



Ozone Early Action Plan

Northern Shenandoah Valley

June 30, 2005

Mr. John M. Daniel, Director
Air Division
Virginia Department of Environmental Quality
629 East Main Street, 8th Floor
Richmond, VA 23219

**RE: Ozone Early Action Plan for Northern Shenandoah Valley
June 30, 2005, Progress Report Submittal to U.S. EPA**

Dear Mr. Daniel:

This submittal includes the 4th semi-annual Early Action Compact status report for the Northern Shenandoah Valley Region in the Commonwealth of Virginia. Per the June 7, 2005, communication received from Ellen Wentworth of U.S. EPA Region 9, the following elements are included:

Documentation of any progress from the period January 2005-June 2005, including:

- Major events and meetings that have taken place;
- Control measures that have already been implemented;
- Implementation schedules for control measures that will be implemented by end of year 2005; and
- Impediments to implementation.

What follows in this report is a brief introductory memo followed by actions taken to fulfill early action compact milestones in the period from January 2005 to June 2005.

The Winchester-Frederick County Economic Development Commission has, and continues, to administer the overall Ozone Early Action Plan (EAP) for the Northern Shenandoah Valley. Several of the control measures within our EAP center on public awareness activities and communication. As such, a request for a proposal for professional marketing/public relations services in support of the EAP was issued in early 2005.

The SHENAIR Institute at James Madison University competed and was awarded the work for Ozone Action Coordination in support of the EAP. This contract calls for taking the lead in implementing the ozone action days/public awareness Phase I strategies and ensuring all other Phase I strategies are implemented by the end of 2005, as the milestones set forth in the EAP specify. The program conceived to perform the outreach and administration/coordination is titled Valley AIRNow Air Quality Outreach Program.

If you have any questions regarding our submittal, please contact me at (540) 665-0973.

Sincerely,

Patrick Barker, AICP
Program Administrator



Ozone Early Action Plan

Northern Shenandoah Valley

4th Semi-Annual Status Report

for

**The Northern Shenandoah
Valley Ozone Early Action Compact Area**

June 30, 2005

PROJECT ORGANIZATION AND SUMMARY TO DATE

This report represents the 4th semi-annual status report for the Northern Shenandoah Valley (NVS) Early Action Compact (EAC) Area in Virginia, which consists of the City of Winchester and Frederick County. As such, this report documents the status and progress made towards the development and implementation of an EAP to address ground level ozone air pollution in the area. Specifically, this report covers the period from January 1, 2005, to June 30, 2005.

The EAC process in the NSV area began in the fall of 2002 with the establishment of the NVS Air Quality Improvement Task Force (Task Force) and the formal development and signing of the Early Action Compact in December 2002. Moving forward, a series of required documents have been produced, culminating in the submission of the official EAP in March 2004. Provided below is a listing and timeline of the products and documents submitted to the United States Environmental Protection Agency (EPA) and the Virginia Department of Environmental Quality (DEQ) in support of the EAP:

- **December 31, 2002** – EAC for the NVS
- **June 16, 2003** – Potential local emission reduction strategies
- **June 30, 2003** – 1st annual status report for January to June 2003.
- **December 31, 2003** – 2nd annual status report for July to December 2003.
- **March 31, 2004** – EAP
- **December 31, 2005** – State Implementation Plan

All these documents, along with other information concerning the EAC program and other EAC areas, can be viewed and retrieved at the following EPA web site: <http://www.epa.gov/ttn/naaqs/ozone/eac/index.htm>.

Efforts on the state and local levels have now moved towards the implementation of the emissions control measures and other actions committed to in the EAP.

The remainder of this status report documents the major actions, milestones, and events that have occurred since the submission of the State Implementation Plan on December 31, 2004.

EVENTS SUMMARY (JANUARY TO JUNE 2005)

Provided below is a listing of major events held and actions taken during the period covered by this status report toward the development and implementation of the local ozone air quality improvement plan and associated nonattainment implications:

Late February 2005 – Winchester City Council and Frederick County Board of Supervisors award work for Ozone Action Coordination for EAP to the SHENAIR Institute at James Madison University.

March 7, 2005 – James Madison University awards funds to Dr. Christie J. Brodrick for Ozone Outreach in Winchester and Frederick County.

March 18, 2005 – First staff meeting. Program name of Valley AIRNow Air Quality Outreach established.

April 6, 2005 – First Task Force meeting administered by Valley AIRNow.

Outreach meeting with DC, Maryland, and Eastern Panhandle ozone outreach coordinators, and the Virginia Department of Environmental Quality to determine daily ozone forecasting logistics, streamline a communication network among the aforementioned regions on Air Quality Action Days (AQAD) due to overlapping media markets, and to share outreach efforts and ideas.

April 16, 2005 – Valley AIRNow attends Earth Day event.

April 20, 2005 – First Task Force Steering Committee meeting administered by Valley AIRNow.

May 3, 2005 – Meeting with Lord Fairfax Community College to determine logistics of survey that will measure pre-intervention knowledge of general public in order to establish a baseline of public awareness of air quality issues in the area, ozone in particular.

May 6, 2005 – The American Lung Association's Clean Commute Day event takes place. Valley AIRNow organized Winchester and Frederick County's local events.

May 18, 2005 – Task Force meeting administered by Valley AIRNow.

May 23, 2005 – Phone survey provided to Lord Fairfax Community College.

June 8, 2005 – Valley AIRNow participates in Business Showcase 2005.

June 15, 2005 – Task Force Steering Committee meeting administered by Valley AIRNow. Pre-intervention phone survey completion deadline.

IMPLEMENTATION STATUS OF EARLY ACTION CONTROL MEASURES

This section describes the status of each emission control measure included in the early action plan and current plan and schedule for measure implementation.

Local Phase I Controls

The Phase I strategies are to be implemented before the end of 2005. These measures have the greatest public acceptance and will provide important foundation for any future efforts.

1. Ozone Action Days/Public Awareness

Control Strategies:

General Public Awareness Program/Education and Promotion Campaign

Air Quality Action Day Program: Begun May 2005

The Air Quality Action Day Program (AQAD) is a 4-pronged Program created by Valley AIRNow. The four separate groups that are alerted of an AQAD are media, educators, business (AIRCops) and government. The Valley AIRNow team alerts the Network by sending an email or fax press release the day before ozone levels are predicted to reach Code Orange or higher levels. The community is alerted mainly through the media and business Networks. Local area newspapers run stories and local radio stations runs PSAs. Businesses share the alert with all employees and, if applicable, customers by offering incentives for participation in emissions reduction activities, displaying the AQAD Alert on their message boards, etc.

Earth Day: April 16, 2005

Valley AIRNow manned booth and provided information about ozone and health.

Valley AIRNow Website deployment: Launched 2004, updated June 2005

The Valley AIRNow website can be accessed at: www.valleyairnow.com.

Valley AIRNow email system deployment: Launched May 2005

The community can contact Valley AIRNow via email at: info@valleyairnow.com.

Air Quality Hotline: Launched May 2005

The air quality hotline provides daily air quality forecasts, information about how to contact Valley AIRNow (email, website), and a messaging service. The hotline number is (540) 450-2207.

Media Kits: Sent May 2005

Media kits containing information about Valley AIRNow, Air Quality Action Days, what an AQAD press release will look like, and general information about the AQI and ozone and your health were sent out in May of 2005 to print, radio, and TV media contacts.



American Lung Association's Clean Commute Day 2005: May 6, 2005

Winchester and Frederick County participation included coordination with Virginia's American Lung Association and posting local area information on their website, working with a local newspaper reporter who published an article about the event on May 5, 2005, coordinating with the Valley Commuter Assistance Program to provide the public with ridesharing, park and ride, and guaranteed ride home program information, and coordinating with the NetTech Center of Winchester to provide the public with a free telework day on May 6, 2005.

Materials development: Begun May 2005



For businesses:

Valley AIRNow developed "how-to's" for each AQAD Network. These documents explain how the Network works, how to join, and instructs appointment of a Clean Air Coordinator. Registration forms have been developed for AIRCorps members.

Valley AIRNow has developed 2 posters that AIRCorps members will post at their locations. The first poster lists tips to reduce emissions. The second poster is a personalized AQAD poster. Valley AIRNow works with each business that signs up for the AIRCorps to personalize posters with what the particular business is doing to help preserve the air on AQAD. These will be displayed only on AQAD.

For Schools:

Valley AIRNow is developing curriculum that matches the Virginia Standards of Learning (SOLs) for use in Winchester and Frederick County public schools.

Private schools do not have to follow the Virginia SOLs, allowing Valley AIRNow to present directly to students on air quality. A presentation is currently under development.

For Government:

"How-to's" of the AQAD Network were circulated to the City Manager and the County Administrator.

For Media:

Media Kits containing: cover letter, Valley AIRNow kick-off letter, AQAD press release, an air quality forecasting press release, information brochures and novelty items about ozone and your health and the AQI. A "how-to" of the AQAD Network was developed for media as well.

For The General Public:

An AQAD brochure sponsored by Valley AIRNow is currently under development. Printing and distribution will begin in June 2005.

Win-Fred, the Smog Dog, was purchased by Valley AIRNow. This big, yellow dog will attend all functions aimed at students or children, as well as presentations given by the Valley AIRNow team and any other function where mascot attendance is appropriate.

Coordination with various organizations to make air quality information available to public: May 2005

Winchester and Frederick County air quality forecasts are now available through the DEQ daily air quality forecast notification system and the American Lung Association's Smog Alert notification system. Real-time data is now available on the DEQ website at: <http://www.deq.virginia.gov/airquality/510690010.html>, on the Valley AIRNow website at: www.valleyairnow.com, on the Air Quality Hotline at: (540) 450-2207, on the EPA AIRNow site at: <http://cfpub.epa.gov/airnow/index.cfm?action=airnow.showlocal&cityid=376>, and on Weather Underground at: <http://www.wunderground.com/cgi-bin/findweather/getForecast?query=winchester%2C+va>. The Weather Channel will display "Valley AIRNow Air Quality Outreach Program" on the "Local on the 8's" air quality forecast segment whenever there is an action day forecasted. The local Winchester newspaper, *The Winchester Star*, publishes air quality forecasts and information in their daily newspaper.

Working with broadcast meteorologists to get air quality forecasts and animated ozone maps up on local news/weather channels: Implemented by end of 2005. WAZT is using air quality information in their 5:30 pm newscast.

Pre- and post- educational intervention surveys: Pre- completed June 15, 2005. Post- to be implemented October 2005.

Lord Fairfax Community College was subcontracted by Valley AIRNow to complete and compile data from 450 phone surveys to Winchester and Frederick County residents in order to measure the success of Valley AIRNow's ozone education and outreach program.

Radio Interviews

WINC-FM interviewed Mike Kiss of the Virginia DEQ and aired a story about the moderate air quality that we were experiencing on Monday, June 6, 2005.

Newspaper articles

The Winchester Star has published 3 articles related to Valley AIRNow and air quality issues in the area.

April 7, 2005: "Task Force's Focus Is Clearing the Air"

May 5, 2005: "Clean Commute Day Encourages Workers to Park Their Cars."

May 31, 2005: "Ozone Forecasters Keep an Eye on the Air."

Business Showcase 2005: June 8, 2005

Valley AIRNow manned a booth at Winchester's annual Business Showcase. Air quality and public health information was available to other businesses and the public. The main purpose of Valley AIRNow attendance was networking. Valley AIRNow considers this event the "kick-off" of the AIRCorps program. Staff visited every booth and explained the EAC, the current air quality concerns of the area, why business involvement is a necessity, and how they can join the program.



Presentations to targeted groups on the local air quality initiative: First appointment is August 4, 2005

Valley AIRNow is scheduled to present to Winchester's Rotary Club in August.

School-based Public Awareness Program

Educators AQAD Program: Launched May 2005

Media releases were developed and sent to Winchester Public Schools and Frederick County Public Schools the day before ozone levels are predicted to be Code Orange or higher, advising the education community to share the alert and enact their individualized AQAD protocols.

Curriculum development: Implemented by September 2005

Valley AIRNow is developing air quality curriculum for K-12 that matches up to the Virginia Standards of Learning. After development, the Superintendents have agreed to post the material on the Blackboard site for easy teacher access.

Air quality presentations: Implemented by end of 2005

Valley AIRNow has communicated with private schools and academies regarding presentations on the local air quality initiative. A standard presentation is currently being developed and Valley AIRNow will make appointments with local private schools for the fall of 2005. It is undetermined if public schools will allow Valley AIRNow to present during an assembly.

Employer-based Ozone Action Days/Ozone Action Days for Area Sources

Valley AIRCorps: Launched June 2005

Valley AIRCorps is the Business Outreach and Promotions Program of the NSV EAP. Valley AIRCorps is a no-cost program that seeks to create, nurture and promote clean air partnerships with businesses in the NSV. The program spreads the word about our air quality challenges, and provides valuable public health networking.



Valley AIRCorps
The Business Outreach and Promotions Program of
Valley AIRNow Air Quality Outreach, Winchester-Frederick County
— (shouldn't) you be a member of the Corps?

Business Statement: Why Air Quality IS YOUR BUSINESS!
Clean air and low ozone are a safety trademark. But our way of life is threatened by pollution. On 46 occasions since 1992, Winchester-Frederick County has exceeded safe concentrations of ground level ozone. That kind of pollution affects human air health. To our disappointment, but the good news is there are things we can do about it—and your business is in perfect position to provide recognized leadership.

Valley AIRCorps: Businesses help the Community and get recognized in the Process!
Valley AIRCorps creates and nurtures clean air partnerships with Winchester-Frederick County businesses. Shows the world about air quality challenges, and provides valuable public health networking. The center of the program is membership in the Air Quality Action Day Network (AQADN)—a network of fellow the public health and AQAD Ozone Action Days, and to take simple steps to reduce smog-inducing emissions.

Three Step Program


1. Join our network
2. Appoint a Clean Air Coordinator and create your own Air Quality Action Day program for your business, and
3. Help us promote your positive steps. It costs nothing to join, takes little time to manage, and helps demonstrate that your business cares about the community and the environment.

**Air slogan: Do Your Share to Preserve Our Air!
Please, do your part!**

Interested? Let's talk!
We want to sign up your business today at the Valley AIRCorps.

Please Contact:
Valley AIRNow, Air Quality Outreach Coordinator, Valley AIRNow Air Quality Outreach Program at 544-442-4739 or via email at: prince@va.gov.

For more information about Valley AIRNow, visit our website at www.valleyairnow.com



The center of the AIRCorps program is membership in the AQAD—a network to inform the community of health risks on Code Orange Action Days or higher ozone levels, and to take simple steps to reduce smog-inducing emissions. Businesses appoint a Clean Air Coordinator (CAC) who subscribes to the AQAD email or fax notification system. Valley AIRNow sends out a media release to each CAC the day before ozone levels are predicted to be Code Orange or higher.

The CAC will disseminate the information to all employees. The CAC tailors their business' membership in the AQAD Network as suits their business. For example, HN Funkhouser is a member of Valley AIRCorps and has committed 16 gas stations and Handy Marts to providing incentives for those who carpool or refuel after dusk on AQAD.

Valley AIRNow highlights an AIRCorps "Member of the Month" who is doing their share to preserve the air.

Automated Fuels Management Plan (AFMP): Fully implemented by Virginia DOT

VDOT automated all 3 facilities located in the EAP. VDOT has also implemented a scheduled maintenance program to minimize air emissions from vehicles that refuel at VDOT facilities located in the NSV.

Dynamic Message Signs

Episodic Ozone Program in the NSV EAC area: fully implemented by VDOT

VDOT will display ozone alerts on all variable message signs throughout the Winchester region to alert the region of potential 8-hour ozone standard exceedances on Air Quality Action Days (AQAD).

Local bank branch display of ozone alerts on AQAD: Valley AIRNow is currently examining feasibility through the Valley AIRCorps program.

Video Monitor System Deployment

Working with Dean Gustafson of the Staunton Smart Traffic Center to make haze and congestion cams available on the Valley AIRNow website: implemented by end of 2005 through the Valley AIRCorps program.

Lawn & Garden Equipment Usage Restrictions

City and County departments' restrictions on AQAD: Implemented June 2005

Issuance of Memorandum (June 2005) specifying City and County departments to restrict publicly-owned lawn and garden gasoline powered equipment.

VDOT implementation of an Episodic Ozone Program in the NSV EAC area: fully implemented by VDOT

VDOT restricts mowing in the EAC Area and fueling at VDOT gasoline facilities for non-emergency vehicles, encourages refueling prior to predicted ozone exceedance days, and postpones use of oil based paints and solvents on AQAD.

2. VMT Reduction Programs

This strategy combines a number of individual programs/activities designed to reduce vehicle miles of travel (VMT).

Control Strategies:

Enhance/Expand existing Northern Shenandoah Valley Regional Commission (NSVRC) Ridesharing Program: Ongoing

Earlier this year, a commuter bus service between Winchester, Front Royal, and Washington, D.C. was added to the NSVRC Ridesharing Program, or the Commuter Assistance Program.

The Valley Commuter Assistance Program is currently working with a consultant, Rappahannock-Rapidan Planning District, and the Virginia Department of Rail & Public Transportation to learn more information from commuters traveling from Western Virginia to Washington. This survey will provide us with the routes that they are taking and why, length of trip in time and miles, why they are choosing the mode that they are using, etc. The results will help plan additional improvements.

The Valley Commuter Assistance Program has plans for additional commuter service and is seeking funding to make it happen. A proposal to VDOT that additional signage be installed on I-66 and I-81 at exits that have park-and-ride

lots to give them more visibility is being drafted. In addition, they are also considering to propose that the rideshare program name, Valley Commuter Assistance Program, be added to all of the blue and white highway information signs so people will know who they are calling if they call the telephone number currently placed on signs (For Rideshare Information).

The City began a transit expansion demonstration project at the beginning of the year by expanding and operating 2 City routes into the County. If the County feels the presence of public transit has value, the City will continue to expand the project.

Bicycle and Pedestrian Accommodation

Metropolitan Planning Organization (MPO) bikeway plan: Approved May 2005

A study assessing where bike and pedestrian facilities can be tied together between Winchester and Frederick County will begin this coming fiscal year beginning July 1st.

Regional Network Plan: Walking and Wheeling: adopted January 05

A VDOT rural transportation grant was awarded to the NSVRC and the Shenandoah Valley Battlefields Foundation. The grant endeavored to inventory existing bike routes and trails. Recommendations were also made as how to create a bike and pedestrian plan for a community. Such a template allows communities to use the plan, tailor for their purposes, and work to establish a bike and pedestrian plan. Recently, Virginia now orders any new roads to take into account and integrate approved bicycle and pedestrian plans before construction.

Promote Green Space Preservation

Conservation Easement Program: Pending Board of Supervisors (BOS) approval in July/August

The program is pending and has not yet been adopted, but received a positive response when it was introduced. The County of Frederick anticipates it will go before the BOS for consideration in July or August 2005. If implemented, the County would set aside tracks of land to prevent their development. The County could potentially, if the BOS chooses to fund the program, purchase easements or accept donated easements (i.e. family farm owners that wish to restrict future development).

Winchester Green Circle

Two greenway initiatives are currently underway. The Winchester Green Circle project is working to create safe walking and biking routes that will encircle the City. Acres of Winchester's green and pleasant land will be preserved and maintained within the confines of the Green Circle by 2010. The circle is meant to run in tandem with biking and walking trails to link City points of interest. The circle will connect areas of historic, recreational, educational, and natural interest. The first mile of trail has been created, along with the 25-acre Abrams Creek Wetlands Preserve. The first mile has also been designated as a permanent natural area. The Green Circle strives to bring safe bicycle and pedestrian facilities to the area, preserve streamside lands, and conserve natural resources.



The other greenway project currently underway in Frederick County is called the Red Bud Run Greenway. This project, similar to the Winchester Green Circle project, is a multi-purpose project that will set aside 5-miles of greenway space along Red Bud Run. The Red Bud Run Greenway project is not as far along as the Winchester Green Circle project, but if everything comes together as planned, the end result will be a large plot of preserved land that benefits the environment, area fishermen, and students at local high schools and Universities.

Promote Mixed Use Development

Both comprehensive plans for the City of Winchester and Frederick County include provisions for promoting mixed use development. In light of recent approved development proposals, the BOS and Winchester Common Council continue to show testimonials to promoting this activity.

An example in the City of Winchester is "the Smith Estate" proposal. This proposal, approved by Winchester City Council in late May 2005, calls about 34 acres, will feature commercial development alongside a mix of medium-density residential and retail development. In Frederick County, the "Crosspointe" proposal was recently approved. This proposal includes approximately 1,500 homes and 960,000 square feet of commercial space for both office buildings and retailers.

Promote Telecommuting

Episodic Ozone Programs

Each AQAD Network (Business, Government, Educators, Media, Community) promotes telecommuting, especially on AQAD.

NetTech Center of Winchester

The Center was a sponsor of Clean Commute Day 2005 and provided a free telework day on May 6, 2005. The Center is currently providing a free 30-day trial to all government employees.

3. Open Burning Restrictions

Establishing open burning restrictions for land clearing activities has the potential to reduce combustion sources in the emissions inventories. While this type of rule is sometimes difficult to enforce, the reduction of related fire hazards, along with the reduction of visible smoke and resulting air quality benefits, were deemed important by the Task Force. This measure will be implemented by local ordinances.

Control Strategies:

City and County departments restrictions on AQAD: Implemented June 2005

Issuance of Memorandum (June 2005) specifying City and County departments to restrict burning associated with any City and County land clearing and construction projects, and fueling of gasoline powered publicly-owned vehicles on AQAD.

4. Engine Idling Restrictions

Restrictions for engine idling was another strategy included, due in part to the heavily traveled I-81 corridor in NSV which has a high percentage of heavy truck travel. A large amount of idling emissions are generated from heavy-duty diesel vehicles that are parked at truck stops, rest areas and, to a lesser extent, distribution centers. While Virginia already has an anti-idling regulation, it is anticipated that the EAC area will consider a more stringent version. The estimated emissions reduction for this measure has not yet been determined and this measure has not been included in the technical analysis of this plan.

Control Strategies:

City and County departments' restrictions on AQAD: Implemented June 2005

The City and the County have taken the lead by issuing a memorandum (June 2005) specifying City and County departments to restrict idling of gasoline powered publicly-owned vehicles on AQAD.

5. School Bus/Heavy Duty Fleet Retrofits

Retrofitting heavy duty diesel engines with emissions control technologies, such as EGR systems, or after treatment devices, is an emissions control measure that shows promise for the NSV. In fact, the availability of funding to support the retrofit of school buses will give implementation of this measure a positive boost. DEQ has allocated up to \$475,000 in funding assistance to assist in implementation of this strategy.

Control Strategies:

City of Winchester Public Schools voluntary diesel retrofit program: completed May 2005

Winchester Public Schools partnered with the DEQ, EPA, and the Winchester-Frederick County Economic Development Commission in a voluntary program to reduce emissions from diesel powered school buses. Winchester Public Schools completed the retrofit on 18 out of the 31 city school buses with diesel oxidation catalysts. The project also reprogrammed the ECM on all (6 identified) eligible late model school buses to reduce NOx emissions by 25%. Emission benefit estimates: appx. 20% reduction in PM emissions, appx. 50% reduction in hydrocarbon emissions, appx. 40% reduction in CO emissions.

Frederick County Public Schools voluntary diesel retrofit program: 112 of 124 completed as of May 24, 2005. Remainder will be installed by end of 2005.

Frederick County Public Schools partnered with the Winchester/Frederick County Economic Development Commission, DEQ and EPA in a voluntary program to reduce emissions from diesel powered school buses. Emission benefits same as Winchester Public Schools.

6. Voluntary Industrial Reductions

The emissions reduction benefits are sometimes difficult to quantify for this strategy, however, an initial voluntary approach seeking industrial reductions is a reasonable and practical way for an EAC area to begin. In addition, this strategy would help increase awareness of the pollution problem and establish a relationship between local government and area industry. The estimated emissions reduction potential for these types of strategies for the area will be determined as agreements are reached with local industries.

Control Strategies:

Valley AIRCorps: Launched June 2005

Valley AIRNow is soliciting, based on positive conversations, Northern Shenandoah Manufacturers Association members for AIRCorps membership. A cover letter and registration form was developed and sent to all Northern Shenandoah Manufacturing Association companies on June 15, 2005. Companies designate a Clean Air Coordinator, who will receive email or fax notification of an AQAD. The company can choose to formulate their Air Quality Action Day program by encouraging alternate commute options, regularly participating in Valley AIRNow's reduced idling program, regularly providing sponsorship for community incentives, regularly providing AQAD outreach assistance, lending use of dynamic message signs, and instituting policies governing mowing, painting, refueling, and other emissions activities on AQAD. Companies have the flexibility to implement any creative policy that reduces emissions during ozone season.