**CHAPTER III**

# AIR QUALITY

# III. AIR QUALITY

## A. OVERVIEW OF AIR QUALITY IN FAIRFAX COUNTY

### 1. Introduction

Through a federal-state-regional-local partnership, the quality of our air is monitored for specific contaminants and actions are taken against those who cause the contamination level to exceed allowed limits. Fairfax County's major responsibility involves participation and coordination with regional organizations on plans intended to reduce air pollution and improve air quality. In addition, prior to June 30, 2010, county staff operated air quality monitoring sites throughout the county. More recently, the county has also taken a leadership role beyond the limits of its traditional air quality partnership; it has helped formulate and has subsequently adopted a program to reduce gases that may be the cause of global climate change. With regard to traditional air quality matters, Fairfax County has demonstrated a continuing commitment to being an active partner in improving the region's air quality.

#### a. Budget Impacts

Due to the overall budget constraints in the county over the past several years, the Board of Supervisors made significant reductions in the budget for the Health Department, which ended the county's air quality monitoring program. Fairfax County's FY 2010 and FY 2011 budget eliminated the Air Quality Monitoring Program and the four merit positions that operated the county's air monitoring stations. None of these positions are scheduled to be reinstated in the future. The air quality planning functions will continue to be done by an Environmental Health Program Manager who also manages other Environmental Health Sections. On July 1, 2010, all monitoring activities conducted by Fairfax County ceased; at this time, the Virginia Department of Environmental Quality assumed full responsibility for air quality monitoring in the county.

During 2010, EQAC, along with several other parties, had many discussions with DEQ on the ramifications of shutting down air quality monitoring stations for which Fairfax County could no longer provide funding. EQAC examined a report provided by the State Advisory Board on Air Pollution, called "Evaluation of Virginia's Air Monitoring Network; November 30, 2009" (available at http://www.deq.virginia.gov/air/sabrpts.html). In addition, EQAC members followed up with an Environmental Health Program Manager to assess the specific monitors for which county funds could no longer support operations. The Program Manager noted that the Metropolitan Washington area (which includes Fairfax County as well as

other parts of northern Virginia, such as Arlington County and Alexandria, portions of Maryland and the District of Columbia) has a total of 17 air monitoring sites, which exceeds the U.S. Environmental Protection Agency's minimum requirement for the region.

In April 2010, EQAC submitted a recommendation to the Board of Supervisors that the board provide comments to DEQ regarding its annual air monitoring network review. Specifically, EQAC recommended that the board request that DEQ include one or more of the four existing Fairfax County monitors in its future monitoring plans. Given the historically higher level of ozone concentrations at the Mount Vernon station, as compared to other county-run stations, EQAC recommended that the board request that DEQ include the Mount Vernon station in the regional monitoring plans. At that time, similar requests were made by Representative Gerry Connolly (to EPA) and the Air and Climate Public Advisory Committee (to DEQ). The board referred this issue to its Legislative Committee, which discussed the matter in September 2010; EQAC's recommendation was not provided to DEQ.

**b. Update on Air Quality Regulatory Changes**

i. Cross State Air Pollution Rule

On July 6, 2010, as a response to the U.S. Court of Appeals for the D.C. Circuit's concerns regarding the Clean Air Interstate Rule, EPA proposed a rule known as the Transport Rule that would require 31 northeastern states and the District of Columbia to significantly improve air quality by reducing power plant emissions that contribute to ozone and fine particle pollution. Emissions reductions will begin to take effect in 2012, and by 2014, this rule, along with existing state and EPA actions, would reduce power plant sulfur dioxide emissions by 71 percent over 2005 levels. Power plant emissions of oxides of nitrogen would drop by 52 percent. DEQ noted that the rule has now been finalized and is called the Cross State Air Pollution Rule.

ii. Industrial/Commercial/Institutional Boiler Maximum Achievable Control Technology:

On February 21, 2011 the EPA Administrator signed emissions standards for large and small boilers and incinerators. The standards for major sources are estimated to apply to approximately 13,840 units nationwide and will reduce emissions by 1.4 tons per year of mercury, 47,000 tpy of particulate matter, 440,000 tpy of $SO_2$, and 7,000 tpy of volatile organic compounds. The area source standards cover more than 200,000 boilers and incinerators and will reduce emissions by 330 tpy of total air toxics and 2,500 tpy of PM. However, on March 21, 2011, EPA

published a notice of reconsideration for certain aspects of these rules and on May 18, 2011 issued a stay for the major source boiler rule and the incinerator rule. EPA is seeking additional public feedback and gathering more information on the final standards to ensure that any final standard will be informed by input from key stakeholders.

iii. Mercury and Air Toxics Rule:

On March 16, 2011, the EPA Administrator signed a proposed rule to reduce emissions of toxic air pollutants from new and existing coal and oil fired power plants. The rule was published in the Federal Register on May 3, 2011. Approximately 1,200 existing coal fired units and 150 oil fired units may be affected by this action, preventing up to 91% of the mercury in fuel from being emitted. This rule was proposed in response to the D.C. Circuit Court's vacatur of the Clean Air Mercury Rule. Comments were being accepted until July 5, 2011, and the final rule was expected to have been signed by November 16, 2011. After the rule is finalized, coal and oil-fired power plants will have three years to meet a compliance deadline of November 2014.

iv. Improving Air Quality - Greenhouse Gas Pollution
EPA announced in early 2011 that it plans to defer, for three years, greenhouse gas permitting requirements for carbon dioxide emissions from biomass-fired and other biogenic sources. The agency intends to seek further information.

**c. Update on National Ambient Air Quality Standards for Major Criteria Pollutants**

i. Atmospheric Ozone

In March 2008, EPA tightened the eight-hour ozone NAAQS from 0.08 ppm to 0.075 ppm for both primary and secondary ozone standards, but the standard was challenged by a coalition of environmental and health advocacy groups. On January 6, 2010, EPA made a proposal to strengthen the eight-hour "primary" ozone standard, designed to protect public health, to a level within the range of 0.060-0.070 ppm. EPA also proposed to strengthen the seasonal "secondary" standard, designed to protect sensitive vegetation and ecosystems, including forests, parks, wildlife refuges and wilderness areas, to a level within the range of 7-15 ppm-hours (cumulative peak-weighted index). EPA had planned to have issue the final standards in summer 2011, but these plans were since delayed.

On April 28, 2008, EPA announced that the Metropolitan Washington area (including the District of Columbia and portions of Virginia and

Maryland) met the 1991 one-hour ozone NAAQS by the required attainment date of November 15, 2005. Since then, EPA has revoked the one-hour ozone standard, although some areas still have continuing obligations under that standard ("anti-backsliding").

ii. Fine Particulate Matter--$PM_{2.5}$

Effective December 14, 2009, EPA announced that the Metropolitan Washington non-attainment area for the 1997 $PM_{2.5}$ NAAQS had attained the 1997 $PM_{2.5}$ NAAQS. This determination was based on 2004 - 2006 data and the region has continued to meet the attainment standard to date and to show improvement.

The Technical Advisory Committee of the Metropolitan Washington Air Quality Committee is currently in the preliminary stages of developing a redesignation request and maintenance plan for this standard, which may include new interim and out-year mobile source budgets.

iii. Nitrogen Dioxide--$NO_2$

On January 22, 2010, EPA strengthened the health-based NAAQS for $NO_2$ to a new one-hour $NO_2$ standard of 0.10 ppm. The standard also requires monitoring that occurs near roads, community-wide $NO_2$ concentrations, and low income or minority at-risk communities. This level will protect people against adverse health effects associated with short-term exposure to $NO_2$, including respiratory effects. It became effective on April 12, 2010. EPA also retained the annual average $NO_2$ standard of 0.053 ppm.

iv. Sulfur dioxide--$SO_2$

On June 2, 2010, EPA strengthened the primary NAAQS for $SO_2$ by establishing a new one-hour standard of 0.075 ppm. The new standard is the three-year average of the 99th percentile of the annual distribution of daily maximum one-hour average concentrations. EPA is revoking the two existing primary standards of 0.14 ppm evaluated over 24-hours and 0.03 ppm evaluated over an entire year because these standards will not add an additional public health benefit. All monitoring data for the Commonwealth of Virginia show compliant measurements. EPA is not revising the existing secondary $SO_2$ NAAQS of 0.50 ppm over a three-hour average that is set to protect public welfare, including effects on soil, water, visibility, wildlife, crops, vegetation, national monuments and buildings. EPA is assessing the need for changes to the secondary standard under a separate review.

v. Lead

On November 12, 2008, EPA issued a final rule that revised the primary and secondary NAAQS for lead and associated monitoring requirements. The effective date of this standard was January 12, 2009. The primary standard is set at 0.15 $\mu g/m^3$ in a rolling three-month average to protect health. A secondary standard is set at the same level to protect the public welfare, including the environment. The revised standards are 10 times more stringent than the previous standards and will improve health protection for at-risk groups, especially children. This decision marked the first time the lead standards have changed in 30 years. By October 2011, EPA was to have designated areas that have to take additional steps to reduce lead air emissions. States will have five years to meet the new standards after designations take effect.

## 2. Air Quality Status in Northern Virginia

### a. Air Compliance Program

Air pollutants are emitted by stationary sources, such as power plants, gasoline service stations and dry cleaners, as well as by mobile and area sources, such as automobiles, trucks and other highway activities. EPA tracks the emission of air pollutants from stationary sources, including sources in Fairfax County. Some of these emissions are discharged through smoke stacks and some emerge from the source without treatment. All are regulated under law. Virginia DEQ's air compliance program conducts inspections of facilities within Fairfax County and records information on violations in the state's database (Comprehensive Environmental Data System). (http://www.deq.state.va.us/air/compliance/homepage.html)

### b. Update on County and Regional Air Quality Data

i. Ozone State Implementation Plan

EPA designated the metropolitan Washington region as moderate nonattainment for the eight-hour ozone standard of 0.08 ppm in April 2004. The Clean Air Act requires states to develop and implement ozone reduction strategies in the form of a State Implementation Plan. The SIP is the state's "master plan" for attaining and maintaining the NAAQS. The region had a deadline of June 15, 2010, to meet the eight-hour ozone standard. Air quality data from 2008-2010 demonstrate compliance with the 0.08 ppm eight-hour ozone standard in the Northern Virginia area. However, EPA has not concluded that the region meets this standard, and, as noted above, the standard itself has been, and may further be, strengthened.

Ground-level ozone is a precursor to smog and can cause breathing problems for those sensitive to smog, especially those with asthma (some use the term smog as a colloquial name for ground level ozone). Figures III-1 through III-4 and Table III-1 present regional and county air quality trends as they relate to the eight-hour ozone standard. Monitors in the metropolitan region recorded data on 33 days during the 2010 ozone season when ozone values were above 0.075 ppm. Various studies have shown that, during certain meteorological episodes, pollution from outside the area can cause ozone exceedances in the Washington metropolitan area.

As described in the section above, EPA has proposed a new ozone standard in the range of 0.060 and 0.070 ppm. The figures below demonstrate that the metropolitan Washington area needs to continue improving ozone air quality to meet this more stringent range. The final rule was due to have been promulgated in summer 2011 but has been delayed. The rule should contain more information on how the new standard will be implemented, including the schedules for both the development and submittal of the attainment plan and for compliance dates to meet the new standard.

ii. Fine Particulate Matter State Implementation Plan

Virginia submitted its $PM_{2.5}$ SIP in April 2008, as required by the Clean Air Act. In October 2008, EPA proposed a "clean data determination" for the metropolitan Washington region in regards to the 1997 $PM_{2.5}$ NAAQS. This determination alleviated certain requirements of the Clean Air Act on the region, such as the implementation of certain inventory requirements. However, the Metropolitan Washington Council of Governments determined that submittal of the full attainment plan, including the requirements alleviated by the "clean data determination," was a prudent measure given the legal and regulatory uncertainty. Fine particulate air monitoring data has continued to show good improvements over the past several years, and more improvements are expected due to the installation of upwind control devices. Figures III-5 and III-6 present regional air quality trends (annual and 24-hour, respectively) as they relate to the PM2.5 standard.

The area will remain a nonattainment area for the 1997 $PM_{2.5}$ NAAQS until the area develops a redesignation request and maintenance plan, as required by the Clean Air Act. The "clean data determination" does not allow an area to become redesignated to a maintenance area until both a redesignation request and maintenance plan are developed, submitted to EPA, and approved at the federal level. The redesignation request and maintenance plan are needed to ensure that the progress the region has made in meeting and far exceeding the NAAQS is recognized with an

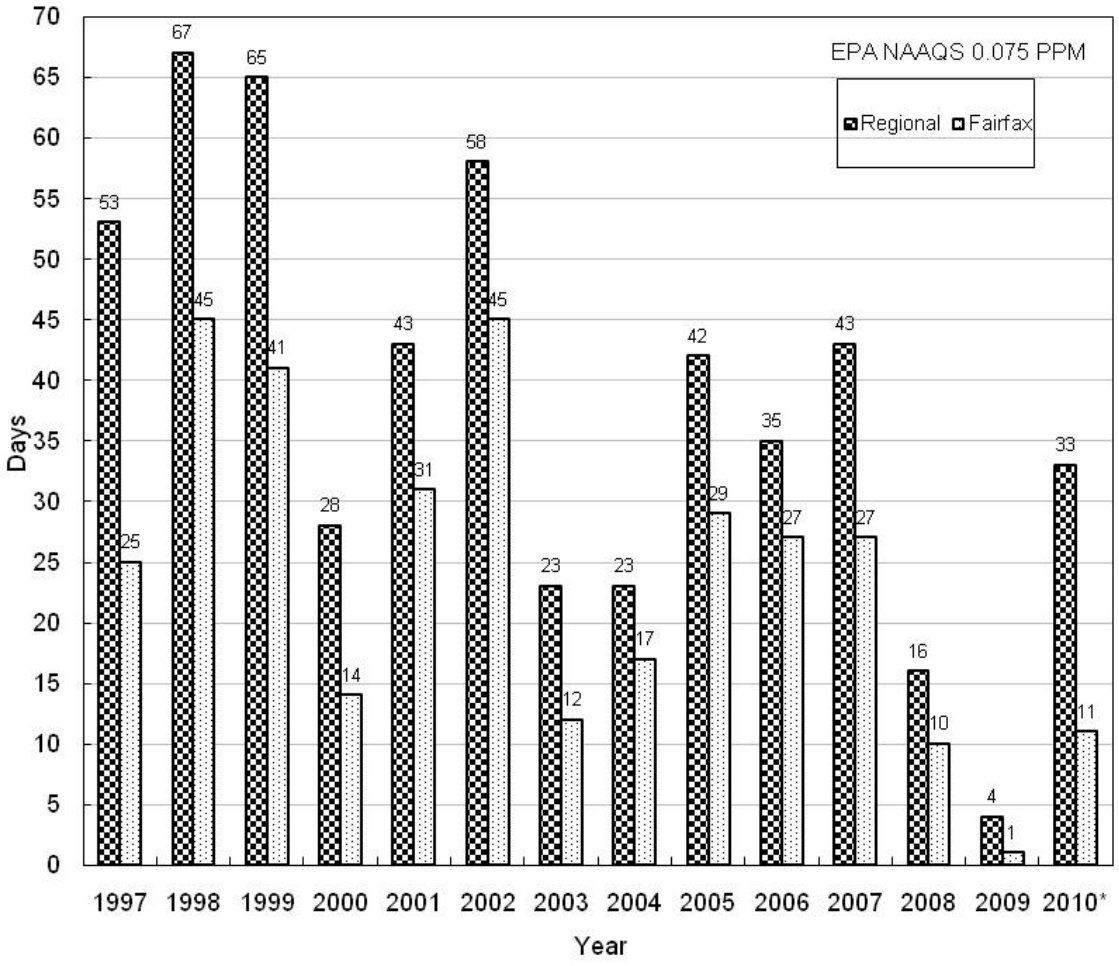
attainment/maintenance designation. MWAQC TAC is currently in the preliminary stages of developing these documents.

iii. Additional Monitors for $NO_2$ and Other Pollutants

Virginia DEQ provided an update on the status and plans for conducting monitoring for $NO_2$ in Fairfax County, noting that the agency is working to install a new $NO_2$ monitor, to be used to assess compliance with the roadside monitoring aspect of the revised NAAQS for $NO_2$. There are plans to install three new $NO_2$ monitors in Virginia, based on information about the average annual daily traffic count. For northern Virginia, DEQ is considering placement of the monitor on property of the Virginia Department of Transportation in the area near the Springfield I-95/I-395/I-495 interchange. Current plans call for the monitor to become operational by January 2013.

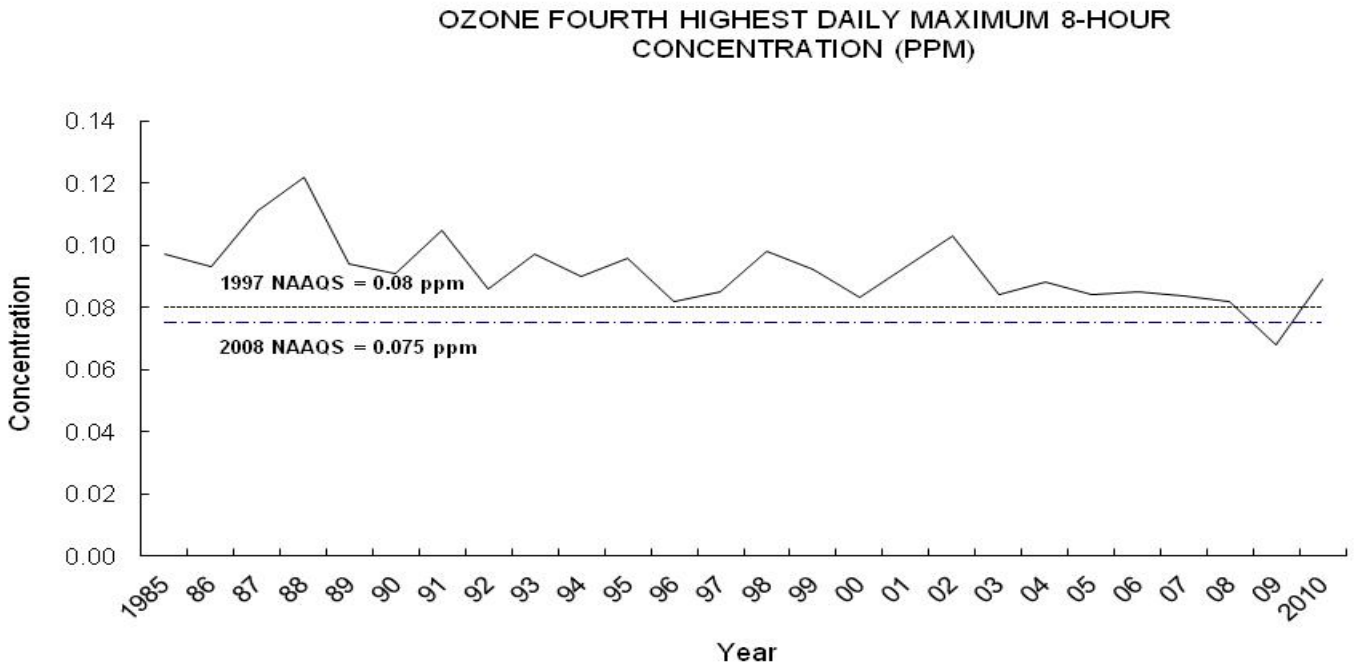
DEQ may also install additional roadside monitors for carbon monoxide and $PM_{2.5}$, depending on what is included in EPA's revised NAAQS for those pollutants. These projected changes to the air monitoring network in northern Virginia will be included in the Annual Monitoring Network Plan, which is sent by DEQ to EPA by July 1 of each year. This report contains information on the air monitoring network, including projected changes for that calendar year. This report is posted on DEQ's air quality web page each year to receive public comment on all aspects of the network plan. DEQ also posts an Annual Monitoring Data Report on the Web page, which contains the monitored results for the previous calendar year. The 2010 data report is now posted at http://www.deq.state.va.us/airmon/publications.html.

**Figure III-1. Air Quality Trends in Relation to the Eight-Hour Ozone Standard (relative to 0.075 ppm 2008 NAAQS Standard)**
OZONE EXCEEDANCE DAYS



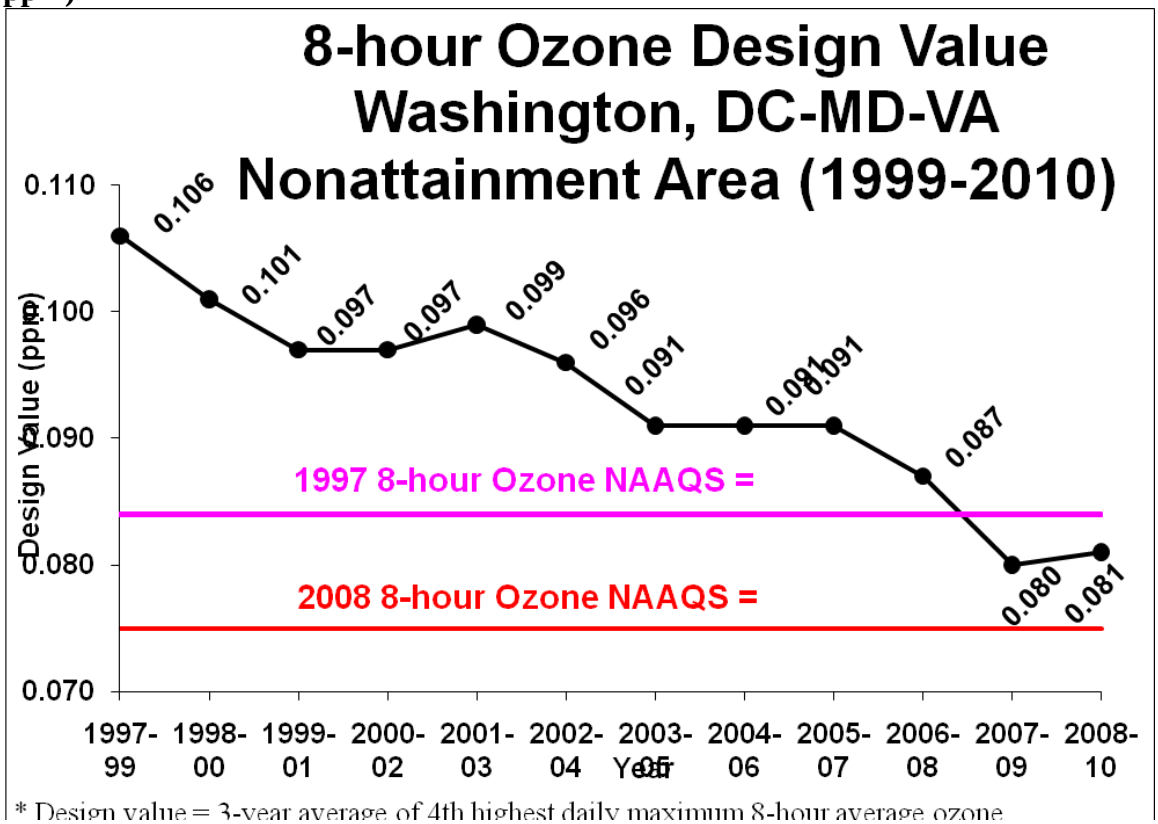

SOURCE: Fairfax County Health Department. 2010 data are preliminary and subject to change after review for Quality Assurance/Quality Control.

**Figure III-2. Air Quality Trends in Relation to the Eight-Hour Ozone Standard, Fairfax County**
**(Fourth Highest Daily Maximum Compared to Both 1997 and 2008 NAAQS, ppm)**



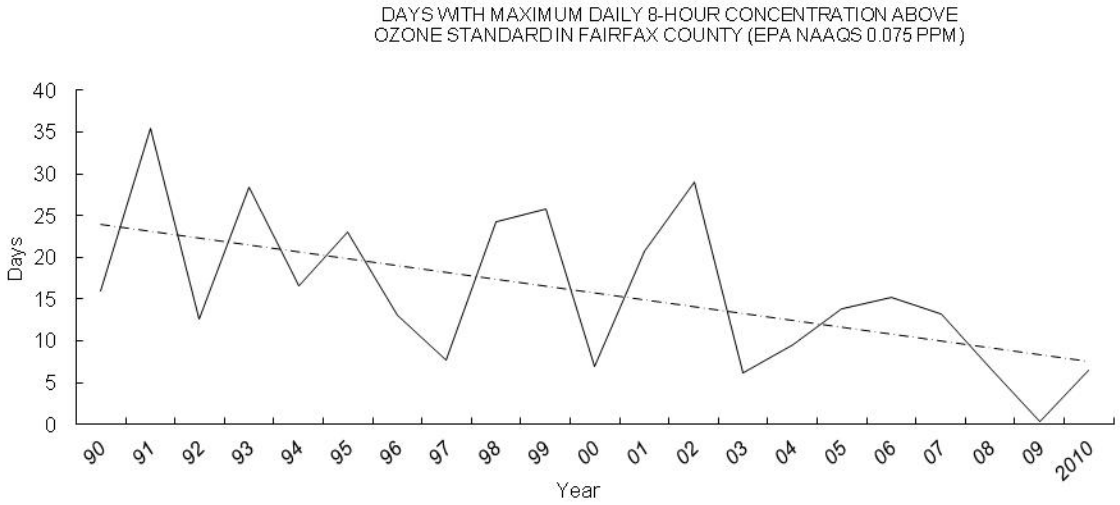

SOURCE: Fairfax County Health Department. 2010 data are preliminary and subject to change after review for Quality Assurance/Quality Control.

**Figure III-3. Air Quality Trends in Relation to the Eight-Hour Ozone Standard (3-Year Mean of Ozone Fourth Highest Daily Maximum Eight-Hour Concentration, ppm)**




Source: Metropolitan Washington Council of Governments. 2010 data are preliminary and are subject to change.

**Figure III-4. Air Quality Trends in Relation to the Eight-Hour Ozone Standard (No. of Days with Maximum Daily Eight-Hour Concentration Above Ozone Standard in Fairfax County, Relative to 0.075 ppm 2008 NAAQS Standard)**



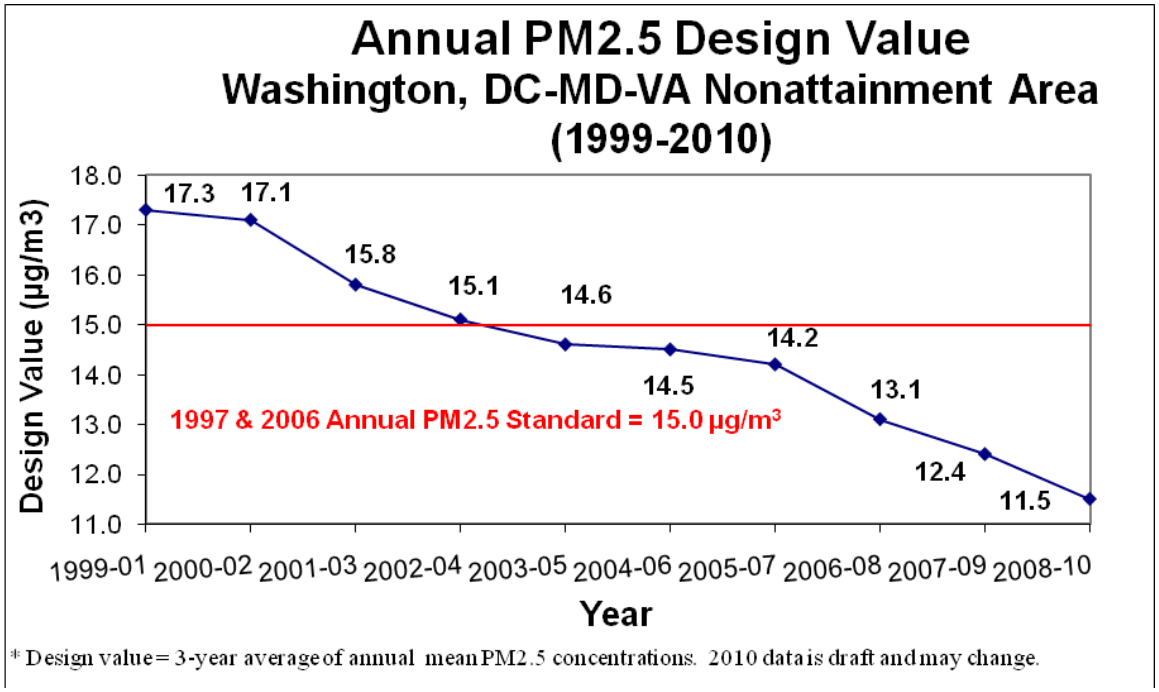

SOURCE: Fairfax County Health Department. 2010 data are preliminary and subject to change after review for Quality Assurance/Quality Control.

**Table III-1. Regional Eight Hour Ozone Exceedances – 2010 (Relative to 0.075 ppm 2008 NAAQS Standard)**

| Date | Number of Stations that Exceeded the Standard | Maximum Values in the Metropolitan Statistical Area; Maximum Eight-Hour Ozone (ppm) |
|---|---|---|
| 5/27/2010 | 6 | 0.088 |
| 6/2/2010 | 2 | 0.080 |
| 6/4/2010 | 1 | 0.076 |
| 6/12/2010 | 1 | 0.079 |
| 6/18/2010 | 1 | 0.083 |
| 6/21/2010 | 3 | 0.082 |
| 6/22/2010 | 5 | 0.091 |
| 6/23/2010 | 1 | 0.076 |
| 6/25/2010 | 1 | 0.080 |
| 6/26/2010 | 1 | 0.076 |
| 7/3/2010 | 3 | 0.082 |
| 7/4/2010 | 5 | 0.086 |
| 7/5/2010 | 3 | 0.082 |
| 7/6/2010 | 9 | 0.090 |
| 7/7/2010 | 12 | 0.100 |
| 7/8/2010 | 4 | 0.093 |
| 7/15/2010 | 3 | 0.078 |
| 7/28/2010 | 1 | 0.077 |
| 8/7/2010 | 1 | 0.077 |
| 8/9/2010 | 1 | 0.079 |
| 8/10/2010 | 11 | 0.090 |
| 8/11/2010 | 10 | 0.097 |
| 8/17/2010 | 7 | 0.089 |
| 8/19/2010 | 4 | 0.086 |
| 8/20/2010 | 7 | 0.081 |
| 8/28/2010 | 1 | 0.076 |
| 8/29/2010 | 2 | 0.080 |
| 8/30/2010 | 11 | 0.098 |
| 8/31/2010 | 8 | 0.088 |
| 9/1/2010 | 5 | 0.086 |
| 9/2/2010 | 4 | 0.083 |
| 9/3/2010 | 1 | 0.083 |
| 9/23/2010 | 2 | 0.080 |

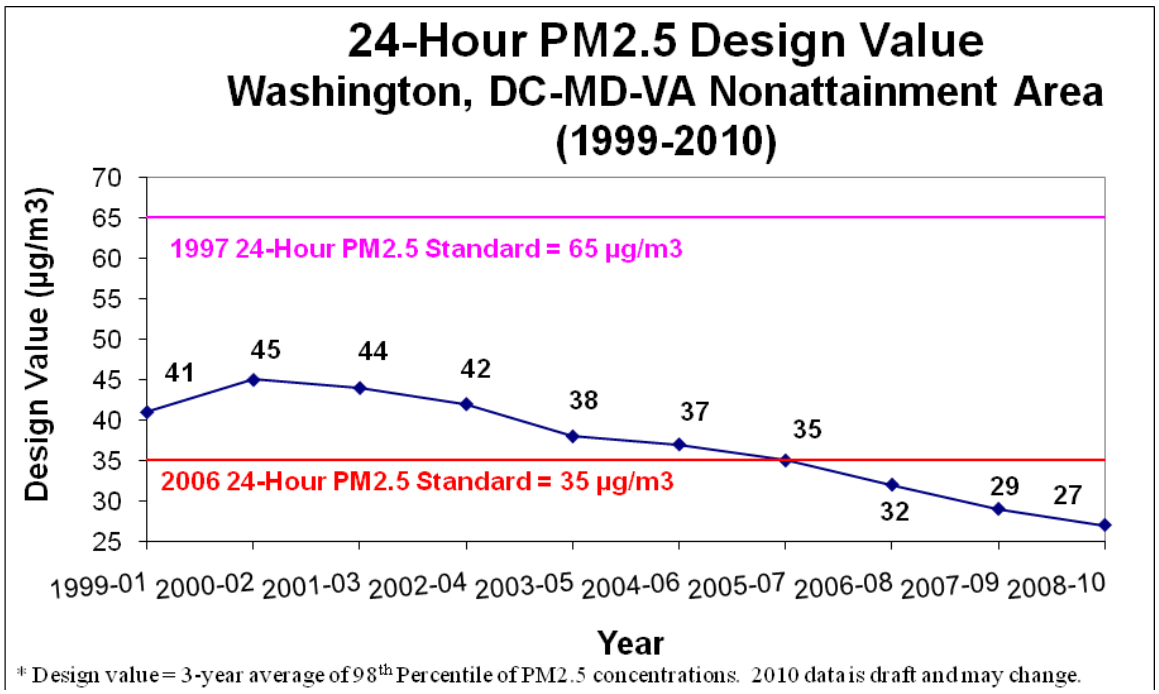
Source: Metropolitan Washington Council of Governments. 2010 data are preliminary as of July 30, 2011 and are subject to change.

**Figure III-5. Regional Air Quality Trends in Relation to the Annual PM2.5 Standard (1999-2010)**




Source: Metropolitan Washington Council of Governments. 2010 data are preliminary and are subject to change.

**Figure III-6. Regional Air Quality Trends in Relation to the 24-Hour PM2.5 Standard (1999-2010)**




Source: Metropolitan Washington Council of Governments. 2010 data are preliminary and are subject to change.

iv. Emissions from Motor Vehicles

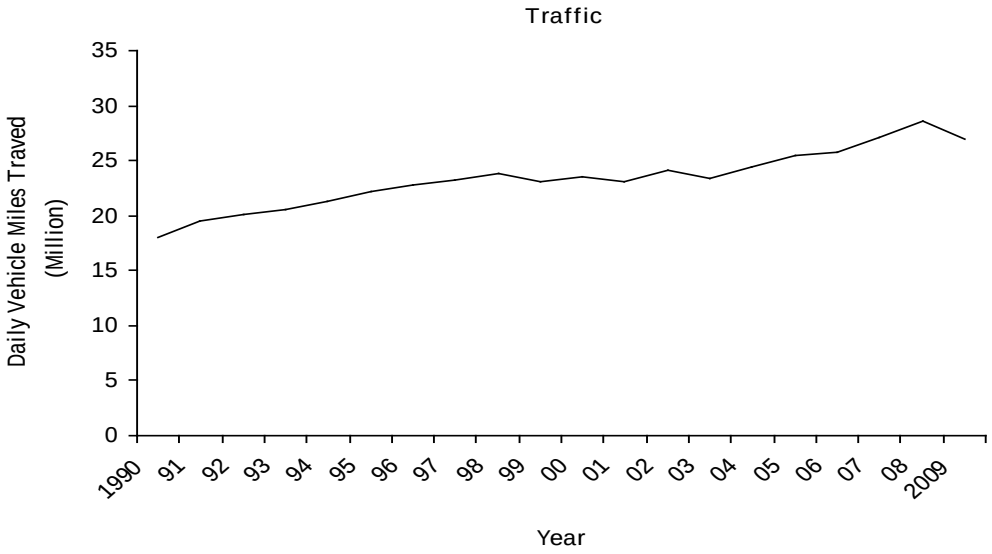
One of the key issues related to ozone nonattainment and other air quality concerns is the use of motorized vehicles and their emissions. There is extensive use of motor vehicles in Fairfax County, including a significant number that do not pass the required emissions testing. Figure III-7 shows the daily vehicle miles traveled in Fairfax County, illustrating that more than 25 million vehicle miles were traveled daily in 2009, a slight decrease from the number for 2008.

There are no proposed changes to the inspection and maintenance program in northern Virginia at this time. However, there was to have been a stakeholders group meeting in summer 2011 to make recommendations on the Inspection and Maintenance program (http://townhall.virginia.gov/L/ViewNotice.cfm?gnid=339). There has been no adverse impact on the IM program due to state budget cuts since the program is funded through registration fees.

VDOT is actively seeking to address transportation modes that can be used as alternatives to motorized vehicles, such as addressing increased use of bicycling and public transit. Efforts to make these alternative

modes safer and more attractive are critically important to addressing the air quality issues in the Washington metropolitan area, and should be commended. For example, these types of initiatives can serve to reduce the county's status as being in nonattainment for ozone.

**Figure III-7. Daily Vehicle Miles Traveled in Fairfax County (Millions)**




SOURCE: Fairfax County Health Department

# B. MAJOR PUBLIC AGENCY RESPONSIBILITIES

## 1. Introduction

Although compliance with National Ambient Air Quality Standards and resulting air quality management responsibilities is a function of federal law, in Fairfax County and in other major metropolitan areas in Virginia these responsibilities have been split between the Commonwealth of Virginia and the regional metropolitan planning organization. Fairfax County holds a seat on, and the county staff is required to support, the MPO for the metropolitan Washington area. MPOs are set up under the Clean Air Act in metropolitan areas with populations in excess of 50,000. In more difficult situations, MPOs are multi-jurisdictional, as is the case in the Washington MPO. Members of MPOs are appointed by the governors and mayors of affected jurisdictions to represent areas included in the MPO. The MPO works with state departments of transportation and transit providers in identifying transportation needs and

priorities. It makes transportation investment decisions for the metropolitan area and, by default, for the individual regions encompassed within the MPO.

## 2. Commonwealth of Virginia

### a. Virginia State Air Pollution Control Board

This board is authorized to propose policies and procedures for air quality regulatory programs, including emissions standards for landfills and vehicles.

### b. Department of Environmental Quality

This department is responsible for establishing or adopting standards for air quality, as well as for performing air quality monitoring, stationary source inspection, new and existing source permitting and vehicular inspection and maintenance programs. Air quality enforcement is handled by DEQ.

### c. Virginia Department of Transportation

This department is responsible for planning, developing, delivering and maintaining transportation for the traveling public.

## 3. Region – The Metropolitan Washington Council of Governments, the Metropolitan Washington Air Quality Committee and the National Capital Region Transportation Planning Board

COG is the Metropolitan Washington regional planning group that works toward solutions to regional problems related to air and water quality, transportation, and housing. COG also manages other programs such as those responsible for forecasting demographic changes. The MWAQC, which is a part of COG, partners with the air agencies to assist in the development of air quality plans as noted in Section 174 of the Clean Air Act. The authority of MWAQC is derived from the certifications made by the governors of Virginia and Maryland and the mayor of the District of Columbia. In Virginia, the roles of organizations like MWAQC, which function as local planning organizations under Section 174 of the Clean Air Act, are described in *The State Air Pollution Control Board's Regulations for the Control and Abatement of Air Pollution*, specifically at 9 VAC 5-151-70 et seq.

MWAQC was established to work cooperatively with state air agencies to conduct interstate air quality attainment and maintenance planning for the Metropolitan Washington region. Members are appointed and Fairfax County currently has three members of the Board of Supervisors on the committee. The Transportation Planning Board serves as the designated MPO for the

Washington region and is responsible for regional transportation planning and conformity. The TPB is staffed by the Department of Transportation Planning, which is part of COG. Members of the TPB are appointed, and Fairfax County currently has two members of the Board of Supervisors sitting on the TPB. TPB and MWAQC work together on air quality and transportation issues. COG is also responsible for issuing air quality indices on a weekly basis. County staff from the Health Department attends MWAQC meetings to support the Fairfax County members.

**a. MWAQC Technical Advisory Committee**

This committee was established to advise and assist MWAQC in planning for and maintaining the region's air quality. Fairfax County is represented on the TAC by an Environmental Health Program Manager from the Health Department along with a member from the Fairfax County Federation of Citizens Associations. Members research, review and discuss technical issues and documents at monthly meetings to develop information and recommendations that are submitted to MWAQC members for their review and approval.

**b. Interstate Air Quality Council**

On May 31, 2005, Virginia Governor Mark Warner, Maryland Governor Robert Ehrlich, Jr., and D.C. Mayor Anthony Williams signed a Memorandum of Understanding creating the Interstate Air Quality Council. The council consists of six members: the secretaries of the environment and transportation from each of the three governments. The IAQC provides overall guidance and streamlined planning to ensure the states and the District meet their shared goals of improved air quality, including compliance with new federal standards for ozone and fine particulates, and efficient transportation. The IAQC works in concert with the air quality and transportation committees of COG to achieve its goals.

**c. Forecasting Subcommittee**

This subcommittee considers how to monitor and report the new eight-hour ozone standard and how to devise guidelines for issuing health alerts during the ozone season.

**d. Attainment Subcommittee**

This subcommittee considers evidence for the case that the Washington nonattainment area can attain the eight-hour ozone standard with the control measures already adopted.

### e. Conformity Subcommittee

This subcommittee reviews Air Quality Conformity Determinations prepared by the TPB to ensure that regional transportation plans are consistent with plans to improve air quality. This includes verifying that estimated emissions from mobile sources, such as cars, trucks and buses, do not exceed the mobile budget, a cap on regional mobile emissions contained in the region's air quality plan.

### f. Air Quality Public Advisory Committee

This committee was established to provide a way to brief residents on actions pending before MWAQC. This committee functions as an important source of feedback from the public on air quality concerns in the metropolitan area. The Air Quality Public Advisory Committee recently changed its name to the Air and Climate Public Advisory Committee to reflect the committee's mission that includes climate and energy policy as well as air quality issues.

### g. Control Measures Workgroup

This workgroup was established to research control measures and develop a plan of emission reducing control measures for the region to implement in an effort to reach attainment for ozone.

## 4. MWAQC - Summary of Regional Air Quality Planning Efforts in 2010 and Anticipated Activities of MWAQC in 2011

### a. Overview

- MWAQC commented to EPA on the second phase of the Renewable Fuels Standard and proposed $NO_2$ NAAQS. MWAQC sent a comment letter that expressed concern about the air quality impact of increased use of biofuels. MWAQC urged EPA to mitigate potential impacts and adopt appropriate, timely and cost-effective emission controls that can be implemented on a national and regional scale.

- $NO_2$ Standard: MWAQC supported the new hourly $NO_2$ standard as providing more health protection. MWAQC also expressed concern about the required increases in monitoring for the standard, saying: "We urge EPA to provide the resources necessary to state and local air monitoring agencies for establishing the $NO_2$ monitoring network."

- MWAQC supported EPA's proposed range for a reconsidered ozone standard, 60-70 parts per billion, as being more protective of public

health. However, MWAQC cautioned that EPA will need to adopt national rules as part of a national strategy to reduce pollution.

- EPA proposed a Regional Transport Rule to resolve issues with the Clean Air Interstate Rule. MWAQC supported the rule, which would require significant reductions in sulfur dioxide and nitrogen oxide emissions that cross state lines by 2014. MWAQC commented that the proposed Transport Rule doesn't establish lower emissions reductions that will be required to meet the new reconsidered ozone standard. MWAQC urged EPA to adopt federal measures to reduce emissions, and supported state emissions budgets with limited interstate trading.

- MWAQC commented on the Conformity Analysis for the 2010 Constrained Long Range Transportation Plan and 2011-2016 Transportation Improvement Program. Conformity was tested against the one-hour ozone mobile emissions budgets as wells as the newly approved eight-hour reasonable further progress mobile budgets in the region's SIP. The 2010 CLRP and the 2011-2016 TIP showed current and future mobile emissions lower than the ozone budgets and lower than the 2002 $PM_{2.5}$ emissions, which is the required test. MWAQC cautioned TPB that a more stringent federal standard for ozone is expected soon; it and urged state and local government to maintain their commitments to emission reduction measures. As in past analyses, emissions decline significantly over time, but between 2030 and 2040, emissions begin to increase slightly as the fleet continues to grow. This suggests the need for new control programs to give benefits into the future.

- MOVES Task Force Completed Local Inputs to New Mobile Model (Motor Vehicle Emission Simulator): The COG MOVES Task Force was created to prepare for the change to using EPA's new mobile model, MOVES, instead of EPA's older mobile model, MOBILE 6.2. Sensitivity runs were conducted to compare the two models using local data. COG staff performed sensitivity analyses on the new MOVES model using defaults and using local inputs. The Task Force discussed local inputs, posed questions to EPA MOVES developers and performed a preliminary conformity analysis of the 2010 CLRP and 2011-2016 TIP, to compare to the MOBILE 6.2 conformity analysis.

- ACPAC Changes Name to Reflect Expanded Mission: The Air Quality Public Advisory Committee changed its name to the Air and Climate Public Advisory Committee to reflect the committee's mission that includes climate and energy policy as well as air quality issues. In its first year under the new structure, ACPAC commented on several issues to MWAQC. ACPAC supported MWCOG's application to the EPA's Climate Showcase Communities for a regional energy outreach

program; it also provided comments to the Climate Energy Environment Policy Committee on the proposed Climate Action Plan for 2012, the WE CAN--Wise Energy Use by Capital Area Neighbors outreach campaign, and EPA's Home Energy Score. ACPAC also commented to MWAQC on the Transport Rule and the Fairfax County monitor shutdown. ACPAC met with Maryland Department of the Environment staff regarding location of future monitors for the new $NO_2$ and CO standards.

- Climate Change and Air Quality Technical Support: MWAQC staff provided technical support to the Climate Energy Environment Policy Committee, which was created in 2009 to implement recommendations in COG's climate change report. Staff worked with area utilities on a format for reporting progress on regional climate and energy initiatives. Staff began receiving data from utilities in 2010 for 2009. The data will be used to measure progress on reducing greenhouse gas emissions from the 2005 baseline.

- Emissions Inventory: Staff held calls to discuss developing future year inventories for a potential fine particle redesignation request and maintenance plan. Staff consulted with EPA regarding the future year, 2025 or 2030, for a possible $PM_{2.5}$ maintenance plan. Staff is developing area source, nonroad and mobile source inventories for the future year.

- Local Government Initiatives: Staff surveyed the local governments regarding their progress on implementing commitments to local non-regulatory programs as part of a bundle of voluntary programs in the regional State Implementation Plan. MWAQC staff worked with the Local Government Initiatives Subcommittee (established in early 2006) to develop local air quality measures to be included in the SIP.

**b. MWAQC Committees**

MWAQC met six times during the fiscal year. Continued operation of the MWAQC regional process throughout the year was possible due to the operation of the Executive Committee and the Technical Advisory Committee. The Executive Committee discussed issues and guided staff between full MWAQC meetings.

**c. Citizen Support**

MWAQC maintains an Air and Climate Public Advisory Committee in order to provide a conduit through which citizens can be briefed and comment on the actions before MWAQC. The ACPAC continued to

provide comments on how regional air quality information could be made more accessible to the public audience.

**d. MWAQC FY 2012 Work Program**

MWAQC and the states will develop a redesignation request and maintenance plan for the $PM_{2.5}$ annual standard (1997). MWAQC will continue to lay the groundwork for the ozone SIP due in 2013, developing a multipollutant strategy for the Washington, DC-MD-VA region. Control measures will be evaluated on their ability to reduce ozone, NOx, VOC, $SO_2$, fine particles and greenhouse gases. The core work program will also provide technical support for local government air quality initiatives. Coordinating air quality planning with state and local clean energy programs will continue to be a focus.

In FY2012, MWAQC Core Program tasks include:

- Develop $PM_{2.5}$ Redesignation Request and Maintenance Plan
- Develop $PM_{2.5}$ inventories for Maintenance Plan
- Track attainment modeling for ozone SIP
- Support multi-pollutant, multi-sector control strategy for ozone SIP
- Test MOVES model in transportation conformity for 2011 TIP
- Prepare mobile emissions for PM2.5 Maintenance and ozone SIP
- Track local government Supplemental Measures (Voluntary Bundle) in the Annual $PM_{2.5}$ and Ozone SIPs.
- Develop tracking metrics for regional greenhouse gas emissions inventory
- Coordinate air quality planning with state and local clean energy programs
- Review transportation conformity analyses for ozone, fine particles and carbon monoxide
- Possibly revisit mobile budgets in submitted SIPs, depending on application of MOVES to the Washington region.

# C. STEWARDSHIP OPPORTUNITIES

Residents of Fairfax County have many opportunities to contribute to improvements in air quality. While some of the Metropolitan Washington area ozone problem originates outside of the area and is beyond the control of Virginia, Maryland and the District of Columbia, there are many aspects of our daily lives that can affect the quality of our air. A significant contributor to air quality issues is vehicle miles traveled. As discussed above, Virginians drive many millions of miles. Reducing the amount of driving, as well as the use of other combustion devices, especially during times where ground-level ozone is of concern (e.g., on

hot days with lots of sun and little or no wind), can help to improve air quality. Examples of actions that can be taken include carpooling, taking mass transit, reducing or postponing lawn-mowing, paving and outdoor painting, limiting vehicle idling, bringing a lunch to work, avoiding drive-thru windows, and refueling after dark.

The following are tips provided on the Clean Air Partners website (www.cleanairpartners.net):

**Small Changes Make A Big Difference**

Begin the day right. Check today's air quality forecast and modify your plans if unhealthy air quality is predicted. Protect yourself and others in your care, by taking the appropriate actions. Making small changes in your lifestyle at home, at work, and on the road can make a big difference.

At Home:

- Postpone mowing and trimming or use electric garden equipment.
- Postpone painting or use water-based paint instead of oil-based paint.
- Replace your charcoal grill with a propane gas grill.
- Choose ENERGY STAR™ appliances and lighting.
- Cut back on heating and air conditioning when you can and turn off lights and appliances when not in use.
- Clean heating filters each month.

At Work:

Employers have a unique opportunity to make a difference. They can promote programs that help employees make positive lifestyle changes. For example, employers can encourage staff to use public transportation or carpool. Employers also can give employees the option of working from home. Encourage employees to sign up for AirAlerts, a free service that delivers air quality information straight to their inbox http://www.cleanairpartners.net/airalert.cfm.

On the Road:

- Keep driving to a minimum.
- Fill up your gas tank during evening hours. Avoid spilling gas and "topping off" the tank. Replace gas tank cap tightly.
- Have your car tuned regularly by replacing the oil and air filter, and keep tires properly inflated and aligned.
- Carpool or use public transportation when possible.
- Combine your errands into one trip.
- Avoid revving or idling your engine.

- Avoid long drive-through lines; instead, park your car and go in.
- Looking for a new vehicle? Consider purchasing a fuel-efficient model or a hybrid that runs on an electric motor and gasoline engine.

# D. COMMENTS

1. EQAC performed extensive follow up with DEQ and others about Fairfax County's plans to cease the operation of the four ozone air quality monitors and has expressed concerns about the elimination of those ozone monitors. In April 2010, EQAC provided a recommendation that the Fairfax County Board of Supervisors provide comments to DEQ regarding its Annual Air Monitoring Network review. Specifically, EQAC recommended that the Board of Supervisors request that DEQ include one or more of the existing Fairfax County ozone monitors in its future monitoring plans. Given the historically higher level of ozone concentrations at the Mount Vernon station, as compared to the other county-run stations, EQAC recommended that the Board of Supervisors request that DEQ include the Mount Vernon station in the regional monitoring plans. EQAC plans to continue to follow this issue over the course of the next several years as additional data become available.

2. EQAC appreciates that an Environmental Health Program Manager will continue to perform air quality planning duties. This includes participation in and attendance at Metropolitan Washington Council of Governments' Air Quality Committee meetings and meetings of the Technical Advisory Committee and subcommittees. In addition to managing other Environmental Health sections, this staff position also: collaborates with other local, regional and national air quality organizations, such as Clean Air Partners; provides support to address board matters related to air quality and the environment; coordinates with other county agencies on efforts to reduce air pollution and perform annual county survey to assess progress toward SIP commitments; serves on county groups and committees such as Environmental Coordinating Committee and Environmental Improvement Program Action Group; reviews proposed projects for environmental impact related to air quality; performs legislative reviews; assesses the results of ongoing regional air monitoring; and participates in outreach events and encourages county residents and others to take voluntary actions to improve air quality.

# E. RECOMMENDATION

None.

# F. REFERENCES

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