

# LIMITED (SECOND) MAINTENANCE PLAN FOR THE 1997 8-HOUR OZONE NONATTAINMENT AREAS

Benzie County,  
Flint (Genesee and Lapeer Counties),  
Grand Rapids (Ottawa and Kent Counties),  
Huron County, Kalamazoo-Battle Creek  
(Calhoun, Kalamazoo, and Van Buren Counties),  
Lansing - East Lansing (Clinton, Eaton, and Ingham Counties),  
Lenawee County and Mason County



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

Prepared by:  
Michigan Department of Environment, Great Lakes, and Energy  
Air Quality Division

Prepared for:  
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# **LIMITED (SECOND) MAINTENANCE PLAN FOR THE 1997 8-HOUR OZONE NONATTAINMENT AREAS**

**Benzie County, Flint (Genesee and Lapeer Counties),  
Grand Rapids (Ottawa and Kent Counties), Huron County,  
Kalamazoo-Battle Creek (Calhoun, Kalamazoo, and Van Buren Counties),  
Lansing-East Lansing (Clinton, Eaton, and Ingham Counties),  
Lenawee County and Mason County**

## **Background**

On July 18, 1997 (62 Federal Register [FR] 38856), the United States Environmental Protection Agency (USEPA) promulgated an 8-hour ozone standard of 0.08 parts per million (ppm). This standard is attained when the 3-year average of the annual 4th highest daily maximum 8-hour average ozone concentrations, measured at each monitor within an area, are less than or equal to 0.08 ppm when rounded. On April 30, 2004 (69 FR 23857), the USEPA published a final rule designating and classifying areas under the 8-hour ozone National Ambient Air Quality Standards (NAAQS). These designations and classifications became effective June 15, 2004. The USEPA designated as nonattainment any area that was violating (in exceedance of) the 8-hour ozone NAAQS based on the three most recent years of air quality data: 2001, 2002, and 2003.

The Clean Air Act (CAA) contains two sets of provisions, Subpart 1 and Subpart 2, which address planning and control requirements for nonattainment areas. Both are found in Title I, part D, of the CAA; 42 U.S.C. 7501-7509a and 7511-7511f, respectively. Subpart 1 contains general requirements for nonattainment areas for any pollutant, including ozone, governed by a NAAQS. Subpart 2 provides more specific requirements for ozone nonattainment areas.

Under the USEPA's implementation rule for the 1997 8-hour ozone standard (April 30, 2004, 69 FR 23951), an area was classified under Subpart 2 based on its 8-hour ozone design value (i.e., the 3-year average annual 4th highest daily maximum 8-hour average ozone concentration) if it had a 1-hour design value at the time of designation at or above 0.121 ppm (the lowest 1-hour design value in Table 1 of Subpart 2) (69 FR 23954). All other areas were covered under Subpart 1 based on their 8-hour design values (69 FR 23958).

Effective June 15, 2004, the USEPA designated the following counties/areas in Michigan as marginal nonattainment areas under the 1997 ozone NAAQS: Benzie County, Flint Area (Genesee and Lapeer Counties), Grand Rapids Area (Ottawa and Kent Counties), Huron County, Kalamazoo-Battle Creek Area (Calhoun, Kalamazoo, and Van Buren Counties), Lansing-East Lansing Area (Clinton, Eaton, and Ingham Counties), Lenawee County, and Mason County. All of the listed areas were redesignated to attainment on May 16, 2007 (72 FR 27425). As part of the redesignation action, the Michigan Department of Environment, Great Lakes, and Energy (EGLE) adopted, and the USEPA approved,

maintenance plans for the areas listed above which demonstrated continued attainment of the 1997 ozone NAAQS at least 10 years after redesignation, as required under CAA section 175A.

Under CAA section 175A(b), states must submit a revision to the first maintenance plan eight years after redesignation to provide for maintenance of the NAAQS for 10 additional years following the end of the first 10-year period. The USEPA's final implementation rule for the 2008 ozone NAAQS revoked the 1997 ozone NAAQS and stated that one consequence of revocation was that areas that had been redesignated to attainment (i.e., maintenance areas) for the 1997 standard no longer needed to submit second 10-year maintenance plans under CAA section 175A(b). In *South Coast Air Quality Management District v. USEPA*, the D.C. Circuit vacated the USEPA's interpretation which, because of the revocation of the 1997 ozone standard, second maintenance plans were not required for "orphan maintenance areas;" i.e., areas that had been redesignated to attainment for the 1997 NAAQS (maintenance areas) and were designated attainment for the 2008 ozone NAAQS, *South Coast*, 882 F.3d 1138 (D.C. Cir. 2018). Thus, states with these "orphan maintenance areas" under the 1997 ozone NAAQS must submit maintenance plans for the second maintenance period.

## **Second Maintenance Plan**

The nonattainment areas of Benzie County, Flint (Genesee and Lapeer Counties), Grand Rapids (Kent and Ottawa Counties), Huron County, Kalamazoo-Battle Creek (Calhoun, Kalamazoo, and Van Buren Counties), Lansing-East Lansing (Clinton, Eaton, and Ingham Counties), Lenawee and Mason County were redesignated to attainment effective May 16, 2007. Therefore, in accordance with CAA section 175A(b), a second maintenance plan demonstrating maintenance through May 16, 2027, was due on May 16, 2015.

A memorandum dated September 4, 1992, from John Calcagni<sup>1</sup> provides guidance on the content of a maintenance plan. The USEPA clarified in three subsequent guidance memos that certain nonattainment areas could meet the CAA section 175A requirement to provide for maintenance by demonstrating that the area's design value<sup>2</sup> was well below the NAAQS and that the historical stability of the area's air quality levels showed the area was unlikely to violate the NAAQS in the future.<sup>3</sup> The USEPA refers to this streamlined demonstration of maintenance as a Limited Maintenance Plan (LMP). The USEPA has interpreted CAA section 175A as permitting this option because section 175A of the CAA

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<sup>1</sup> "Procedures for Processing Requests to Redesignate Areas to Attainment," Memorandum from John Calcagni, Director, Air Quality Management Division, September 4, 1992.

<sup>2</sup> The ozone design value for a monitoring site is the 3-year average of the annual 4th highest daily maximum 8-hour average ozone concentrations. The design value for an ozone nonattainment area is the highest design value of any monitoring site in the area.

<sup>3</sup> See "Limited Maintenance Plan Option for Nonclassifiable Ozone Nonattainment Areas" from Sally L. Shaver, Office of Air Quality Planning and Standards (OAQPS), dated November 16, 1994; "Limited Maintenance Plan Option for Nonclassifiable CO Nonattainment Areas" from Joseph Paisie, OAQPS, dated October 6, 1995; and "Limited Maintenance Plan Option for Moderate PM<sub>10</sub> Nonattainment Areas" from Lydia Wegman, OAQPS, dated August 9, 2001. Copies of these guidance memoranda can be found in the docket for this proposed rulemaking.

defines few specific content requirements for maintenance plans, and in the USEPA's experience in implementing the various NAAQS, areas that qualify for an LMP and have approved LMPs have rarely, if ever, experienced subsequent violations of the NAAQS. As noted in the LMP guidance memoranda, states seeking an LMP must still submit the other maintenance plan elements outlined in the Calcagni memo, including: an attainment emissions inventory, provisions for the continued operation of the ambient air quality monitoring network, verification of continued attainment, and a contingency plan in the event of a future violation of the NAAQS. Moreover, states seeking an LMP must still submit their section 175A maintenance plan as a revision to their state implementation plan (SIP), with all public notice and comment procedures.

While the LMP guidance memoranda were originally written with respect to certain NAAQS,<sup>4</sup> the USEPA has extended the LMP interpretation of section 175A to other NAAQS and pollutants not specifically covered by the previous guidance memos.<sup>5</sup>

### *Attainment Inventory*

The original CAA section 175A maintenance plans approved by the USEPA included an attainment inventory that reflects typical summer day volatile organic compound (VOC) and nitrogen oxides (NO<sub>x</sub>) emissions in 2018. This inventory is summarized in **Table 1** in **Attachment A**.

In addition, because these areas continued to monitor attainment of the 1997 ozone NAAQS in 2014, this is also an appropriate year to use for an attainment year inventory. EGLE is using 2014 summer day emissions from the USEPA 2014 version 7.0 modeling platform as the basis for the attainment inventory presented in **Table 2**, included in **Attachment A**. These data are based on the most recently available National Emissions Inventory (2014 NEI version 2). The inventory documentation for this platform can be found at <https://www.epa.gov/air-emissions-modeling/2014-version-70-platform>.

### *Maintenance Demonstration*

The LMP is considered to be satisfied if the air quality in an area is well below the level of the standard, past air quality trends have been shown to be stable, and the probability of the area experiencing a violation over the second 10-year maintenance period is low.<sup>6</sup> In the case of the 1997 ozone nonattainment areas described above, the LMP should be considered satisfied.

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<sup>4</sup> The prior memos addressed: unclassifiable areas under the 1-hour ozone NAAQS, nonattainment areas for the PM<sub>10</sub> (particulate matter with an aerodynamic diameter less than 10 microns) NAAQS, and nonattainment areas for the carbon monoxide NAAQS.

<sup>5</sup> See: e.g., 79 FR 41900 (July 18, 2014) (Approval of second ten-year LMP for Grant County 1971 SO<sub>2</sub> maintenance area).

<sup>6</sup> "Limited Maintenance Plan Option for Nonclassifiable Ozone Nonattainment Areas" from Sally L. Shaver, Office of Air Quality Planning and Standards (OAQPS), dated November 16, 1994; "Limited Maintenance Plan Option for Nonclassifiable CO Nonattainment Areas" from Joseph Paisie, OAQPS, dated October 6, 1995; and "Limited Maintenance Plan Option for Moderate PM<sub>10</sub> Nonattainment Areas" from Lydia Wegman, OAQPS, dated August 9, 2001.

## *Evaluation of Ozone Air Quality Levels*

To attain the 1997 ozone NAAQS, the 3-year average of the 4th highest daily maximum 8-hour average ozone concentrations (design value) at each monitor within an area must not exceed 0.08 ppm. Based on the rounding convention described in Title 40 of the Code of Federal Regulations (CFR) Part 50, Appendix I, the standard is attained if the design value is 0.084 ppm or below. Consistent with prior guidance, the USEPA believes that if the most recent air quality design value for the area is at a level well below the NAAQS (e.g., below 85 percent of the standard, or in this case below 0.071 ppm), the USEPA considers the state to have met the section 175A requirement for a demonstration that the area will maintain the NAAQS for the requisite period. Such a demonstration assumes continued applicability of prevention of significant deterioration (PSD) requirements, any control measures already in the SIP, and federal measures will remain in place through the end of the second 10-year maintenance period, absent a showing consistent with section 110(l) that such measures are not necessary to assure maintenance.

**Table 3** presents the design values for each monitor in the ozone maintenance areas of Benzie County, Flint (Genesee and Lapeer Counties), Grand Rapids (Kent and Ottawa Counties), Huron County, Kalamazoo-Battle Creek (Calhoun, Kalamazoo, and Van Buren Counties), Lansing-East Lansing (Clinton, Eaton, and Ingham Counties), Lenawee, and Mason County over the 2007 to 2017 period. As shown in **Table 3**, design values for all sites have been well below the level of the 1997 ozone NAAQS since the areas were redesignated to attainment, and the most current design value for each is below 85 percent of the NAAQS, consistent with prior LMP guidance.

**Table 3 – 1997 Ozone NAAQS Design Values (ppm) at Monitoring Sites in the Maintenance Areas for the 1997 Ozone Standard for the 2007-2017 Time Period**

County	AQS Site ID	2007-2009 D.V.	2008-2010 D.V.	2009-2011 D.V.	2010-2012 D.V.	2011-2013 D.V.	2012-2014 D.V.	2013-2015 D.V.	2014-2016 D.V.	2015-2017 D.V.	Percent Change (%)
Benzie	260190003	.072	.069	.070	.075	.074	.073	.068	.069	.067	-6.9
Genesee	260492001	.074	.068	.069	.074	.074	.072	.067	.069	.067	-9.5
Lapeer	260490021	.072	.068	.069	.076	.074	.072	.066	.068	.067	-6.9
Kent	260810020	.072	.067	.070	.075	.074	.071	.067	.069	.068	-5.6
Kent	260810022	.075	.069	.071	.073	.074	.070	.066	.067	.067	-10.7
Ottawa	261390005	.075	.069	.073	.078	.077	.075	.068	.070	.068	-9.3
Huron	260630007	.072	.067	.068	.074	.072	.071	.065	.068	.067	-6.9
Kalamazoo	260770008	.074	.069	.070	.075	.075	.073	.067	.069	.069	-6.8
Ingham	260370001	.071	.065	.066	.071	.071	.069	.064	.067	.062	-12.7
Ingham	260650012	.073	.068	.068	.071	.072	.070	.065	.067	.067	-8.2
Mason	261050007	.073	.068	.070	.075	.075	.074	.068	.070	.068	-6.8
Lenawee	260910007	.073	NA	NA	.076	.075	.073	.065	.067	.066	-9.6

Source: *The USEPA's LMP Resource website, within the file named: OzoneDV\_2001\_2017\_with\_proj2023\_v2.xlsx*  
 NA – Data not available

Therefore, the ozone maintenance areas listed above are eligible for the LMP option, and the long record of monitored ozone concentrations that attain the NAAQS, together with the continuation of existing VOC and NO<sub>x</sub> emissions control programs, adequately provide for the maintenance of the 1997 ozone NAAQS in these areas through the second 10-year maintenance period and beyond.

The nonattainment areas have maintained air quality well below the 1997 ozone NAAQS over the past 11 years. Additionally, the design value data in **Table 3** illustrates that ozone levels have been relatively stable over this time frame, with a predominantly downward trend. It is worth noting that while there was a downward trend over the 2007-2017 time frame, the majority of the monitors experienced a spike in ozone values during the 2012 to 2014 time frame. These spikes were followed by subsequent decreases in emissions and overall emissions experienced a downward trend over the past 11 years.

The data in **Table 3** indicates that the largest year-over-year change in design value was 0.11 ppm at the Lenawee County monitor, which occurred between 2010 and 2017 and represented a decrease of 13 percent. Furthermore, the overall trend in design values for these nonattainment areas between 2007-2017 shows percent decreases ranging from

5.6-12.7 percent, as shown in the last column of **Table 3**. This downward trend in ozone levels, coupled with the relatively small year-over-year variation in ozone design values, makes it reasonable to conclude that these ozone maintenance areas will not exceed the 1997 ozone NAAQS during the second 10-year maintenance period.

Additional supporting information that the area is expected to continue to maintain the standard can be found in projections of future year design values that the USEPA recently completed to assist states with development of interstate transport SIPs for the 2015 ozone NAAQS. Those projections, made for the year 2023, are shown for the 1997 ozone maintenance areas in **Table 4**.

**Table 4 – 1997 Ozone NAAQS Design Values (ppm) at Monitoring Sites in the Maintenance Areas for the 1997 Ozone Standard for the Year 2023**

Maintenance Area	Highest Projected Design Value for the Maintenance Areas (ppm)
Benzie County	.061
Flint Area	.060
Grand Rapids Area	.062
Huron County	.059
Kalamazoo-Battle Creek Area	.060
Lansing-East Lansing Area	.057
Mason County	.061
Detroit-Ann Arbor Area	.069

Emissions estimates also support the conclusion that Benzie County, Flint (Genesee and Lapeer Counties), Grand Rapids (Kent and Ottawa Counties), Huron County, Kalamazoo-Battle Creek (Calhoun, Kalamazoo, and Van Buren Counties), Lansing-East Lansing (Clinton, Eaton, and Ingham Counties), Lenawee, and Mason County will continue to maintain the 1997 ozone NAAQS through the second maintenance period. **Table 5** documents changes in NO<sub>x</sub> and VOC emissions in these areas between 2014 and 2028. The 2028 emissions inventory is projected from the USEPA 2011 version 6.3 modeling platform. The inventory documentation for this platform can be found here: <https://www.epa.gov/air-emissions-modeling/2011-version-63-platform>. The relevant inventory scenario names are “2014fd” and “2028el.” The 2028 scenario was used to support past air quality modeling to support the regional haze program.



**Table 5 – Changes in NO<sub>x</sub> and VOC Emissions in the Maintenance Areas  
Between 2014 and 2028**

Maintenance Area	Summer NO <sub>x</sub> (tons) 2014	Summer NO <sub>x</sub> (tons) 2028	Summer VOC (tons) 2014	Summer VOC (tons) 2028	Summer NO <sub>x</sub> : 2014 to 2028 (tons)	Summer NO <sub>x</sub> : 2014 to 2028 (%)	Summer VOC: 2014 to 2028 (tons)	Summer VOC: 2014 to 2028 (%)
Benzie County	374	181	647	431	-193	-52%	-216	-33%
Detroit-Ann Arbor Area	64,523	32,640	52,023	34,226	-31,883	-49%	-17,797	-34%
Flint Area	4,834	2,012	6,361	4,163	-2,823	-58%	-2,198	-35%
Grand Rapids Area	11,220	3,680	12,584	8,179	-7,540	-67%	-4,406	-35%
Huron County Area	1,558	618	1,080	764	-939	-60%	-316	-29%
Kalamazoo-Battle Creek Area	5,495	2,636	6,913	4,527	-2,859	-52%	-2,387	-35%
Lansing-East Lansing Area	5,403	2,681	5,680	3,770	-2,722	-50%	-1,910	-34%
Mason County	706	273	1,004	680	-433	-61%	-324	-32%

**Table 5** depicts VOC and NO<sub>x</sub> emissions across the maintenance areas (Benzie County, Flint (Genesee and Lapeer Counties), Grand Rapids (Kent and Ottawa Counties), Huron County, Kalamazoo-Battle Creek (Calhoun, Kalamazoo, and Van Buren Counties), Lansing-East Lansing (Clinton, Eaton, and Ingham Counties), Lenawee, and Mason County) are projected to decrease by anywhere from 216 to 17,797 tons per day (29 to 35 percent) and 193 and 31,883 tons per day (49 to 67 percent), respectively, between 2014 and 2028.

### *Continued Air Quality Monitoring*

EGLE commits to continue to operate an approved ozone monitoring network in the ozone maintenance areas of Benzie County, Flint (Genesee and Lapeer Counties), Grand Rapids (Kent and Ottawa Counties), Huron County, Kalamazoo-Battle Creek (Calhoun, Kalamazoo, and Van Buren Counties), Lansing-East Lansing (Clinton, Eaton, and Ingham Counties), Lenawee, and Mason County. EGLE commits to consult with the USEPA prior to making changes to the existing monitoring network should changes become necessary in the future. Michigan remains obligated to meet monitoring requirements and continues to quality assure monitoring data in accordance with 40 CFR Part 58, and to enter all data into the Air Quality System in accordance with federal guidelines.

## *Verification of Continued Attainment*

EGLE has the legal authority to enforce and implement the requirements of the maintenance plan for the applicable areas. This includes the authority to adopt, implement, and enforce any subsequent emission control measures determined to be necessary to correct future ozone attainment problems.

Verification of continued attainment is accomplished through operation of the ambient ozone monitoring network and the periodic update of the area's emissions inventory. EGLE will continue to operate an approved ozone monitoring network in the ozone maintenance areas that this action applies to. There are no plans to discontinue operation, relocate, or otherwise change the existing ozone monitoring network other than through revisions in the network approved by the USEPA.

In addition, to track future levels of emissions, EGLE will continue to develop and submit to the USEPA updated emission inventories for all source categories at least once every three years, consistent with the requirements of 40 CFR Part 51, Subpart A, and in 40 CFR Part 51.122. The Consolidated Emissions Reporting Rule (CERR) was promulgated by the USEPA on June 10, 2002 (67 FR 39602). The CERR was replaced by the Annual Emissions Reporting Requirements on December 17, 2008 (73 FR 76539).

## *Contingency Plan*

Maintenance plans are required to include contingency measures that will be adopted in the case of a violation of the standard. If a violation were to occur, the state would have 18 months to adopt a contingency measure and correct the violation. Michigan's original maintenance plans included the thirteen contingency measures listed below. EGLE is adopting the original list of contingency measures with the exception of the Clean Air Interstate Rule reductions, as this program has been replaced by the Cross-State Air Pollution Control Rule.

Potential Contingency Measures from the original maintenance plans:

1. Lower Reid Vapor Pressure gasoline program
2. Reduced VOC content in Architectural, Industrial, and Maintenance coatings rule
3. Auto body refinisher self-certification audit program
4. Reduced VOC degreasing/solvent cleaning rule
5. Transit improvements
6. Diesel retrofit program
7. Reduced VOC content in commercial and consumer products
8. Clean Air Interstate Rule reductions
9. Tier II reductions including low sulfur fuel and vehicle standards
10. Reduce idling program
11. Portable fuel container replacement rule
12. Reduced VOC content for emulsified asphalt rule
13. Stage II vapor recovery rule for marinas

## Transportation Conformity

Transportation conformity is required by section 176(c) of the CAA. Conformity to a SIP means that transportation activities will not produce new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS (CAA 176(c)(1)(B)). The USEPA's conformity rule in 40 CFR Part 93 requires that transportation plans, programs and projects conform to SIPs and establish the criteria and procedures for determining whether they conform. The conformity rule generally requires a demonstration that emissions from the Regional Transportation Plan (RTP) and the Transportation Improvement Program (TIP) are consistent with the motor vehicle emissions budget (MVEB) contained in the control strategy SIP revision or maintenance plan (40 CFR Parts 93.101, 93.118, and 93.124). An MVEB is defined as "that portion of the total allowable emissions defined in the submitted or approved control strategy implementation plan revision or maintenance plan for a certain date for the purpose of meeting reasonable further progress milestones or demonstrating attainment or maintenance of the NAAQS, for any criteria pollutant or its precursors, allocated to highway and transit vehicle use and emissions (40 CFR 93.101)."

Under the conformity rule, LMP areas may demonstrate conformity without a regional emission analysis (40 CFR 93.109(e)). All actions that would require transportation conformity determinations for the ozone maintenance areas of Benzie County, Flint (Genesee and Lapeer Counties), Grand Rapids (Kent and Ottawa Counties), Huron County, Kalamazoo-Battle Creek (Calhoun, Kalamazoo, and Van Buren Counties), Lansing-East Lansing (Clinton, Eaton, and Ingham Counties), Lenawee and Mason County under the USEPA's transportation conformity rule provisions are considered to have already satisfied the regional emissions analysis and "budget test" requirements in 40 CFR Part 93.

However, because LMP areas are still maintenance areas, certain aspects of transportation conformity determinations still will be required for transportation plans, programs, and projects. Specifically, for such determinations, RTPs, TIPs, and transportation projects still will have to demonstrate that they are fiscally constrained (40 CFR 93.108), meet the criteria for consultation (40 CFR 93.105) and Transportation Control Measure implementation in the conformity rule provisions (40 CFR 93.112 and 40 CFR 93.113, respectively). Additionally, conformity determinations for RTPs and TIPs must be determined no less frequently than every four years, and conformity of plan and TIP amendments and transportation projects is demonstrated in accordance with the timing requirements specified in 40 CFR 93.104. Furthermore, in order for projects to be approved they must come from a currently conforming RTP and TIP (40 CFR 93.114 and 93.115).

## Public Participation

EGLE published notification for the public comment period, including an opportunity to request a public hearing, concerning the draft second maintenance plan in the EGLE calendar on Tuesday May 28, 2019.

The public comment period closed on [date]. [No public hearing was held because no requests were received. – OR – The public hearing was held on [date]]. Appendix A includes a copy of the public notice, the transcript from the public hearing (when applicable), and a response to comments document (when applicable).

Attachment A

**Table 1**  
**Limited Maintenance Plan**  
**Original Attainment Inventory**  
**2018 Typical Summer Day**  
**VOC and NOx Emissions**

County	Source Category	VOC Emissions (tons per day)	NOx Emissions (tons per day)
<b>Lansing Area</b>			
<b>Ingham</b>	Point	6.51	13.79
	Area	13.71	1.33
	On-road	4.43	4.84
	Nonroad	2.38	2.45
<b>Eaton</b>	Point	0.24	7.51
	Area	5.27	0.49
	On-road	1.97	2.39
	Nonroad	1.06	1.43
<b>Clinton</b>	Point	0.74	0.55
	Area	3.08	0.26
	On-road	1.97	2.46
	Nonroad	1.44	1.46
<b>Grand Rapids Area</b>			
<b>Kent</b>	Point	9.46	2.10
	Area	30.63	3.94
	On-road	9.85	10.19
	Nonroad	6.92	5.56
<b>Ottawa</b>	Point	5.89	22.29
	Area	13.35	1.65
	On-road	3.54	4.19
	Nonroad	3.03	3.83
<b>Kalamazoo Area</b>			
<b>Kalamazoo</b>	Point	1.98	2.17
	Area	13.20	1.30
	On-road	4.28	4.75
	Nonroad	2.74	2.66
<b>Calhoun</b>	Point	1.95	2.41
	Area	7.78	0.82
	On-road	3.09	3.82
	Nonroad	1.51	1.72
<b>Van Buren</b>	Point	0.13	0.17
	Area	4.14	0.34
	On-road	1.68	2.18
	Nonroad	1.83	0.90
<b>Benzie</b>	Point	0.01	0.03
	Area	1.37	0.07
	On-road	0.31	0.37
	Nonroad	2.85	0.53
<b>Mason</b>	Point	0.65	0.45
	Area	1.92	0.17
	On-road	0.43	0.51
	Nonroad	2.02	1.52
<b>Huron</b>	Point	0.33	1.69
	Area	2.19	0.22
	On-road	0.55	0.65
	Nonroad	2.39	5.20
<b>Flint Area</b>			
<b>Genesee</b>	Point	4.10	2.51
	Area	21.19	1.92
	On-road	8.07	9.40
	Nonroad	8.20	4.27
<b>Lapeer</b>	Point	0.73	0.31
	Area	4.82	0.41
	On-road	1.69	2.03
	Nonroad	4.68	1.66
<b>Lenawee</b>	Point	1.63	0.38
	Area	5.00	0.51
	On-road	1.00	1.40
	Nonroad	2.99	1.99

**Table 2**  
**Limited Maintenance Plan**  
**2014 Typical Summer Day Emissions by Source Category**  
**VOCs and NOx**

County	Source Category	VOC Emissions (tons per day)	NOx Emissions (tons per day)
<b><i>Lansing Area</i></b>			
<b>Ingham</b>	Biogenic	16.79	1.01
	Fire	0.02	0.00
	Nonpoint	9.43	2.47
	Nonroad	3.06	2.78
	On-road	5.18	7.48
	Point	1.60	3.65
<b>Eaton</b>	Biogenic	15.67	1.11
	Fire	0.02	0.00
	Nonpoint	4.15	1.55
	Nonroad	1.43	1.84
	On-road	2.66	4.76
	Point	1.07	3.93
<b>Clinton</b>	Biogenic	15.96	1.17
	Fire	0.00	0.00
	Nonpoint	4.71	0.42
	Nonroad	1.46	1.72
	On-road	1.99	3.92
	Point	0.38	0.79
<b><i>Grand Rapids Area</i></b>			
<b>Kent</b>	Biogenic	36.05	1.06
	Fire	0.02	0.00
	Nonpoint	26.94	6.25
	Nonroad	9.11	8.36
	On-road	12.43	18.97
	Point	4.87	2.66
<b>Ottawa</b>	Biogenic	22.79	0.92
	Fire	0.34	0.02
	Nonpoint	14.90	3.00
	Nonroad	5.68	5.31
	On-road	5.77	8.66
	Point	2.55	20.13
<b><i>Kalamazoo Area</i></b>			
<b>Kalamazoo</b>	Biogenic	23.65	0.97
	Fire	0.25	0.02
	Nonpoint	11.55	2.48
	Nonroad	3.85	3.10
	On-road	5.37	8.33
	Point	1.32	1.62

**Table 2**  
**Limited Maintenance Plan**  
**2014 Typical Summer Day Emissions by Source Category**  
**VOCs and NOx**

County	Source Category	VOC Emissions (tons per day)	NOx Emissions (tons per day)
<b>Calhoun</b>	Biogenic	21.54	1.26
	Fire	0.18	0.02
	Nonpoint	6.89	1.58
	Nonroad	2.19	1.87
	On-road	3.82	8.23
	Point	1.72	1.68
<b>Van Buren</b>	Biogenic	26.47	1.04
	Fire	0.03	0.00
	Nonpoint	3.11	0.72
	Nonroad	2.91	1.32
	On-road	2.34	4.76
	Point	0.11	0.23
<b>Benzie</b>	Biogenic	14.37	0.24
	Fire	0.00	0.00
	Nonpoint	0.89	0.97
	Nonroad	2.80	0.67
	On-road	0.53	0.79
	Point	0.00	0.01
<b>Mason</b>	Biogenic	30.81	0.48
	Fire	0.27	0.02
	Nonpoint	1.63	1.80
	Nonroad	3.97	0.94
	On-road	0.80	1.14
	Point	0.17	0.73
<b>Huron</b>	Biogenic	19.83	1.82
	Fire	0.17	0.02
	Nonpoint	2.43	4.91
	Nonroad	3.62	3.45
	On-road	0.80	1.18
	Point	0.20	0.64



**Table 2**  
**Limited Maintenance Plan**  
**2014 Typical Summer Day Emissions by Source Category**  
**VOCs and NOx**

County	Source Category	VOC Emissions (tons per day)	NOx Emissions (tons per day)
<b><i>Flint Area</i></b>			
<b>Genesee</b>	Biogenic	21.54	0.90
	Fire	0.03	0.00
	Nonpoint	14.46	3.15
	Nonroad	4.86	3.95
	On-road	9.61	16.22
	Point	3.16	1.78
<b>Lapeer</b>	Biogenic	23.71	1.10
	Fire	0.01	0.00
	Nonpoint	3.11	1.12
	Nonroad	3.62	1.54
	On-road	2.26	3.74
	Point	0.50	0.09
<b><i>Detroit-Ann Arbor Area</i></b>			
<b>Lenawee</b>	Biogenic	19.22	1.59
	Fire	0.27	0.03
	Nonpoint	4.82	1.27
	Nonroad	2.03	2.15
	On-road	2.35	3.34
	Point	0.43	0.40