

US EPA ARCHIVE DOCUMENT

Thomas V. Skinner
Regional Administrator
U.S. EPA, Region V
77 West Jackson Blvd.
Chicago, Illinois 60604

July 15, 2003

Re: Ohio Recommended Eight Hour Ozone Designations

Dear Mr. Skinner:

I am writing to submit Ohio's recommendations for eight-hour ozone nonattainment boundaries for the metropolitan areas within Ohio. Ambient data for the periods 2000-2002 have been evaluated to determine which urban areas within the state are not attaining the revised standard. This evaluation also addressed the interstate metropolitan areas with only a rural portion of the metropolitan statistical area (MSA) within Ohio.

These recommendations were initially based on the metropolitan statistical areas as they existed prior to June 9, 2003. These areas have been redefined in some cases. Our recommendations identify where changes have occurred. The changes, though, do not significantly change our overall recommendations. We believe that the information on population, emissions and air quality supports the recommended status for a county whether or not it is part of the old or new metropolitan area definitions.

In general, the state is recommending the entire MSA or combined MSA (CMSA) be designated according to the highest monitored design value within or downwind of the MSA or CMSA. In these cases, the downwind county beyond the MSA or CMSA is recommended to be included within the nonattainment boundaries.

The areas and their specific counties are as follows:

Canton/Massillon MSA: The MSA includes Stark and Carroll Counties. **Ohio EPA is recommending to exclude Carroll County, a rural upwind area with a population less than 30,000.**

Cincinnati/Hamilton CMSA: The revised interstate MSA includes Butler, Warren, Hamilton, Clermont and Brown Counties in Ohio, Ohio, Boone, Bracken, Campbell, Grant, Gallatin, Kenton and Pendleton Counties in Kentucky and Dearborn, Franklin and Ohio Counties in Indiana. **In Ohio, Ohio EPA is recommending to exclude Brown County,**

a rural upwind area with a population less than 50,000. Ohio EPA is also recommending the addition of Clinton County, a downwind area with monitored violations. Clinton County is a rural downwind area. Depending on U.S. EPA's final implementation rule, this area should be a separate, adjacent nonattainment area unless the area would be classified as moderate nonattainment with subpart II mandatory programs.

Cleveland/Akron CMSA: The old CMSA includes Lorain, Medina, Cuyahoga, Summit, Lake, Portage, Geauga and Ashtabula Counties. The redefined MSAs for this area include the same counties with the exception of Ashtabula. While the Cleveland/Akron/Ashtabula combined area will most likely be evaluated as a single study area, separating the designations by MSA could be more appropriate. Having Ashtabula County as a separate moderate nonattainment area though, could result in a requirement for stage II, fifteen percent RFP, I/M, etc if the eight-hour implementation plan adopts that approach. **Therefore, we recommend that the Cleveland MSA plus Ashtabula County be designated as one area and the Akron MSA be designated as a second area.**

Columbus MSA: The MSA includes Franklin, Delaware, Licking, Fairfield, Pickaway and Madison Counties. Ohio EPA is recommending the addition of Knox County as a separate adjacent downwind area with monitored violations. Ohio EPA is recommending to exclude Pickaway County, a rural upwind county with a population of 52,727.

Morrow and Union Counties have been added to the Columbus MSA. Each of these counties, though, has a population less than 50,000 and less than 5,000 tons per year combined VOC and NOx emissions and should be excluded from the nonattainment area.

Dayton/Springfield MSA: The old MSA includes Miami, Clark, Greene and Montgomery Counties. The redefined MSA includes Preble, an adjacent rural upwind area with a monitor reading attainment. **Preble County should be excluded from the nonattainment designation.**

Huntington/Ashland MSA: The old and new interstate MSAs include Lawrence County in Ohio, Greenup, Carter and Boyd Counties in Kentucky and Wayne and Cabell Counties in West Virginia.

Lima MSA: The MSA includes Allen and Auglaize Counties. Ohio EPA is recommending to exclude Auglaize County, a rural upwind area with population less than 50,000. In addition, Auglaize County is not included in the revised MSA for Lima.

Mansfield MSA: The MSA includes Crawford and Richland Counties. The revised MSA does not include Crawford County. Although this area is not currently monitored, Ohio EPA is recommending that these counties be designated attainment due to the limited population and emissions and their remote location relative to major metropolitan areas.

Parkersburg/Marietta MSA: The interstate MSA includes Washington County in Ohio and Wood County in West Virginia. The revised MSA includes additional counties in Kentucky.

Steubenville/Weirton MSA: The interstate MSA includes Jefferson County in Ohio and Hancock and Brook Counties in West Virginia.

Toledo MSA; The MSA includes Lucas, Wood and Fulton Counties. **Ohio EPA is recommending to exclude Fulton County, a rural upwind area with population less than 50,000. The revised MSA also includes Ottawa County which has less than 50,000 population and should also be excluded from the nonattainment designation.**

Youngstown/Warren MSA: The MSA includes Trumbull, Mahoning and Columbiana Counties. **The revised MSA does not include Columbiana County, but Ohio EPA is recommending to include Columbiana as an adjacent nonattainment area. The revised MSA now includes Mercer County, Pennsylvania. Mercer County should be considered a separate, adjacent nonattainment area since this area is primarily impacted by the Pittsburgh MSA during periods of high ozone.**

Wheeling MSA: The interstate MSA includes Belmont County in Ohio and Ohio and Marshall Counties in West Virginia. **Ohio EPA is recommending the exclusion of Belmont County, a rural upwind county with a population less than 75,000.**

Attached are tables summarizing ambient data for the period 2000-2002 and year 2000 population data for counties in the State of Ohio. In addition, maps summarizing population, population change, manufacturing population and manufacturing population change have been attached to assist in describing the nature of counties excluded from nonattainment designations.

Please call if you have any questions.

Sincerely,

Christopher Jones
Director

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Attachments

- A) List of Ohio County Recommendations
- B) Map: Recommended 8-Hour Nonattainment Designations
- C) Summary and Response to Public Comments
- D) Air Quality Subsystem Quick Look Report
- E) Decennial Census of Population, 1800-2000, by County
- F) Map: of Ohio Metropolitan Areas and Counties, 2000 Population and Percent Change from 1990
- G) NEI99 County Emission Inventories
- H) NET96 C/MSA Emission Index Page
- I) Map: 2000 Census Distribution of Ohio Population
- J) Map: Population Change 1990-2000 Census Tract Level
- K) Workforce Commuter Patterns
- L) State of Ohio Land Cover (Ohio Department of Natural Resources)
- M) Ohio County Estimates, 2000-2001 Number of Farms, Average Size of Farm and Land in Farms

8-Hour Ozone				
County		Attainment/Unclassifiable		Nonattainment
Adams		X		
Allen				X
Ashland		X		
Ashtabula				X
Athens		X		
Auglaize		X		
Belmont		X		
Brown		X		
Butler				X
Carroll		X		
Champaign		X		
Clark				X
Clermont				X
Clinton				X
Columbiana				X
Coshocton		X		
Crawford		X		
Cuyahoga				X
Darke		X		
Defiance		X		
Deleware				X
Erie		X		
Fairfield				X
Fayette		X		
Franklin				X
Fulton		X		
Gallia		X		
Geauga				X
Greene				X
Guernsey		X		
Hamilton				X
Hancock		X		
Hardin		X		
Harrison		X		
Henry		X		
Highland		X		
Hocking		X		
Holmes		X		
Huron		X		
Jackson		X		
Jefferson				X
Knox				X
Lake				X
Lawrence				X
Licking				X
Logan		X		
Lorain				X
Lucas				X
Madison				X
Mahoning				X
Marion		X		
Medina				X
Meigs		X		
Mercer		X		
Miami				X

Monroe		X		
Montgomery				X
Morgan		X		
Morrow		X		
Muskingum		X		
Noble		X		
Ottawa		X		
Paulding		X		
Perry		X		
Pickaway		X		
Pike		X		
Portage				X
Preble		X		
Putnam		X		
Richland		X		
Ross		X		
Sandusky		X		
Scioto		X		
Seneca		X		
Shelby		X		
Stark				X
Summit				X
Trumbull				X
Tuscarawas		X		
Union		X		
Van Wert		X		
Vinton		X		
Warren				X
Washington				X
Wayne		X		
Williams		X		
Wood				X
Wyandot		X		
				33

Additional Information Concerning the Counties Recommended to be Excluded from Nonattainment Boundaries

One common assumption in the following discussions is that the meteorological conditions that contribute to elevated ozone values in Ohio generally include light winds from the south or southwest. This is consistent with the basis for the placement of the ambient ozone monitoring network.

Most of these counties are unmonitored. They are upwind rather than downwind of the urban/industrial portion of the MSA during periods of ozone conducive meteorology. These areas do not generate high emissions and would not be expected to significantly contribute to high ozone concentrations in the region. The population information indicates that these areas are experiencing little or no growth and in some cases, negative growth.

Auglaize: Auglaize County is part of the Lima MSA. Allen County is the only other County in the MSA. Auglaize should be excluded from this nonattainment area due to:

- Proximity to the source region/nonattainment area: Auglaize is located upwind (to the south) of Lima on summer ozone days and would not be expected to significantly contribute to the nonattainment problem, nor would Auglaize County be expected to be impacted by emissions from, nor should it be considered a receptor for, the Lima urban industrial area.
- Population: The population of Auglaize County is less than 50,000 while Allen County is in excess of 100,000.
- Emissions: Auglaize County has less than 4,000 tons per year of both NO_x and VOC emissions, while Allen County has 12,500 and 14,600 tons per year of NO_x and VOC, respectively. The surrounding area is rural/agricultural.
- Land use: Auglaize County is over 95% wooded or agricultural.
- Commuters: Between 12,000 and 13,000 workers commute in or out of the county.

Fulton: Fulton County is part of the Toledo MSA. The MSA also includes Lucas and Wood Counties. Fulton County should be excluded from this nonattainment area due to:

- Proximity to the source region/nonattainment area: Fulton County is located upwind (to the west) of the Toledo urban/industrial area on summer ozone days and would not be expected to significantly contribute to the nonattainment problem, nor would Fulton County be expected to be impacted by, nor should it be considered a receptor for, the Toledo area.
- Population: The population of Fulton County is less than 45,000 which is less than 7% of the total MSA (618,000).
- Emissions: Fulton County emissions of VOC and NO_x are both less than 5,000 tons per year while Lucas and Wood Counties combine for nearly 50,000 ton per year of each. The

surrounding area is rural/agricultural.

- Land use: Fulton County is over 96% wooded or agricultural.
- Commuters: Between 12,000 and 13,000 workers commute in or out of the county.

Brown: Brown County is part of the Cincinnati/Hamilton interstate CMSA. The CMSA includes four additional counties in Ohio as well as counties in Kentucky and Indiana. Brown County should be excluded from this CMSA nonattainment area due to:

- Proximity to the source region/nonattainment area: The majority of Brown County is located south/southeast of the Cincinnati urban/industrial area. The area would not be expected to be significantly impacted by, nor should it be considered a receptor for, the Cincinnati area.
- Population: The population of Brown County is less than 45,000, which is less than 3% of the total CMSA (1,979,202)
- Emissions: Brown County emissions of VOC and NO_x are both less than 2,500 tons per year. CMSA emissions from the remaining Ohio counties are over 90,000 tons per year of VOC and over 150,000 tons per year of NO_x. The surrounding area is rural/agricultural.
- Land use: Brown County is over 97% wooded or agricultural.
- Commuters: Between 11,000 and 12,000 workers commute in or out of the county.

Carroll: Carroll County is part of the Canton MSA. The MSA also includes Stark County. Carroll County should be excluded from this MSA nonattainment area due to:

- Proximity to the source region/nonattainment area: Carroll County is south of the Canton urban/industrial area. The area would not be expected to be impacted by, nor should it be considered a receptor for, the Canton area.
- Population: The population of Carroll County is less than 30,000 while Stark County has over 375,000.
- Emissions: Carroll County emissions of VOC and NO_x are both less than 2,000 tons per year. Stark County has over 20,000 tons per year of each. The surrounding area is rural/agricultural.
- Land use: Carroll County is over 96% wooded or agricultural.
- Commuters: Between 7,000 and 8,000 workers commute in or out of the county.

Belmont: Belmont County is part of the Wheeling West Virginia interstate MSA. The MSA also includes Ohio and Marshall Counties in West Virginia. Belmont County should be excluded from this MSA nonattainment area due to:

- Proximity to the source region/nonattainment area: Belmont County is located west of the Wheeling urban/industrial area. The area would not expect to be impacted by, nor should it be considered a receptor for, the Wheeling area.
- Population: The population of Belmont County is just over 70,000. The MSA total is 153,172. Population in both Belmont County and the MSA is decreasing (-3.8% 1990-2000).
- Emissions: Belmont County emissions of VOC and NO_x are 4,750 and 14,342 tons per

year, respectively. It should be noted that the primary NO_x source in Belmont County is subject to the NO_x transport rules and will be significantly reduced. MSA total emissions of VOC and NO_x are 11,572 and 72,905 tons per year, respectively. The surrounding area is rural/agricultural.

- Land use: Belmont County is over 95% wooded and agricultural.
- Commuters: Between 11,000 and 12,000 workers commute in or out of the county.

Pickaway: Pickaway County is part of the Columbus MSA. The revised MSA also includes Franklin, Delaware, Fairfield, Licking, Madison, Union and Morrow Counties. Pickaway County should be excluded from this MSA nonattainment area due to:

- Proximity to the source region/nonattainment area: Pickaway County is located south of the Columbus area. The area would not expect to be impacted by, nor should it be considered a receptor for, the Columbus area.
- Population: The population of Pickaway County is just over 52,000. The MSA total is 1,540,157. Pickaway County grew by less than 5,000 since 1990.
- Emissions: Pickaway County emissions of VOC and NO_x are 3,736 and 5,914 tons per year, respectively. MSA total emissions of VOC and NO_x are 90,632 and 109,802 tons per year, respectively. The surrounding area, other than Columbus is predominantly rural/agricultural.
- Land use: Pickaway County is over 97% agriculture and wooded.
- Commuters: Between 14,000 and 15,000 workers commute in or out of the county.

The Counties below were included as part of the redefined MSA's but should be excluded from the nonattainment areas.

Union: Union County is part of the revised Columbus MSA. The revised MSA also includes Franklin, Delaware, Fairfield, Licking, Madison, Pickaway and Morrow Counties. In addition to past monitoring measuring attainment of the 8-hour ozone standard, Union County should be excluded from this MSA nonattainment area due to:

- Proximity to the source region/nonattainment area: Union County is located west of the Columbus area. The area would not expect to be impacted by, nor should it be considered a receptor for, the Columbus area.
- Population: The population of Union County is just over 40,000. The MSA total is 1,540,157. Union County grew by less than 10,000 since 1990.
- Emissions: Union County emissions of VOC and NO_x are 2,533 and 2,325 tons per year, respectively. MSA total emissions of VOC and NO_x are 90,632 and 109,802 tons per year, respectively. The surrounding area, other than Columbus and southern Delaware Counties is predominantly rural/agricultural.
- Land use: Union County is over 95% agriculture and wooded.
- Commuters: Between 16,000 and 17,000 workers commute in or out of the county.

Morrow: Morrow County is part of the revised Columbus MSA. The revised MSA also

includes Franklin, Delaware, Fairfield, Licking, Madison, Pickaway and Union Counties. Morrow County should be excluded from this MSA nonattainment area due to:

- Proximity to the source region/nonattainment area: Morrow County is located north of the Columbus area beyond the expected peak Columbus impact area. The highest reading ozone monitor in the Columbus area is in northeastern Franklin County.
- Population: The population of Morrow County is under 40,000. The MSA total is 1,540,157. Morrow County grew by less than 1,000 since 1990.
- Emissions: Morrow County emissions of VOC and NOx are 2,049 and 2,611 tons per year, respectively. MSA total emissions of VOC and NOx are 90,632 and 109,802 tons per year, respectively. The surrounding area, other than Columbus and southern Delaware Counties is predominantly rural/agricultural.
- Land use: Morrow County is over 98% agricultural and wooded.
- Commuters: Between 8,000 and 9,000 workers commute in or out of the county.

Ottawa: Ottawa County is part of the revised Toledo MSA. The revised MSA also includes Lucas, Wood and Fulton Counties. Ottawa County should be excluded from this MSA nonattainment area due to:

- Proximity to the source region/nonattainment area: Union County is located east-southeast of the Toledo area. The area would not expect to be impacted by, nor should it be considered a receptor for, the Toledo area.
- Population: The population of Ottawa County is just over 40,000. The MSA total is 618,203. Ottawa County grew by less than 1,000 since 1990.
- Emissions: Ottawa County emissions of VOC and NOx are 5,815 and 4,974 tons per year, respectively. MSA total emissions of VOC and NOx are 55,000 tons of each. The surrounding is predominantly rural/agricultural.
- Land use: Ottawa County is over 93% agricultural, wooded, open water (excluding Lake Erie) and wetlands.
- Commuters: Between 12,000 and 13,000 workers commute in or out of the county.

Preble: Preble County is part of the revised Dayton MSA. The revised MSA also includes Montgomery, Greene, Clark and Miami Counties. In addition to past monitoring measuring attainment of the 8-hour ozone standard, Preble County should be excluded from this MSA nonattainment area due to:

- Proximity to the source region/nonattainment area: Preble County is located west of the Dayton area. The area would not expect to be impacted by, nor should it be considered a receptor for, the Dayton area.
- Population: The population of Preble County is just under 43,000. The MSA total is 950,558. Preble County grew by less than 3,000 since 1990.
- Emissions: Preble County emissions of VOC and NOx are 2,711 and 2,960 tons per year, respectively. MSA total emissions of VOC and NOx are 63,092 and 52,756 tons per year, respectively. The surrounding area, other than Dayton is predominantly rural/agricultural.
- Land use: Preble County is over 97% agriculture and wooded.

- Commuters: Between 11,000 and 12,000 workers commute in or out of the county.