

REGIONAL COOPERATION IN STORMWATER MANAGEMENT

FISCAL YEAR 2020-2021

A STATUS REPORT

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Commission at its Executive Committee Meeting on October 15, 2020**

**Prepared by the staff of the
Hampton Roads Planning District Commission
in cooperation with the
Regional Stormwater Workgroup**

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REPORT DOCUMENTATION

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ABSTRACT

This document describes cooperative activities related to stormwater management undertaken by Hampton Roads local governments during Fiscal Year 2020-2021. The activities described include the regional information exchange process, public information and education, legislative and regulatory issues, cooperative regional studies and related programs. This document is used by the region's eleven localities with municipal stormwater permits to assist them in meeting their permit requirements.

ACKNOWLEDGMENTS

The Hampton Roads Planning District Commission, in cooperation with the Regional Stormwater Workgroup, prepared this report.

Preparation of this report was included in the HRPDC Unified Planning Work Program for FY 2020-2021, approved by the Commission at its Executive Committee Meeting of October 15, 2020.

The seventeen-member local governments through the HRPDC Regional Stormwater Management Program provided funding.

INTRODUCTION

Working through the Hampton Roads Planning District Commission (HRPDC), the region's seventeen-member cities, counties, and town (Figure 1) cooperated on a variety of stormwater management activities during Fiscal Year 2020-2021. This cooperative effort has been underway as a formal adjunct to the Virginia Pollutant Discharge Elimination System Permits (VPDES) for Municipal Separate Storm Sewer Systems (MS4) held by the Cities of Chesapeake, Hampton, Newport News, Norfolk, Portsmouth and Virginia Beach since Fiscal Year 1995-1996. The Cities of Suffolk, Poquoson, Williamsburg, and the Counties of James City County, Isle of Wight, and York joined in 2002 to coordinate Phase II MS4 permit applications. Cooperative activities documented in this report represent a continuation of an ongoing effort, which has involved concerted activity since 1992.

As of April 19, 2016, the Phase II MS4 permit for Isle of Wight County was terminated by the Department of Environmental Quality (DEQ). It was determined that the County does not own or operate a MS4 within the Census Urbanized Area.

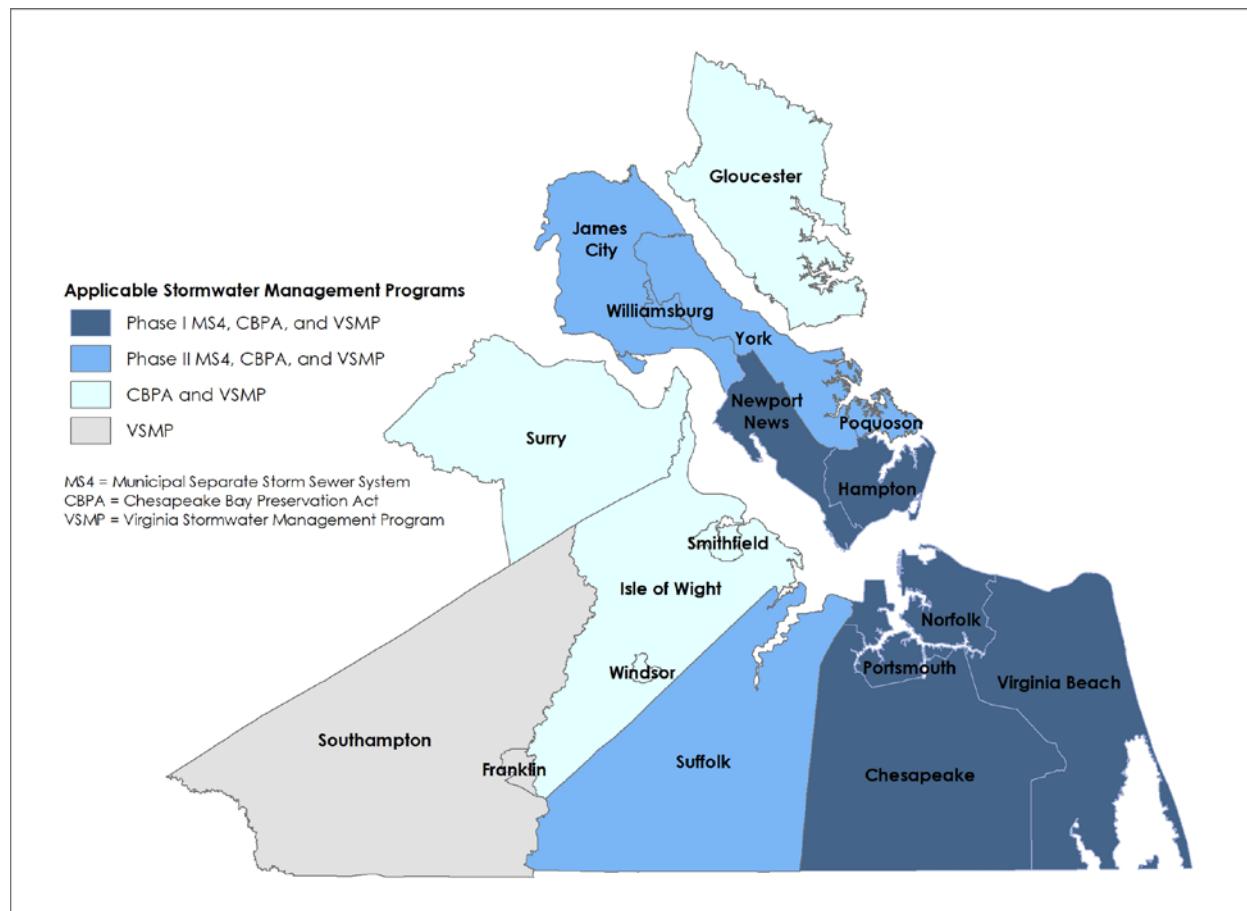


Figure 1

REGIONAL STORMWATER MANAGEMENT PROGRAM GOALS

The HRPDC and local stormwater staffs undertook a comprehensive effort in FY 1998-1999, called the Regional Loading Study. The project included developing a set of regional stormwater management goals to guide the regional program. The goals were presented to and adopted by the HRPDC at its Executive Committee Meeting in September 1999. They were reaffirmed in the January 2003 approval of the “Memorandum of Agreement (MOA) Establishing the Hampton Roads Regional Stormwater Management Program” and the renewal of the MOA in 2008, 2013, and 2018. The adopted Regional Stormwater Management Program Goals, which guide the regional program, are:

- Manage stormwater quantity and quality to the maximum extent practicable (MEP).
 - Implement best management practices (BMPs) and retrofit flood control projects to provide water quality benefits.
 - Support site planning and plan review activities.
 - Manage pesticide, herbicide and fertilizer applications.
- Implement public information activities to increase citizen awareness and support for the program.
- Meet the following needs of citizens:
 - Address flooding and drainage problems.
 - Maintain the stormwater infrastructure.
 - Protect waterways.
 - Provide the appropriate funding for the program.
- Implement cost-effective and flexible program components.
- Satisfy VPDES stormwater permit requirements.
 - Enhance erosion and sedimentation control.
 - Manage illicit discharges, spill response, and remediation.

THE REGIONAL PROGRAM

The Regional Stormwater Management Program initially focused on activities that supported the permit compliance efforts of the six communities with Phase I VPDES MS4 Permits, technical assistance to the region’s non-permitted communities and regional education and training to support all of the communities. The program has expanded to include the needs of the five communities with Phase II VPDES MS4 permits and the development of locally administered Stormwater Programs which were required starting July 1, 2014.

COVID-19

Beginning in March 2020 and continuing into FY 2021, the Hampton Roads localities experienced the impacts of the COVID-19 pandemic. Local staff adapted their operations to protect the health of their employees and their communities while continuing to provide services and meet regulatory requirements. As of June 2021, several localities have reopened their buildings to the public and have resumed traditional operations. The remaining localities have plans to do so within the next couple of months.

The Regional Stormwater Management Program has also been impacted by COVID-19, most notably by HRPDC staff hosting regular meetings of the Regional Stormwater Workgroup and the Regional Environmental Committee, using virtual platforms rather than meeting in person. Sharing new information, resources, and lessons learned continues to be valuable.

Phase I MS4 Permittees

The current Phase I MS4 permits became effective on July 1, 2016. FY 2021 represents the fifth year of the five-year permit cycle. This year, the Phase I permittees were focused on developing their permit reapplication packages, including drafts of their second Bay TMDL Action Plans, which require a 35% reduction of nutrients and sediments. The Phase I MS4 permits were administratively continued.

Phase II MS4 Permittees

The Phase II General Permit was reissued on November 1, 2018. FY 2021 represents the third year in the permit cycle. This year, permittees prepared TMDL Action Plans for all of the local TMDLs that were approved by the USEPA after July 1, 2013 and before June 30, 2018 for which they have an assigned waste load allocation.

Both the Phase I and Phase II permittees continue to implement their local Stormwater Programs, train staff on stormwater issues, and meet education and outreach requirements. HRPDC staff provided information and coordinated trainings to assist with these efforts. More detailed descriptions are available in the *Training* section of this report. The regional environmental education campaign, askHRgreen.org, conducted stormwater outreach campaigns for pet waste pickup, proper lawn maintenance, and the benefits of washing cars using a commercial carwash.

INFORMATION EXCHANGE

The cornerstone of the Regional Stormwater Management Program continues to be the exchange of information. This is accomplished through regular monthly meetings to address topics of regional importance, as well as crosscutting issues that affect local stormwater, planning, public works and public utilities staff. In addition, various agencies and organizations utilize this regional forum to engage and inform local governments, as well as to gather feedback.

Regional Environmental Committee

The seventeen communities participate in the HRPDC Regional Stormwater Management Program and their staffs meet regularly. The HRPDC Regional Environmental Committee meets monthly and includes local stormwater and planning staff plus cooperating agencies such as the DEQ, the Virginia Department of Forestry (VDOF), the Virginia Department of Transportation (VDOT), the Hampton Roads Sanitation District (HRSD), the Port of Virginia, local nonprofit organizations, and local consultants.

Representatives of state and federal agencies frequently brief the Committee on developing issues, regulatory guidance and technical programs. In February 2021, the Committee was briefed by Ms. Amanda Clayton of NASA who provided an overview of the applied sciences capacity building program called DEVELOP. Several state agency representatives, including those from DEQ, DCR, the Virginia Institute of Marine Science, and the Virginia Coastal Policy Center presented on topics including the updated version of the *ConserveVirginia* tool, local air monitoring studies, and Commercial Property Assessed Clean Energy (C-PACE) funding.

Regional Stormwater Workgroup

The Regional Stormwater Workgroup typically meets monthly, and the meetings provide an opportunity for local stormwater managers to exchange information about successful program activities, utility structures and policies, and technical challenges. The Workgroup serves an advisory role to the Regional Environmental Committee.

During FY 2021, the Workgroup focused on the updated Bay TMDL Action Plan guidance memo, the nonpoint source nutrient trading regulations, the Lower James and Elizabeth River PCB TMDL, updates from the Chesapeake Bay Program, and the Stormwater Local Assistance Fund. More information on these policy initiatives is included in the Regional Studies section of the report.

Regional Chesapeake Bay Preservation Act Workgroup

Fifteen of the seventeen HRPDC member localities implement Chesapeake Bay Preservation Area (CBPA) programs, many of them since 1990. DEQ has completed compliance reviews of the region's local programs every five years since they were initiated. The Workgroup serves an advisory role to the Regional Environmental Committee.

The Regional CBPA Workgroup met several times during FY 2021, including in July, October, January, February, April, May, and June. While the Workgroup covered topics such as phragmites management, public outreach, and training for local Bay boards, they were primarily focused on the proposed amendments to the CBPA Designation and Management Regulations and the revisions to the Tidal Wetlands guidelines. More information is presented in the Policy Monitoring section of this report.

Regional Water Quality Technical Workgroup

The objectives of the Water Quality Technical Workgroup are to discuss technical aspects of

restoration projects, discuss research and development of stormwater management strategies, help set regional priorities for approval of BMPs for the Bay TMDL, identify needs for local TMDLs, and develop research priorities for filling data gaps. Meetings are open to the public. The Workgroup serves an advisory role to the Regional Environmental Committee.

In FY 2021, meetings were held quarterly. HRPDC staff hosted presenters from Contech Engineered Solutions, Inc., Whitman, Requardt & Associates, the Delaware Department of Natural Resources and Environmental Control, the University of Maryland – Baltimore County, and Old Dominion University over the course of the year. The featured topics included manufactured treatment devices in the Coastal Plain, the City of Norfolk's street sweeping monitoring program, the role of trees in stormwater management, PCBs, and submarine groundwater discharges.

PUBLIC EDUCATION

askHRgreen.org

The HR STORM committee, consisting of local stormwater education/public information staff, was established in 1997 to support development and operation of the stormwater education program. Beginning in FY 2011, the HRPDC environmental education programs were combined into a single public awareness program and central resource for environmental education in Hampton Roads known as *askHRgreen.org*.

The stormwater education subcommittee of *askHRgreen.org* continues to meet on a monthly basis to develop strategies to fulfill the outreach requirements of the Phase II MS4 General Permit and many of the outreach objectives of the individual Phase I MS4 permits. During FY 2021, the subcommittee took on a variety of activities, including production of a webinar targeted to homeowners showcasing rain-wise landscaping, a sidewalk messaging campaign to prevent illicit discharges, and a cigarette litter prevention campaign. The activities conducted through the *askHRgreen.org* campaign for the year are summarized in the *askHRgreen.org* Annual Report.

TRAINING

Since 2004, HRPDC staff has worked with the MS4 permittees to develop and facilitate stormwater and resiliency training programs for local government staff.

Webcast Subscription

Over the last several years, the Stormwater Managers have found the Center for Watershed Protection (CWP) webcast series to be useful and informative. After the COVID-19 safe-at-home directive in March 2020, CWP permitted webcast subscribers to share the log-in information with up to 20 colleagues, recognizing that many subscribers typically view the webcasts in groups. For 2021, CWP changed their membership options. The Regional Stormwater Workgroup decided to purchase a group membership that permits an unlimited

number of local government staff to become members of CWP. Benefits of membership include access to the webcast series, access to lunch-and-learn presentations, and conference discounts. HRPDC staff manages the group membership and the Hampton Roads localities are able to take advantage of a group membership rate.

The CWP webcasts during FY 2021 covered topics of interest including: 1) illicit discharge, detection, and elimination programs, 2) watershed modeling, 3) pollution prevention techniques, and 4) TMDL implementation.

Online Training Resources

Due to concerns associated with COVID-19, several organizations shifted their training delivery methods from in-person workshops to webinars. HRPDC staff began compiling information about these resources in one place to help Regional Stormwater Workgroup members take advantage of the opportunities. Each week throughout FY 2021, HRPDC staff distributed a complete list of online training events that included the provider, the schedule, the cost, and the registration links.

Virtual Workshop - Manufactured Treatment Devices in the Coastal Plain

The HRPDC partnered with Contech Engineered Solutions, Inc. (Contech ES) for a virtual workshop, “Designing for the Coastal Plain: What Manufactured Treatment Devices (MTDs) Can Do for You” on September 3, 2020. The agenda featured a panel discussion with Mr. Mike Barbachem of Whitman Requardt & Associates, Mr. Tim Stromberg of Stromberg/Garrigan & Associates, and Mr. Yuya Ishizuka of Contech ES. The workshop also included two presentations from Contech ES addressing MTD standards and evaluation as well as MTD maintenance issues. The workshop was well-received and was attended by 42 representatives of local governments, consultants, and state agencies.

POLICY MONITORING

This element of the program involves monitoring state and federal legislative and regulatory activities that may impact local stormwater management programs. HRPDC staff in cooperation with the Committee develops consensus positions for consideration by the Commission and local governments. The level of effort devoted to this element has increased significantly over the years. During FY 2021, the regional emphasis was on the revisions to the Chesapeake Bay Action Plan guidance memo, the amendments to the CBPA regulations, and the nonpoint source nutrient trading regulations. For each issue, HRPDC staff provided updates to the Regional Stormwater Workgroup or the Regional Environmental Committee, collected input, and often submitted comments on behalf of the Region.

Chesapeake Bay TMDL Action Plan Guidance

During FY 2020, the DEQ provided a draft of the revised Chesapeake Bay TMDL Action Plan guidance to a small group of stakeholders for a fatal flaw review. Before publishing the draft in the Virginia Register, the DEQ wanted to determine whether it would be met with claims that it

was not guidance and was regulatory in nature. HRPDC, VAMSA, the Northern Virginia Regional Commission, and several MS4 permittees were invited as part of the small stakeholder group. Though the stakeholders did not advocate for making the guidance regulatory, there were several concerns that were raised, including: 1) credit guarantees from the first permit cycle, 2) crediting for septic system conversions to sanitary, 3) street sweeping crediting, and 4) baseline requirements for retrofit projects beyond the MS4 service area. The HRPDC submitted written comments explaining these concerns to the DEQ.

The guidance was published in the Virginia Register on December 7, 2020, which initiated a 30-day public comment period. The DEQ had incorporated some of the requested changes from the first letter. For example, the credits for septic connections were preserved and accommodations were made in preserving previously used BMP efficiencies. However, there were remaining concerns, and the HRPDC submitted a subsequent letter describing the following: 1) street sweeping and credit preservation, 2) baseline requirements, 3) advocating for permittees to be able to submit their own BMP efficiency data, and lastly, 4) that the regulation not the guidance should determine when a permittee resubmits an Action Plan.

The DEQ finalized the guidance on February 6, 2021, which reflected a few changes. Rather than requiring permittees to update their Action Plans, the language was revised to recommend an update. Although clarification language was added regarding street sweeping, permittees are still required to follow the 2016 Expert Panel crediting methods after June 30, 2022. Language was added that allows credit for BMPs in the CBPA after baseline requirements are met. Some changes were also made for stream restoration crediting related to baseline crediting and references to updated protocols.

Virginia Erosion and Stormwater Management Program Regulations

The DEQ convened a Regulatory Advisory Panel (RAP) to develop regulations in response to the 2016 consolidated law, the Virginia Erosion and Stormwater Management Act (VESMA). The intention was to develop a combined regulation that is easier to follow but does not change the technical requirements of the existing Erosion and Sediment Control and Stormwater Management regulations. HRPDC staff serves on the RAP, which met five times between June 2019 and December 2019. DEQ had intended to provide a comprehensive draft of the consolidated regulation for RAP members to review prior to the next meeting. The date of the next meeting has not been set, and the RAP has yet to receive a draft of the regulation. HRPDC staff will continue to participate in the RAP and provide regular updates.

Virginia Nutrient Trading Regulations

In 2012, the Virginia General Assembly passed legislation requiring the State Water Control Board (SWCB) to adopt regulations for the certification of nonpoint source nutrient credits. Nonpoint credits include credits generated from agricultural and urban stormwater BMPs, management of animal feeding operations, land use conversion, stream or wetlands restoration, shellfish aquaculture, and other established or innovative methods of nutrient control or removal. With this regulation, Virginia's trading program now involves the following

types of exchanges: 1) between point sources, 2) from point to nonpoint sources, and 3) from nonpoint sources to point or nonpoint sources. This expanded trading program is part of the overall goal of meeting the reductions assigned by the Chesapeake Bay TMDL.

The regulation establishes the process for the certification of nonpoint source nitrogen and phosphorus nutrient credits and assure the generation of the credits. The regulation includes application procedures, baseline requirements, credit calculation procedures, release and registration of credits, compliance and reporting requirements for nutrient credit-generating entities, enforcement requirements, application fees, and financial assurance requirements.

The regulation was in development for several years. From FY 2013 to FY 2017, HRPDC staff served on the RAP established to assist the DEQ in developing the certification regulations. The DEQ proposed the regulations for public comment in the Virginia Registrar on December 29, 2014. The HRPDC submitted comments to the DEQ in March 2015 that: 1) supported the definition of management area, 2) requested a public hearing be held for nutrient certification requests, 3) asked for clarification of credits purchased within MS4s by private parties, and 4) suggested revisions to ensure that the regulations are protective of local water quality.

In FY 2016, the DEQ reconvened the RAP to discuss “Innovative Practices, Perpetual Nutrient Credits/Permanence, Stream Restoration/Mitigation Banking, and Term Nutrient Credits” based on the number of comments received during the public comment period.

In FY 2017, the RAP met in April to discuss a list of issues that failed to reach consensus. It was anticipated that a revised regulation would go out for public comment later that year.

The Governor approved the draft regulation, and it was published in the Virginia Register on April 15, 2019 for comment. The HRPDC submitted comments that: 1) requested clarification that baseline conditions must be met within the MS4 service area before credits could be generated, 2) requested flexibility for VSMP Authorities to require credits be secured upstream of the discharge to protect local water quality, and 3) supported requiring credit applicants to verify that their projects comply with local ordinances.

The new regulations were published in the Virginia Register and became effective on September 1, 2020. However, the section detailing the impact of local water impairments on credit exchanges (9VAC25-900-91) was deferred by the SWCB. The Board directed DEQ to convene a stakeholder group to develop a Local Water Quality Protection guidance memo to provide instructions for how to implement section 91. Even though the deferred section became effective on January 1, 2021, the guidance is still under development.

The stakeholder group for the Local Water Quality Protection guidance met six times during FY 2021. The members include representatives of the Chesapeake Bay Foundation, the developers, local government, VDOT, and DEQ. The draft guidance memo includes credit use scenarios using DEQ’s Nutrient Data Viewer. It is unclear if the stakeholder group will meet

again or if DEQ will move forward and publish the guidance memo for the required 30-day comment period. HRPDC staff will continue to follow the development of the guidance and provide reports to the Stormwater Managers.

Virginia's Phase III Watershed Implementation Plan for the Chesapeake Bay TMDL

The EPA established the Chesapeake Bay TMDL on December 29, 2010 that included a Phase I Watershed Implementation Plan (WIP) developed by Virginia that outlined the statewide strategies that would be implemented by each source sector to achieve TMDL compliance. In March 2012, Virginia submitted its final Phase II WIP to EPA that outlined the management actions that will be implemented by local governments. The HRPDC participated in both efforts on behalf of the local governments and submitted regional input for the Phase II WIP entitled, *Hampton Roads Regional Planning Framework, Scenario, and Strategies*.

In FY 2015, Virginia began the development of the Phase III WIP with the establishment of the Chesapeake Bay Stakeholder Advisory Group. HRPDC staff continues to participate in the Stakeholder Advisory Group and attended the October, May, and August meetings held in FY 2021.

In FY 2019, DEQ contracted with the planning districts in the Bay watershed to develop strategies for reducing nitrogen and phosphorus loads (known as local area planning goals) in the unregulated developed, natural, and septic sectors. After multiple stakeholder meetings, the HRPDC submitted a BMP input deck and a table of programmatic actions as part of the contract with DEQ. The regional BMP input deck included the numbers of acres of BMPs such as shoreline management, tree planting, septic pump-out, bioretention basins, dry ponds, etc. that the Hampton Roads localities proposed to implement before 2025. The programmatic actions represent a list of recommendations that would facilitate BMP implementation or help the Commonwealth achieve local area planning goals. Many actions addressed deficiencies in state funding, technical assistance, and reporting gaps.

The DEQ released the draft Phase III WIP in April 2019 and initiated a formal public comment period. The HRPDC supports several of the initiatives that were included in the WIP, such as Virginia's commitment to three full five-year MS4 permit cycles, the development of a State Lands WIP, and the pursuit of adequate funding for SLAF. The region submitted a formal comment letter with several recommendations, including: 1) formalize a State Lands WIP in the Chesapeake Bay modeling tool, CAST, 2) expand access to the Virginia Conservation Assistance Program to all residents in the Bay watershed, 3) enhance BMP reporting, 4) explain why additional nutrient reduction targets were assigned to the James River, when those reductions are 1/6 as effective as pounds reduced in other basins, 5) prioritize projects in the James River for Water Quality Improvement Funds (WQIF), 6) reduce the goals for tree canopy expansion to a realistic target, 7) align state funding priorities with Phase III WIP goals, and 8) revise the numeric reductions on climate change impacts and shift to an adaptive management approach.

After review by the EPA, the Commonwealth finalized the Phase III WIP in August 2019. The

Final version included new state initiatives, such as advanced oyster restoration efforts, increased conservation efforts, a commitment to the State Lands WIP, and re-evaluation of the Bay TMDL Action Plan guidance.

During FY 2021, the Commonwealth completed the State Lands WIP and finalized the updated version of the Bay TMDL Action Plan guidance.

CBPA Designation and Management Regulations

Chapter 1207 of the 2020 Acts of Assembly amended the Chesapeake Bay Preservation Act (Bay Act) to include “coastal resilience and adaptation to sea level rise and climate change” and “the preservation of mature trees or planting of trees as a water quality protection tool and as a means of providing other natural resource benefits” to the criteria requirements for use by local governments in granting, denying, or modifying requests to rezone, subdivide, or use and develop land in CBPAs. Adding these new criteria necessitated updates to the CBPA Designation and Management regulation. The regulatory revisions were exempt from the traditional Notice of Intended Regulatory Action and Regulatory Advisory Panel process in accordance with the provision.

The DEQ published proposed amendments to the regulations on February 1, 2021, which initiated the 90-day public comment period. Given the complexity of adding coastal resilience provisions to the water quality-focused CBPA regulations, HRPDC staff coordinated with the Regional Environmental Committee, the Regional CBPA Workgroup, the Coastal Resiliency Committee, the Planning Directors, the Chief Administrative Officers, and the Commission to develop an extensive comment letter. The priority concerns included: 1) a request for additional stakeholder engagement and 2) a need for clarification on the requirements for the assessment of climate change impacts.

As directed by the State Water Control Board, the DEQ convened a stakeholder group to discuss the more than 300 public comments received. HRPDC staff served on the stakeholder group, which met one time on May 13-14, 2021.

The DEQ released a revised draft of the proposed amendments on June 7, 2021 and presented them to the State Water Control Board on June 29, 2021. The revised language was much improved from the first draft; however, some concerns about the definition of adaptation measures and how to best assess storm surge on individual lots remain. The Board approved the draft and will soon publish the final regulatory amendments in the Virginia Register. Localities will have three years from the effective date to implement the changes to their programs. The DEQ has a grant to work with the Virginia Institute of Marine Science and the Virginia Coastal Policy Center to develop guidance and HRPDC staff will participate in the stakeholder discussions.

Tidal Wetlands Guidelines

The 2020 Tidal Wetlands Act established living shorelines as the default approach to shoreline management unless the “best available science” indicates the site is not suitable for such methods. The Act also directed the Virginia Marine Resources Commission (VMRC) to update their 1993 Tidal Wetlands Guidelines. VMRC first held three workshops during the fall of 2020 to solicit input from stakeholders on how best to incorporate the new provisions, and then, they published a draft of the revised guidelines in March 2021 for public comment. After discussions with the Regional Environmental Committee and the Regional CBPA Workgroup, HRPDC staff submitted a comment letter to the VMRC highlighting the following concerns: 1) the need to account for existing site conditions when determining whether a site is suitable for a living shoreline approach, 2) a request for additional coordination between the VMRC and DEQ to better align the tidal wetlands and CBPA programs, 3) clarification on what constitutes the “best available science”, 4) clarification on whether the specific criteria for projects other than shoreline protection strategies are still useable even though they were removed from the revised guidelines, and lastly, 5) a request to remove the requirement for local wetlands boards to work with an applicant to help reduce the cost of their living shoreline project.

The final Tidal Wetlands Guidelines were approved at the May 25, 2021 VMRC meeting. Several regional comments were incorporated and the changes made were positive overall. During the public hearing, HRPDC staff requested for VMRC to reevaluate the guidelines after a year to ensure that projects are designed as intended using the new provisions.

Water Quality Management Planning Regulation

The Water Quality Management Planning Regulation sets effluent limits for wastewater treatment plants, which are routinely reevaluated. The DEQ established a RAP in FY 2020 to evaluate: 1) the distribution of waste load allocations (WLAs) for industrial and municipal dischargers, 2) any changes in WLAs that must be made as a result of the James River chlorophyll *a* study, and 3) the potential for floating WLAs for James River wastewater treatment plants. The SWCB approved the resulting regulation at their December 9, 2020 meeting, which included the floating WLAs for treatment plants in the James River watershed.

During the 2021 General Assembly session, the Virginia Municipal Wastewater Association negotiated two bills (HB 2129 and SB 1254) to address major problems with the “floating cap” concept that was included in the WIP and related rulemakings. In June 2021, the SWCB approved amendments to the regulations (9VAC25-820) that eliminate the floating WLA concept and replaced it with the Phase III WIP Enhanced Nutrient Removal Certainty Program (ENRC Program). The main elements of the ENRC Program include: (1) establishing schedules for the completion of nutrient upgrades or consolidation projects at 13 publicly owned treatment works; (2) establishing schedules for a TN WLA reduction at the HRSD–York River plant and TN and TP WLA reductions at 6 HRSD treatment plants in the James River Basin; (3) transferring the TN and TP WLAs for the HRSD-Chesapeake/Elizabeth STP to the Nutrient Offset Fund in 2026; (4) transferring the TN and TP WLAs from the former J. H. Miles facility to HRSD; and (5) prioritizing the Water Quality Improvement Fund financing of nutrient upgrades and

consolidation projects included in the ENRC program. HRPDC tracked these developments to understand the potential impact to the Hampton Roads MS4 permittees in implementing the Bay TMDL.

Proprietary BMPs for Stormwater Compliance

The post-construction water quality requirements require approval from DEQ for use of proprietary BMPs in Virginia. The Stormwater BMP Clearinghouse Committee was established in order to provide guidance to the DEQ on BMP listing criteria, Clearinghouse website content, and database design.

At the end of FY 2014, the DEQ issued interim guidance that describes a process for approving these proprietary BMPs and assigning pollutant removal credits: "Interim Use of Stormwater Manufactured Treatment Devices (MTDs) to meet the New Virginia Stormwater Management Program (VSMP) Technical Criteria, Part IIB Water Quality Design Requirements." In FY 2015, the Clearinghouse Committee focused on the approval process for MTDs and discussed how and when the guidance should be updated or replaced with regulations. HRPDC staff has been involved with a cooperative effort to request that DEQ add sizing criteria to the guidance. In FY 2016, DEQ began the process of revising the guidance and updating the BMP Clearinghouse to include sizing for MTDs.

During FY 2019, DEQ developed new draft guidance on evaluating MTDs. The Clearinghouse Committee members were asked to review it and provide comments. The regional concerns included: 1) reciprocity and the applicability to Coastal Plain Virginia, 2) MTDs currently listed on the BMP Clearinghouse, 3) the transition period from the existing guidance to a new one, 4) the removal efficiency cap for filtering devices, and 5) the removal efficiencies for hydrodynamic separators.

The BMP Clearinghouse Committee met once during FY 2020, on August 15, 2019, to discuss revisions to the new draft guidance. DEQ proposed a path forward, which includes allowing manufacturers to submit certifications from other states programs to be approved at higher removal efficiencies.

The Committee met once in FY 2021, on December 10, 2020, and the agenda was focused on implementing House Bill 882, which passed during the 2020 General Assembly session. The bill requires manufacturers to submit certification documentation from either the Washington State TAPE program or from the NJ Department of Environmental Protection by December 31, 2021 to have their device remain listed on the BMP Clearinghouse. This change provides more consistent requirements for approval and prevents DEQ from having to take the time to review performance data. DEQ presented a revised MTD guidance during the meeting and asked for stakeholders to submit feedback by March 26, 2021. No further updates have been provided.

Before the December meeting, HRPDC staff reached out to DEQ to request that the BMP Clearinghouse Committee continue to meet after the MTD guidance is finalized so that the

group could address other priorities, such as: 1) adding additional non-proprietary BMPs to the Clearinghouse, 2) updating the 2013 draft design specifications for non-proprietary BMPs, and 3) developing a template for Comprehensive Stormwater Management Plans. The DEQ representatives did seem interested in continuing to convene the Committee. Additionally, they are currently updating the specifications for bioretention practices and developing a white paper describing the process and requirements for comprehensive stormwater management plans.

Tree Policy

The Virginia Department of Forestry (DOF) contracted with the Green Infrastructure Center (GIC) to review state codes pertaining to tree care, conservation, and zoning. The review was limited to those parts of the code that impact urban trees and trees affected by development. GIC and DOF identified a list of codes that they recommended be evaluated for improvement. Then, on July 30, 2020, the GIC and DOF held an online workshop with local government representatives, including staff from the Cities of Norfolk and Virginia Beach and the HRPDC, to share insights about the code sections in question. The code review and input from the stakeholders were used to develop the report, *A Select Review of the Virginia State Code for Trees and Forests*, which was published on August 28, 2020. Two topics addressed in the report are of particular interest to the region: 1) VA Code §15.2-961, which caps tree canopy requirements based on zoning, and 2) a forthcoming stakeholder group to consider adding trees to the BMP Warehouse.

Senate Bill 1393 of the 2021 General Assembly session seeks to allow local governments to exceed the requirements in its tree replacements and conservation ordinances. The bill only becomes effective if reenacted during the 2022 General Assembly session. The bill directed the Secretaries of Natural Resources and Agriculture and Forestry to convene a stakeholder group to develop policy recommendations to encourage the conservation of mature trees and tree cover on sites being developed, increase tree canopy cover in communities, and encourage the planting of trees. This group includes representatives from the Cities of Chesapeake, Hampton, and Norfolk, as well as the HRPDC, and the first meeting was held June 28, 2021. The schedule to develop the policy recommendations is tight, as the report is due to the Secretaries in early October.

Turbidity Criteria Development

The DEQ has narrative turbidity criteria in their regulations in combination with erosion and sediment protection measures for use in construction projects. The DEQ first held a stakeholder meeting in July 2020 to explore the science of turbidity and discuss USEPA and state efforts to develop numeric criteria. The potential impact of numeric turbidity criteria on private and public construction projects is of concern to local governments. In September, 2020, the State Water Control Board directed the DEQ to pursue regulatory action and create a RAP. HRPDC is serving on the RAP, and the first meeting is scheduled for July 2021.

REGIONAL STUDIES

Water Quality Monitoring Study

In FY 2014, the HRPDC and the Phase I MS4 localities partnered with the USGS and the HRSD to create the Hampton Roads Regional Water Quality Monitoring Program (RWQMP). The purpose of the study is to characterize the sediment and nutrient loadings from the major urban land-uses in the Hampton Roads region. The data collected during the first three to five years will serve as a baseline for nutrient and sediment loads from the MS4s prior to implementation of BMPs in the studied watersheds to comply with the Chesapeake Bay TMDL. The measured sediment and nutrient loads will be compared to the loading rates in the Chesapeake Bay Watershed Model and used to improve the accuracy of the model in the Coastal Plain. In FY 2015, the locations of the 12 stations (2 per Phase I locality) were selected, and seven stations were installed. In FY 2016, three additional stations were installed. In FY 2017, the remaining two stations were brought online. Since then, all twelve stations continued to collect storm event samples, which are analyzed for nutrients and sediments. The stations continuously monitor flow, turbidity, temperature, and conductivity. Additional information on the project objectives, site locations, and data collected can be viewed here: <http://va.water.usgs.gov/HRstormwater/index.html>.

The RWQMP was incorporated into the Phase I MS4 permits. HRPDC staff develops an Annual Report that includes the locations of monitoring stations, a summary of available data, and an interpretation of the data to include in the Phase I MS4 Annual Reports. The report is based on the annual update presented to the Regional Stormwater Workgroup by Mr. Aaron Porter (USGS). At the end of FY 2021, annual nutrient and sediment loads could be computed for 5 years at 8 stations and 4 years at 4 stations. USGS and HRPDC staff will meet with Chesapeake Bay Program modelers to begin to evaluate this data set for inclusion into the Bay Program's suite of models.

PCB TMDL

In FY 2014, the HRPDC partnered with the DEQ, Hampton Roads localities, and the HRSD to develop a study plan to collect stormwater samples from the Elizabeth River watershed and analyze them for polychlorinated biphenyl (PCB) concentration in order to support the development of the Lower James and Elizabeth River PCB TMDL. Stations in Chesapeake, Norfolk, Portsmouth, and Virginia Beach were selected because they met the criteria for representative land uses and watersheds where PCBs could be monitored. In FY 2015, water samples were collected at these stations by the HRSD and sent to the DEQ selected laboratory for PCB analysis. The MS4 localities in Hampton Roads funded the data collection and the DEQ paid for the analysis.

Though delayed for several years, the DEQ is now moving forward with the development of the Tidal James River, Elizabeth River, and Tidal Tributaries PCB TMDL. The first public meeting was held on January 26, 2021, where the DEQ provided: 1) an overview of water quality planning, 2) background information on PCBs, 3) an overview of the water quality impairment of the

watershed, 4) a review of the potential sources, and 5) the intended schedule for TMDL development and public involvement.

The DEQ released a public notice to solicit initial comments and requests to serve on the technical advisory committee (TAC). Several comments were highlighted in the letter submitted by the HRPDC on February 26, 2021, including: 1) a request to incorporate the Hampton Roads data from FY 2015, 2) a request for the DEQ to conduct a thorough source identification analysis, 3) a request for more detail regarding the fish tissue and water quality attainment standards, 4) a request to incorporate PCB monitoring and pollutant reduction plans in industrial VPDES permits, and 5) a request for staff to serve on the TAC.

HRPDC staff arranged a meeting on June 8, 2021 for DEQ and local government representatives to discuss how the development of the PCB TMDL will impact MS4 permits, source identification, and how inadvertent PCBs will be addressed in the TMDL. DEQ will take all of this into consideration when developing the TMDL but continues to use a land use-based approach for estimating loads and wasteload allocations.

In accordance with the schedule presented at the public information meeting, the TAC will meet at the end of the summer, and a draft of the TMDL report should be available for review in August 2021.

Stormwater Local Assistance Fund

The Stormwater Local Assistance Fund (SLAF) has provided nearly \$110M for stormwater projects across the Commonwealth. The Stormwater Managers are interested in how the resources are distributed and which types of projects are most likely to be funded. During FY 2021, HRPDC staff conducted several analyses looking at trends in the program over the years. For example, staff compared the numbers of projects and dollars awarded to Hampton Roads, Northern Virginia, and Richmond-area localities. Staff also examined the pounds of phosphorous removed by region and the dollars awarded based on population.

The region has continued to advocate for including nitrogen removal in the guidelines for SLAF. During the 2021 General Assembly session, the HRPDC coordinated with the Chesapeake Bay Foundation in support of Senate Bill 1404, which incorporates nitrogen removal and also allows fiscally stressed communities to receive greater than 50% of project costs. The bill passed and the DEQ is planning to convene an informal stakeholder group this fall to revise the SLAF guidelines accordingly.

Stormwater Program Matrix

A comprehensive stormwater program matrix, including Phase I and Phase II MS4 permittees, was developed in FY 2000 to address both utility and programmatic issues. The matrix includes the rate structures, the type of bill, the frequency of billing, the number of utility customers, and program contact information. HRPDC staff coordinates with local government stormwater program staff to update the information in the matrix annually.

HRSD Bacteria Source Tracking

HRSD began a pathogen program to conduct bacteria source tracking in June 2015. The program was designed as a way to partner with local governments to focus source identification efforts. HRSD is providing sampling and analysis services while the local governments are providing staff time for the investigations. Several localities have taken advantage of the program including Chesapeake, Hampton, Newport News, Norfolk, Virginia Beach, and Suffolk. The COVID-19 pandemic has impacted the supply chain for the supplies needed for HRSD to conduct the analyses; however, the program is ramping back up to its normal capacity.

TECHNICAL ASSISTANCE

The HRPDC continues to serve as a clearinghouse for technical assistance to the localities, as well as a point of contact in arranging short-term assistance from one locality to another. The HRPDC Committee structure also provides a forum for state and federal regulatory agency staff to meet with the region's localities to discuss evolving stormwater management regulations and other emerging regulatory issues. In addition, HRPDC staff provides technical information and advice to all of the participating localities on a wide variety of issues upon request. In FY 2021, technical assistance to localities was focused on disseminating information related to implementation of and compliance with the Chesapeake Bay TMDL, providing training resources for locality stormwater staff, and evaluating the challenges of implementing local stormwater programs.

MEMORANDUM OF AGREEMENT

The Regional Stormwater Management Program was established in 1996 as a formal program of the Hampton Roads Planning District Commission with support and participation from the seventeen-member local governments, and FY 2021 marks the twenty-fifth anniversary of this collaboration. A MOA was created that outlines the basic regulatory and programmatic premises for the cooperative program, incorporating the Regional Program Goals, described earlier in this report. The MOA establishes a division of program responsibilities among the HRPDC and the participating localities, addresses questions of legal liability for program implementation, and includes other general provisions. The MOA is reauthorized by the signatories every five years and was most recently renewed in 2018.

PERMIT ADMINISTRATION AND REPORTING SYSTEM (PARS)

In an effort to streamline reporting and capture data more effectively for local governments, the permitted localities pooled resources to develop the Permit Administration and Reporting System, or PARS. The region contracted with URS Corporation to develop a web-based data tracking and reporting system. The system allows local governments to catalog development sites and their associated BMPs. The system also enables localities to capture inspection information, catalog stormwater outfalls, document illicit discharge investigations and record

public education information. The Regional Stormwater Workgroup agreed to retire PARS on June 30, 2016 for all users except Chesapeake, James City County, Norfolk, Suffolk, and Williamsburg as it no longer met reporting and tracking needs. These five localities agreed to continue to support PARS through December 2016. Norfolk and Chesapeake continued to support the database into FY 2021 while alternative systems are under development in those localities.

RELATED PROGRAMS AND PROJECTS

In various combinations, the eleven MS4 communities, as well as their non-permitted counterpart communities, and HRPDC staff participate in a wide variety of related programs. These programs are noted here because of their relationship with stormwater management.

Chesapeake Bay Program Participation

The CBP is a regional partnership that has led and directed the restoration of the Chesapeake Bay since 1983. CBP partners include federal and state agencies, local governments, non-profit organizations and academic institutions. Partners work together through the CBP's goal teams, workgroups and committees to collaborate, share information, and set goals.

Since the development of the Chesapeake Bay TMDL in December 2010, the Hampton Roads region has devoted considerable attention to the research, developments, and decisions ongoing within the CBP. HRPDC and locality staff have participated in the deliberations of many CBP committees and workgroups focused on urban stormwater, land development, watershed planning, land use development, modeling and local government's role in the Bay Program. HRPDC staff serves as a local government representative of the Urban Stormwater Workgroup, the BMP Verification Committee, and the Climate Resilience Workgroup. Staff serves as co-chair of the Land Use Workgroup and member of the Water Quality Goal Implementation Team.

During FY2 2021, staff focused on: 1) building resiliency into urban stormwater BMPs, particularly with the RAND study to develop local intensity, duration, and frequency (IDF) curves for precipitation, 2) coordination with localities in verifying the new land use/land cover data, and 3) how solar fields are accounted for in the Bay models.

Through the Urban Stormwater Workgroup, HRPDC staff are informing the Bay Partnership of the resilience work being done in the region, sharing findings of analyses and policies, and advocating for research on the co-benefits of BMPs for water quality and flooding concerns. Through the Land Use Workgroup and a local review process, high-resolution land cover and land use data will be provided to the localities in the Bay watershed. This high-quality data set can be used by the localities for land use planning, tree canopy assessments, or site selection studies for a variety of projects. HRPDC staff also serves on Virginia's WIP III Stakeholder Advisory Group (SAG).

DEQ Contract with Planning District Commissions in the Bay Watershed

In partnership with the other Virginia planning districts in the Chesapeake Bay watershed, HRPDC continued the contract agreement with DEQ to provide support for implementation efforts related to Virginia's Chesapeake Bay TMDL Phase III Watershed Implementation Plan (WIP). This third contract primarily focuses on efforts to evaluate the Chesapeake Bay Preservation Act (CBPA) in a changing climate and promote the program to the public. While the CBPA program has been implemented for years, certain aspects of the regulations may need to be re-evaluated or updated as shoreline management protocols are adjusted to account for increasing sea level rise and intensity and duration of storms. Work is primarily conducted in conjunction with the CBPA Workgroup and input from the Regional Stormwater Management Workgroup is also incorporated. In addition to these efforts, this contract also supports continued outreach to localities regarding implementation of BMPs in the unregulated urban and natural sectors. During FY 2020, staff have continued to research opportunities with the Virginia Conservation Assistance Program (VCAP) and seek ways in which localities outside of Soil, Water, and Conservation Districts (SWCDs) could take part. This effort also complements a small watershed technical assistance grant through the National Fish and Wildlife Federation (NFWF) received by HRPDC. This work is also focused on addressing reductions in the unregulated sector.

Trading with HRSD

HRSD, HRPDC staff, and the MS4 permittees collaborated to develop a regional template for MOAs to establish the framework for trading stormwater pollutant reduction credits. Individual MOAs with each of the eleven MS4 permittees were signed in 2017.

Currently HRSD treatment plants operate well below design flows, as those were established to ensure capacity to support regional population projections in 2040 and beyond. Annual average flows in 2015 were approximately 60% of design flows. As a result of plant flows well below design flows in combination with significant investment in nutrient removal technologies, HRSD currently discharges nutrients and sediment significantly below permitted limits and is projected to do so for the foreseeable future. The difference between permitted mass load limits and current performance provides ample capacity to absorb load reductions required from stormwater dischargers in Hampton Roads through at least 2036. As mentioned above, a portion of the capacity credits available from HRSD's efforts are still available for MS4 trading needs to achieve TMDL compliance.

HRSD is developing the Sustainable Water Initiative for Tomorrow (SWIFT) project, their multi-year initiative that takes treated wastewater, purifies it to drinking water standards, and then injects it into the Potomac Aquifer. In addition to replenishing the water in the aquifer, the SWIFT project will significantly reduce the volume of treated wastewater reaching the James, York, and Elizabeth Rivers. The project will generate enough permanent nutrient and sediment credits to meet almost all of the regional urban stormwater waste load allocations in the Chesapeake Bay TMDL. Mr. Ted Henifin (General Manager for HRSD) has given several

presentations on the project at the Regional Environmental Committee and Regional Stormwater Workgroup meetings.

Trading with HRSD, first using the capacity credits and then using the permanent credits from SWIFT, provides a more cost-effective opportunity for MS4 permittees to meet the waste load allocations of the Chesapeake Bay TMDL.

Small Watershed Technical Assistance Grant

The HRPDC received a grant in September 2020 from the National Fish and Wildlife Foundation to evaluate 10-to-12 private industries to voluntarily implement and report large-scale BMPs on their property to reduce nutrients and/or mitigate flooding. Staff hired a NFWF Technical Service Provider, Whitman, Requardt & Associates, LLP for the evaluation. The project will be completed in FY 2022.

Lower James River and York River Roundtables

During FY 2021, staff have participated in meetings of the Lower James River and York River Roundtables. The Lower James Roundtable met twice during FY 2021, in September and November. The discussions have been focused on the Virginia Conservation Assistance Program (VCAP) and other local outreach and education efforts for reducing pollution.

The York River Roundtable met twice during FY 2021, in October and May. The group is focused on public education, recognizing business practices for watershed resilience, grant applications to synthesize regional information on the health of the watershed, and habitat restoration. HRPDC staff are also part of the Habitat Restoration Committee, which met in July, and November, 2020 and January, March, and May, 2021. This group is mostly focused on identifying and prioritizing restoration practices along shorelines in the York River coastal basins.

Elizabeth River Project's Initiatives

HRPDC staff have been participating in efforts to restore the Eastern Branch of the Elizabeth River. Several meetings were held with representatives from the Elizabeth River Project (ERP), the cities of Chesapeake, Norfolk, Portsmouth, and Virginia Beach, HRSD, HRPDC, Norfolk State University, the US Navy, the Tidewater Regional Office of the DEQ, VA Department of Health, Chesapeake Bay Foundation, and consulting agencies as part of the Eastern Branch Implementation Team. This group works towards identifying projects for implementation along the Eastern Branch of the Elizabeth River. The primary focus in FY 2021 was to update the State of the River scorecard and develop a Watershed Action Plan (WAP).

For the updated scorecard, HRPDC staff, as part of the technical committee, helped to assess scores and trends for nutrients in the Elizabeth River using data collected by DEQ. The scorecard evaluates a variety of parameters to determine the health of the River and provide information to begin the next iteration of the WAP. HRPDC staff are on a variety of sub-committees to develop the WAP, including Education, Water Quality, and Resilience and Sea

Level Rise sub-committees. Through these efforts, HRPDC staff is assisting ERP staff in identify funding opportunities for implementation efforts throughout the Elizabeth River watershed.

External Training Committee

The Office of Training Services of DEQ established a new Committee, the External Training Committee, to serve the training needs of Erosion and Sediment Control and Stormwater certified professionals. The Committee was tasked with identifying priority training topics and ensure training topics are prioritized, efficiently developed, and meet the needs of certified professionals. Representatives from DEQ, the consultant community, and local governments, including the City of Norfolk, Gloucester County, James City County, and the HRPDC, make up the Committee.

Using a survey tool, the Committee developed a preliminary list of priority training topics for Inspectors, Plan Reviewers, and Program Administrators. The topics included energy balance examples, typical design site constraints, effective enforcement measures, and new ESC practices. The Committee reviewed these topics at the May 19, 2020. The next steps will be to identify resources, including personnel and materials, to aid in course development. The DEQ suggested breaking the Committee into Workgroups to work on the highest priority training topics. HRPDC staff will continue to provide updates as the work of the Committee progresses.

CONCLUSION

Through the Hampton Roads Planning District Commission, the seventeen localities of Hampton Roads have established a comprehensive Regional Stormwater Management Program. This program provides technical assistance, coordination, comprehensive technical studies and policy analyses and stormwater education. The Regional Stormwater Management Program enables the region's localities to participate actively and effectively in state and federal regulatory matters. It has enhanced the ability of the eleven localities with VPDES Permits for their Municipal Separate Storm Sewer Systems to comply with permit requirements.

The Regional Stormwater Management Program provides a mechanism through which the strengths of the seventeen local stormwater programs can be mutually supportive. It allows for cost-effective compliance with permit requirements, resolution of citizen concerns with stormwater drainage and water quality matters, promotes regional consistency, and achievement of improved environmental quality throughout the Hampton Roads Region.