

Hampton Roads Coastal Resources Management Technical Assistance Program Fiscal Year 2021-2022 Final Report

WR22-01 | NOVEMBER 2022

GRANT # NA21NOS4190152 | TASK 43



HAMPTON ROADS PLANNING DISTRICT COMMISSION

CHESAPEAKE

Steven Best
Debbie Ritter
Ella Ward
Christopher Price
Brian Solis

FRANKLIN

Frank Rabil
Amanda Jarratt

GLOUCESTER COUNTY

Phillip Bazzani
Carol Steele

HAMPTON

Steve Brown
Donnie Tuck
Mary Bunting

ISLE OF WIGHT COUNTY

Joel Acree
Randy Keaton, Treasurer

JAMES CITY COUNTY

James Icenhour
Scott Stevens

NEWPORT NEWS

David Jenkins, Vice-Chair
McKinley Price
Cynthia Rohlf

NORFOLK

Kenneth Alexander
Courtney Doyle
Andria McClellan, Chair
Danica Royster
Larry "Chip" Filer

POQUOSON

Gordon Helsel
Randall Wheeler

PORTSMOUTH

Shannon Glover
Tonya Chapman

SMITHFIELD

Carter Williams
Michael Stallings

SOUTHAMPTON COUNTY

William Gillette
Brian Thrower

SUFFOLK

Leroy Bennett
Albert Moor

SURRY COUNTY

Robert Elliott
Melissa Rollins

VIRGINIA BEACH

Robert Dyer
Barbara Henley
Delceno Miles
John Moss
Guy Tower
Sabrina Wooten
Patrick Duhaney

WILLIAMSBURG

Douglas Pons
Andrew Trivette

YORK COUNTY

Sheila Noll
Neil Morgan

Robert A. Crum, Jr.
Executive Director/Secretary

**HAMPTON ROADS COASTAL RESOURCES MANAGEMENT
TECHNICAL ASSISTANCE PROGRAM
FISCAL YEAR 2021-2022**

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. NA21NOS4190152 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 for this project amounted to \$69,000 or approximately 50% of the total project cost.

This project was included in the Hampton Roads Planning District Commission FY 2022 Work Program, approved by the Commission on May 20, 2021, and in the Hampton Roads Planning District Commission FY 2023 Work Program, approved by the Commission on May 19, 2022.

Prepared by the staff of the Hampton Roads Planning District Commission



November 2022

REPORT DOCUMENTATION

REPORT TITLE:

Hampton Roads Coastal Resources Technical Assistance Program Fiscal Year 2021-2022

REPORT DATE:

November 2022

AUTHORS:

Benjamin J. McFarlane, AICP, CFM
Senior Regional Planner
bmcfarlane@hrpdcva.gov

GRANT/SPONSORING AGENCY:

DEQ/NOAA/LOCAL FUNDS

ORGANIZATION:

Hampton Roads Planning District Commission
723 Woodlake Drive
Chesapeake, Virginia 23320
(757)420-8300
<https://www.hrpdcva.gov>

ABSTRACT

This report describes the environmental technical assistance program conducted by the Hampton Roads Planning District Commission during FY 2021 – 2022 through its Coastal Resources Management Program. This program encompasses environmental impact review, participation in state and federal programs, coordination of regional programs addressing environmental issues, 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.

ACKNOWLEDGEMENTS

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. NA21NOS4190152 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.

This project was included in the Hampton Roads Planning District Commission FY 2022 Work Program, approved by the Commission on May 20, 2021, and in the Hampton Roads Planning District Commission FY 2023 Work Program, approved by the Commission on May 19, 2022.



Table of Contents

Introduction	1
Program Objectives.....	3
Program Accomplishments.....	4
EIA/EIS and Federal Consistency Review (Product #1)	4
Public Information, Education, and Training (Product #2)	4
Regional Coordination Process (Product #3)	7
Regional Coordination Process	8
Regional Environmental Committee.....	8
Participation in State and Federal Programs	12
Virginia Coastal Zone Management Program	13
Chesapeake Bay Program	13
Regional Technical Studies and Special Projects (Product #4)	14
FishSwimPlay.com Improvements	14
Lower Chickahominy Watershed Collaborative.....	15
Riverine Floodplain GIS Layers	15
Regional Resilient Stormwater Management Design Guidelines	18
Local Assistance and Coordination	19
Benefits Accrued from Prior CZM Grants (Product #5)	20
Resilience Planning (Product #6)	21
Resilience Coordination	21
Coastal Zone Resilience Database Support.....	22
Coastal Resiliency Master Plan Development Support.....	23
Identification of Regional Resilience Priorities and Needs	24
Conclusions	25

This page intentionally left blank.

Introduction

In February 2021, the Hampton Roads Planning District Commission (HRPDC) submitted a proposal to the Virginia Coastal Zone Management Program (CZM) 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, including academic institutions and for-profit and not-for-profit entities. This program has operated successfully with financial assistance from CZM since the latter's inception in 1986. In October 2021, HRPDC was awarded financial assistance to maintain its Technical Assistance Program through September 2022. 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 program, providing on-call staff capacity, a regional coordination mechanism, and technical analysis and research capabilities. It assists the region's localities on local issues in a timely manner, 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. 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, green infrastructure, and recreational trails. In several cases, CZM funding for this program has provided seed money allowing the region to undertake new environmental initiatives, such as the Regional Water Supply, Groundwater, Wastewater, Stormwater Management, and Coastal Resiliency Programs, including their public information and education components. These regional initiatives are now institutionalized and have been enhanced through dedicated local funding. These regional programs are unique examples of intergovernmental cooperation to promote responsible use and management of coastal resources in the Commonwealth.

The Hampton Roads Technical Assistance Program also enables the HRPDC to participate in and support key elements of the CZM program, such as the environmental impact review and federal consistency determination process, wetlands and dune regulations, Chesapeake Bay Preservation Area Designation and Management regulations, air quality regulations, and several state water quality programs. This participation results in cost savings to the state by educating localities collectively about state and federal initiatives and coordinating local government input to these efforts. Over the past thirty-six (36) years, several hundred local government staff members from the region's seventeen local governments have received technical training in wetlands regulations and delineation, Chesapeake Bay Preservation

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.

Act (CBPA) implementation, erosion and sediment control, stormwater management, low impact development, environmental site design, floodplain management, geographic information systems, land conservation, land use planning, 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 also participated. As a result, the capacity of the region to address these issues has increased, including governmental, non-government, and private sectors.

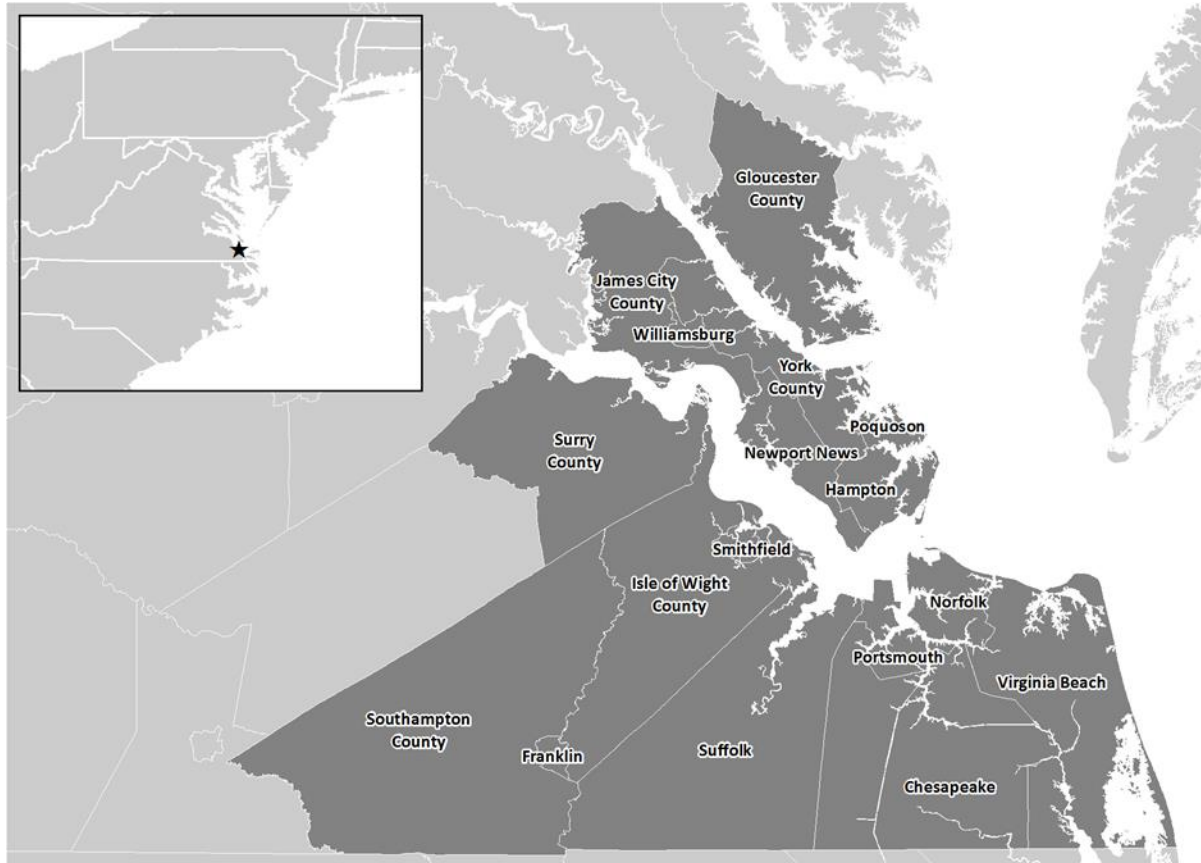


Figure 1: Map of Local Government Members of the Hampton Roads Planning District Commission

Through review of environmental impact documents and coastal zone federal consistency determinations, the regional coastal resources management 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 federally funded or assisted construction projects, harbor dredging, military facility construction and operations, military-civilian encroachment issues, offshore energy and resource planning, 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, such as U.S. Census data, high-resolution elevation data, and land

cover data, as well as datasets developed by HRPDC and Hampton Roads Transportation Planning Organization (HRTPO) staff. Many of these data resources and related applications are housed on the HRPDC's regional GIS data portal, www.HRGEO.org, which was launched in 2018.

The FY 2021 – 2022 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 - Chesapeake Bay issues, environmental impact review, local land use and comprehensive planning, alternative energy development, wetlands protection, shoreline management, coastal resiliency, public access, and GIS data analysis. The program has allowed the continuation of regional support for and participation in CZM activities, 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

The Hampton Roads Technical Assistance Program has six (6) primary objectives. These overall objectives, while expanded in scope, have remained largely the same since the program's inception. They are:

- 1) To assist Hampton Roads localities in implementing CZM recommendations, related state and federal environmental management programs, and related state legislation and regulations.
- 2) To support the Commonwealth of Virginia in implementing the CZM Program 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 that are necessary to support local government consideration of state and federal priorities.
- 4) To enable the Hampton Roads region to continue to play an active role in the development, implementation, and refinement of the CZM Program, the Chesapeake Bay Program, 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: regional coordination, environmental impact review, public information and education, training, regional technical studies, and technical assistance.

Program Accomplishments

EIA/EIS and Federal Consistency Review (Product #1)

The HRPDC staff reviews and comments on applications for state and federal regulatory permits, including 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 reviews requests for comments from DEQ and responds as appropriate. From October 1, 2021, through September 30, 2022, the HRPDC staff provided comments on three (3) federal consistency determinations and provided comments on one (1) transportation draft Natural Resources Technical Report. The specific projects are listed below. 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 have followed up with HRPDC staff to have comments clarified.

- 1) DEQ #21-160F – HUD Blaine Landing Phase I and II
- 2) DEQ #22-091F – FAA Acquisition of Property at 200 Oriana Rd.
- 3) DEQ #22-093F – Navy Living Shoreline Project
- 4) Bowers Hill Interchange Improvements Study – DRAFT Natural Resources Technical Report

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 review.

Public Information, Education, and Training (Product #2)

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 board are kept informed about the status of ongoing HRPDC coastal resources management program activities and pending environmental issues that may affect the Hampton Roads region, the HRPDC staff routinely briefs the Commission on coastal resources management issues of importance. During the year, briefings were given to the HRPDC board on regional legislative priorities, a regional proposal for the Economic Development Administration's Build Back Better Regional Challenge program, potential regional projects for the Community Flood Preparedness Fund, funding for flood mitigation projects, the Stormwater Local Assistance Fund, research on severe weather, and the National Flood Insurance Program.

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. Briefings are also provided to state agency boards, legislative commissions, local government planning commissions, city councils/county boards, and town councils on request. During the grant period, HRPDC staff presented individually or on panels on several environmental issues, including coastal resiliency, floodplain management, flood insurance, and locality-military coordination. These meetings and presentations are summarized in Table 1.

The HRPDC regularly updates its website, www.hrpdcva.gov, with news articles and reports from HRPDC staff. During this grant, HRPDC planning staff posted seventeen (17) entries related to coastal management issues, covering topics such as outdoor recreation, hazard mitigation, environmental education, offshore wind, resilience, and recycling. The HRPDC staff continues to update the agency's website, adding and updating program information, meeting materials, presentations from conferences or other outside events, and technical reports and other work products. All Commission meeting agenda materials are now posted and available on the HRPDC website. The website also contains an extensive section devoted to the HRPDC's regional planning, coastal resiliency, and water resources programs, including links to 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 the organization's YouTube channel.² Recordings of many virtually held meetings have also been posted to the agency's website and YouTube channels.

² <https://www.youtube.com/channel/UCbfXhXsIMTXxq9wEltbPBVg>

Table 1: FY21-22 Coastal Resources Presentations by HRPDC Staff

Date	Event/Audience	Presentation Title
October 28, 2021	Virginia State Bar Webinar: "Virginia's Climate Change Strategies"	"Local and Regional Planning for a Resilient Hampton Roads"
October 29, 2021	Wetlands Watch Lunch & Learn	"Community Flood Preparedness Fund"
November 30, 2021	Virginia Maritime Association Environmental Affairs Committee	"Resilient Design Guidelines for Hampton Roads"
December 16, 2021	Coastal Resilience and Adaptation Consortium	"Hampton Roads Joint Land Use Studies"
January 27, 2022	Commander, Navy Region Mid-Atlantic	"Portsmouth Chesapeake Joint Land Use Study"
March 31, 2022	2022 Environment Virginia Symposium	"Resilient Design Guidelines for Hampton Roads"
April 19, 2022	Regional Public Information Officers Subcommittee	"Get Flood Fluent: FEMA Risk Rating 2.0 Updates"
April 26, 2022	Chesapeake Planning Commission	"JLUS Implementation – Chesapeake"
May 3, 2022	Portsmouth Planning Commission	"Portsmouth-Chesapeake Joint Land Use Study"
June 6, 2022	NVRC Flood Mitigation and Resiliency Workgroup	"Hampton Roads Resilient Design Guidelines"
June 8, 2022	APA Federal Planning Division Annual Training Workshop	"Regional Collaboration for Resilience: Norfolk-Virginia Beach Joint Land Use Study"
July 18, 2022	Joint Subcommittee on Coastal Flooding	"Joint Land Use Study Implementation in Hampton Roads"
July 29, 2022	The Coastal Society Coastal Connections Webinar Series	"Local and Regional Planning for a Resilient Hampton Roads"
August 2, 2022	VCZMP NOAA Section 312 Evaluation	"Coastal Resilience Planning in Hampton Roads, Virginia"
September 27, 2022	Norfolk City Council	"Risk Rating 2.0 and Hampton Roads: National Flood Insurance Program Update"
September 29, 2022	Chesapeake Bay Program Local Government Advisory Committee	"Local and Regional Planning for a Resilient Hampton Roads"

Through the Regional Environmental Committee, HRPDC staff has provided, facilitated, or hosted training on a variety of topics to localities. The HRPDC has partnered with state or federal agencies on various training events by providing logistical support. The HRPDC continues to partner with Old Dominion University (ODU) and Virginia Sea Grant to hold meetings of the Hampton Roads Sea Level Rise/Recurrent Flooding Adaptation Forum. The HRPDC staff helps ODU faculty develop agendas, coordinate speakers, and publicize events. In addition, the HRPDC staff has established a CBPA Working Group that brings together CBPA staff from each locality to share insights, ask questions, and discuss

program implementation. This group met four (4) times during the grant year. The HRPDC staff has also established a Coastal Resiliency Working Group to provide a forum for technical discussions on resiliency-related issues. This group met three (3) times during the grant year. The specific training opportunities are listed in Table 2.

Table 2: Educational and Training Opportunities Provided in FY21-22

Date	Topic	Event	Host	Attendance
November 4, 2021	CBPA Property search tool, CBPA regulations, tidal wetlands guidelines	HRPDC Regional Environmental Committee	HRPDC*	57
December 17, 2021	Regional resiliency design guidelines	Hampton Roads Adaptation Forum	ODU*	95
January 24, 2022	CBPA outreach material, CBPA regulations	HRPDC CBPA Workgroup	HRPDC*	18
March 11, 2022	Chesapeake Bay Program Future IDF Curve Tool	Hampton Roads Adaptation Forum	ODU*	34
April 25, 2022	Flood insurance outreach tools, environmental impact bonds	HRPDC CBPA Workgroup	HRPDC	16
June 2, 2022	Tidal wetlands guidelines	HRPDC Regional Environmental Committee	HRPDC	27
July 7, 2022	Virginia Community Flood Preparedness Fund	HRPDC Regional Environmental Committee	HRPDC*	52
July 25, 2022	Local CBPA board training materials, CBPA regulations, tidal wetlands guidelines	HRPDC CBPA Workgroup	HRPDC*	19
September 30, 2022	CBPA regulations	Hampton Roads Adaptation Forum	ODU	44

*These meetings were held virtually.

Regional Coordination Process (Product #3)

The regional coordination component of the HRPDC's Coastal Resources Management Technical Assistance Program includes the facilitation of meetings between the area's local governments and other organizations as well as participation in state and federal programs. 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, floodplain management, resiliency, and coastal zone management are coordinated and mutually supportive. This coordination process provides opportunities for local government innovation and enhancement of activities in each of these areas.

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. Through the Regional Environmental Committee, HRPDC staff support local governments in implementing legal requirements of various state and federal regulatory programs. This process also helps the region by providing support for coastal resources management and environmental education. The Regional Environmental Committee meets approximately ten to twelve times per year. The Hampton Roads Technical Assistance Program also enables the HRPDC staff to support regional coordination on issues related to coastal resiliency, sea level rise, recurrent flooding, and climate change adaptation. These issues fall under the purview of the HRPDC's Coastal Resiliency Committee. The Coastal Resiliency Committee meets on a quarterly schedule, with additional workgroup discussions of technical matters scheduled for off-months when necessary. Additional information on these efforts is described in a later section of this report.

During this grant year, the HRPDC staff continued local government coordination of ongoing consideration of various environmental issues. Stormwater management, the Chesapeake Bay Program and Total Maximum Daily Load (TMDL), renewable energy, green infrastructure, and flooding continue to be issues of considerable interest. The meetings usually include 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.

Regional Environmental Committee

The following meeting summaries describe the discussions of the HRPDC Regional Environmental Committee during the past year. During this grant year the Regional Environmental Committee met eleven (11) times. Three (3) of the meetings were held in person, while the rest were held virtually via Zoom or WebEx. Alternating meeting formats between in-person and virtual allows the HRPDC staff to balance increasing attendance and accessibility with network building.

Meeting Date: October 7, 2021

Summary: The primary focus of this meeting was green infrastructure. The meeting featured presentations from Mr. George Homewood and Mr. Chris Whitney, Norfolk Planning Department, on the city's tree preservation and conservation initiatives, a presentation from Ms. Shereen Hughes, Wetlands Watch, on urban buffer design opportunities, and a presentation from Ms. Bettina Bergoo and Mr. Aaron Berryhill, Virginia Department of Energy, on financing for solar energy projects. The meeting also included briefings from HRPDC staff on the Portsmouth-Chesapeake Joint Land Use Study and the askHRgreen.org environmental education program.

Outcome(s): Outcomes of this meeting included increased knowledge of tree preservation policies and renewable energy.

Total Attendance: 56

Total Stakeholders: 32

Meeting Date: November 4, 2021

Summary: This meeting featured a presentation from Mr. Scott Smith, Hampton, on the city's resilient water quality improvement projects, a briefing from Ms. Katherine Rainone, HRPDC, on the Build Back Better Regional Challenge, and a presentation from Ms. Sarah Stewart, PlanRVA, on the Lower Chickahominy Watershed Collaborative. The meeting also included a briefing from HRPDC staff on the HRPDC and HRTPO boards' legislative priorities for the 2022 General Assembly session.

Outcome(s): Outcomes of this meeting included increased awareness of innovative stormwater and flood management practices and of regional legislative policies and initiatives. The presentation from Hampton city staff included an in-depth discussion of the city's process for prioritizing improvements, including the selection criteria and methodology, and designs for example projects.

Total Attendance: 57

Total Stakeholders: 31

Meeting Date: December 2, 2021

Summary: The primary focus of this meeting was stormwater management and recycling. This meeting featured a presentation from Ms. Barbara Gavin, Elizabeth River Project, on the organization's program for inspecting and re-certifying residential stormwater best management practices. The meeting also included a presentation from Ms. Cassie Cordova and Ms. Kate Sipes, James City County, and Ms. Elizabeth Hupp, Owens Illinois, on a new glass recycling partnership between the county and the company. The meeting also included briefings from HRPDC staff on the state's tree conservation stakeholder advisory group and the CZM biennial Coastal Partners Workshop.

Outcome(s): Outcomes of this meeting included increased awareness of glass recycling opportunities and innovative partnerships.

Total Attendance: 60

Total Stakeholders: 35

Meeting Date: January 6, 2022

Summary: The primary focus of this meeting was resiliency. The meeting featured a presentation from Mr. Doug Beaver, Norfolk, on the city's Ohio Creek Watershed Project. The meeting also included a presentation from Mr. Reed Perry, Chesapeake Conservancy, on a proposal to make the Chesapeake Bay a National Recreation Area and a presentation from Mr. Earl Sorey, Chesapeake, on the city's decision to end curbside recycling. The meeting also included briefings from HRPDC staff on the Community Flood Preparedness Fund and the 2022 General Assembly session.

Outcome(s): Outcomes of this meeting included increased knowledge of C-PACE as a resiliency tool and awareness of pending changes to the CBPA regulations.

Total Attendance: 70

Total Stakeholders: 38

Meeting Date: February 4, 2022

Summary: This was a special meeting organized to brief locality staff and other stakeholders on legislative developments with the 2022 General Assembly.

Outcome(s): Outcomes of this meeting included increased awareness of legislation pending in the General Assembly.

Total Attendance: 82

Total Stakeholders: 40

Meeting Date: March 3, 2022

Summary: The primary focus of this meeting was Chesapeake's planning for the Indian River corridor. The meeting featured a presentation from Mr. Benjamin Camras, Chesapeake Planning Department, on the city's Indian River Planning Area Study and Redevelopment Strategy. The meeting also included a presentation on a Chesapeake Bay Program Wetlands Fact Sheet from Mr. Kevin Du Bois, DoD Chesapeake Bay Program, and a presentation from Dr. KC Filippino, HRPDC, on a recently completed NFWF-funded Small Watershed Planning Grant. The meeting also included an update from HRPDC staff on the askHRgreen.org regional environmental education program.

Outcome(s): Outcomes of this meeting included increased knowledge of local planning initiatives.

Total Attendance: 34

Total Stakeholders: 19

Meeting Date: April 7, 2022

Summary: The primary focus of this meeting was resilience and sustainability. The meeting featured a presentation from Ms. Carol Considine, ODU, on the Coastal Resilience and Adaptation Economy Consortium and a presentation from Mr. Jon Nelson, Hampton Roads Sanitation District, on a new trash collector developed for the Boat Harbor Treatment Plant. The meeting also included a presentation from Mr. Joe Rieger, Elizabeth River Project, on the organization's new 2022 Watershed Action Plan. The meeting also included briefings from the HRPDC staff on the CZM program, shoreline management policies, the Community Flood Preparedness Fund, and the 2022 General assembly legislative session.

Outcome(s): Outcomes of this meeting included greater awareness of regional resilience initiatives.

Total Attendance: 50

Total Stakeholders: 29

Meeting Date: May 5, 2022

Summary: The primary focus of this meeting was on the Department of Environmental Quality. The meeting featured a presentation from Mr. Mike Rolband, Director of DEQ, on major initiatives and efforts underway at the department. The meeting also included a presentation from Ms. Elizabeth Andrews, Virginia Coastal Policy Center, and Mr. Jeff Flood, Virginia CZM Program, on an effort to address abandoned and derelict vessels. The meeting also included briefings from the HRPDC staff on draft CBPA guidance for implementing new climate resilience requirements and the 2022 Environment Virginia Symposium.

Outcome(s): Outcomes of this meeting included increased knowledge of the new administration's priorities for DEQ.

Total Attendance: 62

Total Stakeholders: 31

Meeting Date: June 2, 2022

Summary: The primary focus of this meeting was resilience. The meeting featured a detailed presentation from Ms. Toni Utterback, Virginia Beach Public Works, on the city's flood protection program, including projects included, education and outreach efforts, and the implementation plan. The meeting also included presentations from Mr. Chris Lowie, Great Dismal Swamp National Wildlife Refuge, on recent and planned upgrades to the facility and from Ms. Carolyn Poissant, Newport News, on a partnership between the city and HRSD to improve the Riverview Farm Park and HRSD's nearby treatment facility. The meeting also included updates from the Chesapeake Bay Foundation on support in the new state budget for water quality and from the HRPDC staff on new land use/land cover data from the Chesapeake Bay Program.

Outcome(s): Outcomes of this meeting included increased knowledge of Virginia Beach's flood protection program and the state budget.

Total Attendance: 27

Total Stakeholders: 14

Meeting Date: July 7, 2022

Summary: The primary focus of this meeting was on resilience and sustainability. The meeting featured a presentation from Ms. Meghan Mulroy-Goldman, Virginia Department of Forestry, on the recently completed Resilient Coastal Forests of Virginia Study, including its methodology and findings. The meeting also included presentations from Mr. Jay Bernas, HRSD General Manager, on the organization's current major efforts, and from Ms. Lucy Stoll, Chesapeake, and Ms. Beth Lewis, Southampton County, on planning for and experiences with utility scale solar projects.

Outcome(s): Outcomes of this meeting included increased understanding of green infrastructure planning practices and awareness of issues with solar energy projects.

Total Attendance: 52

Total Stakeholders: 32

Meeting Date: September 1, 2022

Summary: The primary focus of this meeting was on environmental justice and stormwater management. The meeting featured a presentation from Ms. Grace Holmes, DEQ Tidewater Regional Office, on efforts by DEQ to develop capacity to address environmental justice issues associated with water and air quality. The meeting also featured a presentation from Ms. Laura Kirkwood, HRSD, on the Woodstock Park Improvement Project, a joint HRSD-Virginia Beach project to increase storage capacity and improve a city park. The meeting also included updates from the HRPDC staff on CBPA outreach efforts, the regional hazard mitigation plan, and shoreline management policies.

Outcome(s): Outcomes of this meeting included increased awareness of environmental justice issues and public works projects with multiple benefits.

Total Attendance: 30

Total Stakeholders: 15

Participation in State and Federal Programs

Several state and federal environmental programs encourage using regional organizations as a cost-effective mechanism for informing and engaging local governments and seeking their input. 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 developing 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 CZM as well as state agencies such as the Departments of Conservation and Recreation, Emergency Management, and Environmental Quality, use the PDCs in this manner. Historically, NOAA's Section 312 evaluation of Virginia's CZM Program has recognized the benefits and cost-effectiveness of the network of PDCs in supporting CZM and in assisting their member local governments.

In the Hampton Roads region, the Hampton Roads Technical Assistance Program and the HRPDC's various committees help provide this function. Both HRPDC staff and local government members of these 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 recommend 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 many state or federal programs and efforts. 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 2021-2022, this program included regional participation in state or federal programs addressing water quality, resiliency, stormwater management, groundwater management, and the Chesapeake Bay Program.

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 CZM funding, serving on advisory committees supporting plan and regulatory development, and development of new cooperative initiatives involving state, local, federal, and private or non-governmental entities. During the past year, this included participating on the York River-Small Coastal Basins Roundtable and its Habitat Restoration Steering Committee (habitat protection and restoration), the stakeholder advisory group for proposed amendments to the Chesapeake Bay Preservation Area Designation and Management Regulations (water quality), the VCRMP Technical Advisory Committee (resilience), the Virginia Bay Enhancement Working Group (dredging), the Land Conservation Capacity in Hampton Roads workgroup (natural resource protection), and others.

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 CZM Program. The HRPDC staff participated in two Coastal Policy Team meetings on January 26, 2022, and September 14, 2022. The HRPDC staff also participated in Coastal PDC meetings on January 26, 2022 (hosted by Crater Planning District Commission), and May 31, 2022 (hosted by George Washington Regional Commission), and hosted a Coastal PDC meeting on September 21, 2022. The HRPDC staff also participated in NOAA's Section 312 evaluation of the Virginia CZM Program on August 1-2, 2022.

The Coastal PDCs provide a network linking all regional agencies and localities in the Coastal Zone to address environmental issues. In recent years this network has provided support for multi-regional partnerships and initiatives, including the Chesapeake Bay, coastal resilience, ecotourism, working waterfronts, and planning for the Lower Chickahominy River Watershed. The HRPDC staff has played an integral role in the development and enhancement of these larger networks. During the past year, HRPDC staff continued to PlanRVA's coordination of the Lower Chickahominy Watershed Collaborative by participating on the steering committee and workgroups.

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 and aiding localities in complying with stormwater management permit requirements continue 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 also funded by other programs, the HRPDC provides a forum, through the Regional Environmental Committee and Coastal Resiliency 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 Water Quality Goal Implementation Team and Climate Resiliency Workgroup. This participation includes attending in-person meetings when possible and otherwise participating in conference calls or virtual meetings. The HRPDC staff also supports the Local Government Advisory Committee (LGAC) as needed. During this past year this support also included participating on the planning committee for the LGAC's 2022 Local Government Forum and attending as a presenter.

Regional Technical Studies and Special Projects (Product #4)

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. During FY 2021-2022, the HRPDC staff identified and completed four such projects: updates to the FishSwimPlay.com website, including adding information on parks and trails; support for the Lower Chickahominy Watershed Collaborative; creating GIS layers of riverine floodplains and depth grids; and continued work on regional resilient design guidelines. These initiatives are described below.

FishSwimPlay.com Improvements

FishSwimPlay.com was originally created by the HRPDC staff in 2017 as part of a previous VCZMP grant focusing on improving public access to the water in Hampton Roads. The map application was built on Esri's ArcGIS Online platform and includes locations and other information on a wide variety of public access facilities in Hampton Roads, including boat ramps, canoe and kayak launches, fishing piers, observation decks, and others. Since the site's launch the HRPDC staff has been investigating ways to improve it, either by amending the format to promote greater usability or by adding additional sites or information. During this past grant year, the HRPDC staff began implementing several changes to the site. As a result of upgrades and changes to Esri's ArcGIS Online products, the type of application the original FishSwimPlay.com website used will no longer be supported. To preserve and enhance functionality, the HRPDC staff began developing a new version of the site based on Esri's Experience Builder, which will allow the site to remain operational. The new format retains the ability to filter by facility type or locality as well as links to locality webpages on individual sites where available. In addition, the HRPDC staff has added new information to the water access site database, including information on parking availability, restrooms, ADA accessibility, and fees. The HRPDC staff is also working to build on the public access data by adding information on other types of outdoor recreational facilities, with a new component of the site including information on parks (see Figure 2). The HRPDC

and HRTPO are also working on regional trails planning, which may also be incorporated into the FishSwimPlay.com website at a future date.

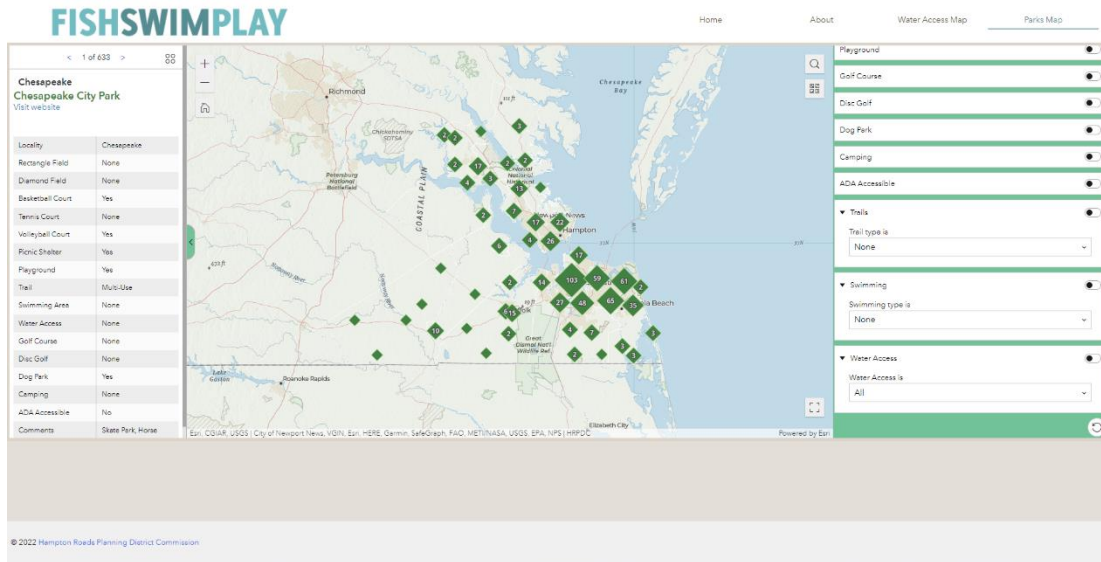


Figure 2: Screenshot of the draft FishSwimPlay.com Parks Map

Lower Chickahominy Watershed Collaborative

The HRPDC staff continues to support the Lower Chickahominy Watershed Collaborative, which is led by PlanRVA. This support includes appointing a representative to be on the Steering Committee, participating in planning discussions for summits and other meetings, and attending workgroup meetings. During the past grant year, the HRPDC staff participated in the Lower Chickahominy Watershed Collaborative Winter Summit (February 16, 2022), six (6) project management meetings (October 12, 2021, November 10, 2021, December 13, 2021, January 19, 2022, February 9, 2022, May 4, 2022), three (3) Steering Committee meetings (January 28, 2022, March 9, 2022, September 20, 2022), three (3) meetings of the Sustainable Economic Development Workgroup (October 27, 2021, December 15, 2021, July 22, 2022), three (3) meetings of the Recreational Infrastructure and Marketing Workgroup (October 29, 2021, December 16, 2021, July 29, 2022), and three (3) meetings of the Land Conservation and Ecological Stewardship Workgroup (October 29, 2021, December 15, 2021, July 25, 2022). During these meetings HRPDC staff helped develop meeting agendas, provided input on discussion topics, and reviewed project materials.

Riverine Floodplain GIS Layers

In addition to the Flood Insurance Rate Maps (FIRMs), the Federal Emergency Management Agency (FEMA) provides several other non-regulatory products to help localities implement their floodplain management programs in compliance with the National Flood Insurance Program. These include reports, studies, and GIS data layers. The availability of different data layers, such as cross sections, transects, and depth grids, depends on the level of detail in the associated flood insurance study (FIS),

the type of flood hazard(s) in the community, and other factors. For many Hampton Roads communities, the predominant flood hazard is coastal flooding from hurricanes and tropical storms. In those communities that also have riverine flooding challenges the available data layers may be limited in detail or scope. However, some information may be available in the community's FIS. For this special project, the HRPDC staff examined the flood insurance studies (specifically, the Floodway Data tables (see Figure 3) and Flood Profiles (see Figure 4)) and available FEMA GIS layers for Franklin, Gloucester County, Hampton, James City County, Newport News, Surry County, and Virginia Beach. U.S. Army Corps of Engineers (USACE) HEC-RAS models for parts of Gloucester County and York County were also examined.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY ² (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
STONEY RUN								
A	12,188	380	*	1.8	9.2	9.2	9.2	0.0
B	12,894	262	*	2.8	11.3	11.3	11.3	0.0
C	13,588	262	*	1.7	11.9	11.9	11.9	0.0
D	14,397	275	*	1.3	12.1	12.1	12.1	0.0
E	17,454	305	*	4.3	15.1	15.1	15.2	0.1
F	18,105	319	*	4.0	16.3	16.3	16.3	0.0
G	18,527	27	*	5.5	17.4	17.4	17.4	0.0
H	19,602	168	*	4.4	19.2	19.2	19.3	0.1
I	20,217	317	*	3.4	19.8	19.8	19.8	0.0
J	20,877	268	*	2.9	20.2	20.2	20.2	0.0
K	21,677	283	*	2.5	20.8	20.8	20.8	0.0
L	22,386	180	*	3.5	21.7	21.7	21.7	0.0
M ³	23,061							
N	23,876	190	*	2.7	27.2	27.2	27.2	0.0
O	24,598	227	*	4.1	27.3	27.3	27.3	0.0
P	25,322	38	*	0.5	27.6	27.6	27.6	0.0
Q	25,740	42	*	2.6	28.1	28.1	28.1	0.0
R	26,616	42	*	0.5	29.7	29.7	29.7	0.0
S	26,747	47	*	1.5	34.4	34.4	34.5	0.1
T	27,546	47	*	0.5	34.5	34.5	34.6	0.1
U	28,634	204	*	4.0	38.2	38.2	38.4	0.2
V	30,053	187	*	0.6	45.7	45.7	45.7	0.0

¹ Feet above mouth
² Time of maximum Mean Velocity may not coincide with time of maximum stage
³ 1-Percent-Annual-Chance Floodplain contained in culvert
* Not computed by EPA SWMM

TABLE 6	FEDERAL EMERGENCY MANAGEMENT AGENCY	FLOODWAY DATA
	CITY OF NEWPORT NEWS, VA (INDEPENDENT CITY)	STONEY RUN

Figure 3: Example Floodway Data Table from Newport News Flood Insurance Study (Source: FEMA)

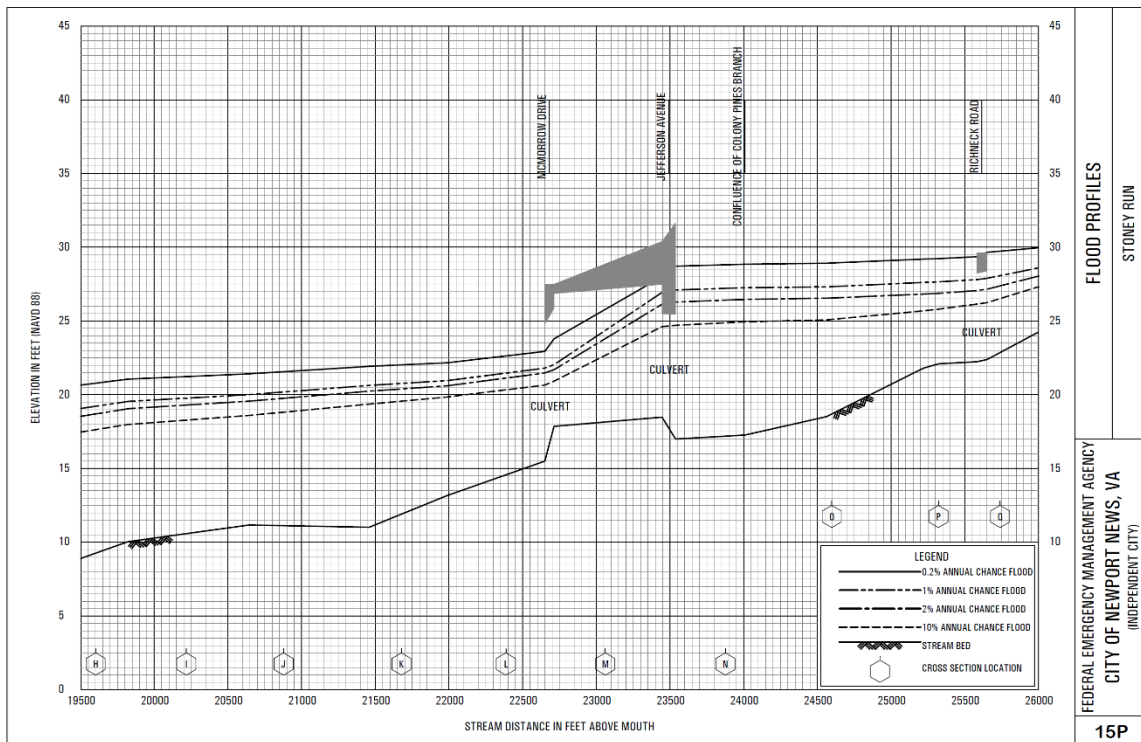


Figure 4: Example Flood Profiles from Newport News Flood Insurance Study (Source: FEMA)

HRPDC staff manually recorded the water surface elevations for the 10%, 2%, 1%, and 0.2% annual chance flood elevations for each cross section and joined those elevations with the cross-section GIS layers provided by FEMA or the USACE. The resulting cross sections can be seen in Figure 5.

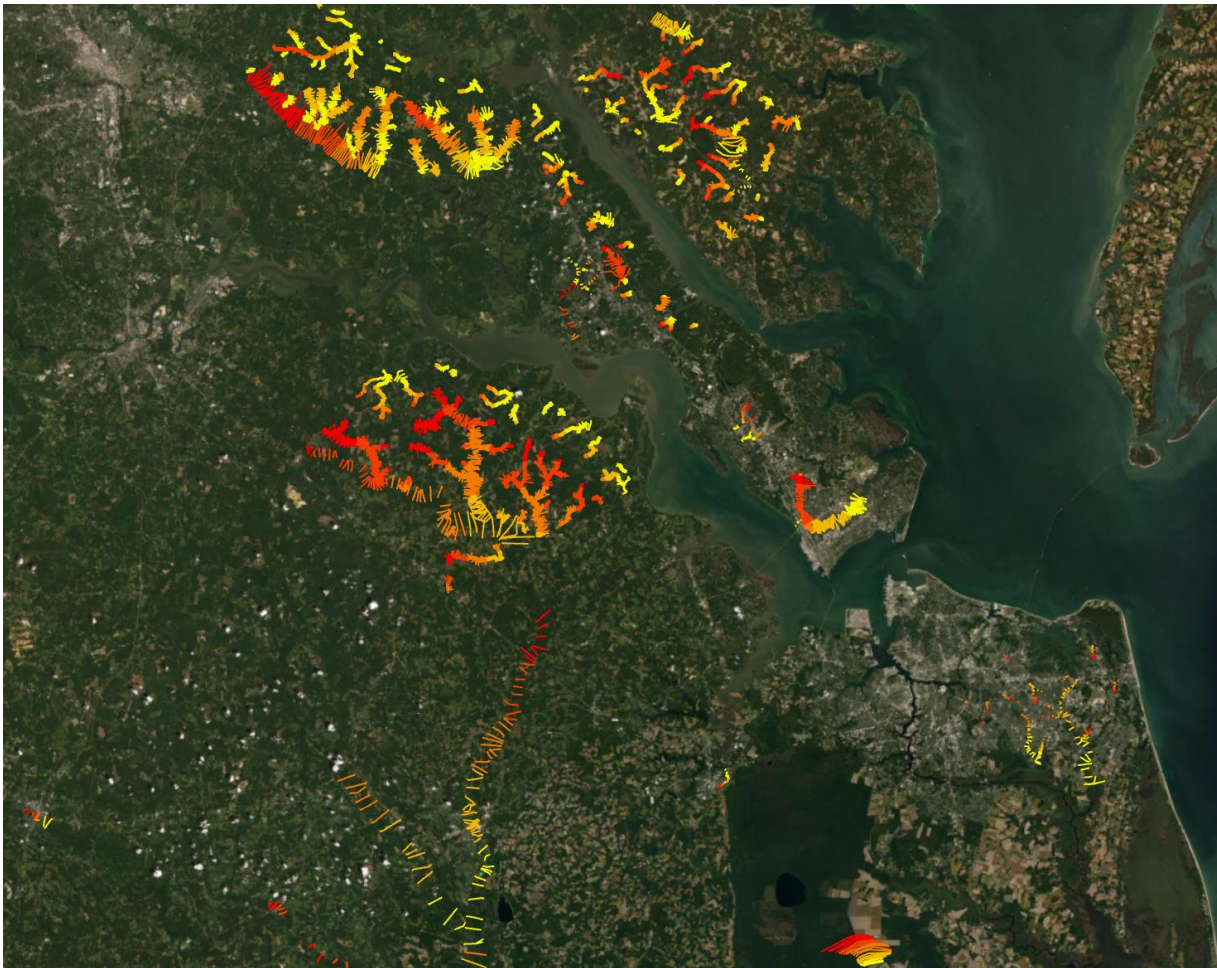


Figure 5: Riverine Cross Sections with Digitized Flood Elevations

Regional Resilient Stormwater Management Design Guidelines

The HRPDC continues its multi-year effort to develop regional resilient floodplain management and stormwater management design guidelines. The ultimate goal of this effort is to build on the regional sea level rise planning scenarios adopted in October 2018 by providing Hampton Roads localities with data and recommendations that can be incorporated into their local plans, policies, and ordinances. During this grant year, the HRPDC staff developed a framework for the design guidelines that incorporates principles, climate projections, policy applications, methodologies, and data sources. Principles for the guidelines include that they should be scientifically based, appropriate to the specific use case, and implementable. The guidelines will include, at a minimum, projections for sea level rise and precipitation. The guidelines will also include four applications: floodplain mapping, tailwater elevations, rainfall design storms, and joint probability events. Over the past year, the following work was done to further the resilient design guidelines:

- Sea Level Rise Projections: The HRPDC adopted regional sea level rise planning scenarios in 2018 that were based on NOAA’s 2017 Sea Level Rise Scenarios. In early 2022 NOAA published updated sea level rise scenarios. The HRPDC staff compared the regional sea level rise planning

scenarios to the new NOAA curves and found that the original regional scenarios still were in broad agreement with the new NOAA curves.

- Floodplain mapping: The HRPDC staff began combining riverine floodplain depth grids, based on the analysis described above, with storm surge floodplain depth grids, including sea level rise, to create composite depth grids.
- Tailwater elevations: The HRPDC revised the tailwater elevation projections for each locality and watershed to focus on those most relevant for stormwater management. This included removing the 4.5' sea level rise scenario and emphasizing the 1-year through 25-year return periods, since those are most frequently used in stormwater management.
- Precipitation: The HRPDC completed the impervious cover analysis with the final Chesapeake Bay Program (CBP) land cover data to make recommendations for individual localities based on whether their impervious cover was greater or less than 10%. The HRPDC staff also calculated the values for individual return periods with the median values from the CBP/RAND/MARISA tool for both RCP 4.5 and RCP 8.5, based on discussions with state agencies.
- Joint Probability Events: Based on policies adopted by Virginia Beach, the HRPDC staff incorporated design storms that combine rainfall and tidal conditions.

The HRPDC staff anticipates finalizing the design guidelines in 2023.

Local Assistance and Coordination

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 sea level rise adaptation, floodplain management, water quality, land conservation, habitat restoration, shoreline management, energy development, wetlands and dune protection, public access, and nonpoint source pollution in their comprehensive planning processes 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 assisting on grant proposals or permit issues, identifying of state or federal agencies that may be of assistance for local projects, providing information about legislation or regulations, identifying technical resources that may be useful to a locality, or 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 Wetlands Watch, the Elizabeth River Project, and others in their initiatives. A major component of these services is the maintenance and sharing of GIS data on a variety of topics. During this grant year, the HRPDC staff assisted localities with data needs for resiliency (e.g., LiDAR high-resolution elevation data, sea level rise inundation areas, first flood elevation data, elevation certificates, etc.) and water quality (e.g., high-resolution land cover data and Chesapeake Bay Preservation Areas). In addition, the HRPDC staff continues to work with local government representatives to identify research priorities for issues of interest. The HRPDC staff continues to utilize the region's GIS data portal, www.HRGEO.org, by adding GIS datasets created as part of regional initiatives and developing Storymaps and other applications. A "Map of the Month" feature highlights a new topic each month. In the past year, these topics included the Community Rating

System³, Chesapeake Bay Watershed Land Cover Change⁴, and population mobility⁵. The HRPDC staff also continues to update the regional parcels layer, which efficiently combines datasets from the HRPDC's member localities into a single layer.⁶

Benefits Accrued from Prior CZM Grants (Product #5)

In October 2008, the HRPDC was awarded the first of a series of grants by the CZM 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 2009 (FY '09 Task 12.04), 2010 (FY '10 Task 12.04), 2011 (FY '11 Task 51), 2014 (FY '13 Task 54), 2015 (FY '15 Task 94.01), 2017 (FY '17 Task 84), 2018 (FY '18 Task 84), 2019 (FY '19 Task 84), 2020 (FY '20 Task 43), and 2021 (FY '21 Task 43). These efforts have required considerable research and analysis and have resulted in several reports which are now available on the HRPDC's website. These reports document the results of various analyses and investigations and form the basis for an ongoing regional discussion of how local governments in Hampton Roads should respond to climate change impacts, particularly sea level rise. Based in part on this work, the HRPDC's member localities have consistently recognized the importance of these issues and have support regional coordination to address them. In 2016 the HRPDC created a new, locally funded Coastal Resiliency Program, to provide coordination and technical assistance services to the region's localities. This program has been supplemented in recent years with focused discussions from the region's chief administrative officers and a new subcommittee of the HRPDC board.

Support from the Virginia Coastal Zone Management Program through focal area and Technical Assistance grants has been foundational for the HRPDC's coordination and technical work. One of the most significant benefits to come out of this support has been the ability for the HRPDC to take advantage of funding from the Department of Defense to conduct studies and other projects that support both community and installation resilience. Joint land use studies (JLUS's) for the cities of Chesapeake, Norfolk, Portsmouth, and Virginia Beach have been previously documented as continuing benefits of this program. However, in more recent years the HRPDC continues to leverage the support of the Virginia Coastal Zone Management Program to seek out additional grant funding for resilience work. Specifically, the HRPDC is currently working on a Military Installation Resilience Review (MIRR), funded by the Office of Local Defense Community Cooperation (OLDCC), formerly known as the Office of Economic Adjustment (OEA), and a Military Installation Sustainability implementation grant, also funded by OLDCC. The MIRR is supplementing the Norfolk-Virginia Beach JLUS (completed in August 2019) by considering additional on-base impacts in addition to bringing the JLUS findings up to date. The implementation grant is funding a pilot project for a regional network of roadway flooding sensors, which will provide real-time observations of flooding on road surfaces. In both cases, the HRPDC is coordinating the work being done on behalf of defense installations with the agency's regional resiliency initiatives.

³ <https://www.hrgeo.org/apps/d3d8f3a10156492e98c1a7c9ddc877f0/explore>

⁴ <https://www.hrgeo.org/apps/7b924acca189433b95c72397c746cbd9/explore>

⁵ <https://www.hrgeo.org/apps/eb098f9dfaaf432a85ecac088923502d/explore>

⁶ <https://www.hrgeo.org/pages/regional-parcels>

Resilience Planning (Product #6)

This product encompasses the HRPDC's regional resiliency initiatives that are supported by VCZMP, including coordination efforts, supporting the VCZMP resilience database, supporting the Virginia Coastal Resilience Master Plan, and identifying regional resilience priorities and needs.

Resilience Coordination

The HRPDC coordinates and manages a regional resiliency program that includes policy development, technical analysis, research, and coordination. The coordination aspect of this program is conducted through the HRPDC Coastal Resiliency Committee, which includes representatives designated by each HRPDC locality chief administrative officer. The committee provides feedback on regional initiatives, serves as a forum for discussing best practices and sharing information, and helps develop regional recommendations. The following meeting summaries describe the discussions of the HRPDC Coastal Resiliency Committee during the past year. During this grant year the Coastal Resiliency Committee met four (4) times. The December 10, 2021, meeting was held virtually via WebEx; all other committee meetings were held in person.

Meeting Date: December 10, 2021

Summary: The primary focus of this meeting was coastal hazards. The meeting featured a presentation from Mr. Alex Foraste and Mr. Chris Swanson, Virginia Department of Transportation, on the department's resiliency efforts.. The meeting also included updates from the HRPDC staff on resilient design standards, the regional legislative agenda for the 2022 General Assembly Session, the Community Flood Preparedness Fund, the Virginia Coastal Resilience Master Plan, and roadway flooding sensors.

Outcome(s): Outcomes of this meeting included increased awareness of VDOT's resiliency efforts.

Total Attendance: 92

Total Stakeholders: 46

Meeting Date: March 25, 2022

Summary: The primary focus of this meeting was coastal hazards. The meeting featured a presentation from Mr. Ben McFarlane, HRPDC, on new sea level rise scenarios from NOAA and potential implications for the HRPDC regional sea level rise scenarios adopted in October 2018. The meeting also included updates from HRPDC staff on resiliency legislation in the General Assembly, resilient design guidelines for stormwater management, roadway flooding sensors, the Community Flood Preparedness Fund, and flood insurance. The meeting included updates from several localities and other organizations.

Outcome(s): Outcomes of this meeting included increased awareness of new NOAA sea level rise planning guidance and support for regional applications to the Community Flood Preparedness Fund.

Total Attendance: 35

Total Stakeholders: 24

Meeting Date: June 24, 2022

Summary: The primary focus of this meeting was coastal hazards. The meeting featured a presentation from Ms. Toni Utterback, Virginia Beach, on the city’s recently approved flood protection program. The meeting also featured updates from the HRPDC staff on the Community Flood Preparedness Fund, resilient design standards, roadway flooding sensors, and legislative developments. The meeting included updates from several localities and other organizations.

Outcome(s): Outcomes of this meeting included increased awareness of Virginia Beach’s flood protection program, including what projects are included and how the city will manage the effort over its ten-year timeline.

Total Attendance: 30

Total Stakeholders: 21

Meeting Date: September 24, 2021

Summary: The primary focus of this meeting was coastal hazards. The meeting featured a presentation from Mr. Ben McFarlane, HRPDC, on developments with the Virginia Coastal Resilience Master Plan and the VCRMP Technical Advisory Committee. The meeting also included updates from the HRPDC staff on the Community Flood Preparedness Fund, the Resilient Virginia Revolving Loan Fund, roadway flooding sensors, the FY24 Coastal Resiliency Program work program and budget, the regional resiliency project inventory, resilient design standards, and NOAA Atlas 14. The meeting also included updates from several localities and other organizations.

Outcome(s): Outcomes of this meeting included increased awareness of the current status of the Virginia Coastal Resilience Master Plan and support for the FY24 HRPDC Coastal Resiliency Program work program and budget.

Total Attendance: 37

Total Stakeholders: 26

The Coastal Resiliency Working Group provides a forum for in-depth discussion of policy and technical issues that require more time and focus than is available during typical committee meetings. During this grant year, the Coastal Resiliency Working Group met three (3) times on October 22, 2021, February 25, 2022, and July 22, 2022. Topics included the Community Flood Preparedness Fund, resilient design standards, and flood insurance.

Coastal Zone Resilience Database Support

The HRPDC staff continued to maintain and update its resilience project database and dashboard tool (see Figure 6). This tool allows for convenient access to regional project data that can be downloaded and used by other partners such as the CZM and the VCRMP Technical Advisory Committee (TAC) members. The dashboard⁷, which can be found on www.HRGEO.org, was first published in May 2019 and has been updated several times since to make sure that information on the included projects is current (see Figure 5). As part of the update of the regional inventory of resilience projects, HRPDC staff submitted spreadsheet copies of the most current inventory to local government staff for review in

⁷ <https://www.hrgeo.org/apps/hampton-roads-resilience-projects-dashboard/explore>

September 2022. As of September 30, 2022, the data updates were still being collected, but responses had been received from Gloucester County, Newport News, Williamsburg, and York County. Updates from these four localities included eight (8) new projects and revisions to eighteen (18) projects already in the database. The HRPDC staff anticipates updating the dashboard on www.HRGEO.org by December 31, 2022. Once final the new and revised projects will also be provided to the VCRMP resilience project database.

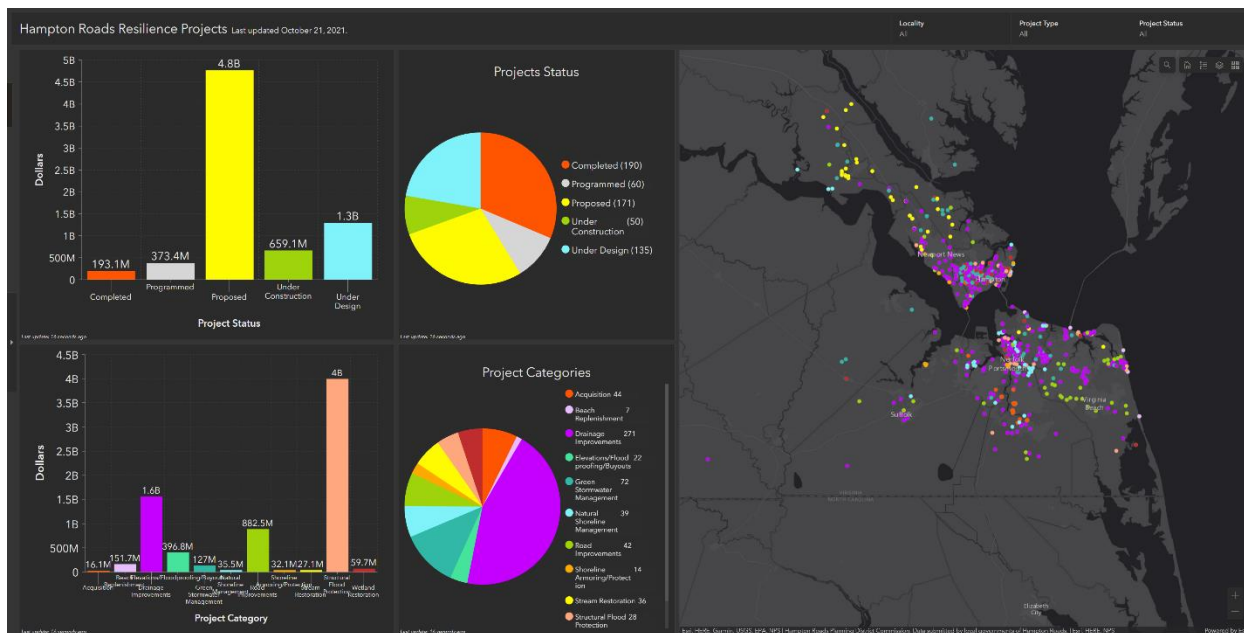


Figure 6: Screenshot of the Hampton Roads Resilience Projects Dashboard

Coastal Resiliency Master Plan Development Support

During this grant year the HRPDC staff continued to support the Virginia Coastal Resiliency Master Plan (VCRMP). This took the form of participating in the original VCRMP Technical Advisory Committee (TAC) through the end of 2021. HRPDC representatives included Mr. Bob Crum, HRPDC Executive Director, and Ms. Whitney Katchmark, HRPDC Principal Water Resources Engineer. Mr. Crum served on the Finance Subcommittee, and Ms. Katchmark served on the Project Evaluation Subcommittee and as the vice chair of the Federal Installation Partnerships Subcommittee. Participation on the original TAC included attending TAC meetings on October 7, 2021, and November 19, 2021. Ms. Katchmark also participated in the Project Evaluation Working Group meeting on October 14, 2021. In addition to attending meetings, HRPDC representatives continued to share information and developments with locality staff and officials through meetings of the HRPDC board, the Regional Environmental Committee, and the Coastal Resiliency Committee.

Following completion of the Phase I plan in December 2021, the HRPDC continued to support state initiatives by developing policy proposals (detailed in the next section), providing feedback to state agency staff on potential next steps, and participating on the TAC established pursuant to legislative changes made during the 2022 General Assembly session to Code of Virginia §10.1-659. Feedback was

provided to the state on draft task orders for technical work related to flood modeling and analysis. HRPDC representatives for the new TAC include Ms. Katchmark and Mr. Ben McFarlane, HRPDC Senior Regional Planner. Participation on the TAC during this grant year included attending and participating in the TAC's first meeting on September 16, 2022.

Identification of Regional Resilience Priorities and Needs

During this grant year, the HRPDC staff worked with the HRPDC Coastal Resiliency Committee, locality chief administrative officers, and the HRPDC board to identify key priorities for new public policies, funding needs, and data needs. These discussions were reflected in the HRPDC's 2022 Regional Legislative Agenda, which was adopted by the HRPDC board on October 21, 2021.⁸ Specifically, the 2022 Regional Legislative Priorities included support for the creation of a Virginia Commonwealth Flood Board. This board and accompanying staff would provide the necessary organizational structure, resources, and capacity at the state level to comprehensively address flooding. Specific tasks of the board would include directing and prioritizing state and federal funding in the Commonwealth for flood mitigation, ensuring collaboration and alignment among state agencies, and coordinating local, regional, and state flood mitigation planning and adaptation efforts. In support of this priority, the HRPDC staff reviewed existing code language and developed proposed changes.

The HRPDC continues to prioritize supporting local and regional resiliency efforts through coordination, data acquisition and analysis, and policy research. These needs were reflected in two applications that the HRPDC submitted to the Department of Conservation and Recreation (DCR) for the Community Flood Preparedness Fund, one for capacity building and one for technical studies. These applications were submitted in April 2022.

The capacity building grant proposal would fund an assessment of existing, planned, and potential regional products for supporting locality participation in the Community Rating System (CRS). In addition, it would assess the utility of and develop a framework and implementation plan for a regional Program for Public Information (PPI). This proposal, if funded, would guide regional discussions on whether to establish a regional PPI that some or all Hampton Roads CRS communities would participate in. It would also help guide future work programs for the HRPDC Coastal Resiliency Program in terms of any work related to the CRS.

The technical studies grant proposal would fund several research and analysis projects that have been identified as important for local and regional resiliency initiatives. These include assessing the quality and extent of existing hydraulic and hydrologic (H&H) models in the region to help develop a plan for improving stormwater modeling, assessing policies and regulations regarding hazardous materials and contaminated sites in floodplains, conducting a case study analysis of proposed regional resilient design guidelines to estimate the cost of establishing higher standards, and researching the performance of water quantity management practices in the coastal plain.

⁸ https://www.hrpdcva.gov/uploads/docs/FY2022LegislativePriorities_Final.pdf

Conclusions

The Hampton Roads Coastal Resources Management Technical Assistance Program continues to enable the HRPDC staff to provide important and timely assistance to local governments and other stakeholders throughout Hampton Roads on a variety of environmental issues. The capacity for the HRPDC to provide these services is greatly enhanced through the resources provided by CZM. The technical assistance, public information, educational opportunities, training, research, analysis, and coordination services provided through this program serve the region's citizens, government officials, locality staff, and other partners and stakeholders. This program continues to be a key part of the region's overall strategy for managing its coastal resources and addressing new challenges. In addition, the funding for resiliency efforts through this grant has allowed for the continued development and evolution of the HRPDC's Coastal Resiliency Program, which has had and continues to have an important role in supporting local and regional resiliency efforts. These services continue a decades-long relationship between the HRPDC and CZM to identify issues of interest and concern before they become problems so that they can be addressed in a cost-effective manner.