, with emission limits shown to provide for attainment. In those cases, EPA interprets contingency measures to mean the state has a comprehensive program to identify sources of violations of the SO₂ NAAQS and to undertake an aggressive follow-up for compliance and enforcement, including expedited procedures for establishing enforceable consent agreements pending the adoption of revised SIPs.¹⁵

The WDNR has an active enforcement program to address violations and will continue to operate a comprehensive program to identify sources of violations of the SO₂ NAAQS and to conduct follow-up compliance and enforcement actions, as needed. Wisconsin commits to adopt and expeditiously implement necessary corrective actions in the event of a violation.

¹⁴ 57 FR 13498 (April 16, 1992).

¹⁵ 57 FR 13547.

In the event adoption of additional control measures on any source in this area is deemed necessary to ensure continued attainment of the NAAQS, those measures will be subject to Wisconsin's administrative and legal processes. This will include publication of notices, an opportunity for public hearing, and other measures required by Wisconsin law and administrative rules.

4. PUBLIC PARTICIPATION

In accordance with Section 110(a)(2) of the CAA, on May 27, 2021 the WDNR published a notice on the internet (<http://dnr.wi.gov/topic/AirQuality/Input.html>) stating that it would hold a public hearing on this Redesignation Request and Maintenance Plan for the Partial Oneida County 1-hour SO₂ NAAQS nonattainment area. A notice of availability was also posted on WDNR's website on that date. The public hearing was held virtually using Zoom meeting and conference call on July 7, 2021, and the redesignation request was made available for public comment through July 8, 2021. The WDNR did not receive any public comments on the draft.

WDNR made several changes to the draft at the recommendation of EPA Region 5 to expand and clarify certain areas of the document, including adding monitored 99th percentile values in Section 2.1, addressing anti-backsliding in Section 2.3, and expanding the attainment inventory discussion in Section 3.1

5. CONCLUSION

Air quality measured at the Rhinelander Tower monitor in Oneida County, Wisconsin has attained the 2010 1-hour SO₂ NAAQS. In addition, as described within this document, the applicable provisions of the CAA regarding redesignation to attainment have been met. Therefore, WDNR requests that EPA redesignate the partial Oneida County nonattainment area to attainment for the 2010 1-hour SO₂ NAAQS.

APPENDIX 2

2011 and 2018 Emission Inventories Methodology

List of Acronyms

AEI	Air Emissions Inventory
DOE	Department of Energy
EGU	Electric Generating Unit
EIA	Energy Information Administration
EIs	Emission Inventories
EPA	Environmental Protection Agency
FID	Facility Identification Number
HPMS	Highway Performance Monitoring System
ICI	Industrial, commercial and institutional
LADCO	Lake Michigan Air Directors Consortium
MAR	Commercial Marine Aircraft and Rail Locomotive
MCDs	Minor Civil Divisions
MOVES	Motor Vehicle Emission Simulator
NAICS	North American Industrial Classification System
NEC	Not Elsewhere Classified
NEI	National Emissions Inventory
OBD	On-Board Diagnostics
SCC	Source Classification Code
SED	State Energy Data
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
STDM	Statewide Travel Demand Model
tpd	tons per day
tpy	tons per year
TSD	Technical Support Document
VHT	Vehicle-Hours of Travel
VMT	Vehicle-Miles of Travel
WDNR	Wisconsin Department of Natural Resources
WDOT	Wisconsin Department of Transportation

This appendix provides additional 2011 and 2018 sulfur dioxide (SO₂) emissions information for the Wisconsin Department of Natural Resources (WDNR) Redesignation Request and Maintenance Plan for the Partial Oneida County 2010 SO₂ NAAQS Nonattainment Area. For EPA to redesignate an area from nonattainment to attainment, 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 (2018) emissions inventory.

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 redesignation request, portable point sources, such as asphalt plants and rock crushers, were reported under nonpoint sources to be consistent with other states. The 2011 and 2018 point source emission inventory was created using annually reported point source emissions information from WDNR's inventory database.

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

There is no electric generating unit (EGU) point source facility located in the nonattainment area in partial Oneida County. The 2011 and 2018 emissions inventories for non-EGU point sources were tabulated using the emissions data reported annually by each facility operator to the DNR air emissions inventory (AEI). The AEI calculates emissions for each individual emissions unit or process line by multiplying fuel or process throughput by the appropriate emission factor that is derived from mass balance analysis, stack testing, continuous emissions monitoring, engineering analysis, or EPA's WebFIRE database. The emission calculations in the AEI also account for any operating control equipment. Table A5.1 in Appendix 5 provides a list of point source emissions by facility identification number (FID) and facility name for 2011 and 2018. These point source facilities, except for the paper mill owned by Ahlstrom-Munksjo NA Specialty Solutions LLC (FID #744008100), are assumed to operate steadily over 52 weeks per year and 5 working days per week each year. Therefore, average tons per day (tpd) emissions for

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

the facilities other than the paper mill are derived by dividing each facility's annual reported emissions by 260 days (52 weeks/yr x 5 days/week = 260 days/yr).

Ahlstrom-Munksjo NA Specialty Solutions LLC (FID # 744008100) is a paper mill located in Rhinelander, Wisconsin and is the primary source of SO₂ emissions in the partial Oneida County nonattainment area. The 2011 and 2018 tpd emissions for this facility are the actual 2011 and 2018 emissions divided by the actual operating days in 2011 and 2018. See Appendix 4 for details.

2. Area Sources

Nonpoint sources are stationary sources that are too small and/or too numerous to be tracked individually in the point source inventory. Therefore, the nonpoint inventory quantifies these 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 back-calculated using the 2014 National Emissions Inventory (NEI) version 2 and 2016 v1 emission modeling platform. Emission calculation methodologies used in developing 2014 nonpoint emissions inventory are available in the EPA's 2014 NEI Technical Support Document (TSD).²

Emission calculation methodologies used to develop the 2016 v1 emission modeling platform are available in the EPA's 2016 version 1 Technical Support Document (TSD).³ For the 2018 attainment year, nonpoint source emissions inventory estimates were based on the interpolating between EPA's 2016 v1 emission modeling platform and its projections for 2023.⁴

For the 2014 NEI, the WDNR updated EPA nonpoint emissions estimates for stationary nonpoint sources for the following sectors: fuel combustion for the industrial, commercial and institutional (ICI) sectors; degreasing; dry-cleaning; graphic arts; and most of the solvent utilization for industrial surface coating categories except industrial maintenance, traffic markings, and other special purpose categories. The WDNR adopted EPA's nonpoint estimates for commercial cooking, solvent utilization for non-industrial surface coating, miscellaneous non-industrial consumer and commercial solvent utilization, residential and commercial portable fuel containers, bulk gasoline terminals and gas stations, waste disposal categories, and miscellaneous non-industrial not elsewhere classified (NEC) categories.

For the WDNR-updated nonpoint fuel combustion sectors, the EPA provided cross-walk information between nonpoint SCCs and their corresponding point source SCCs. These were used to subtract 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

² https://www.epa.gov/sites/production/files/2018-07/documents/nei2014v2_tsd_05jul2018.pdf.

³ https://www.epa.gov/sites/production/files/2020-11/documents/2016v1_emismod_tsd_508.pdf.

⁴ <https://www.epa.gov/air-emissions-modeling/2016v1-platform>.

Administration (EIA). This survey data is the source of activity data for ICI fuel combustion. EIA's State Energy Data System (SEDS) data, as reported in EIA's most recent State Energy Consumption Estimates report, was used to determine total consumption for most fuel oil and kerosene.⁵

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.⁶

To obtain area source emissions for the partial Oneida County 2010 SO₂ NAAQS nonattainment area, the emission estimates for all of Oneida County were allocated to the partial county area based on population data. The Oneida County population for 2011 and 2018 were estimated by interpolating between 2010 and 2020 population data from the Wisconsin Department of Administration. The partial county population was identified based on the relative population of the Minor Civil Divisions (MCDs) in the partial Oneida County 2010 SO₂ NAAQS nonattainment area as compared to the entire county. Using this methodology, for both 2011 and 2018, 50% of the county's population was estimated to live in the partial Oneida County 2010 SO₂ NAAQS nonattainment area. Appendix 6 includes table of area source emissions by source category.

3. Onroad Mobile Sources

Onroad mobile sources are motorized mobile equipment that are primarily used on public roadways. Examples of onroad mobile sources are cars, trucks, buses and road motorcycles. The emissions reported in this document were estimated by the Motor Vehicle Emission Simulator (MOVES), the EPA's recommended mobile source model. The model was run in inventory mode. The version used was MOVES3.0.1, the most recent version of the model, released in March 2021. All estimates were made in accordance with the following EPA technical guidance:

- MOVES3 Technical Guidance: Using MOVES to Prepare Emission Inventories for State Implementation Plans and Transportation Conformity (76 pp, November 2020, EPA-420-B-20-052)⁷

The onroad mobile SO₂ emissions for the partial Oneida County nonattainment area for 2011 and 2018 (as well as the projections for 2025 and 2032) are presented in Appendix 8, separated by source type (vehicle class), fuel type and road type. Average daily (tpd) emissions for the different source categories are derived by dividing each source category's annual (tpy) emission estimate by 365 (366 for the leap year of 2032). A Table summarizing vehicle activity data is presented in Appendix 8.

3.1 Transportation Data

⁵ https://www.eia.gov/state/seds/sep_use/notes/use_print.pdf.

⁶ <https://www.census.gov/programs-surveys/cbp/data.html>.

⁷ <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1010LY2.pdf>.

The modeling inputs to MOVES include detailed transportation data (e.g., vehicle-miles of travel by vehicle class, road class and hour of day, and average speed distributions), requiring support from the state agency responsible for transportation data in Oneida County, the Wisconsin Department of Transportation (WDOT). WDOT maintains transportation network inventory data for the state. WDOT posts official vehicle-miles of travel (VMT) estimates for each Wisconsin county each year.⁸ WDOT has also developed and validated travel simulation models to estimate and forecast VMT and average speed distributions for the state, including detailed data for Oneida County.

WDNR developed the transportation inputs to MOVES utilizing the following transportation data provided by WDOT:

- Official posted estimates of total VMT for Oneida County for the years 2011 and 2018. WDNR divided these total VMT values by functional class (road class) using the distribution of VMT by functional class for Oneida County for the year 2017, provided by WDOT on November 29, 2018.
- Output from WDOT's Statewide Travel Demand Model (STDM) for each Wisconsin county for the years 2010 and 2040. WDOT provided WDNR the 2010 data on November 14, 2018, and the 2040 data on November 15, 2018. These data include vehicle travel by road class, vehicle class and speed class.

A discussion of these two data sources follows.

3.1.1 Official Oneida County VMT Estimates by Functional Class

Table A2.1 displays WDOT-provided annual VMT estimates for Oneida County, separated by functional class, and WDNR's estimates of the amount of that countywide VMT in the partial Oneida County nonattainment area.

⁸ <https://wisconsin.dot.gov/Pages/projects/data-plan/veh-miles/default.aspx>.

Table A2.1. Estimated Annual VMT in Oneida County and the Partial Oneida County Nonattainment Area.

Functional Class	Oneida County Annual VMT (from WDOT)		Partial County Nonattainment Area Annual VMT (WDNR calculated)		VMT Allocated to Partial County Area by:
	2011	2018	2011	2018	
Rural - Interstate	0	0	0	0	(No VMT in Oneida County)
Rural - Other Freeway-Expressway	0	0	0	0	
Rural - Other Principal Arterial	162,326,422	158,767,268	25,972,228	25,402,763	Roadway Miles*Traffic Counts
Rural - Minor Arterial	101,721,351	99,491,019	32,550,832	31,837,126	
Rural - Major Collector	106,748,507	104,407,949	38,429,462	37,586,862	Rural Population (human)
Rural - Minor Collector	29,395,682	28,751,155	10,582,445	10,350,416	
Rural - Local	39,514,768	38,648,371	14,225,317	13,913,414	
Urban - Interstate	0	0	0	0	(No VMT in Oneida County)
Urban - Other Freeway-Expressway	0	0	0	0	
Urban - Other Principal Arterial	56,858,529	55,611,855	56,858,529	55,611,855	Location of urban areas. (The only urban area in Oneida County is fully within the nonattainment area)
Urban - Minor Arterial	21,123,807	20,660,648	21,123,807	20,660,648	
Urban - Collector	8,813,530	8,620,285	8,813,530	8,620,285	
Urban - Local	6,916,434	6,764,785	6,916,434	6,764,785	
ALL (Total VMT)	533,419,030	521,723,335	215,472,584	210,748,153	

3.1.2 Output from WDOT’s Statewide Travel Demand Model (STDM)

WDOT provided to WDNR transportation modeling data from their STDM for Oneida County on November 14 and 15, 2018. Data were provided for the two years 2010 and 2040. (Values for intermediate years can be obtained by linear interpolation.) For each of these years, the data include average weekday VMT and vehicle-hours of travel (VHT), all broken down into 14 five-mph speed bins within 13 roadway classes within six 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, etc., continuing through 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 six vehicle classes are:

- PASS: Passenger
- LDT: Long Distance (Light-Duty) Travel

- LNFRT: Light-Duty Non-Freight
- MNFRT: Medium-Duty Non-Freight
- HNFRT: Heavy-Duty Non-Freight
- FRT: Freight (Heavy-Duty)

The data from WDOT’s STDM were used to develop speed distributions and to allocate VMT to vehicle classes.

3.2 Descriptions of MOVES Modeling Inputs

3.2.1 Vehicle-Miles of Travel (VMT)

The MOVES model requires that VMT input be divided by vehicle class – either five general classes or 13 more-detailed classes. WDNR divided the VMT to the 13 classes, utilizing the WDOT’s STDM VMTs by six classes and the MOVES3.0.1 default VMT splits. Table A2.2 shows the 2011 and 2018 VMT inputs to MOVES.

Table A2.2. 2011 and 2018 Annual VMT in the Partial Oneida County Nonattainment Area Input into MOVES Model.

MOVES Vehicle Class	2011 Annual VMT	2018 Annual VMT	MOVES Default VMT Splits Applied to the STDM Vehicle Classes of:
Motorcycles	1,495,549	1,453,117	PASS + LDT + LNFRT
Passenger Cars	92,504,306	76,009,413	
Passenger Trucks	91,721,406	102,609,039	
Light Commercial Trucks	10,096,876	11,512,211	
Intercity Buses	844,680	934,452	MNFRT
Transit Buses	279,113	314,302	
School Buses	508,129	500,294	
Refuse Trucks	150,380	102,707	
Single-Unit Short-haul Trucks	11,151,313	10,841,643	
Single-Unit Long-haul Trucks	753,405	730,902	
Motorhomes	513,592	409,052	HNFRT + FRT
Combination Short-haul Trucks	1,560,628	1,367,151	
Combination Long-haul Trucks	3,893,208	3,963,871	
All Classes (Total VMT)	215,472,584	210,748,153	

3.2.2 VMT by Month of Year, by Day of Week, and by Hour of Day

WDNR used the MOVES3.0.1 default monthly, daily, and hourly VMT distributions.

3.2.3 Vehicle Population

WDNR estimated vehicle populations for each vehicle class by dividing annual VMT by the MOVES3.0.1 defaults for average annual mileage accumulation.

3.2.4 Average Speed Distribution

WDNR compiled and converted the VHT values provided by WDOT to conform to the bins utilized by MOVES. Since these speed bins are offset by 2.5 mph from the MOVES speed bins, WDNR then adjusted the VHT to the MOVES speed bins, assuming VHT was uniformly distributed across each of the WDOT speed bins.

3.2.5 Vehicle Age Distribution

WDNR has developed vehicle age distributions for the years 2014 and 2017 for a 65-county “outstate”⁹ area, which includes Oneida County, utilizing files provided by WDOT of select fields from the state’s registration database.

For the year 2014, WDNR developed a 65-county vehicle age distribution 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 adjusted the 2014 distributions back to 2011 based on differences between the EPA default age distributions for those two years.

For the year 2017, WDNR developed a 65-county vehicle age distribution 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 projected the 2017 vehicle age distribution to 2018 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.

3.2.6 Road Type Distribution

MOVES requires that VMT for each of the 13 MOVES vehicle classes (see Table A2.2) be allocated to the following four roadway classes:

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

Since Oneida County does not have any restricted access roadways, VMT only needed to be allocated to rural and urban areas. This was done utilizing the data in Tables A2.1 and A2.2 as well as the MOVES3.0.1 default VMT values by vehicle class and road class for Oneida County.

⁹ All Wisconsin counties except the seven southeastern counties of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha.

3.2.7 Fuel Formulation and Supply

The MOVES3.0.1 defaults currently provide the best available fuel data and therefore were used.

3.2.8 Vehicle Inspection and Maintenance Program

Oneida County is not within Wisconsin's vehicle inspection program region. Thus, no inspection and maintenance program was modeled.

3.2.9 Meteorology Data

WDNR used the MOVES3.0.1 default meteorology data (hourly temperature and humidity values for each month) for Oneida County.

4. Nonroad Mobile Sources

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

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

- Commercial Marine, Aircraft¹⁰ 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 is presented in Appendix 7. Average daily (tpd) emissions for the different source categories are derived by dividing each source category's annual (tpy) emission estimate by 365 (366 for the leap year of 2032).

¹⁰ Includes emissions from airport support equipment and aircraft auxiliary power units.

4.1 Non-MAR Sources

The 2011 and 2018 nonroad emissions for the non-MAR subcategories were developed using the EPA's MOVES3.0.1 model. The model was run for Oneida County for each month of 2011 and 2018. Emissions were then allocated from the full county to the partial county nonattainment area based on the surrogates of population, land area or water area, as described in section 4.4

4.2 MAR Sources – Aircraft and Rail Locomotive

For the year 2011, WDNR estimated emissions for aircraft and rail locomotives in Oneida County by linearly back-calculating to 2011 from:

- 2016 emissions from EPA's 2016 Emissions Modeling Platform, version 1
- 2014 emissions from EPA's 2014 National Emissions Inventory (NEI), version 2

For the year 2018, WDNR estimated emissions for aircraft and rail locomotives in Oneida County by linearly interpolating between:

- 2016 emissions from EPA's 2016 Emissions Modeling Platform, version 1
- 2023 emissions from EPA's 2016 Emissions Modeling Platform, version 1

The countywide emissions were then allocated to the partial county nonattainment area as described in section 4.4.

4.3 MAR Sources – Commercial Marine Vessels

Oneida County does not have any major waterways having commercial marine activity. Thus, no commercial marine emissions occur in Oneida County

4.4 Allocation of Emissions to Partial Oneida County Nonattainment Area

Given the vast variety of nonroad mobile sources, several surrogates were employed to estimate the proportion of countywide emissions in the partial Oneida County nonattainment area. The surrogates are described below.

4.4.1 Land Area

Based on geographical data for each city and township in Oneida County, the land area of the partial Oneida County nonattainment area comprises 19% of the total county land area.

The nonroad categories allocated to the partial Oneida County nonattainment area based on this 19% land area proportion are agriculture, logging, oilfields, recreational, and underground mining.

4.4.2 Population

As described in section 2 (Area Sources), for 2011 and 2018, 50.07% and 49.53%, respectively, of the county's population was estimated to live in the partial Oneida County nonattainment area.

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

4.4.3 Water Area

Based on geographical data for each city and township in Oneida County, the water area of the partial Oneida County nonattainment area comprises 20% of the total county water area.

The only nonroad category allocated to partial Oneida County nonattainment area based on water area is pleasure craft.

4.4.4 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. From those data WDNR calculated that 99% of the aircraft emissions in Oneida County come from within the partial Oneida County nonattainment area. The reason for this high percentage is that the major airport in Oneida County, Rhinelander-Oneida County Airport, is located in the partial Oneida County nonattainment area.

4.4.5 Railroad Track-Miles

Based on the WDOT official map for Oneida County, dated January 2018, Oneida County has approximately 39 miles of rail tracks, of which approximately 12 of those miles (31%) are in the partial Oneida County nonattainment area.

Thus, railroad emissions for the partial Oneida County nonattainment area were calculated to be 31% of the full county emissions.

APPENDIX 3

2025 and 2032 Emissions Projections Methodology

List of Acronyms

AEO	Annual Energy Outlook
EPA	Environmental Protection Agency
MCDs	Minor Civil Divisions
MOVES	Motor Vehicle Emission Simulator
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
SO ₂	sulfur dioxide
tpd	tons per day
tpy	tons per year
WDNR	Wisconsin Department of Natural Resources
WDOT	Wisconsin Department of Transportation
VMT	Vehicle-Miles of Travel

This appendix provides information for the sector-specific 2025 and 2032 sulfur dioxide (SO₂) emission estimates for in the Wisconsin Department of Natural Resources (WDNR) Redesignation Request and Maintenance Plan for the Partial Oneida County 2010 SO₂ NAAQS Nonattainment Area. For the 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, the WDNR is providing a projection of emissions for 2025 as the interim year and 2032 as the maintenance year. These emission projections relied upon in the maintenance demonstration presented in Section 3 of the redesignation request.

1. Point Source Inventory Methodology for 2025 and 2032

Except for the emissions for Ahlstrom-Munksjo NA Specialty Solutions LLC (FID #744008100), point source emissions are projected by applying growth factors to the 2018 inventory. 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. For Ahlstrom-Munksjo NA Specialty Solutions LLC, the 2025 and 2032 emissions were estimated using the methods specified in Appendix 4.

Growth Factors from AEO 2019 for Existing Sources

Point source projected 2025 and 2032 emissions were derived by first applying growth factors to the 2018 inventory. These growth factors were developed from Annual Energy Outlook (AEO) 2019 industry-specific energy consumption data, summarized in Table A3.1. Growth in energy consumption was assumed to correspond linearly with growth in emissions.

Table A3.1. Growth Factors from AEO 2019 Used for Projecting Wisconsin Point Source Emissions in Oneida County.

NAICS	NAICS Description	AEO Industrial or Commercial Sub-sector	AEO Energy Consumption (trillion Btu)*			Growth Factors (from 2018)**	
			2018	2025	2032	2025 GF	2032 GF
311942	Spice and Extract Manufacturing	Food Industry	1,223	1,392	1,555	1.14	1.27
311999	All other Miscellaneous Food Manufacturing	Food Industry	1,223	1,392	1,555	1.14	1.27
322220	Paper Bag and Coated and Treated Paper Manufacturing	Paper Industry	1,543	1,639	1,716	1.06	1.11
662110	General Medical and Surgical Hospitals	East North Central Energy Consumption - Commercial	2,821	2,711	2,735	0.96	0.97

* Source: <http://www.eia.gov/forecasts/aeo/index.cfm>.

** Growth factors for the entire 2018-2025 and 2018-2032 periods were calculated by dividing the 2025 or 2032 energy consumption value by the 2018 energy consumption value from AEO 2019.

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 1.1 above includes projections of emissions growth determined by applying general regional growth factors. However, this methodology alone does not distinguish emissions associated with modified and new sources. Therefore, as a second step the WDNR reviewed permitting actions for sources in the Oneida County 2010 SO₂ NAAQS nonattainment area from 2016 through 2020 (five years). A summary of the permitting activity and associated potential emissions is shown in Table A3.2.

The resulting emissions from this exercise are added to the projected emissions for *existing* point sources, to yield the *total* projected point source emissions for 2025 and 2032 found in section 3.2 of the redesignation request and attainment plan (see also Appendix 5, Table A5.2 for the addition of new/modified sources to existing sources). This approach may include emissions which overlap with existing source grown emissions, but it provides a more conservative estimate of future emissions. This future projection of emissions does not limit the amount of future emissions allowed from modified and new sources.

Table A3.2. Permitting Actions for Existing Source and New Emission Sources in the Partial Oneida County 2010 SO₂ Nonattainment Area, 2016 to 2020.

Construction Permit Class	Year	Potential SO ₂ Emissions Increase		Construction Permit Numbers
		(tpy)	(tpd)*	
Minor action**	2016	0	0	(None)
Minor action**	2017	0.58	2.23E-03	16-JJW-141 and 16-JJW-141-R1
Minor action**	2018	0	0	(None)
Minor action**	2019	0.01	3.85E-05	19-NCW-065 and 19-DMM-168-EXM
Minor action**	2020	0	0	(None)
Total		0.59	2.27E-03	

* Tons per day emissions are calculated based on the annual potential emissions divided by 260 weekdays.

** A minor action is a permitting action that is not subject to PSD or nonattainment NSR review.

2. Area Source Inventory Methodology for 2025 and 2032

EPA's 2016 Emissions Modeling Platform, version 1 includes base year 2016 emissions as well as projections for the years 2023 and 2028.¹ Data interpolation between emission projection years 2023 and 2028 from the 2016 Emissions Modeling Platform was used to generate Wisconsin's 2025 area source emissions. Wisconsin's 2032 area source emissions were estimated primarily by extrapolating EPA's 2023 and 2028 projections from the 2016 modeling inventory. Emission calculation methodologies used in developing 2016 v1 Emission Modeling Platform are available in the EPA's 2016 version 1 Technical Support Document (TSD).²

To obtain area source emissions for the partial Oneida County 2010 SO₂ NAAQS nonattainment area, the emission estimates for all of Oneida County were allocated to the partial county area based on population data. The Oneida County population for 2025 was used from the Wisconsin Department of Administration population projections as listed in the data source, without any interpolation.³ For 2032, the population was estimated by interpolating between the 2030 and 2035 population data projections from the Wisconsin Department of Administration. The partial county population was identified based on the relative population of the Minor Civil Divisions (MCDs) in the partial Oneida County 2010 SO₂ NAAQS nonattainment area as compared to the entire county. Using this methodology, the population estimated to live in the partial Oneida nonattainment area in 2025 and 2032 was 49% and 48%, respectively.

The sources in each nonpoint source category are assumed to operate steadily over 365 days each year. Therefore, average tpd emissions for the source categories are derived by dividing each source category's annual emission estimate by 365 days. Appendix 6 includes tables of projected area source emissions for partial Oneida County 2010 SO₂ NAAQS nonattainment area by source category.

¹ <https://www.epa.gov/air-emissions-modeling/2016v1-platform>.

² <https://www.epa.gov/air-emissions-modeling/2016-version-1-technical-support-document>.

³ https://doa.wi.gov/Pages/LocalGovtsGrants/Population_Projections.aspx.

3. Onroad Inventory Methodology for 2025 and 2032

The 2025 and 2032 projected onroad emissions were developed using the MOVES3.0.1 model, as was the case for the 2011 and 2018 emissions. The methodology WDNR used for 2025 and 2032 is the same methodology WDNR used for years 2011 and 2018, as described in Appendix 2.

WDNR used the same methodology to project future age distributions for 2025 and 2032 that was used to project the 2018 age distribution, as described in Appendix 2.

The Wisconsin Department of Transportation (WDOT) provided WDNR modeled transportation data for the years 2010 and 2040. These datasets show a vehicle-miles of travel (VMT) growth for Oneida County of 21.2% over this 30-year period. Assuming linear growth from 2010 to 2040 and assuming that the VMT growth for the nonattainment area is the same as that for the full county, WDNR grew the total 2011 VMT in Appendix 2 to generate the total VMTs for 2025 and 2032 shown in Table A3.2. WDNR then allocated these total VMT amounts to the 13 MOVES vehicle classes using the methodology described in section 3.2.1 of Appendix 2.

Table A3.2. Annual Vehicle-Miles of Travel for the Partial Oneida County 2010 SO₂ Nonattainment Area

MOVES Vehicle Class	2011 Annual VMT	2018 Annual VMT	2025 Annual VMT	2032 Annual VMT
Motorcycles	1,495,549	1,453,117	1,632,700	1,709,180
Passenger Cars	92,504,306	76,009,413	86,453,906	94,261,956
Passenger Trucks	91,721,406	102,609,039	114,698,803	116,558,036
Light Commercial Trucks	10,096,876	11,512,211	12,406,858	12,359,070
Intercity Buses	844,680	934,452	1,025,068	1,009,030
Transit Buses	279,113	314,302	326,800	312,134
School Buses	508,129	500,294	541,434	527,913
Refuse Trucks	150,380	102,707	120,032	134,514
Single-Unit Short-haul Trucks	11,151,313	10,841,643	12,165,965	12,741,948
Single-Unit Long-haul Trucks	753,405	730,902	829,916	863,023
Motorhomes	513,592	409,052	461,231	508,376
Combination Short-haul Trucks	1,560,628	1,367,151	1,680,785	1,787,395
Combination Long-haul Trucks	3,893,208	3,963,871	4,301,689	4,458,911
All Classes (Total VMT)	215,472,584	210,748,153	236,645,186	247,231,486

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

4. 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 2018 estimates, as described in Appendix 2.

For all source categories except commercial marine, aircraft and rail locomotive (MAR), the MOVES3.0.1 model was run for Oneida County, using the model's default growth projections.

For the two MAR categories of aircraft and rail locomotive, the 2025 emissions were calculated by linearly interpolating between the 2023 and 2028 values from EPA's 2016 Emissions Modeling Platform, Version 1. The 2032 emissions were calculated by linearly extrapolating from the 2023 and 2028 values from that platform. These extrapolated 2032 aircraft and rail locomotive emissions were greater than those emissions in 2028.

As was the case for 2011 and 2018, the 2025 and 2032 commercial marine emissions were zero for the partial Oneida County nonattainment area, since no commercial marine activity occurs in that area.

In allocating full Oneida County emissions to the partial Oneida County nonattainment area, the only adjustment factor that was changed from those used for 2011 and 2018 was that for population. The percent of the county's population estimated to live in the partial Oneida County nonattainment area in 2011 and 2018 was 50.07% and 49.53%, respectively. However, as described in section 2 (Area Source Methodology), for 2025 and 2032 that percent changed to 49.02% and 48.50%.

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

APPENDIX 4

Ahlstrom-Munksjo Paper Mill Emissions Inventory Methodology for 2011, 2018, 2025 and 2032

This appendix provides the methodology for the Ahlstrom-Munksjo paper mill tons per year and average tons per day (tpd) emission estimates used in the Wisconsin Department of Natural Resources (WDNR) Redesignation Request and Maintenance Plan for the Partial Oneida County 2010 SO₂ NAAQS Nonattainment Area.

1. 2011 and 2018 Nonattainment Year and Attainment Year Emissions

The Ahlstrom-Munksjo paper mill in Rhinelander is the primary source of SO₂ emissions in the partial Oneida County nonattainment area. Ahlstrom-Munksjo currently operates three boilers capable of emitting SO₂. Boiler B26 is a 300 mmBtu/hr cyclone boiler, constructed in 1958 and modified in 2016, that fires bituminous coals or a mixture of bituminous and subbituminous coals. Boiler B28 is a 280 mmBtu/hr natural gas boiler, constructed in 1996, that can be fired with distillate oil as a backup fuel. Boiler B30 is a 95 mmBtu/hr natural gas boiler installed and operational in 2014. There were four coal-fired boilers retired in 2014 (Boilers B20, B21, B22, and B23, each rated at 83.5 mmBtu/hr).

The 2011 and 2018 annual SO₂ emissions for this facility were derived from annually reported point source emissions information from WDNR's inventory database, as described in Appendix 2. WDNR calculated average tpd SO₂ emissions for each emission unit at the facility by dividing the unit's annual SO₂ emissions by the unit's reported annual days of operation. The emissions from each unit were then summed to arrive at the total average tpd SO₂ emissions for the facility.

The 2011 and 2018 tpd and annual SO₂ emissions for Ahlstrom-Munksjo are shown in Table A4.1. Between 2011 and 2018, SO₂ emissions decreased 25% (tpd basis) at the facility. These tons/day emissions reductions are due to the retirement of coal boilers B20 through B23, slightly reduced sulfur content for the coal used in boiler B26, and the additional SO₂ limit of 3.00 lbs/mmBtu for boiler B26 in Administrative Order AM-01-15 (see Section 2.3 of the redesignation request). Annual SO₂ emissions also decreased significantly (47%) from 2011 to 2018, in part for the reasons just described for tpd emissions, but more importantly because boiler B26 did not operate for certain periods during 2018.

Table A4.1. Ahlstrom-Munksjo Paper Mill SO₂ Emissions for 2011, 2018, 2025 and 2032.

Unit	Average tons/day (annual tons)			
	2011 ¹	2018 ²	2025 ³	2032 ³
B26	6.823 (2,388)	6.125 (1,280)	6.125 (2,195)	6.125 (2,195)
B20-B23	1.345 (34.48)	Retired	Retired	Retired
B28 and B30	0.0004 (0.154)	0.001 (0.382)	0.0004 (0.154)	0.0004 (0.154)
Facility	8.168 (2,422)	6.127 (1,281)	6.126 (2,195)	6.126 (2,195)

¹ In 2011, B20 operated 30 days and B21 operated 20 days. B22 tons/day emissions were excluded for 2011 because the unit only operated two days (the annual emissions of 0.99 tons were retained).

² Boiler B26 did not operate from mid-May to mid-October in 2018. Boiler B26 average coal sulfur content was also slightly lower in 2018 (1.28%) than 2011 (1.34%).

³ 2025 and 2032 emission projections for B26 are based on 2018 emissions, plus additional emissions equivalent to five months of operation to account for B26 down-time [i.e., 5 months x (1,280 tons / 7 months) = 914.4 tons additional SO₂]. 2025 and 2032 emission projections for B28 and B30 are based on 2011 emissions, to reflect decreased operation of those units due to increased operation of B26.

2. 2025 and 2032 Projected Emissions

The majority of SO₂ emitted by Ahlstrom-Munksjo is from boiler B26 (see Table A4.1), so the 2025 and 2032 projected emissions focus on the emissions from this boiler. As described in the section above, emissions in 2018 (tpd and annual tons) are significantly lower than 2011. These lower emissions are primarily due to boiler B26 not operating for five months in 2018, the retirement of other coal boilers at the facility, and slightly lower sulfur coal fired in boiler B26 in 2018 compared to 2011.

Both coal throughput and coal sulfur content were higher in 2018 than 2019 and 2020. Since Ahlstrom-Munksjo may not continue to shut down boiler B26 in summer months or use lower sulfur coal, to be conservative, 2018 was selected to be the base year to estimate the SO₂ emissions in 2025 and 2032 for boiler B26. The tpd emissions in 2025 and 2032 are assumed to be the same as the tpd emissions in 2018 (6.125 tpd), as shown in Table A4.1. It should be noted that the projected tpd SO₂ emissions for boiler B26 are less than the SO₂ potential-to-emit (PTE) of 7.43 tpd for boiler B26, which is calculated based on the revised SO₂ emission limit of 2.38 lbs/mmBtu for boiler B26 in permit 15-DMM-128-R1 issued on March 25, 2021 and effective December 31, 2021 (see Section 2.3 of the redesignation request).

The annual 2025 and 2032 emissions for boiler B26 are estimated using the actual 2018 annual emissions and assuming full-year operation. The mill has shut down coal boiler B26 for five consecutive months out of the year, and essentially replaced the steam demand with increased operation of the natural gas boilers each year after 2016. The annual 2025 and 2032 emissions are estimated by dividing the 2018 annual emissions by 7 months (i.e., tons/month) then multiplying by 12 months. The projected 2025 and 2032 annual SO₂ emissions from Ahlstrom-Munksjo are calculated to be 2,195 tons (see Table A4.1). It should be noted that the projected

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annual SO₂ emissions are less than the SO₂ PTE of 2,710 tons/year which is calculated using the revised SO₂ emission limits in permit 15-DMM-128-R1.

The projected SO₂ tpd and annual emissions are not intended to constitute daily or annual enforceable emission limitations on the Ahlstrom-Munksjo mill.

APPENDIX 5

Point Source Emissions for 2011, 2018, 2025 and 2032

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This appendix provides a list of point source SO₂ emissions in the partial Oneida County 1-hour SO₂ nonattainment area by facility identification number (FID) and facility name for 2011, 2018, 2025, and 2032. These emissions were used for the point source emission estimates contained in the Wisconsin Department of Natural Resources (WDNR) Redesignation Request and Maintenance Plan for the Partial Oneida County 2010 SO₂ NAAQS Nonattainment Area.

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Table A5.1. 2011 and 2018 Point Source SO₂ Emissions for the Partial Oneida County 2010 SO₂ Nonattainment Area

FID	FACILITY NAME	COUNTY	2011 (tpy)	2011 (tpd)¹	2018 (tpy)	2018 (tpd)¹
744008100	AHLSTROM-MUNSKJO NA SPECIALTY SOLUTIONS LLC	Oneida	2,422	8.17	1,280	6.13
744008430	PRINTPACK ENTERPRISE INC	Oneida	0.01	5.19E-05	Shutdown	Shutdown
744008430	AHLSTROM-MUNSKJO NA SPECIALTY SOLUTIONS LLC	Oneida	Not constructed	Not constructed	0.01	2.78E-05
744072230	ASCENSION SAINT MARYS HOSPITAL	Oneida	0.08	2.96E-04	Not Reported	Not Reported
744087080	LAKE STATES YEAST LLC	Oneida	0.02	5.77E-05	0.03	1.15E-04
744091370	PRINTPACK	Oneida	Not constructed	Not constructed	0.05	1.82E-04
744139660	KERRY INC	Oneida	7.99	3.07E-02	0.45	1.72E-03
TOTAL			2,431	8.20	1,281	6.13

¹ Tons per day (tpd) emissions were calculated by dividing annual emissions by 260 days, except for Ahlstrom-Munksjo NA Specialty Solutions (FID #744008100)(see Appendix 4 for details).

Table A5.2. 2025 and 2032 Point Source SO₂ Emissions for the Partial Oneida County 2010 SO₂ Nonattainment Area

FID	FACILITY NAME	NAICS	2025 GF ¹	2032 GF ¹	2025 (tpy)	2032 (tpy)	2025 (tpd) ⁴	2032 (tpd) ⁴
744008100	AHLSTROM-MUNSKJO NA SPECIALTY SOLUTIONS LLC ²	322121	-	-	2,195	2,195	6.13	6.13
744008430	PRINTPACK ENTERPRISE INC	326112	-	-	Shutdown	Shutdown	Shutdown	Shutdown
744008430	AHLSTROM-MUNSKJO NA SPECIALTY SOLUTIONS LLC	32222	1.06	1.11	0.01	0.01	2.95E-05	3.09E-05
744072230	ASCENSION SAINT MARYS HOSPITAL ³	622110	0.96	0.97	0.07	0.07	2.85E-04	2.87E-04
744087080	LAKE STATES YEAST LLC	311999	1.14	1.27	0.03	0.04	1.31E-04	1.46E-04
744091370	PRINTPACK	322220	1.06	1.11	0.05	0.05	1.93E-04	2.02E-04
744139660	KERRY INC	311942	1.14	1.27	0.51	0.57	1.95E-03	2.18E-03
Sub-total – Existing Sources					2,195	2,195	6.13	6.13
New & Modified Sources					0.59	0.59	2.27E-03	2.27E-03
Total (Existing + New and Modified Sources)					2,196	2,196	6.13	6.13

¹ GF = Growth factor (see Appendix 3 for how the growth factors were derived).

² The 2025 and 2032 emissions for this paper mill were estimated based on different methods. See Appendix 4 for details.

³ The 2018 emissions from this facility is not available. The 2018 emissions were held constant from 2011 emissions.

⁴ Tons per day (tpd) emissions, except the ones for Ahlstrom-Munksjo (FID #744008100), were calculated by dividing the annual emissions by 260 days.

APPENDIX 6

Area Source Emissions for 2011, 2018, 2025 and 2032

This appendix provides a list of area source SO₂ emissions in the partial Oneida County 1-hour SO₂ nonattainment area by source classification code (SCC) for 2011, 2018, 2025 and 2032. The sum of SO₂ emissions from the different SCCs were used for the area source SO₂ emission estimates included in the Wisconsin Department of Natural Resources (WDNR) Redesignation Request and Maintenance Plan for the Partial Oneida County 2010 SO₂ NAAQS Nonattainment Area.

SCCs are used to classify different types of activities that generate emissions. Each SCC represents a unique source category-specific process or function that emits air pollutants. For example, SCC 2102002000 represents a stationary industrial coal boiler. A searchable database of SCC codes can be found on this EPA website:

<https://sor-scc-api.epa.gov/sccwebservice/sccsearch/>.

Table A6.1. Tons per year (tpy) 2011, 2018, 2025 and 2032 Area Source SO₂ Emissions for the Partial Oneida County 2010 SO₂ Nonattainment Area

FIPS	SCC	Pollutant	2011(tpy)	2018(tpy)	2025(tpy)	2032(tpy)
55085	2102002000	SO ₂	0.000	0.000	0.000	0.000
55085	2102004001	SO ₂	0.019	0.019	0.019	0.019
55085	2102004002	SO ₂	0.008	0.008	0.009	0.009
55085	2102005000	SO ₂	0.000	0.000	0.000	0.000
55085	2102006000	SO ₂	0.000	0.000	0.000	0.000
55085	2102007000	SO ₂	0.000	0.000	0.000	0.000
55085	2102008000	SO ₂	0.633	0.625	0.630	0.673
55085	2102011000	SO ₂	0.000	0.000	0.000	0.000
55085	2103002000	SO ₂	0.000	0.000	0.000	0.000
55085	2103004001	SO ₂	0.026	0.027	0.029	0.027
55085	2103004002	SO ₂	0.005	0.005	0.006	0.006
55085	2103005000	SO ₂	0.000	0.000	0.000	0.000
55085	2103006000	SO ₂	0.075	0.075	0.075	0.072
55085	2103007000	SO ₂	0.003	0.003	0.003	0.003
55085	2103008000	SO ₂	0.097	0.096	0.095	0.094
55085	2103011000	SO ₂	0.008	0.008	0.008	0.008
55085	2104001000	SO ₂	0.000	0.000	0.000	0.000
55085	2104002000	SO ₂	0.000	0.000	0.000	0.000
55085	2104004000	SO ₂	0.897	0.888	0.878	0.869
55085	2104006000	SO ₂	0.139	0.137	0.136	0.134
55085	2104007000	SO ₂	0.055	0.055	0.054	0.054
55085	2104008100	SO ₂	0.047	0.050	0.053	0.055
55085	2104008210	SO ₂	0.035	0.031	0.027	0.025
55085	2104008220	SO ₂	0.015	0.017	0.018	0.018
55085	2104008230	SO ₂	0.004	0.005	0.006	0.006
55085	2104008310	SO ₂	0.214	0.192	0.170	0.158
55085	2104008320	SO ₂	0.176	0.201	0.212	0.215
55085	2104008330	SO ₂	0.118	0.136	0.148	0.152
55085	2104008400	SO ₂	0.057	0.085	0.101	0.108
55085	2104008510	SO ₂	0.847	0.522	0.172	0.021
55085	2104008610	SO ₂	0.950	0.975	0.958	0.940
55085	2104008700	SO ₂	0.204	0.217	0.227	0.231
55085	2104011000	SO ₂	0.015	0.015	0.015	0.014
55085	2610000100	SO ₂	0.023	0.023	0.022	0.022
55085	2610000400	SO ₂	0.050	0.049	0.049	0.048
55085	2610000500	SO ₂	1.207	1.194	1.182	1.169
55085	2610030000	SO ₂	0.766	0.758	0.750	0.742
55085	2810060100	SO ₃	0.011	0.011	0.012	0.012
Total (tpy)			6.705	6.426	6.062	5.906

Table A6.2. Tons per day (tpd) 2011, 2018, 2025 and 2032 Area Source SO₂ Emissions for the Partial Oneida County 2010 SO₂ Nonattainment Area

FIPS	SCC	Pollutant	2011(tpd)	2018(tpd)	2025(tpd)	2032(tpd)
55085	2102002000	SO ₂	0.000	0.000	0.000	0.000
55085	2102004001	SO ₂	0.000	0.000	0.000	0.000
55085	2102004002	SO ₂	0.000	0.000	0.000	0.000
55085	2102005000	SO ₂	0.000	0.000	0.000	0.000
55085	2102006000	SO ₂	0.000	0.000	0.000	0.000
55085	2102007000	SO ₂	0.000	0.000	0.000	0.000
55085	2102008000	SO ₂	0.002	0.002	0.002	0.002
55085	2102011000	SO ₂	0.000	0.000	0.000	0.000
55085	2103002000	SO ₂	0.000	0.000	0.000	0.000
55085	2103004001	SO ₂	0.000	0.000	0.000	0.000
55085	2103004002	SO ₂	0.000	0.000	0.000	0.000
55085	2103005000	SO ₂	0.000	0.000	0.000	0.000
55085	2103006000	SO ₂	0.000	0.000	0.000	0.000
55085	2103007000	SO ₂	0.000	0.000	0.000	0.000
55085	2103008000	SO ₂	0.000	0.000	0.000	0.000
55085	2103011000	SO ₂	0.000	0.000	0.000	0.000
55085	2104001000	SO ₂	0.000	0.000	0.000	0.000
55085	2104002000	SO ₂	0.000	0.000	0.000	0.000
55085	2104004000	SO ₂	0.002	0.002	0.002	0.002
55085	2104006000	SO ₂	0.000	0.000	0.000	0.000
55085	2104007000	SO ₂	0.000	0.000	0.000	0.000
55085	2104008100	SO ₂	0.000	0.000	0.000	0.000
55085	2104008210	SO ₂	0.000	0.000	0.000	0.000
55085	2104008220	SO ₂	0.000	0.000	0.000	0.000
55085	2104008230	SO ₂	0.000	0.000	0.000	0.000
55085	2104008310	SO ₂	0.001	0.001	0.000	0.000
55085	2104008320	SO ₂	0.000	0.001	0.001	0.001
55085	2104008330	SO ₂	0.000	0.000	0.000	0.000
55085	2104008400	SO ₂	0.000	0.000	0.000	0.000
55085	2104008510	SO ₂	0.002	0.001	0.000	0.000
55085	2104008610	SO ₂	0.003	0.003	0.003	0.003
55085	2104008700	SO ₂	0.001	0.001	0.001	0.001
55085	2104011000	SO ₂	0.000	0.000	0.000	0.000
55085	2610000100	SO ₂	0.000	0.000	0.000	0.000
55085	2610000400	SO ₂	0.000	0.000	0.000	0.000
55085	2610000500	SO ₂	0.003	0.003	0.003	0.003
55085	2610030000	SO ₂	0.002	0.002	0.002	0.002
55085	2810060100	SO ₃	0.000	0.000	0.000	0.000
Total (tpd)			0.018	0.018	0.017	0.016

APPENDIX 7

Nonroad Emissions for 2011, 2018, 2025 and 2032

This appendix provides detailed estimated nonroad emissions data for over 200 subcategories for the partial Oneida County 2010 sulfur dioxide (SO₂) nonattainment area, as well as for the entirety of Oneida County, for 2011, 2018, 2025 and 2032. The sum of SO₂ emissions from the different nonroad source types were used for the nonroad sector SO₂ tons per year (tpy) and tons per day (tpd) emission estimates included in the Wisconsin Department of Natural Resources (WDNR) Redesignation Request and Maintenance Plan for the Partial Oneida County 2010 SO₂ NAAQS Nonattainment Area.

These inventories are based on two primary sources of data:

MOVES model estimates

EPA's MOVES3.0.1 model was used for most source categories. The two exceptions (aircraft and rail locomotive) are described below. The MOVES3.0.1 model estimates countywide emissions. WDNR allocated emissions to the SO₂ nonattainment area by using the following surrogates:

- Land area (for the recreational, agriculture, and logging sectors)
- Population (for the construction, industrial, lawn and garden, and commercial sectors)
- Water area (for the pleasure craft sector)

EPA's National Emissions Inventory and modeling projections

Emissions for aircraft and rail locomotives were obtained from the EPA's 2014 National Emissions Inventory, version 2, and EPA's 2016 Emissions Modeling Platform, version 1. In addition to the 2016 base year, this platform includes the projection years of 2023 and 2028. WDNR calculated 2011 emissions by back-calculating from 2016 and 2014 emissions, calculated 2018 emissions by linearly interpolating between 2016 and 2023 emissions, calculated 2025 emissions by linearly interpolating between 2023 and 2028 emissions, and calculated 2032 emissions by linearly extrapolating from 2023 and 2028 emissions.

WDNR allocated emissions to the SO₂ nonattainment area as follows:

- Aircraft: airport location within the county.
- Rail locomotive: approximate percentage of track-miles in the nonattainment area.

No commercial marine emissions occur in Oneida County.

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**Table A7.1. 2011 Nonroad SO₂ Emissions: tons per year (tpy) and tons per day (tpd)
Oneida County and Partial Oneida County SO₂ Nonattainment Area**

SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2011 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2011 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.004158	0.000011	19.00%	land area	0.000790	0.000002
2260001020	Recreational	2-Stroke Snowmobiles	MOVES	0.085974	0.000236	19.00%	land area	0.016335	0.000045
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.001505	0.000004	19.00%	land area	0.000286	0.000001
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.001285	0.000004	19.00%	land area	0.000244	0.000001
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.000132	0.000000	50.07%	population	0.000066	0.000000
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.000009	0.000000	50.07%	population	0.000004	0.000000
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.000010	0.000000	50.07%	population	0.000005	0.000000
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.000000	0.000000	50.07%	population	0.000000	0.000000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.000341	0.000001	50.07%	population	0.000171	0.000000
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.000002	0.000000	50.07%	population	0.000001	0.000000
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.000004	0.000000	50.07%	population	0.000002	0.000000
2260003040	Industrial	2-Stroke Other General Industrial	MOVES	0.000000	0.000000	50.07%	population	0.000000	0.000000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.000039	0.000000	50.07%	population	0.000020	0.000000
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.000102	0.000000	50.07%	population	0.000051	0.000000
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.000526	0.000001	50.07%	population	0.000263	0.000001
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.001098	0.000003	50.07%	population	0.000550	0.000002
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.000730	0.000002	50.07%	population	0.000366	0.000001
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.000962	0.000003	50.07%	population	0.000482	0.000001
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.000470	0.000001	50.07%	population	0.000235	0.000001
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums	MOVES	0.000897	0.000002	50.07%	population	0.000449	0.000001
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.000231	0.000001	50.07%	population	0.000115	0.000000
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.000114	0.000000	50.07%	population	0.000057	0.000000
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.000000	0.000000	50.07%	population	0.000000	0.000000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.000002	0.000000	19.00%	land area	0.000000	0.000000
2260006005	Commercial	2-Stroke Light Commercial Generator	MOVES	0.000029	0.000000	50.07%	population	0.000015	0.000000
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.000196	0.000001	50.07%	population	0.000098	0.000000
2260006015	Commercial	2-Stroke Light Commercial Air	MOVES	0.000000	0.000000	50.07%	population	0.000000	0.000000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.000001	0.000000	50.07%	population	0.000001	0.000000
2260007005	Logging	2-Stroke Logging Equipment Chain	MOVES	0.000242	0.000001	19.00%	land area	0.000046	0.000000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.002167	0.000006	19.00%	land area	0.000412	0.000001
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.020551	0.000056	19.00%	land area	0.003905	0.000011
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.009134	0.000025	19.00%	land area	0.001735	0.000005
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.001287	0.000004	19.00%	land area	0.000245	0.000001
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.000120	0.000000	50.07%	population	0.000060	0.000000
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.000001	0.000000	50.07%	population	0.000000	0.000000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.000217	0.000001	50.07%	population	0.000109	0.000000

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				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2265002015	Construction	4-Stroke Rollers	MOVES	0.000209	0.000001	50.07%	population	0.000105	0.000000
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.000416	0.000001	50.07%	population	0.000208	0.000001
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.000175	0.000000	50.07%	population	0.000087	0.000000
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.000009	0.000000	50.07%	population	0.000004	0.000000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.000371	0.000001	50.07%	population	0.000186	0.000001
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.000133	0.000000	50.07%	population	0.000066	0.000000
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.000765	0.000002	50.07%	population	0.000383	0.000001
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.000372	0.000001	50.07%	population	0.000186	0.000001
2265002045	Construction	4-Stroke Cranes	MOVES	0.000035	0.000000	50.07%	population	0.000017	0.000000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.000050	0.000000	50.07%	population	0.000025	0.000000
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.000050	0.000000	50.07%	population	0.000025	0.000000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.000111	0.000000	50.07%	population	0.000056	0.000000
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.000251	0.000001	50.07%	population	0.000126	0.000000
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.000192	0.000001	50.07%	population	0.000096	0.000000
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.000060	0.000000	50.07%	population	0.000030	0.000000
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.000051	0.000000	50.07%	population	0.000025	0.000000
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.000482	0.000001	50.07%	population	0.000241	0.000001
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.001778	0.000005	50.07%	population	0.000890	0.000002
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.000383	0.000001	50.07%	population	0.000192	0.000001
2265003040	Industrial	4-Stroke Other General Industrial	MOVES	0.000696	0.000002	50.07%	population	0.000348	0.000001
2265003050	Industrial	4-Stroke Other Material Handling	MOVES	0.000034	0.000000	50.07%	population	0.000017	0.000000
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.000016	0.000000	50.07%	population	0.000008	0.000000
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.000153	0.000000	50.07%	population	0.000077	0.000000
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.006444	0.000018	50.07%	population	0.003222	0.000009
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.002733	0.000007	50.07%	population	0.001368	0.000004
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.000558	0.000002	50.07%	population	0.000280	0.000001
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.001441	0.000004	50.07%	population	0.000722	0.000002
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters	MOVES	0.000036	0.000000	50.07%	population	0.000018	0.000000
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters	MOVES	0.000064	0.000000	50.07%	population	0.000032	0.000000
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.000068	0.000000	50.07%	population	0.000034	0.000000
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Com.)	MOVES	0.002709	0.000007	50.07%	population	0.001356	0.000004
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.000758	0.000002	50.07%	population	0.000380	0.000001
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.000374	0.000001	50.07%	population	0.000187	0.000001
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.001364	0.000004	50.07%	population	0.000683	0.000002
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Com.)	MOVES	0.000320	0.000001	50.07%	population	0.000160	0.000000
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.000369	0.000001	50.07%	population	0.000185	0.000001
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP	MOVES	0.000166	0.000000	50.07%	population	0.000083	0.000000
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Res.)	MOVES	0.018293	0.000050	50.07%	population	0.009159	0.000025
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Com.)	MOVES	0.004342	0.000012	50.07%	population	0.002174	0.000006

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2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders	MOVES	0.000732	0.000002	50.07%	population	0.000367	0.000001
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment	MOVES	0.013940	0.000038	50.07%	population	0.006980	0.000019
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.000646	0.000002	50.07%	population	0.000324	0.000001
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.000429	0.000001	50.07%	population	0.000215	0.000001
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.000006	0.000000	19.00%	land area	0.000001	0.000000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.000024	0.000000	19.00%	land area	0.000004	0.000000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.000026	0.000000	19.00%	land area	0.000005	0.000000
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.000005	0.000000	19.00%	land area	0.000001	0.000000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.000064	0.000000	19.00%	land area	0.000012	0.000000
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.000188	0.000001	19.00%	land area	0.000036	0.000000
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.000041	0.000000	19.00%	land area	0.000008	0.000000
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.000054	0.000000	19.00%	land area	0.000010	0.000000
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.000040	0.000000	19.00%	land area	0.000008	0.000000
2265006005	Commercial	4-Stroke Light Commercial Generator	MOVES	0.006081	0.000017	50.07%	population	0.003045	0.000008
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.001503	0.000004	50.07%	population	0.000753	0.000002
2265006015	Commercial	4-Stroke Light Commercial Air	MOVES	0.000806	0.000002	50.07%	population	0.000404	0.000001
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.001733	0.000005	50.07%	population	0.000868	0.000002
2265006030	Commercial	4-Stroke Light Commercial Pressure	MOVES	0.002688	0.000007	50.07%	population	0.001346	0.000004
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.000127	0.000000	50.07%	population	0.000064	0.000000
2265007010	Logging	4-Stroke Logging Equipment Shredders	MOVES	0.001268	0.000003	19.00%	land area	0.000241	0.000001
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.000008	0.000000	19.00%	land area	0.000002	0.000000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.000024	0.000000	19.00%	land area	0.000005	0.000000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.000005	0.000000	50.07%	population	0.000003	0.000000
2267002015	Construction	LPG Rollers	MOVES	0.000008	0.000000	50.07%	population	0.000004	0.000000
2267002021	Construction	LPG Paving Equipment	MOVES	0.000002	0.000000	50.07%	population	0.000001	0.000000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.000001	0.000000	50.07%	population	0.000000	0.000000
2267002030	Construction	LPG Trenchers	MOVES	0.000016	0.000000	50.07%	population	0.000008	0.000000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.000007	0.000000	50.07%	population	0.000004	0.000000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.000014	0.000000	50.07%	population	0.000007	0.000000
2267002045	Construction	LPG Cranes	MOVES	0.000007	0.000000	50.07%	population	0.000003	0.000000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.000001	0.000000	50.07%	population	0.000001	0.000000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.000011	0.000000	50.07%	population	0.000005	0.000000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.000024	0.000000	50.07%	population	0.000012	0.000000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.000002	0.000000	50.07%	population	0.000001	0.000000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.000024	0.000000	50.07%	population	0.000012	0.000000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.000010	0.000000	50.07%	population	0.000005	0.000000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.000072	0.000000	50.07%	population	0.000036	0.000000
2267003020	Industrial	LPG Forklifts	MOVES	0.006252	0.000017	50.07%	population	0.003130	0.000009

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2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.000047	0.000000	50.07%	population	0.000024	0.000000
2267003040	Industrial	LPG Other General Industrial	MOVES	0.000015	0.000000	50.07%	population	0.000007	0.000000
2267003050	Industrial	LPG Other Material Handling	MOVES	0.000004	0.000000	50.07%	population	0.000002	0.000000
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.000028	0.000000	50.07%	population	0.000014	0.000000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders	MOVES	0.000066	0.000000	50.07%	population	0.000033	0.000000
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.000165	0.000000	50.07%	population	0.000083	0.000000
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.000037	0.000000	50.07%	population	0.000018	0.000000
2267006015	Commercial	LPG Light Commercial Air	MOVES	0.000043	0.000000	50.07%	population	0.000021	0.000000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.000053	0.000000	50.07%	population	0.000027	0.000000
2267006030	Commercial	LPG Light Commercial Pressure	MOVES	0.000001	0.000000	50.07%	population	0.000000	0.000000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.000001	0.000000	50.07%	population	0.000000	0.000000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.000000	0.000000	50.07%	population	0.000000	0.000000
2268003020	Industrial	CNG Forklifts	MOVES	0.000455	0.000001	50.07%	population	0.000228	0.000001
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.000001	0.000000	50.07%	population	0.000000	0.000000
2268003040	Industrial	CNG Other General Industrial	MOVES	0.000000	0.000000	50.07%	population	0.000000	0.000000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.000001	0.000000	50.07%	population	0.000001	0.000000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.000002	0.000000	50.07%	population	0.000001	0.000000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.000014	0.000000	19.00%	land area	0.000003	0.000000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.000055	0.000000	50.07%	population	0.000028	0.000000
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.000003	0.000000	50.07%	population	0.000001	0.000000
2268006015	Commercial	CNG Light Commercial Air	MOVES	0.000004	0.000000	50.07%	population	0.000002	0.000000
2268006020	Commercial	CNG Light Commercial Gas	MOVES	0.000134	0.000000	50.07%	population	0.000067	0.000000
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.001419	0.000004	19.00%	land area	0.000270	0.000001
2270002003	Construction	Diesel Pavers	MOVES	0.002768	0.000008	50.07%	population	0.001386	0.000004
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.000005	0.000000	50.07%	population	0.000002	0.000000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.000079	0.000000	50.07%	population	0.000039	0.000000
2270002015	Construction	Diesel Rollers	MOVES	0.007054	0.000019	50.07%	population	0.003532	0.000010
2270002018	Construction	Diesel Scrapers	MOVES	0.008061	0.000022	50.07%	population	0.004036	0.000011
2270002021	Construction	Diesel Paving Equipment	MOVES	0.000449	0.000001	50.07%	population	0.000225	0.000001
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.000305	0.000001	50.07%	population	0.000153	0.000000
2270002027	Construction	Diesel Signal Boards	MOVES	0.000794	0.000002	50.07%	population	0.000397	0.000001
2270002030	Construction	Diesel Trenchers	MOVES	0.003627	0.000010	50.07%	population	0.001816	0.000005
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.003639	0.000010	50.07%	population	0.001822	0.000005
2270002036	Construction	Diesel Excavators	MOVES	0.027450	0.000075	50.07%	population	0.013744	0.000038
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.000250	0.000001	50.07%	population	0.000125	0.000000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.000143	0.000000	50.07%	population	0.000072	0.000000

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2270002045	Construction	Diesel Cranes	MOVES	0.006939	0.000019	50.07%	population	0.003474	0.000010
2270002048	Construction	Diesel Graders	MOVES	0.006915	0.000019	50.07%	population	0.003462	0.000009
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.023360	0.000064	50.07%	population	0.011696	0.000032
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.001267	0.000003	50.07%	population	0.000634	0.000002
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.009529	0.000026	50.07%	population	0.004771	0.000013
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.033213	0.000091	50.07%	population	0.016630	0.000046
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.022945	0.000063	50.07%	population	0.011489	0.000031
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.028861	0.000079	50.07%	population	0.014451	0.000040
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.016120	0.000044	50.07%	population	0.008071	0.000022
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.003364	0.000009	50.07%	population	0.001685	0.000005
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.000050	0.000000	50.07%	population	0.000025	0.000000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.003481	0.000010	50.07%	population	0.001743	0.000005
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.000474	0.000001	50.07%	population	0.000237	0.000001
2270003020	Industrial	Diesel Forklifts	MOVES	0.006670	0.000018	50.07%	population	0.003340	0.000009
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.002943	0.000008	50.07%	population	0.001474	0.000004
2270003040	Industrial	Diesel Other General Industrial	MOVES	0.003000	0.000008	50.07%	population	0.001502	0.000004
2270003050	Industrial	Diesel Other Material Handling	MOVES	0.000117	0.000000	50.07%	population	0.000058	0.000000
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.010170	0.000028	50.07%	population	0.005092	0.000014
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.004203	0.000012	50.07%	population	0.002104	0.000006
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums	MOVES	0.000000	0.000000	50.07%	population	0.000000	0.000000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.000030	0.000000	50.07%	population	0.000015	0.000000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.002062	0.000006	50.07%	population	0.001032	0.000003
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors	MOVES	0.000426	0.000001	50.07%	population	0.000213	0.000001
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders	MOVES	0.002790	0.000008	50.07%	population	0.001397	0.000004
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Com.)	MOVES	0.000326	0.000001	50.07%	population	0.000163	0.000000
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equip. (Com.)	MOVES	0.000008	0.000000	50.07%	population	0.000004	0.000000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.012957	0.000035	19.00%	land area	0.002462	0.000007
2270005020	Agriculture	Diesel Combines	MOVES	0.001408	0.000004	19.00%	land area	0.000268	0.000001
2270005025	Agriculture	Diesel Balers	MOVES	0.000008	0.000000	19.00%	land area	0.000001	0.000000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.000001	0.000000	19.00%	land area	0.000000	0.000000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.000119	0.000000	19.00%	land area	0.000023	0.000000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2270005045	Agriculture	Diesel Swathers	MOVES	0.000110	0.000000	19.00%	land area	0.000021	0.000000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.000286	0.000001	19.00%	land area	0.000054	0.000000
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.000152	0.000000	19.00%	land area	0.000029	0.000000
2270006005	Commercial	Diesel Light Commercial Generator	MOVES	0.004817	0.000013	50.07%	population	0.002412	0.000007
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.001135	0.000003	50.07%	population	0.000568	0.000002
2270006015	Commercial	Diesel Light Commercial Air	MOVES	0.003135	0.000009	50.07%	population	0.001570	0.000004

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2011 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2011 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.001608	0.000004	50.07%	population	0.000805	0.000002
2270006030	Commercial	Diesel Light Commercial Pressure	MOVES	0.000154	0.000000	50.07%	population	0.000077	0.000000
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.000135	0.000000	50.07%	population	0.000068	0.000000
2270007015	Logging	Diesel Logging Equip	MOVES	0.028167	0.000077	19.00%	land area	0.005352	0.000015
2275000000	Aircraft	All Aircraft and Airport	EPA	0.735879	0.002016	99.00%	airport location	0.728520	0.001996
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.188604	0.000517	20.00%	water area	0.037721	0.000103
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.080387	0.000220	20.00%	water area	0.016077	0.000044
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.096251	0.000264	20.00%	water area	0.019250	0.000053
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.495042	0.001356	20.00%	water area	0.099008	0.000271
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.002605	0.000007	20.00%	water area	0.000521	0.000001
2285002000	Railroad	Diesel Line Haul Locomotives	EPA	0.002177	0.000006	31.00%	track miles	0.000675	0.000002
ALL (Total)	ALL (Total)	ALL (Total)		2.117829	0.005802	52.27%		1.106920	0.003033

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**Table A7.2. 2018 Nonroad SO₂ Emissions: tons per year (tpy) and tons per day (tpd)
Oneida County and Partial Oneida County SO₂ Nonattainment Area**

SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2018 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2018 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.002734	0.000007	19.00%	land area	0.000519	0.000001
2260001020	Recreational	2-Stroke Snowmobiles	MOVES	0.045366	0.000124	19.00%	land area	0.008620	0.000024
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.001205	0.000003	19.00%	land area	0.000229	0.000001
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.000757	0.000002	19.00%	land area	0.000144	0.000000
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.000110	0.000000	49.53%	population	0.000054	0.000000
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.000007	0.000000	49.53%	population	0.000004	0.000000
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.000009	0.000000	49.53%	population	0.000004	0.000000
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.000000	0.000000	49.53%	population	0.000000	0.000000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.000284	0.000001	49.53%	population	0.000141	0.000000
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.000002	0.000000	49.53%	population	0.000001	0.000000
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.000003	0.000000	49.53%	population	0.000001	0.000000
2260003040	Industrial	2-Stroke Other General Industrial	MOVES	0.000000	0.000000	49.53%	population	0.000000	0.000000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.000023	0.000000	49.53%	population	0.000012	0.000000
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.000063	0.000000	49.53%	population	0.000031	0.000000
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.000304	0.000001	49.53%	population	0.000150	0.000000
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.000656	0.000002	49.53%	population	0.000325	0.000001
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.000433	0.000001	49.53%	population	0.000214	0.000001
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.000590	0.000002	49.53%	population	0.000292	0.000001
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.000278	0.000001	49.53%	population	0.000138	0.000000
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums	MOVES	0.000550	0.000002	49.53%	population	0.000272	0.000001
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.000126	0.000000	49.53%	population	0.000062	0.000000
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.000064	0.000000	49.53%	population	0.000032	0.000000
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.000000	0.000000	49.53%	population	0.000000	0.000000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.000001	0.000000	19.00%	land area	0.000000	0.000000
2260006005	Commercial	2-Stroke Light Commercial Generator	MOVES	0.000020	0.000000	49.53%	population	0.000010	0.000000
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.000131	0.000000	49.53%	population	0.000065	0.000000
2260006015	Commercial	2-Stroke Light Commercial Air	MOVES	0.000000	0.000000	49.53%	population	0.000000	0.000000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.000001	0.000000	49.53%	population	0.000000	0.000000
2260007005	Logging	2-Stroke Logging Equipment Chain	MOVES	0.000167	0.000000	19.00%	land area	0.000032	0.000000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.001281	0.000004	19.00%	land area	0.000243	0.000001
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.012189	0.000033	19.00%	land area	0.002316	0.000006
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.005395	0.000015	19.00%	land area	0.001025	0.000003
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.000721	0.000002	19.00%	land area	0.000137	0.000000
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.000098	0.000000	49.53%	population	0.000049	0.000000
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.000001	0.000000	49.53%	population	0.000000	0.000000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.000185	0.000001	49.53%	population	0.000091	0.000000

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2018 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2018 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2265002015	Construction	4-Stroke Rollers	MOVES	0.000174	0.000000	49.53%	population	0.000086	0.000000
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.000347	0.000001	49.53%	population	0.000172	0.000000
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.000146	0.000000	49.53%	population	0.000072	0.000000
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.000008	0.000000	49.53%	population	0.000004	0.000000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.000305	0.000001	49.53%	population	0.000151	0.000000
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.000105	0.000000	49.53%	population	0.000052	0.000000
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.000637	0.000002	49.53%	population	0.000316	0.000001
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.000306	0.000001	49.53%	population	0.000151	0.000000
2265002045	Construction	4-Stroke Cranes	MOVES	0.000023	0.000000	49.53%	population	0.000012	0.000000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.000041	0.000000	49.53%	population	0.000020	0.000000
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.000036	0.000000	49.53%	population	0.000018	0.000000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.000087	0.000000	49.53%	population	0.000043	0.000000
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.000209	0.000001	49.53%	population	0.000104	0.000000
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.000142	0.000000	49.53%	population	0.000071	0.000000
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.000047	0.000000	49.53%	population	0.000023	0.000000
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.000033	0.000000	49.53%	population	0.000016	0.000000
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.000305	0.000001	49.53%	population	0.000151	0.000000
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.001143	0.000003	49.53%	population	0.000566	0.000002
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.000253	0.000001	49.53%	population	0.000125	0.000000
2265003040	Industrial	4-Stroke Other General Industrial	MOVES	0.000471	0.000001	49.53%	population	0.000233	0.000001
2265003050	Industrial	4-Stroke Other Material Handling	MOVES	0.000022	0.000000	49.53%	population	0.000011	0.000000
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.000011	0.000000	49.53%	population	0.000005	0.000000
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.000101	0.000000	49.53%	population	0.000050	0.000000
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.003958	0.000011	49.53%	population	0.001960	0.000005
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.001731	0.000005	49.53%	population	0.000857	0.000002
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.000342	0.000001	49.53%	population	0.000170	0.000000
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.000917	0.000003	49.53%	population	0.000454	0.000001
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters	MOVES	0.000022	0.000000	49.53%	population	0.000011	0.000000
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters	MOVES	0.000040	0.000000	49.53%	population	0.000020	0.000000
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.000042	0.000000	49.53%	population	0.000021	0.000000
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Com.)	MOVES	0.001644	0.000005	49.53%	population	0.000815	0.000002
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.000414	0.000001	49.53%	population	0.000205	0.000001
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.000211	0.000001	49.53%	population	0.000105	0.000000
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.000806	0.000002	49.53%	population	0.000399	0.000001
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Com.)	MOVES	0.000196	0.000001	49.53%	population	0.000097	0.000000
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.000222	0.000001	49.53%	population	0.000110	0.000000
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP	MOVES	0.000106	0.000000	49.53%	population	0.000052	0.000000
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Res.)	MOVES	0.010807	0.000030	49.53%	population	0.005353	0.000015
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Com.)	MOVES	0.002665	0.000007	49.53%	population	0.001320	0.000004

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2018 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2018 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders	MOVES	0.000445	0.000001	49.53%	population	0.000220	0.000001
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment	MOVES	0.008604	0.000024	49.53%	population	0.004262	0.000012
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.000384	0.000001	49.53%	population	0.000190	0.000001
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.000264	0.000001	49.53%	population	0.000131	0.000000
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.000003	0.000000	19.00%	land area	0.000001	0.000000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.000014	0.000000	19.00%	land area	0.000003	0.000000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.000011	0.000000	19.00%	land area	0.000002	0.000000
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.000003	0.000000	19.00%	land area	0.000001	0.000000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.000033	0.000000	19.00%	land area	0.000006	0.000000
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.000081	0.000000	19.00%	land area	0.000015	0.000000
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.000018	0.000000	19.00%	land area	0.000003	0.000000
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.000025	0.000000	19.00%	land area	0.000005	0.000000
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.000023	0.000000	19.00%	land area	0.000004	0.000000
2265006005	Commercial	4-Stroke Light Commercial Generator	MOVES	0.004043	0.000011	49.53%	population	0.002002	0.000005
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.001010	0.000003	49.53%	population	0.000500	0.000001
2265006015	Commercial	4-Stroke Light Commercial Air	MOVES	0.000535	0.000001	49.53%	population	0.000265	0.000001
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.001150	0.000003	49.53%	population	0.000569	0.000002
2265006030	Commercial	4-Stroke Light Commercial Pressure	MOVES	0.001817	0.000005	49.53%	population	0.000900	0.000002
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.000085	0.000000	49.53%	population	0.000042	0.000000
2265007010	Logging	4-Stroke Logging Equipment Shredders	MOVES	0.000492	0.000001	19.00%	land area	0.000094	0.000000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.000006	0.000000	19.00%	land area	0.000001	0.000000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.000023	0.000000	19.00%	land area	0.000004	0.000000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.000007	0.000000	49.53%	population	0.000003	0.000000
2267002015	Construction	LPG Rollers	MOVES	0.000011	0.000000	49.53%	population	0.000006	0.000000
2267002021	Construction	LPG Paving Equipment	MOVES	0.000002	0.000000	49.53%	population	0.000001	0.000000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.000001	0.000000	49.53%	population	0.000001	0.000000
2267002030	Construction	LPG Trenchers	MOVES	0.000021	0.000000	49.53%	population	0.000010	0.000000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.000007	0.000000	49.53%	population	0.000004	0.000000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.000019	0.000000	49.53%	population	0.000010	0.000000
2267002045	Construction	LPG Cranes	MOVES	0.000007	0.000000	49.53%	population	0.000004	0.000000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.000001	0.000000	49.53%	population	0.000001	0.000000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.000013	0.000000	49.53%	population	0.000007	0.000000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.000032	0.000000	49.53%	population	0.000016	0.000000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.000003	0.000000	49.53%	population	0.000002	0.000000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.000028	0.000000	49.53%	population	0.000014	0.000000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.000011	0.000000	49.53%	population	0.000006	0.000000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.000077	0.000000	49.53%	population	0.000038	0.000000
2267003020	Industrial	LPG Forklifts	MOVES	0.006938	0.000019	49.53%	population	0.003436	0.000009

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				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.000053	0.000000	49.53%	population	0.000026	0.000000
2267003040	Industrial	LPG Other General Industrial	MOVES	0.000016	0.000000	49.53%	population	0.000008	0.000000
2267003050	Industrial	LPG Other Material Handling	MOVES	0.000004	0.000000	49.53%	population	0.000002	0.000000
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.000032	0.000000	49.53%	population	0.000016	0.000000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders	MOVES	0.000067	0.000000	49.53%	population	0.000033	0.000000
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.000179	0.000000	49.53%	population	0.000088	0.000000
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.000040	0.000000	49.53%	population	0.000020	0.000000
2267006015	Commercial	LPG Light Commercial Air	MOVES	0.000046	0.000000	49.53%	population	0.000023	0.000000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.000058	0.000000	49.53%	population	0.000029	0.000000
2267006030	Commercial	LPG Light Commercial Pressure	MOVES	0.000001	0.000000	49.53%	population	0.000000	0.000000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.000001	0.000000	49.53%	population	0.000000	0.000000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.000000	0.000000	49.53%	population	0.000000	0.000000
2268003020	Industrial	CNG Forklifts	MOVES	0.000531	0.000001	49.53%	population	0.000263	0.000001
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.000001	0.000000	49.53%	population	0.000000	0.000000
2268003040	Industrial	CNG Other General Industrial	MOVES	0.000000	0.000000	49.53%	population	0.000000	0.000000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.000001	0.000000	49.53%	population	0.000001	0.000000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.000002	0.000000	49.53%	population	0.000001	0.000000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.000014	0.000000	19.00%	land area	0.000003	0.000000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.000062	0.000000	49.53%	population	0.000031	0.000000
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.000003	0.000000	49.53%	population	0.000002	0.000000
2268006015	Commercial	CNG Light Commercial Air	MOVES	0.000004	0.000000	49.53%	population	0.000002	0.000000
2268006020	Commercial	CNG Light Commercial Gas	MOVES	0.000156	0.000000	49.53%	population	0.000077	0.000000
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.000255	0.000001	19.00%	land area	0.000049	0.000000
2270002003	Construction	Diesel Pavers	MOVES	0.000598	0.000002	49.53%	population	0.000296	0.000001
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.000001	0.000000	49.53%	population	0.000001	0.000000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.000020	0.000000	49.53%	population	0.000010	0.000000
2270002015	Construction	Diesel Rollers	MOVES	0.001518	0.000004	49.53%	population	0.000752	0.000002
2270002018	Construction	Diesel Scrapers	MOVES	0.001642	0.000004	49.53%	population	0.000813	0.000002
2270002021	Construction	Diesel Paving Equipment	MOVES	0.000093	0.000000	49.53%	population	0.000046	0.000000
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.000062	0.000000	49.53%	population	0.000031	0.000000
2270002027	Construction	Diesel Signal Boards	MOVES	0.000197	0.000001	49.53%	population	0.000098	0.000000
2270002030	Construction	Diesel Trenchers	MOVES	0.000744	0.000002	49.53%	population	0.000369	0.000001
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.000705	0.000002	49.53%	population	0.000349	0.000001
2270002036	Construction	Diesel Excavators	MOVES	0.005942	0.000016	49.53%	population	0.002943	0.000008
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.000053	0.000000	49.53%	population	0.000026	0.000000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.000028	0.000000	49.53%	population	0.000014	0.000000

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2018 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2018 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2270002045	Construction	Diesel Cranes	MOVES	0.001436	0.000004	49.53%	population	0.000711	0.000002
2270002048	Construction	Diesel Graders	MOVES	0.001493	0.000004	49.53%	population	0.000740	0.000002
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.005123	0.000014	49.53%	population	0.002537	0.000007
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.000260	0.000001	49.53%	population	0.000129	0.000000
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.001981	0.000005	49.53%	population	0.000981	0.000003
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.006855	0.000019	49.53%	population	0.003395	0.000009
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.004517	0.000012	49.53%	population	0.002237	0.000006
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.006066	0.000017	49.53%	population	0.003005	0.000008
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.003153	0.000009	49.53%	population	0.001562	0.000004
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.000679	0.000002	49.53%	population	0.000336	0.000001
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.000010	0.000000	49.53%	population	0.000005	0.000000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.000689	0.000002	49.53%	population	0.000341	0.000001
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.000095	0.000000	49.53%	population	0.000047	0.000000
2270003020	Industrial	Diesel Forklifts	MOVES	0.001129	0.000003	49.53%	population	0.000559	0.000002
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.000524	0.000001	49.53%	population	0.000259	0.000001
2270003040	Industrial	Diesel Other General Industrial	MOVES	0.000560	0.000002	49.53%	population	0.000277	0.000001
2270003050	Industrial	Diesel Other Material Handling	MOVES	0.000023	0.000000	49.53%	population	0.000011	0.000000
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.001817	0.000005	49.53%	population	0.000900	0.000002
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.000722	0.000002	49.53%	population	0.000357	0.000001
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums	MOVES	0.000000	0.000000	49.53%	population	0.000000	0.000000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.000006	0.000000	49.53%	population	0.000003	0.000000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.000380	0.000001	49.53%	population	0.000188	0.000001
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors	MOVES	0.000082	0.000000	49.53%	population	0.000041	0.000000
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders	MOVES	0.000512	0.000001	49.53%	population	0.000254	0.000001
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Com.)	MOVES	0.000054	0.000000	49.53%	population	0.000027	0.000000
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equip. (Com.)	MOVES	0.000001	0.000000	49.53%	population	0.000001	0.000000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.001781	0.000005	19.00%	land area	0.000338	0.000001
2270005020	Agriculture	Diesel Combines	MOVES	0.000196	0.000001	19.00%	land area	0.000037	0.000000
2270005025	Agriculture	Diesel Balers	MOVES	0.000001	0.000000	19.00%	land area	0.000000	0.000000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.000017	0.000000	19.00%	land area	0.000003	0.000000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2270005045	Agriculture	Diesel Swathers	MOVES	0.000015	0.000000	19.00%	land area	0.000003	0.000000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.000038	0.000000	19.00%	land area	0.000007	0.000000
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.000023	0.000000	19.00%	land area	0.000004	0.000000
2270006005	Commercial	Diesel Light Commercial Generator	MOVES	0.000972	0.000003	49.53%	population	0.000481	0.000001
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.000229	0.000001	49.53%	population	0.000113	0.000000
2270006015	Commercial	Diesel Light Commercial Air	MOVES	0.000596	0.000002	49.53%	population	0.000295	0.000001

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2018 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2018 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.000326	0.000001	49.53%	population	0.000162	0.000000
2270006030	Commercial	Diesel Light Commercial Pressure	MOVES	0.000031	0.000000	49.53%	population	0.000015	0.000000
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.000026	0.000000	49.53%	population	0.000013	0.000000
2270007015	Logging	Diesel Logging Equip	MOVES	0.004794	0.000013	19.00%	land area	0.000911	0.000002
2275000000	Aircraft	All Aircraft and Airport	EPA	1.062571	0.002911	99.00%	airport location	1.051945	0.002882
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.115805	0.000317	20.00%	water area	0.023161	0.000063
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.048976	0.000134	20.00%	water area	0.009795	0.000027
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.056949	0.000156	20.00%	water area	0.011390	0.000031
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.034579	0.000095	20.00%	water area	0.006916	0.000019
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.000182	0.000000	20.00%	water area	0.000036	0.000000
2285002000	Railroad	Diesel Line Haul Locomotives	EPA	0.000799	0.000002	31.00%	track miles	0.000248	0.000001
ALL (Total)	ALL (Total)	ALL (Total)		1.509283	0.004135	77.76%		1.173594	0.003215

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**Table A7.3. 2025 Nonroad SO₂ Emissions: tons per year (tpy) and tons per day (tpd)
Oneida County and Partial Oneida County SO₂ Nonattainment Area**

SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2025 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2025 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.001587	0.000004	19.00%	land area	0.000302	0.000001
2260001020	Recreational	2-Stroke Snowmobiles	MOVES	0.026785	0.000073	19.00%	land area	0.005089	0.000014
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.000748	0.000002	19.00%	land area	0.000142	0.000000
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.000427	0.000001	19.00%	land area	0.000081	0.000000
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.000069	0.000000	49.02%	population	0.000034	0.000000
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.000005	0.000000	49.02%	population	0.000002	0.000000
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.000005	0.000000	49.02%	population	0.000003	0.000000
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.000000	0.000000	49.02%	population	0.000000	0.000000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.000179	0.000000	49.02%	population	0.000088	0.000000
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.000001	0.000000	49.02%	population	0.000001	0.000000
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.000002	0.000000	49.02%	population	0.000001	0.000000
2260003040	Industrial	2-Stroke Other General Industrial	MOVES	0.000000	0.000000	49.02%	population	0.000000	0.000000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.000013	0.000000	49.02%	population	0.000006	0.000000
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.000035	0.000000	49.02%	population	0.000017	0.000000
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.000175	0.000000	49.02%	population	0.000086	0.000000
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.000378	0.000001	49.02%	population	0.000185	0.000001
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.000243	0.000001	49.02%	population	0.000119	0.000000
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.000331	0.000001	49.02%	population	0.000162	0.000000
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.000156	0.000000	49.02%	population	0.000077	0.000000
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums	MOVES	0.000309	0.000001	49.02%	population	0.000151	0.000000
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.000077	0.000000	49.02%	population	0.000038	0.000000
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.000039	0.000000	49.02%	population	0.000019	0.000000
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.000000	0.000000	49.02%	population	0.000000	0.000000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.000001	0.000000	19.00%	land area	0.000000	0.000000
2260006005	Commercial	2-Stroke Light Commercial Generator	MOVES	0.000013	0.000000	49.02%	population	0.000006	0.000000
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.000085	0.000000	49.02%	population	0.000042	0.000000
2260006015	Commercial	2-Stroke Light Commercial Air	MOVES	0.000000	0.000000	49.02%	population	0.000000	0.000000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.000001	0.000000	49.02%	population	0.000000	0.000000
2260007005	Logging	2-Stroke Logging Equipment Chain	MOVES	0.000093	0.000000	19.00%	land area	0.000018	0.000000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.000723	0.000002	19.00%	land area	0.000137	0.000000
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.006880	0.000019	19.00%	land area	0.001307	0.000004
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.003040	0.000008	19.00%	land area	0.000578	0.000002
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.000395	0.000001	19.00%	land area	0.000075	0.000000
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.000062	0.000000	49.02%	population	0.000030	0.000000
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.000000	0.000000	49.02%	population	0.000000	0.000000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.000116	0.000000	49.02%	population	0.000057	0.000000

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2025 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2025 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2265002015	Construction	4-Stroke Rollers	MOVES	0.000109	0.000000	49.02%	population	0.000053	0.000000
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.000218	0.000001	49.02%	population	0.000107	0.000000
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.000092	0.000000	49.02%	population	0.000045	0.000000
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.000005	0.000000	49.02%	population	0.000002	0.000000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.000192	0.000001	49.02%	population	0.000094	0.000000
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.000066	0.000000	49.02%	population	0.000032	0.000000
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.000401	0.000001	49.02%	population	0.000196	0.000001
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.000192	0.000001	49.02%	population	0.000094	0.000000
2265002045	Construction	4-Stroke Cranes	MOVES	0.000014	0.000000	49.02%	population	0.000007	0.000000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.000026	0.000000	49.02%	population	0.000013	0.000000
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.000022	0.000000	49.02%	population	0.000011	0.000000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.000055	0.000000	49.02%	population	0.000027	0.000000
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.000132	0.000000	49.02%	population	0.000065	0.000000
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.000088	0.000000	49.02%	population	0.000043	0.000000
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.000029	0.000000	49.02%	population	0.000014	0.000000
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.000020	0.000000	49.02%	population	0.000010	0.000000
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.000221	0.000001	49.02%	population	0.000108	0.000000
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.000841	0.000002	49.02%	population	0.000412	0.000001
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.000186	0.000001	49.02%	population	0.000091	0.000000
2265003040	Industrial	4-Stroke Other General Industrial	MOVES	0.000347	0.000001	49.02%	population	0.000170	0.000000
2265003050	Industrial	4-Stroke Other Material Handling	MOVES	0.000016	0.000000	49.02%	population	0.000008	0.000000
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.000008	0.000000	49.02%	population	0.000004	0.000000
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.000075	0.000000	49.02%	population	0.000037	0.000000
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.002230	0.000006	49.02%	population	0.001093	0.000003
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.000972	0.000003	49.02%	population	0.000476	0.000001
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.000193	0.000001	49.02%	population	0.000095	0.000000
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.000515	0.000001	49.02%	population	0.000253	0.000001
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters	MOVES	0.000012	0.000000	49.02%	population	0.000006	0.000000
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters	MOVES	0.000022	0.000000	49.02%	population	0.000011	0.000000
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.000024	0.000000	49.02%	population	0.000012	0.000000
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Com.)	MOVES	0.000921	0.000003	49.02%	population	0.000452	0.000001
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.000252	0.000001	49.02%	population	0.000124	0.000000
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.000129	0.000000	49.02%	population	0.000063	0.000000
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.000453	0.000001	49.02%	population	0.000222	0.000001
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Com.)	MOVES	0.000110	0.000000	49.02%	population	0.000054	0.000000
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.000124	0.000000	49.02%	population	0.000061	0.000000
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP	MOVES	0.000059	0.000000	49.02%	population	0.000029	0.000000
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Res.)	MOVES	0.006070	0.000017	49.02%	population	0.002975	0.000008
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Com.)	MOVES	0.001496	0.000004	49.02%	population	0.000734	0.000002

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2025 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2025 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders	MOVES	0.000250	0.000001	49.02%	population	0.000122	0.000000
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment	MOVES	0.004831	0.000013	49.02%	population	0.002368	0.000006
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.000216	0.000001	49.02%	population	0.000106	0.000000
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.000148	0.000000	49.02%	population	0.000073	0.000000
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.000002	0.000000	19.00%	land area	0.000000	0.000000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.000008	0.000000	19.00%	land area	0.000001	0.000000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.000005	0.000000	19.00%	land area	0.000001	0.000000
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.000002	0.000000	19.00%	land area	0.000000	0.000000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.000018	0.000000	19.00%	land area	0.000003	0.000000
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.000037	0.000000	19.00%	land area	0.000007	0.000000
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.000008	0.000000	19.00%	land area	0.000002	0.000000
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.000012	0.000000	19.00%	land area	0.000002	0.000000
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.000013	0.000000	19.00%	land area	0.000002	0.000000
2265006005	Commercial	4-Stroke Light Commercial Generator	MOVES	0.002628	0.000007	49.02%	population	0.001288	0.000004
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.000655	0.000002	49.02%	population	0.000321	0.000001
2265006015	Commercial	4-Stroke Light Commercial Air	MOVES	0.000347	0.000001	49.02%	population	0.000170	0.000000
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.000746	0.000002	49.02%	population	0.000366	0.000001
2265006030	Commercial	4-Stroke Light Commercial Pressure	MOVES	0.001181	0.000003	49.02%	population	0.000579	0.000002
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.000055	0.000000	49.02%	population	0.000027	0.000000
2265007010	Logging	4-Stroke Logging Equipment Shredders	MOVES	0.000268	0.000001	19.00%	land area	0.000051	0.000000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.000003	0.000000	19.00%	land area	0.000001	0.000000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.000022	0.000000	19.00%	land area	0.000004	0.000000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.000007	0.000000	49.02%	population	0.000004	0.000000
2267002015	Construction	LPG Rollers	MOVES	0.000012	0.000000	49.02%	population	0.000006	0.000000
2267002021	Construction	LPG Paving Equipment	MOVES	0.000002	0.000000	49.02%	population	0.000001	0.000000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.000001	0.000000	49.02%	population	0.000001	0.000000
2267002030	Construction	LPG Trenchers	MOVES	0.000022	0.000000	49.02%	population	0.000011	0.000000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.000008	0.000000	49.02%	population	0.000004	0.000000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.000021	0.000000	49.02%	population	0.000010	0.000000
2267002045	Construction	LPG Cranes	MOVES	0.000008	0.000000	49.02%	population	0.000004	0.000000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.000001	0.000000	49.02%	population	0.000001	0.000000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.000014	0.000000	49.02%	population	0.000007	0.000000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.000035	0.000000	49.02%	population	0.000017	0.000000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.000004	0.000000	49.02%	population	0.000002	0.000000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.000029	0.000000	49.02%	population	0.000014	0.000000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.000012	0.000000	49.02%	population	0.000006	0.000000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.000095	0.000000	49.02%	population	0.000047	0.000000
2267003020	Industrial	LPG Forklifts	MOVES	0.008851	0.000024	49.02%	population	0.004339	0.000012

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2025 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2025 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.000068	0.000000	49.02%	population	0.000033	0.000000
2267003040	Industrial	LPG Other General Industrial	MOVES	0.000021	0.000000	49.02%	population	0.000010	0.000000
2267003050	Industrial	LPG Other Material Handling	MOVES	0.000005	0.000000	49.02%	population	0.000003	0.000000
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.000041	0.000000	49.02%	population	0.000020	0.000000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders	MOVES	0.000067	0.000000	49.02%	population	0.000033	0.000000
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.000190	0.000001	49.02%	population	0.000093	0.000000
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.000043	0.000000	49.02%	population	0.000021	0.000000
2267006015	Commercial	LPG Light Commercial Air	MOVES	0.000052	0.000000	49.02%	population	0.000025	0.000000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.000064	0.000000	49.02%	population	0.000031	0.000000
2267006030	Commercial	LPG Light Commercial Pressure	MOVES	0.000001	0.000000	49.02%	population	0.000000	0.000000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.000001	0.000000	49.02%	population	0.000000	0.000000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.000000	0.000000	49.02%	population	0.000000	0.000000
2268003020	Industrial	CNG Forklifts	MOVES	0.000680	0.000002	49.02%	population	0.000333	0.000001
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.000001	0.000000	49.02%	population	0.000000	0.000000
2268003040	Industrial	CNG Other General Industrial	MOVES	0.000001	0.000000	49.02%	population	0.000000	0.000000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.000002	0.000000	49.02%	population	0.000001	0.000000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.000003	0.000000	49.02%	population	0.000001	0.000000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.000014	0.000000	19.00%	land area	0.000003	0.000000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.000068	0.000000	49.02%	population	0.000033	0.000000
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.000003	0.000000	49.02%	population	0.000002	0.000000
2268006015	Commercial	CNG Light Commercial Air	MOVES	0.000005	0.000000	49.02%	population	0.000002	0.000000
2268006020	Commercial	CNG Light Commercial Gas	MOVES	0.000175	0.000000	49.02%	population	0.000086	0.000000
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.000240	0.000001	19.00%	land area	0.000046	0.000000
2270002003	Construction	Diesel Pavers	MOVES	0.000602	0.000002	49.02%	population	0.000295	0.000001
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.000001	0.000000	49.02%	population	0.000001	0.000000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.000022	0.000000	49.02%	population	0.000011	0.000000
2270002015	Construction	Diesel Rollers	MOVES	0.001531	0.000004	49.02%	population	0.000751	0.000002
2270002018	Construction	Diesel Scrapers	MOVES	0.001663	0.000005	49.02%	population	0.000815	0.000002
2270002021	Construction	Diesel Paving Equipment	MOVES	0.000094	0.000000	49.02%	population	0.000046	0.000000
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.000060	0.000000	49.02%	population	0.000030	0.000000
2270002027	Construction	Diesel Signal Boards	MOVES	0.000208	0.000001	49.02%	population	0.000102	0.000000
2270002030	Construction	Diesel Trenchers	MOVES	0.000735	0.000002	49.02%	population	0.000360	0.000001
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.000702	0.000002	49.02%	population	0.000344	0.000001
2270002036	Construction	Diesel Excavators	MOVES	0.006055	0.000017	49.02%	population	0.002968	0.000008
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.000052	0.000000	49.02%	population	0.000026	0.000000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.000029	0.000000	49.02%	population	0.000014	0.000000

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2025 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2025 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2270002045	Construction	Diesel Cranes	MOVES	0.001425	0.000004	49.02%	population	0.000698	0.000002
2270002048	Construction	Diesel Graders	MOVES	0.001510	0.000004	49.02%	population	0.000740	0.000002
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.005168	0.000014	49.02%	population	0.002533	0.000007
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.000255	0.000001	49.02%	population	0.000125	0.000000
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.001995	0.000005	49.02%	population	0.000978	0.000003
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.006792	0.000019	49.02%	population	0.003330	0.000009
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.004289	0.000012	49.02%	population	0.002102	0.000006
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.006139	0.000017	49.02%	population	0.003009	0.000008
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.003170	0.000009	49.02%	population	0.001554	0.000004
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.000678	0.000002	49.02%	population	0.000333	0.000001
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.000010	0.000000	49.02%	population	0.000005	0.000000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.000661	0.000002	49.02%	population	0.000324	0.000001
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.000111	0.000000	49.02%	population	0.000054	0.000000
2270003020	Industrial	Diesel Forklifts	MOVES	0.001360	0.000004	49.02%	population	0.000667	0.000002
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.000603	0.000002	49.02%	population	0.000296	0.000001
2270003040	Industrial	Diesel Other General Industrial	MOVES	0.000629	0.000002	49.02%	population	0.000308	0.000001
2270003050	Industrial	Diesel Other Material Handling	MOVES	0.000027	0.000000	49.02%	population	0.000013	0.000000
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.002072	0.000006	49.02%	population	0.001016	0.000003
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.000859	0.000002	49.02%	population	0.000421	0.000001
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums	MOVES	0.000000	0.000000	49.02%	population	0.000000	0.000000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.000005	0.000000	49.02%	population	0.000003	0.000000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.000353	0.000001	49.02%	population	0.000173	0.000000
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors	MOVES	0.000081	0.000000	49.02%	population	0.000040	0.000000
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders	MOVES	0.000470	0.000001	49.02%	population	0.000230	0.000001
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Com.)	MOVES	0.000049	0.000000	49.02%	population	0.000024	0.000000
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equip. (Com.)	MOVES	0.000001	0.000000	49.02%	population	0.000001	0.000000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.001522	0.000004	19.00%	land area	0.000289	0.000001
2270005020	Agriculture	Diesel Combines	MOVES	0.000150	0.000000	19.00%	land area	0.000029	0.000000
2270005025	Agriculture	Diesel Balers	MOVES	0.000001	0.000000	19.00%	land area	0.000000	0.000000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.000013	0.000000	19.00%	land area	0.000002	0.000000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2270005045	Agriculture	Diesel Swathers	MOVES	0.000012	0.000000	19.00%	land area	0.000002	0.000000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.000031	0.000000	19.00%	land area	0.000006	0.000000
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.000021	0.000000	19.00%	land area	0.000004	0.000000
2270006005	Commercial	Diesel Light Commercial Generator	MOVES	0.001009	0.000003	49.02%	population	0.000495	0.000001
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.000238	0.000001	49.02%	population	0.000117	0.000000
2270006015	Commercial	Diesel Light Commercial Air	MOVES	0.000592	0.000002	49.02%	population	0.000290	0.000001

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2025 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2025 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.000337	0.000001	49.02%	population	0.000165	0.000000
2270006030	Commercial	Diesel Light Commercial Pressure	MOVES	0.000033	0.000000	49.02%	population	0.000016	0.000000
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.000026	0.000000	49.02%	population	0.000013	0.000000
2270007015	Logging	Diesel Logging Equip	MOVES	0.004311	0.000012	19.00%	land area	0.000819	0.000002
2275000000	Aircraft	All Aircraft and Airport	EPA	1.127014	0.003088	99.00%	airport location	1.115744	0.003057
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.068075	0.000187	20.00%	water area	0.013615	0.000037
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.028771	0.000079	20.00%	water area	0.005754	0.000016
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.032661	0.000089	20.00%	water area	0.006532	0.000018
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.038908	0.000107	20.00%	water area	0.007782	0.000021
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.000205	0.000001	20.00%	water area	0.000041	0.000000
2285002000	Railroad	Diesel Line Haul Locomotives	EPA	0.000817	0.000002	31.00%	track miles	0.000253	0.000001
ALL (Total)	ALL (Total)	ALL (Total)		1.437440	0.003938	83.80%		1.204607	0.003300

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**Table A7.4. 2032 Nonroad SO₂ Emissions: tons per year (tpy) and tons per day (tpd)
Oneida County and Partial Oneida County SO₂ Nonattainment Area**

SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2032 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2032 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2260001010	Recreational	2-Stroke Motorcycles: Off-Road	MOVES	0.001578	0.000004	19.00%	land area	0.000300	0.000001
2260001020	Recreational	2-Stroke Snowmobiles	MOVES	0.026624	0.000073	19.00%	land area	0.005059	0.000014
2260001030	Recreational	2-Stroke All Terrain Vehicles	MOVES	0.000753	0.000002	19.00%	land area	0.000143	0.000000
2260001060	Recreational	2-Stroke Specialty Vehicle Carts	MOVES	0.000422	0.000001	19.00%	land area	0.000080	0.000000
2260002006	Construction	2-Stroke Tampers/Rammers	MOVES	0.000070	0.000000	48.50%	population	0.000034	0.000000
2260002009	Construction	2-Stroke Plate Compactors	MOVES	0.000005	0.000000	48.50%	population	0.000002	0.000000
2260002021	Construction	2-Stroke Paving Equipment	MOVES	0.000005	0.000000	48.50%	population	0.000003	0.000000
2260002027	Construction	2-Stroke Signal Boards	MOVES	0.000000	0.000000	48.50%	population	0.000000	0.000000
2260002039	Construction	2-Stroke Concrete/Industrial Saws	MOVES	0.000180	0.000000	48.50%	population	0.000087	0.000000
2260002054	Construction	2-Stroke Crushing/Proc. Equipment	MOVES	0.000001	0.000000	48.50%	population	0.000001	0.000000
2260003030	Industrial	2-Stroke Sweepers/Scrubbers	MOVES	0.000003	0.000000	48.50%	population	0.000001	0.000000
2260003040	Industrial	2-Stroke Other General Industrial	MOVES	0.000000	0.000000	48.50%	population	0.000000	0.000000
2260004015	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.000013	0.000000	48.50%	population	0.000006	0.000000
2260004016	Lawn/Garden	2-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.000035	0.000000	48.50%	population	0.000017	0.000000
2260004020	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Residential)	MOVES	0.000173	0.000000	48.50%	population	0.000084	0.000000
2260004021	Lawn/Garden	2-Stroke Chain Saws < 6 HP (Commercial)	MOVES	0.000375	0.000001	48.50%	population	0.000182	0.000000
2260004025	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Res.)	MOVES	0.000240	0.000001	48.50%	population	0.000117	0.000000
2260004026	Lawn/Garden	2-Stroke Trimmers/Edgers/Brush Cutters (Com.)	MOVES	0.000328	0.000001	48.50%	population	0.000159	0.000000
2260004030	Lawn/Garden	2-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.000155	0.000000	48.50%	population	0.000075	0.000000
2260004031	Lawn/Garden	2-Stroke Leafblowers/Vacuums	MOVES	0.000306	0.000001	48.50%	population	0.000148	0.000000
2260004035	Lawn/Garden	2-Stroke Snowblowers (Residential)	MOVES	0.000077	0.000000	48.50%	population	0.000037	0.000000
2260004036	Lawn/Garden	2-Stroke Snowblowers (Commercial)	MOVES	0.000039	0.000000	48.50%	population	0.000019	0.000000
2260004071	Lawn/Garden	2-Stroke Commercial Turf Equipment	MOVES	0.000000	0.000000	48.50%	population	0.000000	0.000000
2260005035	Agriculture	2-Stroke Sprayers	MOVES	0.000001	0.000000	19.00%	land area	0.000000	0.000000
2260006005	Commercial	2-Stroke Light Commercial Generator	MOVES	0.000014	0.000000	48.50%	population	0.000007	0.000000
2260006010	Commercial	2-Stroke Light Commercial Pumps	MOVES	0.000095	0.000000	48.50%	population	0.000046	0.000000
2260006015	Commercial	2-Stroke Light Commercial Air	MOVES	0.000000	0.000000	48.50%	population	0.000000	0.000000
2260006035	Commercial	2-Stroke Hydro Power Units	MOVES	0.000001	0.000000	48.50%	population	0.000000	0.000000
2260007005	Logging	2-Stroke Logging Equipment Chain	MOVES	0.000090	0.000000	19.00%	land area	0.000017	0.000000
2265001010	Recreational	4-Stroke Motorcycles: Off-Road	MOVES	0.000715	0.000002	19.00%	land area	0.000136	0.000000
2265001030	Recreational	4-Stroke All Terrain Vehicles	MOVES	0.006812	0.000019	19.00%	land area	0.001294	0.000004
2265001050	Recreational	4-Stroke Golf Carts	MOVES	0.003009	0.000008	19.00%	land area	0.000572	0.000002
2265001060	Recreational	4-Stroke Specialty Vehicle Carts	MOVES	0.000387	0.000001	19.00%	land area	0.000074	0.000000
2265002003	Construction	4-Stroke Asphalt Pavers	MOVES	0.000062	0.000000	48.50%	population	0.000030	0.000000
2265002006	Construction	4-Stroke Tampers/Rammers	MOVES	0.000000	0.000000	48.50%	population	0.000000	0.000000
2265002009	Construction	4-Stroke Plate Compactors	MOVES	0.000117	0.000000	48.50%	population	0.000057	0.000000

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2032 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2032 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2265002015	Construction	4-Stroke Rollers	MOVES	0.000110	0.000000	48.50%	population	0.000053	0.000000
2265002021	Construction	4-Stroke Paving Equipment	MOVES	0.000220	0.000001	48.50%	population	0.000107	0.000000
2265002024	Construction	4-Stroke Surfacing Equipment	MOVES	0.000093	0.000000	48.50%	population	0.000045	0.000000
2265002027	Construction	4-Stroke Signal Boards	MOVES	0.000005	0.000000	48.50%	population	0.000002	0.000000
2265002030	Construction	4-Stroke Trenchers	MOVES	0.000193	0.000001	48.50%	population	0.000094	0.000000
2265002033	Construction	4-Stroke Bore/Drill Rigs	MOVES	0.000066	0.000000	48.50%	population	0.000032	0.000000
2265002039	Construction	4-Stroke Concrete/Industrial Saws	MOVES	0.000405	0.000001	48.50%	population	0.000196	0.000001
2265002042	Construction	4-Stroke Cement & Mortar Mixers	MOVES	0.000194	0.000001	48.50%	population	0.000094	0.000000
2265002045	Construction	4-Stroke Cranes	MOVES	0.000014	0.000000	48.50%	population	0.000007	0.000000
2265002054	Construction	4-Stroke Crushing/Proc. Equipment	MOVES	0.000026	0.000000	48.50%	population	0.000013	0.000000
2265002057	Construction	4-Stroke Rough Terrain Forklifts	MOVES	0.000023	0.000000	48.50%	population	0.000011	0.000000
2265002060	Construction	4-Stroke Rubber Tire Loaders	MOVES	0.000055	0.000000	48.50%	population	0.000027	0.000000
2265002066	Construction	4-Stroke Tractors/Loaders/Backhoes	MOVES	0.000133	0.000000	48.50%	population	0.000064	0.000000
2265002072	Construction	4-Stroke Skid Steer Loaders	MOVES	0.000088	0.000000	48.50%	population	0.000043	0.000000
2265002078	Construction	4-Stroke Dumpers/Tenders	MOVES	0.000030	0.000000	48.50%	population	0.000014	0.000000
2265002081	Construction	4-Stroke Other Construction Equipment	MOVES	0.000020	0.000000	48.50%	population	0.000009	0.000000
2265003010	Industrial	4-Stroke Aerial Lifts	MOVES	0.000280	0.000001	48.50%	population	0.000136	0.000000
2265003020	Industrial	4-Stroke Forklifts	MOVES	0.001067	0.000003	48.50%	population	0.000517	0.000001
2265003030	Industrial	4-Stroke Sweepers/Scrubbers	MOVES	0.000236	0.000001	48.50%	population	0.000114	0.000000
2265003040	Industrial	4-Stroke Other General Industrial	MOVES	0.000440	0.000001	48.50%	population	0.000213	0.000001
2265003050	Industrial	4-Stroke Other Material Handling	MOVES	0.000020	0.000000	48.50%	population	0.000010	0.000000
2265003060	Industrial	4-Stroke Industrial AC/Refrigeration	MOVES	0.000010	0.000000	48.50%	population	0.000005	0.000000
2265003070	Industrial	4-Stroke Terminal Tractors	MOVES	0.000095	0.000000	48.50%	population	0.000046	0.000000
2265004010	Lawn/Garden	4-Stroke Lawn mowers (Residential)	MOVES	0.002207	0.000006	48.50%	population	0.001071	0.000003
2265004011	Lawn/Garden	4-Stroke Lawn mowers (Commercial)	MOVES	0.000962	0.000003	48.50%	population	0.000466	0.000001
2265004015	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Residential)	MOVES	0.000191	0.000001	48.50%	population	0.000093	0.000000
2265004016	Lawn/Garden	4-Stroke Rotary Tillers < 6 HP (Commercial)	MOVES	0.000510	0.000001	48.50%	population	0.000247	0.000001
2265004025	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters	MOVES	0.000012	0.000000	48.50%	population	0.000006	0.000000
2265004026	Lawn/Garden	4-Stroke Trimmers/Edgers/Brush Cutters	MOVES	0.000022	0.000000	48.50%	population	0.000011	0.000000
2265004030	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Residential)	MOVES	0.000023	0.000000	48.50%	population	0.000011	0.000000
2265004031	Lawn/Garden	4-Stroke Leafblowers/Vacuums (Com.)	MOVES	0.000912	0.000002	48.50%	population	0.000442	0.000001
2265004035	Lawn/Garden	4-Stroke Snowblowers (Residential)	MOVES	0.000252	0.000001	48.50%	population	0.000122	0.000000
2265004036	Lawn/Garden	4-Stroke Snowblowers (Commercial)	MOVES	0.000129	0.000000	48.50%	population	0.000062	0.000000
2265004040	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Res.)	MOVES	0.000448	0.000001	48.50%	population	0.000217	0.000001
2265004041	Lawn/Garden	4-Stroke Rear Engine Riding Mowers (Com.)	MOVES	0.000109	0.000000	48.50%	population	0.000053	0.000000
2265004046	Lawn/Garden	4-Stroke Front Mowers (Commercial)	MOVES	0.000123	0.000000	48.50%	population	0.000060	0.000000
2265004051	Lawn/Garden	4-Stroke Shredders < 6 HP	MOVES	0.000059	0.000000	48.50%	population	0.000028	0.000000
2265004055	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Res.)	MOVES	0.006007	0.000016	48.50%	population	0.002913	0.000008
2265004056	Lawn/Garden	4-Stroke Lawn & Garden Tractors (Com.)	MOVES	0.001481	0.000004	48.50%	population	0.000718	0.000002

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2032 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2032 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2265004066	Lawn/Garden	4-Stroke Chippers/Stump Grinders	MOVES	0.000247	0.000001	48.50%	population	0.000120	0.000000
2265004071	Lawn/Garden	4-Stroke Commercial Turf Equipment	MOVES	0.004780	0.000013	48.50%	population	0.002318	0.000006
2265004075	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Res.)	MOVES	0.000213	0.000001	48.50%	population	0.000104	0.000000
2265004076	Lawn/Garden	4-Stroke Other Lawn & Garden Equip. (Com.)	MOVES	0.000147	0.000000	48.50%	population	0.000071	0.000000
2265005010	Agriculture	4-Stroke 2-Wheel Tractors	MOVES	0.000002	0.000000	19.00%	land area	0.000000	0.000000
2265005015	Agriculture	4-Stroke Agricultural Tractors	MOVES	0.000007	0.000000	19.00%	land area	0.000001	0.000000
2265005020	Agriculture	4-Stroke Combines	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2265005025	Agriculture	4-Stroke Balers	MOVES	0.000005	0.000000	19.00%	land area	0.000001	0.000000
2265005030	Agriculture	4-Stroke Agricultural Mowers	MOVES	0.000002	0.000000	19.00%	land area	0.000000	0.000000
2265005035	Agriculture	4-Stroke Sprayers	MOVES	0.000017	0.000000	19.00%	land area	0.000003	0.000000
2265005040	Agriculture	4-Stroke Tillers > 5 HP	MOVES	0.000035	0.000000	19.00%	land area	0.000007	0.000000
2265005045	Agriculture	4-Stroke Swathers	MOVES	0.000008	0.000000	19.00%	land area	0.000001	0.000000
2265005055	Agriculture	4-Stroke Other Agricultural Equipment	MOVES	0.000011	0.000000	19.00%	land area	0.000002	0.000000
2265005060	Agriculture	4-Stroke Irrigation Sets	MOVES	0.000013	0.000000	19.00%	land area	0.000002	0.000000
2265006005	Commercial	4-Stroke Light Commercial Generator	MOVES	0.002955	0.000008	48.50%	population	0.001433	0.000004
2265006010	Commercial	4-Stroke Light Commercial Pumps	MOVES	0.000736	0.000002	48.50%	population	0.000357	0.000001
2265006015	Commercial	4-Stroke Light Commercial Air	MOVES	0.000390	0.000001	48.50%	population	0.000189	0.000001
2265006025	Commercial	4-Stroke Light Commercial Welders	MOVES	0.000839	0.000002	48.50%	population	0.000407	0.000001
2265006030	Commercial	4-Stroke Light Commercial Pressure	MOVES	0.001328	0.000004	48.50%	population	0.000644	0.000002
2265006035	Commercial	4-Stroke Hydro Power Units	MOVES	0.000062	0.000000	48.50%	population	0.000030	0.000000
2265007010	Logging	4-Stroke Logging Equipment Shredders	MOVES	0.000259	0.000001	19.00%	land area	0.000049	0.000000
2265007015	Logging	4-Stroke Logging Equipment Skidders	MOVES	0.000003	0.000000	19.00%	land area	0.000001	0.000000
2267001060	Recreational	LPG Specialty Vehicle Carts	MOVES	0.000021	0.000000	19.00%	land area	0.000004	0.000000
2267002003	Construction	LPG Asphalt Pavers	MOVES	0.000007	0.000000	48.50%	population	0.000004	0.000000
2267002015	Construction	LPG Rollers	MOVES	0.000012	0.000000	48.50%	population	0.000006	0.000000
2267002021	Construction	LPG Paving Equipment	MOVES	0.000002	0.000000	48.50%	population	0.000001	0.000000
2267002024	Construction	LPG Surfacing Equipment	MOVES	0.000001	0.000000	48.50%	population	0.000001	0.000000
2267002030	Construction	LPG Trenchers	MOVES	0.000022	0.000000	48.50%	population	0.000011	0.000000
2267002033	Construction	LPG Bore/Drill Rigs	MOVES	0.000008	0.000000	48.50%	population	0.000004	0.000000
2267002039	Construction	LPG Concrete/Industrial Saws	MOVES	0.000021	0.000000	48.50%	population	0.000010	0.000000
2267002045	Construction	LPG Cranes	MOVES	0.000008	0.000000	48.50%	population	0.000004	0.000000
2267002054	Construction	LPG Crushing/Proc. Equipment	MOVES	0.000001	0.000000	48.50%	population	0.000001	0.000000
2267002057	Construction	LPG Rough Terrain Forklifts	MOVES	0.000014	0.000000	48.50%	population	0.000007	0.000000
2267002060	Construction	LPG Rubber Tire Loaders	MOVES	0.000035	0.000000	48.50%	population	0.000017	0.000000
2267002066	Construction	LPG Tractors/Loaders/Backhoes	MOVES	0.000004	0.000000	48.50%	population	0.000002	0.000000
2267002072	Construction	LPG Skid Steer Loaders	MOVES	0.000029	0.000000	48.50%	population	0.000014	0.000000
2267002081	Construction	LPG Other Construction Equipment	MOVES	0.000012	0.000000	48.50%	population	0.000006	0.000000
2267003010	Industrial	LPG Aerial Lifts	MOVES	0.000120	0.000000	48.50%	population	0.000058	0.000000
2267003020	Industrial	LPG Forklifts	MOVES	0.011232	0.000031	48.50%	population	0.005448	0.000015

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2032 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2032 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2267003030	Industrial	LPG Sweepers/Scrubbers	MOVES	0.000086	0.000000	48.50%	population	0.000042	0.000000
2267003040	Industrial	LPG Other General Industrial	MOVES	0.000026	0.000000	48.50%	population	0.000013	0.000000
2267003050	Industrial	LPG Other Material Handling	MOVES	0.000006	0.000000	48.50%	population	0.000003	0.000000
2267003070	Industrial	LPG Terminal Tractors	MOVES	0.000053	0.000000	48.50%	population	0.000026	0.000000
2267004066	Lawn/Garden	LPG Chippers/Stump Grinders	MOVES	0.000066	0.000000	48.50%	population	0.000032	0.000000
2267005055	Agriculture	LPG Other Agricultural Equipment	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2267005060	Agriculture	LPG Irrigation Sets	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2267006005	Commercial	LPG Light Commercial Generator Sets	MOVES	0.000209	0.000001	48.50%	population	0.000101	0.000000
2267006010	Commercial	LPG Light Commercial Pumps	MOVES	0.000048	0.000000	48.50%	population	0.000023	0.000000
2267006015	Commercial	LPG Light Commercial Air	MOVES	0.000058	0.000000	48.50%	population	0.000028	0.000000
2267006025	Commercial	LPG Light Commercial Welders	MOVES	0.000072	0.000000	48.50%	population	0.000035	0.000000
2267006030	Commercial	LPG Light Commercial Pressure	MOVES	0.000001	0.000000	48.50%	population	0.000000	0.000000
2267006035	Commercial	LPG Hydro Power Units	MOVES	0.000001	0.000000	48.50%	population	0.000000	0.000000
2268002081	Construction	CNG Other Construction Equipment	MOVES	0.000000	0.000000	48.50%	population	0.000000	0.000000
2268003020	Industrial	CNG Forklifts	MOVES	0.000863	0.000002	48.50%	population	0.000419	0.000001
2268003030	Industrial	CNG Sweepers/Scrubbers	MOVES	0.000001	0.000000	48.50%	population	0.000000	0.000000
2268003040	Industrial	CNG Other General Industrial	MOVES	0.000001	0.000000	48.50%	population	0.000000	0.000000
2268003060	Industrial	CNG AC/Refrigeration	MOVES	0.000002	0.000000	48.50%	population	0.000001	0.000000
2268003070	Industrial	CNG Terminal Tractors	MOVES	0.000004	0.000000	48.50%	population	0.000002	0.000000
2268005055	Agriculture	CNG Other Agricultural Equipment	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2268005060	Agriculture	CNG Irrigation Sets	MOVES	0.000014	0.000000	19.00%	land area	0.000003	0.000000
2268006005	Commercial	CNG Light Commercial Generator Sets	MOVES	0.000076	0.000000	48.50%	population	0.000037	0.000000
2268006010	Commercial	CNG Light Commercial Pumps	MOVES	0.000004	0.000000	48.50%	population	0.000002	0.000000
2268006015	Commercial	CNG Light Commercial Air	MOVES	0.000005	0.000000	48.50%	population	0.000003	0.000000
2268006020	Commercial	CNG Light Commercial Gas	MOVES	0.000196	0.000001	48.50%	population	0.000095	0.000000
2270001060	Recreational	Diesel Specialty Vehicle Carts	MOVES	0.000223	0.000001	19.00%	land area	0.000042	0.000000
2270002003	Construction	Diesel Pavers	MOVES	0.000597	0.000002	48.50%	population	0.000290	0.000001
2270002006	Construction	Diesel Tampers/Rammers (unused)	MOVES	0.000001	0.000000	48.50%	population	0.000001	0.000000
2270002009	Construction	Diesel Plate Compactors	MOVES	0.000022	0.000000	48.50%	population	0.000011	0.000000
2270002015	Construction	Diesel Rollers	MOVES	0.001513	0.000004	48.50%	population	0.000734	0.000002
2270002018	Construction	Diesel Scrapers	MOVES	0.001630	0.000004	48.50%	population	0.000791	0.000002
2270002021	Construction	Diesel Paving Equipment	MOVES	0.000092	0.000000	48.50%	population	0.000045	0.000000
2270002024	Construction	Diesel Surfacing Equipment	MOVES	0.000058	0.000000	48.50%	population	0.000028	0.000000
2270002027	Construction	Diesel Signal Boards	MOVES	0.000208	0.000001	48.50%	population	0.000101	0.000000
2270002030	Construction	Diesel Trenchers	MOVES	0.000715	0.000002	48.50%	population	0.000347	0.000001
2270002033	Construction	Diesel Bore/Drill Rigs	MOVES	0.000646	0.000002	48.50%	population	0.000313	0.000001
2270002036	Construction	Diesel Excavators	MOVES	0.006064	0.000017	48.50%	population	0.002941	0.000008
2270002039	Construction	Diesel Concrete/Industrial Saws	MOVES	0.000051	0.000000	48.50%	population	0.000025	0.000000
2270002042	Construction	Diesel Cement & Mortar Mixers	MOVES	0.000027	0.000000	48.50%	population	0.000013	0.000000

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2032 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2032 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2270002045	Construction	Diesel Cranes	MOVES	0.001397	0.000004	48.50%	population	0.000677	0.000002
2270002048	Construction	Diesel Graders	MOVES	0.001506	0.000004	48.50%	population	0.000731	0.000002
2270002051	Construction	Diesel Off-highway Trucks	MOVES	0.005181	0.000014	48.50%	population	0.002513	0.000007
2270002054	Construction	Diesel Crushing/Proc. Equipment	MOVES	0.000249	0.000001	48.50%	population	0.000121	0.000000
2270002057	Construction	Diesel Rough Terrain Forklifts	MOVES	0.001951	0.000005	48.50%	population	0.000946	0.000003
2270002060	Construction	Diesel Rubber Tire Loaders	MOVES	0.006650	0.000018	48.50%	population	0.003225	0.000009
2270002066	Construction	Diesel Tractors/Loaders/Backhoes	MOVES	0.004152	0.000011	48.50%	population	0.002014	0.000006
2270002069	Construction	Diesel Crawler Tractors	MOVES	0.006048	0.000017	48.50%	population	0.002933	0.000008
2270002072	Construction	Diesel Skid Steer Loaders	MOVES	0.002937	0.000008	48.50%	population	0.001425	0.000004
2270002075	Construction	Diesel Off-Highway Tractors	MOVES	0.000655	0.000002	48.50%	population	0.000318	0.000001
2270002078	Construction	Diesel Dumpers/Tenders	MOVES	0.000010	0.000000	48.50%	population	0.000005	0.000000
2270002081	Construction	Diesel Other Construction Equipment	MOVES	0.000640	0.000002	48.50%	population	0.000311	0.000001
2270003010	Industrial	Diesel Aerial Lifts	MOVES	0.000131	0.000000	48.50%	population	0.000064	0.000000
2270003020	Industrial	Diesel Forklifts	MOVES	0.001726	0.000005	48.50%	population	0.000837	0.000002
2270003030	Industrial	Diesel Sweepers/Scrubbers	MOVES	0.000758	0.000002	48.50%	population	0.000367	0.000001
2270003040	Industrial	Diesel Other General Industrial	MOVES	0.000771	0.000002	48.50%	population	0.000374	0.000001
2270003050	Industrial	Diesel Other Material Handling	MOVES	0.000031	0.000000	48.50%	population	0.000015	0.000000
2270003060	Industrial	Diesel AC/Refrigeration	MOVES	0.002612	0.000007	48.50%	population	0.001267	0.000003
2270003070	Industrial	Diesel Terminal Tractors	MOVES	0.001088	0.000003	48.50%	population	0.000527	0.000001
2270004031	Lawn/Garden	Diesel Leafblowers/Vacuums	MOVES	0.000000	0.000000	48.50%	population	0.000000	0.000000
2270004036	Lawn/Garden	Diesel Snowblowers (Commercial)	MOVES	0.000005	0.000000	48.50%	population	0.000002	0.000000
2270004046	Lawn/Garden	Diesel Front Mowers (Commercial)	MOVES	0.000335	0.000001	48.50%	population	0.000163	0.000000
2270004056	Lawn/Garden	Diesel Lawn & Garden Tractors	MOVES	0.000080	0.000000	48.50%	population	0.000039	0.000000
2270004066	Lawn/Garden	Diesel Chippers/Stump Grinders	MOVES	0.000423	0.000001	48.50%	population	0.000205	0.000001
2270004071	Lawn/Garden	Diesel Commercial Turf Equipment (Com.)	MOVES	0.000047	0.000000	48.50%	population	0.000023	0.000000
2270004076	Lawn/Garden	Diesel Other Lawn & Garden Equip. (Com.)	MOVES	0.000001	0.000000	48.50%	population	0.000001	0.000000
2270005010	Agriculture	Diesel 2-Wheel Tractors	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2270005015	Agriculture	Diesel Agricultural Tractors	MOVES	0.001400	0.000004	19.00%	land area	0.000266	0.000001
2270005020	Agriculture	Diesel Combines	MOVES	0.000132	0.000000	19.00%	land area	0.000025	0.000000
2270005025	Agriculture	Diesel Balers	MOVES	0.000001	0.000000	19.00%	land area	0.000000	0.000000
2270005030	Agriculture	Diesel Agricultural Mowers	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2270005035	Agriculture	Diesel Sprayers	MOVES	0.000011	0.000000	19.00%	land area	0.000002	0.000000
2270005040	Agriculture	Diesel Tillers > 6 HP	MOVES	0.000000	0.000000	19.00%	land area	0.000000	0.000000
2270005045	Agriculture	Diesel Swathers	MOVES	0.000010	0.000000	19.00%	land area	0.000002	0.000000
2270005055	Agriculture	Diesel Other Agricultural Equipment	MOVES	0.000028	0.000000	19.00%	land area	0.000005	0.000000
2270005060	Agriculture	Diesel Irrigation Sets	MOVES	0.000020	0.000000	19.00%	land area	0.000004	0.000000
2270006005	Commercial	Diesel Light Commercial Generator	MOVES	0.001057	0.000003	48.50%	population	0.000513	0.000001
2270006010	Commercial	Diesel Light Commercial Pumps	MOVES	0.000248	0.000001	48.50%	population	0.000120	0.000000
2270006015	Commercial	Diesel Light Commercial Air	MOVES	0.000634	0.000002	48.50%	population	0.000307	0.000001

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SCC	Segment Description	SCC Description	Emissions From:	Oneida County 2032 Emissions		% in SO ₂ Non-attainment Area	Allocate by:	SO ₂ Nonattainment Area 2032 Emissions	
				SO ₂ (tpy)	SO ₂ (tpd)			SO ₂ (tpy)	SO ₂ (tpd)
2270006025	Commercial	Diesel Light Commercial Welders	MOVES	0.000353	0.000001	48.50%	population	0.000171	0.000000
2270006030	Commercial	Diesel Light Commercial Pressure	MOVES	0.000035	0.000000	48.50%	population	0.000017	0.000000
2270006035	Commercial	Diesel Hydro Power Units	MOVES	0.000028	0.000000	48.50%	population	0.000013	0.000000
2270007015	Logging	Diesel Logging Equip	MOVES	0.004150	0.000011	19.00%	land area	0.000788	0.000002
2275000000	Aircraft	All Aircraft and Airport	EPA	1.210283	0.003307	99.00%	airport location	1.198180	0.003274
2282005010	Pleasure Craft	2-Stroke Outboards	MOVES	0.069817	0.000191	20.00%	water area	0.013963	0.000038
2282005015	Pleasure Craft	2-Stroke Personal Watercraft	MOVES	0.029513	0.000081	20.00%	water area	0.005903	0.000016
2282010005	Pleasure Craft	4-Stroke Inboards	MOVES	0.033217	0.000091	20.00%	water area	0.006643	0.000018
2282020005	Pleasure Craft	Diesel Inboards	MOVES	0.043486	0.000119	20.00%	water area	0.008697	0.000024
2282020010	Pleasure Craft	Diesel Outboards	MOVES	0.000230	0.000001	20.00%	water area	0.000046	0.000000
2285002000	Railroad	Diesel Line Haul Locomotives	EPA	0.000860	0.000002	31.00%	track miles	0.000267	0.000001
ALL (Total)	ALL (Total)	ALL (Total)		1.532103	0.004186	84.20%		1.290082	0.003525

APPENDIX 8

Onroad Emissions and Activity Data for 2011, 2018, 2025 and 2032

This appendix provides detailed listings of the estimated onroad emissions and activity data for the partial Oneida County sulfur dioxide (SO₂) nonattainment area for 2011, 2018, 2025 and 2032. The sum of SO₂ emissions from the different onroad source types were used for the onroad sector SO₂ tons per year (tpy) and tons per day (tpd) emission estimates included in the Wisconsin Department of Natural Resources (WDNR) Redesignation Request and Maintenance Plan for the Partial Oneida County 2010 SO₂ NAAQS Nonattainment Area.

**Table A8.1. 2011 Onroad SO₂ Emissions: tons per year (tpy) and tons per day (tpd)
Partial Oneida County SO₂ Nonattainment Area**

Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2011 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Motorcycle	Gasoline	Off-Network	0.000091	0.000000
Motorcycle	Gasoline	Rural Restricted	0.000000	0.000000
Motorcycle	Gasoline	Rural Unrestricted	0.006862	0.000019
Motorcycle	Gasoline	Urban Restricted	0.000000	0.000000
Motorcycle	Gasoline	Urban Unrestricted	0.004578	0.000013
Passenger Car	Gasoline	Off-Network	0.077665	0.000213
Passenger Car	Gasoline	Rural Restricted	0.000000	0.000000
Passenger Car	Gasoline	Rural Unrestricted	0.336732	0.000923
Passenger Car	Gasoline	Urban Restricted	0.000000	0.000000
Passenger Car	Gasoline	Urban Unrestricted	0.327860	0.000898
Passenger Car	Diesel	Off-Network	0.000049	0.000000
Passenger Car	Diesel	Rural Restricted	0.000000	0.000000
Passenger Car	Diesel	Rural Unrestricted	0.000269	0.000001
Passenger Car	Diesel	Urban Restricted	0.000000	0.000000
Passenger Car	Diesel	Urban Unrestricted	0.000261	0.000001
Passenger Car	Ethanol (E-85)	Off-Network	0.000010	0.000000
Passenger Car	Ethanol (E-85)	Rural Restricted	0.000000	0.000000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.000045	0.000000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.000000	0.000000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.000044	0.000000
Passenger Truck	Gasoline	Off-Network	0.092646	0.000254
Passenger Truck	Gasoline	Rural Restricted	0.000000	0.000000
Passenger Truck	Gasoline	Rural Unrestricted	0.530365	0.001453
Passenger Truck	Gasoline	Urban Restricted	0.000000	0.000000
Passenger Truck	Gasoline	Urban Unrestricted	0.360146	0.000987
Passenger Truck	Diesel	Off-Network	0.000614	0.000002
Passenger Truck	Diesel	Rural Restricted	0.000000	0.000000
Passenger Truck	Diesel	Rural Unrestricted	0.004937	0.000014
Passenger Truck	Diesel	Urban Restricted	0.000000	0.000000
Passenger Truck	Diesel	Urban Unrestricted	0.003484	0.000010
Passenger Truck	Ethanol (E-85)	Off-Network	0.000049	0.000000
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.000000	0.000000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.000278	0.000001
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.000000	0.000000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.000189	0.000001
Light Commercial Truck	Gasoline	Off-Network	0.010052	0.000028
Light Commercial Truck	Gasoline	Rural Restricted	0.000000	0.000000
Light Commercial Truck	Gasoline	Rural Unrestricted	0.051539	0.000141
Light Commercial Truck	Gasoline	Urban Restricted	0.000000	0.000000
Light Commercial Truck	Gasoline	Urban Unrestricted	0.045085	0.000124
Light Commercial Truck	Diesel	Off-Network	0.000158	0.000000
Light Commercial Truck	Diesel	Rural Restricted	0.000000	0.000000
Light Commercial Truck	Diesel	Rural Unrestricted	0.001150	0.000003
Light Commercial Truck	Diesel	Urban Restricted	0.000000	0.000000
Light Commercial Truck	Diesel	Urban Unrestricted	0.001026	0.000003
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.000005	0.000000
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.000000	0.000000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.000025	0.000000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.000000	0.000000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.000021	0.000000
Intercity Bus	Gasoline	Off-Network	0.000167	0.000000
Intercity Bus	Gasoline	Rural Restricted	0.000000	0.000000
Intercity Bus	Gasoline	Rural Unrestricted	0.001206	0.000003

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Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2011 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Intercity Bus	Gasoline	Urban Restricted	0.000000	0.000000
Intercity Bus	Gasoline	Urban Unrestricted	0.000981	0.000003
Intercity Bus	Diesel	Off-Network	0.000338	0.000001
Intercity Bus	Diesel	Rural Restricted	0.000000	0.000000
Intercity Bus	Diesel	Rural Unrestricted	0.002224	0.000006
Intercity Bus	Diesel	Urban Restricted	0.000000	0.000000
Intercity Bus	Diesel	Urban Unrestricted	0.001899	0.000005
Intercity Bus	CNG	Off-Network	0.000040	0.000000
Intercity Bus	CNG	Rural Restricted	0.000000	0.000000
Intercity Bus	CNG	Rural Unrestricted	0.000237	0.000001
Intercity Bus	CNG	Urban Restricted	0.000000	0.000000
Intercity Bus	CNG	Urban Unrestricted	0.000207	0.000001
Transit Bus	Gasoline	Off-Network	0.000041	0.000000
Transit Bus	Gasoline	Rural Restricted	0.000000	0.000000
Transit Bus	Gasoline	Rural Unrestricted	0.000395	0.000001
Transit Bus	Gasoline	Urban Restricted	0.000000	0.000000
Transit Bus	Gasoline	Urban Unrestricted	0.000335	0.000001
Transit Bus	Diesel	Off-Network	0.000080	0.000000
Transit Bus	Diesel	Rural Restricted	0.000000	0.000000
Transit Bus	Diesel	Rural Unrestricted	0.000711	0.000002
Transit Bus	Diesel	Urban Restricted	0.000000	0.000000
Transit Bus	Diesel	Urban Unrestricted	0.000637	0.000002
Transit Bus	CNG	Off-Network	0.000010	0.000000
Transit Bus	CNG	Rural Restricted	0.000000	0.000000
Transit Bus	CNG	Rural Unrestricted	0.000080	0.000000
Transit Bus	CNG	Urban Restricted	0.000000	0.000000
Transit Bus	CNG	Urban Unrestricted	0.000073	0.000000
School Bus	Gasoline	Off-Network	0.000017	0.000000
School Bus	Gasoline	Rural Restricted	0.000000	0.000000
School Bus	Gasoline	Rural Unrestricted	0.000173	0.000000
School Bus	Gasoline	Urban Restricted	0.000000	0.000000
School Bus	Gasoline	Urban Unrestricted	0.000121	0.000000
School Bus	Diesel	Off-Network	0.000119	0.000000
School Bus	Diesel	Rural Restricted	0.000000	0.000000
School Bus	Diesel	Rural Unrestricted	0.001231	0.000003
School Bus	Diesel	Urban Restricted	0.000000	0.000000
School Bus	Diesel	Urban Unrestricted	0.000893	0.000002
School Bus	CNG	Off-Network	0.000001	0.000000
School Bus	CNG	Rural Restricted	0.000000	0.000000
School Bus	CNG	Rural Unrestricted	0.000009	0.000000
School Bus	CNG	Urban Restricted	0.000000	0.000000
School Bus	CNG	Urban Unrestricted	0.000006	0.000000
Refuse Truck	Gasoline	Off-Network	0.000015	0.000000
Refuse Truck	Gasoline	Rural Restricted	0.000000	0.000000
Refuse Truck	Gasoline	Rural Unrestricted	0.000097	0.000000
Refuse Truck	Gasoline	Urban Restricted	0.000000	0.000000
Refuse Truck	Gasoline	Urban Unrestricted	0.000060	0.000000
Refuse Truck	Diesel	Off-Network	0.000097	0.000000
Refuse Truck	Diesel	Rural Restricted	0.000000	0.000000
Refuse Truck	Diesel	Rural Unrestricted	0.000524	0.000001
Refuse Truck	Diesel	Urban Restricted	0.000000	0.000000
Refuse Truck	Diesel	Urban Unrestricted	0.000339	0.000001
Refuse Truck	CNG	Off-Network	0.000000	0.000000
Refuse Truck	CNG	Rural Restricted	0.000000	0.000000
Refuse Truck	CNG	Rural Unrestricted	0.000001	0.000000
Refuse Truck	CNG	Urban Restricted	0.000000	0.000000

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Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2011 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Refuse Truck	CNG	Urban Unrestricted	0.000001	0.000000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.005005	0.000014
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.028807	0.000079
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.017402	0.000048
Single Unit Short-haul Truck	Diesel	Off-Network	0.003227	0.000009
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.021110	0.000058
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.013551	0.000037
Single Unit Short-haul Truck	CNG	Off-Network	0.000012	0.000000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.000000	0.000000
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.000073	0.000000
Single Unit Short-haul Truck	CNG	Urban Restricted	0.000000	0.000000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.000050	0.000000
Single Unit Long-haul Truck	Gasoline	Off-Network	0.000304	0.000001
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.001877	0.000005
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.001215	0.000003
Single Unit Long-haul Truck	Diesel	Off-Network	0.000193	0.000001
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.001303	0.000004
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.000898	0.000002
Single Unit Long-haul Truck	CNG	Off-Network	0.000001	0.000000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.000000	0.000000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.000004	0.000000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.000000	0.000000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.000003	0.000000
Motor Home	Gasoline	Off-Network	0.000062	0.000000
Motor Home	Gasoline	Rural Restricted	0.000000	0.000000
Motor Home	Gasoline	Rural Unrestricted	0.004083	0.000011
Motor Home	Gasoline	Urban Restricted	0.000000	0.000000
Motor Home	Gasoline	Urban Unrestricted	0.002501	0.000007
Motor Home	Diesel	Off-Network	0.000004	0.000000
Motor Home	Diesel	Rural Restricted	0.000000	0.000000
Motor Home	Diesel	Rural Unrestricted	0.000559	0.000002
Motor Home	Diesel	Urban Restricted	0.000000	0.000000
Motor Home	Diesel	Urban Unrestricted	0.000367	0.000001
Motor Home	CNG	Off-Network	0.000000	0.000000
Motor Home	CNG	Rural Restricted	0.000000	0.000000
Motor Home	CNG	Rural Unrestricted	0.000000	0.000000
Motor Home	CNG	Urban Restricted	0.000000	0.000000
Motor Home	CNG	Urban Unrestricted	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Off-Network	0.000001	0.000000
Combination Short-haul Truck	Gasoline	Rural Restricted	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.000008	0.000000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.000007	0.000000
Combination Short-haul Truck	Diesel	Off-Network	0.000547	0.000001
Combination Short-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.005467	0.000015
Combination Short-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.004742	0.000013

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Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2011 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Combination Short-haul Truck	CNG	Off-Network	0.000002	0.000000
Combination Short-haul Truck	CNG	Rural Restricted	0.000000	0.000000
Combination Short-haul Truck	CNG	Rural Unrestricted	0.000013	0.000000
Combination Short-haul Truck	CNG	Urban Restricted	0.000000	0.000000
Combination Short-haul Truck	CNG	Urban Unrestricted	0.000012	0.000000
Combination Long-haul Truck	Diesel	Off-Network	0.000447	0.000001
Combination Long-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.015211	0.000042
Combination Long-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.011534	0.000032
ALL (Total)	ALL (Total)	ALL (Total)	2.010200	0.005507
Motorcycle	ALL	ALL	0.011531	0.000032
Passenger Car	ALL	ALL	0.742935	0.002035
Passenger Truck	ALL	ALL	0.992708	0.002720
Light Commercial Truck	ALL	ALL	0.109060	0.000299
Intercity Bus	ALL	ALL	0.007299	0.000020
Transit Bus	ALL	ALL	0.002361	0.000006
School Bus	ALL	ALL	0.002569	0.000007
Refuse Truck	ALL	ALL	0.001133	0.000003
Single Unit Short-haul Truck	ALL	ALL	0.089238	0.000244
Single Unit Long-haul Truck	ALL	ALL	0.005798	0.000016
Motor Home	ALL	ALL	0.007577	0.000021
Combination Short-haul Truck	ALL	ALL	0.010798	0.000030
Combination Long-haul Truck	ALL	ALL	0.027192	0.000074
ALL (Total)	ALL (Total)	ALL (Total)	2.010200	0.005507
ALL	Gasoline	ALL	1.908501	0.005229
ALL	Diesel	ALL	0.100199	0.000275
ALL	CNG	ALL	0.000834	0.000002
ALL	Ethanol (E-85)	ALL	0.000666	0.000002
ALL (Total)	ALL (Total)	ALL (Total)	2.010200	0.005507
ALL	ALL	Off-Network	0.192070	0.000526
ALL	ALL	Rural Restricted	0.000000	0.000000
ALL	ALL	Rural Unrestricted	1.017603	0.002788
ALL	ALL	Urban Restricted	0.000000	0.000000
ALL	ALL	Urban Unrestricted	0.800526	0.002193
ALL (Total)	ALL (Total)	ALL (Total)	2.010200	0.005507

**Table A8.2. 2018 Onroad SO₂ Emissions: tons per year (tpy) and tons per day (tpd)
Partial Oneida County SO₂ Nonattainment Area**

Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2018 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Motorcycle	Gasoline	Off-Network	0.000049	0.000000
Motorcycle	Gasoline	Rural Restricted	0.000000	0.000000
Motorcycle	Gasoline	Rural Unrestricted	0.003860	0.000011
Motorcycle	Gasoline	Urban Restricted	0.000000	0.000000
Motorcycle	Gasoline	Urban Unrestricted	0.002645	0.000007
Passenger Car	Gasoline	Off-Network	0.033646	0.000092
Passenger Car	Gasoline	Rural Restricted	0.000000	0.000000
Passenger Car	Gasoline	Rural Unrestricted	0.146482	0.000401
Passenger Car	Gasoline	Urban Restricted	0.000000	0.000000
Passenger Car	Gasoline	Urban Unrestricted	0.145857	0.000400
Passenger Car	Diesel	Off-Network	0.000064	0.000000
Passenger Car	Diesel	Rural Restricted	0.000000	0.000000
Passenger Car	Diesel	Rural Unrestricted	0.000334	0.000001
Passenger Car	Diesel	Urban Restricted	0.000000	0.000000
Passenger Car	Diesel	Urban Unrestricted	0.000332	0.000001
Passenger Car	Ethanol (E-85)	Off-Network	0.000014	0.000000
Passenger Car	Ethanol (E-85)	Rural Restricted	0.000000	0.000000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.000062	0.000000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.000000	0.000000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.000062	0.000000
Passenger Truck	Gasoline	Off-Network	0.052560	0.000144
Passenger Truck	Gasoline	Rural Restricted	0.000000	0.000000
Passenger Truck	Gasoline	Rural Unrestricted	0.287490	0.000788
Passenger Truck	Gasoline	Urban Restricted	0.000000	0.000000
Passenger Truck	Gasoline	Urban Unrestricted	0.199589	0.000547
Passenger Truck	Diesel	Off-Network	0.000549	0.000002
Passenger Truck	Diesel	Rural Restricted	0.000000	0.000000
Passenger Truck	Diesel	Rural Unrestricted	0.003997	0.000011
Passenger Truck	Diesel	Urban Restricted	0.000000	0.000000
Passenger Truck	Diesel	Urban Unrestricted	0.002850	0.000008
Passenger Truck	Ethanol (E-85)	Off-Network	0.000093	0.000000
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.000000	0.000000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.000497	0.000001
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.000000	0.000000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.000345	0.000001
Light Commercial Truck	Gasoline	Off-Network	0.006180	0.000017
Light Commercial Truck	Gasoline	Rural Restricted	0.000000	0.000000
Light Commercial Truck	Gasoline	Rural Unrestricted	0.030873	0.000085
Light Commercial Truck	Gasoline	Urban Restricted	0.000000	0.000000
Light Commercial Truck	Gasoline	Urban Unrestricted	0.027579	0.000076
Light Commercial Truck	Diesel	Off-Network	0.000132	0.000000
Light Commercial Truck	Diesel	Rural Restricted	0.000000	0.000000
Light Commercial Truck	Diesel	Rural Unrestricted	0.000919	0.000003
Light Commercial Truck	Diesel	Urban Restricted	0.000000	0.000000
Light Commercial Truck	Diesel	Urban Unrestricted	0.000836	0.000002
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.000011	0.000000
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.000000	0.000000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.000050	0.000000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.000000	0.000000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.000045	0.000000
Intercity Bus	Gasoline	Off-Network	0.000157	0.000000
Intercity Bus	Gasoline	Rural Restricted	0.000000	0.000000
Intercity Bus	Gasoline	Rural Unrestricted	0.001086	0.000003

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Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2018 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Intercity Bus	Gasoline	Urban Restricted	0.000000	0.000000
Intercity Bus	Gasoline	Urban Unrestricted	0.000871	0.000002
Intercity Bus	Diesel	Off-Network	0.000353	0.000001
Intercity Bus	Diesel	Rural Restricted	0.000000	0.000000
Intercity Bus	Diesel	Rural Unrestricted	0.002326	0.000006
Intercity Bus	Diesel	Urban Restricted	0.000000	0.000000
Intercity Bus	Diesel	Urban Unrestricted	0.001954	0.000005
Intercity Bus	CNG	Off-Network	0.000057	0.000000
Intercity Bus	CNG	Rural Restricted	0.000000	0.000000
Intercity Bus	CNG	Rural Unrestricted	0.000280	0.000001
Intercity Bus	CNG	Urban Restricted	0.000000	0.000000
Intercity Bus	CNG	Urban Unrestricted	0.000241	0.000001
Transit Bus	Gasoline	Off-Network	0.000044	0.000000
Transit Bus	Gasoline	Rural Restricted	0.000000	0.000000
Transit Bus	Gasoline	Rural Unrestricted	0.000410	0.000001
Transit Bus	Gasoline	Urban Restricted	0.000000	0.000000
Transit Bus	Gasoline	Urban Unrestricted	0.000346	0.000001
Transit Bus	Diesel	Off-Network	0.000084	0.000000
Transit Bus	Diesel	Rural Restricted	0.000000	0.000000
Transit Bus	Diesel	Rural Unrestricted	0.000760	0.000002
Transit Bus	Diesel	Urban Restricted	0.000000	0.000000
Transit Bus	Diesel	Urban Unrestricted	0.000669	0.000002
Transit Bus	CNG	Off-Network	0.000015	0.000000
Transit Bus	CNG	Rural Restricted	0.000000	0.000000
Transit Bus	CNG	Rural Unrestricted	0.000094	0.000000
Transit Bus	CNG	Urban Restricted	0.000000	0.000000
Transit Bus	CNG	Urban Unrestricted	0.000084	0.000000
School Bus	Gasoline	Off-Network	0.000007	0.000000
School Bus	Gasoline	Rural Restricted	0.000000	0.000000
School Bus	Gasoline	Rural Unrestricted	0.000080	0.000000
School Bus	Gasoline	Urban Restricted	0.000000	0.000000
School Bus	Gasoline	Urban Unrestricted	0.000055	0.000000
School Bus	Diesel	Off-Network	0.000106	0.000000
School Bus	Diesel	Rural Restricted	0.000000	0.000000
School Bus	Diesel	Rural Unrestricted	0.001238	0.000003
School Bus	Diesel	Urban Restricted	0.000000	0.000000
School Bus	Diesel	Urban Unrestricted	0.000868	0.000002
School Bus	CNG	Off-Network	0.000002	0.000000
School Bus	CNG	Rural Restricted	0.000000	0.000000
School Bus	CNG	Rural Unrestricted	0.000019	0.000000
School Bus	CNG	Urban Restricted	0.000000	0.000000
School Bus	CNG	Urban Unrestricted	0.000013	0.000000
Refuse Truck	Gasoline	Off-Network	0.000001	0.000000
Refuse Truck	Gasoline	Rural Restricted	0.000000	0.000000
Refuse Truck	Gasoline	Rural Unrestricted	0.000004	0.000000
Refuse Truck	Gasoline	Urban Restricted	0.000000	0.000000
Refuse Truck	Gasoline	Urban Unrestricted	0.000003	0.000000
Refuse Truck	Diesel	Off-Network	0.000066	0.000000
Refuse Truck	Diesel	Rural Restricted	0.000000	0.000000
Refuse Truck	Diesel	Rural Unrestricted	0.000355	0.000001
Refuse Truck	Diesel	Urban Restricted	0.000000	0.000000
Refuse Truck	Diesel	Urban Unrestricted	0.000226	0.000001
Refuse Truck	CNG	Off-Network	0.000005	0.000000
Refuse Truck	CNG	Rural Restricted	0.000000	0.000000
Refuse Truck	CNG	Rural Unrestricted	0.000015	0.000000
Refuse Truck	CNG	Urban Restricted	0.000000	0.000000

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Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2018 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Refuse Truck	CNG	Urban Unrestricted	0.000010	0.000000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.003220	0.000009
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.016866	0.000046
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.010168	0.000028
Single Unit Short-haul Truck	Diesel	Off-Network	0.002908	0.000008
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.018940	0.000052
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.011795	0.000032
Single Unit Short-haul Truck	CNG	Off-Network	0.000079	0.000000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.000000	0.000000
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.000323	0.000001
Single Unit Short-haul Truck	CNG	Urban Restricted	0.000000	0.000000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.000215	0.000001
Single Unit Long-haul Truck	Gasoline	Off-Network	0.000200	0.000001
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.001082	0.000003
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.000700	0.000002
Single Unit Long-haul Truck	Diesel	Off-Network	0.000172	0.000000
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.001171	0.000003
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.000780	0.000002
Single Unit Long-haul Truck	CNG	Off-Network	0.000006	0.000000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.000000	0.000000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.000026	0.000000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.000000	0.000000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.000018	0.000000
Motor Home	Gasoline	Off-Network	0.000032	0.000000
Motor Home	Gasoline	Rural Restricted	0.000000	0.000000
Motor Home	Gasoline	Rural Unrestricted	0.002046	0.000006
Motor Home	Gasoline	Urban Restricted	0.000000	0.000000
Motor Home	Gasoline	Urban Unrestricted	0.001236	0.000003
Motor Home	Diesel	Off-Network	0.000003	0.000000
Motor Home	Diesel	Rural Restricted	0.000000	0.000000
Motor Home	Diesel	Rural Unrestricted	0.000379	0.000001
Motor Home	Diesel	Urban Restricted	0.000000	0.000000
Motor Home	Diesel	Urban Unrestricted	0.000245	0.000001
Motor Home	CNG	Off-Network	0.000000	0.000000
Motor Home	CNG	Rural Restricted	0.000000	0.000000
Motor Home	CNG	Rural Unrestricted	0.000000	0.000000
Motor Home	CNG	Urban Restricted	0.000000	0.000000
Motor Home	CNG	Urban Unrestricted	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Off-Network	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Rural Restricted	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.000001	0.000000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.000001	0.000000
Combination Short-haul Truck	Diesel	Off-Network	0.000457	0.000001
Combination Short-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.004487	0.000012
Combination Short-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.003884	0.000011

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Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2018 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Combination Short-haul Truck	CNG	Off-Network	0.000020	0.000000
Combination Short-haul Truck	CNG	Rural Restricted	0.000000	0.000000
Combination Short-haul Truck	CNG	Rural Unrestricted	0.000103	0.000000
Combination Short-haul Truck	CNG	Urban Restricted	0.000000	0.000000
Combination Short-haul Truck	CNG	Urban Unrestricted	0.000091	0.000000
Combination Long-haul Truck	Diesel	Off-Network	0.000450	0.000001
Combination Long-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.014645	0.000040
Combination Long-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.011145	0.000031
ALL (Total)	ALL (Total)	ALL (Total)	1.068801	0.002928
Motorcycle	ALL	ALL	0.006555	0.000018
Passenger Car	ALL	ALL	0.326852	0.000895
Passenger Truck	ALL	ALL	0.547970	0.001501
Light Commercial Truck	ALL	ALL	0.066624	0.000183
Intercity Bus	ALL	ALL	0.007325	0.000020
Transit Bus	ALL	ALL	0.002506	0.000007
School Bus	ALL	ALL	0.002389	0.000007
Refuse Truck	ALL	ALL	0.000685	0.000002
Single Unit Short-haul Truck	ALL	ALL	0.064515	0.000177
Single Unit Long-haul Truck	ALL	ALL	0.004155	0.000011
Motor Home	ALL	ALL	0.003941	0.000011
Combination Short-haul Truck	ALL	ALL	0.009045	0.000025
Combination Long-haul Truck	ALL	ALL	0.026240	0.000072
ALL (Total)	ALL (Total)	ALL (Total)	1.068801	0.002928
ALL	Gasoline	ALL	0.975424	0.002672
ALL	Diesel	ALL	0.090480	0.000248
ALL	CNG	ALL	0.001719	0.000005
ALL	Ethanol (E-85)	ALL	0.001178	0.000003
ALL (Total)	ALL (Total)	ALL (Total)	1.068801	0.002928
ALL	ALL	Off-Network	0.101746	0.000279
ALL	ALL	Rural Restricted	0.000000	0.000000
ALL	ALL	Rural Unrestricted	0.541300	0.001483
ALL	ALL	Urban Restricted	0.000000	0.000000
ALL	ALL	Urban Unrestricted	0.425755	0.001166
ALL (Total)	ALL (Total)	ALL (Total)	1.068801	0.002928

**Table A8.3. 2025 Onroad SO₂ Emissions: tons per year (tpy) and tons per day (tpd)
Partial Oneida County SO₂ Nonattainment Area**

Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2025 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Motorcycle	Gasoline	Off-Network	0.000031	0.000000
Motorcycle	Gasoline	Rural Restricted	0.000000	0.000000
Motorcycle	Gasoline	Rural Unrestricted	0.002480	0.000007
Motorcycle	Gasoline	Urban Restricted	0.000000	0.000000
Motorcycle	Gasoline	Urban Unrestricted	0.001695	0.000005
Passenger Car	Gasoline	Off-Network	0.019802	0.000054
Passenger Car	Gasoline	Rural Restricted	0.000000	0.000000
Passenger Car	Gasoline	Rural Unrestricted	0.081247	0.000223
Passenger Car	Gasoline	Urban Restricted	0.000000	0.000000
Passenger Car	Gasoline	Urban Unrestricted	0.080771	0.000221
Passenger Car	Diesel	Off-Network	0.000070	0.000000
Passenger Car	Diesel	Rural Restricted	0.000000	0.000000
Passenger Car	Diesel	Rural Unrestricted	0.000341	0.000001
Passenger Car	Diesel	Urban Restricted	0.000000	0.000000
Passenger Car	Diesel	Urban Unrestricted	0.000339	0.000001
Passenger Car	Ethanol (E-85)	Off-Network	0.000015	0.000000
Passenger Car	Ethanol (E-85)	Rural Restricted	0.000000	0.000000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.000063	0.000000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.000000	0.000000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.000063	0.000000
Passenger Truck	Gasoline	Off-Network	0.029661	0.000081
Passenger Truck	Gasoline	Rural Restricted	0.000000	0.000000
Passenger Truck	Gasoline	Rural Unrestricted	0.151578	0.000415
Passenger Truck	Gasoline	Urban Restricted	0.000000	0.000000
Passenger Truck	Gasoline	Urban Unrestricted	0.105032	0.000288
Passenger Truck	Diesel	Off-Network	0.000746	0.000002
Passenger Truck	Diesel	Rural Restricted	0.000000	0.000000
Passenger Truck	Diesel	Rural Unrestricted	0.004894	0.000013
Passenger Truck	Diesel	Urban Restricted	0.000000	0.000000
Passenger Truck	Diesel	Urban Unrestricted	0.003434	0.000009
Passenger Truck	Ethanol (E-85)	Off-Network	0.000092	0.000000
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.000000	0.000000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.000473	0.000001
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.000000	0.000000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.000328	0.000001
Light Commercial Truck	Gasoline	Off-Network	0.003593	0.000010
Light Commercial Truck	Gasoline	Rural Restricted	0.000000	0.000000
Light Commercial Truck	Gasoline	Rural Unrestricted	0.016769	0.000046
Light Commercial Truck	Gasoline	Urban Restricted	0.000000	0.000000
Light Commercial Truck	Gasoline	Urban Unrestricted	0.014916	0.000041
Light Commercial Truck	Diesel	Off-Network	0.000117	0.000000
Light Commercial Truck	Diesel	Rural Restricted	0.000000	0.000000
Light Commercial Truck	Diesel	Rural Unrestricted	0.000749	0.000002
Light Commercial Truck	Diesel	Urban Restricted	0.000000	0.000000
Light Commercial Truck	Diesel	Urban Unrestricted	0.000673	0.000002
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.000012	0.000000
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.000000	0.000000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.000055	0.000000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.000000	0.000000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.000049	0.000000
Intercity Bus	Gasoline	Off-Network	0.000123	0.000000
Intercity Bus	Gasoline	Rural Restricted	0.000000	0.000000
Intercity Bus	Gasoline	Rural Unrestricted	0.000814	0.000002

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Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2025 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Intercity Bus	Gasoline	Urban Restricted	0.000000	0.000000
Intercity Bus	Gasoline	Urban Unrestricted	0.000648	0.000002
Intercity Bus	Diesel	Off-Network	0.000360	0.000001
Intercity Bus	Diesel	Rural Restricted	0.000000	0.000000
Intercity Bus	Diesel	Rural Unrestricted	0.002373	0.000007
Intercity Bus	Diesel	Urban Restricted	0.000000	0.000000
Intercity Bus	Diesel	Urban Unrestricted	0.001970	0.000005
Intercity Bus	CNG	Off-Network	0.000068	0.000000
Intercity Bus	CNG	Rural Restricted	0.000000	0.000000
Intercity Bus	CNG	Rural Unrestricted	0.000274	0.000001
Intercity Bus	CNG	Urban Restricted	0.000000	0.000000
Intercity Bus	CNG	Urban Unrestricted	0.000232	0.000001
Transit Bus	Gasoline	Off-Network	0.000028	0.000000
Transit Bus	Gasoline	Rural Restricted	0.000000	0.000000
Transit Bus	Gasoline	Rural Unrestricted	0.000256	0.000001
Transit Bus	Gasoline	Urban Restricted	0.000000	0.000000
Transit Bus	Gasoline	Urban Unrestricted	0.000215	0.000001
Transit Bus	Diesel	Off-Network	0.000082	0.000000
Transit Bus	Diesel	Rural Restricted	0.000000	0.000000
Transit Bus	Diesel	Rural Unrestricted	0.000751	0.000002
Transit Bus	Diesel	Urban Restricted	0.000000	0.000000
Transit Bus	Diesel	Urban Unrestricted	0.000654	0.000002
Transit Bus	CNG	Off-Network	0.000016	0.000000
Transit Bus	CNG	Rural Restricted	0.000000	0.000000
Transit Bus	CNG	Rural Unrestricted	0.000088	0.000000
Transit Bus	CNG	Urban Restricted	0.000000	0.000000
Transit Bus	CNG	Urban Unrestricted	0.000078	0.000000
School Bus	Gasoline	Off-Network	0.000003	0.000000
School Bus	Gasoline	Rural Restricted	0.000000	0.000000
School Bus	Gasoline	Rural Unrestricted	0.000036	0.000000
School Bus	Gasoline	Urban Restricted	0.000000	0.000000
School Bus	Gasoline	Urban Unrestricted	0.000025	0.000000
School Bus	Diesel	Off-Network	0.000103	0.000000
School Bus	Diesel	Rural Restricted	0.000000	0.000000
School Bus	Diesel	Rural Unrestricted	0.001292	0.000004
School Bus	Diesel	Urban Restricted	0.000000	0.000000
School Bus	Diesel	Urban Unrestricted	0.000885	0.000002
School Bus	CNG	Off-Network	0.000004	0.000000
School Bus	CNG	Rural Restricted	0.000000	0.000000
School Bus	CNG	Rural Unrestricted	0.000027	0.000000
School Bus	CNG	Urban Restricted	0.000000	0.000000
School Bus	CNG	Urban Unrestricted	0.000019	0.000000
Refuse Truck	Gasoline	Off-Network	0.000000	0.000000
Refuse Truck	Gasoline	Rural Restricted	0.000000	0.000000
Refuse Truck	Gasoline	Rural Unrestricted	0.000001	0.000000
Refuse Truck	Gasoline	Urban Restricted	0.000000	0.000000
Refuse Truck	Gasoline	Urban Unrestricted	0.000000	0.000000
Refuse Truck	Diesel	Off-Network	0.000063	0.000000
Refuse Truck	Diesel	Rural Restricted	0.000000	0.000000
Refuse Truck	Diesel	Rural Unrestricted	0.000345	0.000001
Refuse Truck	Diesel	Urban Restricted	0.000000	0.000000
Refuse Truck	Diesel	Urban Unrestricted	0.000214	0.000001
Refuse Truck	CNG	Off-Network	0.000039	0.000000
Refuse Truck	CNG	Rural Restricted	0.000000	0.000000
Refuse Truck	CNG	Rural Unrestricted	0.000112	0.000000
Refuse Truck	CNG	Urban Restricted	0.000000	0.000000

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Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2025 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Refuse Truck	CNG	Urban Unrestricted	0.000070	0.000000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.002112	0.000006
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.010662	0.000029
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.006421	0.000018
Single Unit Short-haul Truck	Diesel	Off-Network	0.002907	0.000008
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.018987	0.000052
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.011683	0.000032
Single Unit Short-haul Truck	CNG	Off-Network	0.000130	0.000000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.000000	0.000000
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.000517	0.000001
Single Unit Short-haul Truck	CNG	Urban Restricted	0.000000	0.000000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.000342	0.000001
Single Unit Long-haul Truck	Gasoline	Off-Network	0.000127	0.000000
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.000675	0.000002
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.000435	0.000001
Single Unit Long-haul Truck	Diesel	Off-Network	0.000173	0.000000
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.001186	0.000003
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.000785	0.000002
Single Unit Long-haul Truck	CNG	Off-Network	0.000009	0.000000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.000000	0.000000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.000035	0.000000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.000000	0.000000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.000024	0.000000
Motor Home	Gasoline	Off-Network	0.000020	0.000000
Motor Home	Gasoline	Rural Restricted	0.000000	0.000000
Motor Home	Gasoline	Rural Unrestricted	0.001330	0.000004
Motor Home	Gasoline	Urban Restricted	0.000000	0.000000
Motor Home	Gasoline	Urban Unrestricted	0.000809	0.000002
Motor Home	Diesel	Off-Network	0.000004	0.000000
Motor Home	Diesel	Rural Restricted	0.000000	0.000000
Motor Home	Diesel	Rural Unrestricted	0.000509	0.000001
Motor Home	Diesel	Urban Restricted	0.000000	0.000000
Motor Home	Diesel	Urban Unrestricted	0.000326	0.000001
Motor Home	CNG	Off-Network	0.000000	0.000000
Motor Home	CNG	Rural Restricted	0.000000	0.000000
Motor Home	CNG	Rural Unrestricted	0.000000	0.000000
Motor Home	CNG	Urban Restricted	0.000000	0.000000
Motor Home	CNG	Urban Unrestricted	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Off-Network	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Rural Restricted	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.000000	0.000000
Combination Short-haul Truck	Diesel	Off-Network	0.000511	0.000001
Combination Short-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.004943	0.000014
Combination Short-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.004254	0.000012

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Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2025 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Combination Short-haul Truck	CNG	Off-Network	0.000040	0.000000
Combination Short-haul Truck	CNG	Rural Restricted	0.000000	0.000000
Combination Short-haul Truck	CNG	Rural Unrestricted	0.000199	0.000001
Combination Short-haul Truck	CNG	Urban Restricted	0.000000	0.000000
Combination Short-haul Truck	CNG	Urban Unrestricted	0.000174	0.000000
Combination Long-haul Truck	Diesel	Off-Network	0.000456	0.000001
Combination Long-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.014210	0.000039
Combination Long-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.010810	0.000030
ALL (Total)	ALL (Total)	ALL (Total)	0.628165	0.001721
Motorcycle	ALL	ALL	0.004207	0.000012
Passenger Car	ALL	ALL	0.182711	0.000501
Passenger Truck	ALL	ALL	0.296239	0.000812
Light Commercial Truck	ALL	ALL	0.036933	0.000101
Intercity Bus	ALL	ALL	0.006861	0.000019
Transit Bus	ALL	ALL	0.002169	0.000006
School Bus	ALL	ALL	0.002394	0.000007
Refuse Truck	ALL	ALL	0.000845	0.000002
Single Unit Short-haul Truck	ALL	ALL	0.053761	0.000147
Single Unit Long-haul Truck	ALL	ALL	0.003449	0.000009
Motor Home	ALL	ALL	0.002998	0.000008
Combination Short-haul Truck	ALL	ALL	0.010122	0.000028
Combination Long-haul Truck	ALL	ALL	0.025476	0.000070
ALL (Total)	ALL (Total)	ALL (Total)	0.628165	0.001721
ALL	Gasoline	ALL	0.532316	0.001458
ALL	Diesel	ALL	0.092200	0.000253
ALL	CNG	ALL	0.002497	0.000007
ALL	Ethanol (E-85)	ALL	0.001152	0.000003
ALL (Total)	ALL (Total)	ALL (Total)	0.628165	0.001721
ALL	ALL	Off-Network	0.061518	0.000169
ALL	ALL	Rural Restricted	0.000000	0.000000
ALL	ALL	Rural Unrestricted	0.318272	0.000872
ALL	ALL	Urban Restricted	0.000000	0.000000
ALL	ALL	Urban Unrestricted	0.248376	0.000680
ALL (Total)	ALL (Total)	ALL (Total)	0.628165	0.001721

**Table A8.4. 2032 Onroad SO₂ Emissions: tons per year (tpy) and tons per day (tpd)
Partial Oneida County SO₂ Nonattainment Area**

Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2032 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Motorcycle	Gasoline	Off-Network	0.000033	0.000000
Motorcycle	Gasoline	Rural Restricted	0.000000	0.000000
Motorcycle	Gasoline	Rural Unrestricted	0.002609	0.000007
Motorcycle	Gasoline	Urban Restricted	0.000000	0.000000
Motorcycle	Gasoline	Urban Unrestricted	0.001776	0.000005
Passenger Car	Gasoline	Off-Network	0.019239	0.000053
Passenger Car	Gasoline	Rural Restricted	0.000000	0.000000
Passenger Car	Gasoline	Rural Unrestricted	0.075099	0.000205
Passenger Car	Gasoline	Urban Restricted	0.000000	0.000000
Passenger Car	Gasoline	Urban Unrestricted	0.074237	0.000203
Passenger Car	Diesel	Off-Network	0.000110	0.000000
Passenger Car	Diesel	Rural Restricted	0.000000	0.000000
Passenger Car	Diesel	Rural Unrestricted	0.000497	0.000001
Passenger Car	Diesel	Urban Restricted	0.000000	0.000000
Passenger Car	Diesel	Urban Unrestricted	0.000491	0.000001
Passenger Car	Ethanol (E-85)	Off-Network	0.000013	0.000000
Passenger Car	Ethanol (E-85)	Rural Restricted	0.000000	0.000000
Passenger Car	Ethanol (E-85)	Rural Unrestricted	0.000053	0.000000
Passenger Car	Ethanol (E-85)	Urban Restricted	0.000000	0.000000
Passenger Car	Ethanol (E-85)	Urban Unrestricted	0.000052	0.000000
Passenger Truck	Gasoline	Off-Network	0.027491	0.000075
Passenger Truck	Gasoline	Rural Restricted	0.000000	0.000000
Passenger Truck	Gasoline	Rural Unrestricted	0.133380	0.000364
Passenger Truck	Gasoline	Urban Restricted	0.000000	0.000000
Passenger Truck	Gasoline	Urban Unrestricted	0.091907	0.000251
Passenger Truck	Diesel	Off-Network	0.000878	0.000002
Passenger Truck	Diesel	Rural Restricted	0.000000	0.000000
Passenger Truck	Diesel	Rural Unrestricted	0.005474	0.000015
Passenger Truck	Diesel	Urban Restricted	0.000000	0.000000
Passenger Truck	Diesel	Urban Unrestricted	0.003811	0.000010
Passenger Truck	Ethanol (E-85)	Off-Network	0.000080	0.000000
Passenger Truck	Ethanol (E-85)	Rural Restricted	0.000000	0.000000
Passenger Truck	Ethanol (E-85)	Rural Unrestricted	0.000386	0.000001
Passenger Truck	Ethanol (E-85)	Urban Restricted	0.000000	0.000000
Passenger Truck	Ethanol (E-85)	Urban Unrestricted	0.000266	0.000001
Light Commercial Truck	Gasoline	Off-Network	0.003296	0.000009
Light Commercial Truck	Gasoline	Rural Restricted	0.000000	0.000000
Light Commercial Truck	Gasoline	Rural Unrestricted	0.014472	0.000040
Light Commercial Truck	Gasoline	Urban Restricted	0.000000	0.000000
Light Commercial Truck	Gasoline	Urban Unrestricted	0.012778	0.000035
Light Commercial Truck	Diesel	Off-Network	0.000103	0.000000
Light Commercial Truck	Diesel	Rural Restricted	0.000000	0.000000
Light Commercial Truck	Diesel	Rural Unrestricted	0.000606	0.000002
Light Commercial Truck	Diesel	Urban Restricted	0.000000	0.000000
Light Commercial Truck	Diesel	Urban Unrestricted	0.000537	0.000001
Light Commercial Truck	Ethanol (E-85)	Off-Network	0.000010	0.000000
Light Commercial Truck	Ethanol (E-85)	Rural Restricted	0.000000	0.000000
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted	0.000044	0.000000
Light Commercial Truck	Ethanol (E-85)	Urban Restricted	0.000000	0.000000
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted	0.000039	0.000000
Intercity Bus	Gasoline	Off-Network	0.000129	0.000000
Intercity Bus	Gasoline	Rural Restricted	0.000000	0.000000
Intercity Bus	Gasoline	Rural Unrestricted	0.000823	0.000002

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Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2032 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Intercity Bus	Gasoline	Urban Restricted	0.000000	0.000000
Intercity Bus	Gasoline	Urban Unrestricted	0.000652	0.000002
Intercity Bus	Diesel	Off-Network	0.000327	0.000001
Intercity Bus	Diesel	Rural Restricted	0.000000	0.000000
Intercity Bus	Diesel	Rural Unrestricted	0.002135	0.000006
Intercity Bus	Diesel	Urban Restricted	0.000000	0.000000
Intercity Bus	Diesel	Urban Unrestricted	0.001761	0.000005
Intercity Bus	CNG	Off-Network	0.000067	0.000000
Intercity Bus	CNG	Rural Restricted	0.000000	0.000000
Intercity Bus	CNG	Rural Unrestricted	0.000239	0.000001
Intercity Bus	CNG	Urban Restricted	0.000000	0.000000
Intercity Bus	CNG	Urban Unrestricted	0.000201	0.000001
Transit Bus	Gasoline	Off-Network	0.000026	0.000000
Transit Bus	Gasoline	Rural Restricted	0.000000	0.000000
Transit Bus	Gasoline	Rural Unrestricted	0.000235	0.000001
Transit Bus	Gasoline	Urban Restricted	0.000000	0.000000
Transit Bus	Gasoline	Urban Unrestricted	0.000197	0.000001
Transit Bus	Diesel	Off-Network	0.000072	0.000000
Transit Bus	Diesel	Rural Restricted	0.000000	0.000000
Transit Bus	Diesel	Rural Unrestricted	0.000664	0.000002
Transit Bus	Diesel	Urban Restricted	0.000000	0.000000
Transit Bus	Diesel	Urban Unrestricted	0.000574	0.000002
Transit Bus	CNG	Off-Network	0.000014	0.000000
Transit Bus	CNG	Rural Restricted	0.000000	0.000000
Transit Bus	CNG	Rural Unrestricted	0.000073	0.000000
Transit Bus	CNG	Urban Restricted	0.000000	0.000000
Transit Bus	CNG	Urban Unrestricted	0.000064	0.000000
School Bus	Gasoline	Off-Network	0.000002	0.000000
School Bus	Gasoline	Rural Restricted	0.000000	0.000000
School Bus	Gasoline	Rural Unrestricted	0.000023	0.000000
School Bus	Gasoline	Urban Restricted	0.000000	0.000000
School Bus	Gasoline	Urban Unrestricted	0.000015	0.000000
School Bus	Diesel	Off-Network	0.000092	0.000000
School Bus	Diesel	Rural Restricted	0.000000	0.000000
School Bus	Diesel	Rural Unrestricted	0.001164	0.000003
School Bus	Diesel	Urban Restricted	0.000000	0.000000
School Bus	Diesel	Urban Unrestricted	0.000788	0.000002
School Bus	CNG	Off-Network	0.000004	0.000000
School Bus	CNG	Rural Restricted	0.000000	0.000000
School Bus	CNG	Rural Unrestricted	0.000028	0.000000
School Bus	CNG	Urban Restricted	0.000000	0.000000
School Bus	CNG	Urban Unrestricted	0.000020	0.000000
Refuse Truck	Gasoline	Off-Network	0.000000	0.000000
Refuse Truck	Gasoline	Rural Restricted	0.000000	0.000000
Refuse Truck	Gasoline	Rural Unrestricted	0.000000	0.000000
Refuse Truck	Gasoline	Urban Restricted	0.000000	0.000000
Refuse Truck	Gasoline	Urban Unrestricted	0.000000	0.000000
Refuse Truck	Diesel	Off-Network	0.000058	0.000000
Refuse Truck	Diesel	Rural Restricted	0.000000	0.000000
Refuse Truck	Diesel	Rural Unrestricted	0.000330	0.000001
Refuse Truck	Diesel	Urban Restricted	0.000000	0.000000
Refuse Truck	Diesel	Urban Unrestricted	0.000202	0.000001
Refuse Truck	CNG	Off-Network	0.000049	0.000000
Refuse Truck	CNG	Rural Restricted	0.000000	0.000000
Refuse Truck	CNG	Rural Unrestricted	0.000140	0.000000
Refuse Truck	CNG	Urban Restricted	0.000000	0.000000

Redesignation Request and Maintenance Plan for the Partial Oneida County 2010 SO₂ NAAQS NAA

Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2032 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Refuse Truck	CNG	Urban Unrestricted	0.000087	0.000000
Single Unit Short-haul Truck	Gasoline	Off-Network	0.002077	0.000006
Single Unit Short-haul Truck	Gasoline	Rural Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted	0.010357	0.000028
Single Unit Short-haul Truck	Gasoline	Urban Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted	0.006215	0.000017
Single Unit Short-haul Truck	Diesel	Off-Network	0.002738	0.000007
Single Unit Short-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Diesel	Rural Unrestricted	0.017833	0.000049
Single Unit Short-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Single Unit Short-haul Truck	Diesel	Urban Unrestricted	0.010910	0.000030
Single Unit Short-haul Truck	CNG	Off-Network	0.000142	0.000000
Single Unit Short-haul Truck	CNG	Rural Restricted	0.000000	0.000000
Single Unit Short-haul Truck	CNG	Rural Unrestricted	0.000558	0.000002
Single Unit Short-haul Truck	CNG	Urban Restricted	0.000000	0.000000
Single Unit Short-haul Truck	CNG	Urban Unrestricted	0.000367	0.000001
Single Unit Long-haul Truck	Gasoline	Off-Network	0.000123	0.000000
Single Unit Long-haul Truck	Gasoline	Rural Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted	0.000650	0.000002
Single Unit Long-haul Truck	Gasoline	Urban Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted	0.000417	0.000001
Single Unit Long-haul Truck	Diesel	Off-Network	0.000163	0.000000
Single Unit Long-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Diesel	Rural Unrestricted	0.001113	0.000003
Single Unit Long-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Single Unit Long-haul Truck	Diesel	Urban Unrestricted	0.000732	0.000002
Single Unit Long-haul Truck	CNG	Off-Network	0.000009	0.000000
Single Unit Long-haul Truck	CNG	Rural Restricted	0.000000	0.000000
Single Unit Long-haul Truck	CNG	Rural Unrestricted	0.000036	0.000000
Single Unit Long-haul Truck	CNG	Urban Restricted	0.000000	0.000000
Single Unit Long-haul Truck	CNG	Urban Unrestricted	0.000025	0.000000
Motor Home	Gasoline	Off-Network	0.000019	0.000000
Motor Home	Gasoline	Rural Restricted	0.000000	0.000000
Motor Home	Gasoline	Rural Unrestricted	0.001463	0.000004
Motor Home	Gasoline	Urban Restricted	0.000000	0.000000
Motor Home	Gasoline	Urban Unrestricted	0.000896	0.000002
Motor Home	Diesel	Off-Network	0.000004	0.000000
Motor Home	Diesel	Rural Restricted	0.000000	0.000000
Motor Home	Diesel	Rural Unrestricted	0.000610	0.000002
Motor Home	Diesel	Urban Restricted	0.000000	0.000000
Motor Home	Diesel	Urban Unrestricted	0.000387	0.000001
Motor Home	CNG	Off-Network	0.000000	0.000000
Motor Home	CNG	Rural Restricted	0.000000	0.000000
Motor Home	CNG	Rural Unrestricted	0.000000	0.000000
Motor Home	CNG	Urban Restricted	0.000000	0.000000
Motor Home	CNG	Urban Unrestricted	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Off-Network	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Rural Restricted	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Rural Unrestricted	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Urban Restricted	0.000000	0.000000
Combination Short-haul Truck	Gasoline	Urban Unrestricted	0.000000	0.000000
Combination Short-haul Truck	Diesel	Off-Network	0.000491	0.000001
Combination Short-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Combination Short-haul Truck	Diesel	Rural Unrestricted	0.004682	0.000013
Combination Short-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Combination Short-haul Truck	Diesel	Urban Unrestricted	0.004029	0.000011

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Source Type	Fuel Type	Road Type	SO ₂ Nonattainment Area - 2032 Emissions	
			SO ₂ (tpy)	SO ₂ (tpd)
Combination Short-haul Truck	CNG	Off-Network	0.000047	0.000000
Combination Short-haul Truck	CNG	Rural Restricted	0.000000	0.000000
Combination Short-haul Truck	CNG	Rural Unrestricted	0.000231	0.000001
Combination Short-haul Truck	CNG	Urban Restricted	0.000000	0.000000
Combination Short-haul Truck	CNG	Urban Unrestricted	0.000202	0.000001
Combination Long-haul Truck	Diesel	Off-Network	0.000423	0.000001
Combination Long-haul Truck	Diesel	Rural Restricted	0.000000	0.000000
Combination Long-haul Truck	Diesel	Rural Unrestricted	0.012831	0.000035
Combination Long-haul Truck	Diesel	Urban Restricted	0.000000	0.000000
Combination Long-haul Truck	Diesel	Urban Unrestricted	0.009816	0.000027
ALL (Total)	ALL (Total)	ALL (Total)	0.571620	0.001562
Motorcycle	ALL	ALL	0.004418	0.000012
Passenger Car	ALL	ALL	0.169792	0.000464
Passenger Truck	ALL	ALL	0.263672	0.000720
Light Commercial Truck	ALL	ALL	0.031885	0.000087
Intercity Bus	ALL	ALL	0.006335	0.000017
Transit Bus	ALL	ALL	0.001920	0.000005
School Bus	ALL	ALL	0.002136	0.000006
Refuse Truck	ALL	ALL	0.000865	0.000002
Single Unit Short-haul Truck	ALL	ALL	0.051198	0.000140
Single Unit Long-haul Truck	ALL	ALL	0.003268	0.000009
Motor Home	ALL	ALL	0.003380	0.000009
Combination Short-haul Truck	ALL	ALL	0.009682	0.000026
Combination Long-haul Truck	ALL	ALL	0.023070	0.000063
ALL (Total)	ALL (Total)	ALL (Total)	0.571620	0.001562
ALL	Gasoline	ALL	0.480638	0.001313
ALL	Diesel	ALL	0.087437	0.000239
ALL	CNG	ALL	0.002603	0.000007
ALL	Ethanol (E-85)	ALL	0.000942	0.000003
ALL (Total)	ALL (Total)	ALL (Total)	0.571620	0.001562
ALL	ALL	Off-Network	0.058333	0.000159
ALL	ALL	Rural Restricted	0.000000	0.000000
ALL	ALL	Rural Unrestricted	0.288837	0.000789
ALL	ALL	Urban Restricted	0.000000	0.000000
ALL	ALL	Urban Unrestricted	0.224449	0.000613
ALL (Total)	ALL (Total)	ALL (Total)	0.571620	0.001562

Redesignation Request and Maintenance Plan for the Partial Oneida County 2010 SO₂ NAAQS NAA

Table A8.5. Vehicle Activity Data Output from the MOVES2014b Model for Years 2011, 2018, 2025 and 2032 for Partial Oneida County SO₂ Nonattainment Area

Source Type	Fuel Type	Road Type	Partial Oneida County SO ₂ Nonattainment Area							
			Vehicle Population				Annual Vehicle-Miles of Travel			
			2011	2018	2025	2032	2011	2018	2025	2032
Motorcycle	Gasoline	Off-Network	681	624	706	753				
Motorcycle	Gasoline	Rural Restricted					0	0	0	0
Motorcycle	Gasoline	Rural Unrestricted					876,744	843,099	947,539	993,956
Motorcycle	Gasoline	Urban Restricted					0	0	0	0
Motorcycle	Gasoline	Urban Unrestricted					618,805	610,019	685,162	715,224
Passenger Car	Gasoline	Off-Network	8,722	6,844	7,738	8,207				
Passenger Car	Gasoline	Rural Restricted					0	0	0	0
Passenger Car	Gasoline	Rural Unrestricted					47,788,400	38,659,700	43,959,900	47,777,600
Passenger Car	Gasoline	Urban Restricted					0	0	0	0
Passenger Car	Gasoline	Urban Unrestricted					44,299,900	36,738,400	41,749,400	45,154,100
Passenger Car	Diesel	Off-Network	39	46	61	103				
Passenger Car	Diesel	Rural Restricted					0	0	0	0
Passenger Car	Diesel	Rural Unrestricted					199,093	288,566	352,811	654,902
Passenger Car	Diesel	Urban Restricted					0	0	0	0
Passenger Car	Diesel	Urban Unrestricted					184,559	274,226	335,069	618,941
Passenger Car	Ethanol (E-85)	Off-Network	3	4	5	5				
Passenger Car	Ethanol (E-85)	Rural Restricted					0	0	0	0
Passenger Car	Ethanol (E-85)	Rural Unrestricted					16,779	24,858	29,110	28,999
Passenger Car	Ethanol (E-85)	Urban Restricted					0	0	0	0
Passenger Car	Ethanol (E-85)	Urban Unrestricted					15,554	23,623	27,646	27,406
Passenger Truck	Gasoline	Off-Network	7,254	8,254	9,015	8,966				
Passenger Truck	Gasoline	Rural Restricted					0	0	0	0
Passenger Truck	Gasoline	Rural Unrestricted					53,469,800	59,265,700	65,069,200	65,350,100
Passenger Truck	Gasoline	Urban Restricted					0	0	0	0
Passenger Truck	Gasoline	Urban Unrestricted					35,038,100	39,812,400	43,683,900	43,658,700
Passenger Truck	Diesel	Off-Network	257	273	435	573				
Passenger Truck	Diesel	Rural Restricted					0	0	0	0
Passenger Truck	Diesel	Rural Unrestricted					1,866,800	1,950,520	3,382,120	4,360,620
Passenger Truck	Diesel	Urban Restricted					0	0	0	0
Passenger Truck	Diesel	Urban Unrestricted					1,223,290	1,310,280	2,270,560	2,913,220
Passenger Truck	Ethanol (E-85)	Off-Network	9	21	25	23				
Passenger Truck	Ethanol (E-85)	Rural Restricted					0	0	0	0
Passenger Truck	Ethanol (E-85)	Rural Unrestricted					74,596	161,597	175,331	165,108
Passenger Truck	Ethanol (E-85)	Urban Restricted					0	0	0	0
Passenger Truck	Ethanol (E-85)	Urban Unrestricted					48,882	108,555	117,707	110,304
Light Commercial Truck	Gasoline	Off-Network	736	851	948	958				

Redesignation Request and Maintenance Plan for the Partial Oneida County 2010 SO₂ NAAQS NAA

Source Type	Fuel Type	Road Type	Partial Oneida County SO ₂ Nonattainment Area							
			Vehicle Population				Annual Vehicle-Miles of Travel			
			2011	2018	2025	2032	2011	2018	2025	2032
Light Commercial Truck	Gasoline	Rural Restricted					0	0	0	0
Light Commercial Truck	Gasoline	Rural Unrestricted					5,046,190	5,802,990	6,268,800	6,247,860
Light Commercial Truck	Gasoline	Urban Restricted					0	0	0	0
Light Commercial Truck	Gasoline	Urban Unrestricted					4,225,740	4,981,660	5,378,210	5,334,130
Light Commercial Truck	Diesel	Off-Network	65	60	60	59				
Light Commercial Truck	Diesel	Rural Restricted					0	0	0	0
Light Commercial Truck	Diesel	Rural Unrestricted					442,193	375,231	389,520	401,641
Light Commercial Truck	Diesel	Urban Restricted					0	0	0	0
Light Commercial Truck	Diesel	Urban Unrestricted					370,298	322,123	334,182	342,903
Light Commercial Truck	Ethanol (E-85)	Off-Network	1	2	3	3				
Light Commercial Truck	Ethanol (E-85)	Rural Restricted					0	0	0	0
Light Commercial Truck	Ethanol (E-85)	Rural Unrestricted					6,782	16,256	19,453	17,551
Light Commercial Truck	Ethanol (E-85)	Urban Restricted					0	0	0	0
Light Commercial Truck	Ethanol (E-85)	Urban Unrestricted					5,680	13,955	16,690	14,984
Intercity Bus	Gasoline	Off-Network	3	4	5	5				
Intercity Bus	Gasoline	Rural Restricted					0	0	0	0
Intercity Bus	Gasoline	Rural Unrestricted					46,829	65,361	79,956	79,725
Intercity Bus	Gasoline	Urban Restricted					0	0	0	0
Intercity Bus	Gasoline	Urban Unrestricted					37,702	52,015	63,194	62,634
Intercity Bus	Diesel	Off-Network	29	27	27	26				
Intercity Bus	Diesel	Rural Restricted					0	0	0	0
Intercity Bus	Diesel	Rural Unrestricted					392,044	419,478	455,728	450,277
Intercity Bus	Diesel	Urban Restricted					0	0	0	0
Intercity Bus	Diesel	Urban Unrestricted					315,630	333,825	360,187	353,752
Intercity Bus	CNG	Off-Network	2	2	2	2				
Intercity Bus	CNG	Rural Restricted					0	0	0	0
Intercity Bus	CNG	Rural Unrestricted					29,070	35,512	36,866	35,081
Intercity Bus	CNG	Urban Restricted					0	0	0	0
Intercity Bus	CNG	Urban Unrestricted					23,404	28,261	29,137	27,561
Transit Bus	Gasoline	Off-Network	1	1	1	1				
Transit Bus	Gasoline	Rural Restricted					0	0	0	0
Transit Bus	Gasoline	Rural Unrestricted					15,431	23,696	25,082	24,204
Transit Bus	Gasoline	Urban Restricted					0	0	0	0
Transit Bus	Gasoline	Urban Unrestricted					12,719	19,306	20,294	19,467
Transit Bus	Diesel	Off-Network	8	8	8	8				
Transit Bus	Diesel	Rural Restricted					0	0	0	0
Transit Bus	Diesel	Rural Unrestricted					127,627	137,616	143,817	138,224
Transit Bus	Diesel	Urban Restricted					0	0	0	0
Transit Bus	Diesel	Urban Unrestricted					105,191	112,117	116,366	111,171

Redesignation Request and Maintenance Plan for the Partial Oneida County 2010 SO₂ NAAQS NAA

Source Type	Fuel Type	Road Type	Partial Oneida County SO ₂ Nonattainment Area							
			Vehicle Population				Annual Vehicle-Miles of Travel			
			2011	2018	2025	2032	2011	2018	2025	2032
Transit Bus	CNG	Off-Network	1	1	1	1				
Transit Bus	CNG	Rural Restricted					0	0	0	0
Transit Bus	CNG	Rural Unrestricted					9,947	11,885	11,741	10,568
Transit Bus	CNG	Urban Restricted					0	0	0	0
Transit Bus	CNG	Urban Unrestricted					8,198	9,682	9,500	8,500
School Bus	Gasoline	Off-Network	2	1	1	0				
School Bus	Gasoline	Rural Restricted					0	0	0	0
School Bus	Gasoline	Rural Unrestricted					7,598	5,650	4,413	2,981
School Bus	Gasoline	Urban Restricted					0	0	0	0
School Bus	Gasoline	Urban Unrestricted					4,849	3,564	2,765	1,857
School Bus	Diesel	Off-Network	57	48	51	49				
School Bus	Diesel	Rural Restricted					0	0	0	0
School Bus	Diesel	Rural Unrestricted					301,241	298,266	324,136	317,511
School Bus	Diesel	Urban Restricted					0	0	0	0
School Bus	Diesel	Urban Unrestricted					192,265	188,170	203,091	197,750
School Bus	CNG	Off-Network	0	0	1	1				
School Bus	CNG	Rural Restricted					0	0	0	0
School Bus	CNG	Rural Unrestricted					1,328	2,848	4,321	4,815
School Bus	CNG	Urban Restricted					0	0	0	0
School Bus	CNG	Urban Unrestricted					848	1,797	2,707	2,999
Refuse Truck	Gasoline	Off-Network	0	0	0	0				
Refuse Truck	Gasoline	Rural Restricted					0	0	0	0
Refuse Truck	Gasoline	Rural Unrestricted					4,067	272	60	5
Refuse Truck	Gasoline	Urban Restricted					0	0	0	0
Refuse Truck	Gasoline	Urban Unrestricted					2,441	161	35	3
Refuse Truck	Diesel	Off-Network	7	6	5	5				
Refuse Truck	Diesel	Rural Restricted					0	0	0	0
Refuse Truck	Diesel	Rural Unrestricted					89,793	62,273	61,285	65,406
Refuse Truck	Diesel	Urban Restricted					0	0	0	0
Refuse Truck	Diesel	Urban Unrestricted					53,885	36,940	36,104	38,301
Refuse Truck	CNG	Off-Network	0	0	1	1				
Refuse Truck	CNG	Rural Restricted					0	0	0	0
Refuse Truck	CNG	Rural Unrestricted					122	1,922	14,190	19,425
Refuse Truck	CNG	Urban Restricted					0	0	0	0
Refuse Truck	CNG	Urban Unrestricted					73	1,140	8,359	11,375
Single Unit Short-haul Truck	Gasoline	Off-Network	242	225	214	196				
Single Unit Short-haul Truck	Gasoline	Rural Restricted					0	0	0	0
Single Unit Short-haul Truck	Gasoline	Rural Unrestricted					1,756,760	1,528,640	1,631,730	1,685,740
Single Unit Short-haul Truck	Gasoline	Urban Restricted					0	0	0	0

Redesignation Request and Maintenance Plan for the Partial Oneida County 2010 SO₂ NAAQS NAA

Source Type	Fuel Type	Road Type	Partial Oneida County SO ₂ Nonattainment Area							
			Vehicle Population				Annual Vehicle-Miles of Travel			
			2011	2018	2025	2032	2011	2018	2025	2032
Single Unit Short-haul Truck	Gasoline	Urban Unrestricted					1,028,200	884,366	937,539	962,788
Single Unit Short-haul Truck	Diesel	Off-Network	565	607	696	721				
Single Unit Short-haul Truck	Diesel	Rural Restricted					0	0	0	0
Single Unit Short-haul Truck	Diesel	Rural Unrestricted					5,267,680	5,293,840	6,016,680	6,332,700
Single Unit Short-haul Truck	Diesel	Urban Restricted					0	0	0	0
Single Unit Short-haul Truck	Diesel	Urban Unrestricted					3,083,070	3,062,660	3,457,000	3,616,830
Single Unit Short-haul Truck	CNG	Off-Network	1	3	6	9				
Single Unit Short-haul Truck	CNG	Rural Restricted					0	0	0	0
Single Unit Short-haul Truck	CNG	Rural Unrestricted					9,841	45,696	78,122	91,579
Single Unit Short-haul Truck	CNG	Urban Restricted					0	0	0	0
Single Unit Short-haul Truck	CNG	Urban Unrestricted					5,760	26,437	44,886	52,304
Single Unit Long-haul Truck	Gasoline	Off-Network	11	9	9	9				
Single Unit Long-haul Truck	Gasoline	Rural Restricted					0	0	0	0
Single Unit Long-haul Truck	Gasoline	Rural Unrestricted					122,744	97,369	108,596	111,497
Single Unit Long-haul Truck	Gasoline	Urban Restricted					0	0	0	0
Single Unit Long-haul Truck	Gasoline	Urban Unrestricted					76,508	59,992	66,451	67,818
Single Unit Long-haul Truck	Diesel	Off-Network	25	29	32	32				
Single Unit Long-haul Truck	Diesel	Rural Restricted					0	0	0	0
Single Unit Long-haul Truck	Diesel	Rural Unrestricted					340,811	351,153	400,862	419,054
Single Unit Long-haul Truck	Diesel	Urban Restricted					0	0	0	0
Single Unit Long-haul Truck	Diesel	Urban Unrestricted					212,431	216,355	245,289	254,889
Single Unit Long-haul Truck	CNG	Off-Network	0	0	0	0				
Single Unit Long-haul Truck	CNG	Rural Restricted					0	0	0	0
Single Unit Long-haul Truck	CNG	Rural Unrestricted					561	3,733	5,408	6,072
Single Unit Long-haul Truck	CNG	Urban Restricted					0	0	0	0
Single Unit Long-haul Truck	CNG	Urban Unrestricted					350	2,300	3,309	3,693
Motor Home	Gasoline	Off-Network	62	59	58	53				
Motor Home	Gasoline	Rural Restricted					0	0	0	0
Motor Home	Gasoline	Rural Unrestricted					202,402	176,693	180,130	184,710
Motor Home	Gasoline	Urban Restricted					0	0	0	0
Motor Home	Gasoline	Urban Unrestricted					116,589	100,607	101,861	103,827
Motor Home	Diesel	Off-Network	35	25	35	41				
Motor Home	Diesel	Rural Restricted					0	0	0	0
Motor Home	Diesel	Rural Unrestricted					123,474	83,950	114,494	140,730
Motor Home	Diesel	Urban Restricted					0	0	0	0
Motor Home	Diesel	Urban Unrestricted					71,124	47,800	64,745	79,105
Motor Home	CNG	Off-Network	0	0	0	0				
Motor Home	CNG	Rural Restricted					0	0	0	0
Motor Home	CNG	Rural Unrestricted					2	1	1	3

Redesignation Request and Maintenance Plan for the Partial Oneida County 2010 SO₂ NAAQS NAA

Source Type	Fuel Type	Road Type	Partial Oneida County SO ₂ Nonattainment Area							
			Vehicle Population				Annual Vehicle-Miles of Travel			
			2011	2018	2025	2032	2011	2018	2025	2032
Motor Home	CNG	Urban Restricted					0	0	0	0
Motor Home	CNG	Urban Unrestricted					1	1	0	2
Combination Short-haul	Gasoline	Off-Network	0	0	0	0				
Combination Short-haul	Gasoline	Rural Restricted					0	0	0	0
Combination Short-haul	Gasoline	Rural Unrestricted					260	56	12	1
Combination Short-haul	Gasoline	Urban Restricted					0	0	0	0
Combination Short-haul	Gasoline	Urban Unrestricted					213	46	10	1
Combination Short-haul	Diesel	Off-Network	45	41	42	41				
Combination Short-haul	Diesel	Rural Restricted					0	0	0	0
Combination Short-haul	Diesel	Rural Unrestricted					856,371	738,519	899,425	952,614
Combination Short-haul	Diesel	Urban Restricted					0	0	0	0
Combination Short-haul	Diesel	Urban Unrestricted					701,034	605,506	733,355	774,382
Combination Short-haul	CNG	Off-Network	0	0	1	1				
Combination Short-haul	CNG	Rural Restricted					0	0	0	0
Combination Short-haul	CNG	Rural Unrestricted					1,512	12,651	26,432	33,315
Combination Short-haul	CNG	Urban Restricted					0	0	0	0
Combination Short-haul	CNG	Urban Unrestricted					1,238	10,372	21,551	27,082
Combination Long-haul	Diesel	Off-Network	44	47	49	49				
Combination Long-haul	Diesel	Rural Restricted					0	0	0	0
Combination Long-haul	Diesel	Rural Unrestricted					2,265,440	2,305,050	2,507,290	2,602,200
Combination Long-haul	Diesel	Urban Restricted					0	0	0	0
Combination Long-haul	Diesel	Urban Unrestricted					1,627,770	1,658,820	1,794,400	1,856,710
ALL (Total)	ALL (Total)	ALL (Total)	18,904	18,122	20,241	20,901	215,472,632	210,748,125	236,645,221	247,231,484
Motorcycle	ALL	ALL	681	624	706	753	1,495,549	1,453,118	1,632,701	1,709,180
Passenger Car	ALL	ALL	8,763	6,894	7,804	8,315	92,504,285	76,009,373	86,453,936	94,261,948
Passenger Truck	ALL	ALL	7,520	8,548	9,475	9,562	91,721,468	102,609,052	114,698,818	116,558,052
Light Commercial Truck	ALL	ALL	802	913	1,011	1,020	10,096,883	11,512,215	12,406,855	12,359,069
Intercity Bus	ALL	ALL	34	33	34	33	844,679	934,452	1,025,068	1,009,030
Transit Bus	ALL	ALL	10	10	11	10	279,113	314,302	326,800	312,134
School Bus	ALL	ALL	59	50	52	50	508,129	500,294	541,433	527,912
Refuse Truck	ALL	ALL	7	6	6	6	150,380	102,707	120,032	134,514
Single Unit Short-haul Truck	ALL	ALL	807	835	917	926	11,151,310	10,841,638	12,165,957	12,741,941
Single Unit Long-haul Truck	ALL	ALL	36	37	41	42	753,404	730,902	829,914	863,023
Motor Home	ALL	ALL	97	84	93	93	513,592	409,051	461,231	508,376
Combination Short-haul	ALL	ALL	45	41	42	42	1,560,628	1,367,150	1,680,785	1,787,395
Combination Long-haul	ALL	ALL	44	47	49	49	3,893,210	3,963,870	4,301,690	4,458,910

Redesignation Request and Maintenance Plan for the Partial Oneida County 2010 SO₂ NAAQS NAA

Source Type	Fuel Type	Road Type	Partial Oneida County SO ₂ Nonattainment Area							
			Vehicle Population				Annual Vehicle-Miles of Travel			
			2011	2018	2025	2032	2011	2018	2025	2032
ALL (Total)	ALL (Total)	ALL (Total)	18,904	18,122	20,241	20,901	215,472,632	210,748,125	236,645,221	247,231,484
ALL	Gasoline	ALL	17,713	16,871	18,695	19,148	194,798,991	189,731,762	210,964,238	218,538,927
ALL	Diesel	ALL	1,175	1,217	1,501	1,707	20,413,114	20,473,283	24,998,515	27,993,833
ALL	CNG	ALL	4	7	12	15	92,255	194,236	296,531	334,372
ALL	Ethanol (E-85)	ALL	12	27	33	31	168,273	348,844	385,937	364,352
ALL (Total)	ALL (Total)	ALL (Total)	18,904	18,122	20,241	20,901	215,472,632	210,748,125	236,645,221	247,231,484
ALL	ALL	Off-Network	18,904	18,122	20,241	20,901				
ALL	ALL	Rural Restricted					0	0	0	0
ALL	ALL	Rural Unrestricted					121,760,333	119,090,646	133,724,559	139,706,772
ALL	ALL	Urban Restricted					0	0	0	0
ALL	ALL	Urban Unrestricted					93,712,299	91,657,479	102,920,662	107,524,712
ALL (Total)	ALL (Total)	ALL (Total)	18,904	18,122	20,241	20,901	215,472,632	210,748,125	236,645,221	247,231,484