UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

DEC 3 2003

The Honorable Mark Warner
Governor of Virginia
State Capitol, 3rd Floor
Richmond, Virginia 23219

Dear Governor Warner:

Thank you for making recommendations on 8-hour ozone air quality designations. Your letter is an important step in providing the citizens of Virginia with information on air pollution levels where they live and work. Levels of ground-level ozone, a major constituent of smog, have improved significantly since the Clean Air Act (CAA) was amended in 1990, at which time 135 areas were designated as not attaining the 1-hour ozone standard. Since that time nearly half those areas (67) have cleaned up their air to meet the 1-hour ozone standard and have been redesignated as attaining that standard. However, many areas have still not met the less stringent 1-hour ozone standard and, in 1997, the United States Environmental Protection Agency (EPA) promulgated a more stringent 8-hour ozone national ambient air quality standard. Thus, much work remains to be done. Under the CAA, EPA is required to promulgate designations for new or revised standards, such as the 8-hour ozone standard. Earlier this year, after several public interest groups filed a lawsuit claiming EPA had not met the statutory deadline for designating areas for the 8-hour ozone standard, we entered into a consent decree that requires us to promulgate designations by April 15, 2004.

We have reviewed your letter dated July 9, 2003 submitting Virginia's recommendations on air quality designations for the 8-hour ozone standard. Consistent with section 107(d)(1) of the CAA, this letter is to inform you that, based upon the information contained in your letter, and in the absence of additional substantiation for your recommendations, EPA intends to make modifications to Virginia's recommended designations and boundaries. If you would like to provide additional information about the areas in question, please provide this information by February 6, 2004, so that we can continue to work with your office as we move forward to make final designations. To advance the designation and classification process, please submit by December 30, 2003 your final 2003 monitoring data into the Air Quality System and, in addition, submit it by the above date to Judith M. Katz, Director, Air Protection Division, by official letter so that we can place it in the docket for the designations rulemaking.

The CAA defines a nonattainment area as any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant. EPA guidance indicates that Virginia should use the larger of the Consolidated Metropolitan Statistical Area, Metropolitan Statistical Area, or the 1-hour ozone nonattainment area as the presumptive boundary for 8-hour ozone nonattainment

areas. The guidance provides criteria factors that Virginia should consider in determining whether to modify the presumptive boundaries. We have reviewed your supporting information to either expand or contract the presumptive nonattainment area.

In addition to updating the other supporting data for the relevant factors (e.g., 1999 emissions inventory, 2002 census data), EPA has been tracking 2003 ozone monitoring data and their impact on areas' preliminary 2001-2003 design values. Where the updated information, including the preliminary 2001-2003 ozone monitoring data, indicate that an area's attainment status will differ from Virginia's recommendation based on earlier data, including 2000-2002 monitoring data, EPA indicates the potential modification to the designation recommendation in the enclosure. Additionally, the EPA will continue to quality-assure all the relevant data to determine if it might affect the State's recommended designations. It is important for Virginia to expedite submittal of 2003 ozone air quality data because it, along with the other data for the relevant factors, is critical to the designation and classification process.

The enclosure to this letter provides a table in which EPA identifies the Virginia counties that are being identified as nonattainment. We are also providing a written summary of our reasoning for modifying your recommendations, explaining why we believe that our modifications are consistent with the statutory definition of a nonattainment area in light of the relevant factors provided in our guidance.

We look forward to a continued dialogue with Virginia as we work to finalize the designations for the 8-hour ozone standard. As you know, the job of improving ozone air quality is a difficult one and we appreciate your continued efforts to work with us toward this goal. We will review any supporting information that Virginia wishes to submit to EPA by February 6, 2004 on these recommendations. If you have any questions, please do not hesitate to contact me or have your staff contact Judith M. Katz, Director, Air Protection Division, at 215-814-2654.

Sincerely,

Donald S. Welsh

Donald S. Welsh
Regional Administrator

Enclosures

cc (w/enclosures):

The Honorable W. Tayloe Murphy, Jr., Secretary of Natural Resoucres
Robert G. Burnley, Director, VADEQ
John M. Daniels, Jr., Director of Air Program, VADEQ
Thomas Snyder, ARMA Director, MDE
Donald Wambsgans, Program Manager, Air Quality Division (D.C.)

Enclosure 1

The following table identifies the individual areas and counties comprising those areas within Virginia that EPA intends to designate as nonattainment. Following the table is a description of areas where EPA intends to modify the Virginia recommendation and the basis for such modification. EPA intends to designate as attainment/unclassifiable all counties (or parts thereof) not identified in the table below.

Area	**Virginia Recommended Nonattainment Counties**	**EPA Recommended Nonattainment Counties**
Frederick County, VA	Frederick County City of Winchester	Frederick County City of Winchester
Norfolk, VA	James City County York County City of Chesapeake City of Hampton City of Newport News City of Norfolk City of Poquoson City of Portsmouth City of Suffolk City of Virginia Beach City of Williamsburg	James City County York County City of Chesapeake City of Hampton City of Newport News City of Norfolk City of Poquoson City of Portsmouth City of Suffolk City of Virginia Beach City of Williamsburg Gloucester County Isle of Wight County
Richmond, VA	Charles City County (partial county) Chesterfield County Hanover County Henrico County City of Colonial Heights City of Hopewell City of Richmond	Charles City County (whole county) Chesterfield County Hanover County Henrico County City of Colonial Heights City of Hopewell City of Richmond City of Petersburg Prince George County
Roanoke, VA	Botetourt County Roanoke County City of Roanoke City of Salem	Botetourt County Roanoke County City of Roanoke City of Salem
Shenandoah National Park,VA	Page County (partial) Madison County (partial)	Page County (partial) Madison County (partial)

Washington, DC-MD-VA	Alexandria City Arlington County Fairfax City Fairfax County Falls Church City Fauquier County Loudoun County Manassas City Manassas Park City Prince William County	Alexandria City Arlington County Fairfax City Fairfax County Falls Church City Fauquier County Loudoun County Manassas City Manassas Park City Prince William County
Fredericksburg, VA[1]	Caroline County Spotsylvania County Stafford County City of Fredericksburg	Caroline County Spotsylvania County Stafford County City of Fredericksburg

[1] This area will be designated as a separate nonattainment area from the Washington, D.C. nonattainment area if EPA receives a SIP revision from the Commonwealth acknowledging that the Fredericksburg area will rely on the Washington, D.C. nonattainment area design monitor for redesignation purposes and requesting the same ozone classification as the Washington, D.C. nonattainment area for air quality planning purposes. Should EPA not receive that SIP revision by the date of final designation, Stafford, Spotsylvania, and Caroline counties and the City of Fredericksburg will be included as part of the Washington, D.C. nonattainment area.

Enclosure 2

EPA Nonattainment in Virginia

Frederick County Area

Virginia recommended Frederick County and the City of Winchester to be part of the Frederick County area. EPA is not modifying the Virginia recommendation for the Frederick County area. The Frederick area has an approved Early Action Compact (EAC). As an EAC Area, Frederick County's nonattainment designation would be deferred.

Norfolk Area

Virginia recommended the following counties to be part of the Norfolk nonattainment area: Chesapeake City, Hampton City, James City County, Newport News City, Norfolk City, Poquoson City, Portsmouth City, Suffolk City, Virginia Beach City, Williamsburg City, and York County. EPA is modifying the Virginia recommendation for the Norfolk area by adding Gloucester County and Isle of Wight County. The entire Norfolk nonattainment area consists of the following counties: Chesapeake City, Hampton City, James City County, Newport News City, Norfolk City, Poquoson City, Portsmouth City, Suffolk City, Virginia Beach City, Williamsburg City, York County, Gloucester County, and Isle of Wight County. Therefore, Mathews County in the Virginia portion of the Norfolk Metropolitan Statistical Area (MSA) is being excluded from the Norfolk nonattainment area.

EPA is recommending the designation of Gloucester and Isle of Wight counties as part of the Norfolk 8-hour ozone nonattainment area. The presumptive boundary is the Norfolk MSA which includes these two counties. EPA guidance stipulates that counties are exempted from this nonattainment presumption only after consideration of additional information. Such information has been provided for only Mathews County, Virginia and Currituck County, North Carolina. Isle of Wight's and Gloucester's Nitrogen Oxide (NOx) emissions average 3,291 tons per year compared with the Mathews and Currituck average of 586 tons per year. The Isle of Wight and Gloucester population average is 33,247 people compared with that for Mathews and Currituck of 14,440 people. The Isle of Wight and Gloucester average Vehicle Miles Traveled (VMT) and VMT growth are 341 million miles and 9 million miles per year compared with 101 million miles and 2.5 million miles per year for Mathews and Currituck. The population growth rate for Isle of Wight and Gloucester is 510 people per year compared with 223 people per year for the exempted counties.

Richmond Area

Virginia recommended the following counties to be part of the Richmond nonattainment area: Charles City County (partial county), Chesterfield County, Colonial Heights City, Hanover

County, Henrico County, Hopewell City, and Richmond City. EPA is modifying the Virginia recommendation for the Richmond area by adding Petersburg City and Prince George County. In addition, although Virginia recommended only the portion of Charles City County around the violating ozone monitor as nonattainment, EPA is designating the entire county as nonattainment under the 8-hour ozone standard. Further discussion of this partial county request can be found in the next section. The entire Richmond nonattainment area consists of the following counties: Charles City County, Chesterfield County, Colonial Heights City, Hanover County, Henrico County, Hopewell City, Richmond City, Petersburg City, and Prince George County. Therefore, the counties that are part of the Richmond MSA that are not being designated nonattainment are Dinwiddie County, Goochland County, Powhatan County, and New Kent County.

EPA is recommending the designation of Prince George County and the City of Petersburg as part of the Richmond 8-hour ozone nonattainment area. The presumptive nonattainment boundary is the Richmond MSA of which contains this city and county. EPA guidance stipulates that counties are exempted from nonattainment presumption after consideration of additional information. Such information has been provided for only Dinwiddie, Goochland, and Powhatan counties in the Richmond MSA. Prince George County's and the City of Petersburg's Volatile Organic Compound (VOC) emissions average 2,443 tons per year compared with 1,438 tons per year from the 3 exempted counties. Prince George and the City of Petersburg's NOx emissions average 2,739 tons per year compared with 2,301 tons per year from the 3 exempted counties. The Prince George and Petersburg population average is 33,625 people compared with 21,983 from the exempted counties. The Prince George and Petersburg VMT and VMT growth rate is 622 million miles and 15 million miles per year compared with 377 million miles and 9 million miles year from the exempted counties.

Richmond Area – Charles City County (Partial County Request Denied)

Charles City County is being designated part of the Richmond nonattainment area. Although the Richmond 1-hour ozone nonattainment area included only the portion of Charles City County around the violating ozone monitor, EPA does not currently believe that the portion of Charles City County that was excluded from that 1-hour ozone nonattainment area is substantially different from the portion around the violating ozone monitor. Since the nonattainment boundary presumption is the Consolidated Metropolitan Statistical Area (CMSA) and Virginia did not provide data that would support rebuffing this presumption, EPA believes that it is more appropriate to include all of Charles City County in the Richmond 8-hour ozone nonattainment area.

Charles City County is part of the Richmond MSA and designating it attainment would produce a gap in the contiguous nonattainment area. Given the metropolitan nature of Charles City County, it is highly likely that this county not only exhibits poor air quality but also contributes to the ozone air quality in the Richmond area. Therefore, EPA does not believe that there is support to grant Virginia's request for the designation of only the portion of Charles City County around the violating ozone monitor.

Roanoke Area

Virginia recommended Roanoke County, Botetourt County, Roanoke City, and Salem City to be part of the Roanoke area. EPA is not modifying the Virginia recommendation for the Roanoke area. The Roanoke area has an approved Early Action Compact. As an approved EAC Area, Roanoke area's nonattainment designation would be deferred.

Shenandoah National Park Area (Partial County Request Granted)

Virginia recommended portions of Page County and Madison County to be part of the Shenandoah National Park nonattainment area. EPA is not modifying the Virginia recommendation for the Shenandoah National Park nonattainment area.

The Shenandoah National Park is a Class I Area and consists of portions of 8 counties, Albemarle, Augusta, Greene, Rockingham, Page, Warren, Rappahannock, and Madison. Two of these counties, Page and Madison, have ozone monitors. The 2003 design value at the ozone monitor in Page County is meeting the ozone standard. However, the 2003 design value at the Madison County monitor is violating the ozone standard. EPA is designating the portions of Page and Madison counties that are part of the Shenandoah National Park. Neither of these counties is part of an MSA. The designation of partial counties in the particular case is justified because the ozone violations are most likely due to transport. Both of these counties have no point source VOC and NOx emissions, very low area and mobile emissions (less 1120 tons/year), low population (less than 23,000 people), and the population growth rate is very low. Therefore, the sources in the Page and Madison counties do not contribute to the ozone violations in Madison County or nearby areas, justifying the partial county designation.

Virginia portion of the Washington-Baltimore, DC-MD-VA-WV CMSA

The counties and areas in the Washington-Baltimore, DC-MD-VA-WV CMSA are the following: Anne Arundel County, Baltimore City, Baltimore County, Carroll County, Harford County, and Howard County Maryland are part of the Baltimore area; Queen Anne's County, Maryland is part of the Kent and Queen Anne's area; Calvert County, Charles County, Frederick County, Montgomery County, and Prince Georges County, Maryland, Arlington County, Alexandria City, Fairfax County, Fairfax City, Falls Church City, Fauquier County, Loudoun County, Manassas City, Manassas Park City, and Prince Williams County, Virginia and the District of Columbia are part of the Washington D.C. Area; Stafford County, Spotsylvania County, and Fredericksburg City, Virginia are part of the Fredericksburg area; Washington County, Maryland is part of the Hagerstown area; Berkeley County and Jefferson County, West Virginia are part of the Berkeley and Jefferson "Panhandle" Area; and Clarke County, Culpeper County, King George County, and Warren County, Virginia that are the remainder of the Washington-Baltimore CMSA.

The states recommended, and we have agreed to divide the CMSA into 6 separate nonattainment areas. Due to the broad expanse of the area, the different causes of pollution in different parts of the CMSA and the difficulties in planning that would occur if such a large

number of separate government entities were required to plan as one large nonattainment area, we believe it is appropriate to create 6 separate nonattainment areas so long as each area agrees to the same classification as all other areas. Requiring the same classification for each of the 6 areas will ensure that the needed emission reductions occur to address pollution levels in the Washington-Baltimore CMSA. The Fredericksburg and Kent and Queen Anne's areas have additional requirements which tie their future redesignation to that of the Washington, D.C. and Baltimore areas. However, since each area has a different make-up of emissions sources, separate designations will allow the areas to choose which sources it makes the most sense to control. In addition, the creation of 6 separate nonattainment areas will avoid the unwieldy air quality planning that would occur if such a large number of different governmental entities were required to act as one nonattainment area.

Virginia portion of the Washington, D.C. Nonattainment Area

Virginia recommended the following counties to be part of the Washington, D.C. nonattainment area: Arlington County, Alexandria City, Fairfax County, Fairfax City, Falls Church City, Fauquier County, Loudoun County, Manassas City, Manassas Park City, and Prince Williams County. EPA is not modifying the Virginia recommendation for the Washington, D.C. nonattainment area. The entire Washington, D.C. nonattainment area consists of the District of Columbia and counties in Maryland and Virginia. The Maryland portion of the Washington, D.C. nonattainment area consists of Calvert County, Charles County, Frederick County, Montgomery County, and Prince George's County.

Virginia's analysis for the 8-hour ozone nonattainment area boundaries in the Washington, D.C. area determined that the existing ozone nonattainment area boundary for the 1-hour standard, with the exclusion of Stafford County and the inclusion of Fauquier County, should be used as the boundary for the 8-hour Washington nonattainment area. This conclusion is based on EPA's evaluation of the following statistics provided by Virginia:

- covers 427 tons per day of the total combined VOC and NOx emissions in the area, which is 89% of the total combined emissions in the Virginia portion of the CMSA.

- covers a population of 1.9 million which is 93% of the total population of the Virginia portion of the CMSA,

- covers 314, 000 people which is 93% of the total anticipated population growth in the Virginia portion of the CMSA over the next ten years,

- covers 50, 348,000 daily vehicle miles of travel which is 95% of the total daily vehicle miles traveled in the Virginia portion of the CMSA,

- covers all but four of the existing major stationary emission sources of ozone precursor pollutants in the area,

- already contains established transportation conformity and air quality planning organizations, and;

- includes the location of all eleven of the violating monitors.

The Virginia counties of Clarke, Warren, King George, and Culpeper that are part of the Baltimore-Washington CMSA are not being included as part of the 8-hour ozone nonattainment area. None of these counties contains an ozone monitor. These counties are characteristically different from the core Washington metropolitan area. For example, these four counties contain either little or no VOC and NOx emissions, emission densities are less than 0.05%, and these counties have very low populations. Furthermore, Warren and Clarke counties are separated from the rest of the Washington metropolitan area by the easternmost portion of the Appalachian Mountains.

Fredericksburg Area

Virginia recommended the following counties to be part of the Fredericksburg nonattainment area: Stafford County, Caroline County, Spotsylvania County, and the City of Fredericksburg. EPA is modifying the Virginia recommendation for the Fredericksburg nonattainment area. EPA's analysis supports Virginia's conclusions that the Fredericksburg area should be designated as a separate ozone nonattainment from the Washington-Baltimore CMSA. This area will be designated as a separate nonattainment area from the Washington, D.C. nonattainment area if EPA receives a SIP revision from the Commonwealth acknowledging that the Fredericksburg area will rely on the Washington, D.C. nonattainment area design monitor for redesignation purposes and requesting the same ozone classification as the Washington, D.C. nonattainment area for air quality planning purposes. Should EPA not receive that SIP revision by the date of final designation, Stafford, Spotsylvania, and Caroline counties and the City of Fredericksburg will be included as part of the Washington, D.C. nonattainment area.

The Fredericksburg 8-hour ozone nonattainment area consists of Stafford County, Caroline County, Spotsylvania County, and the City of Fredericksburg. Stafford County is part of the Ozone Transport Region (OTR) therefore it is subject to New Source Review, Vehicle Emissions Inspection Program, VOC and NOx Reasonable Available Control Technology (RACT), and many other control programs. Caroline County is not part of the Washington-Baltimore CMSA and is currently monitoring attainment for the 8 hour ozone standard.

EPA evaluated the relevant criteria with respect to the Fredericksburg area and finds that this area is characteristically different from the core Washington, D.C. metropolitan area. For example, the VOC and NOx emissions densities for the Fredericksburg counties are less than 4 tons per year-km^2, compared to the Washington area densities that are greater than 17 tons per year-km^2. Similarly, the population density and growth are low compared with the core Washington area. The Figures 1 through 4 at the end of this enclosure with regard to population density, VMT growth, percentage of utility NOx emissions and percentage of commuters into the Washington, D.C. area also support the separation of Fredericksburg from the core Washington,

D.C. area. In the Figures, the Panhandle refers to the Berkeley-Jefferson, West Virginia counties and Hagerstown refers to Washington County, Maryland.

Figure 1: Population Comparison between Washington, D.C. and adjacent areas

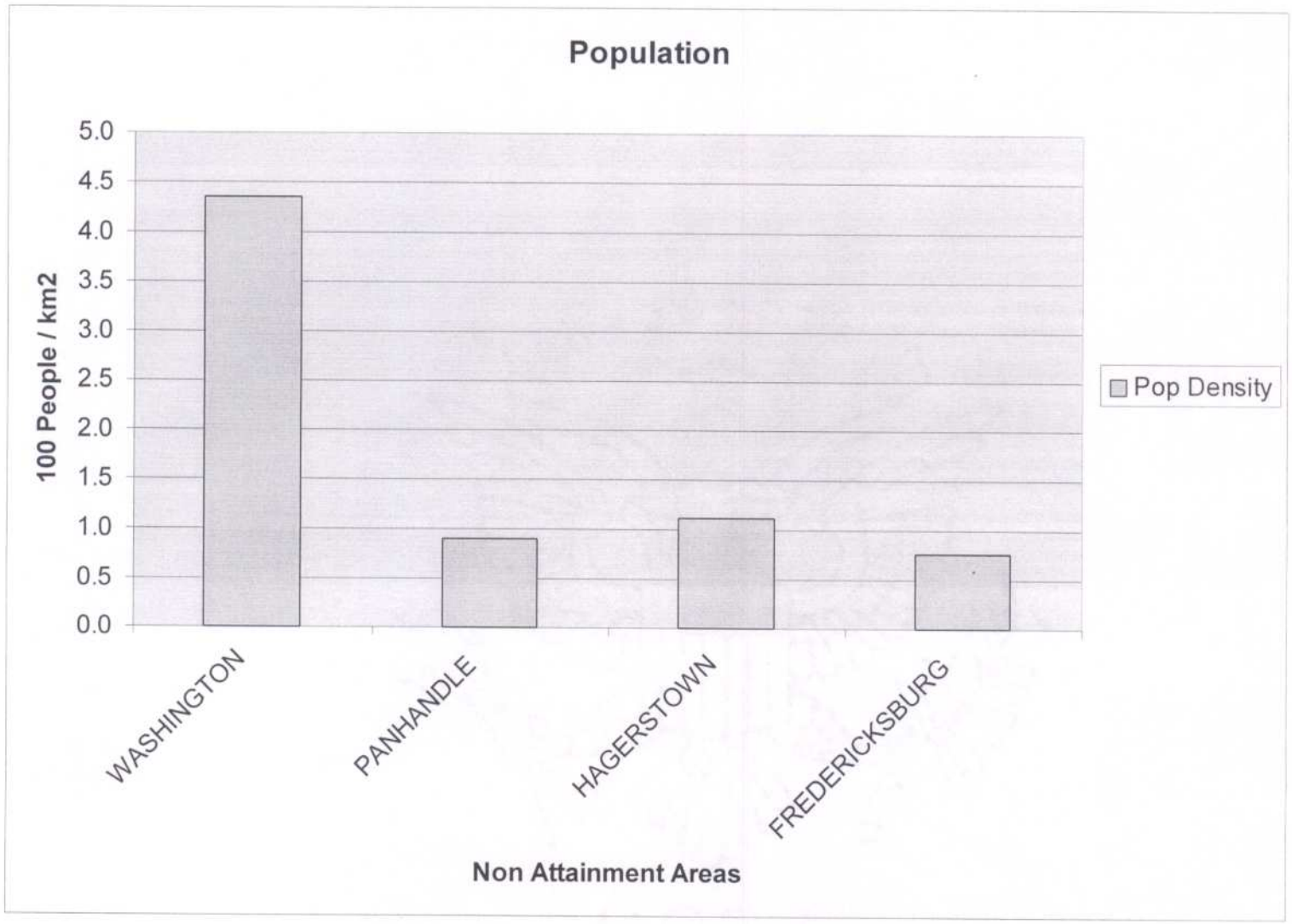

Figure 2: VMT Growth Comparison between the Washington, D.C. area and adjacent areas

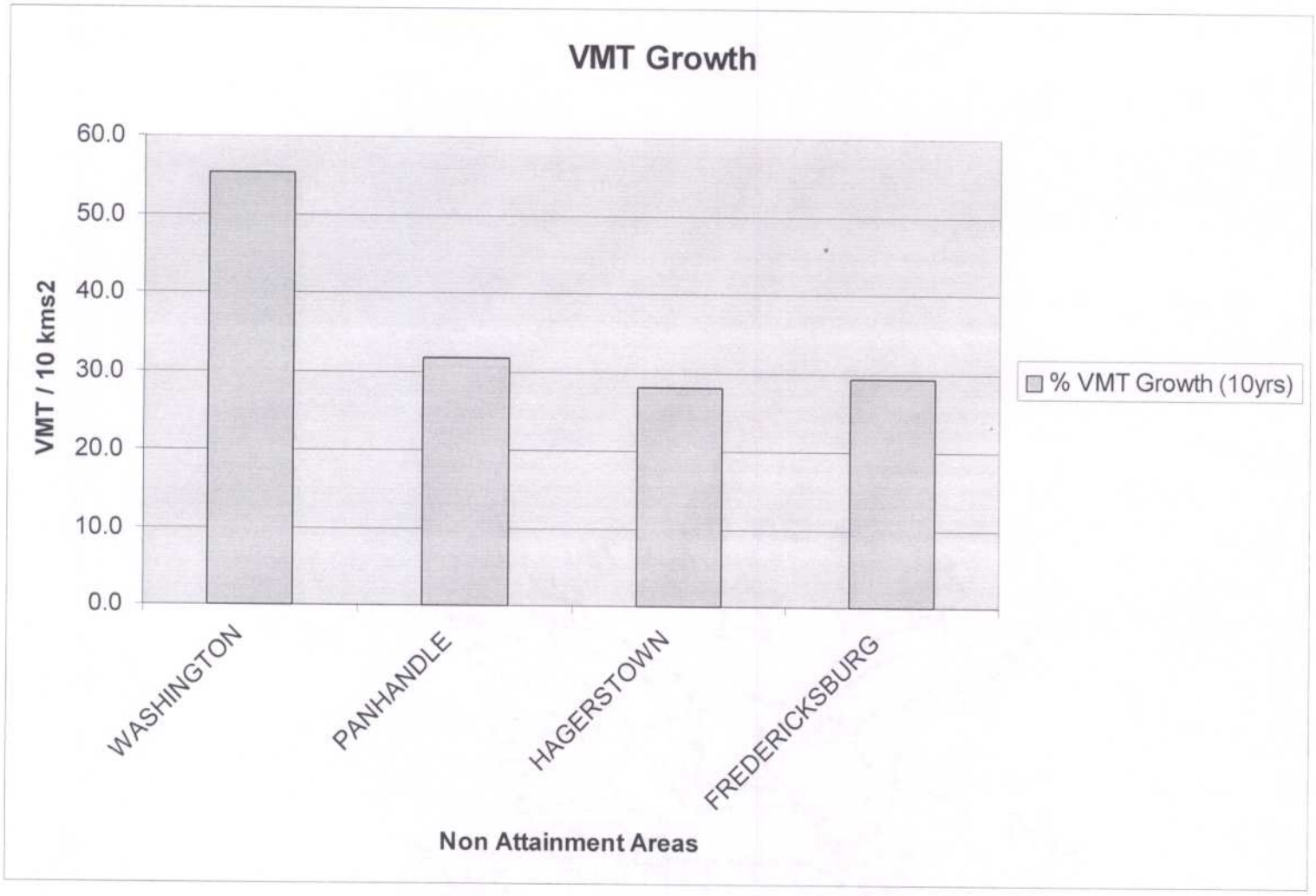

Figure 3: Comparison of % Utility NOx Emissions between Washington area and adjacent areas

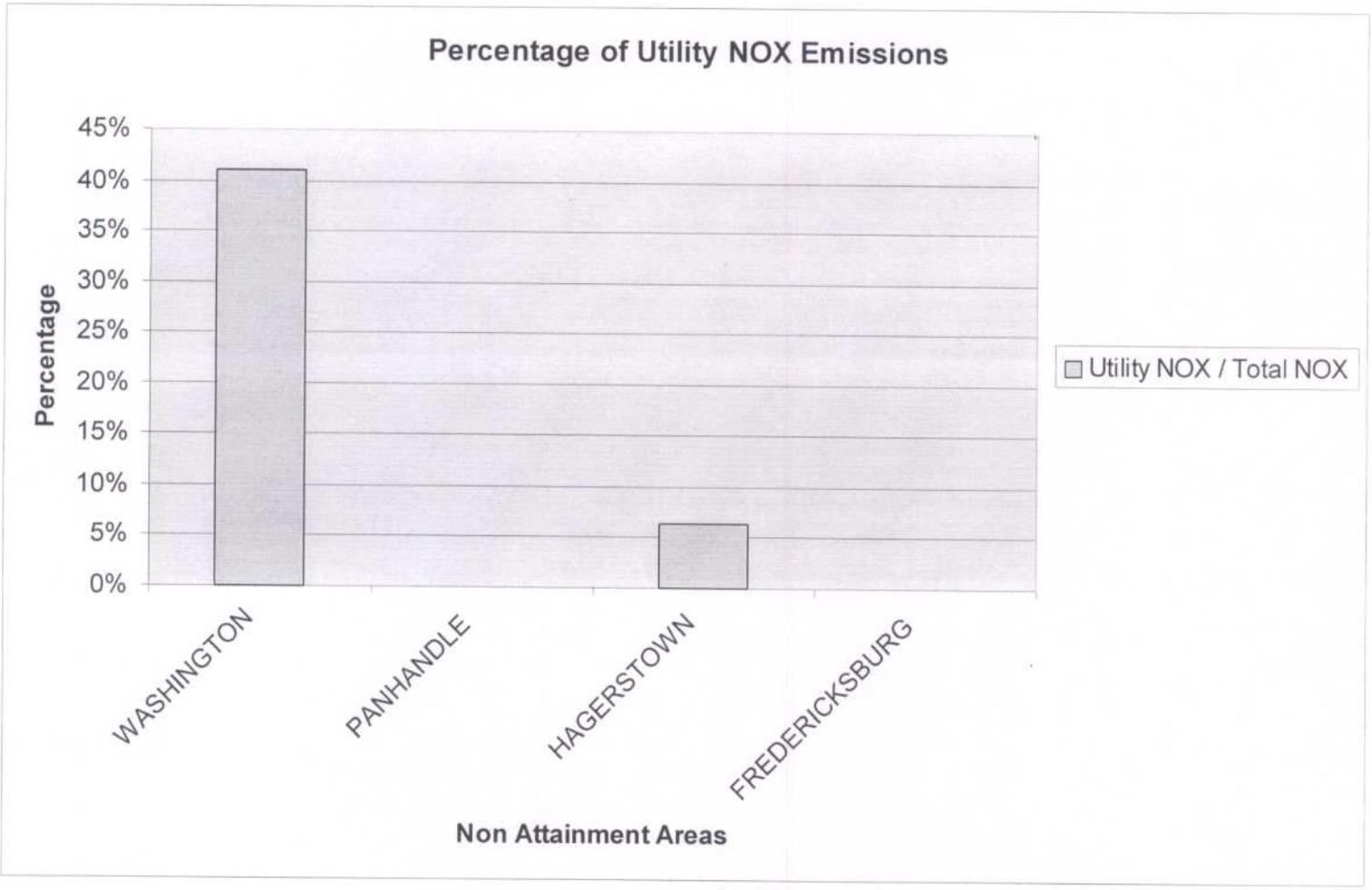
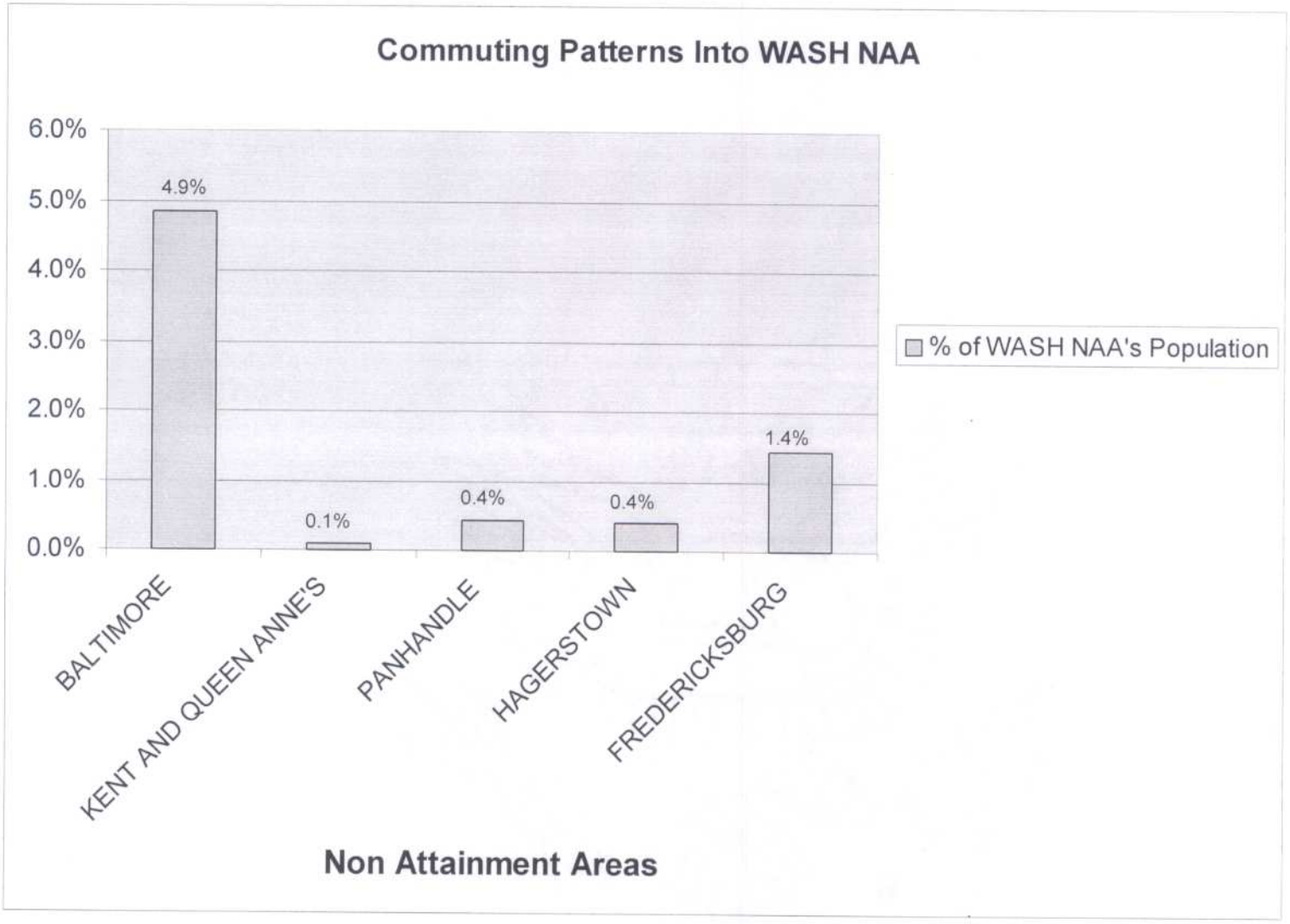
Figure 4: Comparison of Commuting Patterns of each adjacent area into the Washington, D.C. area