



Commonwealth of Virginia
Office of Governor Ralph S. Northam

Executive Order 6 Report
Secretary of Natural Resources

Report to Governor Ralph S. Northam on Executive Order Number Six

Secretary of Natural Resources Matthew J. Strickler

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I. Introduction

On April 3, 2018, you signed Executive Order Number Six (EO-6): *Supporting the Critical Role of the Virginia Department of Environmental Quality in Protection of Virginia's Air, Water, and Public Health*. The purpose of EO-6 was to begin a process to thoroughly assess the Department of Environmental Quality's (DEQ) ability to carry out its mission, and identify areas where additional funding or authorities are necessary to adequately protect Virginia's environment. This report is the culmination of that process.

DEQ's mission statement – that the agency “protects and enhances Virginia's environment, and promotes the health and well-being of the citizens of the Commonwealth” – paraphrases its enabling statute (Code of Virginia §10.1-1183). This is a broad legislative mandate that extends beyond the traditional responsibilities of protecting air and water quality and ensuring safe disposal of waste, and into much more complex areas of public policy such as addressing climate change and issues of environmental justice and sustainable economic development.

Since DEQ was formed in 1993, the agency's funding has decreased significantly. Since 2001 DEQ's general fund appropriations have been reduced by \$37 million per year, and 74 positions have been lost. Most of DEQ's permit fees are set in code and have not been raised in recent years, even as permitting complexity and volume have increased. Further, the percentage of DEQ's operations supported by the general fund has decreased from 40 percent to 20 percent, leaving the agency more reliant on limited permit fees and federal funds.

This has resulted in significant cuts to DEQ services and programs, diminishing the Commonwealth's capacity to monitor and reduce pollution, develop or update critical environmental regulations, process permits, and engage with the public. This report discusses progress on ongoing initiatives and makes recommendations for action in the areas of ensuring protection of our air, water and lands, improving public engagement, and increasing efficiency and responsiveness in permitting. These recommendations will require identifying additional resources and authorities for the agency.

II. Progress to date on ongoing initiatives

EO-6 gave DEQ three tasks that the agency could begin in the immediate term: identify critical, time-sensitive updates to regulations or guidance, evaluate rollbacks of federal environmental

rules under the Trump Administration, and work with stakeholders to improve communication with the public. DEQ began by holding a series of roundtables with a broad cross section of stakeholders to identify concerns about DEQ performance and gather feedback about how agency operations could improve. Many of the recommendations in this report are derived in part or in full from suggestions made during those meetings.

These meetings, along with DEQ's internal review, also helped identify a number of concerning proposals by the Trump Administration to weaken federal environmental standards, including:

- Allowing polluters, instead of the U.S. Environmental Protection Agency (EPA), to decide when major modifications to pollution sources would trigger the more environmentally protective "New Source Review" permitting process.
- Eliminating the "once in, always in" policy for additional hazardous air pollution controls at major pollution sources, allowing polluters whose emissions dip below the major source level to stop using certain pollution reduction technology.
- Replacing the Clean Power Plan with a new "Affordable Clean Energy" rule which, by EPA's own analysis, will increase emissions of carbon dioxide (CO₂) and increase the level of emissions of certain pollutants in the atmosphere that adversely affect human health.
- Allowing more mercury and other toxic air pollutants to be emitted from coal and oil fired power plants.
- Weakening standards for reduction of toxic metals in wastewater discharged from nuclear and fossil fuel fired power plants.
- Rolling back the gains made in fuel efficiency of cars and trucks by freezing the Corporate Average Fuel Efficiency (CAFE) standards.
- Weakening requirements for safe disposal of toxic coal ash currently stored in unlined ponds near coal fired power plants.
- Limiting the EPA's ability to protect water quality in thousands of streams and wetlands through the Waters of the United States (WOTUS) rule.

DEQ has the authority under Virginia law to continue using standards that are more protective of the environment and public health. DEQ will look to exercise that authority in these cases, and whenever possible if the Trump Administration proposes to weaken other EPA rules.

Finally, DEQ's initial review and stakeholder meetings identified a list of actions that the Northam Administration and the agency could take or initiate in advance of this report to help protect Virginia's environment and improve DEQ service and performance. Actions completed or initiated to date include:

- The Commonwealth began utilizing funding provided by the Volkswagen emissions cheating scandal, including a \$14 million contract to build out Virginia's electric vehicle charging network and an additional \$14 million grant round to electrify regional transit buses.
- In September of 2018, Virginia joined the Transportation and Climate Initiative (TCI) to work with other East Coast states to develop solutions for carbon pollution reductions in the transportation sector.
- Also in September of 2018, Virginia joined the International Alliance to Combat Ocean Acidification (OA Alliance). DEQ and the Virginia Marine Resources Commission (VMRC) are in the process of drafting an Ocean Acidification Action Plan with strategies for reducing the impacts of more corrosive waters driven by climate change on Virginia's fish and shellfish populations, as well as the oyster and clam aquaculture industry.
- Virginia developed an agreement with the National Oceanic and Atmospheric Administration (NOAA) to permanently establish the Commonwealth's Coastal Zone Management Program and better protect our fragile and productive coastal environment.
- Through Executive Order 29, a new Virginia Council on Environmental Justice was established. The Office of the Secretary of Natural Resources (OSNR) worked with the Secretary of the Commonwealth to select a racially and geographically diverse membership for the Council, and DEQ and OSNR will provide staff support for the Council as it meets over the next year.
- DEQ released a request for proposals to find an outside entity that will help the agency develop a plan to better integrate environmental justice considerations into its work. DEQ expects to establish a contract in 2019.

- Pursuant to your directive of September 12, 2018, DEQ has established an ad hoc work group to advise and assist the agency in the development of a framework for limiting methane leakage from natural gas infrastructure. This group will support DEQ in its collection and evaluation of data to inform development of a regulation. Methane is roughly 30 times more potent than carbon dioxide (CO₂) as a greenhouse gas (GHG) and unregulated methane leakage can threaten emissions reductions achieved by switching from coal to natural gas. DEQ will begin the formal rulemaking process in 2019.
- DEQ will update renewable energy “permit by rule” (PBR) regulations to make permitting process for solar projects of 150 megawatts or less faster, clearer, and more transparent. DEQ is poised to release the proposed updated regulation for solar projects for public comment in 2019 and plans to finalize it in 2020.
- DEQ will begin work to update the State Water Control Board’s stormwater management and erosion and sediment control regulations to improve program administration in the wake of legislation requiring consolidation of the programs. A Notice of Intended Regulatory Action (NOIRA) to begin this process has been issued with the hope that the Board’s regulatory action on this can conclude in 2020.
- DEQ completed its work on a regulation to reduce carbon pollution from fossil fuel fired power plants by 30 percent over the next decade. The rule will allow (but does not require) Virginia to link to the Regional Greenhouse Gas Initiative (RGGI) carbon trading market to reduce carbon pollution at the lowest possible cost. The State Air Pollution Control Board (Air Board) has approved the final regulation.

DEQ has engaged the Office of the Attorney General (OAG) to take on more referrals for enforcement action. With the assistance of OSNR, DEQ and the OAG have developed an informal agreement to improve communication and collaboration on major enforcement cases. To date, the OAG has accepted several referrals and is in the process of taking stronger enforcement action against polluters than DEQ could on its own. Referrals include the Mountain Valley Pipeline erosion and sediment control violations and unpermitted land disturbing activities and water quality violations at Fones Cliffs on the Rappahannock River.

- DEQ plans to update its website to improve usability, and increase public communications through media advisories and social media. At the Administration’s request, DEQ received funding in the budget to proceed with the website overhaul, which will be completed in spring of 2020. DEQ also hired a new communications director to

bring a more proactive and strategic approach to public engagement and communicating with the media.

- DEQ is working to increase the transparency and ease of access to information regarding DEQ's regulatory boards and to make presentations and other information provided to the boards clearer and easier for the public to understand and access.

Implementing these initiatives within existing resources will be challenging and will take time. Last year, the Northam Administration proposed \$2.5 million in additional funding for DEQ, focused on immediate term needs like website upgrades and support for regulatory review in air and water quality permitting and monitoring programs. The General Assembly funded only a portion of the Administration's proposal for website upgrades (\$859,075). DEQ is doing its best to carry out these important initiatives using existing resources. However, without additional resources, the additional progress envisioned by EO-6 will not be possible.

III. Recommendations for additional action

In addition to continuing or completing the actions outlined in Section II, we must develop a longer term vision for stabilizing DEQ and making it more effective. After DEQ submitted its 90-day "critical updates" report, the agency began developing the more comprehensive review that was also required by EO-6. In October, 2018, DEQ submitted its final report. Since then, OSNR has worked with the agency to understand its needs and focus on the most important areas in need of attention. This section describes actions and initiatives necessary to help DEQ fulfil its mission and your vision for environmental protection in the Commonwealth, and is divided into three main sections: ensuring protection of our air, water, and lands, improving public engagement, and increasing efficiency and responsiveness in permitting. Each section will address recommendations in these areas for shoring up existing programs, launching new administrative initiatives, and seeking additional authorities from the General Assembly.

Ensuring protection of our air, water, and lands

The Air, Water, and Land Protection and Revitalization (formerly Waste) divisions carry out DEQ's traditional core responsibilities. Unfortunately, since 2001 these divisions have experienced budget cuts of \$4.3 million, \$8.5 million, and \$2.3 million, respectively. This has inhibited DEQ's ability to fulfill monitoring, compliance, and enforcement responsibilities. OSNR recommends the following administrative actions for existing programs. Many of these initiatives will require additional resources in order to carry out the recommendations.

Improve air quality monitoring with a focus on environmental justice, specifically:

- Increase community based air monitoring designed to look at hyper-local pollution or address concerns raised by specific local governments or communities.
- Restore ambient air toxics monitoring program in Northern Virginia and support programs in Richmond and Hampton Roads.
- Expand existing air quality monitoring for ozone and particulate matter (PM) – both of which lead to respiratory illness.
- Expand existing air quality monitoring for PM to cover select environmental justice communities with significant PM pollution sources.
- Expand existing air quality monitoring for ozone to cover areas with new sources, including a growing number of data centers.

Improve water quality monitoring, specifically:

- Expand existing surface water monitoring program to include the ability to conduct additional water quality studies that address localized and urgent water quality issues, as well as emerging pollutants such as polyfluoroalkyl substances (PFAS).
- Restore funding for long term fish tissue and toxicity monitoring in rivers and lakes to protect public health and meet the requirements of the Virginia Water Quality Monitoring, Information, and Restoration Act (WQMIRA).
- Restore funding for DEQ to take and analyze water samples during compliance inspections of permitted facilities.
- Expand laboratory capabilities to test and analyze samples from suspected Harmful Algal Blooms (HABs) that are becoming more frequent in both fresh and salt water as climate change brings warmer temperatures and more intense precipitation events.
- Restore funding for ambient (in-stream, not end-of-pipe) water quality monitoring of harmful pollutants including metals and alkaline substances to set more accurate background conditions as a baseline for permitting decisions.

- Restore funding for Chesapeake Bay water quality monitoring, laboratory services, and coordinator position to assist in ensuring Virginia can make progress toward Chesapeake Bay cleanup goals.
- Restore technical assistance and training service funding to help localities implement the Chesapeake Bay Preservation Act, including delineation and protection of riparian buffers critical to Bay water quality.
- Review and update agency guidance on “mixing zones”: areas of water bodies where pollution discharges are currently allowed to exceed water quality criteria under the outdated theory that dilution is the solution to pollution.
- Fund replacement vehicles and emergency repairs to equipment to support water quality monitoring programs.

Improve water supply monitoring, specifically:

- Expand drought monitoring from the inadequate 20-well system to a comprehensive network that gives better coverage across the Commonwealth and allows DEQ to better predict drought to the benefit of localities, farmers, businesses, fish, and wildlife, especially under climate change scenarios.
- Maintain and replace aging (> 30 y.o.) groundwater monitoring wells to ensure protection of water supplies for drinking and other uses.
- Expand groundwater monitoring to include wells that measure saltwater intrusion in eastern Virginia. Limited data shows significant saltwater intrusion in some areas, which will only get worse as sea levels rise.
- Increase DEQ capacity to measure land subsidence from aquifer water withdrawals in the coastal plain beyond current modeling capabilities by installing and operating devices to monitor changes (extensometers). This will allow DEQ to understand when water withdrawals are causing land to “sink,” exacerbating flooding problems).
- Initiate a Surface Water Management Area study to explore the need for more active management to conserve water in areas where data indicates persistent low flow

conditions could harm in-stream uses and the aquatic environment, particularly the Shenandoah, Pamunkey, and middle/lower James rivers.

In addition to bolstering existing monitoring and compliance programs, DEQ needs to build new capacity to take on challenges like climate change and environmental justice, and to modernize outdated regulations or issue new ones to incorporate new science, adapt to changing pollution sources, and strengthen environmental protections. OSNR recommends the following actions to help advance DEQ's mission:

- Conduct an assessment of the impacts of climate change on DEQ's programs and work with other state agencies to develop a statewide climate action plan including action on transportation electrification, consistent with the Virginia Energy Plan. Climate change impacts nearly every aspect of DEQ's work, as well as the work of many other state agencies and all citizens of the Commonwealth, but has not been fully integrated into Virginia's public policy or agency decision making.
- Harmonize GHG pollution reporting structures and timelines to develop a more complete picture of GHG emissions from major point sources in the Commonwealth.
- Reduce nitrogen oxide (NOx) pollution – which negatively impacts respiratory health and Chesapeake Bay water quality – by amending state regulations to require sources with equipment to reduce such pollution to operate it continually.
- Make air permits more enforceable by revising regulations to allow DEQ to enforce against incorrect information provided in a permit application or a list of required pollution control equipment.
- Revise solid waste management regulations to:
 - ensure that facilities provide adequate financial assurance that they can fund cleanup and closure.
 - update provisions related to setbacks and siting of solid waste facilities, as well as solid waste facility leachate pollution.
 - to eliminate or significantly reduce – with restrictions on timing, conditions, and residuals management – the open burning of household solid waste.

- require groundwater monitoring and safe disposal of Coal Combustion By-Product (CCB/coal ash) at non-utility facilities not covered by the federal CCB rule
- Update hazardous waste regulations to require better documentation by hazardous waste generators.
- Conduct a robust analysis of existing and potential pollution “hot spots” and their location relative to environmental justice communities, per the December, 2018 recommendation of the Advisory Council on Environmental Justice.

While DEQ has broad authority in some areas of environmental protection, Virginia state law has not kept up with emerging pollution challenges and related threats to public health and the economy. Additionally, many of DEQ’s fee schedules are set in Code and have not been updated in years, eroding the agency’s ability to provide consistently high quality and timely service to permit holders and applicants, as well as its capacity to ensure compliance with permit conditions. OSNR recommends that the Administration pursue the following legislative actions to help advance DEQ’s mission:

- Convene a stakeholder group to discuss amending the State Water Control Law to allow DEQ to pursue designation of Virginia’s portion of the Chesapeake Bay as a “No Discharge Zone” under the U.S. Clean Water Act. This would prohibit the discharge of minimally-treated sewage from vessels into the Bay, eliminating a source of bacteria and nutrient pollution that has significant public health implications.
- Convene a stakeholder group to discuss expanding the Chesapeake Bay Preservation Act to apply to the entire Bay watershed, not just Tidewater Virginia localities. This change would provide significant reductions in nutrient and sediment pollution and is already included in Virginia’s draft Phase III Watershed Implementation Plan under the Chesapeake Bay Program.
- Amend the Code of Virginia to provide enforcement authority and penalties for non-reporting of surface water withdrawals. DEQ estimates unreported withdrawals account for 20 percent or more of the total water withdrawn from watersheds during critical periods, undermining water conservation efforts.

- Amend the Code of Virginia to give DEQ clear authority to regulate unpermitted open dumps and recover costs for cleanup of older (pre-permit) and abandoned landfills, which can pose significant risks to the environment and public health.
- Pursue legislation that would: allow periodic adjustments to maximum assessed penalties to keep up with inflation and allow assessments to include costs incurred due to enforcement action; increase the DEQ director’s unilateral administrative penalty authority and allow the use of stipulated (“if-then”) penalties across all media; provide “ticketing” authority to allow field-level enforcement of relatively minor environmental violations; and institute stop work order authority across all media.

Improving public engagement

EO-6 called on DEQ to identify ways in which it could improve outreach, communications, and information sharing with members of the various communities impacted by its programs. Stakeholder meetings, along with the recommendations of the Governor’s Advisory Council on Environmental Justice, have reinforced that call. DEQ must be better equipped to engage with the communities it serves and make information about its programs and decisions more easily accessible to the public. OSNR recommends enhancing public engagement efforts at DEQ, specifically:

- Develop a Stakeholder Communications and Engagement Plan to enhance communications efforts and identify ways to effectively reach more people.
- Establish, under the DEQ communications director, community outreach coordinators at each of DEQ’s six regional offices. These individuals would be responsible for active outreach to communities and stakeholders within their regions to ensure DEQ is implementing its programs transparently, communicating with the public on a consistent basis, and addressing environmental justice concerns.
- Establish live streaming for DEQ public hearings, public meetings, and board meetings so that people unable to physically attend meeting are able to watch proceedings.
- Update public outreach materials and presentations to make them clearer and more understandable to the public, and contract for Spanish interpretation and translation of those material as well as meeting transcripts, public notices, and other DEQ content when appropriate.

- Develop and implement strategies to make permit documents more accessible for public review, including by posting searchable, downloadable documents online; provide information that is easier for the public to understand during key stages of the permitting process; and ensure that impacted communities – especially environmental justice communities – are being reached prior to regulatory action.
- Improve accessibility and functionality of DEQNet (DEQ’s internal website) to facilitate staff’s ability to locate information and share it with the public as appropriate in a timely manner. This will vastly improve DEQ’s responsiveness to constituent requests and questions.
- Increase DEQ’s ability to engage with the public over social media. This would allow the agency to run a more robust and responsive communications program and better engage the public and a new generation of stakeholders.
- Appoint an ombudsperson to focus on answering constituent questions directed to headquarters and identifying trending or sensitive topics for agency leadership.

Increasing efficiency and responsiveness in permitting

EO-6 recognizes that DEQ must be fully functioning in order to protect environmental resources that are vital to our economy, but also that a fully functioning DEQ is necessary to keep our economy growing through timely and consistent review of permit applications. Backlogs continue to grow at the agency, and timelines get longer, because existing resources are inadequate to hire enough qualified people to review and process complex environmental permits. In addition, some permitting programs need updates to function more efficiently. OSNR recommends identifying additional resources to improve efficiency and responsiveness in permitting at DEQ, specifically:

- Simplify Virginia Stormwater Management Program regulations by removing Best Management Practice design specification and including instead a simpler methodology for reducing stormwater runoff (definitions and equations for the Virginia Runoff Reduction method).
- Hire outside contractor to assist in stormwater plan reviews to reduce backlog and ensure through review of projects with the greatest environmental risk.

- Add staff to process permits for land application of biosolids from wastewater treatment plants. Over-application of biosolids can have significant water quality and public health impacts and DEQ never received adequate resources to run this program after it was transferred from the Department of Health in 2009.
- Create a DEQ central office position to provide permitting guidance and consistency review for the Virginia Pollution Discharge Elimination System program, where scientifically and technically complex regulations and permit requirements can create delays and inconsistencies.
- Ensure adequate staff and reliable function of modeling tools necessary to support groundwater and surface water withdrawal permitting programs. Completion of these analyses is time consuming and downed/subpar systems can delay permitting
- Increase capacity to meet review and issuance timeframes for groundwater withdrawal permits. Current staffing levels are inadequate to process permits in a timely manner.

OSNR also recommends the following legislative actions to improve permitting programs:

- Restructure the water withdrawal permit fee program and clarify DEQ’s authority related to “grandfathered” facilities in the water withdrawal program.
- Pursue legislation to increase Virginia Pollutant Discharge Elimination System permit fees to cover a larger proportion of program costs and reduce permitting backlog.
- Amend the Code of Virginia to allow DEQ to administratively withdraw Virginia Water Protection (wetlands permit) permit applications due to lack of timely response from permit applicants. This would speed up permitting by incentivizing permit applicants to provide DEQ with additional information necessary to process permits, while also allowing DEQ to “clear the books” of inactive permit applications without going through the lengthy permit denial process.
- Amend the Code of Virginia to define “de minimis” impacts from construction stormwater based on risk of impacts to the environment and evaluate options for

managing projects with such impacts. This will allow DEQ to focus more in-depth plan reviews on projects with significant environmental risks.

- Pursue legislation allowing DEQ to charge fees for CO2 pollution (as it does for other air pollutants) to help fund monitoring, compliance, enforcement, and permitting for the air program.
- Seek legislation to update solid waste permit fees to cover a larger proportion of program costs, reduce permitting backlog, and increase permitting staff in regional offices.

IV. Conclusion

The recommendations outlined in this report certainly do not address every funding need or request for authority identified by DEQ, nor do they include every stakeholder suggestion. They do, however, represent what I believe is necessary to revitalize and modernize DEQ in a way that will meet your stated objectives. With these additional resources and authorities, and a new focus on public engagement and environmental justice, DEQ will be positioned to ensure protection of Virginia's environment now and into the future.