



Pennsylvania Department of Environmental Protection

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P.O. Box 2063

Harrisburg, PA 17105-2063

August 15, 2003

Secretary

717-787-2814

Mr. Donald S. Welsh
Regional Administrator
U.S. Environmental Protection Agency
Region III (3RA00)
1650 Arch Street
Philadelphia, PA 19103-2029

Dear Mr. Welsh:

Pursuant to the requirements of section 107(d) of the Clean Air Act (CAA), enclosed are our initial recommendations for designation of areas in the Commonwealth of Pennsylvania, including interstate areas, with regard to the eight-hour ground-level ozone national ambient air quality standard.

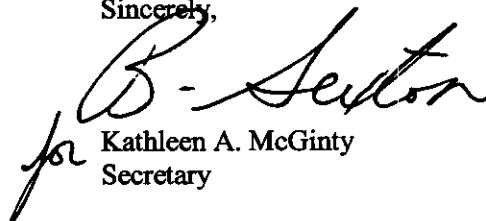
Pennsylvania intends to take full advantage of the additional opportunities for review and revision provided under the CAA, the Environmental Protection Agency's (EPA) pending final rule implementing the eight-hour ozone standard and related guidance documents. We understand EPA intends to comment to the states on their recommendations in October, which triggers a 120-day review period for states and EPA to work out any unresolved issues. During that period, ozone data for the 2003 ozone season will become available. In addition, since EPA's eight-hour implementation rule will not be final until the end of the year, Pennsylvania also intends to review EPA's responses in light of the implications of the final rule.

In preparing these recommendations, Pennsylvania considered the factors described in EPA's guidance and consulted with the general public and advisory groups, including our Air Quality Technical Advisory Committee, Small Business Compliance Assistance Committee and Citizens Advisory Council, as well as with the Pennsylvania Department of Transportation and major metropolitan planning organizations. We also held six public meetings by teleconference.

We have made these eight-hour ozone designation recommendations with one important goal in mind – choosing boundaries that can facilitate effective clean air planning in which citizens of the area can be involved. More importantly, we intend to work with states in the Ozone Transport Region and with EPA on effective and equitable regional and national measures to address ozone transport. Both are necessary to ensure attainment and maintenance of the eight-hour ozone standard in Pennsylvania and downwind areas.

Thank you for in advance for your favorable consideration of Pennsylvania's recommendations.

Sincerely,



Kathleen A. McGinty
Secretary



Appendix I

- Table 1. List of Proposed Designations
- Figure 1. One-Hour Ozone Planning Areas
- Figure 2. Metropolitan Statistical Areas
- Figure 3. Proposed Nonattainment Areas

TABLE 1. List of Proposed Designations

Pennsylvania Areas	County Design Values*	Proposed Designation	Comments
DEPs Southeast Region			
Philadelphia-Camden-Vineland PA-NJ-DE-MD Combined SA			
Bucks County	104 ppb	Nonattainment	
Chester County	95 ppb	Nonattainment	
Delaware County	95 ppb	Nonattainment	
Montgomery County	99 ppb	Nonattainment	
Philadelphia County	98 ppb	Nonattainment	
DEPs Southcentral Region			
Altoona Metropolitan SA			
Blair County	84 ppb	Attainment	
Harrisburg-Carlisle-Lebanon Combined SA			
Harrisburg-Carlisle Metropolitan SA			
Cumberland County	No monitor	Nonattainment	
Dauphin County	91 ppb	Nonattainment	
Perry County	83 ppb	Nonattainment	
Lebanon Metropolitan SA			
Lebanon County	No monitor	Nonattainment	
Lancaster Metropolitan SA			
Lancaster County	94 ppb	Nonattainment	
Reading Metropolitan SA			
Berks County	92 ppb	Nonattainment	
York-Hanover-Gettysburg Combined SA			
York-Hanover Metropolitan SA			
York County	92 ppb	Nonattainment	
Gettysburg Micropolitan SA			
Adams County	No Monitor**	Nonattainment	

Pennsylvania Areas	County Design Values*	Proposed Designation	Comments
Chambersburg Micropolitan SA Area			
Franklin County	94 ppb	Nonattainment	Transport County
Huntingdon Micropolitan SA			
Huntingdon County	No monitor	Attainment	
Remaining Counties in DEPs Southcentral Region			
Bedford County	No monitor	Attainment	
Fulton County	No monitor	Attainment	
Juniata County	No monitor	Attainment	
Mifflin County	No monitor	Attainment	
DEPs Southwest Region			
Pittsburgh-New Castle Combined Statistical Area			
Pittsburgh Metropolitan Statistical Area			
Allegheny County	95 ppb	Nonattainment	
Armstrong County	91 ppb	Nonattainment	
Beaver County	90 ppb	Nonattainment	
Butler County (Part of DEPs Northwest Region)	No monitor	Nonattainment	
Fayette County	No monitor	Nonattainment	
Washington County	88 ppb	Nonattainment	
Westmoreland County	86 ppb	Nonattainment	
New Castle Micropolitan SA			
Lawrence County (Part of DEPs Northwest Region)	78 ppb	Attainment	
Johnstown Metropolitan SA			
Cambria County	88 ppb	Nonattainment	
Somerset Micropolitan SA			
Somerset County	No Monitor	Attainment	
Indiana Micropolitan SA			
Indiana County	No monitor	Attainment	

Pennsylvania Areas	County Design Values*	Proposed Designation	Comments
Remaining Counties in DEPs Southwest Region			
Greene County	90 ppb	Nonattainment	Transport County
DEPs Northwest Region			
Erie Metropolitan SA			
Erie County	88 ppb	Nonattainment	
Youngstown-Warren-Boardman Metropolitan SA			
Mercer County	92 ppb	Nonattainment	
Meadville Micropolitan SA			
Crawford County	No monitor	Attainment	
St. Marys Micropolitan SA			
Elk County	No monitor	Attainment	
Bradford Micropolitan SA			
McKean County	No monitor	Attainment	
Oil City Micropolitan SA			
Venango County	No monitor	Attainment	
Warren Micropolitan SA			
Warren County	No monitor	Attainment	
Remaining Counties in DEPs Northwest Region			
Clarion County	No monitor	Attainment	
Jefferson County	No monitor	Attainment	
Forest County	No monitor	Attainment	
DEPs Northcentral Region			
State College Metropolitan SA			
Centre County	85 ppb	Nonattainment	

Pennsylvania Areas	County Design Values*	Proposed Designation	Comments
Williamsport-Lock Haven Combined Statistical Area			
Williamsport Metropolitan SA			
Lycoming County	79 ppb	Attainment	
Lock Haven Micropolitan SA			
Clinton County	No monitor	Attainment	
Bloomsburg-Berwick Micropolitan SA			
Columbia County	No monitor	Attainment	
Montour County	No monitor	Attainment	
DuBois Micropolitan SA			
Clearfield County	87 ppb	Nonattainment	Transport County
Sunbury-Lewisburg-Selinsgrove Combined SA			
Lewisburg Micropolitan SA			
Union County	No monitor	Attainment	
Selinsgrove Micropolitan SA			
Snyder County	No monitor	Attainment	
Sunbury Micropolitan SA			
Northumberland County	No monitor	Attainment	
Remaining Counties in Northcentral Region			
Bradford County	No monitor	Attainment	
Cameron County	No monitor	Attainment	
Potter County	No monitor	Attainment	
Sullivan County	No monitor	Attainment	
Tioga County	84 ppb	Attainment	
DEPs Northeast Region			
Allentown-Bethlehem-Easton Metropolitan Statistical Area			
Carbon County	No monitor	Nonattainment	
Lehigh County	93 ppb	Nonattainment	
Northampton County	92 ppb	Nonattainment	

Pennsylvania Areas	County Design Values*	Proposed Designation	Comments
Scranton-Wilkes-Barre-Hazleton Metropolitan SA			
Lackawanna County	85 ppb	Nonattainment	
Luzerne County	84 ppb	Nonattainment	
Wyoming County	No monitor	Nonattainment	
New York-Newark-Edison Metropolitan SA			
Pike County	No monitor	Attainment	Part of New York MSA, designate as attainment
East Stroudsburg Micropolitan SA			
Monroe County	No monitor	Attainment	
Remaining Counties in Northeast Region			
Schuylkill County	No monitor	Attainment	
Susquehanna County	No monitor	Attainment	
Wayne County	No monitor	Attainment	

*Three Year Average (2000-2002) of the 4th Highest Maximum for 8-Hour Ozone Concentrations

**A monitor in this county had only two years of complete data. EPA expects three years of complete data to designate attainment areas.

Figure 2: Statistical Areas

Based on 2000 Census Data (Report Dated June 10, 2003)

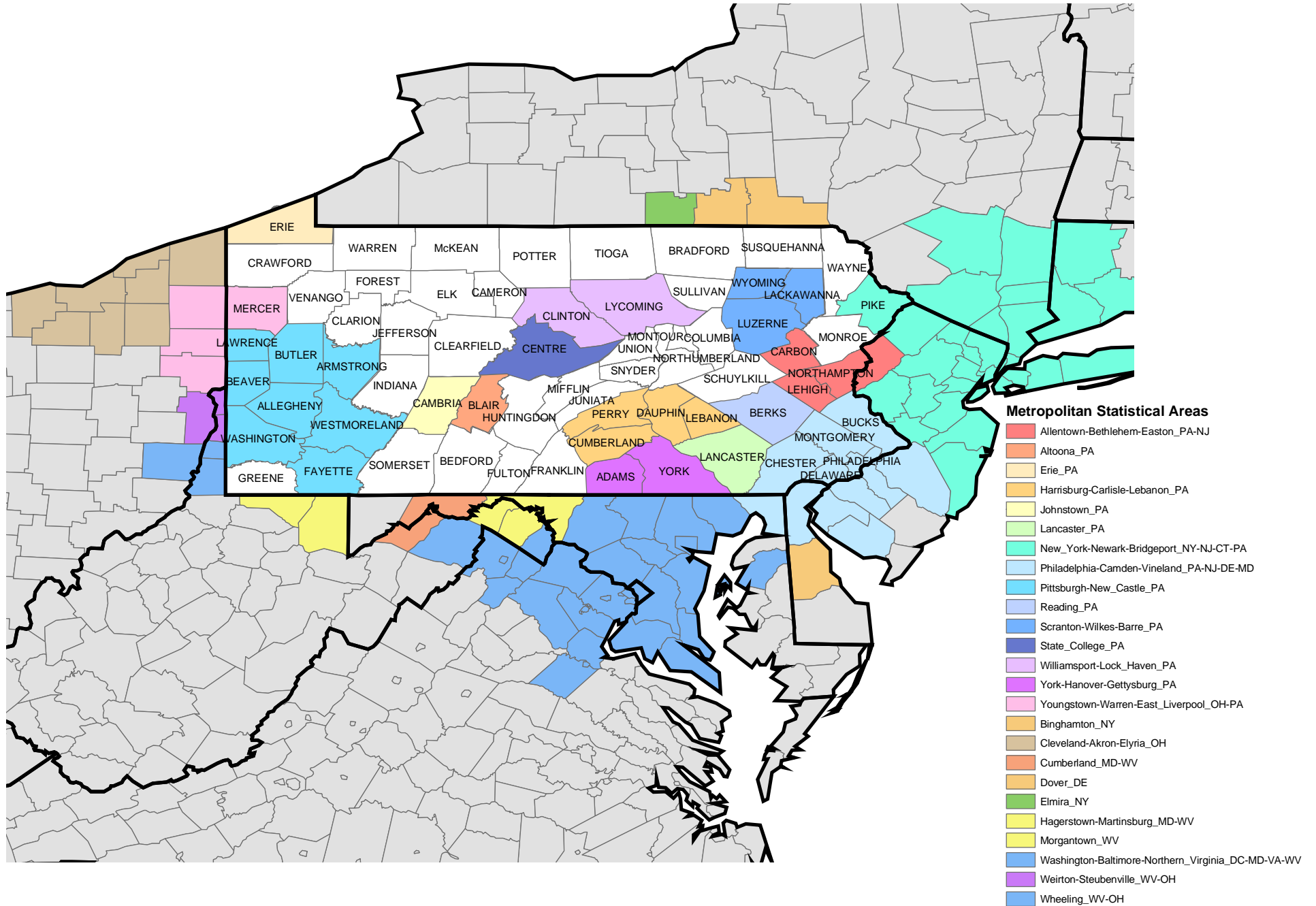
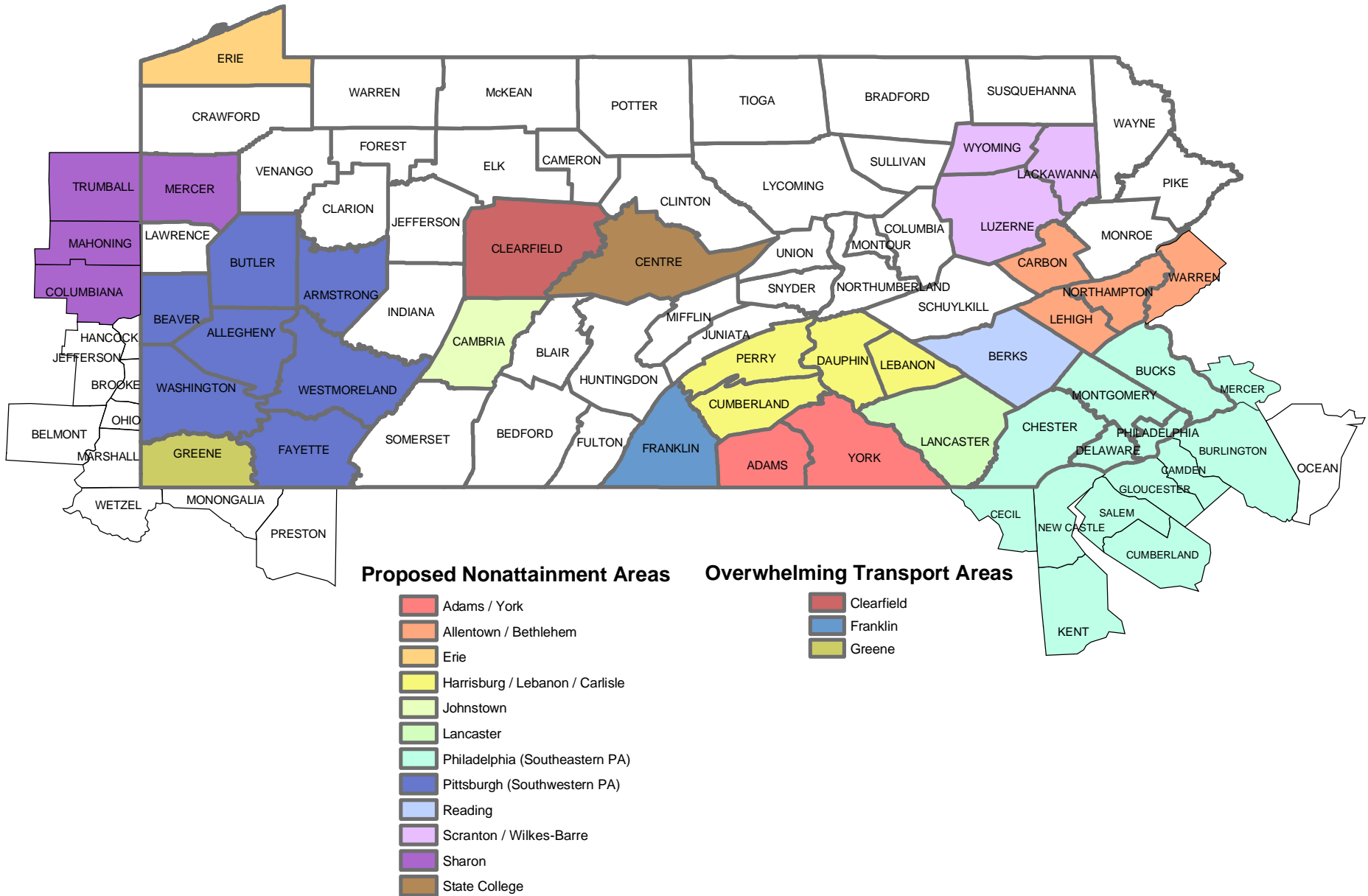


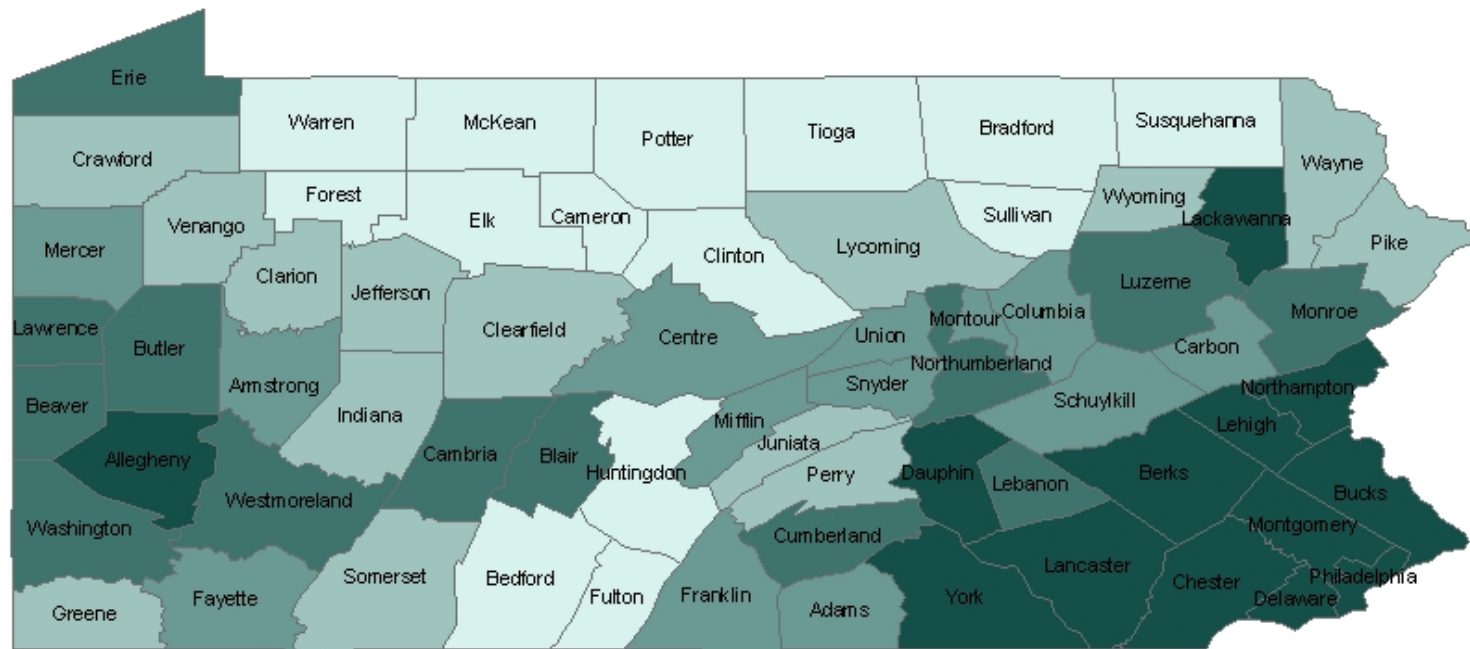
Figure 3: Proposed Nonattainment Areas



APPENDIX II

Figure 4.	Population Density of Pennsylvania
Figure 5a	1999 VOC Emission Density
Figures 5b.	2007 VOC Emission Density
Figure 5c.	Biogenic VOC Emissions Density
Figure 6a.	1999 NOx Emission Density
Figure 6b.	2007 NOx Emission Density
Figure 7.	Emissions Comparison by Category

Pennsylvania Population Density



Source: U.S. Census Bureau, 2000

Population / Sq.Mi

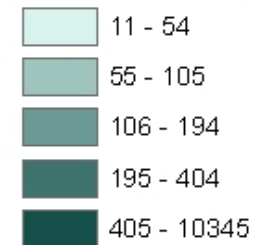
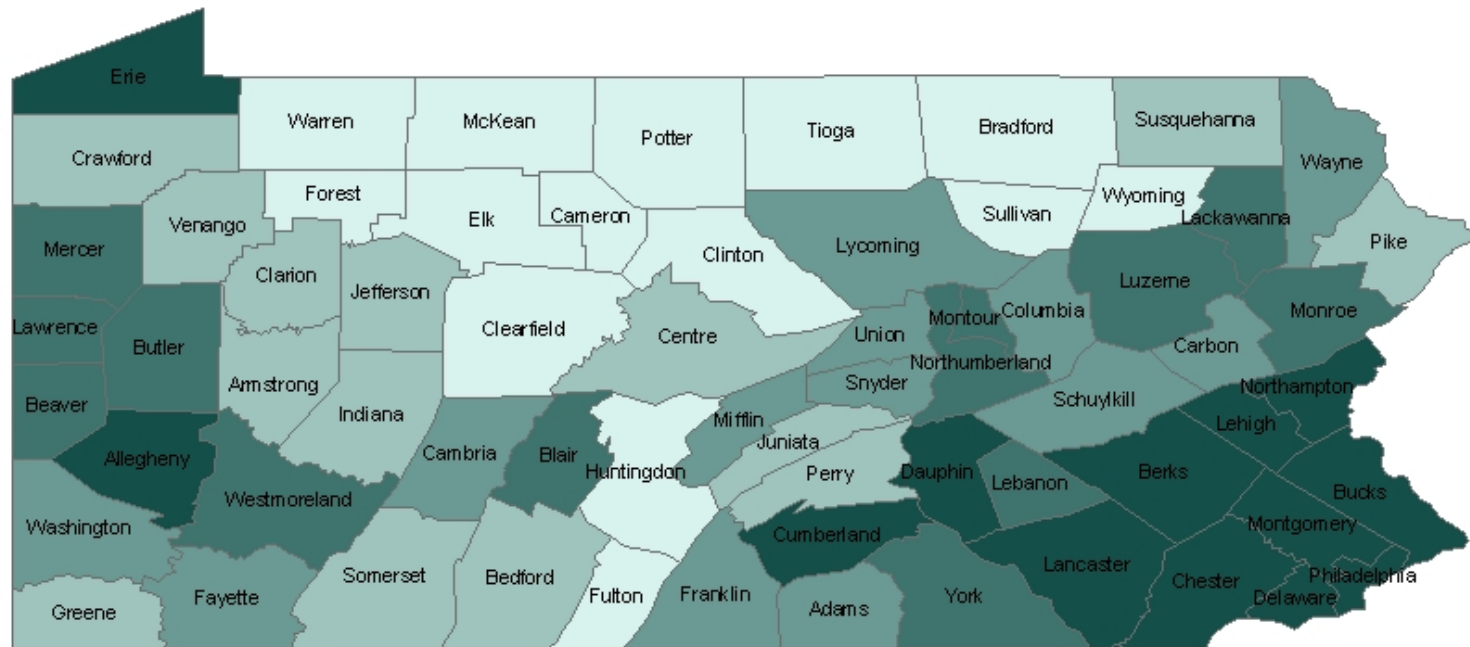


Figure 4

1999 VOC Emissions Density

Tons per Day/ Square Mile



1999 VOC (tpd) / Sq. Mi.

0.004 - 0.015

0.016 - 0.020

0.021 - 0.035

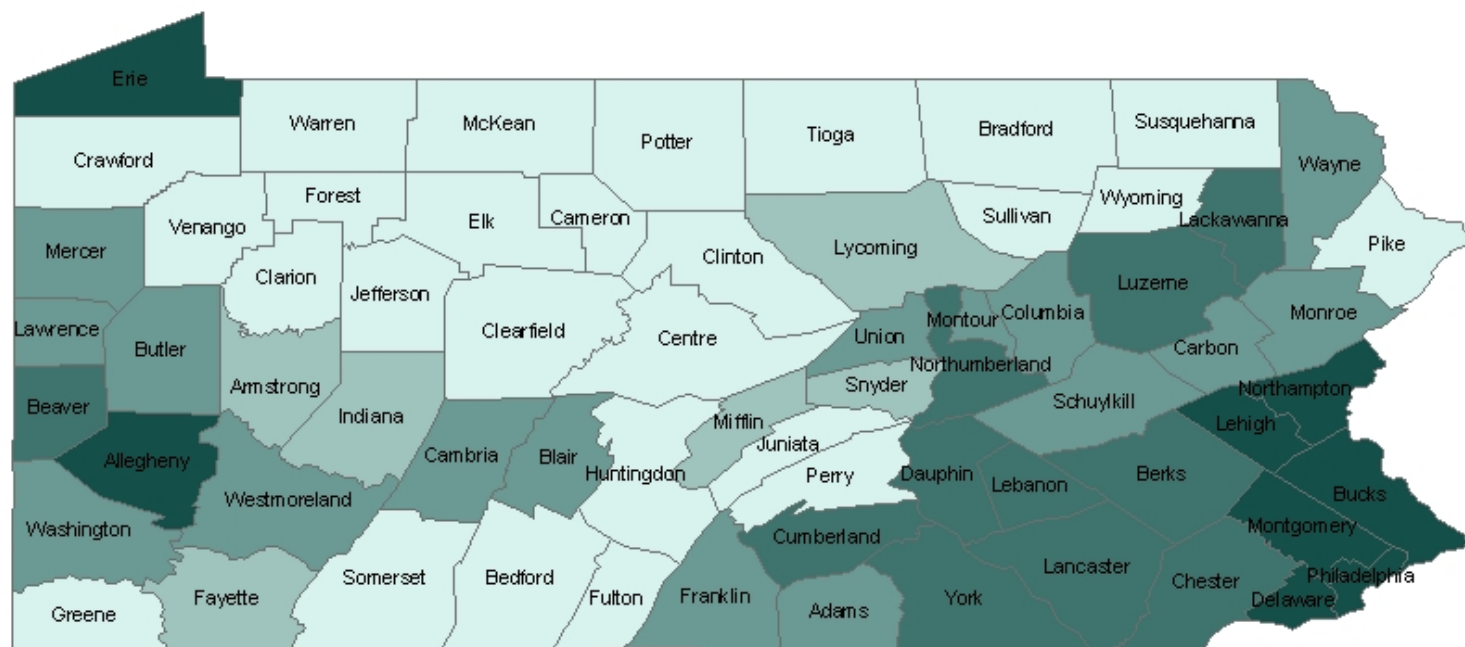
0.036 - 0.065

0.066 - 0.967

Figure 5a

2007 VOC Emissions Density

Tons per Day/ Square Mile



2007 VOC (tpd) / Sq. Mi.

0.003 - 0.015

0.016 - 0.020

0.021 - 0.035

0.036 - 0.065

0.066 - 0.967

Figure 5b

PA Biogenic Emission Density

1997 BEIS 2.3 Data

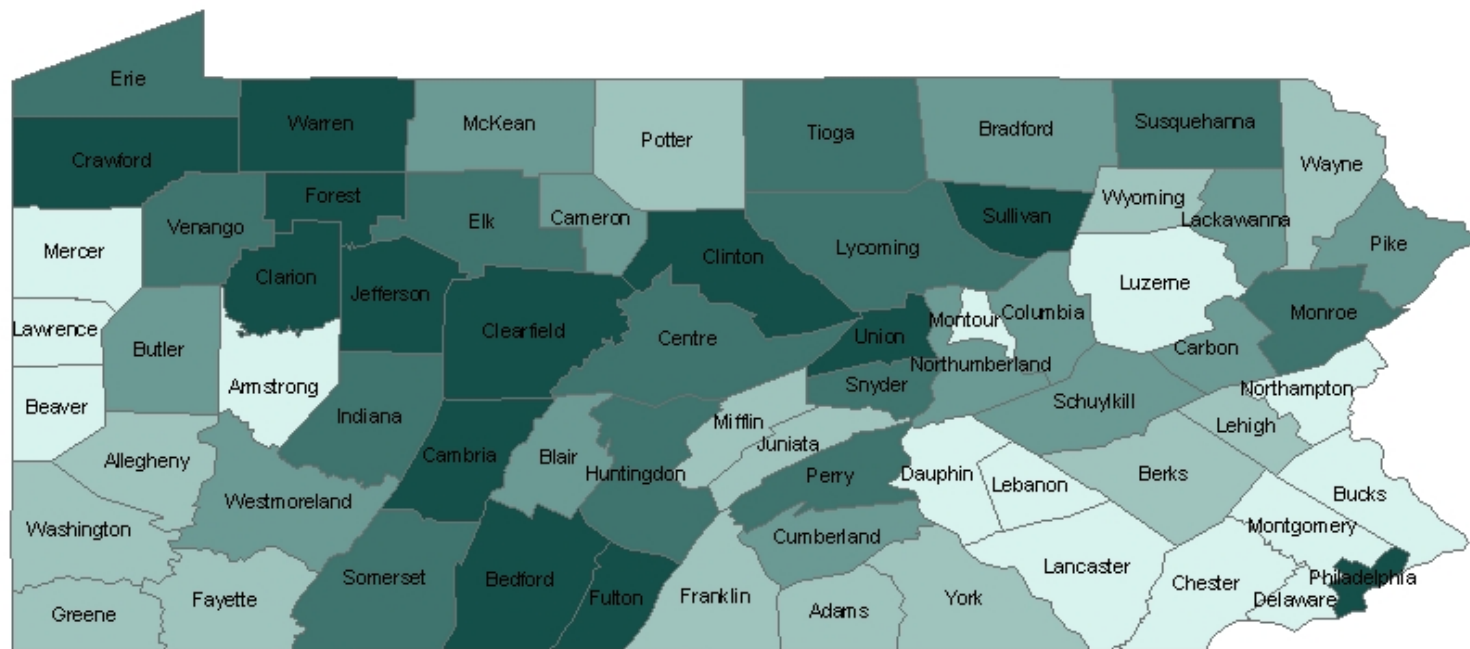
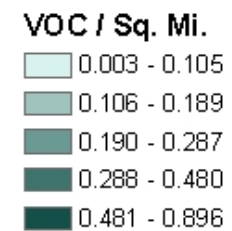
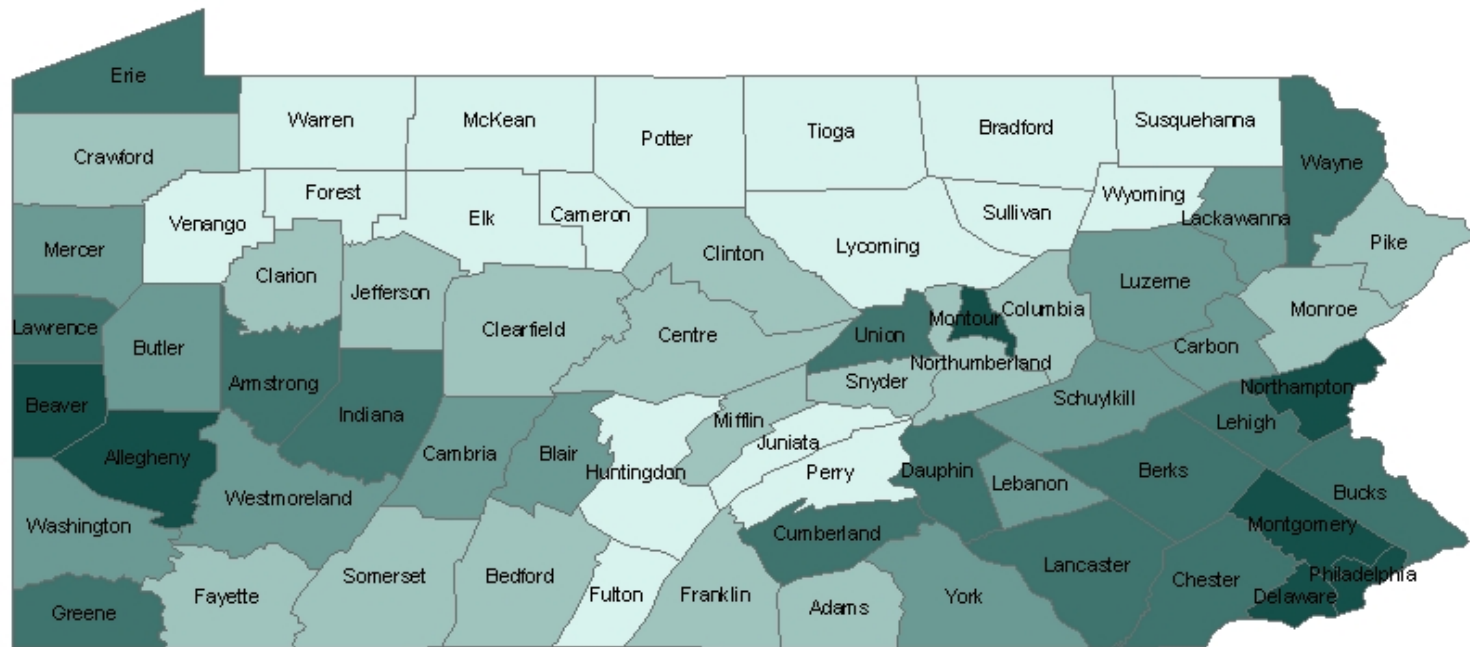


Figure 5c



2007 NOx Emissions Density

Tons per Day/ Square Mile



2007 NOx (tpd) / Sq. Mi.

0.003 - 0.017

0.018 - 0.029

0.030 - 0.053

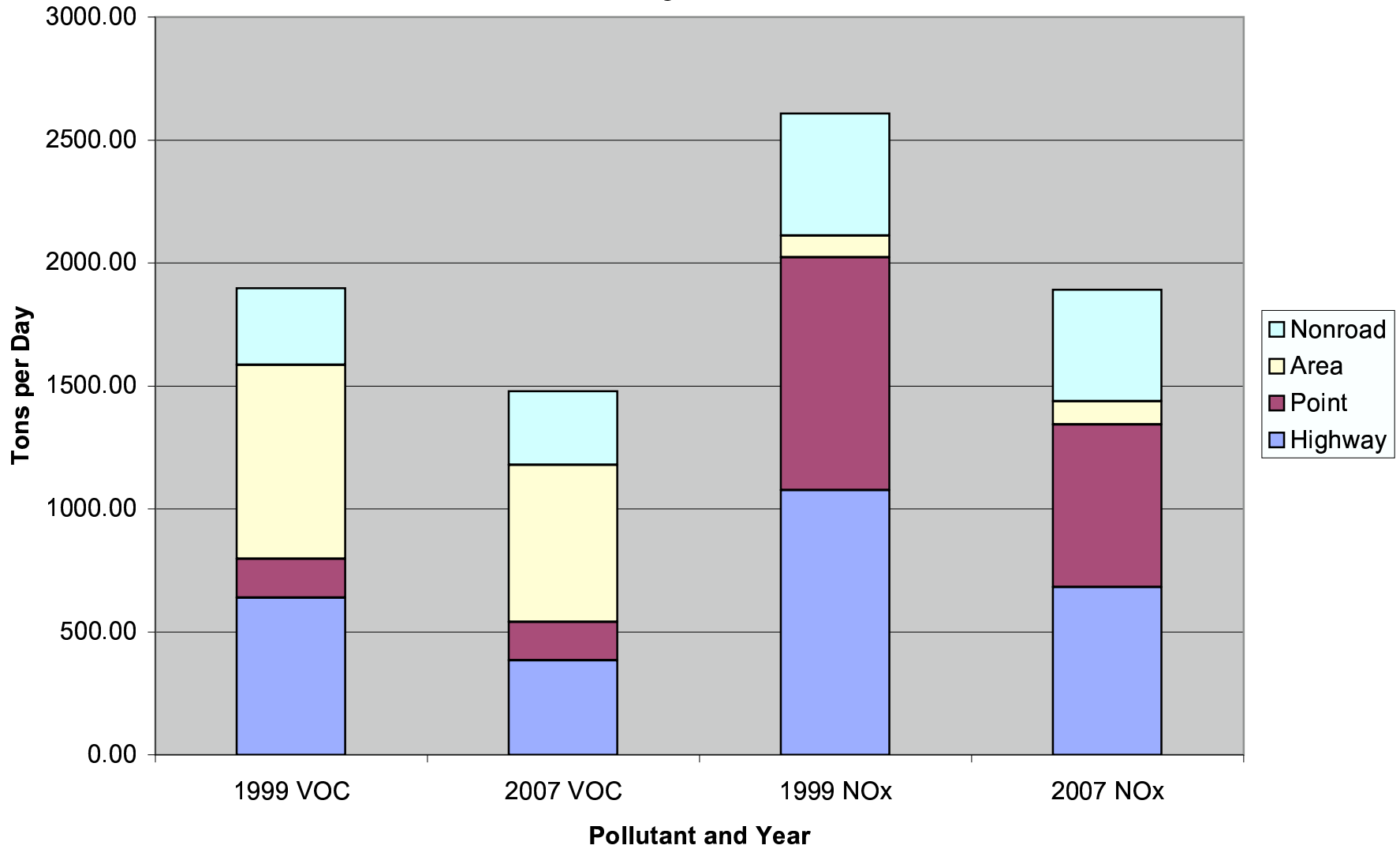
0.054 - 0.111

0.112 - 0.750

Figure 6b

Pennsylvania Emissions Comparison

Figure 7



APPENDIX III:

Key Terms

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KEY TERMS

Air Quality Monitoring – a program through which air quality samples are collected to judge attainment of ambient air quality standards, to prevent or alleviate air pollution emergencies, to observe pollution trends throughout regions, and to evaluate the effects of urban, land-use, and transportation planning relating to air pollution. The Ambient Air Monitoring Program in Pennsylvania is run by DEP and two local independent health departments (Allegheny and Philadelphia counties). Measurements are taken in areas of high population density, high expected levels of pollution, or both.

Ambient air quality – concentration of pollutants in the air around us, generally expressed in parts of pollutant per volume of air (contrasted with emissions)

Area sources of air pollution – usually refers to smaller commercial sources that are not required to be permitted, residential and other miscellaneous sources (ex. fires).

Biogenic sources – natural sources of air pollution, for example, trees.

Emissions – for purposes of ozone, the organic and nitrogen oxide pollution coming directly from area, mobile, nonroad and stationary facilities, estimated before dilution in the ambient air.

Emission offsets – emission reductions achieved on a continuous basis that allow a new source of air pollution to construct and operate. Generally, more than one pound of reduction is required to offset one pound of new pollution so there is a net reduction in emissions.

Classification – the Clean Air Act divides nonattainment areas for ozone (and other pollutants) into various categories, depending on the extent of their pollution. The more polluted areas must do more, but they are given more time to reduce pollution and attain the standard.

Core Based Statistical Area – a central county or group of counties with at least one population core and a high degree of social and economic integration. Criteria are set by the U.S. Office of Management and Budget.

Designation - the process by which the U.S. Environmental Protection identifies the areas which do not meet the NAAQS.

Design Value - the value for a monitor or a nonattainment area that, for legal purposes, determines whether the monitor or area violates the standard. The 8-hour design value for a monitor is the fourth highest maximum 8-hour concentration over three years. The 8-hour design value for an area with more than one monitor is the highest monitor design value.

Emissions – pollution emitted directly from a source. Generally expressed in mass over a time period, ex. tons per day or tons per year.

Metropolitan Statistical Area - a CBSA with a minimum population of at least 50,000.

Micropolitan Statistical Area – a CBSA with a population of at least 10,000 but less than 50,000.

Mobile sources of air pollution – highway vehicles, including cars, motorcycles, trucks and buses.

National Ambient Air Quality Standards (NAAQS)– established by EPA. Primary standards protect public health with a margin of safety, secondary standards protect the environment.

New Source Review – the process by which new or modified major sources are reviewed in nonattainment areas to determine whether or not they must obtain compensating

emission reductions to ensure overall pollution decreases. (See also emission offsets)

Nonattainment – if an area (boundaries determined by EPA) is violating a NAAQS or has not completed all requirements to be removed from this status, it is designated nonattainment.

Nonroad (off-road) sources of air pollution – construction, farming, lawn and garden, industrial plant vehicles, airport service equipment, locomotives, airplanes, etc.

Nitrogen oxides (NO_x) -- Chemical compounds containing nitrogen and oxygen; reacts with volatile organic compounds in the presence of heat and sunlight to form ozone. NO_x contributes to haze, acid rain, particulate formation and the nitrification of waterways and soils.

Ozone – a gas composed of three oxygen atoms. It is not usually emitted directly into the air, but at ground level is created by a chemical reaction between oxides of nitrogen (NO_x) and volatile organic compounds (VOC) in the presence of heat and sunlight. Ozone has the same chemical structure whether it occurs miles above the earth (stratospheric) or at ground level (tropospheric) and can be good or bad, depending on its location in the atmosphere.

Ozone Transport Region (OTR) --- area where ozone and its precursors are assumed to be regional. The Northeast Ozone Transport Region, the only one defined by the statute, includes ME, NH, RI, CT, MA, VT, NY, NJ, DE, MD, PA, DC, northern VA, and is governed by a Commission, the composition of which was also determined by Congress. The law gives EPA the authority to form others. EPA has not done so.

Ppb (ppm) – parts per million, parts per billion. A measure of concentration in ambient air. (0.08 parts per million can be expressed as 80 parts per billion)

Reasonably Available Control Technology (RACT)- An emission limitation on existing sources in nonattainment areas that takes into account the cost of controls.

State Implementation Plan (SIP) - Document prepared by states, and submitted to EPA for approval, which identifies actions and programs to be undertaken by the State and its subdivisions to implement their responsibilities under the Clean Air Act. Once approved by EPA, a SIP is federally enforceable.

Stationary (point) sources of air pollution – major industrial facilities with permits that are individually assessed by DEP

Tons per day – for ozone, tons of pollutant emitted on a typical summer weekday

Volatile Organic Compounds (VOCs) - A group of chemicals that react in the atmosphere with nitrogen oxides in the presence of heat and sunlight to form ozone; does not include methane and other compounds determined by EPA to have negligible photochemical reactivity.

**Recommendations to EPA for
8-Hour Ozone Attainment/Nonattainment Areas**

Comment/Response Document

List of Commentators:

1	Donald Shanis, Assistant Executive Director Delaware Valley Regional Planning Commission 111 South Independence Mall East Philadelphia, PA 19106-2515
2	Joseph Otis Minott Clean Air Council 135 S. 19 th Street Philadelphia, PA 19103 Joe_minott@cleanair.org
3	Harold D. Miller, Director The Southwestern Pennsylvania Growth Alliance Via e-mail from Kelly McQuoid [kmcquoid@accdpel.org]
4	Charles McPhedran Senior Attorney Citizens for Pennsylvania's Future (PennFuture) Via email
5	Nancy Parks Chair, Clean Air Committee Pennsylvania Chapter, Sierra Club 201 West Aaron Square PO Box 120 Aaronsburg, PA 16820-0120

Comments and Responses

1	Comment:	The commentators generally support Pennsylvania’s recommendations for boundaries based on government and planning jurisdictions as well as commuting patterns. (1, 2)
	Response:	<i>DEP appreciates the support of the commentators.</i>
2	Comment:	The commentator explains the difficulties for transportation planning that could result from a larger nonattainment area. (1)
	Response:	<i>Commuting patterns are a significant factor on which metropolitan statistical areas and related boundaries are based. Transportation planning and conformity is a resource-intensive requirement of the Clean Air Act. DEP believes that preserving well-established agencies and processes will enhance the investment of local officials in projects which support clean air goals.</i>
3	Comment:	The commentator commends DEP for abandoning its earlier proposal to designate certain areas as “transitional nonattainment.” (2, 5)
	Response:	<i>As stated, the Department continues to believe that most areas of Pennsylvania should be in attainment with the new eight-hour ozone standard by 2007. However, use of the term “transitional” is not consistent with EPA’s proposed implementation strategy and therefore is no longer being used in the proposal.</i>
4	Comment:	DEP should look at the emissions contribution of Berks, Lancaster and York counties to see if they contribute to downwind pollution, and if so, combine counties into larger nonattainment areas. (2)
	Response:	<i>DEP does not believe that the creation of large nonattainment areas is an effective way to attain the ozone standard. Pennsylvania is part of the Ozone Transport Region and therefore, many reduction strategies are applied statewide and regionwide. Attainment of the eight-hour standard is even more likely than the one-hour standard to require further reductions of nitrogen oxides from regional or national strategies, rather than consideration of transport on a county- to- county scale. Larger nonattainment areas tend to complicate local consideration of air quality goals (see response to issue #2). DEP has revised and expanded the discussion for the Philadelphia area to more fully present its rationale for Pennsylvania’s recommendation.</i>
5	Comment:	In the absence of a demonstration that York, Lancaster, Lehigh and Berks significantly contribute to nonattainment in the Philadelphia area, it is appropriate for them to remain separate from the Philadelphia region. (2)

	<i>Response:</i>	<i>The Department agrees. See response to #4.</i>
6	<i>Comment:</i>	The commentator opposes including Ocean County in the Philadelphia nonattainment area. (2)
	<i>Response:</i>	<i>The Department agrees.</i>
7	<i>Comment:</i>	The commentator supports keeping Mercer County NJ and Cecil County MD as part of the Philadelphia nonattainment area. (2)
	<i>Response:</i>	<i>The Department agrees.</i>
8	<i>Comment:</i>	The commentator supports inclusion of some Ohio counties in an interstate nonattainment area in western Pennsylvania but questions why eastern Ohio counties were not included in the Beaver Valley area (2, 3)
	<i>Response:</i>	<i>Ohio counties were included in the Mercer County recommendation because they are part of the MSA as defined recently by the Office of Management and Budget/Census. None of the West Virginia or Ohio counties were included for the Pittsburgh area. Additionally, West Virginia and Ohio have adopted and EPA has approved regulations requiring levels of nitrogen oxide controls on electric generating units identical to those in Pennsylvania. DEP believes inclusion of the additional counties from West Virginia and Ohio in the Pittsburgh nonattainment planning area would be of little benefit to Pennsylvania.</i>
9	<i>Comment:</i>	The commentator urges EPA to take stronger action on the issue of pollution transport. (2)
	<i>Response:</i>	<i>The Department believes "transport" of pollution is a major issue for Pennsylvania and will continue to work aggressively on this issue for all sources of transported air pollution.</i>
10	<i>Comment:</i>	The commentator opposes the designation of southwestern Pennsylvania as a nonattainment area without adequately addressing transport from upwind sources. (3)
	<i>Response:</i>	<i>Air quality values from 86 to 95 parts per million clearly indicate that southwestern Pennsylvania will be included in a nonattainment area no matter what the size or interstate nature of the area. The seven counties recommended as the nonattainment area are the same as those for the one-hour standard in order to preserve existing planning institutional relationships. The commentator's opposition to the designations is noted. However, EPA is obligated to promulgate designations by April 15, 2004.</i>
11	<i>Comment:</i>	The commentator recommends that the Pittsburgh nonattainment area should include portions of Ohio and West Virginia, because transport should be the most important factor in determining

		nonattainment boundaries. The commentator provides justification for that position which include monitoring data; basis in EPA guidance for consideration of factors such as emissions, commuting patterns, levels of control in each area; the proposal of other multi-state nonattainment areas; economic development inequities between Pennsylvania and Ohio/West Virginia; reliance on other regulatory initiatives and the enforcement by other states of controls such as the NOx SIP call. (3)
	<i>Response:</i>	<i>Pennsylvania has fought effectively to address the issues of transport. We have commented extensively on this issue to EPA on their implementation strategy, taking some of the same positions as the commentator. The NOx SIP Call is being fully implemented in Pennsylvania, and due to court action, will not be implemented fully until May 2004 in Ohio and West Virginia. When the NOx SIP Call is fully implemented, we are projecting that the Pittsburgh area should attain the standard. DEP does not believe that making large nonattainment areas will solve the problem. DEP further believes that it would be difficult to justify inclusion of Ohio and West Virginia in the nonattainment area. (See also response to #8)</i>
12	<i>Comment:</i>	DEP's public participation process failed to provide sufficient time or information to enable the public to properly evaluate the options. (3)
	<i>Response:</i>	<i>DEP agrees that the time period was short, but points out that the state has three more opportunities to revise its recommendations before EPA promulgates final designations in April 2004. EPA did not publish a proposed implementation rule until June 2, 2003; DEP decided to wait to make its proposal until EPA laid out some of the possible implications of designation. State recommendations were actually due July 15, but DEP decided to take additional time for public and legislative input. The implications of designation will only fully be understood once EPA finalizes its implementation regulation, expected by the end of the year. DEP will then seek the input of interested parties in any changes to its recommendations. It is likely that there will also be a short time period allowed by EPA for Pennsylvania to comment between publication of the federal implementation regulations and EPA's final decision.</i>
13	<i>Comment:</i>	No designations for southwestern Pennsylvania should be submitted to EPA until appropriate stakeholders are convened to discuss the options and reach consensus. (3)
	<i>Response:</i>	<i>The Clean Air Act provides a specific opportunity for the Commonwealth to submit recommendations and EPA has laid out the timetable for its designation process based on a settlement agreement. The Commonwealth has delayed its submission to EPA to allow public input but further delay will not be fruitful and would</i>

		<i>remove Pennsylvania from deliberations at the federal level. Again, DEP will have additional opportunities for dialog (including revisions to the recommendations) with EPA and will reconsider the views of the commentators at that time.</i>
14	Comment:	DEP has not identified areas that contribute to nonattainment in downwind areas. (4)
	Response:	<i>All areas of Pennsylvania are included in the Ozone Transport Region (OTR). All areas within the OTR are effectively treated as “moderate” nonattainment. Nonattainment status is thus of little consequence for compliance purposes because sources located in attainment areas must comply with the nonattainment requirements for VOC and NOx. DEP did examine factors in the guidance. With low population density and emissions density of nearby areas, we believe that their contribution to the nonattainment areas is not significant.</i>
15	Comment:	DEP provides no evidence of attainment in those areas without monitors that have been recommended as attainment. The commentator suggests some approaches from EPA’s guidance that could be used. (4)
	Response:	<i>DEP used the factors from EPA’s guidance (see Figures 4-7 in the proposal). While statistical analysis techniques were not applied, we also examined data from nearby monitors to determine if nonattainment would be expected.</i>
16	Comment:	Neither PA nor NJ has examined in sufficient detail evidence to include Ocean County in an appropriate nonattainment area. (4)
	Response:	<i>Pennsylvania’s justification for including Ocean County in the New York City nonattainment area has been clarified.</i>
17	Comment:	All counties designated as nonattainment should receive a specific classification during the EPA submission process. (5)
	Response:	<i>EPA asked states to address designation only in these recommendations. The classification process and the ensuing emission reduction requirements will be addressed by EPA in the context of finalizing their implementation rule, proposed June 2, 2003. In commenting on that rule, DEP supported the option that would require all nonattainment areas to be classified.</i>
18	Comment:	The commentator had various recommendations for requirements for nonattainment areas including Reasonably Available Control Technology, inspection/maintenance, new source review, conformity, motor vehicle emissions control. (5)
	Response:	<i>These suggestions will be addressed in EPA’s final implementation rule; once those requirements are known, Pennsylvania will embark</i>

		<i>upon a planning process for its nonattainment areas.</i>
19	<i>Comment:</i>	Emission reduction requirements should be put in place that will allow Pennsylvania to reach attainment on its own. (5)
	<i>Response:</i>	<i>Ozone is a regional problem which will require a mix of national, regional, state and local strategies. Pennsylvania cannot reach attainment on its own and recognizes the importance of its contributions to downwind nonattainment areas.</i>
20	<i>Comment:</i>	Additional monitoring stations may be necessary to identify PA's responsibility for transport into Ocean County, New Jersey. (5)
	<i>Response:</i>	<i>Since EPA is suggesting that ozone monitoring networks be reduced, not expanded, other tools will be used to identify transport patterns. The Ozone Transport Region will continue to be the major tool to address interstate transport among Northeast states.</i>