SUMMARY OF THE MEETING OF THE
HRPDC REGIONAL ENVIRONMENTAL COMMITTEE
MARCH 6, 2025
THE REGIONAL BUILDING, 723 WOODLAKE DRIVE, CHESAPEAKE VA 23320

1. Summary of the February 6, 2025, Meeting of the Hampton Roads Regional Environmental Committee (REC)

The summary of the Regional Environmental Committee meeting held on February 6, 2025 was included with the agenda. There were no edits.

2. Microplastics

Dr. Meredith Sealey, VIMS, presented an overview of global plastic pollution, the sources of microplastic pollution in Hampton Roads, and the environmental effects of plastics and related stressors.

The origin of plastic pollution is closely tied to single-use plastics and waste mismanagement. The mismanagement of waste is overflowing garbage, debris lost in transit, and in the case of some poorer countries, no waste management systems at all. As plastics persist in the environment, they become fragmented and break into tiny pieces. This is caused by UV weathering, physical abrasion, wave action, ingestion and egestion by organisms, and microbial degradation. Microplastics are plastics less than 5mm in diameter. The sources of microplastics include clothing fibers, microbeads, paint abrasion, and tire wear. Microplastics are transported to waterways through stormwater systems and wastewater treatment effluent. It is often the additives to plastic that cause the biggest impacts to marine systems.

Dr. Sealey's lab combines environmental chemistry and biogeochemistry, ecosystem health, and public engagement to study marine pollution. They are looking at how environmental processes (i.e., weathering) and ecosystem stressors (i.e., ocean warming) cause contaminants and synthetic compounds to impact ecosystem health. They are studying how microplastics affect microbes in marine sediments and the fate and effects of tire wear particles in Hampton Roads. Dr. Sealey is interested in partnering with the localities for sample collection to better evaluate these sources.

The Committee members asked several questions of Dr. Sealey. The first question was whether plastic manufacturers provide funding for fate and transport research. She said they sometimes do; however, they prioritize funding recycling programs.

Another question was whether manufacturers are working on developing plastics that will degrade faster. Dr. Sealey answered that there is continuing research on engineering the next generation of polymers, and she questioned whether promoting faster degradation would be good for the environment.

A question was asked about alternatives to single-use plastics. Dr. Sealey said that there are compostable polymers, such as the material for bamboo cutlery, that can be composted but not in your backyard. They require high temperature and high pressure to break down. Some of the university dining halls in VA have these systems onsite.

Another question was raised about the potential for policy changes to manage the retread tire waste that is often seen on interstate highways. Dr. Sealey said that several west coast states are looking into legislative solutions.

One Committee member noted that it was frustrating that some countries, primarily China, are not managing their plastic waste, which causes problems on a global scale.

And the final question was whether traditional street sweepers are effective in collecting tire wear particles. Dr. Sealey answered yes, and the amount would depend on the type of roadway.

3. Coastal VA Offshore Wind Update

Mr. John Larson, Dominion Energy, began with an overview of Dominion Energy and their 2024 Integrated Resource Plan. The Plan illustrates their need for diversified sources of energy to keep pace with demand, which is significantly increasing. Alternative sources of energy, including: 1) solar, 2) offshore wind, 3) biomass, 4) natural gas, and 5) nuclear, all have strengths and weaknesses. Dominion Energy is pursuing all of them in the years to come.

While solar and wind generated 7 percent of Dominion's energy in 2024, by 2039, they will generate 35 percent. The Coastal Virginia Offshore Wind (CVOW) pilot project was the first offshore wind project installed in federal waters and the first owned by an electric utility. The two turbines generate 12 MW and began producing power in October 2020. The commercial scale project will generate 2,640 MW with 176 turbines and will cost $10.7B. The project is under construction and is expected to be finished at the end of 2026.

Mr. Larson highlighted a few other renewable energy projects Dominion has underway, including the Dulles Solar and Storage Project, which includes installing solar on Dulles property that is not slated for other uses. In 2026, it will generate 100 MW and store 50 MW. The Chesterfield Energy Reliability Center, which will provide reliable service during peak electric demand, will provide 1,000 MW using natural gas and fuel oil. It is anticipated to be in service in late 2028 or 2029. And finally, in 2027, there will be a liquid natural gas storage facility in Brunswick County at the Greenville Power Station that will be capable of powering more than 700,000 homes for four days.

Mr. Larson was asked if Dominion plans to expand the offshore lease area. The President recently signed an Executive Order that prevents new leases from begin signed; however, Dominion has already secured leases for other areas that are expected to move forward.

Another Committee member asked if local government should slow their approvals of data centers to allow Dominion more time to meet the requirements of the VA Clean Economy Act (VCEA). Mr. Larson noted that Dominion is well-positioned to meet the VCEA, however, he also stressed the importance of Americans being more conscience of their energy usage. He also suspects that over time hydrogen will become a more prominent source of energy.

There have been some challenges with respect to supply chain constraints, and one Committee member asked if the tariffs that are coming at the federal level will exacerbate

those challenges. Mr. Larson replied that they would, but he also noted that many of the parts come from Japan and South Korea, which have not yet been hit as hard by tariffs.

When asked if Dominion is interested in working with localities who are generating their own power, Mr. Larson said there is already a microgrid project underway in Suffolk. He stated that it was a solid option.

4. Legislative Update

HRPDC staff provided an overview of the bills that have passed the General Assembly and are waiting for action by the Governor. A handful of resilience bills were passed, including bills to: 1) create the Hampton Roads Coastal Resilience Program and Fund, 2) direct JLARC to study nonfederal match costs for coastal storm risk management studies, and 3) reestablish the Joint Subcommittee on Coastal Flooding. A few drinking water and wastewater bills were passed, including the companion bills for same day reporting of Waterworks anomalies and the Senate bill for updating local ordinance for rainwater harvesting. Amendments to the Dam Safety Act, which give authority to DCR and change some of the responsibilities of dam owners, were passed. The companion bills requiring certain projects have at least 8 percent of the labor hours performed by apprentices passed, and several local government associations are asking for exemptions for public projects. Both tree bills under consideration this session passed the General Assembly. The bill requiring wetlands be included in the VA Flood Protection Master Plan and the Coastal Resilience Master Plan and directing the creation of a policy task force passed. And finally, there are several planning bills that will be sent to the Governor's desk, including those considering accessory dwelling units and shortening the timeline for site plan review.

5. Regional Building Parking Lot Retrofit

Ms. Sunderland presented a summary of the retrofit of the HRPDC/HRTPO parking lot at the Regional Building. The features include traditional concrete instead of asphalt, Stormcrete porous concrete panels, sediment pretreatment, a bioretention basin, native plants, and recycled materials. Without losing any parking spaces, the parking lot now treats stormwater runoff, prevents downstream flooding, reduces the urban heat island effect, and provides pollinator habitat. Ms. Sunderland noted that the treatment train of permeable concrete and the bioretention basin have the storage capacity equivalent to over 600 rain barrels. If the retrofit design had included a stormwater retention pond instead, the size of the parking lot would have been reduced by at least 20 percent to accommodate a traditional stormwater BMP. While the construction is mostly complete, there are additional features that will be added, including four Level 2 electric vehicle charging stations, a customized bike rack, and educational signage. Ms. Sunderland said that while it is not practical to retrofit all urban parking lots, it does make sense to incorporate some stormwater practices to take better advantage of acres dedicated to parking especially when you consider that Hampton Roads has approximately 64,000 acres of "other impervious area" and needs about $10B in flood mitigation projects. Ms. Sunderland thanked several project partners, particularly DEQ for providing grant funds. After showing a time lapse video of the construction of the project, Ms. Sunderland shared a demonstration of the Stormcrete porous concrete panels and provided a walk-around tour for interested Committee members.