STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

C. HEIDI GRETHER
DIRECTOR

February 22, 2018

Ms. Cathy Stepp, Administrator
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard (R-19J)
Chicago, Illinois 60604-3590

Dear Administrator Stepp:

SUBJECT: Area Designations for the 2015 Ozone Standard

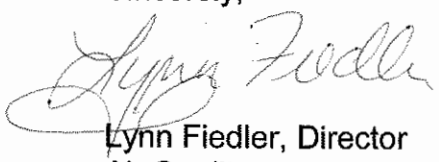
The Michigan Department of Environmental Quality (MDEQ), Air Quality Division (AQD) is providing supplemental information regarding the area designations for the 2015 ozone National Ambient Air Quality Standards (NAAQS). In the December 20, 2017, letter to Governor Rick Snyder, the United States Environmental Protection Agency (USEPA) agreed with the MDEQ's original nonattainment designation recommendations of a seven-county nonattainment area in Southeast Michigan and three individual county nonattainment areas in West Michigan. With this document, the MDEQ is revising its original recommendations for Allegan and Muskegon Counties from full-county to partial-county nonattainment areas. Decreasing the size of the nonattainment areas would more accurately reflect the nature of the ozone exceedance in these counties and reduce the potential negative impact of nonattainment status for the entire county.

Partial-county nonattainment areas for Allegan and Muskegon Counties would better represent the role of transported pollution in high ozone concentrations observed in these counties. Pollution from out-of-state travels across Lake Michigan and results in elevated ozone concentrations along the Lake Michigan shoreline. Ozone concentrations have been shown to decrease rapidly with increasing distance from the shoreline and the size of the nonattainment areas should reflect this. The MDEQ is recommending a partial-county border approximately 10 to 20 miles inland that follows township borders within Allegan and Muskegon Counties.

In addition to this revision, the MDEQ is again recommending a designation of attainment for all areas of the state that measure attainment of the 2015 ozone NAAQS, and a designation of unclassifiable for those areas of the state that do not have any ozone data to justify either an attainment or nonattainment designation. This recommendation is due to the change the USEPA made in a final designation action on November 16, 2017 (82 FR 54232) and the letter dated December 20, 2017, to Governor Snyder. These changes to the MDEQ's original designation recommendations occurred without proper notice, are at odds with the language of the Clean Air Act, and are contrary to the air monitoring data.

Justification for the revised recommendations is summarized in the enclosure. If you would like to discuss this further, please contact Ms. Kaitlyn Leffert, AQD, at 517-284-6751; leffertk@michigan.gov; MDEQ, P.O. Box 30260, Lansing, Michigan 48909-7760; or you may contact me.

Sincerely,



Lynn Fiedler, Director
Air Quality Division
517-284-6773

Enclosure
cc: Ms. Kaitlyn Leffert, MDEQ
Ms. Mary Maupin, MDEQ

Revision to Michigan's Nonattainment Recommendations For the 2015 Ozone Standard: Partial-county West Michigan Nonattainment Areas

February 22, 2018

Michigan Department of Environmental Quality
Air Quality Division
P.O. Box 30260
Lansing, Michigan 48909-7760

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Purpose and Background

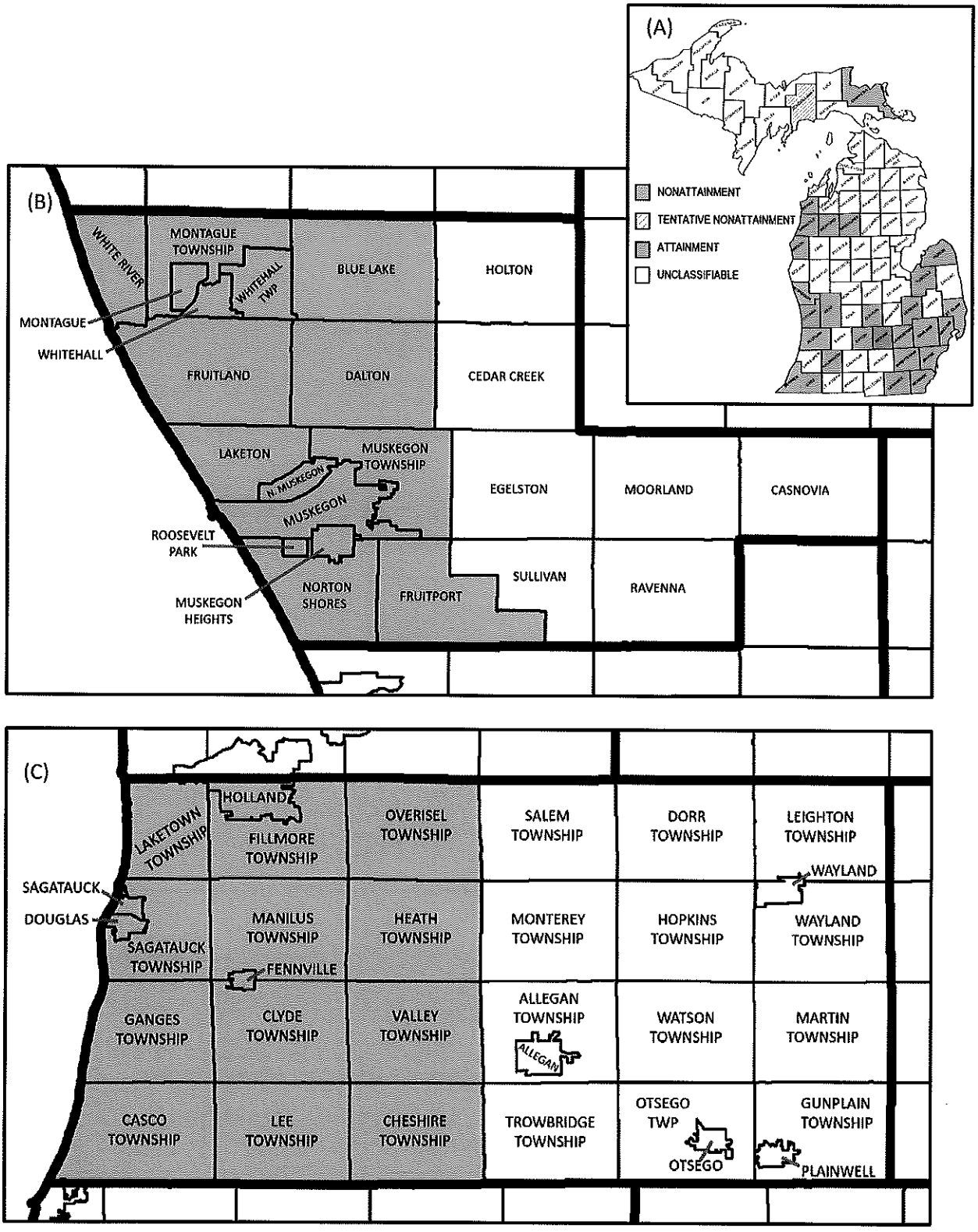
The purpose of this document is to respond to United States Environmental Protection Agency's (USEPA) recommendations for proposed ozone nonattainment areas in the state of Michigan and to provide revised designation recommendations. In October 2015, the USEPA lowered the National Ambient Air Quality Standard (NAAQS) for ozone from 75 ppb to 70 ppb. In response to the new standard, States submitted to the USEPA their recommendations for nonattainment areas that were exceeding, or contributing to areas that were exceeding, the 2015 ozone standard. The Michigan Department of Environmental Quality (MDEQ) submitted its recommendations to the USEPA in October 2016 and recommended 10 counties for nonattainment, including a seven-county area in Southeast Michigan, and three single-county nonattainment areas in West Michigan. The MDEQ also recommended the following 17 counties as being in attainment of the standard: Benzie, Cass, Chippewa, Clinton, Eaton, Genesee, Huron, Ingham, Kalamazoo, Kent, Lenawee, Manistee, Mason, Missaukee, Ottawa, Tuscola, and Wexford. The recommendations were based upon a five-factor analysis, which included a review of air quality data, emissions data, meteorological factors, topography, and jurisdictional boundaries (Appendix A).

Since the submittal of the MDEQ recommendations, the USEPA has taken additional action towards finalizing the ozone designations for the state of Michigan. The USEPA designated 57 counties as attainment/unclassifiable on November 16, 2017 (82 FR 54232). In addition, according to the December 20, 2017, letter sent to Michigan's governor, the USEPA is proposing to designate the same 10 counties for nonattainment as those recommended in the original submittal to the USEPA. In response to the USEPA's proposed designations, the MDEQ has decided to update its recommendation for attainment, unclassifiable, and nonattainment areas.

The MDEQ reiterates that the Clean Air Act (CAA) only allows the designation categories of attainment, nonattainment, and unclassifiable, and that unclassifiable/attainment should not be used as a designation in areas where the standard is being met. The original designation recommendations submitted by the State of Michigan contain a detailed, five-factor weight of evidence analysis of attainment areas in the state. The MDEQ's original five-factor analysis is sufficient to demonstrate that the following counties should be designated as attainment: Benzie, Cass, Chippewa, Clinton, Eaton, Genesee, Huron, Ingham, Kalamazoo, Kent, Lenawee, Manistee, Mason, Missaukee, Ottawa, Tuscola, and Wexford. The MDEQ's original designation recommendation also contains the conservative view that any counties in Michigan without an air quality monitor should be considered Unclassifiable (Appendix A).

Regarding nonattainment designations, the MDEQ continues to agree with the original recommendation of a nonattainment designation for counties of Berrien, Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne. However, the MDEQ has decided to update its nonattainment designation recommendations for Allegan and Muskegon Counties to better reflect the source of high ozone concentrations along the Lake Michigan shoreline. The MDEQ is requesting to revise the nonattainment areas for Allegan and Muskegon Counties from whole to partial-county nonattainment areas (Figure 1). Smaller nonattainment areas will more accurately reflect the significant role that out-of-state air pollution has on the shoreline area of these counties. This document will go through additional and updated information to support the designation of partial-county nonattainment areas in Allegan and Muskegon Counties.

Figure 1. Revised Recommended Nonattainment Areas for the 2015 Ozone Standard. (A) Original recommended nonattainment and attainment areas. (B) Revised recommendations for Muskegon County. (C) Revised recommendations for Allegan County.



Ozone Transport Over Lake Michigan

The phenomenon of ozone transport over Lake Michigan and the impact on West Michigan's air quality is well documented. Ozone transport in the region has been studied at various points in time through the Lake Michigan Ozone Study (LMOS). The LMOS started in 1990 with the original member states of Illinois, Indiana, Michigan, and Wisconsin. The study was coordinated by the Lake Michigan Air Directors Consortium (LADCO). The goal of the study was to understand sources of ozone and transport throughout the region to determine the most effective measures to achieve ozone attainment across the region.

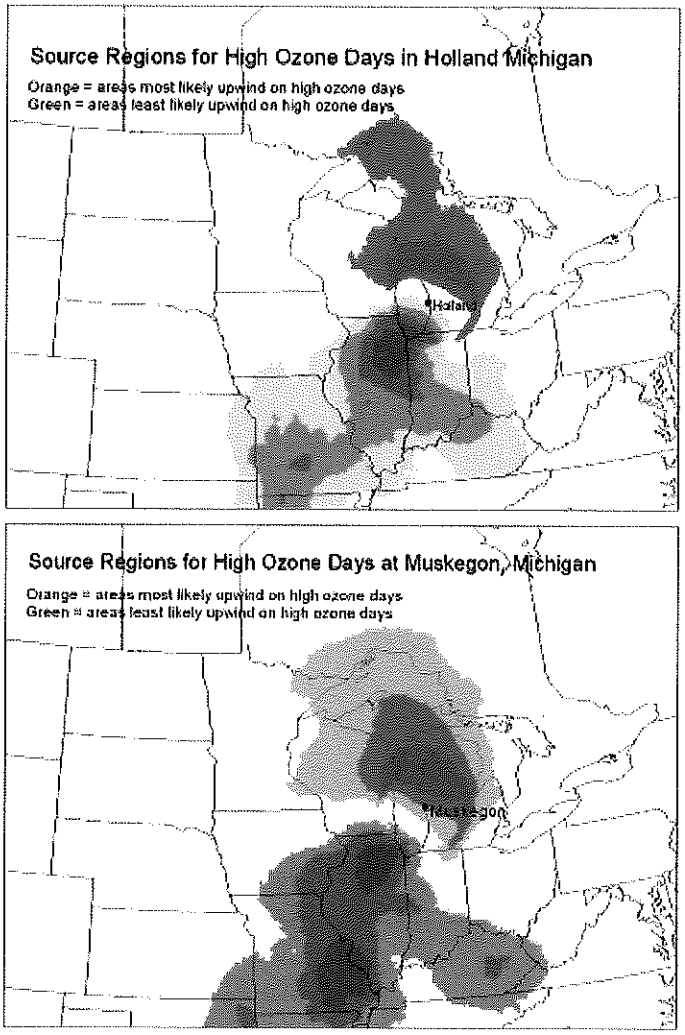
The first major LMOS field data collection was in summer 1991. Satellite photographs, surface weather maps, and routine meteorological and ozone observations were collected to quantify ozone transport over Lake Michigan. The study found that the entire eastern United States contributes to a polluted air mass over Lake Michigan, particularly during high pressure conditions. This polluted air mass is a result of emissions from across the eastern United States, as well as emissions from the Chicago, IL – Gary, IN area. It was also observed that when the air mass was cut off from the rest of the United States, typically due to rain, pollution levels over the lake decreased. Wind was also found to have an important impact on the size and concentration of the polluted air mass over Lake Michigan. In addition, rural areas along northern Lake Michigan shorelines often have higher ozone concentrations than the more populated areas in the southern Lake Michigan area due to the absence of oxides of nitrogen (NOx) scavenging, which reduces concentrations in urban areas around the lake. Finally, wind direction plays a significant role in the presence of ozone pollution. Southeasterly wind flow meant the west shoreline received more air pollution, while a southwesterly flow meant that the east shoreline received more of the polluted air. Southerly wind flow resulted in both shores being affected. Overall, the results of the 1991 LMOS study indicate that there is often a large, polluted air mass sitting over Lake Michigan and that factors such as rain, wind, and the presence of scavenging compounds can influence the areas in the Lake Michigan region that receive elevated ozone concentrations.

Following the field study of ozone in 1991, the LMOS group analyzed the data collected and developed a model to assess effective strategies for controlling ozone pollution in the Lake Michigan region. The model results confirmed the field study results, finding that ozone is a "superregional" problem with high ozone concentrations being transported into and out of the Lake Michigan region from across the eastern United States. The LMOS group further noted that, "Reducing this incoming pollution is critical, otherwise an unrealistically large level of local emission reduction will be required to achieve attainment."

In 2009, an additional Lake Michigan ozone study was conducted, which focused exclusively on West Michigan. The study utilized existing monitoring data and air quality models to determine the likelihood that West Michigan could meet the 1997 and 2008 ozone standards. A key finding of this study was that ozone pollution in western Michigan is dominated by transport. HYSPLIT modeling was conducted for high ozone days (above 80 ppb) during 2002 to 2006. The HYSPLIT results were compiled into composite trajectory plots for the Muskegon and Holland monitors, as shown in Figure 2. The orange areas in the plot indicate those areas most likely upwind on high ozone days, while the green areas indicate those areas least likely to be upwind on high ozone days. Both the Holland and Muskegon monitors fall outside of the projected upwind area on the map. In fact, the Muskegon monitor falls inside the area that is least likely upwind on high ozone days measured at the Muskegon monitor. In addition, both monitors show a strong likelihood that the Chicago, IL – Gary, IN area is contributing to ozone exceedances at these western Michigan monitors. These results generally agree with conclusions made from earlier ozone studies, as transported pollution appears to come from across the eastern United

States region, rather than from just the high pollution areas within the Lake Michigan region. All of Illinois, and parts of Wisconsin, Indiana, Kentucky, Missouri, and Iowa are in the area that is most likely upwind on high ozone days at the Muskegon and Holland monitors.

Figure 2. Composite Back Trajectory Plot from the West Michigan Ozone Study (2009). The top plot shows the model output for the Holland monitor, while the bottom plot shows the model output for the Muskegon monitor.



Lake Michigan ozone continues to be studied. During the summer of 2017, yet another field study was conducted to study the gradient of ozone along the lakeshore. Measurements for this study were collected from May 22 to June 22, 2017, using a combination of satellite and aircraft remote sensing and on-the-ground monitoring. The results for this study are yet to be published.

The USEPA acknowledges that ozone transport is an important factor in the high ozone concentrations observed along Michigan's Lake Michigan shoreline. The USEPA's Intended Area Designations for the 2015 Ozone Standard Technical Support Document (December 20, 2017) states "the meteorological data strongly indicates that the violating monitors in these counties (Muskegon, Allegan, and Berrien) are predominantly affected by the transport of emissions over Lake Michigan."

The impact of ozone transport across Lake Michigan and the resulting impact on West Michigan counties forms the basis for these revised nonattainment area recommendations. The following sections include additional analysis to further demonstrate that Allegan and Muskegon Counties should be considered to have partial-county nonattainment area status due to the impact of transported ozone pollution along the Lake Michigan shoreline.

Air Quality

In the original designation recommendations, final 2015 design values and preliminary 2016 design values were used to determine which ambient air monitors were not attaining the 2015 ozone standard (Appendix A). Since the submittal of Michigan's original recommendations, the 2016 design values have been finalized. Final 2016 design values for Allegan and Muskegon Counties are shown in Table 1. The final 2016 design values for the remainder of the state can be found in Appendix B. Since the original recommendations, there have not been any significant changes to the design values in Muskegon or Allegan Counties and the monitors in both counties continue to violate the standard.

Table 1. Final 2016 Ozone Design Values for the Holland and Muskegon Monitors

Monitor Number	Monitor	County	Fourth Highest Value (ppb)			2016 Design Value
			2014	2015	2016	
260050003	Holland	Allegan	77	72	76	75
261210039	Muskegon	Muskegon	75	74	76	75

Design values from 2016 for eight West Michigan monitors were compared against their distance from shore (Table 2, Figure 3) and graphed to determine the approximate distance at which attainment of the ozone standard is reached (Figure 4). The logarithmic regression equation for this analysis shows a good relationship between design value and distance from shore. The graph indicates that design values decrease more rapidly close to the shoreline and tend to level off with increasing distance from shore. Using this logarithmic regression, it was determined that 21.32 miles is the distance from shore where air monitor values show attainment of the standard.

Table 2. West Michigan Monitor's Distance from Shore and 2016 Design Values

Monitor	2016 Design Value (ppb)	Distance from Shore (miles)
Cassopolis	70	31.73
Coloma	74	4.78
Kalamazoo	69	41.10
Holland	75	3.06
Jenison	70	18.31
Grand Rapids	69	27.98
Evans	67	44.75
Muskegon	75	3.00

Figure 3. Map of Monitor Locations in West Michigan

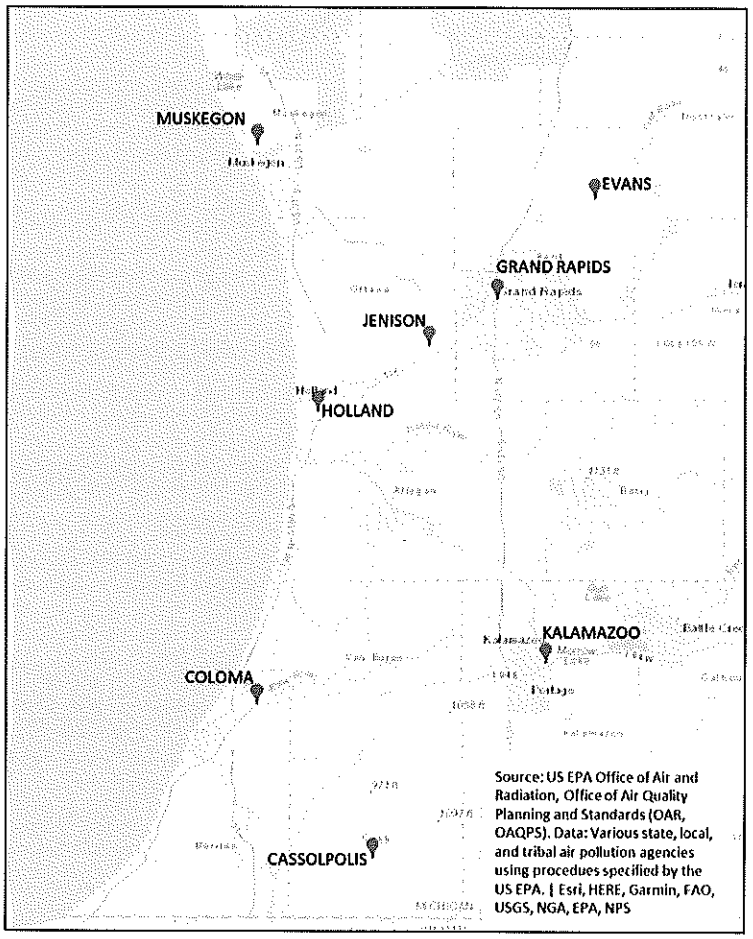
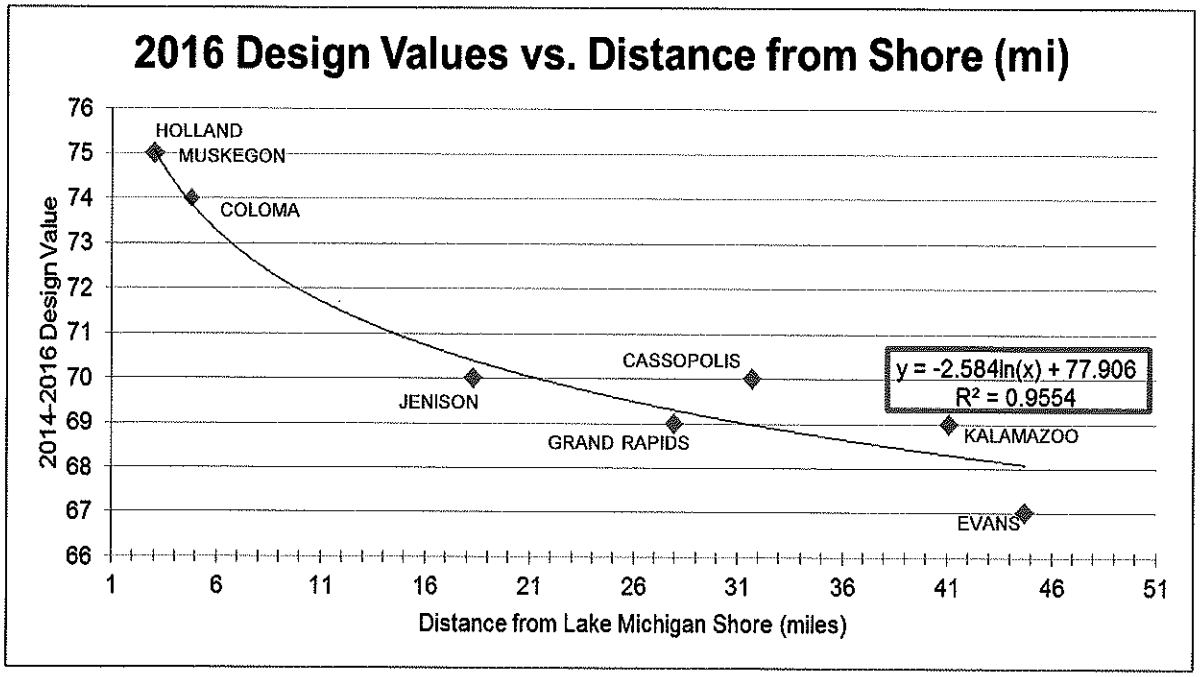


Figure 4. 2016 Design Values versus Monitor Distance from Shore



The Wisconsin Department of Natural Resources conducted an in-depth analysis of air quality gradients along the Lake Michigan shoreline[1]. Like West Michigan, transported pollution is a major contributor to ozone exceedances along Wisconsin's Lake Michigan shoreline. Wisconsin's shoreline monitoring network is more expansive than Michigan's and provides a better framework for determining ozone gradients along the shoreline. Wisconsin's analysis indicated that distances in the range of 2.9 to 4.2 miles from the shore represent the point at which air transitions from nonattainment into attainment of the standard. Together, the Wisconsin and Michigan analyses indicate that the appropriate nonattainment area boundary falls approximately between 3 and 21 miles inland.

This analysis serves to illustrate that elevated ozone concentrations are most concentrated along the Lake Michigan shoreline and that ozone concentrations decrease with increasing distance from shore. While this analysis alone is not robust enough to provide a definitive point at which air quality comes into attainment of the standard, it does demonstrate the trend of decreasing ozone concentrations with increasing distance from shore. In combination with the other factors considered in this document, there is good basis for the argument that partial-county nonattainment areas are more appropriate than entire county nonattainment areas along the Lake Michigan shoreline.

Emissions Data and Emissions-related Factors

Emissions of ozone precursors in Allegan and Muskegon Counties remain low relative to the surrounding areas and the emissions likely do not contribute to ozone nonattainment issues in these counties. The 2014 National Emissions Inventory (NEI) data is now available and updated emissions data for Allegan and Muskegon Counties are shown in Table 3 alongside the 2011 NEI data.

Table 3. Total Emissions of NOx and Volatile Organic Compounds (VOCs) in Allegan and Muskegon Counties

County	NOx (tpy)		VOC (tpy)	
	2014	2011	2014	2011
Allegan	5,071	5,289	12,031	12,899
Muskegon	6,743	7,296	11,478	12,263

Source: 2014 and 2011 National Emissions Inventory

Emissions of NOx and VOCs in Muskegon and Allegan Counties are low and have decreased since the 2011 NEI. Muskegon County saw a greater-than 7 percent drop in NOx emissions and a 6 percent drop in VOC emissions, while Allegan County reduced NOx emissions by 4 percent and VOC emissions by more than 6 percent between 2011 and 2014. Emissions of ozone precursors in these counties should continue to remain low or decrease over time.

To supplement the county-wide emissions data, sub-county emissions data and emissions-related data were reviewed to determine the extent of emissions within the new proposed nonattainment boundaries. Point source emission data from 2015 for Allegan and Muskegon Counties was used to determine the amount of county emissions that fall inside the proposed revised nonattainment boundaries (Table 4). The 2015 point source data from the Michigan Air Emissions Reporting System (MAERS) indicate that the majority of both NOx and VOC emissions fall inside the proposed partial-county nonattainment areas in Allegan and Muskegon

[1] Technical Support Document: 2015 Ozone National Ambient Air Quality Standards Area Designations. Wisconsin Department of Natural Resources. April 2017. Link: http://dnr.wi.gov/topic/AirQuality/documents/OzoneTSD20170420.pdf

Counties. In Muskegon County, nearly all the NOx emissions (with the exception of 22 tons) and 93 percent of the county-wide VOC emissions fall within the proposed nonattainment area. In Allegan County, over 80 percent of both NOx and VOC emissions are within the proposed partial-county nonattainment area.

Table 4. Point Source NOx and VOC Emissions Inside the Recommended Partial-county Nonattainment Area

County	NOx			VOCs		
	Total (tpy)	Inside (tpy)	Inside (%)	Total (tpy)	Inside (tpy)	Inside (%)
Allegan	767	636	83%	346	279	81%
Muskegon	2,484	2,462	99%	213	189	89%

Source: Michigan Air Emissions Reporting System, 2015

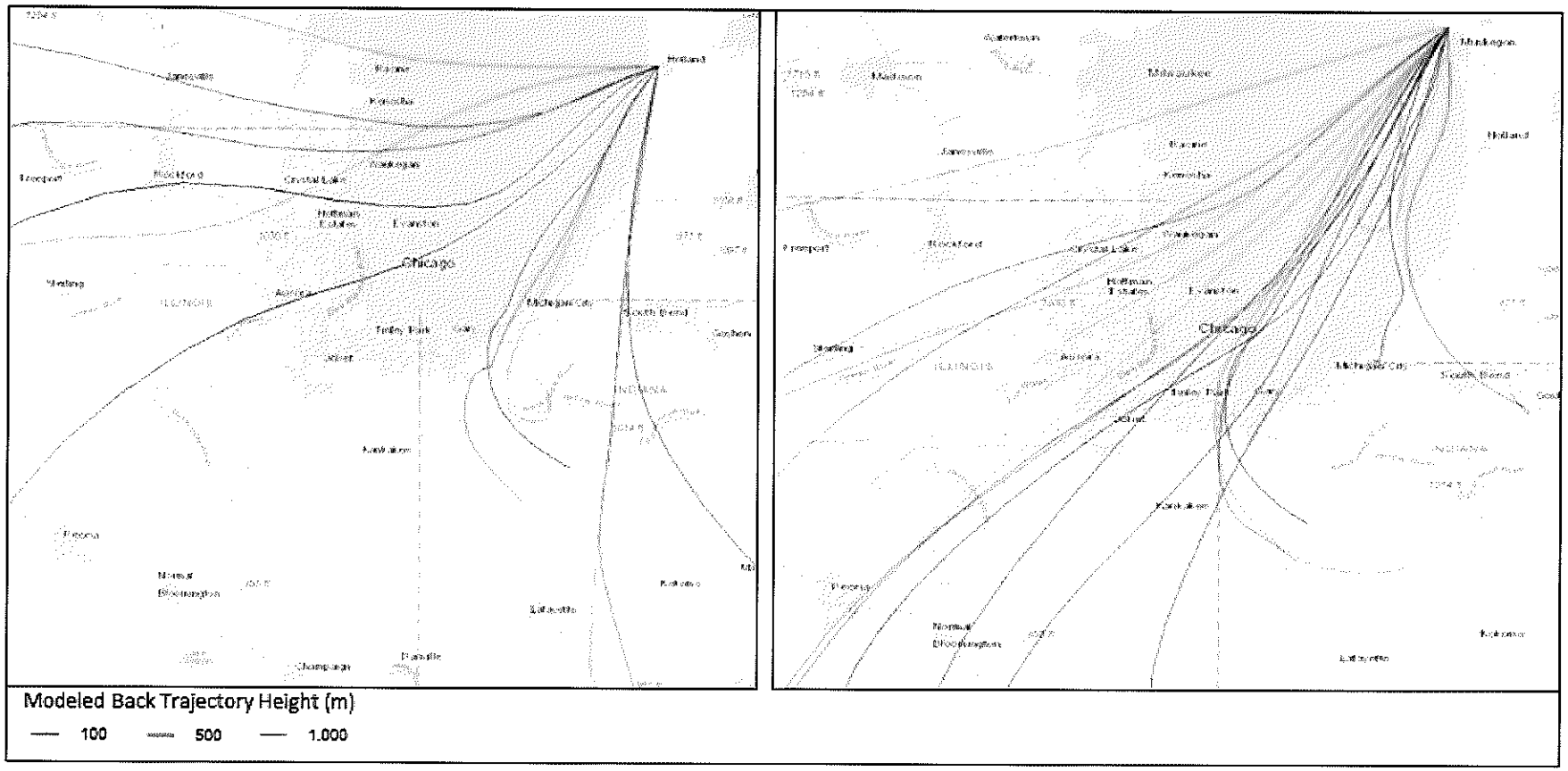
Partial county emissions data is useful in illustrating the distribution of point sources in the counties and how the new nonattainment area boundaries will impact the point sources in these counties. However, emissions of ozone precursors in Allegan and Muskegon Counties are still very low overall and are not likely to be a major contributor to the ozone pollution issues on Michigan's Lake Michigan shoreline, especially in comparison to the high emissions of ozone precursors in other counties bordering Lake Michigan (Appendix A).

HYSPLIT and Photochemical Modeling

Meteorological data supports the conclusion that transported pollution is a significant factor in West Michigan ozone exceedances. In the original submittal, HYSPLIT modeling results were available for the 2013 and 2014 ozone seasons (Appendix A). Since the original designation recommendations, HYSPLIT results for the 2015 ozone season have become available (Figure 5).

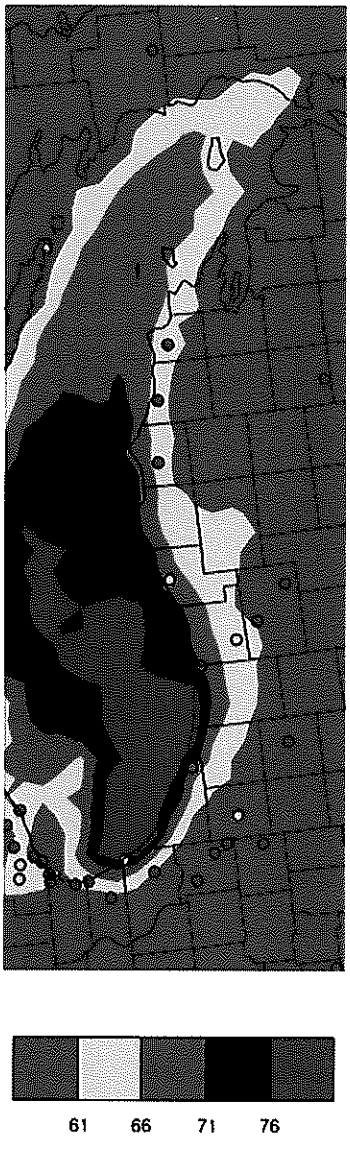
The 2015 HYSPLIT modeling data show similar trends to that of the 2013 and 2014 HYSPLIT projections. In 2015, the Holland monitor had four exceedances and the Muskegon monitor had six exceedances. In Holland, two of the modeled exceedances occur when air masses are clearly coming from the west and crossing through Chicago, Illinois and Kenosha, Wisconsin before traveling across Lake Michigan and hitting the monitor. The other two exceedance causing air masses are coming from a more southerly direction and travel through Indiana and parts of Michigan before arriving at the Holland monitor. These modeled back trajectories agree with conclusions made in the LMOS, that regional ozone pollution from across the eastern United States is impacting the Lake Michigan area and that the wind patterns influence the direction from which air pollution is transported into the Lake Michigan area. At the Muskegon monitor, all six ozone exceedances show similar projected back-trajectories. The projected air parcels primarily travel from the southwest and pass over the Chicago, IL – Gary, IN area, before crossing over Lake Michigan and arriving at the Muskegon monitor. Again, the HYSPLIT results support the conclusion that regional pollution is being transported into the Lake Michigan area and is picking up emissions from metropolitan area around Lake Michigan before reaching Lake Michigan. This polluted air mass is what then leads to exceedances at the Muskegon and Holland monitors.

Figure 5. HYSPLIT Modeling Results for 2015 High Ozone Days at the Holland and Muskegon Monitors



Photochemical modeling of ozone over the Lake Michigan area also demonstrates the rapid decrease of ozone concentrations along Michigan's Lake Michigan shoreline. LADCO recently conducted photochemical modeling of ozone concentrations over Lake Michigan, projecting 2017 design values based upon 2011 meteorology (Figure 6). The model results indicate that ozone concentrations achieve attainment of the standard within a narrow band along the shoreline. The red and purple areas in the figure are those that exceed the 2015 ozone standard of 70 ppb. These areas are primarily located over Lake Michigan with thin bands where these high concentrations are expected to encroach inland along Michigan's Lake Michigan shoreline. These results, combined with the other factors considered in this analysis, provide strong evidence that ozone exceedances at Michigan's Lake Michigan monitors are caused by regional pollution that is transported to the Lake Michigan area, and that air quality rapidly improves as you move inland.

Figure 6. Photochemical Model Projections of 2017 8-hour Ozone Design Values with Interpolated Gradient-adjusted Fused Surface (ppb). Modeling Completed by LADCO.



Jurisdictional Boundaries

Michigan previously recommended all three West Michigan counties as separate, full-county nonattainment areas. The USEPA has adopted this recommendation as their proposed designations for West Michigan. However, additional analysis of air quality, emissions, and meteorological data indicates the significant impact that transported pollution has on Michigan's Lake Michigan shoreline and the rapid rate at which ozone levels decrease as air comes inland. Due to this further analysis, the MDEQ is now recommending that the USEPA designate only a portion of Allegan and Muskegon Counties as nonattainment. Drawing partial-county borders is not unprecedented and the USEPA is even proposing to designate partial-county boundaries in Wisconsin, which faces similar transport-induced nonattainment issues to that of Michigan.

In Wisconsin, the USEPA is recommending a border based on the location of the attaining monitors. For the state of Michigan, our nearest attaining monitor to the shoreline is 18.32 miles from shore. The MDEQ is taking this distance into consideration in its recommended nonattainment boundaries but is also considering the entire weight of evidence analysis in drawing the partial-county borders. The design value–distance from shore analysis indicates that the nonattainment boundary may fall in the range of 4 to 20 miles inland. In addition, the HYSPLIT modeling results identify out-of-state transport as playing a key role in high ozone values at the nonattaining monitors. Photochemical modeling shows the existence of a gradient and that high ozone concentrations are tightly concentrated along the shore. Based upon this information, township borders around 10 to 20 miles inland were used to draw the proposed nonattainment boundary. The townships proposed to be included in the nonattainment area are also listed below. Figure 1 shows a map of the revised nonattainment area border.

Townships, Villages, and Cities Located in the Proposed Nonattainment Area

Muskegon County	**Allegan County**
Blue Lake	Casco
Dalton	Cheshire
Fruitland	Clyde
Fruitport	Douglas
Laketon	Fillmore
Montague	Ganges
Muskegon	Heath
Muskegon Heights	Holland (Only the part in Allegan Co)
North Muskegon	Laketown
Norton Shores	Lee
Whitehall	Manilus
White River	Overisel
	Sagatuck
	Valley

Berrien County

Although the MDEQ is revising its recommended boundaries for the Allegan and Muskegon County nonattainment areas, the recommendation for the third nonattainment county in West Michigan, Berrien County is remaining the same. Berrien County faces the same issues of transported pollution as the other nonattainment West Michigan counties, but due to its proximity to out-of-state sources and the likelihood that most of the county has high ozone

concentrations, the MDEQ continues to recommend Berrien as a separate, single-county nonattainment area.

Conclusion

The MDEQ is submitting these revised recommendations to the USEPA to consider when making final ozone designations for the 2015 ozone standard. The MDEQ requests that all areas that show attainment of the 2015 ozone standard and have the five-factor analysis to give weight to that status, be designated as attainment (Benzie, Cass, Chippewa, Clinton, Eaton, Genesee, Huron, Ingham, Kalamazoo, Kent, Lenawee, Manistee, Mason, Missaukee, Ottawa, Tuscola, and Wexford Counties). The MDEQ also requests that all areas that cannot be supported as attainment or nonattainment be designated as unclassifiable per the CAA requirements.

Partial county nonattainment areas for Allegan and Muskegon Counties are more appropriate due to the significant impact transported pollution has on the Lake Michigan shoreline and evidence that its impacts are limited to shoreline areas. Further analysis of air quality data, emissions data, and meteorological data all indicate that transported pollution is a significant contributor to the high ozone concentrations measured at the Allegan and Muskegon monitors. In addition, air quality data and photochemical modeling indicate that ozone concentrations decrease at increasing distance from the Lake Michigan shoreline. As a result, the MDEQ is requesting the USEPA designate areas of Allegan County and Muskegon County as partial-county nonattainment areas, rather than full-county nonattainment areas.

APPENDIX A

ORIGINAL NONATTAINMENT RECOMMENDATIONS SUBMITTAL

OCTOBER 2016

This appendix was included in the submittal, but was deleted here for the sake of brevity. The October 2016 submittal is available on our website or upon request from the MDEQ-AQD, SIP Unit.

APPENDIX B

2016 OZONE DESIGN VALUES

Table B1. 2016 Design Values for All Monitors in the State of Michigan

Monitor Number	Monitor	County	Fourth Highest Concentration (ppb)			2016 Design Value (ppb)
			2014	2015	2016	
260050003	Holland	Allegan	77	72	76	75
260190003	Frankfort	Benzie	69	67	72	69
260210014	Coloma	Berrien	73	72	78	74
260270003	Cassopolis	Cass	66	68	77	70
260330901	Sault Ste. Marie	Chippewa	56	59	62	59
260370001	Rose Lake	Clinton	66	64	73	67
260490021	Flint	Genesee	68	66	72	68
260492001	Otisville	Genesee	68	67	73	69
260630007	Harbor Beach	Huron	66	67	72	68
260650012	Lansing	Ingham	65	64	73	67
260770008	Kalamazoo	Kalamazoo	67	67	74	69
260810020	Grand Rapids	Kent	66	67	75	69
260810022	Evans	Kent	66	65	72	67
260910007	Tecumseh	Lenawee	68	65	69	67
260990009	New Haven	Macomb	71	72	75	72
260991003	Warren	Macomb	68	64	71	67
261010922	Manistee	Manistee	68	67	70	68
261050007	Scottville	Mason	70	66	74	70
261130001	Houghton Lake	Missaukee	63	64	74	67
261210039	Muskegon	Muskegon	75	74	76	75
261250001	Oak Park	Oakland	67	66	75	69
261390005	Jenison	Ottawa	71	65	74	70
261470005	Port Huron	St. Clair	71	75	73	73
261530001	Seney	Schoolcraft	67	70	75	70
261579991	Unionville	Tuscola	63	64	71	66
261619991	Ann Arbor	Washtenaw	67	64	74	68
261610008	Ypsilanti	Washtenaw	70	64	69	67
261630001	Allen Park	Wayne	64	64	70	66
261630019	East 7 Mile	Wayne	73	70	74	72
261659991	Hoxyville	Wexford	66	64	71	67