

IMPROVING AIR QUALITY IN VIRGINIA

The Department of Environmental Quality monitors air quality across Virginia. The Commonwealth has made significant progress improving air quality in the past several years, but Virginia must continue working to meet the challenges ahead.

DEQ, other government agencies, and many Virginia businesses and organizations have taken important steps that will improve air quality. These steps include:

- With DEQ's support, the Roanoke and Winchester areas have voluntarily adopted early action plans (such as developing new bus routes and Air Quality Action Days) to improve air quality. This will prevent them from becoming designated by the federal government as nonattainment areas, or areas that do not meet air quality standards.
- Air quality has improved in Fredericksburg and Shenandoah National Park to the point that they now meet the federal ozone air quality standard. However, the areas must work to ensure that good air quality continues. Fredericksburg area localities, in conjunction with DEQ and the Virginia Department of Transportation, have developed a plan to maintain air quality. DEQ also worked with the National Park Service to create a plan to protect air quality within Shenandoah National Park.
- The Commonwealth is implementing a remote sensing program as part of the Northern Virginia automobile emissions inspection and maintenance program. As part of the metropolitan Washington, D.C., area, parts of Northern Virginia must reduce ozone and particle pollution. Since automobile emissions can contribute to ozone and particle pollution, reducing pollution emissions from automobiles will result in better air quality. Remote sensing provides tailpipe exhaust readings while a vehicle is being driven. DEQ will use this data to identify polluting vehicles and require owners to repair their vehicles. Information from this program also may be used to reward drivers of exceptionally clean automobiles by allowing up to one additional year of registration without an emissions inspection.
- DEQ is providing technical assistance to the Shenandoah Valley Air Quality Initiative or SHENAIR. Citizens, elected officials, educators and regulators participate in the initiative to provide information for air quality planning purposes. SHENAIR hopes to accomplish this goal through air quality observations and forecasts, including the establishment of air quality and meteorological monitoring stations throughout the Shenandoah Valley.
- Virginia natural gas transmission facilities are expected to reduce smog-forming nitrogen oxide emissions by 3,000 tons by the summer of 2007, improving air quality in Virginia, as well as Maryland and Washington, D.C.
- Power plants have installed air pollution control technologies that reduced nitrogen oxides emissions between 2003 and 2004 by more than 7,000 tons during the summer months. This significant reduction was achieved even though electricity production remained steady.



A DEQ staff member changes a filter on an air monitor near Richmond, Virginia.

In addition, Virginia is working with the public to improve awareness about air quality. DEQ and the American Lung Association of Virginia, with the assistance of other Virginia businesses and associations, have launched the Clean Air Champions campaign. Since May 2005 about 1,500 people have taken the program's pledge to properly maintain their vehicles to reduce air pollution emissions.

Another DEQ program provides air quality forecasts for the metropolitan areas of Richmond, Roanoke, Hampton Roads and Northern Virginia. These forecasts include information on expected levels of ozone and particle pollution. The agency also issues ozone forecasts for the Winchester area. The forecasts alert citizens when high pollution levels may occur. On those days, citizens, businesses and industry are encouraged to take effective steps that will help keep the air clean, including:

- Avoiding unnecessary car trips.
- Sharing a ride or using public transportation.
- Postponing refueling vehicles and equipment until after dusk.
- Limiting or halting the use of gasoline-powered lawn equipment.
- Avoiding excessive engine idling.

To learn more about Virginia's air quality and regional air quality improvement programs, visit DEQ's website at www.deq.virginia.gov/airquality.

OZONE AND PARTICLE POLLUTION

Ground-level ozone is the main ingredient in smog. It is a colorless gas formed by the reaction of sunlight with vehicle emissions, gasoline fumes, solvent vapors, and power plant and industrial emissions. Ozone formation is most likely in hot, dry weather when the air is fairly still.

Particle pollution is made up of particles found in soot, dust, smoke and fumes. The burning of coal, oil, diesel and other fuels produces these particles. The particles are small enough to enter deep into the lungs and cause health problems.

Ozone and particle pollution have been linked to short-term health concerns, particularly among children, asthmatics, people with heart or lung disease and older adults. The effects of these pollutants can be minimized by avoiding strenuous activity or exercise when levels are high. Air quality forecasts issued by DEQ for the following day are available to plan activities during the summer months.

More information is available at www.airnow.gov.