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ANNUAL REPORT ON THE ENVIRONMENT

**CHAPTER II**

# **AIR QUALITY**

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## **II. AIR QUALITY**

### **A. ISSUES AND OVERVIEW**

#### **1. Introduction**

Although air quality in Fairfax County continues to improve, the difficulties of air quality management in a tough regulatory environment are becoming all too clear. We continue to struggle with the reality of being part of a metropolitan ozone non-attainment area (an area that fails to meet the National Ambient Air Quality Standard (NAAQS) for ozone). While some of the uncertainties of litigation that were pending last year have now been resolved, the offsetting effects of those results combined with the advent of new litigation challenging the Environmental Protection Agency (EPA) decision to approve a requested extension of the Washington Metropolitan Area attainment date have not made our regulatory future look any more certain. Meanwhile the lack of some key air quality planning capabilities will continue to expose the County to an even more uncertain regulatory future.

##### **a. NO<sub>x</sub> SIP Call (litigation)**

In March of 2001, the U.S. Supreme Court rejected industry petitions appeal of the June, 2000 decision of the U.S. District Court of Appeals for the District of Columbia upholding the NO<sub>x</sub> (oxides of nitrogen) SIP (State Implementation Plan) Call issued earlier in the year by the EPA. The result of this is that the SIP Call can go forward with the further result that Northern Virginia should be able to take credit for ozone nonattainment that can be traced to transported NO<sub>x</sub>. This will not be without some potential difficulty within the state of Virginia, however, since our gains will have to come at the expense of upwind stationary sources of NO<sub>x</sub> elsewhere in the state.

##### **b. Rejection of Ozone Eight-Hour and Particulate Matter Standards (litigation)**

In February of 2001, the U.S. Supreme court largely upheld EPA's position in the face of industry challenges to the to the new ozone eight-hour and particulate matter standards. In the face of these court decisions, EPA struggles with the difficulties of moving toward implementation of these new standards. In Fairfax County, this will be more of an issue as we move away from the one-hour and toward the eight-hour standard. Meanwhile, although there were fewer exceedances in 2000, the County failed once again to see the year through without violations of both the one-hour and eight-hour standards.

**c. Phase II Attainment (Rate of Progress Planning) in Northern Virginia**

The Clean Air Act Amendments of 1990 required additional air quality management restrictions in Northern Virginia and culminated in approval of an additional 9% reduction (The Phase I Attainment Plan) by the Metropolitan Washington Air Quality Committee (“MWAQC”), which is the entity responsible for air quality planning for Fairfax County. The purpose of the Phase II Attainment Plan is to evaluate whether the measures included in the 9% plan are adequate to reach attainment in the Washington Metropolitan Area. In turn, the Phase II Attainment Plan has to be reflected in SIP planning activities in the State of Virginia. Although the favorable resolution of the NO<sub>x</sub> SIP Call litigation means that we should be able to project compliance with the one-hour ozone standard under the Phase II Attainment Plan, the transition to an eight-hour standard complicates this situation.

**d. Earthjustice Legal Defense Fund Lawsuit (litigation)**

As time passes, the relevance of the Phase II Planning exercise is apparently diminishing. In February 2001, the Earthjustice Legal Defense Fund, on behalf of the Sierra Club, filed suit against the EPA in the U.S. Court of Appeals for the D.C. Circuit as well as in the 4<sup>th</sup> Circuit in Richmond for approving an extension of the Washington Metropolitan Area attainment deadline until 2005. The EPA decision to grant that extension had been based largely on the projected effects of NO<sub>x</sub> transport into the Washington area and was consistent with the results of the NO<sub>x</sub> SIP Call.

Meanwhile the ongoing failure to monitor actual attainment of either the one-hour or the eight-hour ozone standard largely undercuts the assumptions that derive from Phase II planning. If the Earthjustice Legal Defense Fund lawsuit is successful, the results could be far-reaching for Fairfax County. Among other things, it would almost certainly result in a bump up in our nonattainment classification status from ‘serious’ to ‘severe’ with resulting additional air quality management requirements. It would also more than likely trigger legal requirements restricting highway planning flexibility and imposing further mass transit requirements or other actions offsetting growth in the use of motor vehicles.

**e. Periodic Emissions Inventory Update**

The periodic emissions inventory update which is due to the EPA in November of 2001 is likely to be delayed because of the failure of the EPA to complete its latest mobile source emissions model in a timely manner. The Mobile VI Model had originally been scheduled to be available in March of this year, although that has apparently not occurred. The failure to be able to correctly model for mobile source emissions is particularly problematic in Fairfax County because of the controversy surrounding emission levels of vehicles in the County.

## **f. The Rise of Conformity**

The purpose of conformity is to assure that planning for transportation activities is consistent with air quality management goals. In non-attainment areas such as the Metropolitan Washington Area, transportation planning cannot be allowed to proceed if: (1) it contributes to the creation of new air quality violations; (2) it contributes to the worsening of existing air quality violations; or (3) it delays the attainment of ambient air quality standards. The MWAQC, in consultation with the Transportation Planning Board (“TPB”), has the responsibility to establish the limits for mobile source emissions that apply to SIP development activities affecting Fairfax County.

In the Washington Metropolitan Area, the Transportation Planning Board is currently the key to conformity planning. Earlier this year, the TPB released its proposed conformity analysis for public comment; it is scheduled to take final action on the current conformity analysis before the end of the year. It should be no surprise, however, that the problem that is plaguing the conformity analysis is NO<sub>x</sub>. As a result of the current state of the mobile emissions inventory, the present conformity analysis demonstrates an exceedance of our daily NO<sub>x</sub> inventory by eight (8) tons per day. As a result of the dilemma this presents, the TPB has established a special conformity task force that has been meeting with the purpose of trying to determine how to address this problem. This is a particularly difficult situation given the lawsuit by the Earthjustice Legal Defense League. Although the EPA is defending the lawsuit, COG has apparently sought to intervene in the case in support of the EPA. Meanwhile the County is, at this stage, just a bystander. The County has apparently been part of the deliberations at MWAQC and also with the TPB and the task force.

As we stated last year, although we are at the relatively early stages of conformity analysis in Metropolitan Washington, other metropolitan non-attainment areas on the East Coast have recently had to face lawsuits claiming adverse air quality effects from highway expansion. There is increasing evidence that these types of activities are likely to become major components in the anti-sprawl strategy of national environmental groups. Depending upon what happens with conformity analysis in the Washington area, there is an increasing possibility that current road construction activities could be abruptly halted through denial of funding for federal projects and “regionally significant” state projects.

## **2. Air Quality Status in Northern Virginia**

### **a. Ground-level Ozone**

The Metropolitan Washington, D.C. area, which includes Fairfax County, is classified as a serious nonattainment area for ozone. For all other Federal Air Quality standards, the area is in attainment. Since the region again failed to attain the one-hour ozone standard in 2000, it remains at risk of being bumped up from a serious to a severe non-attainment area.

**b. Ozone Exceedances in 2000**

Attainment of the ozone standard in the Metropolitan Washington, D.C. area will require three years with no ozone exceedances. An exceedant day is one when an ozone-monitoring site exceeds the NAAQS of 0.12 ppm for at least one hour. In 2000 there were two ozone exceedant days in the metropolitan air quality region, with one exceedant day in Fairfax County. On that day (June 10, 2000) air quality at the Mount Vernon, Virginia monitoring station exceeded the standard. 2000 ozone exceedances for the region are shown in Table II-1.

**c. Air Quality Trends in Fairfax County**

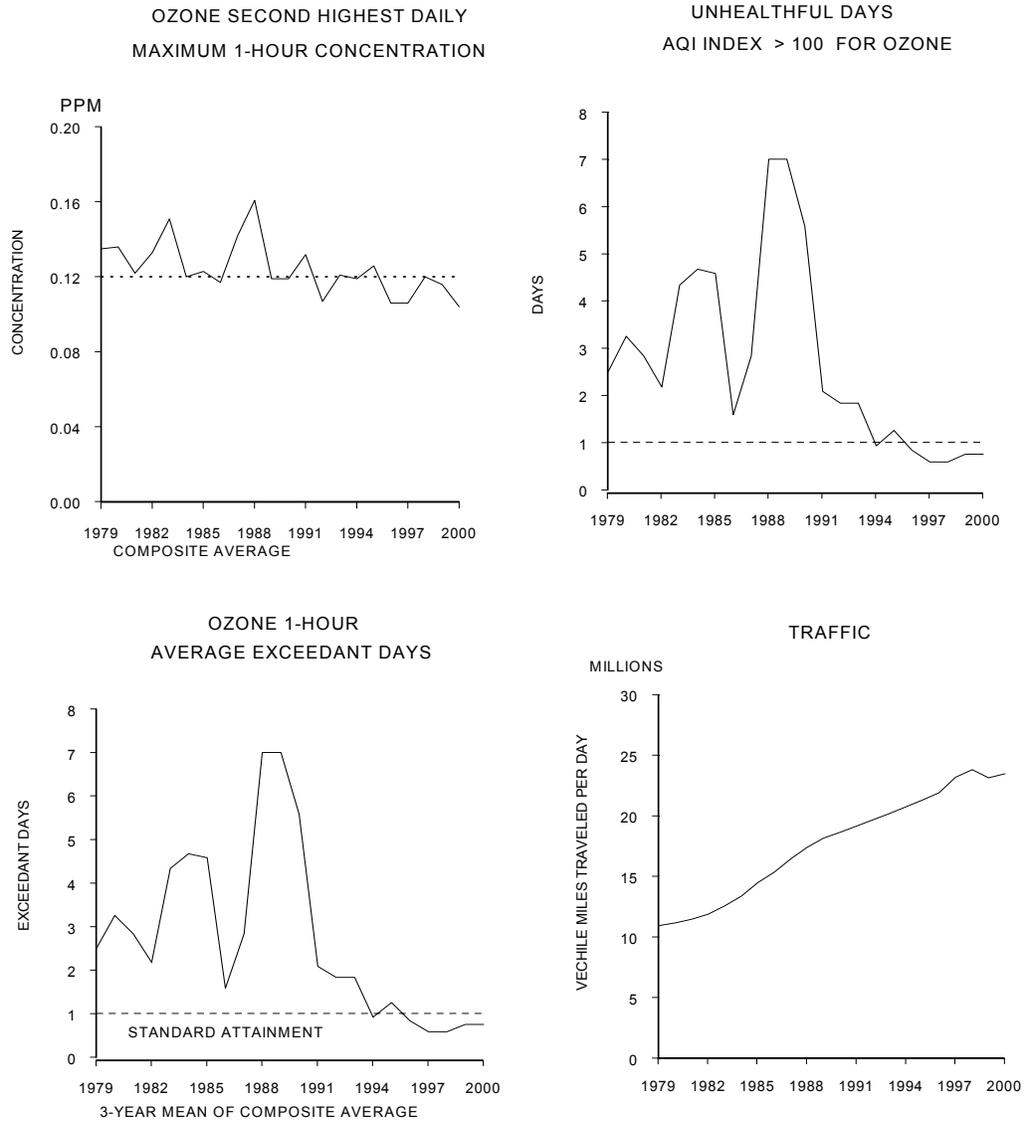
Although air quality in Fairfax County is improving, there would appear to be a good likelihood that marginal violations of the ozone standard will continue. This would especially appear to be the case given the current status and expected implementation of the eight-hour ozone standard. Figure II-1 presents a series of graphs displaying annual trends over the past several years even in the face of steadily increasing automobile usage. If the EPA is indeed successful in implementing the new ozone eight-hour standard, it would appear that this situation will be exacerbated. Even though the eight-hour averaging time for the new standard is longer, the significantly reduced exceedance level makes attainment problematic for Fairfax County, as indeed it will for the whole metropolitan area. Figure II-2 presents a series of graphs displaying the effects of the new standard.

<b>Table II-1</b>		
<b>Regional Ozone Exceedances, 2000</b>		
<b>Date</b>	<b>Location</b>	<b>Maximum One-Hour Ozone (ppm)</b>
May 13	Greenbelt, MD	0.128
June 10	Greenbelt, MD	0.142
	Suitland, MD	0.127
	Mount Vernon, VA*	0.125

\*Fairfax County Monitoring Station

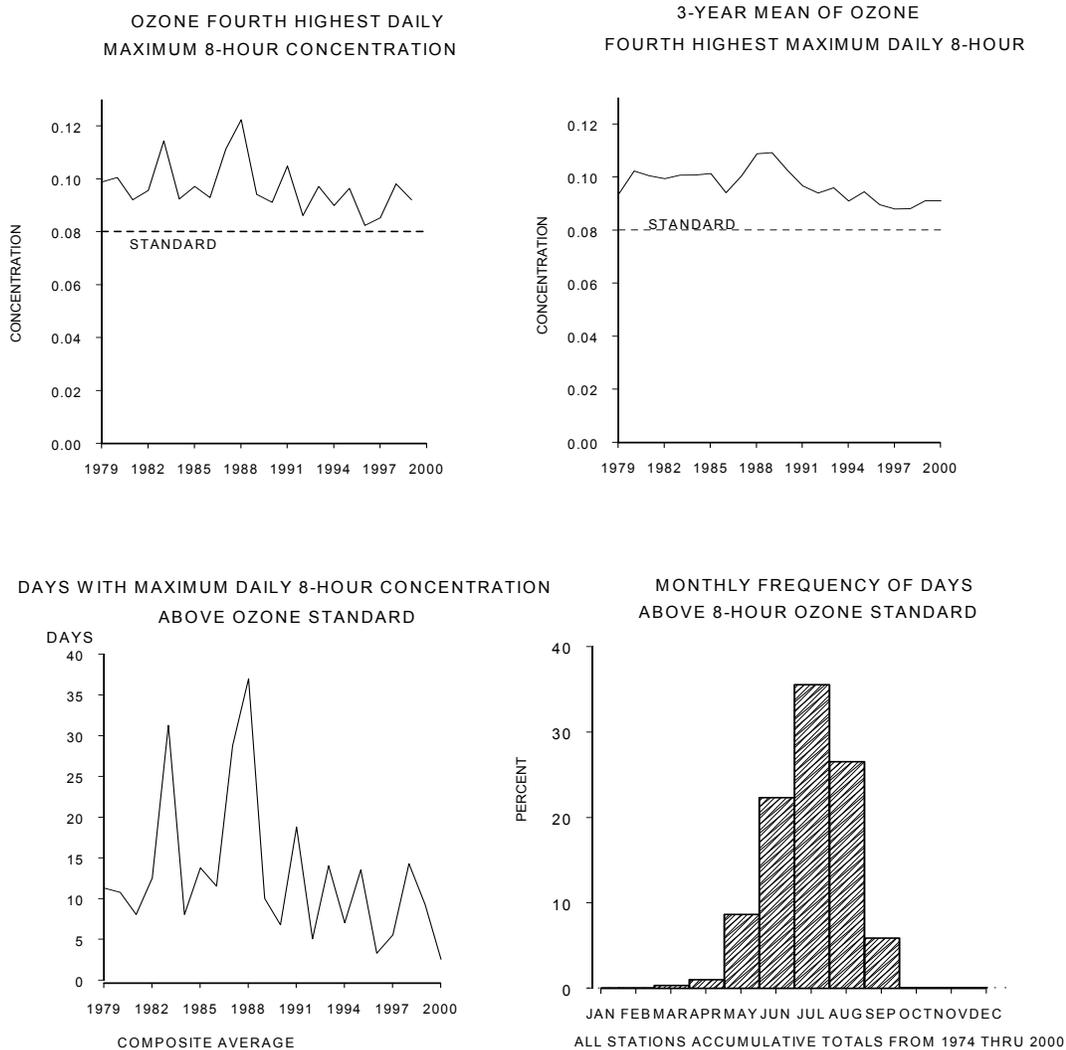
Source: Fairfax County Department of Health

**Figure II-1: Air Quality Trends**



Source: Fairfax County Department of Health

**Figure II-2: Air Quality Trends in Relation to an Eight-Hour Ozone Standard**



Source: Fairfax County Department of Health

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## **B. MAJOR PUBLIC AGENCY RESPONSIBILITIES**

### **1. Commonwealth of Virginia**

#### **a. 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. Virginia Department of Environmental Quality**

This department is responsible for establishing standards of air quality monitoring and vehicular inspection and maintenance programs. This department is also the enforcement authority for the federal asbestos regulations.

### **2. Region – Metropolitan Washington Council of Governments, Metropolitan Washington Air Quality Committee (MWAQC)**

The Metropolitan Washington Council of Governments (“COG”) serves as the regional planning organization of the Washington area’s major local governments and their governing officials. COG works toward solutions to problems in such areas as growth, air and water quality, transportation, and housing. This agency is responsible for issuing air quality indices on a weekly basis.

The MWAQC was formed under the authority of the Governors of Maryland and Virginia and the Mayor of the District of Columbia to develop specific recommendations for a regional ozone control strategy for the Washington, DC-MD-VA non-attainment area. This Committee works under COG. About three years ago, Fairfax County increased its representation on MWAQC by appointing a representative of the County Health Department to the MWAQC Technical Advisory Committee.

#### **a. MWAQC Technical Advisory Committee**

This committee reviews technical issues and documents before they are submitted to MWAQC for review and approval.

#### **b. 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.

#### **c. Attainment Subcommittee**

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

**d. Conformity Subcommittee**

This subcommittee reviews projects, which will contribute to transportation demands, including help in determining if a project will contribute emissions which exceed the region's target volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>).

In the past year the Transportation Planning Board (TPB), which is the designated Metropolitan Planning Organization (MPO) for the region, has also been actively involved in addressing the conformity issue. The Air Quality Conformity Determination, which was released in October of 2000, is a key document related to conformity analysis that has been produced by the TPB. It is also the TPB that has convened the task force that is attempting to resolve the NO<sub>x</sub> shortfall that currently plagues the region as well as Fairfax County.

**e. Air Quality Public Advisory Committee**

This committee has been set up to provide a vehicle to brief citizens 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.

**3. County of Fairfax**

**a. Department of Health, Division of Environmental Health, Community Health and Safety Module**

This Division is authorized by the Fairfax County Code, Chapter 103, in cooperation with federal and state agencies, to conduct an air-monitoring program. This division now provides consultative services to those requesting assistance in indoor air quality issues. If there is a substantial threat to public health, on-site investigations may be provided concerning indoor air quality and exposure to toxic substances in non-occupational, indoor environments. This Division also represents the County in its interactions with MWAQC. The representative from the Health Department sits as a member of the MWAQC Technical Advisory Committee and functions as a conduit to communicate with the County on air quality issues of concern to MWAQC.

**b. Department of Transportation**

This agency is responsible for the planning and the coordination of improvements that reduce both congestion and the vehicle miles traveled.

## C. PROGRAMS, PROJECTS, AND ANALYSES

### 1. Regional Air Quality Planning

Having failed to attain the federal NAAQS again in 2000, the County enters an even more tenuous phase in its air quality planning. The elements of this situation are pointed out in some detail in the “Issues and Overview” discussion above.

Although Phase II planning remains underway, the credibility of that effort remains at risk. As we predicted in our report last year, the issue of conformity is becoming more of an issue every day. While it would appear that the County can legitimately project benefits from the NO<sub>x</sub> SIP Call reductions and the adoption of the Tier II standards for cars and light duty trucks, ongoing failure to attain the one-hour ozone standard in the face of the Earthjustice Legal Defense Fund lawsuit puts the planning capability of the County substantially at risk.

As indicated in our recommendations last year, EQAC is concerned about this situation. We remain concerned, as we were last year, about the need to act now to tighten the links between planning, particularly for transportation needs, and air quality management.

## D. LEGISLATIVE UPDATE

### 1. Summary of Air Quality Laws Enacted by the Virginia General Assembly – 2000/2001

In the 2000 General Assembly, the only enacted bill that related to Air Quality was SB 682. In the latter portion of the session, that bill, which was also addressed in last year's *Annual Report on the Environment*, added a school administrator to the indoor air quality task force.

As has been the case in both of the past two sessions, there has not been much activity in the 2001 session addressing the subject of air quality. The only enacted bill so far this year is SB 1386. This is, however, a potentially important piece of legislation that establishes an air emissions banking program. A Joint Resolution (HJ 658) was introduced urging the U.S. Congress to close the loophole in the Clean Air Act that allows the grandfathering of coal-burning power plants, but that Resolution has not yet been acted upon in the Senate. SB 1030 was introduced in the Senate, attempting to redefine the NO<sub>x</sub> potential to emit threshold for power plants that are within a one-mile proximity of each other. That bill has not yet been passed out of Committee.

## **E. CONCLUSIONS AND OBSERVATIONS**

1. The responses of the County to last year's Air Quality recommendations warrant particular consideration given the evolving nature of the Air Quality planning dilemma faced by the County in 2001. In what apparently remains a pre-decisional context, the most important element of all may well be the dialogue itself. Therefore, we would like to introduce this year's recommendations by making some observations and clarifications in response to the actions that were recommended by the County last year.
2. We appreciate and heartily endorse the response of the County supporting the need for the integration of permanent air quality planning capability in the County. We have also listened carefully to the County response to the suggestion that a "hard look" be taken at smart growth strategies no matter what happens with respect to the establishment of air quality planning capability in the County. Similarly, we have noted County observations concerning the potentially important role of the Transportation Coordinating Council in helping to coordinate air quality management concerns with transportation planning activities. All of these responses are relevant and timely in setting the stage for a more intense focus on the reality and urgency surrounding this issue. In the final analysis it is this reality and urgency that we urge the County to address.

## **F. RECOMMENDATIONS**

1. Again this year EQAC recommends that the County take steps to integrate air quality planning needs more directly into the County planning process. As reflected in this year's Annual Report and as we pointed out last year, air quality planning constraints are increasingly becoming a function of executive and regulatory activities beyond the control of the County and even beyond the control of the MWAQC. Concerning MWAQC, while the County has become more active and well represented there the volume, complexity and significance of information is such that it simply cannot be appreciated or presented without further staffing capability. This situation was recognized in the County responses to our recommendations last year, but so far no direct action that we are aware of has been taken to address our concerns. Until additional staffing occurs, the County will continue to struggle with circumstances that are gradually slipping out of the County's control. This remains of such concern to EQAC that we are compelled to raise it again this year as a major point of emphasis.
2. Whether or not additional staffing occurs, it is critical to recognize that there are activities and options available for direct use in the County when it comes to air quality planning, provided those activities and options are discussed and presented clearly and in a timely manner. Our point last year in discussing "smart growth" strategies as an example of a pro-active option in addressing air quality management in Fairfax County was merely that --- an example. We appreciated the response of the County in pointing out that the framework for "smart growth" approaches already exists within the

Comprehensive Planning process. The issue is not however, whether the framework exists. The operative words in our recommendation were to “take a hard look”. The essential point here is that these needs cannot be met in a cursory fashion through the establishment of a framework to do the job or through a written exchange such as that represented by the presentation of ARE recommendations and consideration of responses thereto.

What we are really recommending is that in the area of air quality planning the County must develop its own capability to systematically evaluate air quality compliance needs and address them. This will require the direct integration of awareness and understanding of the consequences of continued non-attainment of federally mandated air quality standards. Only by understanding the significance of those consequences before they occur can an appropriate and timely emphasis on options and alternatives really occur. Some of these activities have been undertaken in Fairfax County, but many have not. In our opinion, what the County needs is a more robust and comprehensive discussion on several options any one or several of which might be better suited to the needs of the County than consideration of “smart growth”. The key here is to recognize that steps can be taken now and whether or not additional staffing occurs. But these steps will require a commitment of time, energy, and more than anything, an informed focus on issues and real decision-making capability. We agree with the response last year that there are several entities whose activities are relevant to our recommendations here. In concert with efforts to look at additional staffing, we recommend that the County, perhaps through the ECC or through some other existing County entity, heighten its focus on air quality planning needs, whether or not additional staffing occurs.

If ongoing dialogue on these issues would be of benefit, EQAC would be pleased to participate in such discussions. Some air quality management discussions have occurred in the context of the regular EQAC meeting schedule, but these discussions have usually been related to issues of the moment. If appropriate, EQAC would be pleased to participate in further, more focused discussions to clarify its concerns and recommendations.

## **LIST OF REFERENCES**

Air Quality Annual Report 2000, Fairfax County Health Department, Environmental Monitoring and Trends Analysis section

Air Quality Trends – Washington Metropolitan Area 1985-2000, Metropolitan Washington Council of Governments, Department of Environmental Programs, Washington, DC November, 1999

Air Quality Planning Work Program and Budget – July 1, 2000 through June 30, 2001, Metropolitan Washington Council of Governments, Department of Environmental Programs, Washington, DC February 24, 2000

Questions and Answers on Air Quality Planning and The Phase I Attainment Plan, Prepared on behalf of the Metropolitan Washington Air Quality Committee, for the DC-MD-VA Non-Attainment Area