

Region III Plan Summary

Pennsylvania; 2011 Base Year Inventories for the 2008 8-Hour Ozone National Ambient Air Quality Standard for the Allentown-Bethlehem-Easton, Lancaster, Pittsburgh-Beaver Valley, and Reading Areas, and the Pennsylvania Portion of the Philadelphia-Wilmington-Atlantic City Area

Title: 2011 Base Year Inventories for the 2008 8-Hour Ozone National Ambient Air Quality Standard for the Allentown-Bethlehem-Easton, Lancaster, Pittsburgh-Beaver Valley, and Reading Areas, and the Pennsylvania Portion of the Philadelphia-Wilmington-Atlantic City Area

Federal Register Dates: Direct Final Rulemaking - April 26, 2016, 81 FR 24492, Proposed Rulemaking – April 26, 2016, 81 FR 24536

EPA Effective date: June 27, 2016

State Submittal Date: September 30, 2015

Affected Areas:

The Allentown-Bethlehem-Easton nonattainment area is comprised of Carbon, Lehigh, and Northampton Counties, all in Pennsylvania. Lancaster and Reading are single-county nonattainment areas, comprised of Lancaster County, Pennsylvania and Berks County, Pennsylvania, respectively. The Pittsburgh-Beaver Valley nonattainment area is comprised of Allegheny, Armstrong, Beaver, Butler, Fayette, Washington, and Westmoreland Counties, all in Pennsylvania. The Philadelphia-Wilmington-Atlantic City nonattainment areas includes Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties in Pennsylvania, plus counties in Delaware, Maryland, and New Jersey.

Summary of the Plan:

The Environmental Protection Agency (EPA) is taking direct final action to approve the 2011 base year inventories for the five Pennsylvania marginal nonattainment areas for the 2008 8-hour ozone national ambient air quality standard (NAAQS), the Allentown-Bethlehem-Easton, Lancaster, Pittsburgh-Beaver Valley, and Reading nonattainment areas and the Pennsylvania portion of the Philadelphia-Wilmington-Atlantic City nonattainment area. The Commonwealth of Pennsylvania submitted the emission inventories to meet the nonattainment requirements for marginal ozone nonattainment areas for the 2008 8-hour ozone NAAQS. EPA is approving the 2011 base year emissions inventories for the 2008 8-hour ozone NAAQS as a revision to the Pennsylvania State Implementation Plan (SIP)

Emissions Inventory:

States are required under section 172(c)(3) of the CAA to develop comprehensive, accurate and current accounting of actual emissions from all sources (point, nonpoint, nonroad and on road) in the nonattainment area. The CAA Section 182 (a)(1) that areas designated as nonattainment and classified as marginal are to submit an inventory of all sources of ozone precursors no later than 2 years after the effective date of designation.

PADEP's 2011 base year inventories include emissions estimates covering the general source categories of stationary point, stationary nonpoint, nonroad mobile, and onroad mobile. In its 2011 base year inventories, PADEP reported actual annual emissions and typical summer day emissions for the months of May through September for NO_x, VOC, and carbon monoxide (CO).

Tables 1 through 5 summarize the 2011 VOC, NO_x, and CO emission inventory by source sector for Pennsylvania's five marginal nonattainment areas. Annual emissions are given in tons per year (tpy), and summer weekday emissions are given in tons per day (tpd).

Table 1. Summary of 2011 Emissions for the Allentown-Bethlehem-Easton Area

Source Sector	Summer Weekday (tpd)			Annual (tpy)		
	VOC	NO _x	CO	VOC	NO _x	CO
Point	3.5844	24.0763	44.5565	1,298.2944	8,882.4313	15,980.1187
Nonpoint	52.4620	4.3983	10.7226	21,874.0747	2,365.4084	17,758.0824
Nonroad	7.3491	8.4916	81.1983	2,624.7749	2,372.2160	26,305.6727
Highway	17.1800	35.5600	172.5900	6,169.9800	12,833.6100	76,800.1200
Total	80.5755	72.5262	309.0674	31,967.1240	26,453.6657	136,843.9938

Table 2. Summary of 2011 Emissions for the Lancaster Area

Source Sector	Summer Weekday (tpd)			Annual (tpy)		
	VOC	NO _x	CO	VOC	NO _x	CO
Point	6.0096	3.3279	4.9232	2,161.8035	1,225.2810	1,811.4742
Nonpoint	31.6881	4.1839	14.0763	13,262.0758	2,043.6030	13,992.7848
Nonroad	9.4751	8.1193	75.9137	3,854.6239	2,369.2314	26,064.9100
Highway	11.9900	24.4200	121.0300	4,233.6300	8,879.1200	52,716.3700
Total	59.1628	40.0511	215.9432	23,512.1332	14,571.2354	94,585.5390

Table 3. Summary of 2011 Emissions for the Pennsylvania Portion of the Philadelphia-Wilmington-Atlantic City Area

Source Sector	Summer Weekday (tpd)			Annual (tpy)		
	VOC	NO _x	CO	VOC	NO _x	CO
Point	13.8162	39.8652	35.4149	5,044.1788	14,466.8247	12,605.2393
Nonpoint	144.0575	27.7843	24.6034	55,434.4159	14,394.6064	27,032.5230
Nonroad	41.8480	39.2817	510.4407	14,368.4324	11,090.2074	162,745.4696
Highway	60.5800	123.3900	631.6900	21,497.8300	43,869.0400	259,855.7300
Total	260.3017	230.3212	1,202.1490	96,344.8571	83,820.6785	462,238.9619

Table 4. Summary of 2011 Emissions for the Pittsburgh-Beaver Valley Area

Source Sector	Summer Weekday (tpd)			Annual (tpy)		
	VOC	NO _x	CO	VOC	NO _x	CO
Point	10.6595	160.0714	120.1636	3,900.9235	57,329.8382	43,988.6819
Nonpoint	191.5216	65.3470	85.7973	63,326.9810	27,064.6374	49,340.2937
Nonroad	24.8491	27.7845	284.5770	9,281.1724	7,908.6977	93,498.8397

Highway	43.5400	88.8500	446.6400	16,584.5300	32,360.4000	210,881.4800
Total	270.5702	342.0529	937.1779	93,093.6069	124,663.5733	397,709.2953

Table 5. Summary of 2011 Emissions for the Reading Area

Source Sector	Summer Weekday (tpd)			Annual (tpy)		
	VOC	NO _x	CO	VOC	NO _x	CO
Point	3.4007	8.6847	5.4075	1,223.7618	3,139.5588	1,946.4482
Nonpoint	32.6838	4.2975	11.0720	13,462.6586	2,055.8245	11,792.2040
Nonroad	4.5626	5.4649	46.8275	1,650.9746	1,528.6220	15,312.2966
Highway	9.8600	22.1100	98.8800	3,479.3500	8,073.1900	43,022.4700
Total	50.5071	40.5571	162.1870	19,816.7450	14,797.3983	72,073.4188

Point sources are large, stationary, identifiable sources of emissions that release pollutants into the atmosphere. Pennsylvania obtained its point source data from the Pennsylvania Air Information Management System (AIMS). PADEP regional offices identify and inventory stationary sources for AIMS through inspections, surveys, and permitting. Inventory data for point sources in Allegheny and Philadelphia Counties was developed by the Allegheny County Health Department (ACHD) and the Philadelphia Air Management Services (AMS), respectively. ACHD and AMS provided their point source data to PADEP and also submitted it to EPA for the National Emission Inventory (NEI).

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