Since 1993



Virginia Department of Environmental Quality

Message from the Director

One of the Commonwealth's top priorities is to conserve and protect our natural resources so they may be enjoyed for generations to come. As we strive to reach this goal, Virginians should be proud of the accomplishments we have made in protecting our environment.

The Virginia Department of Environmental Quality celebrates its 20th anniversary this year. In the two decades since the formation of DEQ, we have seen significant progress in safeguarding and conserving our natural resources. Our work to ensure cleaner air, land and water has yielded impressive results.

When we take common-sense steps toward conservation and environmental protection, it is good for our environment, our quality of life and our economy. To cite just one example, Virginia's long-standing commitment to restore the health and vitality of the Chesapeake Bay means not only a better Bay, it also encourages economic growth. This is equally true of other measures we take.

This report, produced to commemorate DEQ's anniversary, highlights some of the efforts that help make Virginia such a wonderful place in which to live. Whether it is promoting pollution prevention, achieving environmental compliance, or addressing pollution concerns of the past and present, DEQ remains committed to taking meaningful actions that benefit our environment.

Virginia still faces ongoing environmental challenges, and I am confident we will be able to meet them. The work we have done in the last 20 years and more has set us in the right direction. Thank you for joining me as we continue to follow this course for the well-being of all Virginians.

David K. Paylor



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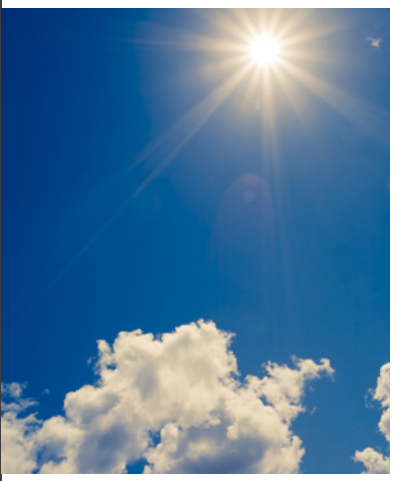
INTRODUCTION



When the Virginia Department of Environmental Quality opened its doors in April 1993, the Commonwealth entered a new era in its efforts to protect the environment. DEQ was formed through the consolidation of four agencies that had responsibilities for a wide range of programs to protect Virginia's natural resources. Since that time, Virginians have seen significant progress in the quality of our air, land and water resources.

The ongoing focus of today's DEQ is to find solutions to environmental challenges – and to show measurable results. Whether through permits, monitoring, inspections or a variety of other activities, DEQ remains dedicated to protecting the environment for the health and well-being of all Virginians.

PROGRAMS

DEQ is not only committed to enhancing Virginia's environment, but protecting the health of Virginia's citizens as well. By spearheading programs and initiatives to respond to current environmental issues, DEQ has maintained a role as a leader among the **stewards** of Virginia.

Air Quality

If the old image of a smog-filled skyline has taught us anything, it is that we must keep our air clean and breathable. DEQ works with businesses, state agencies, park services, schools and local governments all over Virginia to meet air quality standards, typically using permits to specify pollution control and monitoring technologies that will best maintain air quality.

About one-third of Virginia's air pollution is caused by vehicular emissions. In the northern part of the state, 1.7 million vehicles cause emissions on a daily basis that must be closely monitored to restrict the amount of contaminants that are released into the atmosphere. Air Check Virginia, DEQ's vehicle emissions inspections program, has helped maintain air quality in northern Virginia by ensuring that each vehicle meets emission standards every two years.

As a result of efforts across the state, Virginia's air quality has noticeably improved. Since 2003, Virginia citizens' average exposure to harmful particles has gone down each year, and the number of days that Virginia has exceeded the ozone standard has declined by nearly 13 percent. Over the last 20 years, air pollution on the whole has gone down 40 percent.



TIMELINE OF KEY EVENTS

1993

The Virginia Department of Environmental Quality is formed with the consolidation of the Commonwealth's four main environmental agencies.

1994

DEQ's first regional boundaries are established, replacing almost 20 regional boundary configurations from the pre-DEQ air, waste and water agencies.

1995

Virginia's Voluntary Remediation Program is authorized to encourage voluntary cleanups of potentially contaminated sites for later reuse.

Water Quality and Supply

To ensure safe recreation and a diversity of aquatic life, DEQ sets water quality standards and monitors the types and amounts of pollutants that may be discharged into Virginia's waters. As of 2012, 51 waterways, 264 miles of rivers and streams, 2,710 acres of lakes and reservoirs, and 4 square miles of estuary have been classified as "fully restored." In addition, 29 streams around the state are now classified as "exceptional waters." Because these waters are protected against new and increased pollution discharges, they are able to sustain flourishing aquatic habitats, and also serve as ideal recreational areas.



To ensure wise use of our finite water supply, DEQ works in partnership with affected stakeholders to identify sources of surface and ground water, monitor availability, document current levels of water use, and plan for meeting future expectations for these water sources. Such responsibilities have become increasingly necessary as all Virginia localities now utilize water supply plans. To balance these sometimes competing, ever increasing uses of the state's water supplies, DEQ relies on active, ongoing scientific research, effective stakeholder engagement and collaborative modeling.

Waste Management

DEQ works to uphold the regulations that govern solid waste management, including: reuse, recycling, storage, treatment and disposal. For example, since the founding of the agency in 1993, the number of tire piles has gone down considerably thanks to an aggressive cleanup effort. Abandoned tire sites, which once numbered more than 1,300 statewide, have declined to less than 130, all of which are relatively small piles.

The quality and operation of landfills has been a cause for concern over the last 20 years. Older landfills do not meet modern design standards, while many leaked contaminants into the land and ground water. Landfill production standards have since been heightened and designs have been improved, making waste management facilities safer and more protective. In addition, since 1999, the number of annual waste site cleanups has steadily increased from less than 20 to more than 100.





1996

DEQ launches its site on the World Wide Web, focusing on providing environmental information requested by the public.

1997

Virginia creates the Water Quality Improvement Fund, authorizing grants for nutrient removal at publicly owned treatment plants in the Chesapeake Bay watershed.

1998

DEQ begins "Air Check Virginia," an enhanced vehicle emissions inspection program for Northern Virginia.

Coastal Zone Management

Over the last 20 years, the Coastal Zone Management Program (CZM) has demonstrated how partnerships can overcome great challenges and result in significant successes that benefit Virginia's coastal resources and economy.

Alongside other natural resource agencies and local governments, DEQ takes a leading role in a valuable partnership that finds innovative and resourceful ways to preserve the Commonwealth's abundant yet fragile coastal resources. The contributions of the CZM program are helping revitalize the unique characteristics and ecological health of Virginia's coast. Over its 25-year history, the program has fostered a dramatic 5,000-acre increase in eelgrass habitat and hundreds of acres of oyster reef habitat on Virginia's Eastern Shore. The CZM program is also responsible for creating dozens of new and enhanced public sites, and the acquisition of over 3,500 acres of coastal land for habitat protection.





The Chesapeake Bay

As one of the most challenged waters in Virginia, the Chesapeake Bay is the focus of a multi-agency cleanup effort.

Virginia's Chesapeake Bay water quality standards drive DEQ in its restoration efforts to reduce nitrogen and phosphorus. Lower levels of these pollutants ultimately mean higher oxygen levels, increased populations of bay grasses and balanced levels of algae in tidal waters. Decreased levels of pollution are making the Bay and its tributaries hospitable to a variety of living resources. Rebuilding natural habitats is equally important and has helped restore the populations of a number of species including: blue crab, striped bass, shad and oyster.

Due to disease, overharvesting and habitat loss, the native oyster faces a long comeback. The oyster population in the Chesapeake Bay is less than 1 percent of what it once was. Over the last 20 years, the rebuilding of oyster reefs in the Bay has been a slow but encouraging step toward ecosystem restoration.

1999

The Virginia Coastal Zone Management Program brings together government and private-sector partners to focus on Chesapeake Bay oyster restoration.

2000

The General Assembly authorizes DEQ to regulate activities in nontidal wetlands, helping ensure no net loss of wetlands and minimizing impacts on Virginia wetlands.

2001

DEQ develops a schedule for closing unlined landfills by 2020. These closures ensure that active landfills protect human health and the environment.

Watershed Cleanup Plans

To help restore waterways impaired by pollution, DEQ creates watershed cleanup plans (known as Total Maximum Daily Loads or TMDLs). These help ensure that pollution is reduced to levels that meet Virginia's water quality standards.

Development, runoff and wastewater all contribute to the increased levels of bacteria, nitrogen, phosphorus, sediment, and other contaminants in Virginia's impaired waterways, which were first classified as impaired in 1992. Since then, DEQ has developed 272 cleanup reports covering 825 watersheds.

Recycling and Litter Prevention

DEQ supports recycling and litter prevention programs in the public and private sectors, urging recycling program managers, solid waste planning units, local governments and citizens to contribute to a better way of managing wastes. The agency also provides annual grants to localities that support their litter prevention and recycling program activities.

Regulations adopted in 1990 required localities to implement programs that annually meet or exceed the recycling rate of municipal waste mandated by the Code of Virginia, and to report their data to DEQ. The annual reporting has shown that recycling programs have matured and continue to grow. Since 2005, Virginia's recycling rate has grown from 32.2 percent to 43.5 percent.

Voluntary Remediation Program

In some areas of Virginia, leftover pollutants on abandoned or unused properties can contaminate the land. The Virginia Voluntary Remediation Program (VRP) encourages revitalization of contaminated land throughout the state. These "brownfields" often have polluted soil and ground water. Many sites are converted from abandoned scrap yards and rail yards into office complexes, medical facilities and other development projects that enhance communities around the state. Since VRP was established in 1995, the program has developed more than 275 brownfield sites and revitalized over 3,400 acres of contaminated land.



2002

Federal "brownfields" legislation implements financing for reuse of contaminated industrial sites, enhancing Virginia's brownfields redevelopment program.

2003

Legislation takes effect enabling local and regional water supply planning. DEQ later adopts regulations requiring the development of water supply plans for each locality.

2004

DEQ implements a community involvement policy that promotes close work with the public and ensuring broad participation in environmental decision making.



Pollution Response

Responding to pollution-related emergencies is a responsibility that DEQ shoulders across the entire state. The Pollution Response Program (PREP) is in place to assist emergency officials and provide timely response to air, water and waste pollution incidents. DEQ works with local emergency responders, the Virginia Department of Emergency Management and other entities to resolve these situations in a timely and coordinated manner.

Pollution Prevention

Pollution prevention has been a key component of DEQ's mission from its early days. The Virginia Environmental Excellence Program (VEEP) challenges Virginia businesses and government agencies to look for sustainable and innovative ways to lighten their environmental footprint. Facilities as wide-ranging as manufacturers, military bases, state agencies and universities have answered that challenge, with over 400 organizations currently taking part in VEEP.

In concert with the Virginia Tourism Corporation and the Virginia Hospitality and Tourism Association, DEQ works to reduce the impact of the tourism industry through Virginia Green, a voluntary, statewide program dedicated to stewardship and environmentally conscious travel. More than 1,300 hotels, restaurants, attractions and other tourism businesses are now part of the Virginia Green initiative.

Citizen Participation

The support and contributions of concerned citizens are integral to achieving Virginia's water quality goals. DEQ's water quality monitoring program allows members of the community to take part in the huge task of assessing the quality of Virginia's rivers, lakes and streams. Citizens may participate by researching, contributing data, assisting in the cleanup effort and furthering water quality education.





2005

State regulations take effect limiting the amount of nitrogen and phosphorus that large wastewater treatment plants may discharge to the Chesapeake Bay and its tributaries.

2006

Virginia revises its recycling mandate to provide for a two-tiered goal. This provides relief for lightly populated localities unable to reach the 25 percent recycling level.

2007

DEQ implements its nutrient trading program, allowing for the transfer of "credits" among existing wastewater treatment facilities in the Chesapeake Bay watershed.

A DAY IN THE LIFE OF DEQ

DEQ's regional offices are the primary point of contact for many of those who do business with the agency. Contact any of the six regional offices for more information on day-to-day operations.

RESPONDING TO CITIZEN CONCERNS ABOUT POLLUTION



Citizens often have questions and concerns about pollution-related incidents. DEQ's Pollution Response Program ensures that pollution complaints are investigated and provides knowledgeable responses to citizen reports on air, water and waste pollution incidents, often using public concerns as a way to measure which areas require pollution response. DEQ counts on citizen help to locate, identify and stop pollution. Even if an incident is not an emergency, it is helpful for DEQ to receive reports on known or suspected pollution problems.

MONITORING AIR, LAND AND WATER



Monitoring is an essential part of protecting the environment. DEQ scientists measure chemical and biological parameters in air, water and soil samples that help the agency decide how to address specific situations. This information enables DEQ to set priorities and deal with environmental concerns in a timely manner. DEQ maintains a statewide monitoring network that provides real-time air quality information for several key pollutants. In addition, DEQ tests Virginia's rivers, lakes and tidal waters for pollutants. More than 130 pollutants are monitored annually to determine whether the waters can be used for swimming, fishing and drinking. DEQ also conducts soil and sediment sampling to identify cleanup needs at solid and hazardous waste sites.

ISSUING PERMITS



Issuing environmental permits is a way for DEQ to ensure that businesses, industries, local governments and others comply with state and federal regulations. Permits serve as blueprints describing the restrictions placed on permit holders, and the steps they are required to take to minimize pollution. Permits may be written for specific facilities, or concerning specific pollutants or processes. They cover a broad range of environmental activities, including pollution discharges to state waters, wetlands protection, surface and ground water withdrawals, emission of pollutants to the air, and solid waste disposal. Energy generation is a new permitting area for DEQ, with permits by rule having been developed for wind and solar projects.

INSPECTING FACILITIES



To help ensure that regulated facilities are complying with their permits, DEQ conducts announced and unannounced inspections. Permit holders must provide regular status reports to DEQ with information on types and amounts of pollution that is released from facilities. Inspections cover areas such as air emissions, discharges to water, disposal of solid waste and storage of hazardous waste.

In addition to inspections, DEQ uses a variety of tools to ensure compliance with environmental permits and regulations. If DEQ identifies a potential violation, the agency's first goal is to bring a regulated facility into compliance and meet environmental requirements. There are formal and informal ways to accomplish this, and DEQ begins with the least adversarial method appropriate. Initial steps include offering technical assistance or seeking corrective action. If appropriate, DEQ also may issue enforcement orders or seek further legal action.

2008

DEQ assumes oversight of land application of biosolids in Virginia, ensuring a comprehensive inspection and enforcement program statewide.

2009

A DEQ study of airborne toxic chemicals in Hopewell, a first for the area, provides details on 67 chemicals and metals, and calls for additional analysis of two chemicals.

2010

Virginia completes its Watershed Implementation Plan for Chesapeake Bay water quality improvement, affecting most nutrient sources subject to discharge permits.



COLLABORATING WITH STAKEHOLDERS

DEQ communicates and collaborates regularly with individuals and organizations interested in environmental policy and procedures. DEQ's community involvement policy recognizes that stakeholders are valuable partners and tries to engage people early and often in environmental decision-making. DEQ provides opportunities for meaningful community involvement in all agency programs, looks for new ways to enhance public input, and develops education materials and training opportunities for the public. Often, this involves holding public meetings and other information sessions that help the public understand complex environmental issues and provide input on actions that DEQ takes to protect the environment.

These days it's easier than ever to contact DEQ and get the answers you need. Visit the agency website to "Connect with DEQ." Web visitors also can sign up for news feeds, and receive public meeting notices through the Virginia Town Hall.



EXECUTIVE SPOTLIGHT

DIRECTOR DAVID K. PAYLOR

David K. Paylor was reappointed director of the Department of Environmental Quality by Governor Bob McDonnell in January 2010. He originally was appointed director by Governor Timothy Kaine in 2006.

Paylor's career began in 1973 with the State Water Control Board and continued with DEQ. He began as a field biologist and held a variety of positions after that as an aquatic ecologist, water resources manager, director of petroleum programs, and director of operations.



2011

In the first year under the watershed general permit for Chesapeake Bay nutrient discharges, facilities within all of the bay's river basins achieve their nutrient limits.

2012

DEQ begins a community air study at fumigation sites in Suffolk, involving a stakeholder group to keep people informed about the monitoring project.

2013

In a move to consolidate water management efforts in Virginia, DEQ assumes responsibility for storm water and other nonpoint source pollution programs.

LOOKING AHEAD

Planning for the future is a challenge that affects this generation as well as the next. Since its inception, DEQ has worked to ensure a healthier future by conserving Virginia's natural resources, promoting sustainable practices and supporting the use of renewable energy.



In 2009, the General Assembly enacted the "Small Renewable Energy Projects" statute that directed DEQ to develop permits to regulate impacts of these projects on natural resources. As of 2012, permits for the construction and operation of small renewable energy projects are now in place. Model ordinances for wind and solar have also been developed.

Information technology has revolutionized the way DEQ manages and uses the huge body of environmental information that scientists continue to provide. Virginia Environmental Geographic Information Systems (VEGIS) is an online web-based mapping tool that allows a user to easily find environmental information that applies to a specific location. DEQ scientists contribute data layers to the program in an ongoing effort to offer a "one-stop shop" to anyone looking for information.

Coastal GEMS, the Coastal Zone Geospatial and Educational Mapping Systems, is another online resource that pulls together data from local, state, and federal agencies, non-profit organizations and academic institutions and fuses them all into one easy-to-use data portal. Being able to view and interact with all of this data in one place allows users to see the big picture and helps to reveal vital connections between Virginia's water and land infrastructure.

Coastal GEMS is just the starting point. The goal is to eventually offer comprehensive information from all natural resource agencies for planners in coastal communities.

DEQ's Business Technology Group continues to evaluate its data applications and information technology processes to develop recommendations for improvements.



Since 1993 DEQ has taken the reins as Virginia's leading environmental agency, developing new and improved approaches to environmental protection with internal and external communication as our hallmark. DEQ works with many stakeholders to protect and enhance Virginia's natural world. And you can help the cause in your own community. We don't live on the environment. We don't live near the environment. We live with the environment. This is our world. Let's make a difference… together.

Contact the DEQ Central Office, or any of our regional offices with environmental questions and concerns. Or visit **www.deq.virginia.gov** for more information.

"This is our world. Let's make a difference…together."

David K. Paylor

DEQ BY THE NUMBERS



4 DEQ was formed in 1993 when **4** state agencies merged.

7 Over the last **20** years, DEQ has had **seven** directors.

8 Virginia's population has increased from under 5 million to **8 million**, which means more people who are affected by environmental policy and action.

15 The number of days that Virginia has exceeded the ozone standard has gone down by **15%**.

20 The amount of waste diverted from landfills has gone up more than **20%** over the last two decades.

29 Over the last 8 years, **29** streams have been designated as "exceptional waters."

30 The number of public boat landings, piers and pathways in the Chesapeake Bay area has increased by **30%** thanks to programs like Virginia Coastal Zone Management Program.

40 Harmful emissions that are released into the atmosphere have gone down by **40%**.

100 There have been more than **100** waste site cleanups since 1999.

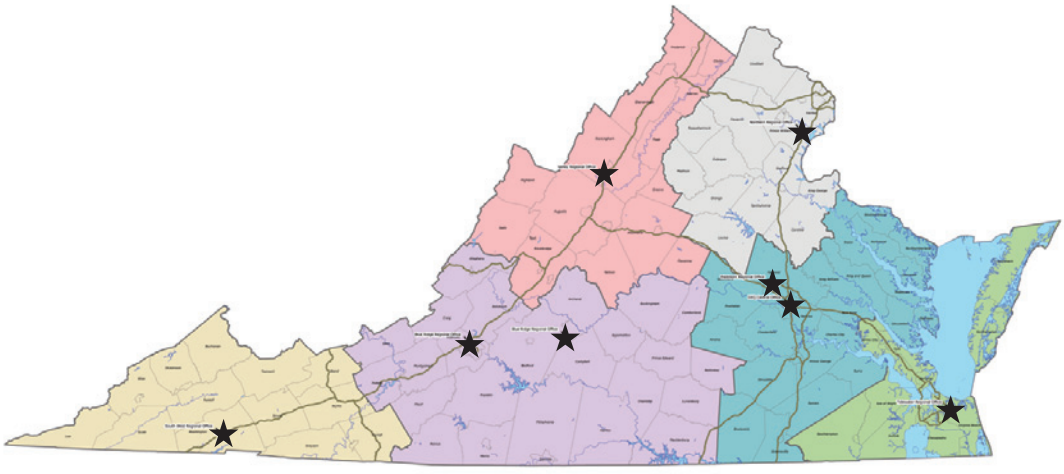
275 More than 3,400 acres and **275** sites have been revitalized through DEQ's Voluntary Remediation Program.

315 There are now **315** fully restored waterways in Virginia. There are also 1,518 partially restored waterways throughout the state.

700 … people are employed full-time in six regional offices and in one central office.

1184 Since the founding of DEQ in 1993, more than **1,184** tire piles have been removed across Virginia.

1350 DEQ's Virginia Green initiative has gained a following of **1,350** businesses since the program's inception in 2001.



DEQ Regions and Office Locations www.deq.virginia.gov/Locations.aspx

Since 1993

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