

Hampton Roads Coastal Resources Technical Assistance Program Fiscal Year 2015-2016 Final Report



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**HAMPTON ROADS COASTAL RESOURCES
TECHNICAL ASSISTANCE PROGRAM**

**FISCAL YEAR 2015 - 2016
FINAL REPORT**

This report was produced, in part, through financial assistance from the Virginia Coastal Zone Management Program in the Virginia Department of Environmental Quality through Grant No. NA15NOS4190164 from the National Oceanic and Atmospheric Administration. The views expressed herein are those of the authors and do not necessarily reflect the views of NOAA or any of its sub-agencies. Federal financial assistance to this project amounted to \$60,000 or approximately fifty percent of the total project cost.

Preparation of this report was included in the HRPDC Unified Planning Work Program for FY 2015 - 2016, approved by the Commission at its Quarterly Commission Meeting of June 18, 2015, and in the HRPDC Unified Planning Work Program for FY 2016 - 2017, approved by the Commission at its Executive Committee Meeting of June 16, 2016.

**Prepared by the staff of the
Hampton Roads Planning District Commission**



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ABSTRACT

This report describes the environmental technical assistance program conducted by the Hampton Roads Planning District Commission during FY 2015 – 2016 through its Coastal Resources Management Program. This program encompasses environmental impact review, participation in state and federal programs, coordination of regional environmental programs addressing environmental issues, such as the Chesapeake Bay and wetlands, public information and education, and technical assistance to Hampton Roads localities. It contains representative examples of the technical work, comment letters, outreach materials, and associated materials generated and used in assisting the region's seventeen local governments, supporting the Virginia Coastal Zone Management Program, and working with the other Planning District Commissions in the Coastal Zone.

ACKNOWLEDGMENTS

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INTRODUCTION

In March 2015, the Hampton Roads Planning District Commission submitted a proposal to the Virginia Coastal Zone Management Program (VCZMP) for funding to continue the HRPDC's Technical Assistance Program. Through this program, the HRPDC provides technical assistance on a variety of environmental and coastal resources management issues to its seventeen member local governments and to coordinate their response to those issues.¹ It also provides assistance to the incorporated towns in the region as well as to a wide variety of non-governmental stakeholders. This Program has operated successfully with financial assistance from the Virginia Coastal Zone Management Program since the VCZMP's inception in 1986. In October 2015, the HRPDC was awarded financial assistance to maintain its Technical Assistance Program through September 2016. This report provides an overview of the activities and accomplishments of the Hampton Roads Coastal Resources Technical Assistance Program during that period.

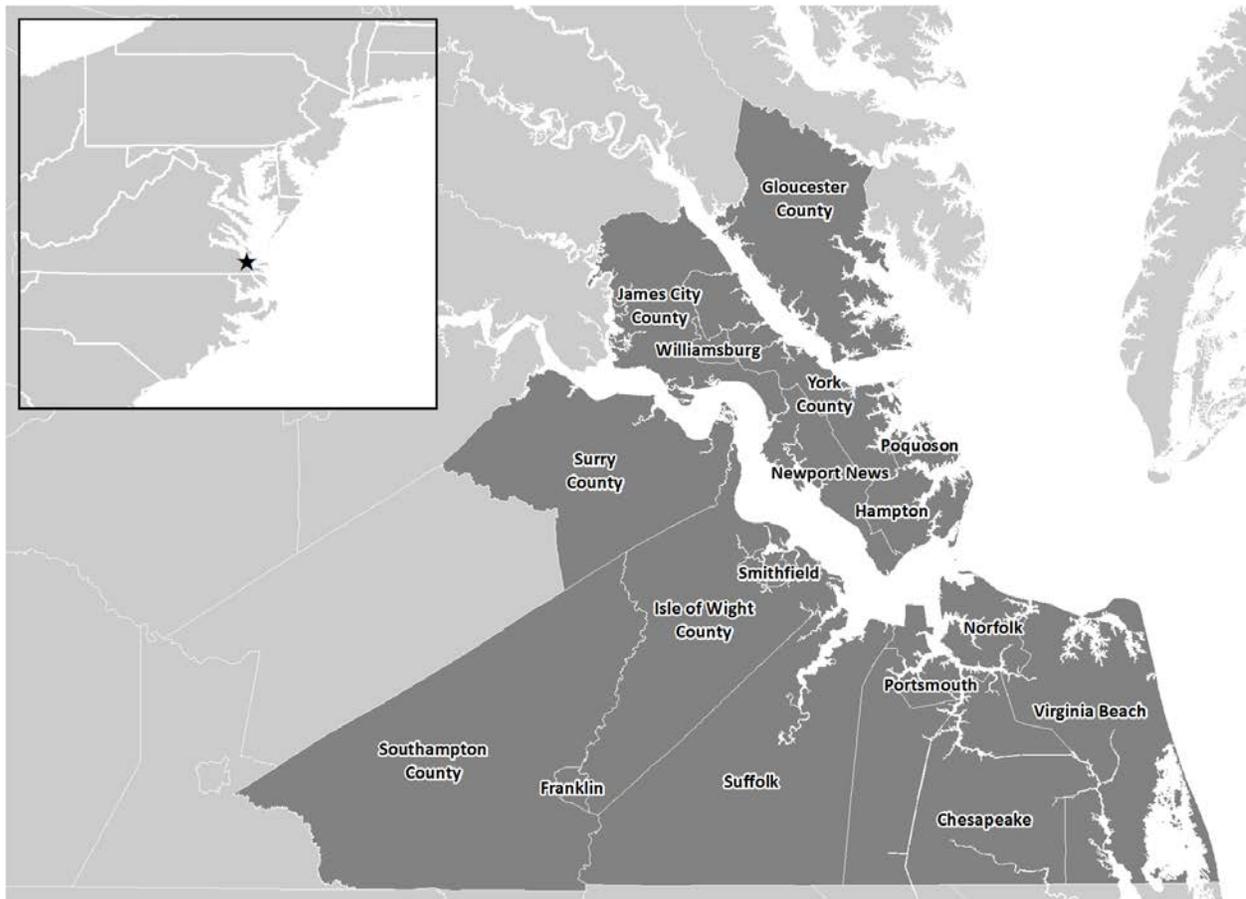
The Hampton Roads Technical Assistance Program is a comprehensive, interrelated initiative, providing on-call staff capability, a regional coordination mechanism, and related technical studies. It assists the region's localities on short-term local issues, ensures a collective response to regional, state and federal issues as they arise, and facilitates cooperation and coordination among the localities. The Technical Assistance Program provides the resources to begin many efforts which are later funded through specific grants or local assessments, while in other cases, the program allows for the continuation of efforts after initial funding. Examples of these programs include the HRPDC's work on the Chesapeake Bay Program, planning for green infrastructure, and planning for climate change.

Of particular significance, VCZMP funding for this program has provided seed money allowing the region to undertake new environmental initiatives, such as the Regional Water Supply, Groundwater, Wastewater and Stormwater Management Programs, including the public information and education components of each. These regional initiatives, which continue to evolve, are now institutionalized and have been enhanced through dedicated local funding. These regional programs are unique examples of intergovernmental cooperation in management of coastal resources in the Commonwealth.

The Hampton Roads Technical Assistance Program also enables the HRPDC to participate in and support a number of core elements of the Virginia Coastal Zone Management Program, such as the environmental impact review and federal consistency determination process, wetlands and dune regulations, Chesapeake Bay Preservation Act (CBPA) regulations, air quality regulations, and several state water quality programs. This participation results in cost savings to the state by educating localities collectively about

¹ The Hampton Roads Planning District Commission consists of the Cities of Chesapeake, Franklin, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg, the Counties of Gloucester, Isle of Wight, James City, Southampton, Surry, and York, and the Town of Smithfield.

state and federal initiatives and coordinating local government input to these efforts. Over the past thirty (30) years, several hundred local government staff members from the region's seventeen local governments have received technical training in wetlands regulations and delineation, CBPA implementation, erosion and sediment control, stormwater management, low impact development and environmental site design, flood hazard mitigation, geographic information systems, land conservation, coastal resiliency, green infrastructure, watershed management, and comprehensive coastal resources management. Local government board members, staff from other PDCs, and representatives of the private sector have also participated. As a result, the effectiveness of local government implementation has increased.



Local Government Members of the Hampton Roads Planning District Commission

Through review of environmental impact documents and coastal zone consistency determinations, the regional program has also facilitated rapid resolution of local government concerns with the impacts of state projects proposed by the Virginia Department of Transportation (VDOT), the Virginia Community College System, state supported colleges and universities, and others, as well as federal projects such as port security and inspection systems, harbor dredging, military facility construction and operations, Base Realignment and Closure decisions, encroachment issues, Coast Guard permits for marine events and operations, Outer Continental Shelf Energy Development, and related resource management programs.

The Technical Assistance Program allows the HRPDC to serve as a central source of environmental data and information, including water and wastewater data, soil surveys, historic aerial photographs, and regional land use data. HRPDC also houses and collects a wide variety of GIS datasets from various federal, state, and local partners, including high-resolution elevation and land cover data, as well as datasets developed by HRPDC staff.

The FY 2015 – 2016 Hampton Roads Technical Assistance Program enabled the region's localities to continue to address, in a comprehensive and integrated fashion, many aspects of coastal resources management - the Chesapeake Bay Program, environmental impact review, local comprehensive planning, CBPA and Chesapeake Bay TMDL implementation, wetlands protection, shoreline management, coastal resiliency, public access, and environmental database development and analysis through the HRPDC's Geographic Information System (GIS). The program has allowed the continuation of regional support for and participation in the VCZMP, regional participation in other state and federal initiatives, completion of necessary technical studies, technical assistance to the region's localities, and conduct of public information and education activities.

PROGRAM OBJECTIVES

At the outset of the FY 2015 – 2016 Hampton Roads Technical Assistance Program, the HRPDC, in cooperation with staff from its member local governments, established six (6) objectives for the Program. These overall objectives, while expanded in scope, have remained largely the same since program inception. They are:

1. To assist Hampton Roads localities in implementing the recommendations of the Virginia Coastal Zone Management Program, related state and federal environmental management programs as well as the Chesapeake Bay Program, and related state legislation and regulations.
2. To support the Commonwealth of Virginia in implementing the VCZMP through coordination of local and regional review of environmental impact assessments/statements and applications for state and federal environmental permits and related environmental documents and by serving as an information conduit between the state and localities on coastal resource management issues.
3. To complete regional environmental studies, necessary to support local government consideration of the Chesapeake Bay Agreement priorities, including development and implementation of the Chesapeake Bay Total Maximum Daily Load (TMDL).
4. To enable the Hampton Roads region to continue to play an active role in the development, implementation and refinement of the Virginia Coastal Zone Management Program, the Chesapeake Bay Agreement, the Chesapeake Bay Preservation Act, and related environmental initiatives.
5. To improve the coordination and quality of local and regional decision-making concerning coastal and related environmental resources.
6. To increase public awareness of the value of coastal resources and of the local and regional efforts to manage them.

To accomplish these objectives, a comprehensive program was structured involving a range of activities in the following categories: VCZMP Program Support, Technical Studies, Local Assistance and Coordination, and Public Information and Education.

PROGRAM ACCOMPLISHMENTS

VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM SUPPORT

Environmental Impact Review

The HRPDC staff reviews and comments on all applications for state and federal regulatory permits and the associated Environmental Impact Assessments/Statements or federal consistency determinations. Local staff representatives are regularly contacted to identify any concerns individual local governments may have with specific projects. On occasion, the Hampton Roads Planning District Commission may be informed on particular projects with significant regional or local impacts. Generally, no formal action is taken by the Commission as a result of this notification; however, historically, the Commission has requested more extensive HRPDC staff and local government review of particular issues. HRPDC staff responds to nearly all requests for comments from the Department of Environmental Quality (DEQ).

From October 1, 2015 through September 30, 2016, the HRPDC staff reviewed and commented on thirty-four (34) environmental impact assessments, environmental impact statements, and federal consistency certifications for both state and federal projects. Projects reviewed in FY 2015 – 2016 ranged widely in complexity. The HRPDC, in cooperation with the localities, worked to ensure that these projects were coordinated with and met local government requirements. HRPDC's responses are combined with any others from state agencies when DEQ makes its final determinations. While these determinations (and the collected comments) are conveyed back to HRPDC, DEQ staff does not generally identify any specific impacts to projects based on HRPDC staff comments. However, in several cases DEQ staff or staff from other state agencies has followed up with HRPDC staff to have comments clarified.

In addition to environmental impact reviews and assessments, HRPDC staff also reviews grant proposals for federal and state funding. These proposals are reviewed for local and regional impacts and significance, as well as to ensure that tasks are not duplicated. From October 1, 2015 through September 30, 2016, the HRPDC staff reviewed and commented on seven (7) grant proposals.

Appendix A contains a listing of all projects and proposals reviewed through this program component during the period from October 1, 2015, through September 30, 2016, as well as sample comment letters on notable and representative projects. To improve the information available for consideration by the Commission and to facilitate tracking of local and state actions on environmental documents, the HRPDC staff developed a database and reporting system during a previous grant year. All environmental documents reviewed since July 2001 have been entered into the database. HRPDC comment letters for the following projects are included in Appendix A:

- 1) DEQ#15-166S – Dominion 2016 Solar Facilities, PUE-2015-00104
- 2) DEQ#15-196F – Construction and Operation of a Solar Photovoltaic System at NAS Oceana
- 3) DEQ#15-198F – Construction of Building 1120 Dormitory (Building 1124), AFETA Camp Peary
- 4) DEQ#16-140F – Hampton Roads Executive Airport Pavement Rehabilitation
- 5) DEQ#16-189F – Virginia International Gateway Phase II Expansion

Coordination of review and comment on environmental documents with the region's localities is frequently problematic, because of time constraints placed on the review process by the state and, in some cases, by project applicants who request expedited review from the state. In addition, projects are often submitted for environmental impact review before designs are complete. Localities often wait for permit applications, which require complete designs and plans, prior to commenting.

Participation in State and Federal Programs

Several state and federal environmental programs encourage use of PDCs as a cost effective mechanism for informing local governments and seeking their input for state and federal program development and accomplishment. For example, the Chesapeake Bay Program in both its 1996 and 2002 Local Government Participation Action Plans recommended better use of technical assistance providers, such as PDCs, to serve as vehicles to distribute information and outreach on Chesapeake Bay-related issues. It also suggested development of a network of local officials and staff with expertise in dealing with resource protection issues. Virginia's Regional Cooperation Act strongly recommends this type of role for PDCs. Several programs, including the Virginia Coastal Zone Management Program, do use the PDCs in this manner. Historically, NOAA's Section 312 evaluation of the Virginia Coastal Zone Management Program has recognized the benefits and cost-effectiveness of the network of PDCs in supporting the VCZMP and in assisting their member local governments. During the 2006 NOAA evaluation of the Virginia Coastal Zone Management Program, the Evaluation Team provided favorable comments on the role and activities of PDCs. Those comments were formalized in the final Section 312 Evaluation Report.

In the Hampton Roads region, the Hampton Roads Technical Assistance Program and its associated committees provide such a network. Both HRPDC staff and local government members of the HRPDC Advisory Committees (including the Regional Environmental Committee, Directors of Utilities Committee, and Coastal Resiliency Committee) frequently serve on state and federal advisory groups. On a regular basis, the participating localities request that the HRPDC staff serve as their representative to these advisory groups. Alternatively, the Committees may select a local government member to represent the region. In both cases, the HRPDC Committees provide all seventeen member localities with a mechanism to participate, at least indirectly, in the state or federal program(s). Also, data and information on Hampton Roads conditions are provided by the Hampton Roads

representative (HRPDC or local government staff) to state and federal agencies on behalf of the localities, thus minimizing state and federal agency data collection and input costs. During FY 2015-2016, this program included regional participation on state and federal panels addressing stormwater management, groundwater, the Chesapeake Bay Program, and climate change.

The HRPDC staff works closely with state and federal agencies on coordination of programs as they affect the Hampton Roads region. This work involves follow-up to previous studies conducted by the HRPDC with VCZMP-funding, serving on advisory committees supporting plan and regulatory development, and development of new cooperative initiatives involving state, local, federal and private entities. In the past year, HRPDC staff served on several advisory groups, including the Stakeholder Advisory Group addressing stormwater management laws, work groups supporting the Eastern Virginia Groundwater Management Advisory Committee, and the Governor's Climate Change and Resiliency Update Commission.

Virginia Coastal Zone Management Program

During the grant period, the HRPDC staff continued to participate in Coastal Zone PDC meetings, contributing to the ongoing refinement of the Virginia Coastal Zone Management Program. The HRPDC staff participated in Coastal Policy Team meetings on February 9, 2016 and September 20, 2016. HRPDC also attended a Coastal PDC meeting in November 2015 (hosted by the George Washington Regional Commission) and hosted a Coastal PDC meeting in May 2016.

The Coastal PDCs provide a network linking all regional agencies and localities in the Coastal Zone to address environmental issues. Although somewhat more limited in scope, similar networks exist among the Coastal PDCs and their non-coastal counterparts in the southern watersheds insofar as interstate environmental issues with the State of North Carolina are concerned, and with their counterparts throughout the Chesapeake Bay Watershed on Chesapeake Bay related issues. The HRPDC staff has played an integral role in the development and enhancement of these larger networks as well.

Efforts to coordinate activities with the other Coastal PDCs in all facets of environmental planning continued throughout the year. Representative activities in 2015 and 2016 focused on exchanging information among the PDCs on issues such as floodplain management, partnering with the U.S. Army Corps of Engineers on resiliency projects, working waterfronts, and environmental regulations.

Chesapeake Bay Program

The Hampton Roads Technical Assistance Program continues to support the HRPDC's participation, on behalf of its member localities, in the Chesapeake Bay Program. Beginning in FY 1998-1999, this element of the Program received greatly increased emphasis through several initiatives, including the renewal of the Chesapeake Bay Local Government Advisory Committee, establishment of a Metropolitan Areas Work Group, development of the Chesapeake Bay Agreement 2000 and development of new and revised Chesapeake Bay Program Implementation Strategies. The Commission's involvement with the Chesapeake Bay Program continued with the development of the Tributary Strategies and the Chesapeake Bay Watershed Model. Implementation of the Chesapeake Bay TMDL continues to be a major focus of HRPDC's environmental work.

In addition, both HRPDC and Hampton Roads local government staff maintain involvement on various federal and state advisory and regulatory committees. While this participation is often funded by other programs, the HRPDC provides a forum, through the Regional Environmental Committee, for those representatives to gather information and responses from other local governments in the region, and to convey information from these advisory groups back to the region. The HRPDC staff currently participates in the Chesapeake Bay Program's Climate Resiliency Workgroup; HRPDC staff attended in-person meetings of the workgroup in May and July 2016 and also participated in conference calls.

SPECIAL PROJECTS AND TECHNICAL STUDIES

The HRPDC staff regularly coordinates with local and regional partners to identify timely and appropriate special projects or technical studies that address important regional issues. The HRPDC staff and regional advisory committees identify potential topics for special projects or technical studies during the grant application process, but often there are important issues that arise during the grant year, and this grant allows HRPDC staff to respond to those needs as they occur. Throughout the course of this grant, the HRPDC staff identified and completed work on two special projects. These projects were:

- 1) Analysis of High-Resolution Land Cover Data for Hampton Roads Localities
- 2) Assessment of Potential Impacts of Executive Order 13690 on Floodplain Management in Hampton Roads

Analysis of High-Resolution Land Cover Data for Hampton Roads Localities

One of the major focus areas of the HRPDC's coastal resources technical assistance program is support for local efforts related to the Chesapeake Bay. Specifically, the program helps, through coordination meetings and technical analysis, localities implement state laws and regulations such as the Chesapeake Bay Preservation Act and stormwater permits and federal requirements such as the Chesapeake Bay TMDL. Land cover data is an important input to the Chesapeake Bay model and an important resource for local governments to use when making and implementing plans and ordinances.

In response to the demand for better land cover data for the Chesapeake Bay model, in 2014 the Virginia General Assembly agreed to fund development of a statewide land cover dataset to provide improved land cover data for stormwater management and other planning activities. The project was directed by the Virginia Geographic Information Network (VGIN) and funded by the Virginia Department of Environmental Quality (DEQ). The land cover data was derived primarily from 2013 aerial imagery collected by the Virginia Base Mapping Program along with ancillary data sources.

After consulting with a variety of stakeholders concerning technical requirements and classification scheme, VGIN's consultant proceeded to process the entire state in phases. The Chesapeake Bay watershed was given priority status in order meet deadlines set by Chesapeake Bay Program to update the land cover data input in the Bay Watershed model, which was developed during the Chesapeake Bay TMDL process.

The land cover data has been completed for the Hampton Roads region and is available at a 1-meter resolution. HRPDC staff processed the land use data help the localities access the data more quickly and easily. Staff merged the tiled raster data together, clipped it to the locality boundaries, and made it available for download. Staff also created a matrix to summarize the number of acres found in each category by locality. Also analyzed was the number of acres per category per locality without federal properties included, to meet the needs of the local stormwater planners. Analysis was also performed on the land cover only within the Chesapeake Bay watershed in Hampton Roads. Results were also calculated for the region and the Chesapeake Bay portion without federal lands.

Results of the analysis are included in Appendix B.

Assessment of Potential Impacts of Executive Order 13690 on Floodplain Management in Hampton Roads

On January 30, 2015, President Obama issued Executive Order 13690, "Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input." Among other changes, the new executive order changes the definition of the floodplain for purposes of federal projects and actions. As a result, the floodplain will likely increase in size; the increase will depend on the particular approach selected by the various federal agencies. In order to estimate the potential changes to the floodplain, the HRPDC staff conducted a data-gathering and GIS analysis of the three approaches described in E.O. 13690. This analysis identified potential issues with the new standard and calculated the size of the new floodplain under each approach. As part of the analysis, the HRPDC produced maps of the region and individual member jurisdictions showing the new floodplain for each of the approaches.

The assessment is included in Appendix C.

LOCAL ASSISTANCE AND COORDINATION

Technical Assistance

This element of the Hampton Roads Technical Assistance Program entails staff support and assistance to local governments and private entities as they address key coastal resources and other environmental issues such as TMDLs, habitat restoration, riparian buffer creation and protection, energy, climate change, aspects of the Chesapeake Bay Program, wetlands and dune protection, and nonpoint source pollution in their comprehensive planning process and related activities. Specific local projects or issues to be addressed through this element are identified by the localities throughout the grant year. These requests encompass assistance on grant proposals, assistance on permit issues, identification of state or federal agencies that may be of assistance for local projects, information about legislation or regulations, identification of technical resources that may be useful to a locality in developing a study, and responding to an elected official's request for information. The localities and others frequently turn to the HRPDC for assistance on GIS mapping and analysis projects. Through this element of the program, the HRPDC staff also assists private or non-profit entities, such as the Back Bay Restoration Foundation, Elizabeth River Project, Friends of Powhatan Creek, Hoffer Creek Wildlife Foundation, Lynnhaven River NOW, and others in their environmental planning and restoration initiatives. Aerial photographs and additional technical information on wetlands, hazardous waste sites, and soils are provided to private consultants upon request. During this grant year, the HRPDC staff assisted localities with data needs for sea level rise and land cover.

The HRPDC staff continued to work with representatives of the affected local governments in their review, evaluation, and use of recent PDC environmental management reports. The focus of this effort has been on the identification of research priorities for stormwater management and coastal resiliency. Discussions have also taken place regarding the need for additional data, such as subsidence monitoring, water level monitoring, and first flood structure elevations, to be collected for use in various technical analyses.

The HRPDC staff continued to advise the region's seventeen localities on environmental issues in conjunction with development of and revisions to local comprehensive plans, development regulations, and related issues. The primary issues addressed through this program continue to be state and federal wetlands regulatory programs, stormwater management programs, groundwater issues, the Chesapeake Bay Program, and sea level rise/recurrent flooding. Most of the region's member localities have received individual assistance through this program during the past year. An increasing emphasis of local government support on environmental issues has been in the legislative and regulatory arena. During FY 2015 – 2016, the areas of emphasis included stormwater management, groundwater issues, the Chesapeake Bay TMDL, and sea level rise.

The HRPDC staff continued development and enhancement of the region's geographic information system (GIS). The HRPDC staff is currently working with staff from the

Hampton Roads Sanitation District to develop a regional GIS that will draw data from individual localities to create consistent regional datasets. The HRPDC staff also continues to develop or acquire regional, state, and federal datasets, such as land use, elevation, and land cover, for regional and local projects.

Regional Coordination Process

The Hampton Roads Technical Assistance Program enables the HRPDC to maintain a regional coordination process on environmental issues while also providing links to other ongoing regional environmental programs. Historically, this has been achieved through the Hampton Roads Joint Environmental Committee, which was comprised of the Chesapeake Bay Committee and the Regional Stormwater Management Committee. In August 2013, the Joint Environmental Committee voted to dissolve and adopt new by-laws as the Hampton Roads Regional Environmental Committee, which held its first meeting in September 2013. Through the Regional Environmental Committee, HRPDC staff support local governments in implementing legal requirements regulatory programs, such as the Chesapeake Bay Preservation Act, Chesapeake Bay TMDL, and Comprehensive Coastal Resource Management Plans. This process also helps the region by providing support for coastal resources management and environmental education. The Regional Environmental Committee meets monthly.

The Hampton Roads Technical Assistance Program also enables the HRPDC staff to support regional coordination of issues related to coastal resiliency, sea level rise, recurrent flooding, and climate change. These issues fall under the purview of the HRPDC's Coastal Resiliency Committee, which is comprised of locality senior officials and department heads. The committee meets on a quarterly schedule, with additional workgroup discussions of technical matters scheduled for off-months when necessary.

During the course of the grant year, the HRPDC staff continued local government coordination of ongoing consideration of various environmental issues. Stormwater regulations and program management, the Chesapeake Bay TMDL, and sea level rise continue to be issues of considerable interest. The meetings usually include several main presentations by HRPDC staff, local committee members, or state agency representatives and often include discussion of potential project ideas or responses to regulatory developments. Each meeting also closes with an opportunity for regional and local staff to provide status reports or ask questions on issues relevant to the committee.

The following points summarize the activities of the Hampton Roads Regional Environmental Committee during the year.

- October 1, 2015 –The major focus of this meeting was a presentation by Chris Burkett from the Virginia Department of Game and Inland Fisheries on the update to the Virginia Wildlife Action Plan. The meeting also included updates and briefings from the HRPDC staff on the sea level rise, VCZM program matters, and the regional stormwater program.

Total Attendance: 42
Total Stakeholders: 23

- November 5, 2015 –This meeting featured a presentation from Isle of Wight County staff on recent stormwater BMP retrofit projects funded by the state’s Stormwater Local Assistance Fund. The meeting also included a presentation Norfolk staff on the city’s proposed projects for the National Disaster Resiliency Competition. The meeting also included updates and briefings on a regional GIS proposal, regional strategic planning, and the coastal program.

Total Attendance: 46
Total Stakeholders: 23

- December 3, 2015 –This meeting featured a presentation from Portsmouth city staff and Virginia Modeling, Analysis, and Simulation Center faculty on a study of how Portsmouth residents perceive and experience recurrent flooding. The meeting also featured a presentation on a study by the Hampton Roads Sanitation District on aquifer replenishment. The meeting also included presentation and updates on Virginia stormwater regulations and laws, sea level rise, and the coastal program.

Total Attendance: 41
Total Stakeholders: 24

- January 7, 2016 –This meeting featured a presentation from Virginia Beach city staff on innovative stormwater BMP projects funded by the Stormwater Local Assistance Fund. The meeting also included briefings and updates on the HRPDC’s legislative agenda, the Chesapeake Bay Program, and the coastal program.

Total Attendance: 41
Total Stakeholders: 20

- February 4, 2016 – This meeting featured a presentation from Sumalee Hoskin of the U.S. Fish and Wildlife Service on the final 4(d) rule for the northern long-eared bat. The meeting also included a presentation from York County staff on innovative stormwater BMP projects funded by the Stormwater Local Assistance Fund. The meeting also included briefings, updates, and discussions on the Chesapeake Bay Landscape Professional Certification program, statewide land cover data, and the coastal program.

Total Attendance: 49
Total Stakeholders: 30

- March 3, 2016 – This meeting featured a presentation from Chip Neikirk of the Virginia Marine Resources Commission on the status of general permits for living shoreline projects. The meeting also included a presentation from Chris Swanson of the Virginia Department of Transportation on the agency’s draft Chesapeake Bay Action Plan. The meeting also included updates, briefings, and discussions on legislation regional cigarette litter prevention program, regional GIS, and the coastal program.

Total Attendance: 47
Total Stakeholders: 29

- May 5, 2016 – This meeting featured a presentation by Kevin McLean of the Virginia Association of Soil and Water Conservation Districts on the Virginia Conservation Assistance Program. The meeting also included updates on working waterfronts, regional environmental education, and working waterfronts.
Total Attendance: 41
Total Stakeholders: 26

- June 2, 2016 – This meeting featured a presentation from Michelle Hamor of the U.S. Army Corps of Engineers on a proposal for a multi-hazard tournament to help localities identify resiliency projects. The meeting also featured a presentation on the progress by the Navy on their progress in implementing the Chesapeake Bay TMDL. The meeting also included updates on working waterfronts and the Chesapeake Bay Program.
Total Attendance: 41
Total Stakeholders: 25

- July 7, 2016 – This meeting featured a presentation from Jeremy Sharp of the Norfolk Planning Department on the city’s zoning ordinance update. The meeting also included updates on the Chesapeake Bay Landscape Professional Certification Program, statewide land cover data, and the coastal program.
Total Attendance: 41
Total Stakeholders: 24

- August 4, 2016 – This meeting featured a presentation from Leigh Chapman of Salter’s Creek Consulting on the update to the Hampton Roads Regional Hazard Mitigation Plan. The meeting also included a briefing on the Chesapeake Bay Program’s Local Area Targets Task Force. The meeting also included updates on working waterfronts, the Chesapeake Bay Program’s Climate Resiliency Workgroup, the coastal zone program, and joint land use studies in Hampton Roads.
Total Attendance: 45
Total Stakeholders: 28

- September 1, 2016 – This meeting featured a presentation by Joe Rieger of the Elizabeth River Project on the removal of the Lafayette River from DEQ’s list of bacteria-impaired waterways. The meeting also included briefings and updates on regional data sources, regional land use data, the Chesapeake Bay Local Area Targets Task Force, the Stormwater Local Assistance Fund, the coastal zone program, and the regional stormwater program.
Total Attendance: 44
Total Stakeholders: 26

The following points summarize the activities of the Hampton Roads Sea Level Rise Advisory Committee and Coastal Resiliency Committee.

- October 9, 2015 – This meeting of the Sea Level Rise Advisory Committee featured a presentation on the Dutch Dialogues workshop held in June 2015. The meeting also included briefings and updates on the National Disaster Resilience Competition, regional sea level rise inundation maps, the HRPDC work program, and various local, state, federal, and academic projects related to sea level rise and recurrent flooding.
Total Attendance: 29
Total Stakeholders: 22
- December 4, 2015 – This meeting of the Sea Level Rise Advisory Committee featured a presentation from Virginia Beach city staff a proposal for an alternative way for administering FEMA grants for raising houses. The meeting also included a presentation from Portsmouth city staff and Virginia Modeling, Analysis, and Simulation Center faculty on how Portsmouth residents perceive and experience recurrent flooding. The meeting also included updates and discussions on local planning for sea level rise, integrating hazard mitigation and local comprehensive planning, the HRPDC work program, the ODU intergovernmental pilot project, and local, state, federal, and academic projects related to sea level rise and recurrent flooding.
Total Attendance: 40
Total Stakeholders: 22
- January 27, 2016 – This meeting of the Coastal Resiliency Committee featured a presentation on an aquifer replenishment study by Ted Henifin of the Hampton Roads Sanitation District. The meeting also included discussion of the committee's structure, work program, and partnerships with federal entities.
Total Attendance: 39
Total Stakeholders: 26
- March 25, 2016 – This meeting of the Coastal Resiliency Committee featured a presentation by Col. Jason Kelly of the U.S. Army Corps of Engineers Norfolk District on multi-jurisdictional feasibility studies and a presentation by the HRPDC staff on proposals to monitor regional land subsidence. The meeting also included updates on FEMA programs and local, state, federal, and academic projects related to coastal resiliency.
Total Attendance: 26
Total Stakeholders: 18
- June 24, 2016 – This meeting of the Coastal Resiliency Committee featured a presentation by Skip Stiles and Ross Weaver of Wetlands Watch on an adaptation strategy guide for local governments. The meeting also included briefings, updates, and discussion on communicating resiliency, collaboration with federal agencies,

the HRPDC work program, and local, state, federal, and academic projects related to coastal resiliency.

Total Attendance: 42

Total Stakeholders: 27

- September 23, 2016 – This meeting of the Coastal Resiliency Committee featured a presentation by Hampton city staff on the city’s recent Community Assistance Visit and the resulting comments on permitting development in Special Flood Hazard Areas. The meeting also included a presentation by HRPDC staff on alternatives for economic impact analysis of sea level rise and a presentation by ODU faculty on a survey of perceptions of sea level rise, flooding, and adaptation. The meeting also included updates and discussions of the HRPDC Coastal Resiliency Program and local, state, federal, and academic projects related to coastal resiliency.

Total Attendance: 26

Total Stakeholders: 16

Through the regional coordination process, the HRPDC works to ensure that local government planning and implementation activities in the areas of stormwater management, water supply and groundwater management, wastewater, Chesapeake Bay , sea level rise, resiliency, and coastal zone management are coordinated and mutually supportive. The synergy inherent in this coordination process provides opportunities for local government innovation and enhancement of activities in each of these areas.

PUBLIC INFORMATION, EDUCATION AND TRAINING

An integral component of the Hampton Roads Technical Assistance Program is the provision of public information and education on environmental issues in the Hampton Roads region. Provision of public information and education was identified by the participating localities at the outset of the program in 1986 as a critical need that could be met cooperatively through the HRPDC. Since that time, the HRPDC staff has provided written communications and briefings to the Commission and a wide range of interest groups on environmental issues and has provided regular briefings to many of those groups. These efforts continued during the grant year.

To ensure that the members of the HRPDC are kept informed about the status of ongoing HRPDC environmental program activities and pending environmental issues that may affect the Hampton Roads region, the HRPDC staff routinely briefs the Commission on environmental issues of importance. During the year, briefings were given to the HRPDC on the following topics: water supply protection, groundwater, and coastal resiliency.

The HRPDC staff has provided briefings on regional environmental programs, environmental issues and state and federal regulations to a variety of groups and given presentations on related HRPDC technical studies and programs at several state, regional,

and national conferences. A number of briefings were also provided to state agency Boards, Legislative Commissions, local government Planning Commissions, City Councils/County Boards, and Town Councils on regional environmental projects and issues.

During the grant period, HRPDC staff represented the region in several major panels and presentations on environmental issues. These include stormwater management, the Chesapeake Bay TMDL, groundwater, climate change and sea level rise, water supply, and pesticides. A number of these presentations addressed multiple programs. Programs and activities covered included water supply planning, green infrastructure, TMDL regulations, pollution prevention, the overall HRPDC water resources program, watershed modeling, wetlands regulations, regional environmental education initiatives, and the regional stormwater management program. These meetings and presentations included:

- Presentation at 2015 Rising Seas Summit, “Planning for Sea Level Rise at the Local Level” – November 5, 2015
- Presentation at Environment Virginia, “Beyond Vulnerability Assessments: Informing Planning Decisions on Sea Level Rise” – April 6, 2016
- Presentation at 2016 NOAA Social Coast Forum , “Too Much Water: Sea Level Rise and Flooding in Hampton Roads” – February 9, 2016
- Presentation at Environmental Defense Fund workshop on nature-based resiliency solutions, “Solving Multiple Challenges: Addressing Sea Level Rise and Risk Reduction in conjunction with other Hampton Roads communities’ needs” – February 9, 2016
- Presentation at Resilient Virginia, “Regional Coordination and Sea Level Rise Adaptation in Hampton Roads” – March 22, 2016
- Briefing for Senator Mark Warner, “Regional Coordination and Sea Level Rise Adaptation in Hampton Roads” – April 1, 2016
- Presentation to USDOT Center for Climate Change and Environmental Forecasting, “Regional Planning for Sea Level Rise in Hampton Roads, Virginia” – August 25, 2016

A copy of the presentation given at the Environmental Defense Fund workshop on February 9, 2016 is included in Appendix D.

In August 2010, HRPDC replaced a quarterly newsletter with an online publication an e-mailed “HRPDC Weekly Update,” which was distributed to nearly 4,000 individuals. In July 2011, the “HRPDC Weekly Update” was moved to a bi-weekly schedule and renamed the

“Hampton Roads Update” and later renamed the “Hampton Roads e-Newsletter” in April 2012. The online publication was shifted to a list of news articles and reports from HRPDC staff directly accessible from the HRPDC website’s homepage (www.hrpdcva.gov). To enhance the effectiveness of all HRPDC public information materials, HRPDC Special Reports on specific topics are also developed and distributed to supplement the regular newsletter. All newsletters and special reports are now distributed electronically. During this grant, HRPDC planning staff posted twenty-three (23) entries related to coastal management issues.

The HRPDC staff has devoted considerable attention and effort over the past year to the continued refinement of the Commission's web page (www.hrpdcva.gov). The website contains copies of all newsletters, complete copies of HRPDC technical reports and an overview of Commission activities. All Commission and most committee meeting agenda materials are now posted and available on the HRPDC website. It contains an extensive section devoted to the HRPDC’s regional planning and water resources programs, including links to a number of other federal, state, local, and private sector sites. Efforts to further enhance the website remain ongoing. A Commission Action Summary is posted after each meeting, and the meetings can be viewed on YouTube in their entirety.²

Through the Regional Environmental Committee, HRPDC staff has provided, facilitated, or hosted training on a variety of topics to localities. HRPDC also subscribes to and hosts a series a webinars provided by the American Planning Association (APA) and American Institute of Certified Planners (AICP). These webinars cover a variety of planning issues and provide Certification Maintenance (CM) credits to AICP planners. The HRPDC also has continued to partner with Old Dominion University and Virginia Sea Grant to hold meetings of the Hampton Roads Sea Level Rise/Recurrent Flooding Adaptation Forum. These meetings often provide Continuing Education Credits (CECs) to Certified Floodplain Managers. HRPDC staff publicizes and coordinates these training webinars and opportunities. In total, these training opportunities provided local staff with up to 14.75 AICP Certification Maintenance credits and 21.0 CFM Continuing Education Credits. The specific training opportunities are listed below.

² <https://www.youtube.com/user/HRPDC>

Educational and Training Opportunities Provided in FY15-16

Program Title	Content Provider	Date	Host	Credits
'Health Equity and Planning Ethics'	APA/AICP	October 9, 2015	HRPDC	1.5 CM Ethics
Sustaining Places Through the Comprehensive Plan	APA/AICP	October 23, 2015	HRPDC	1.5 CM
Beyond Toolkits: Adaptation Strategies and Lessons	HRPDC/ODU/ Virginia Sea Grant	October 30, 2015	Old Dominion University	4.0 CEC
'Planning, Economic Development, and the New Normal'	APA/AICP	December 2, 2015	HRPDC	1.5 CM
'Parks that Reshape Cities'	APA/AICP	April 4, 2016	HRPDC	1.25 CM
Planning for Resilience in Hampton Roads	HRPDC/ODU/ Virginia Sea Grant	May 6, 2016	Old Dominion University	4.0 CEC
'Translating the Plan into Action	APA/AICP	May 11, 2016	HRPDC	1.5 CM
'2016 Planning Law Review'	APA/AICP	June 29, 2016	HRPDC	1.5 CM Law
The Latest in Sea Level Rise Science	HRPDC/ODU/Virg inia Sea Grant	July 29 2016	Old Dominion University	4.0 CEC
Introducing Green Infrastructure for Coastal Resilience	NOAA	August 24, 2016	HRPDC/Chesapeake Bay Foundation	6.0 CM 5.0 CEC
Adaptive Structures and Innovative Solutions	HRPDC/ODU/Virg inia Sea Grant/Hampton University	September 29, 2016	Old Dominion University/Hampton University	4.0 CEC

CZM SUCCESS STORY: ENHANCING COASTAL RESILIENCY IN HAMPTON ROADS

In October 2008, the HRPDC was awarded the first of four grants by the Virginia CZM Program to study the impacts of climate change on the Hampton Roads region and identify potential responses to those impacts (FY '08 Task 12.03). Additional grants were awarded in October 2009 (FY '09 Task 12.04), October 2010 (FY '10 Task 12.04), and October 2011 (FY '11 Task 51). This effort required considerable research and analysis, and resulted in four separate reports which are now available on the HRPDC's website. These reports included the results of significant GIS analyses and mapping efforts, and have formed part of the basis for an ongoing regional discussion of how local governments in Hampton Roads should respond to climate change impacts, particularly sea level rise, which was early on identified as one of the greatest concerns for this region. One of the most useful components of this effort has been the development of a set of maps showing the potential inundation impacts of various sea level rise scenarios. In addition, the recognition of the significance of this issue for Hampton Roads communities has resulted in a new Coastal Resiliency Program and Committee at the HRDPC, with dedicated funding for staff time on resiliency projects and efforts.

Building on both the technical work and coordination process, the HRPDC has, in partnership with several localities and the U.S. Navy, received a grant in the fall of 2016 from the Department of Defense's Office of Economic Adjustment for a Joint Land Use Study covering Navy installations in Norfolk and Virginia Beach. The focus of the study will be to identify areas and infrastructure that are both vulnerable to flooding and that support Navy operations and readiness in the region, with the goal of developing implementable local policies that both cities can act upon. The two-year study is expected to be completed in August 2018.

CONCLUSIONS

Through the Hampton Roads Technical Assistance Program, the HRPDC has provided technical assistance to its member local governments and others; has delivered public information and education to the citizens and government officials of the region; has conducted important technical studies; and has coordinated a regional approach to participation in state and federal environmental programs, while also providing cost-effective support to the Virginia Coastal Zone Management Program.

The Hampton Roads Technical Assistance Program conducted through the VCZMP is a cost-effective solution to the need for environmental cooperation and coordination in the Hampton Roads region of 3,000 square miles and 1.7 million residents. It provides a vehicle for the ten cities, six counties, and eleven towns of Hampton Roads to work with a number of state and federal agencies and others to exchange information and develop coordinated approaches to environmental management issues, while concurrently providing technical support for routine local government planning and management activities. Based on state

and federal legislative and executive branch responses to comments and recommendations developed through this process, it is an effective means for the region's localities to communicate their views on environmental issues. It also provides a cost-effective means of ensuring that this region can participate in and support important environmental initiatives of the Commonwealth, such as the Virginia Coastal Zone Management Program and the Chesapeake Bay Program. It also appears to be a cost-effective mechanism for the Virginia Coastal Zone Management Program and related state environmental programs to use in communicating with and soliciting input from local government. Over the years, funding from the VCZMP through the Hampton Roads Technical Assistance Program has provided the region with the seed to establish a number of new regional programs in the areas of water supply planning and coordination, watershed management, stormwater management and environmental education. The HRPDC and its member local governments continue to believe that the Hampton Roads Technical Assistance Program is an extremely valuable and cost-effective approach to environmental planning and management in the Hampton Roads region.