



## AIR QUALITY

Few things are as important as the air we breathe. Poor air quality increases human illness and mortality. It also reduces water quality, contributes to climate change, and damages living resources including wildlife, forests, and agriculture.

DEQ works to improve air quality in Virginia by upholding regulations such as the Clean Air Act, which sets national standards for six common air pollutants: particle pollution, ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides and lead. These pollutants continue to decrease.

As a result of emission reductions associated with a variety of pollution control programs, reduced emissions transported into Virginia from nearby states, and changes in human behavior such as carpooling, air pollution in Virginia has decreased by more than 50%. Levels of monitored fine particulates have decreased by more than 40%. Levels of nitrogen dioxide and sulfur dioxide have dropped significantly, and the average number of high-ozone days statewide has dropped by 96 percent—from a high of 108 days in 1998 to a low of 4 days in 2017.



## WATER

Everyone uses water, every day. To meet society's needs, businesses, industries and households often discharge pollutants into waterways. These practices are closely monitored by DEQ to make sure that levels of pollutants entering Virginia's waterways are kept to minimal levels. The agency upholds water quality standards to ensure safe recreation and support for a diversity of aquatic life. Virginia's goal of no-net loss of wetlands continues to be met and helps support Virginia's high quality water resources.

Discharge permits are effective tools that the agency uses to regulate facilities. These permits determine the types and amounts of pollutants that can be safely discharged. High levels of nutrient pollution (nitrogen and phosphorus) pose a challenge to Virginia's waters. This common form of pollution may result in algal growth that can reduce oxygen and even create "dead zones," or areas that are unable to sustain life. Since 1995, levels of phosphorus and nitrogen have seen significant decreases.

DEQ employs several programs to ensure wise use of our finite water supply. The agency issues permits for the use of surface water and groundwater to ensure that in-stream and off-stream uses can continue to be met over the long term. This is achieved by balancing human water needs with sufficient in-stream flow for fish and wildlife habitat, dilution of pollution, recreation, and navigation. In partnership with stakeholders, DEQ identifies sources of water, monitors availability, documents current levels of water use, and plans for meeting future expectations.



## LAND

DEQ ensures compliance with waste management regulations and the key practices of pollution prevention, such as reuse and recycling. This also includes proper storage, treatment, and disposal of solid waste and hazardous waste.

Older landfills and former industrial sites in some cases have contributed to contamination of land and water. In the past 20 years, landfill standards have been strengthened and designs have been improved, making waste management facilities safer for people and the environment. Also, the number of acres voluntarily cleaned up and brought back into productive use has dramatically increased since 1996. Leaking petroleum tanks are the focus of another statewide cleanup effort. DEQ's tank inspection program promotes the cleanup of leaking storage tanks, thereby revitalizing contaminated land. Since the early 1990s, more than 30,000 leaking petroleum sites have been cleaned up.

In 2016, the recycling rate was 42.6 percent – exceeding the mandated statewide recycling rate of 25 percent for most areas – as reported by local and regional authorities.



# VIRGINIA ENVIRONMENTAL DASHBOARD

Air quality in Virginia continues to improve, and major air pollutants continue to decrease.

- Number of high ozone days has decreased.
- Fine particulate matter levels have decreased.
- Carbon dioxide emitted by power plants has decreased.
- Criteria pollutants from point sources have decreased.



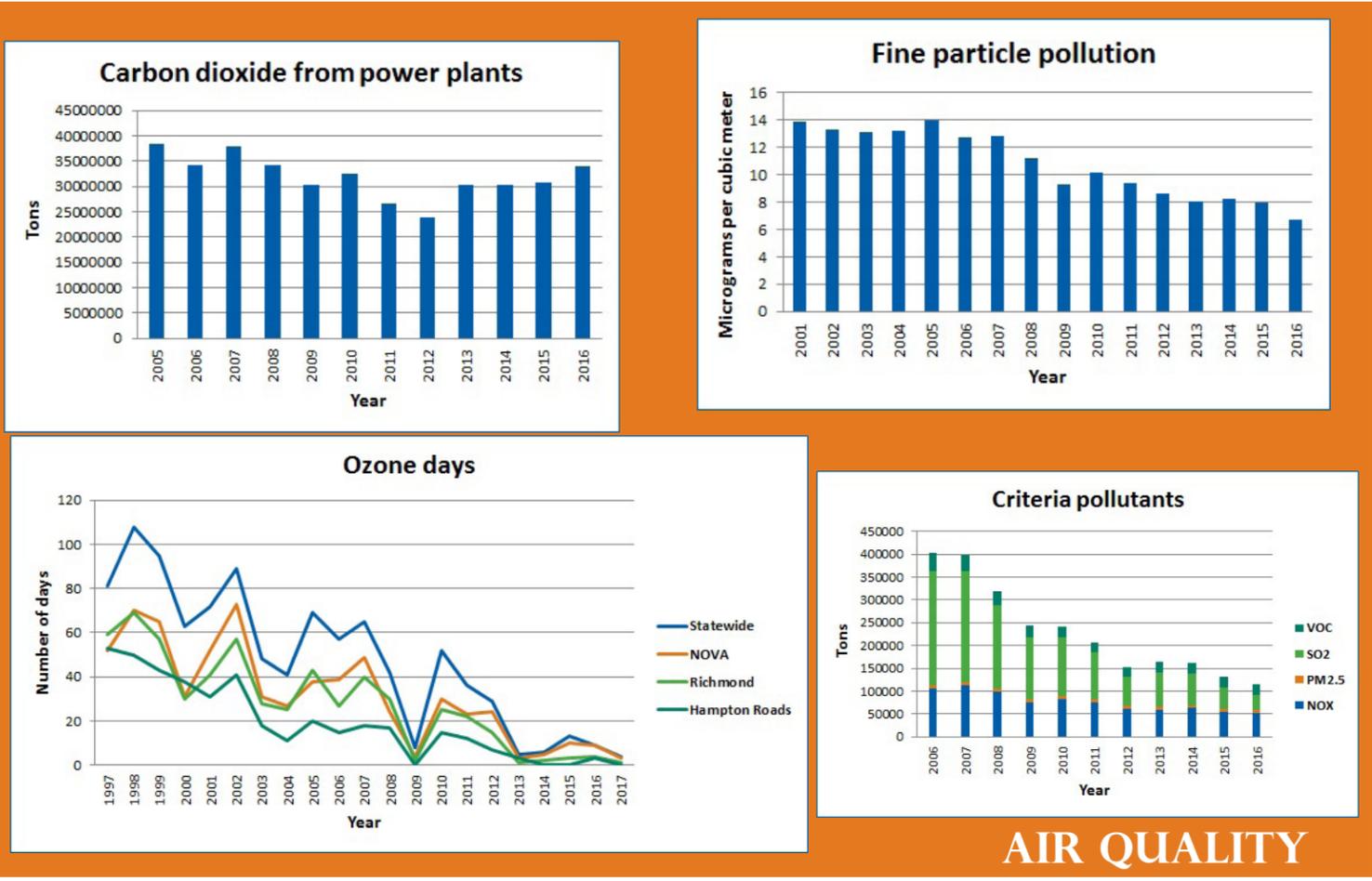
Progress is being made in some program areas, but work remains in groundwater and watershed restoration.

- Phosphorus and nitrogen nutrients discharged from point sources in the Chesapeake Bay watershed have decreased.
- Waters that meet standards and have been removed from the Impaired Waters List have increased.
- Number of groundwater monitoring wells becoming more stable has increased.
- Number of active watershed restoration projects continues to increase.
- Virginia continues to meet its goal of zero net loss of non-tidal wetlands.

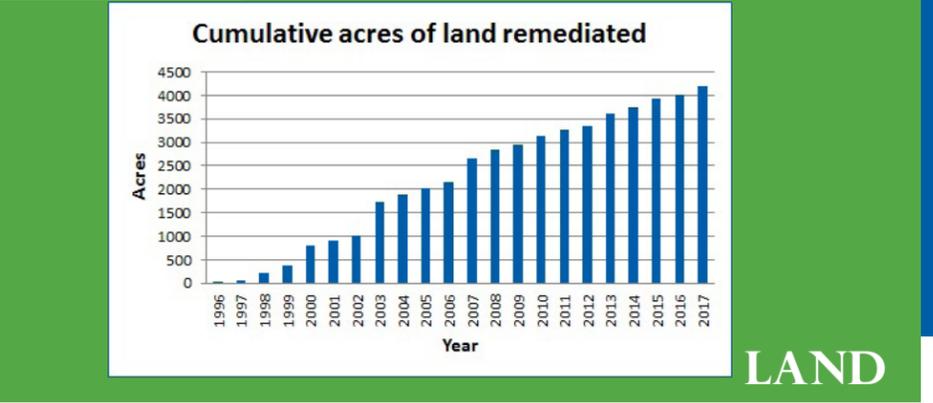
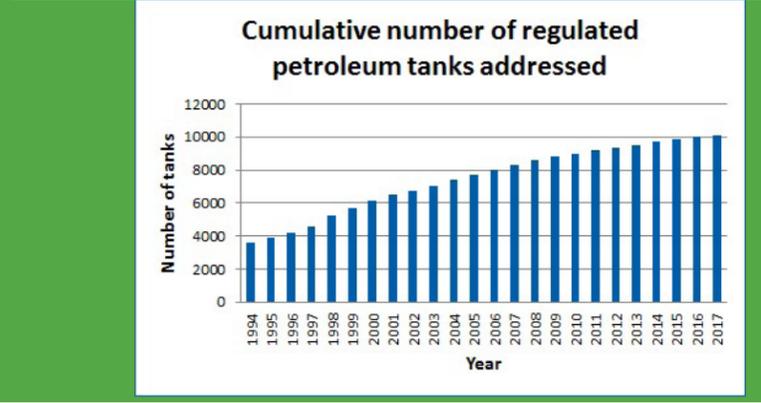
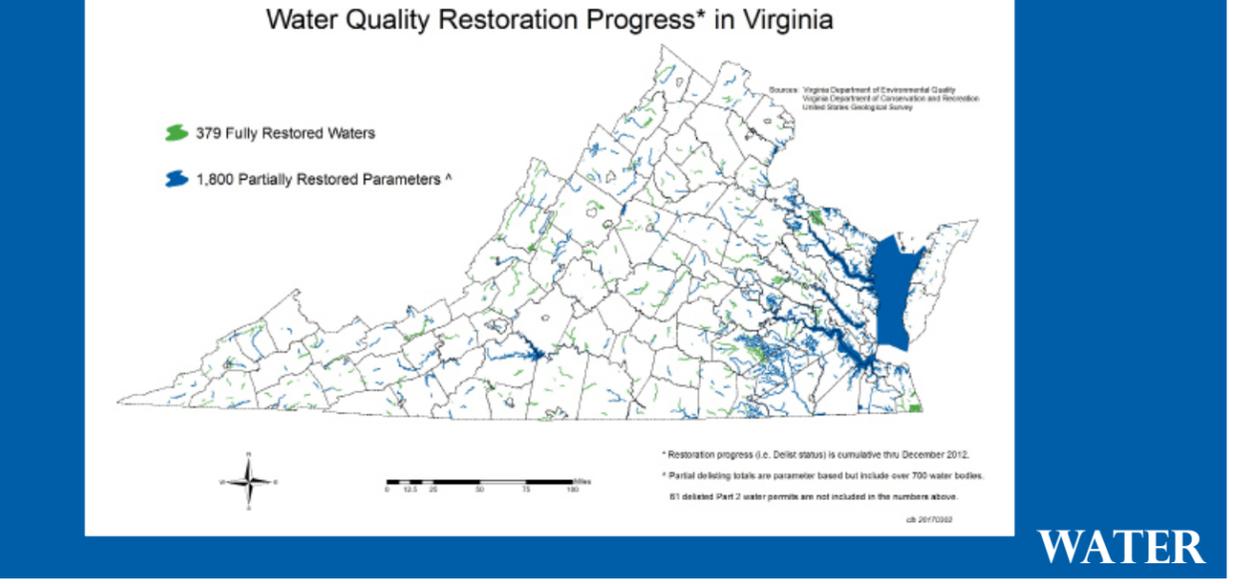
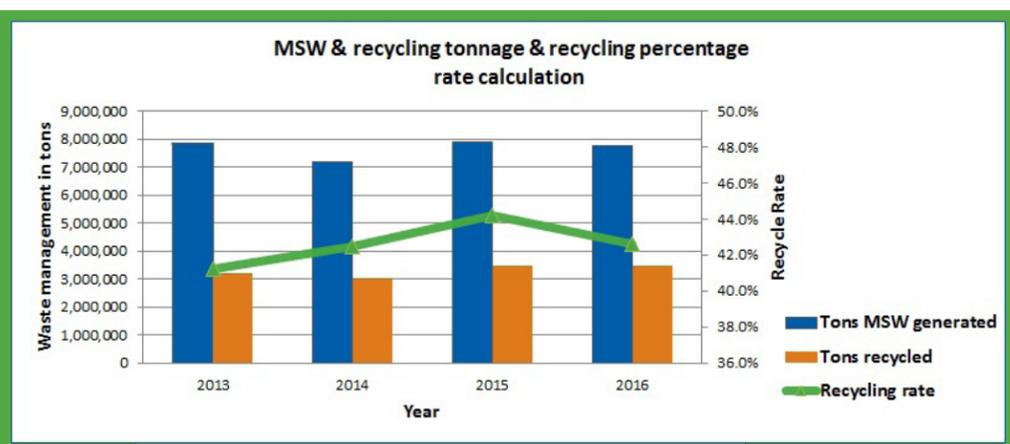
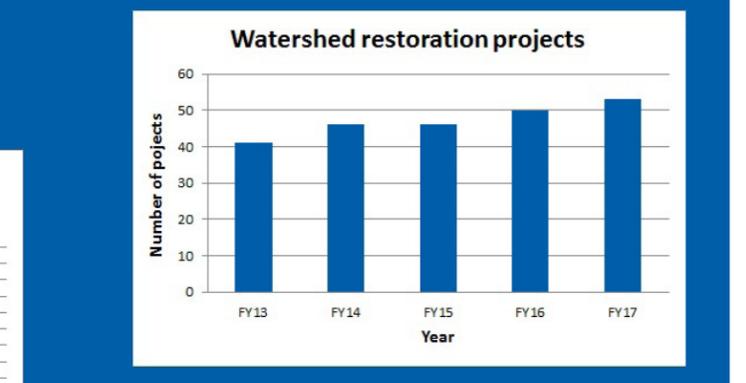
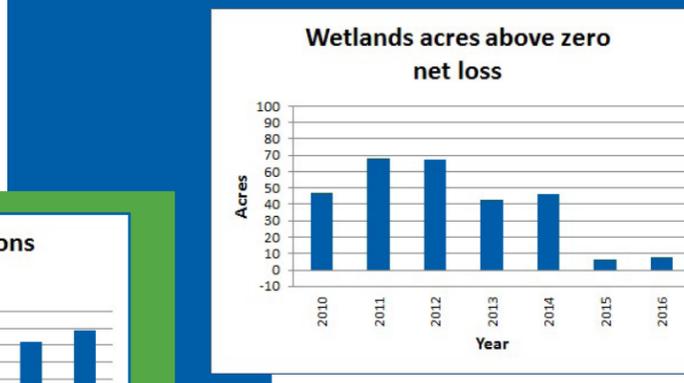
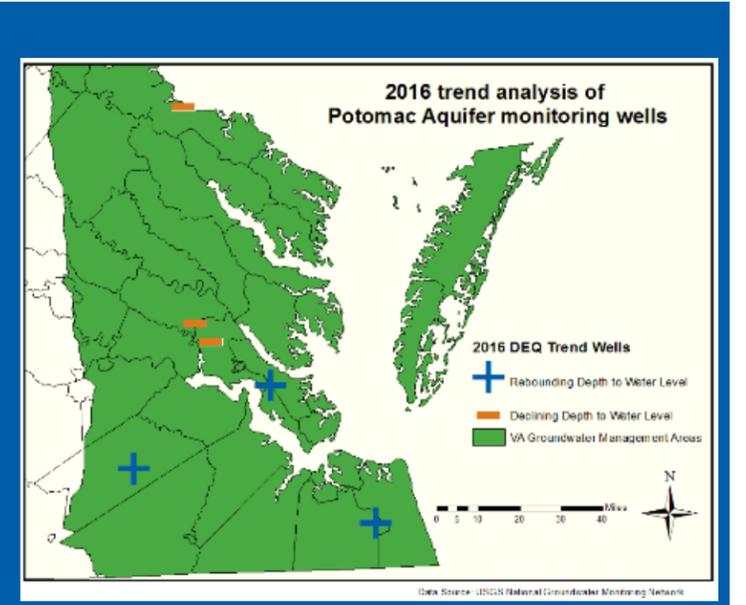
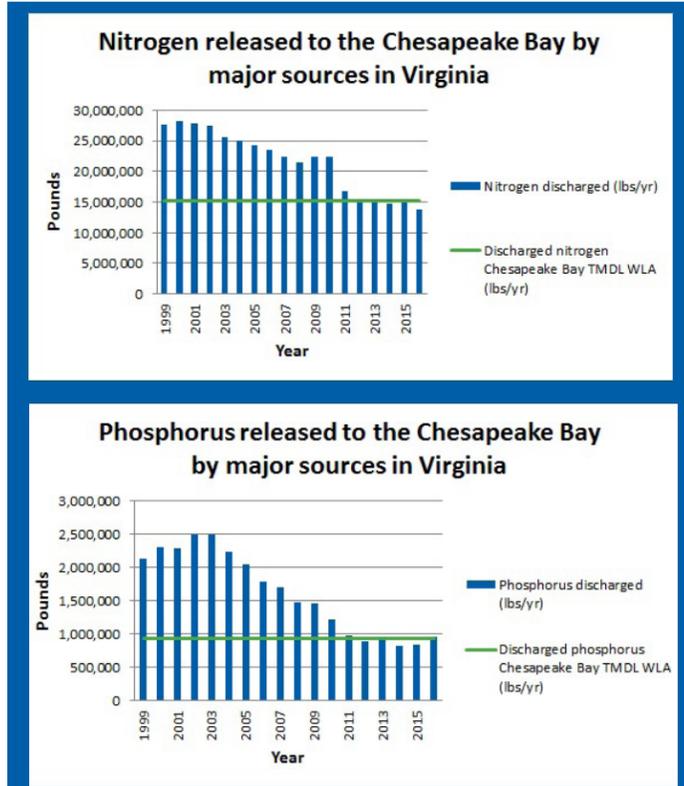
Based on waste management programs, cleanup efforts continue to yield positive results.

- Hazardous waste sites and the number of regulated petroleum tanks being cleaned have increased greatly.
- Acres of land in the Voluntary Remediation Program have increased steadily.
- Solid waste management planning units continue to exceed the recycling rate.





## AIR QUALITY



## LAND

## WATER