

Region III Plan Summary
**2011 Base Year Emissions Inventory for the 2008 8-Hour Ozone Standard – Washington
DC-MD-VA Nonattainment Area for NO_x and VOC CO Final Rule # 1**

**Title: 2011 Base Year Emissions Inventory for the 2008 8-Hour Ozone Standard –
Washington DC-MD-VA Nonattainment Area for NO_x and VOC**

**Federal Register Dates: Direct Final Rule 80 FR 27255 (May 13, 2015) Proposed Rule 80
FR 27276 (May 13, 2015)**

EPA Effective date: July 13, 2015

State Submittal Date: DDOE – 7/17/14 VADEQ- 7/17/14 MDE – 8/4/14

**Affected Area: District of Columbia Nonattainment Area including DC, Calvert, Charles,
Frederick, Montgomery and Prince George Counties in Maryland and Arlington,
Alexandria, Fairfax, Loudoun and Prince William Counties in VA**

Summary of the Plan

On May 13, 2015 (80 FR 27255), EPA published a direct final rulemaking action (DFRN) approving the 2011 base year emissions inventories submitted by the District of Columbia Department of the Environment (DDOE), the Maryland Department of the Environment (MDE), and the Virginia Department of Environmental Quality (VADEQ) for the DC Area for the 2008 8-hour ozone NAAQS. See EPA Docket ID number EPA–R03–OAR–2014–0759 Direct Final Rule-1. This notice took action on the base year inventories submitted by the States for nitrogen oxides (NO_x) and volatile organic compounds (VOC), but did not take action on the CO base year inventories that were also part of the States’ submittal. The action approving the CO portion will follow shortly.

Emissions Inventory Requirements:

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.

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.

The state air agencies, in collaboration with the Metropolitan Washington Council of Governments (MWWOG), developed the point source data for the 2011 base year inventory. The point source inventory contains emissions for EGU and Non-EGU sources in the NAA. EPA

guidance for emissions inventory development provides that actual emissions should be used for purposes of the base year inventory. The state air agencies developed their 2011 inventory by using emissions directly reported by the facilities. MWCOG compiled the ozone season day and annual emissions provided by the state air agencies and included them in the plan. The emissions were provided at the facility level and process-level.

For the 2011 nonpoint source emissions, also known as "area sources," the state air agencies provided an inventory that contains estimations of emissions by multiplying an emission factor by some known indicator of collective activity for each source category at the county (or county-equivalent). These emissions are typically calculated on an annual basis because the activity data are generally only available on an annual basis. The state air agencies converted these annual emissions to seasonal emissions. The state air agencies defined the summer ozone season as May through September.

The 2011 nonroad mobile source inventory was prepared by MWCOG with EPA's NONROAD2008 model. NONROAD estimates fuel consumption and emissions for all nonroad mobile source categories except for aircraft, locomotives, and commercial marine vessels. EPA's NMIM2008 software (version NMIM20090504), the NMIM County Database (NCD20130531_nei2011 v1), and the NONROAD 2008a model (July 2009 version) were run for the NAA for both an average ozone season day and annual emissions. The period May through September was considered for ozone season analysis, while four season approach was adapted for developing annual emissions. Emission estimates for locomotive engines, aircraft emissions and commercial marine vessels were provided separately. The state air agencies estimated emissions separately for these sources using local data for each of their respective counties.

The onroad mobile source 2011 emissions inventory was developed using the EPA's highway mobile source emissions model MOVES 2010a. The National Capitol Region Transportation Planning Board (TBP) developed transportation related inputs and ran the model using fuel and inspection and maintenance program inputs provided by the state air agencies, and meteorology inputs developed by the Metropolitan Washington Air Quality Committee (MW AQC) staff. MW AQC staff reviewed and approved these emissions.

Final Action

EPA approved a revision at 40 CFR Part 52.474, 52.1075 and 52.2425 for the DC-MD-VA 2011 Base year emissions inventory for the 2008 8-hour ozone nonattainment area for NO_x and VOC emissions as described for the Affected Areas (shown above). The emissions inventory includes emissions estimates that cover the general source categories of point sources, non-road mobile sources, area sources, on-road mobile sources, and biogenic sources.

EPA Region III Contact: Marilyn Powers (3AP30), U.S. EPA Region III
1650 Arch Street, Philadelphia, PA 19103-2029
215-814-2308; powers.marilyn@epa.gov