

REPORT OF THE

STATE WATER COMMISSION

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



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COMMONWEALTH OF VIRGINIA

RICHMOND

2020

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STATE WATER COMMISSION EXECUTIVE SUMMARY

Background and Deliberations

The State Water Commission (the Commission) is a 15-member legislative body established by statute that is charged with (i) studying all aspects of water supply and allocation problems in the Commonwealth, (ii) coordinating the legislative recommendations of all state entities that have responsibilities with respect to water supply and allocation issues, and (iii) annually reporting its findings and recommendations to the General Assembly and the Governor. In 2019, the Commission met twice and heard testimony regarding flooding in the Southern Rivers Watershed of Virginia Beach, drought cycles, work on combined sewer overflow outfalls in Alexandria, perfluoroalkyl and polyfluoroalkyl substances (PFAS) as emerging contaminants, the "flash drought" of 2019, and work on Dominion Energy coal ash ponds.

Meeting of May 7, 2019

The Commission held its first meeting of the interim in Richmond on May 7, 2019. The meeting began with opening remarks by Delegate Thomas C. Wright, Jr., Chairman. The agenda included presentations on (i) wind tides and flooding in the Southern Rivers Watershed of Virginia Beach, (ii) cycles of drought and excess water in Virginia, and (iii) the operation of Alexandria Renew Enterprises (AlexRenew), which is addressing legal requirements placed on four combined sewer overflow outfalls in Alexandria.

Wind Tides and Flooding in the Southern Rivers Watershed of Virginia Beach Dr. Brian Batten, Dewberry

Dr. Batten provided an overview of the coastal resilience planning of the City of Virginia Beach as it relates to the Southern Rivers Watershed. Wind tides in Back Bay cause flooding in the southern portions of the city and, although the Great Bridge Lock may have some effect on the flooding level, computer modeling shows that the effect is not substantial. Dr. Batten described potential strategies to reduce flooding, including the creation of an "inlet cut" into Back Bay.

Is Virginia Getting Wetter? Drier? Or What?

Karen C. Rice, Ph.D., Research Hydrologist, Virginia-West Virginia Water Science Center, USGS Research Faculty, University of Virginia

Dr. Rice discussed a variety of topics related to cycles of drought and excess water in Virginia over the last several decades, including the water cycle, stream flow, the occurrence of 100-year floods, and stream water temperature change. Although some increases in annual precipitation since 1980 can be detected, these increases are not

statistically significant. The main conclusion that Dr. Rice expressed is that all long-term measures of water in Virginia are subject to variability.

RiverRenew Program Update

Karen L. Pallansch, CEO, Alexandria Renew Enterprises

Ms. Pallansch provided an overview of the operation of Alexandria Renew Enterprises (AlexRenew), which operates the wastewater treatment facility in Alexandria and took over four combined sewer overflow outfalls in 2018 in order to address requirements imposed by Chapters 826 and 827 of the Acts of Assembly of 2017. AlexRenew's project, which it calls RiverRenew, aims to contract a design-build contractor by December 2020 to construct several tunnels under the city. This will resolve the issue of sewage that overflows from the system and drains into the Potomac River during rain events by diverting the sewage to the tunnels. AlexRenew anticipates a four-year construction period but awaits word from the construction industry as to whether the goal of completion by 2025 can be achieved.

Meeting of December 2, 2019

The Commission held its second meeting of the interim in Richmond on December 2, 2019. The meeting began with opening remarks by Senator Frank M. Ruff, Jr., Vice-Chairman, presiding. The agenda included presentations on (i) perfluoroalkyl and polyfluoroalkyl substances (PFAS), (ii) the "flash drought" that occurred in Virginia during the fall of 2019, and (iii) the work being carried out by Dominion Energy to address a number of coal ash ponds pursuant to Chapters 650 and 651 of the Acts of Assembly of 2019 (HB 2786 and SB 1355).

Breaking Down PFAS as an Emerging Contaminant

Brent Alspach, Director of Applied Research, Arcadis

Mr. Alspach provided an overview of PFAS, a group of man-made chemicals that are persistent organic pollutants. The major vectors for exposure to PFAS and related chemicals include Teflon, which contained one of the chemicals at issue until 2013, and drinking water. While a database of public water systems shows only two sites in Virginia where PFAS have been detected, there is no comparable data for wastewater treatment facilities. PFAS are not easy to remove from water, and there is no national standard for an acceptable level of PFAS that can be used in enforcement, he said.

Drought Update: Flash Drought in Virginia – 2019

David K. Paylor, Director, Virginia Department of Environmental Quality

Mr. Paylor discussed the drought that struck the Commonwealth between August and October 2019. This was a "flash drought," he said, a combination of a lack of rain and a period of sunny weather and extreme heat that drew moisture out of the soil. By the beginning of October, most of the state was abnormally dry and some parts were in

extreme drought. The effect on agriculture was widespread, and the James and Potomac Rivers were under low-flow alerts for drinking water. Unlike in droughts of 2002 and earlier, the state now has a task force to monitor drought conditions and issue advance warnings.

Coal Ash Update

Mark Mitchell, V.P. Generation Construction, Dominion Energy

Mr. Mitchell provided an overview of the work being carried out by Dominion Energy pursuant to Chapters 650 and 651 of the Acts of Assembly of 2019 (HB 2786 and SB 1355). The new laws affect four power stations that include a total of 11 coal ash ponds. The coal ash in those ponds is being consolidated into five landfills. As required, Dominion is planning to reuse at least 25 percent of the coal ash, he said, and it has put out a request for proposals seeking a company that can reuse large volumes of ash and avoid fluctuations in market conditions. Not every coal ash pond lends itself to recycling, and Dominion is still considering its options for some ponds that are more difficult to access, Mr. Mitchell said.

Conclusion and Recommendations

The Commission did not make a formal recommendation to the General Assembly.

Additional information about the State Water Commission's activities is available through its website at <http://dls.virginia.gov/commissions/swc.htm>.

Respectfully submitted,

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