



**Virginia Department of Environmental Quality
Office of Pollution Prevention**

2020 Pollution Prevention Annual Report

Released December 2020



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FROM THE DIRECTOR

This year we look back at 30 years of the federal Pollution Prevention (P2) Act. It was only a few years later that Virginia adopted our own pollution prevention law in 1993. Marking milestones often prompts us to look back. The federal P2 Act recognized that preventing pollution at its source could protect the environment and lower operating costs through cost-effective changes in production, operation and raw material use.

Thirty years later, these principles still stand. DEQ's Office of Pollution Prevention (OPP) hosts a number of programs and initiatives that support the P2 Act and serve as a conduit for non-regulatory assistance to businesses, institutions and communities. These programs encourage the minimization of environmental footprints through actions that often exceed regulatory requirements while enhancing bottom lines. OPP coordinates incentive programs and assistance, as well as internal programs that allow DEQ to lead by example.

A few of the program's accomplishments from 2020 are:

- Developed success stories on topics including methods for identifying energy saving opportunities, improving environmental programs, developing organization based green teams, engaging employees and increasing energy efficiency
- Launched an updated annual reporting system for Virginia Environmental Excellence Program members to efficiently collect and effectively review environmental results data
- Reviewed the Virginia Green application to streamline and include new pollution prevention action items, while identifying opportunities to develop branded resources to encourage implementation of green practices

The programs coordinated by OPP serve Virginia organizations by providing tools to implement environmental programs that reduce risk and environmental footprints, recognize innovative programs and leverage what has been successfully implemented and duplicated. OPP looks forward to the year ahead and plans to provide focused outreach through the Virginia Green Travel program and industry-specific outreach through the Virginia Environmental Excellence Program.

Virginia continues to be a leader among states in promoting collaborative partnerships through non-regulatory environmental programs and OPP works closely with other states to share best practices and advance resources. The leadership of Governor Ralph Northam and Virginia Secretary of Natural Resources Matthew J. Strickler has demonstrated the importance of environmental quality to the Commonwealth. OPP will continue to support their initiatives and engage Virginians through programs that enhance the environment.

David Paylor
DEQ Director



VIRGINIA ENVIRONMENTAL EXCELLENCE PROGRAM



BACKGROUND

The Virginia Environmental Excellence Program (VEEP) recognizes facilities that have demonstrated a commitment to enhanced environmental performance and encourages innovations in environmental performance.

Since 2000, DEQ has promoted the non-regulatory VEEP as a mechanism to encourage “beyond-compliance” environmental results. VEEP provides recognition and incentives to facilities meeting the program requirements. There are two separate and distinct VEEP tracks: Sustainability Partners (SP) and the Environmental Management System (EMS) track.

VEEP SP is designed to encourage organizations to make environmental sustainability part of their culture through leadership, innovation and continual improvement and provides recognition to members. An EMS is not a requirement to be an SP.

The VEEP EMS track has three levels of participation, all supplying recognition and other benefits such as permit fee discounts, a single point of contact at DEQ and, in some cases, the opportunity for regulatory flexibility. Each level of the EMS track builds on the previous level, requiring a more robust system to identify and address environmental risks. The three levels of participation for the VEEP EMS track are:

- **E2 (Environmental Enterprise)** for facilities that have made significant progress toward the development of an EMS, have made a commitment to pollution prevention and have a record of sustained compliance with environmental regulations.
- **E3 (Exemplary Environmental Enterprise)** for facilities that have exceeded the E2 requirements and have a fully implemented EMS.
- **E4 (Extraordinary Environmental Enterprise)** for facilities that have exceeded the E3 requirements, have completed at least one full cycle of an EMS as verified by a third-party auditor and have demonstrated a commitment to continuous and sustainable environmental progress and community involvement.

OPP administers VEEP, which includes reviewing applications and renewals, performing site visits, coordinating compliance reviews and organizing recognition events. In 2020, OPP staff reviewed almost 100 applications for new and renewing VEEP members, including 12 SP applications.

2020 VEEP HIGHLIGHTS:

Outreach

Every year DEQ employs many types of outreach intended to keep current program participants up to date on VEEP as well as to reach potential new members. This includes workshops, conferences, newsletters, webinars and one-on-one support. This year OPP’s efforts included the following:

- VEEP staff hosted and recorded a webinar early in 2020 to support the new online VEEP reporting system through the DEQ portal.
- OPP continues to draft quarterly updates to post internally. These posts are available to DEQ staff and aim to keep VEEP top of mind in the agency and remind staff to be aware of external recruiting opportunities.
- VEEP staff provide facility-specific P2 guidance directly to facilities by request.



Deputy Director of Prince William County (PWC) Parks Recreation and Tourism Tracy Hannigan walks past a shoe donation bin at one of the many park facilities. “Being a part of VEEP, having recently achieved E3 certification helps keep us focused on taking concrete steps to meet our environmental stewardship goals,” said Hannigan. “The program has helped us document and reduce our environmental impact.”

VIRGINIA ENVIRONMENTAL EXCELLENCE PROGRAM

Pollution Prevention Case Studies

This year OPP continued its series of case studies to highlight successful P2 actions bringing the total of recent case studies to 10. The case studies show real world examples and identify technologies and techniques that were successful. These examples showcase the effectiveness of pollution prevention projects by quantifying pollution reduction, cost savings and other benefits. The success stories highlight environmental performance that goes above and beyond the industry standard.

VEEP Data Management Improvements

In recent years VEEP's database has been integrated into the agency's Comprehensive Environmental Data System (CEDS), and VEEP records are now maintained in the agency's electronic document retention system. In 2020 OPP worked with DEQ's Office of Information Services to design, test and implement a new reporting system that is integrated with CEDS. The VEEP annual reporting module was one of the first applications launched in the *myDEQ* portal. Over the next few years the agency anticipates expanding the use of *myDEQ* as a hub for receiving and sharing data. It has been a benefit for VEEP members to receive early access to this powerful tool.

The advantages to OPP of the new reporting system in *myDEQ* integrated with CEDS include the ability to:

- Track the status of all reports in real time from when the user registers to when DEQ approves the report;
- Document the timeline of report edits and requests for additional information;
- Run reports to determine the status of all reports and send mass follow-up emails with the touch of a button;
- Send individual follow-up emails easily;
- Be more self-sufficient in managing the new system and requiring fewer agency resources to maintain the system;
- Increase the information captured and analyze data in more detail; and,
- Exponentially expand the amount of VEEP information available to the rest of the agency.

2020 Pollution Prevention Case Studies

- [BAE Systems Norfolk Ship Repair](#) – Employee Education and Engagement for Environmental Success
- [Carilion Clinic](#) – Developing an Environmental Stewardship Council and Sustainability Champion Committee
- [Harrisonburg-Rockingham Regional Sewer Authority](#) – Better Biosolids and Recovered Energy
- [HI Richmond](#) – Working Towards a Triple Bottom Line with Energy and Water Reductions
- [Intertape Polymer Group](#) – Energy Treasure Hunts
- [Shenandoah Valley Organic](#) – Finding Success by Focusing on Farmers and the Environment
- [Wild Wolf Brewing Company](#) – Continuous Improvement and Resource Conservation
- [Worthen Industries – UPACO Adhesives Division](#) – Seeking Sustainability Through Energy Reductions and Zero-Waste to Landfill



OPP met with Shenandoah Valley Organics (SVO) to assist the already environmentally-focused company with the development of an EMS. In 2020, SVO joined VEEP as both a SP member and an EMS track member at the E2 level. The facility is featured in a case study developed by OPP to highlight successful strategies for implementing pollution prevention.

VIRGINIA ENVIRONMENTAL EXCELLENCE PROGRAM

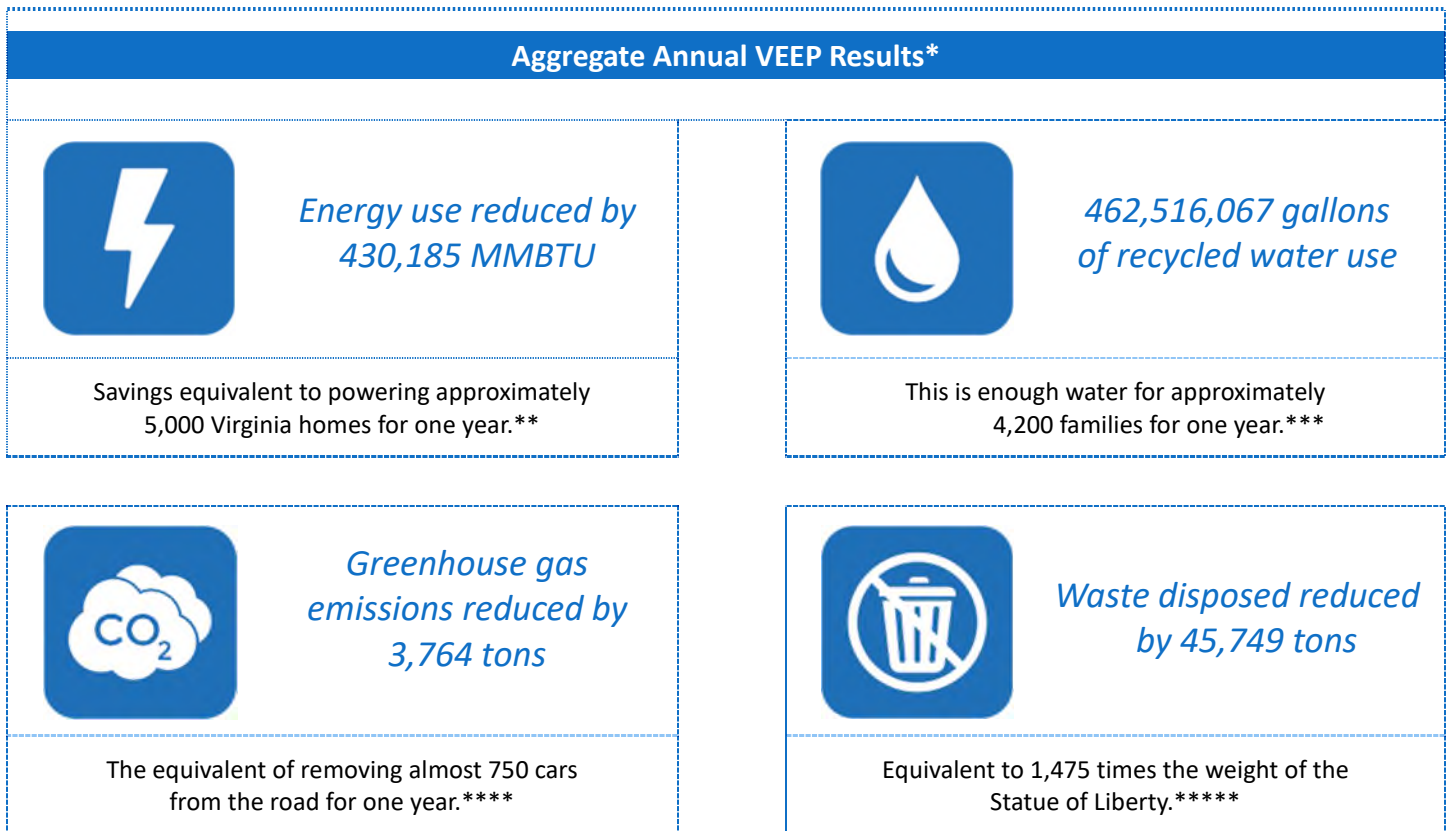
Annual Permit Fee Discounts for VEEP Facilities

When legislation establishing annual permit fees for facilities was put in place, the General Assembly acknowledged that VEEP members “go beyond” compliance and determined that their improved environmental performance merited permit fee discounts: hazardous waste (potentially 5 percent for E2 facilities and 10 percent for E3 and E4 facilities); solid waste (potentially 10 percent for E2 facilities and 20 percent for E3 and E4 facilities) and water (potentially 2 percent for E2 and 5 percent for E3 and E4 facilities). The total discounts available for each media is capped at a fixed level, and the discount received will drop if the total is exceeded. In 2020, VEEP members saved \$136,253 on annual permit fees.

Environmental Results

To remain in VEEP’s EMS track, members must submit an annual progress report including detailed metrics. When applying for and renewing participation, facilities select from a list of more than 35 environmental indicators that they then use as the basis of their VEEP annual reporting. Members report results in both actual and normalized quantities (i.e., results based on product, number of employees, etc.). Normalized results allow facilities to better compare year-to-year performance. In their annual application, VEEP SP track members also include quantifiable results, using the same 35 indicators.

VEEP EMS track members reported saving nearly \$49,000,000 through environmental efforts in 2019. Other environmental results are listed below.



*Results reported in 2020 are based on calendar year 2019 accomplishments. The overall program results as presented above should only be considered a general indication of VEEP facility performance because: (1) the program is voluntary and data is submitted by the facilities; (2) many facilities still have limited experience tracking environmental results data; and, (3) the aggregate results are a snapshot from one year and may not reflect overall reduction trends.

** U.S. Energy Information Administration - Virginia households consume an average of 86 million Btu per year, about 4% less than the U.S. average.

*** EPA WaterSense - The average American family uses more than 300 gallons of water per day at home.

**** EPA Greenhouse Gases Equivalencies Calculator - 4.67 metric tons (5.14 US tons) CO₂e/vehicle/year.

***** The Statue of Liberty weighs 31 tons.

VIRGINIA GREEN TRAVEL

BACKGROUND

Virginia Green is the Commonwealth's voluntary initiative to promote P2 practices across all sectors of the tourism industry. Participating tourism businesses and organizations voluntarily commit to engage in P2 practices in the areas of waste reduction, water and energy conservation, and in the support of green events and meetings. OPP oversees development of all programmatic guidance and requirements for membership. Coordination of the application review process, marketing and promotion is done by DEQ's partners, the Virginia Green Travel Alliance (VGTA), the Virginia Tourism Corporation and the Virginia Restaurant, Lodging, and Travel Association.



VGTA, a fully-accredited 501(c)(3) non-profit organization, was created in 2014 to help promote Virginia Green and its partners. The VGTA processes all Virginia Green certification applications, promotes program partners on the VGTA website and social media outlets, and administers outreach efforts.

Run by the VGTA, the certification process is fee-based and includes two levels of participation. The fee structure was developed with input from tourism partners to ensure the program's accessibility to the entire travel and tourism sector, while providing the VGTA with funding to offset the cost of processing applications. The Virginia Green Commitment Level, the entry level, requires that a tourism business certify that it has made commitments to implement sustainable practices. Many businesses choose to start at the Commitment Level and work towards being Fully-Certified. Fully-Certified Virginia Green Partners have implemented a required number of sustainable practices in various categories such as recycling and waste reduction, water and energy conservation, and green event management. Fully-Certified Partners undergo an application review that may require the submittal of photographs and other documentation of the green programs they have implemented.

2020 VIRGINIA GREEN HIGHLIGHTS:

OPP has maintained an active role in Virginia Green by continuing to provide technical resources and oversight of the certification standards. In addition, OPP is expanding its ability to provide technical assistance to individual tourism businesses when possible.

Virginia Green Suppliers Network

The Virginia Green Suppliers Network (VGSN) is a fee-based online directory of green service providers in support of Virginia Green. The online directory lists almost 50 suppliers providing green services ranging from composting to transportation. The VGTA oversees the registration process and maintains the online listing of suppliers. VGSN members, in addition to selling green products and services, are required to commit to reducing environmental impacts. As part of joining the VGSN, members are listed on the VGTA website, given a discount for Virginia Green workshops, conferences and other events, provided direct sales access to Virginia Green Travel partners and given use of the VGSN logo.

Virginia Green Application Review

The Virginia Green membership application is periodically reviewed. The last full application review was completed in 2018, and OPP is currently in the process of providing recommendations and revising the application for the VGTA. In addition to making updates that make the application easier to navigate and asking for additional information that will make it easier to review, a section on single-use plastics was added. The previous revision of the application included a significant number of actions aimed at reducing single-use plastics, but the addition of the section highlights the effort.

VIRGINIA GREEN TRAVEL

Virginia Green Resources

OPP is working with the VGTA and other partners to develop branded materials to promote the implementation of pollution prevention initiatives. During the application review process, OPP looked for opportunities where providing additional resources would ease the implementation of green practices. OPP is currently looking into designing display cards for restaurants to explain to patrons why straws are not offered, providing resources for energy efficiency and updating the waste estimate calculator.

Annual Virginia Green Conference and Green Travel Star Awards Ceremony

Due to COVID-19, the seventh annual Virginia Green Travel Conference and Travel Star Awards Ceremony was originally scheduled to occur in person in March but was rescheduled and held virtually in August. The virtual conference, attended by over 100 people, included two days of speakers and engaging panels on green tourism and sustaining tourism in a changing climate. In addition to the two day virtual conference, attendees were encouraged to attend weekly workshop webinars over the six weeks following the conference. The conference and workshops covered the impacts of climate change, opportunities for solar and wind energy, advancements in electric vehicles, as well as discussions on environmental justice and the rise of single-use plastics during the pandemic. The keynote speaker was Dr. Jeremy Hoffman from the Science Museum of Virginia who took attendees on a deep dive of climate change in the Commonwealth.

The Green Travel Star Awards recognized 18 Travel Stars, nine Travel Leaders, three Green Team All-Stars and one Industry Game Changer for their efforts to protect the environment. The Green Team All-Stars Awards recognize the passionate individuals that champion sustainable changes at their facilities. The Industry Game Changer Award recognizes a person that has been integral to promoting green tourism in their community and industry.

Planning is underway for the 2021 conference and awards, which will be held in April in downtown Richmond. The awards application has been updated to increase the emphasis on providing data to document the environmental benefits of programs that have been implemented. In addition, a new award category is being planned for 2021.

HIGHLIGHTS FROM THE VIRGINIA GREEN TRAVEL AWARDS



Virginia State Parks Innovative Green Project

VA State Parks set a goal to reduce customer reliance on single-use water bottles and straws. All state parks now have water bottle filling stations.



Science Museum of Virginia Vision 2020

Sustainability is the centerpiece of Science Museum of Virginia's (SMV) new Master Plan embracing urban green spaces. SMV has already added a green roof, rain barrels and electric vehicle charging.

**LEWIS
GINTER
BOTANICAL
GARDEN**



Lewis Ginter Botanical Garden Attraction of the Year

In addition to including native plants, Lewis Ginter Botanical Garden has incorporated regenerative landscapes that work to repair past environmental damage.

GOVERNOR'S ENVIRONMENTAL EXCELLENCE AWARDS

BACKGROUND

On August 21, the winners of the 2020 Governor's Environmental Excellence Awards were announced by webinar to an audience of over 175. Meryem Karad, Policy and Communications Advisor to the Virginia Secretary of Natural Resources, introduced Governor Ralph Northam, who welcomed the attendees and congratulated the winners. It was especially meaningful for the winners who missed the opportunity to participate in an in-person awards ceremony. The awards program was co-sponsored by DEQ and the Virginia Department of Conservation and Recreation. The awards recognized the significant contributions of environmental and conservation leaders in four categories: sustainability, environmental project, land conservation and implementation of the Virginia Outdoors Plan.

2020



**Governor's Environmental
Excellence Awards**

GOLD MEDAL WINNERS

Fairfax County Public Schools – Get2Green Sustainability Program

In 2014, Fairfax County Public Schools (FCPS) launched Get2Green. The district's goal was to be a model environmental steward, which means investing in green infrastructure and resources, utilizing interdisciplinary environmental curriculum and fostering community partnerships. As the largest public school system in Virginia and the 11th largest school district in the nation, FCPS knew its efforts would reach many. FCPS could foster a lifetime of environmental stewardship in its 188,000 students. Get2Green serves as a tool to encourage, support and monitor sustainability across all departments. Departments involved work together while having individual focuses. Working together, FCPS has prevented the release of over 145,000 metric tons of carbon dioxide through energy conservation initiatives and saved the school division over \$31 million in energy costs. Get2Green has also conserved 90 million gallons of water and increased recycling by 15,000 tons. FCPS works to conserve energy, plant gardens, reduce waste and more. These projects teach students environmental stewardship through hands-on learning and equip students to be future leaders in addressing environmental challenges.

City of Hopewell – Hopewell Riverwalk Implementation of the Virginia Outdoors Plan

The Hopewell Riverwalk is an out-and-back wooden boardwalk that originates at City Park in downtown Hopewell. Following the shoreline of the Appomattox River westward, the Riverwalk connects City Park to the Hopewell City Marina. The 1,736-foot boardwalk trail offers stunning views of the confluence of the James and Appomattox Rivers and allows visitors to immerse themselves in the natural environment of the city's riverfront. The project is one of Hopewell's most significant recreational assets. It has become a valuable tool for promoting healthy lifestyles, environmental stewardship and economic growth in the city. Funding for the project came from Hopewell City Council, the Economic Development Authority, the Virginia General Assembly and donations raised by Friends of the Lower Appomattox River. Additionally, city staff collaborated with HCA John Randolph Medical Center for the project's largest easement across private property. During design and construction, the city directed significant effort towards preserving wetlands and creating a minimally invasive footprint. This included designing the walk at a height that allows for wetland grasses and other foliage to thrive in its footprint. During construction of the project, cleanup activities removed over 50 discarded tires and 100 bags of litter from the shoreline. By design, this low-maintenance attraction will need little upkeep for the next 10 to 15 years. The city has committed to maintaining the Riverwalk. This new feature is attracting visitors, which is benefiting businesses in downtown Hopewell.

GOVERNOR'S ENVIRONMENTAL EXCELLENCE AWARDS

Neabsco Regional Park – Neabsco Creek Boardwalk Implementation of the Virginia Outdoors Plan

The three-quarter mile-long Neabsco Creek Boardwalk connects several formerly separate park sites, creating the Neabsco Regional Park. Prince William County (PWC) Department of Parks, Recreation and Tourism designed this project to highlight Woodbridge's most valuable natural asset, the Potomac waterfront. The boardwalk provides a critical trail connection between the Occoquan River and Leesylvania State Park. This includes providing much-needed bicycle and pedestrian connectivity in Eastern PWC. The corridor connects directly to transit stations and facilitates human-powered transportation between Belmont Bay and Woodbridge in the north and the developing community of Potomac Shores in the south. The boardwalk allows hikers access to wetlands where the tall grasses and marsh filter pollution from the river and provide a rich habitat. The construction technique used was an innovative, environmentally sensitive top-down method that minimized impacts to the wetlands. PWC and others can use this top-down construction method for projects in other sensitive and wet areas. The project supports the protection of Neabsco Creek's wetlands by providing access, education and volunteer opportunities. Park staff report a 100-fold increase in visitation and program enrollment.



Harrisonburg-Rockingham Regional Sewer Authority – Enhanced Biosolids Reuse and Reduction Project Environmental Project

The Harrisonburg-Rockingham Regional Sewer Authority took on the Enhanced Biosolids Reuse and Reduction (EBRR) Project to recover excess anaerobic digester gas beyond that used for digester heating. The facility could use the recovered gas to fuel a biosolids dryer. The dryer would provide additional dewatering of biosolids. Prior to the EBRR Project, the facility's dewatered biosolids contained approximately 18 percent solids. The thermal drying increases the percentage of solids and the resulting material meets the EPA definition of Class A Exceptional Quality (EQ) biosolids. In addition to significant cost savings from reduced biosolids hauling, the project is strategically important. The reduced pathogen levels greatly increase biosolids storage and disposal options. The cost savings generated by reducing the volume of biosolids hauled and the revenue received from co-digestion of imported poultry-processing waste had to cover project operations. Two critical factors that helped reach this requirement were the increase in co-digestion of local poultry-processing sludge and the addition of heat exchangers. The EBRR Project secured \$12.74 million in financing through the Virginia Clean Water Revolving Loan Fund in 2017. Since the EBRR Project completion in 2019, the biosolids dryer system has proven to be sustainable on the biogas produced by anaerobic co-digestion and the dryer's waste-heat recovery system. The resulting biosolids are greater than 90 percent solids and have non-detectable levels of pathogenic organisms.



The Piedmont Environmental Council – Stewardship, Restoration and Public Engagement at Roundabout Meadows Land Conservation

The Piedmont Environmental Council (PEC) and partners have worked over the past 20 years to preserve 326-acres at the intersection of US Routes 15 and 50 in Loudoun County, known as Gilberts Corner. In 2013, PEC accepted the donation of a 141-acre working livestock farm located at Gilberts Corner, now called Roundabout Meadows, as a conservation easement. The Roundabout Meadows property is part of the Journey Through Hallowed Ground National Scenic Byway listed under ConserveVirginia's Scenic Preservation category. At the time of the acquisition, the pastures were heavily degraded. Cattle had free access to a stream that transects the property. PEC has since established a grazing plan and sustainable vegetable operation, installed two-miles of streamside fencing, protected a sensitive wetland area and installed a walking trail. PEC launched the Roundabout Meadows Community Farm in 2018, which donated 5,000 pounds of fruits and vegetables to local food banks in its first year. The streamside fencing has reduced E.coli levels, which is of particular importance since it is a tributary to Goose Creek, an important public drinking water supply source. In addition to these improvements, PEC has turned Roundabout Meadows into a hub of community engagement and education.

GOVERNOR'S ENVIRONMENTAL EXCELLENCE AWARDS

Virginia Clean Cities – Clean Fuels Advancement in Virginia

Environmental Project

The mission of Virginia Clean Cities (VCC) is to advance air quality improvement, economic opportunity and energy security. VCC's Clean Fuels Advancement in Virginia program meets the organization's goals by promoting clean fuel education, vehicles and infrastructure. Since 2015, VCC has been the driving force behind a reduction in emissions of over 700,000 tons of carbon dioxide and a reduction in demand of gasoline and diesel fuel by over 128 million gallons. To achieve these results, VCC connects with fleets, biofuel producers and station operators. By hosting almost 200 events, VCC has reached almost 440,000 Virginians. Of the over 25,000 alternative fuel vehicles tracked by VCC, about 60 percent are E85 vehicles. VCC worked to increase clean fuel stations, including biodiesel, compressed natural gas, E85, liquefied petroleum gas, liquefied natural gas and electric fueling options. In Virginia, the number of stations expanded from 531 in 2015 to 889 in 2019. VCC worked to install a statewide set of early stage DC fast chargers (DCFC). Prior to 2015, there were no DCFC outside of Northern Virginia. By September of 2015, VCC worked with partners to install 25 DCFCs across the state from Blacksburg to Virginia Beach and in-between. For every dollar in program funds VCC has spent, VCC programs have had a \$172 impact on the economy. Over five years, the economic impact of VCC's programs has totaled \$258 million.



SILVER MEDAL WINNERS

Roanoke County Department of Parks, Recreation & Tourism – Hinchee Park

Land Conservation

Hinchee Park in Roanoke County provides the opportunity for visitors to bike, walk or ride horses from the Hanging Rock Battlefield Trail to the 12,000-acre Carvins Cove Natural Reserve. Hinchee Park creates a 235-acre reserve, including a permanent conservation easement for 200-acres. To protect water quality and natural resources, the Roanoke County Department of Parks, Recreation and Tourism established erosion controls, installed fencing, planted native trees and implemented other practices. The project would not have been possible without many significant partners including the Pathfinders for Greenways, the Beirne Carter Foundation, the Virginia Outdoors Foundation, the Virginia Land Conservation Fund and the Hinchee Pace family. In addition, over 200 individual donors were involved in the project.



Virginia Outdoors Foundation & Enrichmond Foundation – Preservation & Restoration of Historic Evergreen and East End Cemeteries - Land Conservation

In 2016, Virginia Outdoors Foundation (VOF) allocated \$400,000 from its Open-Space Lands Preservation Trust Fund for the preservation and restoration of Historic Evergreen Cemetery and neighboring East End Cemetery. These two cemeteries are among the largest and most significant historic African-American cemeteries in the nation. VOF and the Enrichmond Foundation formed a workgroup in October of 2016 composed of volunteers and community leaders. One of the primary goals of the easement is cultural and historic preservation, one of the priorities of ConserveVirginia. Other goals for the easement are to protect water resources, protect open space and prohibit activities and uses that do not serve recreation or educational purposes. Efforts are underway to remove invasive vegetation. The partners are reviewing a full stream restoration to stabilize stream banks. All of these practices are designed to balance the natural and cultural resources of the property.



GOVERNOR'S ENVIRONMENTAL EXCELLENCE AWARDS

BRONZE MEDAL WINNERS

Church & Dwight Co., Inc. – Continuous Sustainability Improvement Program Sustainability Program

Church & Dwight's Continuous Sustainability Improvement Program includes upholding six sustainability pillars: brands, products, packaging, employees and communities, responsible sourcing and environment. This facility has excelled in upholding the company's sustainability pillars through raw material reduction, lighting upgrades, product redesign and continuous process improvements. Through process change, the facility saved more than \$300,000, conserved over 180,000 gallons of water and reduced consumption of ammonia by over 300,000 pounds.



Land Trust of Virginia – Blue Ridge Conservation Initiative Land Conservation

The Land Trust of Virginia's (LTV) Blue Ridge Conservation Initiative aims to protect land along Northern Virginia's Blue Ridge. To focus its efforts on land with the most conservation value, the LTV mapped 21 separate conservation values in the target area, which identified 286 parcels as having the highest occurrence of these values. These parcels became the highest priority for protection. The first recorded easement in the study area was Ashleigh Farm. It's a 98-acre parcel protected through an easement that limits new construction. Ashleigh Farm is identified as high priority by ConserveVirginia due to significant cultural, historic and scenic resources.



Prince William County Risk & Wellness Services Division – AST Management for Pollution Prevention Environmental Project

In the past, Prince William County Risk & Wellness Division (Risk) primarily managed the county's large tanks, while individual departments managed smaller tanks with support from Risk. Recognizing that even a small tank could pose a large environmental impact, Risk decided to manage all county tanks proactively. Over the next four years, Risk engaged the county's EMS Council and Executive Management to improve the tank program. Risk developed its own comprehensive program that included training for inspectors, repairing and replacing tanks, establishing inspection, spill prevention and response programs, developing an educational campaign and establishing a rideable contract.



Southern Tip Bike & Hike Trail Implementation of the Virginia Outdoors Plan

The Southern Tip Trail is a multi-use, ADA-compliant greenway providing outdoor recreational opportunities to cyclists and pedestrians in Northampton County. The 4.9-miles of paved trail provides access to the Eastern Shore's unique ecosystem. The Eastern Shore of Virginia National Wildlife Refuge owns and maintains the trails with the help of volunteers organized by the Nature Conservancy. The trail serves as an economic driver in a rural region with a growing tourism economy. The greenway also conserves natural lands vital to millions of migratory birds and other native species.



HONORABLE MENTION

Rappahannock Electric Cooperative – Green Together - Sustainability Program

DEQ LEADING THE GREENING OF STATE GOVERNMENT

LEADING BY EXAMPLE: DEQ'S ENVIRONMENTAL MANAGEMENT SYSTEM

Background

Implementation of DEQ's EMS is ongoing; with the goal of not only reducing DEQ's environmental footprint, but also engaging employees in the day-to-day awareness and decision making that is a cornerstone of environmental management. DEQ is leading by example as it strives to continually improve the EMS and environmental awareness at its facilities across the state.

The EMS is integrated into DEQ's strategic plan, committing the agency to lead the Commonwealth's greening of government efforts. The EMS Team works to enhance environmentally sound practices, increase environmental awareness through annual training, increase communication of mutually beneficial knowledge and encourage innovative environmental solutions. These efforts go hand-in-hand with our mission of protecting and enhancing Virginia's environment and promoting the health and well-being of the citizens of the Commonwealth.

Objectives & Targets

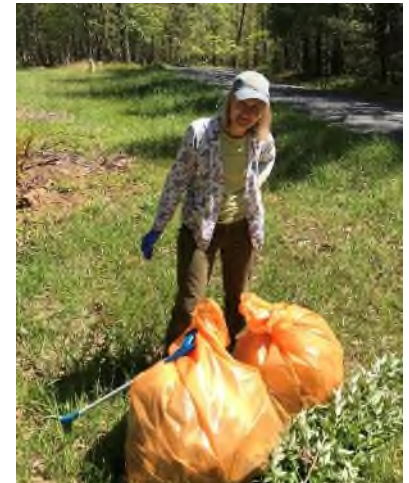
Since 2014 the EMS Team has implemented numerous objectives and targets to address risks identified by annual reviews of the agency's environmental aspects and impacts. Of the 15 objectives and targets that have been implemented to date, 13 have been completed. In 2020 DEQ continued working towards the long-term goals for a 10percent paper reduction and researching green purchasing for potential implementation at DEQ. The EMS Team continues to implement action plans to reach these goals.

In addition to these objectives and targets, the Agency and Regional EMS Teams also coordinate events for Earth Day every April and America Recycles Day every November. In 2020 these events were virtual, but still serve as a crucial way to engage with DEQ staff on the importance of protecting the environment through actions at home as well as work. Increasing environmental awareness is an important part of encouraging employees to take a look at the daily decisions they make that impact the environment.

GREENING OF STATE GOVERNMENT

DEQ's EMS is not only an opportunity for DEQ to reduce its environmental footprint, but also serves as an example to other agencies. DEQ has shared EMS information with other state and local agencies that are looking for ways to improve or build an EMS or other environmental programs. OPP has provided information on best practices for recycling programs and input on developing signage and informational materials. DEQ is currently revising the EMS Manual as part of the commitment to continual improvement. The new manual will include efforts to address climate change mitigation and resiliency through the Agency's EMS, leading the way for other state agencies to do the same in the coming years.

DEQ works to encourage other state entities to reduce the environmental impacts of their operations. OPP convened a group of state agencies in early 2020 to discuss opportunities to work together towards common goals. Representatives from nine agencies and two universities attended the meeting held on February 27, 2020 at DEQ's Piedmont Regional Office in Glen Allen. OPP continues to work on the identification of common environmental goals across agencies. In addition, OPP is looking into opportunities to share green practices for home.



Earth Day's 50th Anniversary did not stop for the pandemic. DEQ personnel like Central Office employee Ann Regn (pictured) took to their local parks and streams to hold their own cleanups to celebrate the day.

RESOURCES

General Information

www.deq.virginia.gov/Programs/PollutionPrevention.aspx

Virginia Green Tourism Program

www.deq.virginia.gov/Programs/PollutionPrevention/VirginiaGreen.aspx

www.virginia.org/green/

www.virginiagreen.net

Governor's Environmental Excellence Awards Program

www.deq.virginia.gov/Programs/PollutionPrevention/GovernorsEnvironmentalExcellenceAwards.aspx

Pollution Prevention Case Studies

www.deq.virginia.gov/CaseStudies.aspx

Virginia Environmental Excellence Program

www.deq.virginia.gov/Programs/PollutionPrevention/VirginiaEnvironmentalExcellenceProgram.aspx

Virginia Information Source for Energy

www.deq.virginia.gov/Programs/PollutionPrevention/VirginiaInformationSourceforEnergy.aspx