2638 - CID510096_Mathews County_CFPF

Application Details

Funding Opportunity:	2336-Virginia Community Flood Preparedness Fund - Project Grants - CY24 Round 5
Funding Opportunity Due Date:	Jan 24, 2025 11:59 PM
Program Area:	Virginia Community Flood Preparedness Fund
Status:	Under Review
Stage:	Final Application
Initial Submit Date:	Jan 24, 2025 1:41 PM
Initially Submitted By:	Jackie Rickards
Last Submit Date:	
Last Submitted By:	

Contact Information

Primary Contact Information

Active User*:	Yes
Type:	External User
Name*:	Ms. (Salutation) Jackie (First Name) Middle Name Rickards (Last Name)
Title:	Senior Planning Project Manager
Email*:	jrickards@mppdc.com
Address*:	PO Box 399 4521 Lewis B. Puller Memorial Highway Shacklefords (City) Virginia (State/Province) 23156 (Postal Code/Zip)
Phone*:	(804) 785-8100 Ext. Phone ###-###-####
Fax:	###-###-####
Comments:	

Organization Information

Status*:	Approved
Name*:	Middle Peninsula Planning District Commission
Organization Type*:	Local Government - PDC
Tax ID*:	
Unique Entity Identifier (UEI)*:	
Organization Website:	https://www.mppdc.com/

Address*: PO Box 286

Saluda Virginia 23149
City State/Province Postal Code/Zip

Phone*: (804) 758-2311 Ext.
###-###-####

Fax: ###-###-####

Benefactor:

Vendor ID:

Comments:

VCFPF Applicant Information

Project Description

Name of Local Government*: Middle Peninsula Planning District Commission

Your locality's CID number can be found at the following link: Community Status Book Report

NFIP/DCR Community Identification Number (CID)*: 510098

If a state or federally recognized Indian tribe,

Name of Tribe:

Authorized Individual*: Lewis Lawrence
First Name Last Name

Mailing Address*: PO Box 399
Address Line 1

4521 Lewis B. Puller Memorial Highway
Address Line 2

Shacklefords Virginia 23156
City State Zip Code

Telephone Number*: 804-785-8100

Cell Phone Number*: 804-832-6747

Email*: llawrence@mppdc.com

Is the contact person different than the authorized individual?

Contact Person*: Yes

Contact: Jackie Rickards
First Name Last Name

PO Box 399
Address Line 1

4521 Lewis B. Puller Memorial Highway
Address Line 2

Shacklefords Virginia 23156
City State Zip Code

Telephone Number: 804-785-8100

Cell Phone Number: 215-264-6451

Email Address: jrickards@mppdc.com

Enter a description of the project for which you are applying to this funding opportunity

Project Description*:

This proposal requests gap funding for the construction of two breakwaters (BW-3 and BW-4), dune grasses, and fencing needed to complete a

living shoreline at Haven Beach located in Mathews County (State Route 645, Diggs, VA 23045) to provide flood and erosion protection for a County-owned local and regional asset for public waterfront access in a low-income geographic area.

Low-income geographic area means any locality, or community within a locality, that has a median household income that is not greater than 80 percent of the local median household income, or any area in the Commonwealth designated as a qualified opportunity zone by the U.S. Secretary of the Treasury via his delegation of authority to the Internal Revenue Service. A project of any size within a low-income geographic area will be considered.

Is the proposal in this application intended to benefit a low-income geographic area as defined above?

Benefit a low-income geographic area*: Yes

Information regarding your census block(s) can be found at census.gov

Census Block(s) Where Project will Occur*: 9514.02

Is Project Located in an NFIP Participating Community?*: Yes

Is Project Located in a Special Flood Hazard Area?*: Yes

Flood Zone(s) (if applicable): VE

Flood Insurance Rate Map Number(s) (if applicable): 51115C0095E

Eligibility CFPF - Round 4 - Projects

Eligibility

Is the applicant a local government (including counties, cities, towns, municipal corporations, authorities, districts, commissions, or political subdivisions created by the General Assembly or pursuant to the Constitution or laws of the Commonwealth, or any combination of these)?

Local Government*: Yes

Yes - Eligible for consideration
No - Not eligible for consideration

Does the local government have an approved resilience plan and has provided a copy or link to the plan with this application?

Resilience Plan*: Yes

Yes - Eligible for consideration under all categories
No - Eligible for consideration for studies, capacity building, and planning only

If the applicant is not a town, city, or county, are letters of support from all affected local governments included in this application?

Letters of Support*: Yes

Yes - Eligible for consideration
No - Not eligible for consideration
N/A - Not applicable

Has this or any portion of this project been included in any application or program previously funded by the Department?

Previously Funded*: No

Yes - Not eligible for consideration
No - Eligible for consideration

Has the applicant provided evidence of an ability to provide the required matching funds?

Evidence of Match Funds*: Yes

Yes - Eligible for consideration
No - Not eligible for consideration
N/A - Match not required

Scoring Criteria for Flood Prevention and Protection Projects - Round 4

Scoring

Category Scoring:

Hold CTRL to select multiple options

Project Category*: Any other nature-based approach,Living shorelines and vegetated buffers

Is the project area socially vulnerable? (based on ADAPT Virginia?s Social Vulnerability Index Score)

Social Vulnerability Scoring:

Very High Social Vulnerability (More than 1.5)
High Social Vulnerability (1.0 to 1.5)
Moderate Social Vulnerability (0.0 to 1.0)
Low Social Vulnerability (-1.0 to 0.0)
Very Low Social Vulnerability (Less than -1.0)

Socially Vulnerable*: Moderate Social Vulnerability (0.0 to 1.0)

Is the proposed project part of an effort to join or remedy the community?s probation or suspension from the NFIP?

NFIP*: No

Is the proposed project in a low-income geographic area as defined below?
"Low-income geographic area" means any locality, or community within a locality, that has a median household income that is not greater than 80 percent of the local median household income, or any area in the Commonwealth designated as a qualified opportunity zone by the U.S. Secretary of the Treasury via his delegation of authority to the Internal Revenue Service. A project of any size within a low-income geographic area will be considered.

Low-Income Geographic Area*: Yes

Projects eligible for funding may also reduce nutrient and sediment pollution to local waters and the Chesapeake Bay and assist the Commonwealth in achieving local and/or Chesapeake Bay TMDLs. Does the proposed project include implementation of one or more best management practices with a nitrogen, phosphorus, or sediment reduction efficiency established by the Virginia Department of Environmental Quality or the Chesapeake Bay Program Partnership in support of the Chesapeake Bay TMDL Phase III Watershed Implementation Plan?

Reduction of Nutrient and Sediment Pollution*: Yes

Does this project provide ?community scale? benefits?

Community Scale Benefits*: More than one census block

Expected Lifespan of Project

Expected Lifespan of Project*: Over 20 Years

Comments:

The breakwater will be designed to a 50-year FEMA flood level standard.

Scope of Work - Projects - Round 4

Scope of Work

Upload your Scope of Work
Please refer to Part IV, Section B. of the grant manual for guidance on how to create your scope of work

Scope of Work*: A and B. Haven Beach_SCOPE OF WORK_Round 5.pdf

Comments:

Scope of Work for the Project

Budget Narrative

Budget Narrative Attachment*: C. Haven Beach_BUDGET NARRATIVE 1.pdf

Comments:

Budget Narrative for the project.

Scope of Work Supporting Information - Projects

Supporting Information - Projects

Provide population data for the local government in which the project is taking place

Population*: 8514.00

Provide information on the flood risk of the project area, including whether the project is in a mapped floodplain, what flood zone it is in, and when it was last mapped. If the property or area around it has been flooded before, share information on the dates of past flood events and the amount of damage sustained

Historic Flooding data and Hydrologic Studies*: B. Supporting - 1 Project info - b Historic flooding data 2.pdf

Include studies, data, reports that demonstrate the proposed project minimizes flood vulnerabilities and does not create flooding or increased flooding (adverse impact) to other properties

No Adverse Impact*: B. Supporting - 1 Project info - c No adverse impact.pdf

Include supporting documents demonstrating the local government's ability to provide its share of the project costs. This must include an estimate of the total project cost, a description of the source of the funds being used, evidence of the local government's ability to pay for the project in full or quarterly prior to reimbursement, and a signed pledge agreement from each contributing organization

Ability to Provide Share of Cost*: Haven Beach - Letter of authorization and match pledge.pdf

A benefit-cost analysis must be submitted with the project application

Benefit-Cost Analysis*: B. Supporting - 1 Project info - e BCA 2.pdf

Provide a list of repetitive loss and/or severe repetitive loss properties. Do not provide the addresses for the properties, but include an exact number of repetitive loss and/or severe repetitive loss structures within the project area

Repetitive Loss and/or Severe Repetitive Loss Properties*: B. Supporting - 1 Project info - g SRL-RL.pdf

Describe the residential and commercial structures impacted by this project, including how they contribute to the community such as historic, economic, or social value. Provide an exact number of residential structures and commercial structures in the project area

Residential and/or Commercial Structures*:

Haven Beach does not contain any residential or commercial structures. This coastal project will mitigate tidal, storm surge, and sea level rise flooding at the coastline to protect residences and businesses that lie north of and inland from Haven Beach.

If there are critical facilities/infrastructure within the project area, describe each facility

Critical Facilities/Infrastructure*:

There are no critical facilities/infrastructure within the project area. This coastal project will mitigate tidal, storm surge, and sea level rise flooding impacts to infrastructure in inland areas.

Explain the local government's financial and staff resources. How many relevant staff members does the local government have? To what relevant software does the local government have access? What are the local government's capabilities?

Financial and Staff Resources*:

The PDC is a 52-year-old political subdivision of Virginia formed by the Middle Peninsula localities under VA Code §15.2-4203 to provide solutions to problems of greater than local significance. The PDC have worked on topics associated with the land water interface, including coastal use conflicts and policies, flooding, and resiliency. In 2020, the PDC launched the Fight the Flood (FTF) Program to connect property owners to contractors who can help them protect their property from flood waters. FTF offers a variety of financial tools to fund resiliency projects including but limited to the Septic Repair revolving loan fund program (RLFP), Living Shoreline RLFP, and plant insurance for living shorelines. Since the beginning of the program FTF has invested $44,506,804 in flood protection in the region. The proposed project within relates to Middle Peninsula regional resilience efforts.

Currently PDC staff manages 49 projects funded by a variety of funding state and federal agencies. The PDC adopted an $10,082,854 agency budget for FY25 (7/24 to 6/25). Several projects involve multiple projects, and some involve dozens of individual projects, most of which are located on private properties.
To ensure that projects are complete according to the scope of work, project timeline and budget, MPPDC staff work together. Staff includes:

- Lewis Lawrence, Executive Director, coordinates project partners, assists project execution, and provides updates to the MPPDC Board.
- Curt Smith, Deputy Director, assists project partner coordination, advises project execution & provides updates to the MPPDC Board.
- Rachael Peabody, Deputy Director, will administer and manage CFPF funded projects.
- Julie Kaylor, Chief Financial Officer, oversees all financial activities including preparation of financial reports & budget management. She also administers the MPPDC Living Shoreline Incentives Revolving Loan and Grant Program
- Taylor Ovide, Coastal Planner, assist in managing partners, activities & information from the proposed project and project reports.
-Jackie Rickards, Senior Planning Project Manager, oversees reporting for CFPF funded projects.
- Jennifer Farmer, Hybrid Financial Clerk, Clerk to the Board, & Regional Planner, assists the CFO with administrative, fiscal, & clerical tasks and provide assistance to planning staff as needed.

Staff has access to Microsoft Suite for daily work tasks and uses ArcGIS to hold all data associated with the FTF Program.

Identify and describe the goals and objectives of the project. Include a description of the expected results of the completed project and explain the expected benefits of the project. This may include financial benefits, increased awareness, decreased risk, etc.

Goals and Objectives*:

Goal 1: Reduced erosion at Haven Beach and prevention of further degradation through the construction of a living shoreline and associated protective breakwaters in a cost-effective manner with beneficial reuse of dredged materials.

Goal 2: Strengthened community resilience against coastal hazards while promoting economic stability through the preservation and accessibility of recreational and commercial activities.

Goal 3: Protected habitats for the conservation of threatened species while maintaining the natural buffer between the Chesapeake Bay waters and Mathews County to ensure the long-term preservation of the coastal ecosystem and its biodiversity.

Objective 1: Construction of Breakwater 3 & 4 (June 2025 to December 2025).

Objective 2: Installation of Plants and Fencing (June 2026 to December 2027).

Outline a plan of action laying out the scope and detail of how the proposed work will be accomplished with a timeline identifying expected completion dates. Determine milestones for the project that will be used to track progress. Explain what deliverables can be expected at each milestone, and what the final project deliverables will be. Identify other project partners

Approach, Milestones, and Deliverables*: B. Supporting - 5 Approach Milestones and Deliverables.pdf

Where applicable, briefly describe the relationship between this project and other past, current, or future resilience projects. If the applicant has received or applied for any other grants or loans, please identify those projects, and, if applicable, describe any problems that arose with meeting the obligations of the grant and how the obligations of this project will be met

Relationship to Other Projects*:

See supporting document - B. Supporting - 6 Relationship to other projects.pdf

For ongoing projects or projects that will require future maintenance, such as infrastructure, flood warning and response systems, signs, websites, or flood risk applications, a maintenance, management, and monitoring plan for the projects must be provided

Maintenance Plan*: B. Supporting - 7 Maintenance Plan.pdf

Describe how the project meets each of the applicable scoring criteria contained in Appendix B. Documentation can be incorporated into the Scope of Work Narrative

Criteria*:

Eligible Projects - 25 pts
Social Vulnerability Index Score - 5 pts
Community scale of benefits - 30 pts
Expected lifespan of project - 10 pts
Remedy for NFIP probation or suspension - 0 pts
Proposed project part of a low-income geographic area - 10 pts
Proposed project implements a Chesapeake Bay TMDL BMP - 5 pts
TOTAL - 85pts

Budget

Budget Summary

Grant Matching Requirement*: LOW INCOME - Projects that will result in nature-based solutions - Fund 95%/Match 5%

Is a match waiver being requested?

Match Waiver Request No

Note: only low-income communities are eligible for a match waiver.

*:

I certify that my project is in a low-income geographic area: Yes

Total Project Amount (Request + Match)*: $1,393,557.00

**This amount should equal the sum of your request and match figures

REQUIRED Match Percentage Amount: $69,677.85

BUDGET TOTALS

Before submitting your application be sure that you meet the match requirements for your project type.

Match Percentage: 5.00%

Verify that your match percentage matches your required match percentage amount above.

Total Requested Fund Amount: $1,323,879.00

Total Match Amount: $69,678.00

TOTAL: $1,393,557.00

Personnel

Description	Requested Fund Amount	Match Amount	Match Source
No Data for Table			

Fringe Benefits

Description	Requested Fund Amount	Match Amount	Match Source
No Data for Table			

Travel

Description	Requested Fund Amount	Match Amount	Match Source
No Data for Table			

Equipment

Description	Requested Fund Amount	Match Amount	Match Source
No Data for Table			

Supplies

Description	Requested Fund Amount	Match Amount	Match Source
No Data for Table			

Construction

Description	Requested Fund Amount	Match Amount	Match Source
No Data for Table			

Contracts

Description	Requested Fund Amount	Match Amount	Match Source
Construction of Breakwaters, dune grasses and fencing	$1,323,879.00	$69,678.00	Cash
	$1,323,879.00	**$69,678.00**	

Maintenance Costs

Description	Requested Fund Amount	Match Amount	Match Source
No Data for Table			

PreAward and Startup Costs

Description	Requested Fund Amount	Match Amount	Match Source
No Data for Table			

Other Direct Costs

Description	Requested Fund Amount	Match Amount	Match Source

No Data for Table

Long and Short Term Loan Budget - Projects - VCFPF

Budget Summary

Are you applying for a short term, long term, or no loan as part of your application?

If you are not applying for a loan, select "not applying for loan" and leave all other fields on this screen blank

Long or Short Term*:	Not Applying for Loan
Total Project Amount:	$0.00
Total Requested Fund Amount:	$0.00
TOTAL:	$0.00

Salaries

Description	Requested Fund Amount

No Data for Table

Fringe Benefits

Description	Requested Fund Amount

No Data for Table

Travel

Description	Requested Fund Amount

No Data for Table

Equipment

Description	Requested Fund Amount

No Data for Table

Supplies

Description	Requested Fund Amount

No Data for Table

Construction

Description	Requested Fund Amount

No Data for Table

Contracts

Description	Requested Fund Amount

No Data for Table

Other Direct Costs

Description	Requested Fund Amount
No Data for Table	

Supporting Documentation

Supporting Documentation

Named Attachment	Required	Description	File Name	Type	Size	Upload Date
Detailed map of the project area(s) (Projects/Studies)		Map of Project Area	Haven Beach - Map of Project Area.pdf	pdf	727 KB	01/24/2025 12:36 PM
FIRMette of the project area(s) (Projects/Studies)		FIRMette for the project area.	Haven Beach - FIRMette.pdf	pdf	685 KB	01/24/2025 12:36 PM
Historic flood damage data and/or images (Projects/Studies)		Historic flooding data for the project area.	B. Supporting - 1 Project info - b Historic flooding data 3.pdf	pdf	118 KB	01/24/2025 12:38 PM
A link to or a copy of the current floodplain ordinance		Floodplain Management Ordinance Mathews County	B. Supporting - 1 Project info - f Floodplain Management Ordinance Mathews County.pdf	pdf	154 KB	01/24/2025 12:35 PM
Maintenance and management plan for project		Maintenance and monitoring plan for this project.	B. Supporting - 7 Maintenance and Monitoring Plan.pdf	pdf	529 KB	01/24/2025 12:40 PM
A link to or a copy of the current hazard mitigation plan		Link to the 2021 Middle Peninsula Regional All Hazards Mitigation Plan.	Link to the Middle Peninsula Regional All Hazards Mitigation Plan.docx	docx	14 KB	10/21/2024 10:41 AM
A link to or a copy of the current comprehensive plan		Link to the Mathews County Comprehensive Plan	Link to the Mathews County Comprehensive Plan.pdf	pdf	178 KB	01/24/2025 12:42 PM
Social vulnerability index score(s) for the project area		Haven Beach Social Vulnerability Index map	Haven Beach - SVI.pdf	pdf	655 KB	01/24/2025 01:34 PM
Authorization to request funding from the Fund from governing body or chief executive of the local government		Letter of authorization and match pledge from Mathews County.	Haven Beach - Letter of authorization and match pledge.pdf	pdf	344 KB	01/24/2025 12:46 PM
Signed pledge agreement from each contributing organization		Letter of authorization and match from Mathews County.	Haven Beach - Letter of authorization and match pledge.pdf	pdf	344 KB	01/24/2025 12:45 PM
Maintenance Plan						
Benefit-cost analysis must be submitted with project applications over $2,000,000. in lieu of using the FEMA benefit-cost analysis tool, applicants may submit a narrative to describe in detail the cost benefits and value. The narrative must explicitly indicate the risk reduction benefits of a flood mitigation project and compares those benefits to its cost-effectiveness.						
Benefit Cost Analysis		BCA document.	B. Supporting - 1 Project info - e BCA.docx	docx	25 KB	01/24/2025 12:54 PM
Other Relevant Attachments		Relationship to other projects.	B. Supporting - 6 Relationship to other projects.pdf	pdf	216 KB	01/24/2025 11:56 AM

Letters of Support

Description	File Name	Type	Size	Upload Date
Support Letter from Essex County	Essex County_Letter of Support to MPPDC_10082024.pdf	pdf	46 KB	01/24/2025 12:14 PM
Support Letter from Gloucester County	Gloucester County_Letter of Support to DCR for Flood Fund Applications.pdf	pdf	168 KB	01/24/2025 12:13 PM
Support Letter from King & Queen County.	King Queen County_Support Letter for Fight the Flood - Round 5.pdf	pdf	145 KB	01/24/2025 12:13 PM
Support Letter from King William County	King WilliamCounty_Letter of Support to MPPDC_10082024.pdf	pdf	1 MB	01/24/2025 12:12 PM
Support Letter from Mathews County	Mathews_CFPF Application Support Letter.pdf	pdf	355 KB	01/24/2025 12:12 PM
Support Letter from Middlesex County	Middlesex County_Support letter for MPPDC_FTF_flood.pdf	pdf	322 KB	01/24/2025 12:11 PM
Support Letter from the Three River Health District.	Three River Health District_LetterofSupportFloodPreparedness.pdf	pdf	154 KB	01/24/2025 12:17 PM

Support Letter from the Town of Tappahannock	Town of Tappahanock_Letter Supporting - Round 5.pdf	pdf	100 KB	01/24/2025 12:11 PM
Support Letter from the Town of Urbanna	Town of Urbanna Letter of Support Rnd 5.pdf	pdf	153 KB	01/24/2025 12:10 PM
Support Letter from the Town of West Point	West Point_CFPF Application Support Letter Round 5.pdf	pdf	189 KB	01/24/2025 12:10 PM

Resilience Plan

Resilience Plan

Description	File Name	Type	Size	Upload Date
Ability to pay	B. Supporting - 1 Project info - d ability to match.pdf	pdf	262 KB	01/24/2025 01:37 PM
Alternatives to project.	B. Supporting - 3 Alternatives.docx	docx	25 KB	01/24/2025 01:37 PM
Attachment 1. Conserve Virginia Maps associated with the project area	Attachment 1. ConserveVirginia Maps.pdf	pdf	3 MB	01/24/2025 12:28 PM
Attachment 2. Proximity to Floodplain and endorsement from the Certified Floodplain Manager	Attachment 2. Proximity to Floodplain 2.pdf	pdf	511 KB	01/24/2025 12:29 PM
Attachment 3. Coastal Flood Exposure Map for the project area.	Attachment 3. Coastal Flood Exposure Map.pdf	pdf	407 KB	01/24/2025 12:31 PM
Attachment 4. Michels Cost Proposal (Project Estimate)	Attachment 4. Michels Cost Proposal 1.pdf	pdf	14 MB	01/24/2025 12:32 PM
MPPDC Resilience Plan approved on 8/19/21.	Resilience Plan_Approved-8_19_DCR-packet_letterandplan.pdf	pdf	850 KB	10/21/2024 10:42 AM
Need for Assitance	B. Supporting - 2 Need for Assistance.pdf	pdf	432 KB	01/24/2025 12:55 PM
Population associated within this project.	B. Supporting - 1 Project info - a population.pdf	pdf	485 KB	01/24/2025 01:35 PM

A. Application Form for Grant and Loan Requests for All Categories

Virginia Department of Conservation and Recreation
Virginia Community Flood Preparedness Fund Grant Program

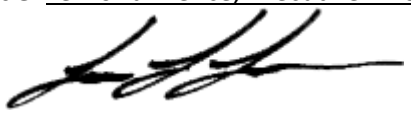
Title: Haven Beach Breakwaters and Living Shoreline

Name of Local Government: Middle Peninsula Planning District Commission

Category Being Applied for (check one):
☐ Capacity Building/Planning
☒ Project
☐ Study

NFIP/DCR Community Identification Number (CID): ____ 510096_____

Name of Authorized Official and Title: Lewis Lawrence, Executive Director

Signature of Authorized Official: 
Mailing Address (1): _PO Box 399_____
Mailing Address (2): __4521 Lewis B. Puller Memorial Highway_____
City: Shacklefords **State:** VA **Zip:** 23156
Telephone Number: (804) 785-8100 **Cell Phone Number:** (____) _____
Email Address: llawrence@mppdc.com

Contact Person (If different from authorized official): ___Jackie Rickards_____
Mailing Address (1): _PO Box 399_____
Mailing Address (2): __4521 Lewis B. Puller Memorial Highway_____
City: Shacklefords **State:** VA **Zip:** 23156
Telephone Number: (804) 785-8100 **Cell Phone Number:** _____
Email Address: _jrickards@mppdc.com_____

Is the proposal in this application intended to benefit a low-income geographic area as defined in the Part 1 Definitions? Yes _**X**___ No ____

Project Grants and Loans (Check All that Apply – Hybrid Solutions will include items from both the "Nature-Based" and "Other" categories)

Nature-based solutions
- ☐ Acquisition of property (or interests therein) and/or structures for purposes of allowing floodwater inundation, strategic retreat of existing land uses from areas vulnerable to flooding; the conservation or enhancement of natural flood resilience resources; or acquisition of structures, provided the acquired property will be protected in perpetuity from further development, and where the flood mitigation benefits will be achieved as a part of the same project as the property acquisition.
- ☐ Wetland restoration.

- ☐ Floodplain restoration.
- ☐ Construction of swales and settling ponds.
- **X** Living shorelines and vegetated buffers.
- ☐ Permanent conservation of undeveloped lands identified as having flood resilience value by *ConserveVirginia* Floodplain and Flooding Resilience layer or a similar data driven analytic tool, or the acquisition of developed land for future conservation.
- ☐ Dam removal.
- ☐ Stream bank restoration or stabilization.
- ☐ Restoration of floodplains to natural and beneficial function.

Other Projects

- ☐ Developing flood warning and response systems, which may include gauge installation, to notify residents of potential emergency flooding events.
- ☐ Dam restoration.
- **X** Beneficial reuse of dredge materials for flood mitigation purposes
- ☐ Removal or relocation of structures from flood-prone areas where the land will not be returned to open space.
- ☐ Structural floodwalls, levees, berms, flood gates, structural conveyances.
- ☐ Storm water system upgrades.
- ☐ Medium and large-scale Low Impact Development (LID) in urban areas.
- ☐ Acquisition of property (or interests therein) and/or structures for purposes of allowing floodwater inundation, strategic retreat of existing land uses from areas vulnerable to flooding; the conservation or enhancement of natural flood resilience resources; or acquisition of structures, provided the acquired property will be protected in perpetuity from further development, and where the flood mitigation benefits will **not be** achieved as a part of the same project as the property acquisition.
- ☐ Other project identified in a DCR-approved Resilience Plan

Location of Project or Activity (Include Maps): Mathews County - Please see the attached corresponding maps for this application.

NFIP Community Identification Number (CID#): 510096

Is Project Located in an NFIP Participating Community? **X** Yes ☐ No

Is Project Located in a Special Flood Hazard Area? **X** Yes ☐ No

Flood Zone(s) (If Applicable): VE

Flood Insurance Rate Map Number(s) (If Applicable): 51115C0095E

Total Cost of Project: $1,393,557

Total Amount Requested: $1,323,897

Amount Requested as Grant: $1,323,897

Amount Requested as Project Loan (Long-Term, not including short-term loans for up-front costs): $0

RVRF Loan Amount Requested as Project Match (Not including short-term loans for up-front costs): $0

Amount Requested as Short-Term loan for Up-Front Costs (not to exceed 20% of amount requested as Grant): $0

For projects, planning, capacity building, and studies in low-income geographic areas: Are you requesting that match be waived? □ Yes **X** No

B. SCOPE OF WORK NARRATIVE

General Requirements

1. **Need:**
    a. **Specific problem being solved (not just that flooding exists or may occur in the future).**

This proposal requests gap funding for the **construction of two nature-based breakwaters (BW) (BW-3 and BW-4), dune grasses, and fencing needed to complete a living shoreline** at Haven Beach (**Figures 1 and 2**) located in Mathews County (State Route 645, Diggs, VA 23045) to provide flood and erosion protection for a County-owned local and regional asset for public waterfront access in a low-income geographic area. The project goals include shoreline stabilization, habitat creation, beneficial reuse of dredged materials, community benefits, and cost effectiveness.

This is a **shovel-ready project** as the County has **already acquired funding through the Virginia Port Authority's (VPA) Virginia Waterway Maintenance Fund Grant for all the necessary design and construction documents, permits, and a qualified contractor** to complete the work.

Originally, a larger living shoreline project was conceived (**Figures 3, 4, and 5**) that included:

- *Dredge Hole in the Wall Channel and Place Dredged Material for Beneficial Use.*
  The proposed Hole in the Wall Channel (HIWC) is 18,000 ft long and 150 ft wide and follows existing aids to navigation. The channel will be dredged to a maximum dept of -7ft MLLW including allowable over depth and non-pay depth. Approximately 40,000 cubic yards (cy) of material will be dredged and placed for beneficial reuse at Haven Beach.
- *Construct Living Shoreline Protection Structures.*
  Three new breakwaters (with crest lengths of 200 feet and an overall length of 230 feet) and one 50-feet long extension to the shorter of the two existing breakwaters will be built to hold the dredge material in place and enhance long-term shore protection and coastal resiliency at Haven Beach.

The design and construction documents, permits, and procurement of a qualified contractor to complete the larger project were acquired. However, through the competitive bid process for the original larger project, the lowest bid amounted to being greater than anticipated total due to inflation, high interest rates, and supply chain issues. Therefore, the County divided the larger project into two parts to be completed as funding was secured:

- Part 1. Construction of one new breakwater and one 50-feet long extension to the shorter of the two existing breakwaters. This also included placement dune grasses, and fencing. The first part is currently under construction with funding through the VPA.
- Part 2. Construction of two new breakwaters (BW-3 and BW-4), dune grasses, and fencing. **The second part is the purpose of this application.**

Since the larger project was already permitted and a construction contractor has been procured, this second part project is ready to begin upon receipt of the DCR award resulting in **very efficient expenditure of CFPF funds.**

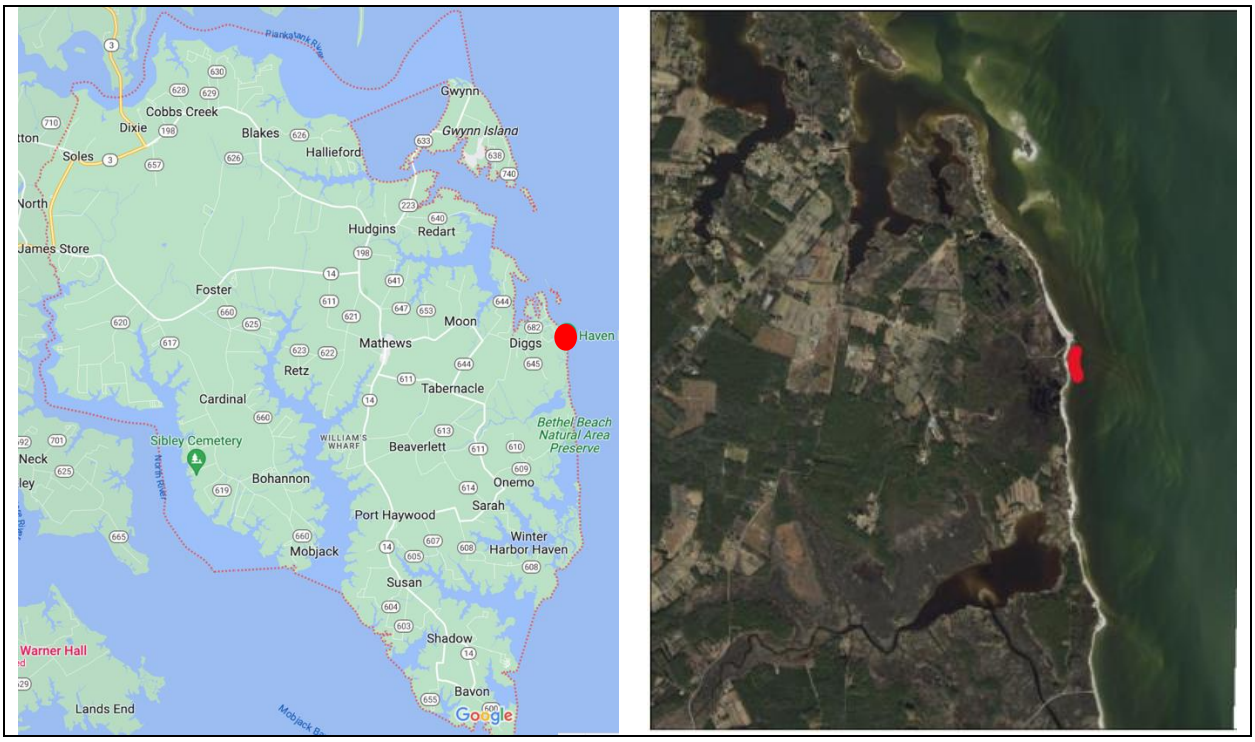


Figure 1 - Location of Haven Beach (red) in Mathews County.

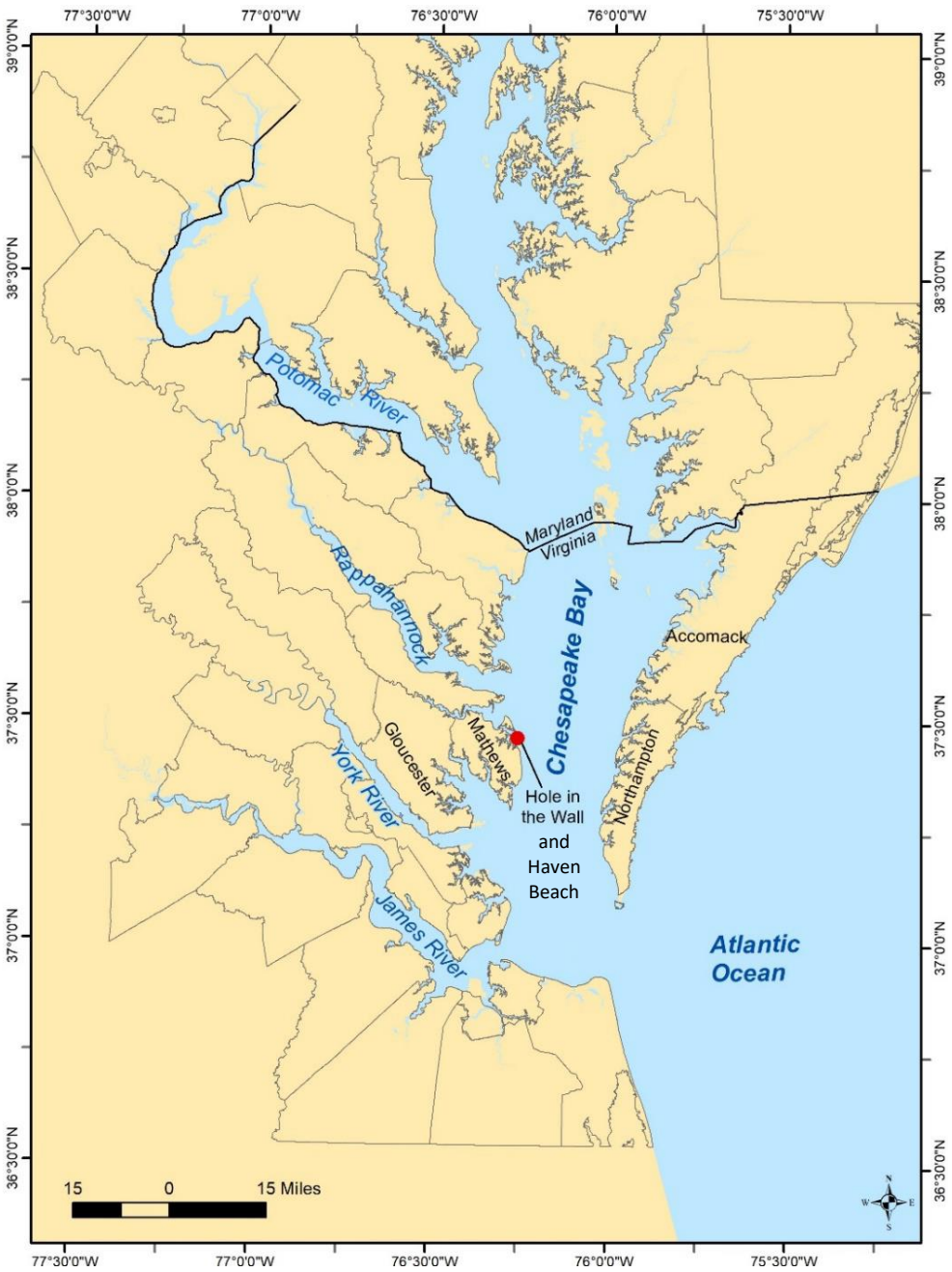


Figure 2 - Location of Haven Beach and Hole in the Wall Channel in the Chesapeake Bay.

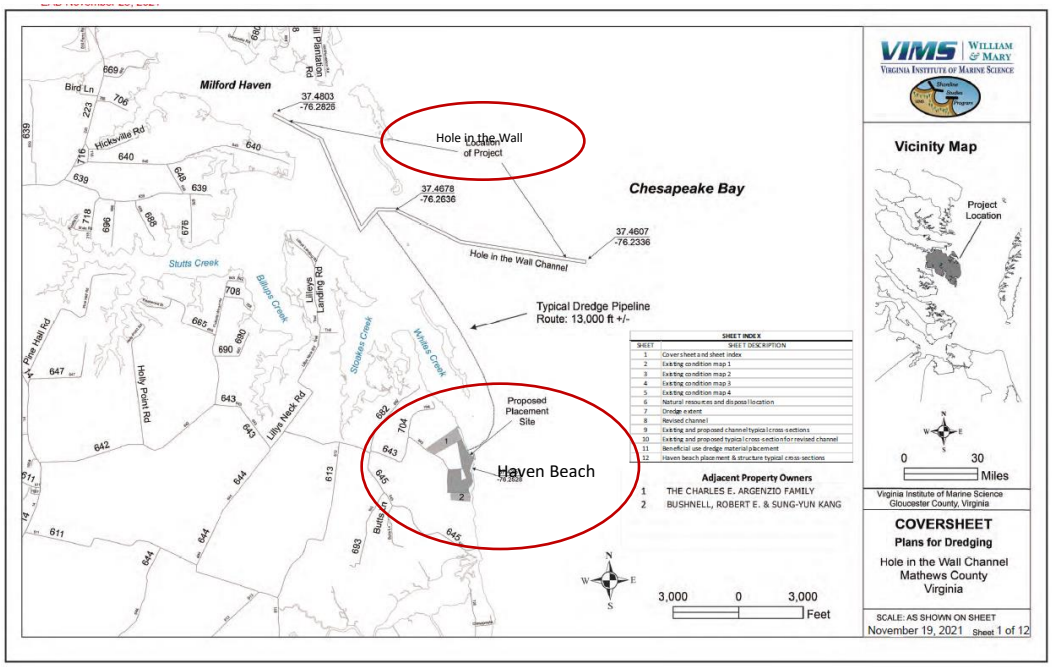


Figure 3 - Proximity map showing the location of the Hole in the Wall navigational channel and Haven Beach to the south. Local matching funds are being utilized from the dredging of the Hole in the Wall Channel for the proposed activities. Sand from the dredging project will be pumped to provide the sand needed for construction of a living shoreline at Haven Beach.

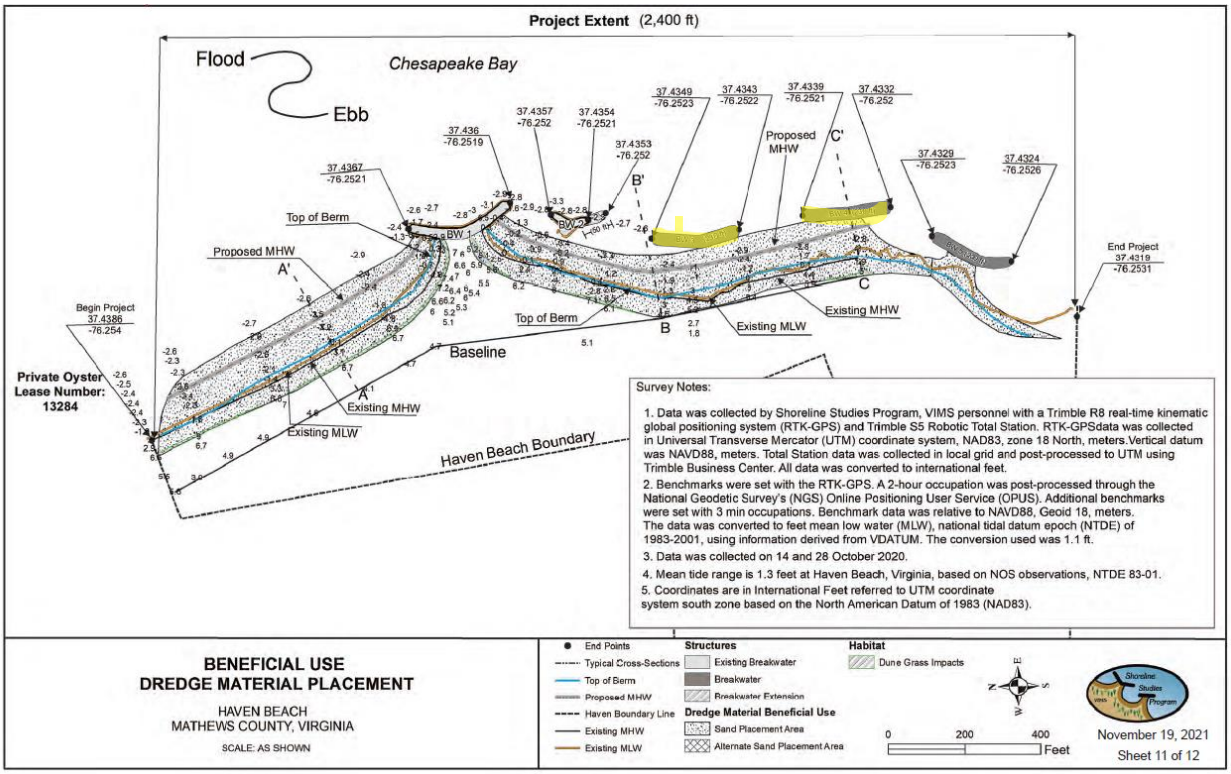


Figure 4 - Living shoreline design at Haven Beach. Funding is being requested for construction of BW-3 and BW-4 which are rock breakwaters permitted for 230 linear feet each. BW-3 and BW-4 are highlighted in yellow.

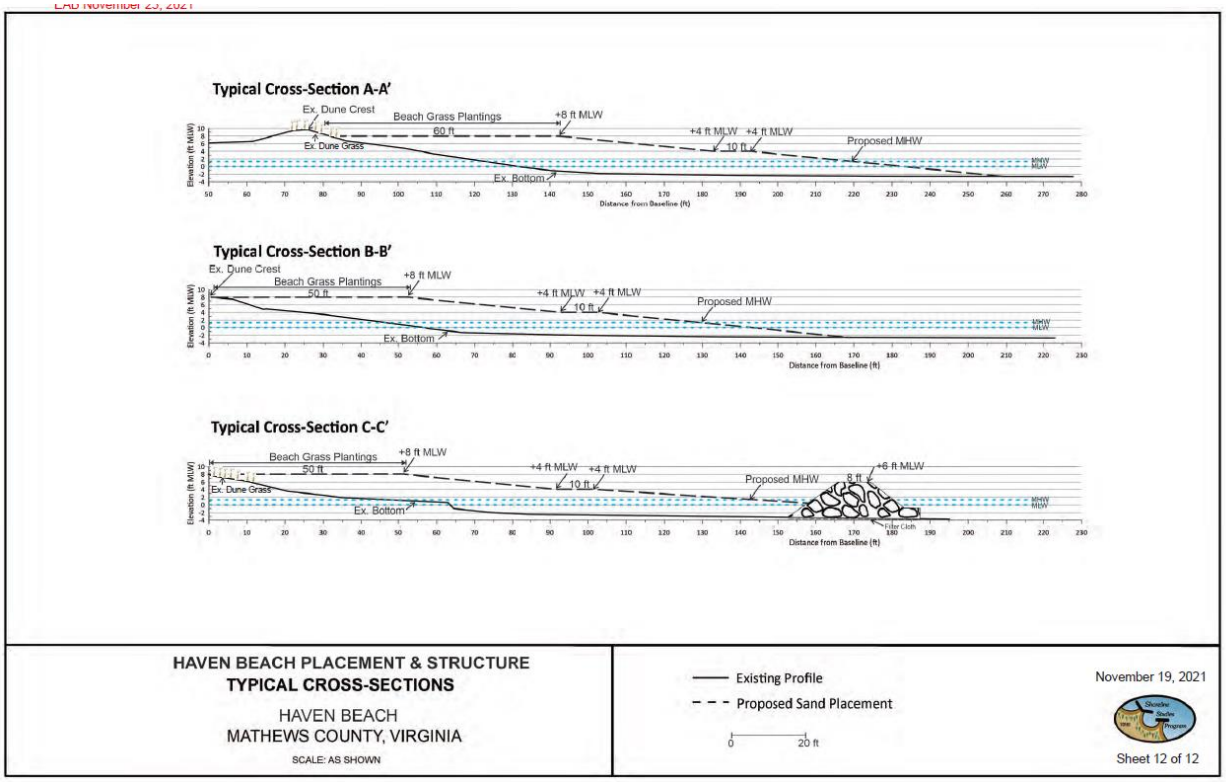


Figure 5 - Cross section of the living shoreline design at Haven Beach. Two rock breakwaters permitted for 230 linear feet each will be constructed to heights of 8' which is designed to a 50-year FEMA flood level standard.

According to DCR's ConserveVirginia model (**Attachment 1**), the project area:

- Is identified for natural habitat and ecosystem diversity,
- Is identified for floodplains and flooding resilience,
- Is identified for scenic preservation,
- Is identified for protected landscapes resilience,
- Has the second highest results in the watershed impact model, and
- Has a moderate need for land-based recreation access.

The construction of the proposed living shorelines will provide the conservation and preservation identified for the areas in ConserveVirginia.

b. Factors which contribute to the identified problem.

Haven Beach faces a major problem: it is receding due to erosion caused by increased storm driven flooding activity and sea-level rise. Mathews County's low elevation and extreme exposure to Chesapeake Bay and Atlantic Ocean make it one of the most vulnerable places in the Commonwealth to coastal erosion and flooding. The project addresses shoreline erosion at the Mathews County-owned Haven Beach. The high energy coastal environment of the region is a major contributing factor to the erosion. Haven Beach had been protected by Rigby Island to the northeast which is the predominant wind and wave direction at the site (**Figure 6**). Historical maps and data show that the local barrier islands have undergone significant geomorphological changes since first mapped in the 1800s. **Figure 7** shows the effect of erosion and sediment transport in nearby Milford Haven over 150 years, from 1877 to 2017. There used to be

three larger barrier islands, and tidal flows from Chesapeake Bay were restricted to two channels between the islands. By 2017 the barrier islands were significantly smaller and more fragmented than they used to be. Rigby Island is now nearly gone, and Northern Barrier occupies just a fraction of its former land area. Today, Haven Beach is much more exposed to flooding and wave energy from Chesapeake Bay than in the past, resulting in significant coastal erosion.

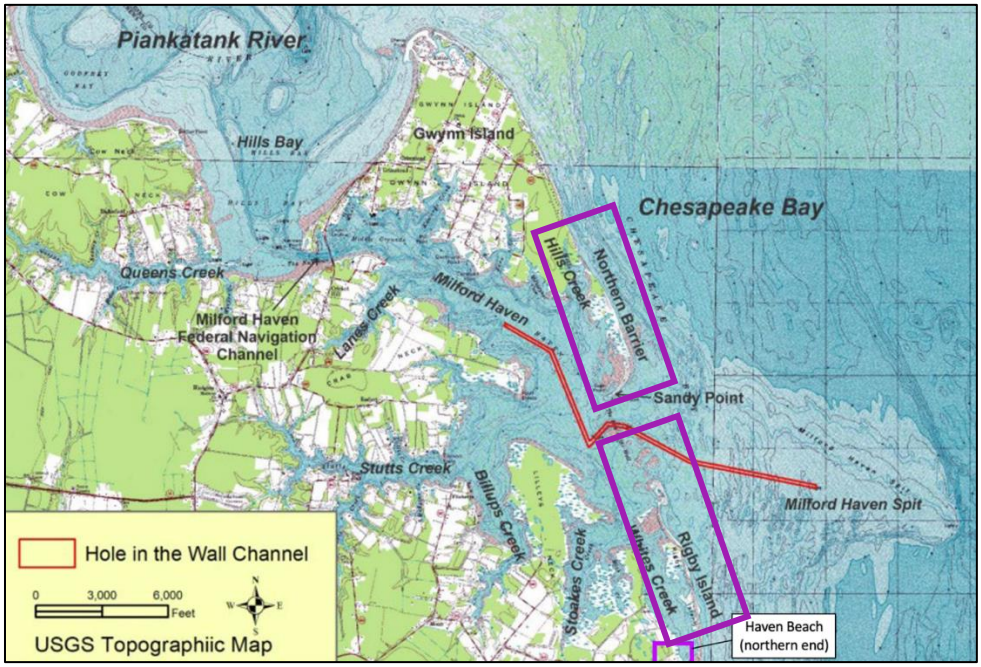


Figure 6 - Map of Milford Haven in Mathews County showing HITW Channel, Haven Beach, Northern Barrier, and Rigby Island.

Figure 7 - Map showing historic 1877 (yellow) extent of shoreline and barrier islands compared to 2017 aerial imagery.

The rapid deterioration of the barrier islands, especially Rigby Island, has major implications for Haven Beach. As shown in **Figures 8-10**, Rigby Island was wider and attached to the mainland by a narrow connector. The island's shores eroded due to forces from Chesapeake Bay to the east and, to a lesser extent, Whites Creek, a waterway that runs between the island's west side and Haven Beach. As Rigby Island fragmented and shrank, Haven Beach has become increasingly exposed to the strong forces of the Chesapeake Bay. The beach has receding rapidly: between 1937-2017, the beach's shoreline receded 5 to 10 feet per year on average.

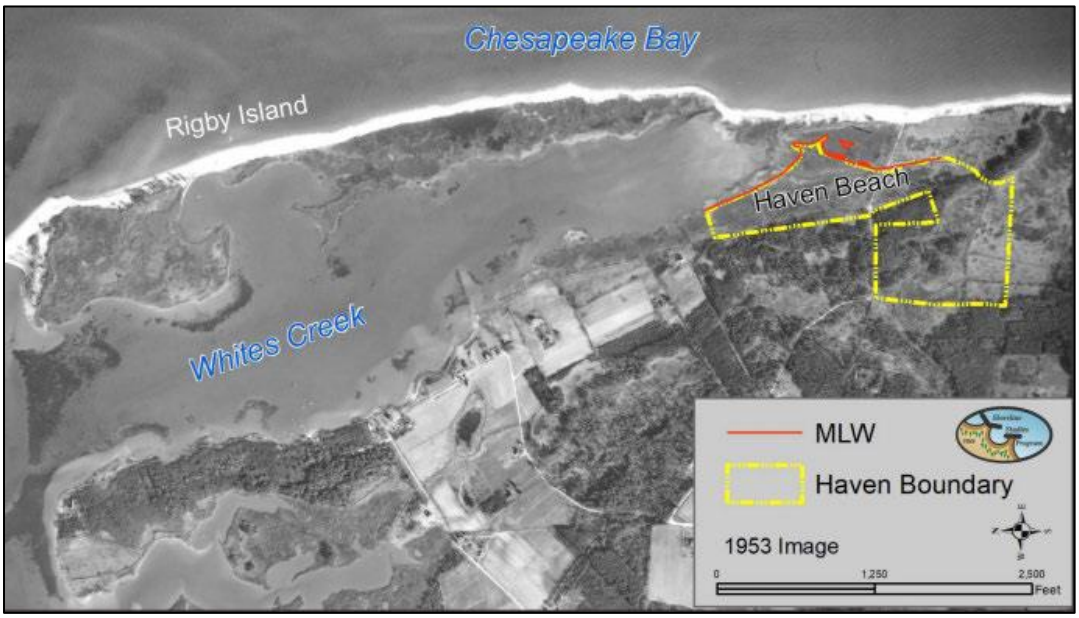


Figure 8 - Haven Beach location in 1953.

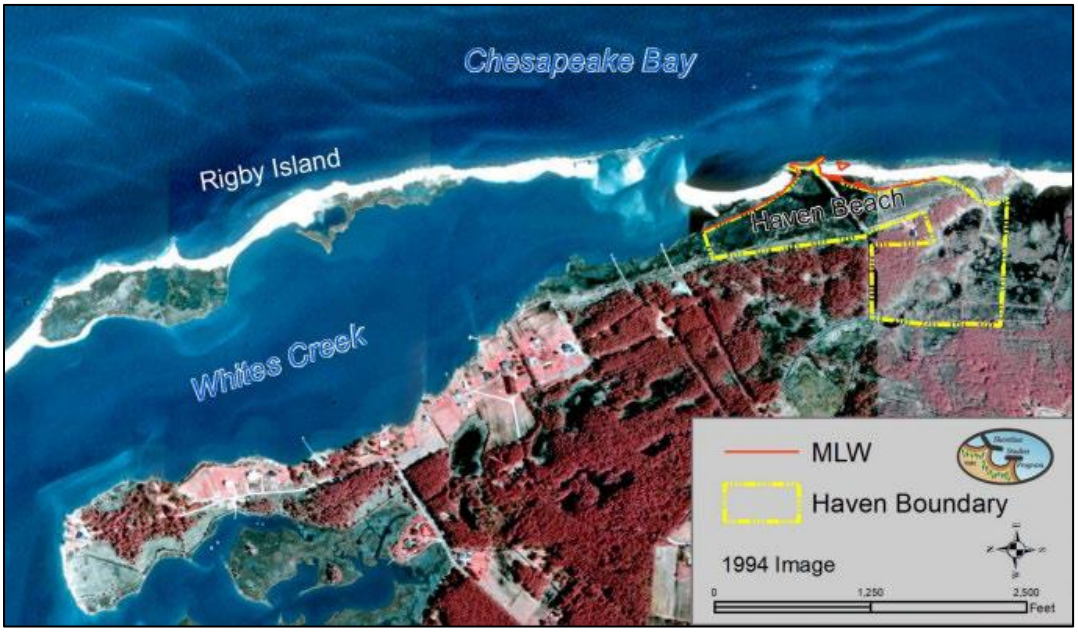


Figure 9 - Haven Beach location in 1994.

Figure 10 - Haven Beach Location in 2017.

Efforts have been made to protect Haven Beach's shoreline in the past. Five experimental breakwaters were installed in 1985, but failed and do not exist today. In 2005, Mathews County installed one large breakwater and one small breakwater with beach fill along the shoreline to stop erosion and protect habitat (**Figure 11**). The large breakwater is still functioning to protection the shoreline and has maintained a substantial headland beach area behind it, but the small breakwater has lost all the sand behind it and is underperforming with regards to erosion protection.

Figure 11 - Aerial photo (top) and ground photo (bottom) taken at Haven Beach after breakwater and beach fill installation in 2005.

This proposal is for gap funding for construction of two breakwaters at Haven Beach as designed. With funding through the VPA, the Middle Peninsula Planning District Commission (MPPDC) and Mathews County has worked to get phase I construction started in fall 2024 (**Figure 12**); however, MPPDC will coordinate with Mathews County to ensure cash flow is available to pay contractors.

Figure 12 - Construction of the first breakwaters and living shoreline at Haven Beach (2024).

c. Why the project is needed either locally or regionally.

The previously constructed shoreline protection structures at the beach are not adequate to protect against the increasing high energy coastal environment due to the changing climate. Unless the beach is widened and protected, the shoreline will become unusable, and Mathews County will lose a valuable resource.

Haven Beach is an important recreational and ecological hub for Virginia's Mathews County and the wider Middle Peninsula region. It is a County-owned stretch of partially vegetated coastline that provides recreational access for residents, important habitat for the threatened Northeastern Beach Tiger Beetle, and a natural buffer between the waters of Chesapeake Bay and Mathews County residents and businesses.

Despite shoreline recession, Haven Beach still has vegetated habitat worth protecting. One of the goals of the 2005 breakwater construction project was to protect marsh habitat on the backshore. The project was successful, as the marsh is still in place. South of the breakwaters, an old peat surface intersects the beach at about mean tide level. The peat forms a wide terrace in some areas south of the breakwater that has supported the regrowth of smooth cordgrass. Above the peat, wash-over sand is sparsely populated with upper marsh and dune grasses. In the north half of Haven Beach, sandy beaches front wash over dunes and vegetated and non-vegetated wetlands. The tombolo, or sand bar, behind the large breakwater is heavily vegetated. Drone imagery taken by VIMS in July 2020 and rectified in GIS was used to provide a baseline of existing conditions for design of the project. The images show the breakwaters and habitats along the shoreline (**Figure 13**).

Haven Beach is a popular resource for recreation and the local economy. As noted above, DCR's ConserveVirginia model identified the project area for natural habitat and ecosystem diversity, floodplains and flooding resilience, scenic preservation, protected landscapes resilience, and for having a moderate need for land-based recreation access.

In addition, Mathews County tourism is reliant on access to the natural environment. Tourism in the Mathews County included $18.2 million total impact in 2023, which has been steadily increasing from $13.3 million in 2016. Therefore, its critical to preserve Haven Beach for the economic, recreational and environmental benefits it brings to the County.

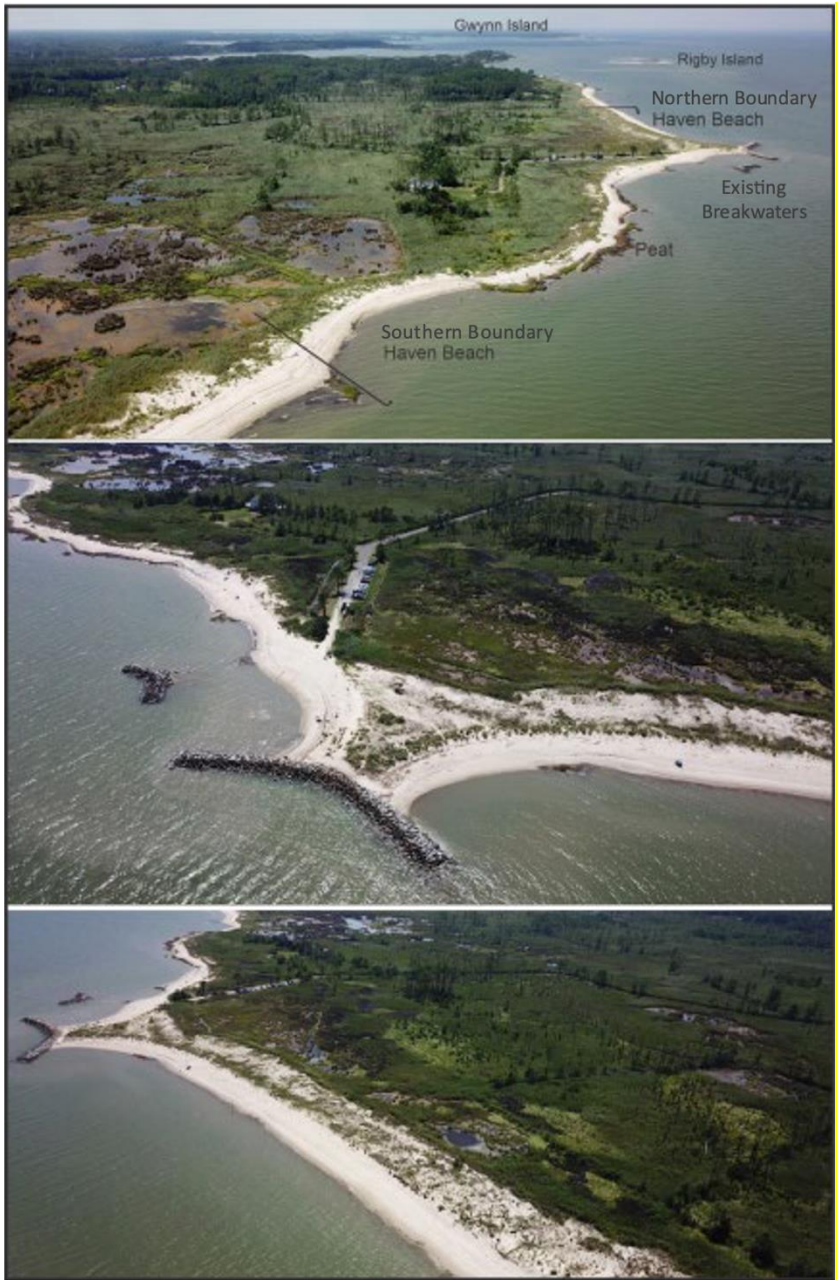


Figure 13 - Drone imagery taken July 2020 at Haven Beach.

d. How the project decreases the risk to public safety through flood risk reduction.

The beach is a popular spot for residents and tourist to enjoy free public access to a beach and the Bay. Reducing flood risks keeps these beach-goers safer during a variety of storms sizes. The additional reduction in erosion and widening of the beach allows people adequate space to enjoy the beach without overcrowding the sand and dunes.

The project aims to address the ecological and natural resource threats, plus several public safety, recreational, and economic impacts caused by erosion at Haven Beach. Exposure to the high energy coastal environment puts coastal habitats and properties at risk of inundation and deterioration. While

there is no residential or commercial development within the boundaries of Haven Beach, residences and businesses adjacent to and inland from Haven Beach will benefit from the expanded beach and living shoreline project that improve coastal resilience in the area.

e. How the project protects or conserves natural resources.

Haven Beach is an important natural resource that allows people to access and enjoy the waters of Mathews County. Haven Beach historically has been used by residents and visitors for recreation and Chesapeake Bay access. By 1985, State Route 643 ended at the shore where a small sandy parking area existed behind a timber bulkhead. Public access infrastructure to the beach has been modernized and fortified since then. The addition of this project's shoreline protection structures will ensure that beach and its public access infrastructure are preserved for the public to enjoy for decades to come.

The Mathews County Comprehensive Plan emphasizes the planning theme "increased cooperative approaches and initiatives to enhance the economy through heritage tourism, ecotourism, aquaculture, and working waterfront business development that complements the environment." The proposed project at Haven Beach coincides with Mathews County's economic and cultural vision for the future.

This project is designed to protect and restore natural resources by building a living shoreline consisting of rock sills/breakwaters. The living shoreline is constructed from sand, rock, and plants local to the region that make excellent habitat for the local small fish species as well as hard substrate for oyster settlement and growth, as observed at other living shorelines in the region.

In addition, the Hole in the Wall Channel dredging project and Haven Beach living shoreline construction, located approximately two miles away from each other, present an excellent opportunity for multi-benefit resource sharing that addresses the challenges at each site. The material to be dredged at Hole in the Wall Channel consists predominantly of coarse sand, which is being reused at Haven Beach to protect against coastal erosion, flooding, and sea-level rise. Living shoreline protection structures (breakwaters) will be utilized to prevent the newly placed material from erosion and subsequent transport south beyond Haven Beach.

The applicant and the property owner recognize the importance to do no harm to land owned by the Commonwealth and adjacent property owners as result of the construction elements of this project. The construction for the proposed project will be under the auspices of experienced contractors who understand that adverse impacts must be avoided. The proposed project will work with the permitting agency, designers, and contractors to ensure that the project is built to and functions with no adverse impacts.

f. Who or what is protected.

Beyond the dunes, habitats, and local species, the project protects the Park facilities and all of its users. Haven Beach is an important recreational resource that allows people to access and enjoy the waters of Mathews County. Protecting the beach from the impacts of flooding allows the area to meet its complete capacity and prolongs and enhances utilization by both residents and visitors. In addition, this project will prevent tidal, storm surge, and sea level rise flooding at the coastline to protect residences and businesses that lie north of and inland from Haven Beach.

g. The safety threats, or environmental concerns related to flood risk.

The entirety of the site (Haven Beach, State Rte. 645, Diggs, VA 23045, 37°26'25", -76°15'28") is located within a mapped floodplain, with portions located within FEMA Flood Zones AE and VE (**Attachment 2**). Due to the beach's relatively low elevation, the site has an extensive history of flooding that has resulted in significant impacts to the environment.

For example, the beach has long been, and continues to be, impacted by tropical, sub-tropical, and Nor'easter events. This creates both safety threats in terms of health hazards caused by floods, as well as negative environmental impacts due to habitat deterioration and diminishing coastlines.

Since 2003, there have been at least seven significant coastal events resulting in flooding impacts to the beach:

1. Hurricane Isabel in 2003
2. A nor-easter in 2005
3. A nor'easter in 2010
4. A nor'easter in June 2011
5. Hurricane Irene in August 2011
6. A nor'easter in 2012
7. A coastal storm in October 2015

The site is subjected regularly to storm flooding events that result in damages, although perhaps not to the degree of the aforementioned events.

In addition, the Coastal Flood Exposure Mapper indicates the project site is in a high hazards zone (**Attachment 3**).

h. Groups who might directly benefit from this flood risk reduction effort.

Residents, businesses, and tourists will directly benefit from this mitigation effort. Mathews County's 2023 Census population was 8,514. Mathews County residents purchased 706 Recreational Licenses and Permits (totaling $21,537) and 1,178 Commercial Licenses and Permits (totaling $54,198) from the Virginia Marine Resources Commission in 2018. Recreation and commercial activity provide a large economic benefit to the County as well as the Commonwealth.

Low-income residents will directly benefit from this project as this project will ensure that Haven Beach will be protected for continued free outdoor recreational access to this site. The definition of a "low-income geographic area" provided by DCR in the 2024 Funding Manual for the Virginia Community Flood Preparedness Fund is:

- "any locality, or community within a locality, that has a median household income that is not greater than 80 percent of the state median household income or
- any area in the Commonwealth designated as a qualified opportunity zone by the U.S. Secretary of the Treasury via his/her delegation of authority to the Internal Revenue Service."

According to the US Census, Virginia's median household income (MHI) from 2018 to 2022 was $87,249 in 2022 dollars. A "low-income geographic area" (Census Block Group, Census Tract, or Zip Code

Tabulation Area) would have an MHI lower than $69,799 (80% of the state MHI) or be designated as a qualified opportunity zone.

The MHI in Mathews County is $79,054 (from 2018 to 2022 in 2022 dollars), so the County as a whole is not a "low-income geographic area." However, there are smaller areas in the County that meet the definition. Essex, Middlesex, and King and Queen Counties meet the MHI criteria on a county-wide level, making the entire area covered by these counties eligible. Specific census tracts, zip codes, and block groups within other counties in MPPDC also meet the criteria. These areas and local opportunity zones are identified as green in **Figure 14**. The red dot shows the location of the project.

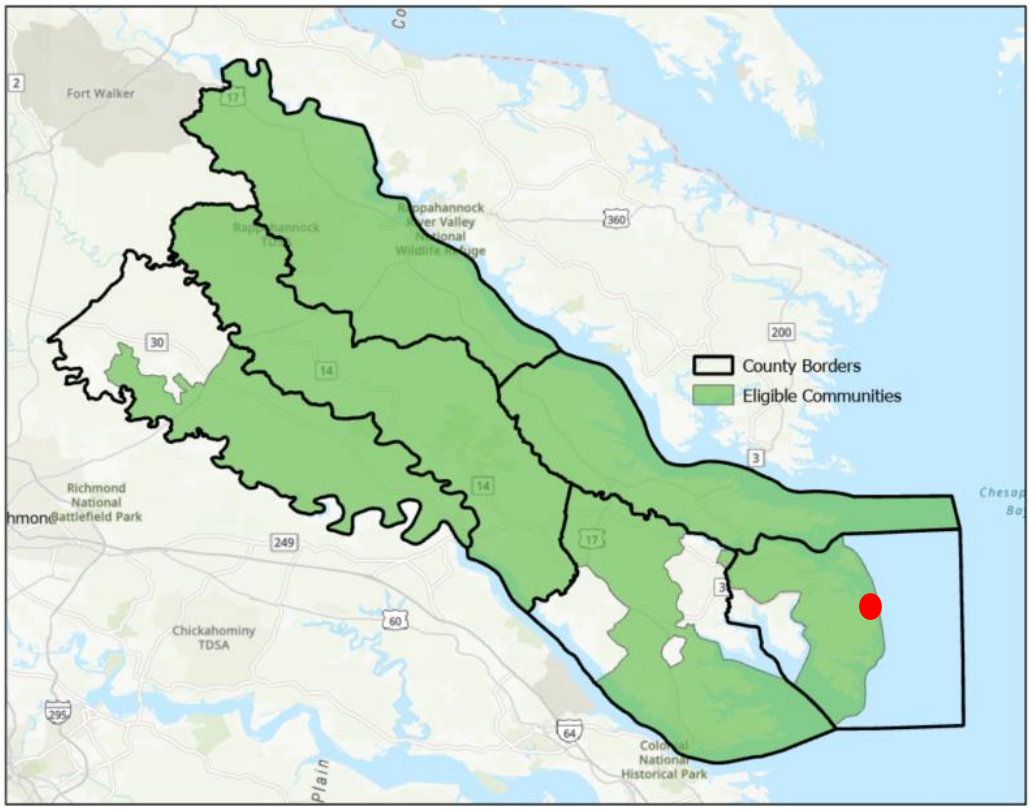


Figure 14 - "Low-income geographic area" eligibility for the entire Middle Peninsula.

Residents in areas of social vulnerability will also directly benefit from this project. Social vulnerability is the ability of individuals or groups to prepare for and recover from hazards, like flooding. The Virginia Social Vulnerability Index (SVI) Viewer indicates Haven Beach has a 'Moderate Social Vulnerability' score (**Figure 15**).

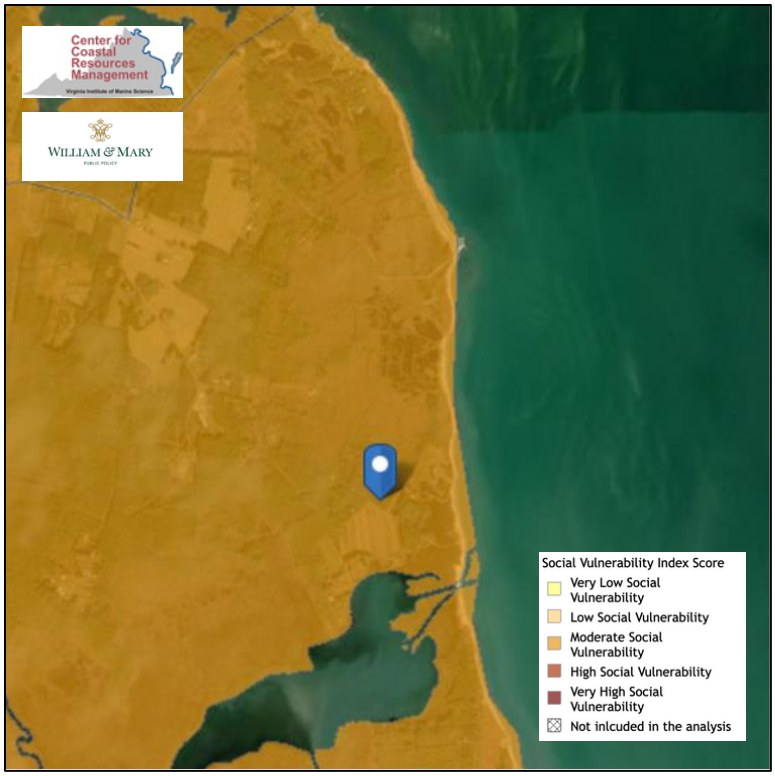


Figure 15 - Social Vulnerability Index Score.

This project will also benefit tourists coming from other parts of the region and Commonwealth and the businesses visited by tourists as this project aims to protect Haven Beach and ensure the long-term use of this public asset.

i. What would happen (or not happen) if the applicant does not receive funding.

The area has already seen construction of inadequate erosion control features. Without the gap funding to construct the entire project as designed, the site and public infrastructure will be compromised, resulting in degradation of the site and loss of a public assets. Any category of storm will flood the site, damaging the property and precluding access. Moreover, rising sea levels will have a negative impact on the property, inching the water closer to the site's active resources and increasing the likelihood of significant flooding or erosion of the beach.

j. Alternatives analysis of the viability of the project, how selected project reduces risk to populations at risk of flooding. Provide examples of current or previous related projects, data, outcomes etc. that justify the approach chosen. Include how long and how much protection to be achieved.

The proposed living shoreline project is the region's preferred nature-based solution for mitigating impacts of tidal flooding, storm surge, and sea level rise. A living shoreline will mitigate the effects of exceptional floods and sea level rise for 50 years or more. Additionally, since a living shoreline is feasible at this location, a hardened or non-living shoreline is not permissible per state regulations, thereby limiting the alternatives to implementing a living shoreline or doing nothing.

Under the "do nothing" alternative, the site and public infrastructure will be compromised, resulting in degradation of the site and loss of public assets.

2. Goals and Objectives:

a. Goals should be listed as an outcome that solves the problem identified.

Goal 1: Reduced erosion at Haven Beach and prevention of further degradation through the construction of a living shoreline and associated protective breakwaters in a cost-effective manner with beneficial reuse of dredged materials.

Goal 2: Strengthened community resilience against coastal hazards while promoting economic stability through the preservation and accessibility of recreational and commercial activities.

Goal 3: Protected habitats for the conservation of threatened species while maintaining the natural buffer between the Chesapeake Bay waters and Mathews County to ensure the long-term preservation of the coastal ecosystem and its biodiversity.

b. Objectives must be specific, measurable and timebound.

Objective 1: Construction of Breakwater 3 & 4 (June 2025 – December 2025).

Objective 2: Installation of Plants and Fencing (June 2026 – December 2027).

c. Objectives be achievable within the agreement period.

The required grant period of performance for projects is 3 years. All objectives and goals will be achieved within the grant contract period. This project is shovel ready and construction of the breakwaters 3 &4 will start upon receipt of funding in 2025. The beach must reach its new equilibrium before the plants can be planted. VIMS recommends waiting approximately 12 months. Planting is also weather and seasonally dependent. It is anticipated the plants and fencing will be installed in late 2026, but that might be delayed until early 2027. MPPDC staff will update DCR on the timing as the project occurs.

3. Work Plan:

a. What are the major activities and tasks?

Task 1: Construction of Breakwaters 3 &4 (June 2025 – December 2025)

- Construct the remaining two breakwaters from the full project as designed and place sand taking advantage of the permits and construction contract in hand to start work immediately. MPPDC staff are currently under contract for construction management (funded entirely by VPA-WMF funds) and will oversee the construction of this project.

Task 2: Installation of Plants and Fencing (June 2026 – December 2027)
Once breakwater sand retention as reached a new equilibrium, the living shoreline plants and fencing will be installed.

b. Who is responsible for completing the activities and tasks?

The following entities are responsible for the identified activities:

- MPPDC staff will serve as the applicant of record and grant administrator. MPPDC staff are currently under contract for construction management (funded entirely by VPA-WMF funds) and will oversee the construction of this project concurrently. MPPDC will coordinate with Mathews county to ensure cash flow is available to pay contractors.
- Mathews County staff will provide matching funds and ensure compliance with all grant and permit terms and conditions.
- The construction contractor (Seaward) will conduct all construction-related activities.

MPPDC staff are confident in their abilities to oversee the proposed activities. The agency has developed strong working relationships with industry and academic experts that will further strengthen the overall project effectiveness and efficiency as well. MPPDC staff that will work to manage this project include:

- Lewie Lawrence, MPPDC Executive Director: Coordinates and oversees all agency planning activities. Mr. Lawrence will be involved in general project oversight, participate in Project Management Committee meetings, and advise on technical aspects of the project.
- Julie Kaylor, MPPDC Chief Financial Officer: Directs and oversees all financial activities, including preparation of financial reports and budgets. Ms. Julie Kaylor will oversee and administer all financial aspects of the project.
- Rachael Peabody, MPPDC Director of Daily Operations: Works as project manager for projects and assists with coordination and oversight of all agency planning activities. Ms. Peabody will serve as project manager providing general project oversight.
- Jackie Rickards, MPPDC Senior Planning Project Manager: Ensures that all reporting and final documents are provided to the funding agency.

The Mathews County Planning, Zoning and Wetlands Office has a multitude of responsibilities including long range land use planning, enforcement of ordinances, and administration of the Mathews County Shoreline Management Plan.

The Mathews County Building Department administers the Mathews County Floodplain Management Ordinance and maintains the county floodplain maps (FEMA Flood Insurance Rate Maps). They are responsible for ensuring the requirements of the Virginia Uniform Statewide Building Code (Virginia USBC) are met. Jon Morr is the Building Official.

c. What is the timeframe for accomplishing activities and tasks?

All activities and tasks will commence within 12 months of the agreement date and will be completed within 36 months.

d. Identify the required partners and where they are represented in the workplan.

MPPDC will work alongside Mathews County staff to ensure all activities and tasks are completed within the three-year timeframe.

e. Deliverables

The **construction of two nature-based breakwaters (BW) (BW-3 and BW-4), dune grasses, and fencing needed to complete a living shoreline** at Haven Beach.

f. Maintenance plan tied to the identified viability of the project. Plan for sustaining the project after the agreement period (if applicable).

County staff will perform long-term maintenance, as they have done for the park for over 40 years. Standard maintenance of living shorelines includes, but is not limited to, the following:

- Debris removal: regular removal of debris, like litter, is important to mitigate accumulation of items that potentially disrupt the natural process of the living shoreline and impacts its stability.
- Vegetation management: replanting vegetation and removing invasive species may be required to ensure the health and stability of the living shoreline.
- Erosion control: assessment and management of erosion is needed to ensure the effectiveness of the living shoreline. This may involve adding addition sand to enhance its protective function.

4. Evaluation

a. Indicators of success.

The successful completion of the proposed project is measured through the following indicators:

- Regular Communication and Coordination: Regular and effective communication among the partners will ensure that any issues are addressed and that necessary adjustments are made in a timely manner.
- Compliance with Project Timeline and Budget: Success of the project can be measured by assessing the project's adherence to the outline timeline and budget within this proposal. This can be determined by monitoring the completion of various tasks within the outlined timeframes and comparing the actual project costs with the budget allocated for each task.
- Community Support and Engagement: The project's success can be measured by the level of community support and stakeholder engagement during the implementation of the project.

The success of the living shoreline project is measured through the following indicators:

- Erosion reduction
- Habitat restoration
- Biodiversity
- Water quality improvement
- Vegetation growth
- Cost effectiveness
- Continued use of the Park by current and new users
- Resilience to climate change including reduced property damage during and after flood events and shorter Park closures following flood events.

b. Data that will be collected and how the data will be used to measure success.

Each success indicator will be measured against an appropriate scale, be it the duration to complete the task, number of engagements, positive feedback on engagements, reduced erosion as noted during maintenance, and/or costs.

Mathews County currently has Biogenic Solutions under contract to monitor the beach through 2027, so those data will be used to monitor success.

c. How was cost effectiveness evaluated and measured against the expected outcomes?

Cost effectiveness will be ensured by the County's use of competitive procurement and the project partners' experience and knowledge of market costs for shoreline project such as the proposed.

d. What products, services, meetings, outreach efforts etc. will be conducted and how will success be measured?

MPPDC will utilize the Fight the Flood Program's outreach and education media channels to feature and promote the project to the public. Success will be measure in the number of visitors to the site and their satisfaction with the natural environment. Success will be measured by the level of community use of and satisfaction with the completed works.

e. Project progress monitoring plan to ensure project meets the requirements of the agreement and is delivered on time. Outline how delays or other findings may be used to modify or improve outcomes/deliverables.

Progress will be monitored weekly for this project by comparing the actual progress to the anticipated progress in the original project schedule. Progress will be reported quarterly to DCR along with a reimbursement invoice in compliance with the terms of the grant contract. Explanations for discrepancies in anticipated and actual progress will be provided along with corrective action steps and/or a request to revise the project schedule. Project delays may result in a request to extend the deadline. Other findings that may impact outcomes, deliverables, and the schedule will be described. We understand that activities must commence within 12 months of the agreement date and must be completed within 36 months. The final reimbursement request will be submitted to DCR within 90 days of the project completion date in compliance with the grant contract.

Budget Narrative- Required for All Categories

Each application must include a detailed Budget Narrative explaining all proposed expenditures. A budget narrative is applicable to requests from any category of grants in this manual. **Applicants must** submit a budget narrative via the WebGrants Portal. The following items must be included in the Budget Narrative:

***Estimated total project cost*:** This amount must reflect the total cost of bringing the project to completion. Estimates for all work to be completed by third parties (engineers, contractors, etc.) on the specified project should be included.

Based upon the identified scope of work, the estimated total project cost is **$1,393,557.**

Mathews County for Construction and Related Grant Activities: $1,393,557
Mathews County will add the DCR CFPF Round 5 funds to the existing contract between the County and the contractor for the Hole in the Wall/Haven Beach project (Michel's Construction Inc, **Attachment 4**).

The contract included cost for this work. The costs have been updated for inflation. Updated costs are:

- construction for breakwater (BW)-3 and BW-4 ($1,118,500) and
- associated dune grasses and fencing ($275,057).

The project is permitted, the construction contractor has been procured, and the project is ready to begin upon receipt of the DCR award resulting in very efficient expenditure of CFPF funds.

MPPDC staff are currently under contract for construction management (funded entirely by VPA-WMF funds) and will oversee the construction of the DCR-funded breakwaters concurrently with the remainder of the project using only VPA-WMF funds.

***Amount of funds requested from the Fund*:** This is the total amount of any grant assistance sought from the Fund. Include a detailed breakdown of how this funding is proposed to be allocated. At a minimum this should include a breakdown of salaries, including any position requested, position title, 100 percent of salary amount and percent directly dedicated to grant activity fringe benefits, travel, equipment, supplies, construction, contracts, and any other direct costs. The budget narrative must include details and costs for each budget category sufficient to determine reasonableness and allowability.

The total amount of requested grant assistance is **$1,323,897**, or 95% of total project costs, as the project is located in a low-income geographic area and the project results in a nature-based solution. This includes contractual funding amounts for construction.

Indirect costs are not eligible for funding. Salaries of existing staff are ineligible; however, salaries of staff who provide direct and documented support to the grant effort may be considered as match. Please refer to the match requirements in Part III of this manual. For local governments designated as low-income geographic areas, 100 percent of the estimated total project costs should be included.

Grant funding will not be used for indirect costs.

***Amount of funds available*:** This amount, when combined with the amount of funding requested from the Fund, must reflect the total estimated project cost to demonstrate that all necessary funding has

been secured to complete the project. Include a description of the source of these funds and evidence of the applicant's ability to obtain these funds to complete the project.

Mathews County will appropriate the requisite 5% or **$69,678** from its VPA-WMF award in required local match funds, to be combined with the **$1,323,897** in grant assistance to equal the total estimated project cost (**$1,393,557**). The County's match commitment letter has been uploaded to the grants portal.

The VPA-WMF funds awarded to Mathews County are to be used for the first part of the full project as designed, including dredging of ~40,000 cubic yards of sand, purchasing and installation of plants, and construction of a needed 50 ft extension of an existing undersized breakwater and construction of a full breakwater 230 ft length. The effort collectively will construct a living shoreline at Haven Beach using the dredged sand, plants, and rock breakwaters to stabilize and provide a sustainable shoreline solution at the site.

RVRF Match loans: The match loan and amount of funding requested for loan.

No loans are requested.

Authorization to request for funding: Local governments seeking funding shall also attach signed documentation authorizing the request for funding.

The authorization to request funding letter has been uploaded to the grants portal.

Applicant Name: Middle Peninsula Planning District Commission
Community Flood Preparedness Fund &
Resilient Virginia Revolving Loan Fund
Detailed Budget Narrative
Period of Performance: June 2025 (or upon receipt of award contract) through December 2027
Submission Date: January 24, 2025

Grand Total State Funding Request	$1,323,897
Grand Total Local Share of Project	$69,678
Federal Funding (if applicable)	$0
Project Grand Total	$1,393,557
Locality Cost Match	5%

Breakout By Cost Type	Personnel	Fringe	Travel	Equipment	Supplies	Contracts	Indirect Costs	Other Costs	Total
Federal Share (if applicable)	$0	$0	$0	$0	$0	$0	$0	$0	$0
Local Share	$0	$0	$0	$0	$0	$69,678	$0	$0	$69,678
State Share	$0	$0	$0	$0	$0	$1,323,897	$0	$0	$1,323,897
Pre-Award/Startup	$0	$0	$0	$0	$0	$0	$0	$0	$0
Maintenance	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total	$0	$0	$0	$0	$0	$1,393,557	$0	$0	$1,393,557

Historic flooding data and hydrologic studies projecting flood frequency

Mathews County's low elevation and extreme exposure to Chesapeake Bay and Atlantic Ocean make it one of the most vulnerable places in the Commonwealth to coastal erosion and flooding. The rapid deterioration of the barrier islands, especially Rigby Island, to erosion and sediment transport has major implications for Haven Beach. The entirety of the site is located within a mapped floodplain, with portions located within FEMA Flood Zones AE and VE (mapped 12/9/2014).

Due to the beach's relatively low elevation, the site has an extensive history of flooding that has resulted in significant impacts to the environment. The beach has long been, and continues to be, impacted by tropical, sub-tropical, and Nor'easter events. Since 2003 there have been at least seven significant coastal events resulting in flooding impacts to the beach:

1. Hurricane Isabel in 2003
2. A nor-easter in 2005
3. A nor'easter in 2010
4. A nor'easter in June 2011
5. Hurricane Irene in August 2011
6. A nor'easter in 2012
7. A coastal storm in October 2015

Previously constructed shoreline protection structures at the beach are not adequate to protect against the high energy coastal environment. The project site is impacted by ever increasing effects of coastal and tidal influences, resulting in site flooding and drainage issues.

According to NOAA's Coastal Flood Mapper, this project location is at the highest risk of coastal flooding.

No adverse impact

Studies, data, reports must demonstrate proposed project minimizes flood vulnerabilities and does not create or increase flooding to other properties. Provide more detailed versions of those outlined as General Requirements.

The project involves a living shoreline that includes widening the beach, increasing the height of the dunes, and installation of plants and rock sills. These physical features are anticipated to prevent tidal flooding, storm surge, and elevated water levels resulting from sea- level rise at the coastline and protect upland areas. Limiting tidal, storm surge, and sea level rise flooding along this section of shoreline will not create or move flooding issues in the upland areas or increase flooding along other sections of shoreline.

VIMS Shoreline Studies Program staff have taken great consideration into the project's design with regards to adverse impacts to adjacent properties using decades' worth of experience and knowledge gained from designing and monitoring sites involving similar shoreline treatments in similar wave and energy environments. As such, there are no anticipated adverse impacts involving flood vulnerabilities to adjacent properties.

County of Mathews Administration Office

mathewscountyva.gov

November 4, 2024

Mr. Jake Shaw
Virginia Department of Conservation and Recreation
Community Flood Preparedness Fund
600 East Main Street, 24th Floor
Richmond, VA 23219-2094

RE: Application Authorization and Match Commitment for Haven Beach Breakwaters and Living Shoreline

Dear Mr. Jake Shaw,

Mathews County authorizes and supports Middle Peninsula Planning District Commission staff to request funding through the Virginia Department of Conservation and Recreation's Community Flood Preparedness Fund Round 5 (CID510096_Mathews County CFPF). This proposal is for funding to complete a shovel-ready project. The County has already acquired all the necessary design and construction documents and permits and procured a qualified contractor to complete the construction of two breakwaters at locked in pricing and has procured proposals pending with other qualified contractors to install dune grasses and dune fencing. Two breakwaters are currently under construction and 40,000 cubic yards of coarse sand dredged from the nearby Hole in the Wall navigation channel have been beneficially reused upon Haven Beach. Funding is needed to construct two additional breakwaters, dune grasses and fencing to complete a living shoreline to provide comprehensive flood and erosion protection. Completing the full project as designed will provide a living shoreline that widens the beach and raises dune heights to provide greater protection during storms and reduce flooding at the County's popular public beach in a low-income area.

This letter is also a commitment to match this project with $69,678 (5% of project costs). The County will pay the match contribution during the agreement period and has the ability to fund the project upfront, requesting reimbursements on a quarterly basis.

If you have any questions about the proposal application, please feel free to reach out to me by email at rwilson@mathewscountyva.gov or by phone at 804-725-7172.

Sincerely,

Ramona Wilson
County Administrator
Mathews County, VA

Benefit-cost analysis

Haven Beach is experiencing increased effects from coastal and tidal flooding. Flooding issues are exacerbated by continued sea level rise and the increased frequency and severity of storm surge. Without sufficient mitigation efforts starting at the beachline,

The proposed living shoreline and associated protective breakwaters will protect the beach through natural flood mitigation and support drainage, thereby minimizing property damage, enhancing the resilience of public infrastructure, and ensuring longer-term viability, and significantly reducing the potential for injuries and/or loss of life. Increasing the resilience of the shoreline minimizes secondary and tertiary effects of flooding and drainage issues that plague the community.

While no specific economic impact studies exist which quantify the direct, indirect, and induced benefits of Haven Beach, the County recognizes that the cost of investing in the facility will be returned many times over in the benefits generated from this important, publicly accessible recreational location. It is anticipated that the DCR and County investments in flood protection through the construction of a living shoreline will result in a reduction in flood damages to the property, reduce general maintenance and repair costs following storm events, and enhance the overall recreational use. All of these benefits provided by the project are anticipated to surpass the project costs many times over, not just over the immediate term, but for decades to come as flood conditions are forecast to worsen.

Other necessary information to establish project priority

i. Repetitive Loss and/or Severe Repetitive Loss Properties

Include an exact number of repetitive loss and/or severe repetitive loss structures within the project area.

While the park and park structures have flooded repeatedly and sustained significant damages on many occasions during the park's ~40-year history, insurance claims have only been filed two times by Gloucester County. The first claim occurred following Hurricane Isabel in 2003 (FEMA claim). The second claim occurred following a major storm that damaged the finger pier at the boat landing. All other storm damage-induced repairs, including hauling shifted sand, replacing water soaked and rotten boards, and removing the damaged playground, were covered and managed by the County without insurance claims. Therefore, by definition, there are no repetitive loss and/or severe repetitive loss properties within the project area.

There are repetitive and severe repetitive loss properties within 2 miles of the project area (**Figure 1**).

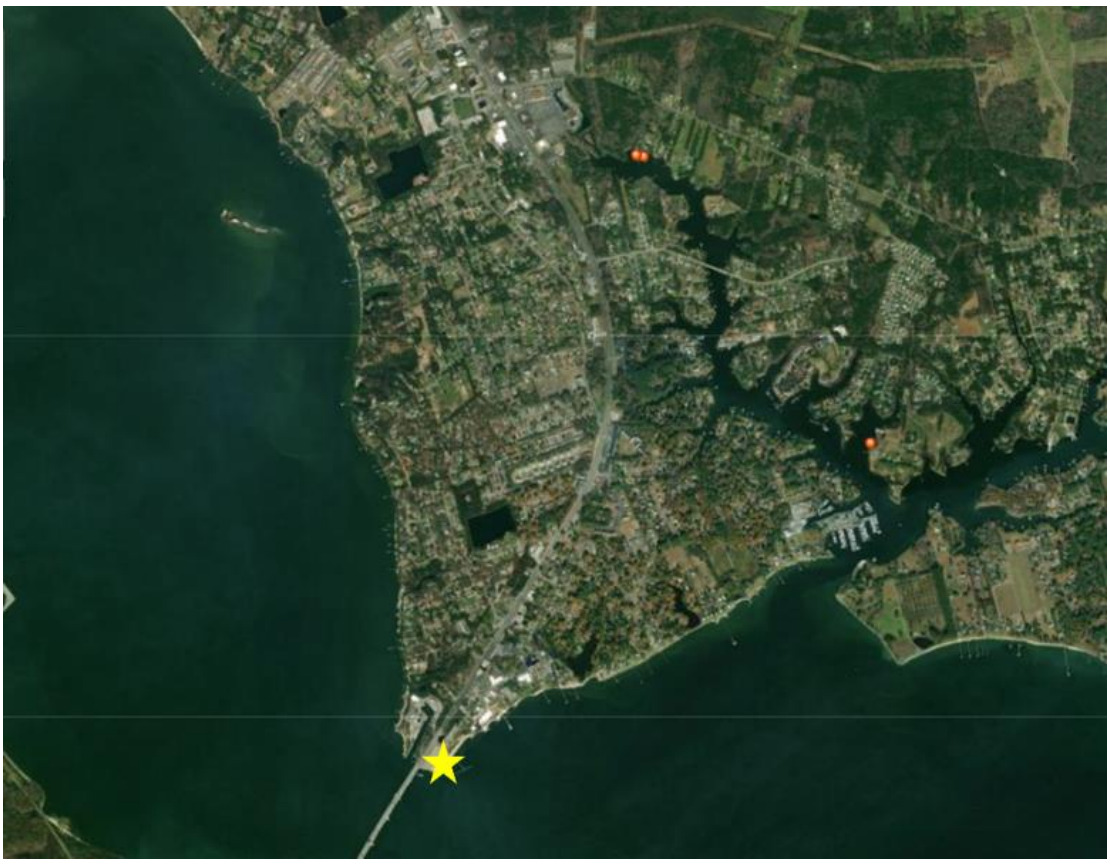


Figure 1 - Repetitive and Severe Repetitive Loss properties (red dots) within 2 miles of the project location (yellow star).

ii. Residential and Commercial Structures

Describe the residential and commercial structures impacted by this project, including how they contribute to the community such as historic, economic, or social value. Provide an exact number of residential structures and commercial structures in the project area.

Gloucester Beach Point Park does not contain any residential or commercially owned structures. The site includes a County-owned and operated 2,000 square foot facility that provides public restrooms, employee storage, and seasonal concessions. There is also a shower facility, interpretative sign panels, and a gazebo. There are two boat landings that support recreational and commercial seafood activity and a no-cost use fishing pier.

DCR's ConserveVirginia model identifies the site's importance for cultural and historic preservation. The Park hosts the only public beach access in the County. It is also the most popular public tidal boating site around. The no-cost use fishing pier provides a supplemental food source for many low-income families in the region.

In addition, the Park has a long history of being a hub for commercial use in the County, including historic ferry transportation and a working waterfront for various fisheries in the distant past to more recent boating, fishing, and beach recreational access.

iii. Critical Facilities/Infrastructure

Gloucester Beach Point Park serves as critical infrastructure with regards to its role in providing emergency services and marine patrol access to the water. In addition, the Park itself is a critical site for the County and region's water based recreational economy. Investing in a more resilient living shoreline system is a top priority to protect this valuable asset and ensure it continues to provide direct, indirect, and induced benefits to the County, region, and beyond.

As noted above, Gloucester County has filed one FEMA claim for damages incurred from tidal flooding at the site's single building. No FEMA claims have been filed since because the damage incurred to that structure have been mostly from nuisance tidal flooding which have slowly eroded and worn out the structure but has not created the level of an insurance claim. That being said, it is anticipated that the living shoreline system, with elevated dunes, will reduce nuisance flooding at the site, slowing or mitigating the gradual deterioration. Additionally, the primary losses to the County have been related to the costs incurred from staff time for repairs and maintenance following storm events, as well as the lost indirect and induced economic benefits when the public is unable to access the park following flood events.

Approach, Milestones, and Deliverables

Outline a plan of action *laying out the* ***scope*** *and detail of* ***how the proposed work will be accomplished*** *with a* ***timeline*** *identifying expected* ***completion dates****. Determine* ***milestones*** *for the project that will be used to* ***track progress****. Explain what* ***deliverables*** *can be expected at each milestone, and what* ***the final project deliverables*** *will be. Identify other* ***potential project partners****.*

Work Plan

1. Project Permitting (July 2025 – January 2026, 7 months --- *Note that all timelines are contingent upon the actual execution date of an award contract and are subject to change*)

- Gloucester County staff will oversee the permitting process and attain all necessary permits for construction. County staff will meet with VIMS-SSP to review the entire project plan and discuss the scope as well as the scope that VIMS-SSP will be preparing.
- The VIMS-SSP, which developed the project design (for the 50-yr flood), will be contracted to provide assistance to Gloucester County staff regarding technical aspects of the project design and will make modifications to the project design, as necessary.
- Deliverable: Permit

2. Project Procurement (February 2026 – April 2026, 3 months)

- Gloucester County staff will procure a qualified contractor for construction of the permitted project. This includes meeting with Purchasing to get the project ready for bid, hosting an onsite meeting with interested bidders, and reviewing bidder replies after Purchasing has verified completion of submittals.
- VIMS-SSP will provide assistance and guidance throughout the procurement stages of the project regarding technical aspects of the project design and will make modifications to the project design, as necessary.
- Deliverable: RFP and Contract

3. Living Shoreline Construction (April 2026 – June 2026, 3 months)

- Gloucester County staff will host a meeting on site with VIMS, selected contractor and subs (if applicable) to discuss the project approach and clear them for starting work. Staff will have time on-site, on the phone, and on emailing communicating with the contractor to keep up with work during construction.
- VIMS-SSP will conduct a pre-construction survey.
- Contractor will construct the living shoreline, the widening of the beach, heightening of dunes, and installation of plants and rock sills as permitted, along with other grant related activities. DCR funds will be used for construction labor and materials. Gloucester County will oversee construction and ensure compliance with all grant terms and conditions.
- Gloucester County staff will check on the site after construction ends and meet with VIMS-SSP and maintenance staff to review maintenance plan.
- Deliverable: Completed project

4. Post construction monitoring of living shoreline (July 2026 – June 2027, 12 months)

- MPPDC staff will contract with VIMS-SSP to conduct post-construction monitoring of the site by capturing ground and drone imagery.
- VIMS-SSP will conduct a post-construction survey and a one-year post-construction survey.
- Deliverable: Monitoring data

Maintenance Plan

For ongoing projects or projects that will require future maintenance, such as infrastructure, flood warning and response systems, signs, websites, or flood risk applications, a maintenance, management, and monitoring plan for the projects must be provided demonstrating how they will be maintained, managed, and monitored after the lifespan of this award for a minimum of ten years or the expected lifespan of the project, whichever is longer. Provide more detailed versions of those outlined as General Requirements.

VIMS-SSP will complete an as-built survey immediately following construction and another survey one-year post-construction. VIMS-SSP will also collect high-resolution LiDAR elevation data and drone imagery of the entire project in an effort to monitor changes over the first year. VIMS-SSP will use this data to evaluate the effectiveness of the project ensuring the dune is growing and retaining sand, which is crucial for shoreline stabilization.

VIMS-SSP will provide guidance to the County regarding proper maintenance techniques. Standard maintenance of living shorelines typically includes:

- Debris removal: Regular removal of debris, such as litter, to prevent accumulation that could disrupt the natural processes of the living shoreline and affect its stability.
- Vegetation management: Replanting vegetation and removing invasive species to maintain the health and stability of the living shoreline.
- Erosion control: Regular assessment and management of erosion, which may include adding addition sand to enhance the shoreline's protective function.

County staff, who have maintained the park for over 40 years, will conduct regular inspections and maintenance over the expected lifespan of the project. The Facilities Management department is responsible for:

- Maintenance, general repair, grounds keeping, and custodial care of County properties,
- Maintenance and inspection services on County vehicles and equipment, and
- Seasonal mosquito control in Mosquito Control Districts.

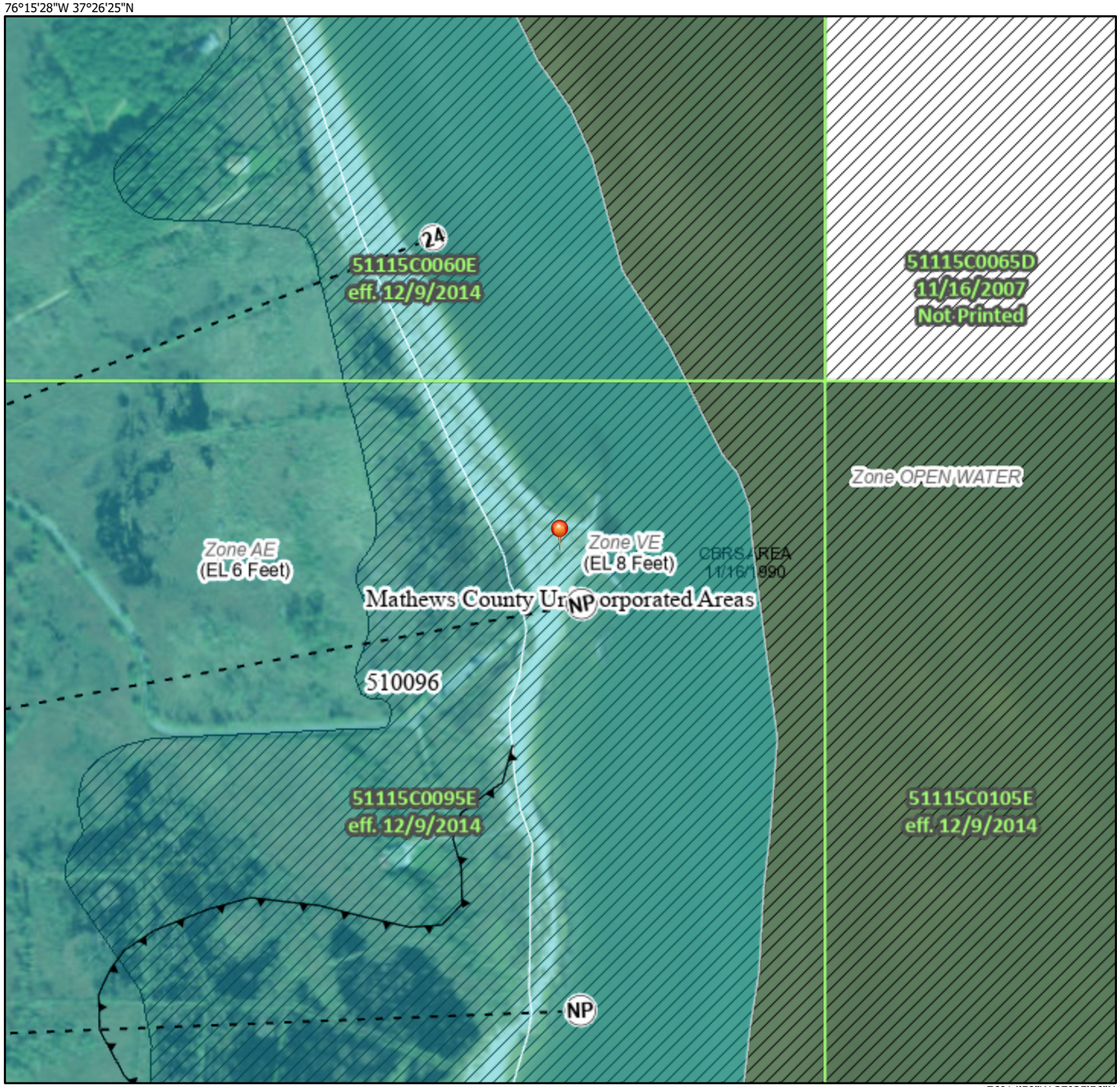
County staff are well-equipped to oversee any needed maintenance and are skilled in automotive and equipment repair, carpentry, landscaping, HVAC, masonry, mosquito control, painting, plumbing, and sign making. Staff performs interior building renovations and completes small construction projects. They also maintain the blue and green road name signs throughout the County.

Should any conditions occur at the site which rise above a level of state-of-good-repair maintenance, the County intends to consult VIMS-SSP for advice regarding any necessary major repairs and seek solutions accordingly.

National Flood Hazard Layer FIRMette

FEMA

76°15'28"W 37°26'25"N



76°14'50"W 37°25'56"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/3/2023 at 3:38 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Chapter 63

FLOODPLAIN MANAGEMENT

ARTICLE I
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§ 63-20. Conditions for continuation.

ARTICLE VI
Variances

§ 63-21. Factors to be considered.
§ 63-22. Notifications.
§ 63-23. Recordkeeping.

ARTICLE VII
Glossary

§ 63-24. Definitions.

[HISTORY: Adopted by the Board of Supervisors of Mathews County 10-14-2014.[1] Amendments noted where applicable.]

1. **Editor's Note: This ordinance also superseded former Ch. 63, Floodplain Management, adopted 4-28-1987, as amended.**

MATHEWS COUNTY CODE

GENERAL REFERENCES

Building construction — See Ch. 20.

Erosion and sediment control — See Ch. 50.

Sand dunes — See Ch. 122.

Subdivision of land — See Ch. 140.

Wetlands — See Ch. 166.

ARTICLE I
General Provisions

§ 63-1. Statutory authorization and purpose.

A. This chapter is adopted pursuant to the authority granted to localities by Code of Virginia, § 10.1-600 et seq.

B. The purpose of these provisions is to prevent: the loss of life and property, the creation of health and safety hazards, the disruption of commerce and governmental services, the extraordinary and unnecessary expenditure of public funds for flood protection and relief, and the impairment of the tax base by:

(1) Regulating uses, activities, and development which, alone or in combination with other existing or future uses, activities, and development, will cause unacceptable increases in flood heights, velocities, and frequencies;

(2) Restricting or prohibiting certain uses, activities, and development from locating within districts subject to flooding;

(3) Requiring all those uses, activities, and developments that do occur in flood-prone districts to be protected and/or floodproofed against flooding and flood damage; and

(4) Protecting individuals from buying land and structures which are unsuited for intended purposes because of flood hazards.

§ 63-2. Applicability.

These provisions shall apply to all privately and publicly owned lands within the jurisdiction of Mathews County, Virginia, and identified as areas of special flood hazard according to the Flood Insurance Rate Map (FIRM) that is provided to Mathews County by FEMA.

§ 63-3. Compliance and liability.

A. No land shall hereafter be developed and no structure shall be located, relocated, constructed, reconstructed, enlarged, or structurally altered except in full compliance with the terms and provisions of this chapter and any other applicable ordinances and regulations which apply to uses within the jurisdiction of this chapter.

B. The degree of flood protection sought by the provisions of this chapter is considered reasonable for regulatory purposes and is based on acceptable engineering methods of study, but does not imply total flood protection. Larger floods may occur on rare occasions. Flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. This chapter does not imply that districts outside the floodplain district or land uses permitted within such district will be free from flooding or flood damages.

C. This chapter shall not create liability on the part of Mathews County or any officer or employee thereof for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

§ 63-4. Records.

Records of actions associated with administering this chapter shall be kept on file and maintained by the Floodplain Administrator.

§ 63-5. Abrogation and greater restrictions.

This chapter supersedes any ordinance currently in effect in flood-prone districts. Any ordinance, however, shall remain in full force and effect to the extent that its provisions are more restrictive.

§ 63-6. Violations and penalties.

A. Any person who fails to comply with any of the requirements or provisions of this chapter or directions of the Floodplain Administrator or any authorized employee of Mathews County shall be guilty of the appropriate violation and subject to the penalties therefor.

B. The VA USBC addresses building code violations and the associated penalties in Sections 104 and 115. Violations and associated penalties of the Zoning Ordinance of Mathews County are addressed in Article 20 of the Zoning Ordinance.[2]

C. In addition to the above penalties, all other actions are hereby reserved, including an action in equity for the proper enforcement of this chapter. The imposition of a fine or penalty for any violation of, or noncompliance with, this chapter shall not excuse the violation or noncompliance or permit it to continue; and all such persons shall be required to correct or remedy such violations within a reasonable time. Any structure constructed, reconstructed, enlarged, altered or relocated in noncompliance with this chapter may be declared by Mathews County to be a public nuisance and abatable as such. Flood insurance may be withheld from structures constructed in violation of this chapter.

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2. Editor's Note: See Ch. 175, Zoning, Art. 20.

ARTICLE II
Administration

§ 63-7. Designation of Floodplain Administrator.

The Building Official is hereby appointed to administer and implement these regulations and is referred to herein as the Floodplain Administrator. The Floodplain Administrator may:

A. Do the work themselves. In the absence of a designated Floodplain Administrator, the duties are conducted by Mathews County Chief Executive Officer.

B. Delegate duties and responsibilities set forth in these regulations to qualified technical personnel, plan examiners, inspectors, and other employees.

C. Enter into a written agreement or written contract with another community or private sector entity to administer specific provisions of these regulations. Administration of any part of these regulations by another entity shall not relieve the community of its responsibilities pursuant to the participation requirements of the National Flood Insurance Program as set forth in the Code of Federal Regulations at 44 CFR. 59.22.

§ 63-8. Duties and responsibilities of Floodplain Administrator.

The duties and responsibilities of the Floodplain Administrator shall include but are not limited to:

A. Review applications for permits to determine whether proposed activities will be located in the special flood hazard area (SFHA).

B. Interpret floodplain boundaries and provide available base flood elevation and flood hazard information.

C. Review applications to determine whether proposed activities will be reasonably safe from flooding and require new construction and substantial improvements to meet the requirements of these regulations.

D. Review applications to determine whether all necessary permits have been obtained from the federal, state or local agencies from which prior or concurrent approval is required; in particular, permits from state agencies for any construction, reconstruction, repair, or alteration of a dam, reservoir, or waterway obstruction (including bridges, culverts, structures), any alteration of a watercourse, or any change of the course, current, or cross-section of a stream or body of water, including any change to the one-hundred-year-frequency floodplain of free-flowing nontidal waters of the state.

E. Verify that applicants proposing an alteration of a watercourse have notified adjacent communities, the Department of Conservation and Recreation (Division of Dam Safety and Floodplain Management), and other appropriate agencies (VADEQ, USACE) and have submitted copies of such notifications to FEMA.

F. Advise applicants for new construction or substantial improvement of structures that are located within an area of the Coastal Barrier Resources System established by the Coastal Barrier Resources Act[3] that federal flood insurance is not available on such structures; areas

3. **Editor's Note: See 16 U.S.C. § 3501 et seq.**

subject to this limitation are shown on Flood Insurance Rate Maps as coastal barrier resource system areas (CBRS) or otherwise protected areas (OPA).

G. Approve applications and issue permits to develop in flood hazard areas if the provisions of these regulations have been met, or disapprove applications if the provisions of these regulations have not been met.

H. Inspect or cause to be inspected, buildings, structures, and other development for which permits have been issued to determine compliance with these regulations or to determine if noncompliance has occurred or violations have been committed.

I. Review elevation certificates and require incomplete or deficient certificates to be corrected.

J. Submit to FEMA, or require applicants to submit to FEMA, data and information necessary to maintain FIRMs, including hydrologic and hydraulic engineering analyses prepared by or for Mathews County, within six months after such data and information becomes available if the analyses indicate changes in base flood elevations.

K. Maintain and permanently keep records that are necessary for the administration of these regulations, including:

(1) Flood Insurance Studies, Flood Insurance Rate Maps (including historic studies and maps and current effective studies and maps) and letters of map change; and

(2) Documentation supporting issuance and denial of permits, elevation certificates, documentation of the elevation (in relation to the datum on the FIRM) to which structures have been floodproofed, other required design certifications, variances, and records of enforcement actions taken to correct violations of these regulations.

L. Enforce the provisions of these regulations, investigate violations, issue notices of violations or stop-work orders, and require permit holders to take corrective action.

M. Advise the Board of Building Appeals regarding the intent of these regulations and, for each application for a variance, prepare a staff report and recommendation.

N. Administer the requirements related to proposed work on existing buildings:

(1) Make determinations as to whether buildings and structures that are located in flood hazard areas and that are damaged by any cause have been substantially damaged.

(2) Make reasonable efforts to notify owners of substantially damaged structures of the need to obtain a permit to repair, rehabilitate, or reconstruct, and prohibit the noncompliant repair of substantially damaged buildings except for temporary emergency protective measures necessary to secure a property or stabilize a building or structure to prevent additional damage.

O. Undertake, as determined appropriate by the Floodplain Administrator due to the circumstances, other actions which may include, but are not limited to, issuing press releases, public service announcements, and other public information materials related to permit requests and repair of damaged structures; coordinating with other federal, state, and local agencies to assist with substantial damage determinations; providing owners of damaged structures information related to the proper repair of damaged structures in special

flood hazard areas; and assisting property owners with documentation necessary to file claims for increased cost of compliance coverage under NFIP flood insurance policies.

P. Notify the Federal Emergency Management Agency when the corporate boundaries of Mathews County have been modified and:

(1) Provide a map that clearly delineates the new corporate boundaries or the new area for which the authority to regulate pursuant to these regulations has either been assumed or relinquished through annexation; and

(2) If the FIRM for any annexed area includes special flood hazard areas that have flood zones that have regulatory requirements that are not set forth in these regulations, prepare amendments to these regulations to adopt the FIRM and appropriate requirements, and submit the amendments to the governing body for adoption; such adoption shall take place at the same time as or prior to the date of annexation, and a copy of the amended regulations shall be provided to Department of Conservation and Recreation (Division of Dam Safety and Floodplain Management) and FEMA.

Q. Upon the request of FEMA, complete and submit a report concerning participation in the NFIP which may request information regarding the number of buildings in the SFHA, number of permits issued for development in the SFHA, and number of variances issued for development in the SFHA.

R. It is the duty of the Floodplain Administrator to take into account flood, mudslide and flood-related erosion hazards, to the extent that they are known, in all official actions relating to land management and use throughout the entire jurisdictional area of the community, whether or not those hazards have been specifically delineated geographically (e.g., via mapping or surveying).

§ 63-9. Use and interpretation of FIRMs.

The Floodplain Administrator shall make interpretations, where needed, as to the exact location of special flood hazard areas, floodplain boundaries, and floodway boundaries. The following shall apply to the use and interpretation of FIRMs and data:

A. Where field surveyed topography indicates that adjacent ground elevations:

(1) Are below the base flood elevation, even in areas not delineated as a special flood hazard area on a FIRM, the area shall be considered as special flood hazard area and subject to the requirements of these regulations;

(2) Are above the base flood elevation, the area shall be regulated as special flood hazard area unless the applicant obtains a letter of map change that removes the area from the SFHA.

B. In FEMA-identified special flood hazard areas where base flood elevation and floodway data have not been identified and in areas where FEMA has not identified SFHAs, any other flood hazard data available from a federal, state, or other source shall be reviewed and reasonably used.

C. Base flood elevations and designated floodway boundaries on FIRMs and in FISs shall take precedence over base flood elevations and floodway boundaries by any other sources if such sources show reduced floodway widths and/or lower base flood elevations.

D. Other sources of data shall be reasonably used if such sources show increased base flood elevations and/or larger floodway areas than are shown on FIRMs and in FISs.

E. If a Preliminary Flood Insurance Rate Map and/or a Preliminary Flood Insurance Study has been provided by FEMA:

(1) Upon the issuance of a letter of final determination by FEMA, the preliminary flood hazard data shall be used and shall replace the flood hazard data previously provided from FEMA for the purposes of administering these regulations.

(2) Prior to the issuance of a letter of final determination by FEMA, the use of preliminary flood hazard data shall be deemed the best available data pursuant to § 63-15B and used where no base flood elevations and/or floodway areas are provided on the effective FIRM.

(3) Prior to issuance of a letter of final determination by FEMA, the use of preliminary flood hazard data is permitted where the preliminary base flood elevations or floodway areas exceed the base flood elevations and/or designated floodway widths in existing flood hazard data provided by FEMA. Such preliminary data may be subject to change and/or appeal to FEMA.

§ 63-10. Jurisdictional boundary changes.

A. The County Floodplain Ordinance in effect on the date of annexation shall remain in effect and shall be enforced by the municipality for all annexed areas until the municipality adopts and enforces an ordinance which meets the requirements for participation in the National Flood Insurance Program. Municipalities with existing floodplain ordinances shall pass a resolution acknowledging and accepting responsibility for enforcing floodplain ordinance standards prior to annexation of any area containing identified flood hazards. If the FIRM for any annexed area includes special flood hazard areas that have flood zones that have regulatory requirements that are not set forth in these regulations, prepare amendments to these regulations to adopt the FIRM and appropriate requirements, and submit the amendments to the governing body for adoption; such adoption shall take place at the same time as or prior to the date of annexation and a copy of the amended regulations shall be provided to Department of Conservation and Recreation (Division of Dam Safety and Floodplain Management) and FEMA.

B. In accordance with the Code of Federal Regulations, Title 44, Subpart B, Section 59.22(a)(9)(v), all NFIP participating communities must notify the Federal Insurance Administration and optionally the State Coordinating Office in writing whenever the boundaries of the community have been modified by annexation or the community has otherwise assumed or no longer has authority to adopt and enforce floodplain management regulations for a particular area.

C. In order that all Flood Insurance Rate Maps accurately represent the community's boundaries, a copy of a map of the community suitable for reproduction, clearly delineating the new corporate limits or new area for which the community has assumed or relinquished floodplain management regulatory authority must be included with the notification.

§ 63-11. District boundary changes.

The delineation of any of the floodplain districts may be revised by Mathews County where

natural or man-made changes have occurred and/or where more detailed studies have been conducted or undertaken by the United States Army Corps of Engineers or other qualified agency, or an individual documents the need for such change. However, prior to any such change, approval must be obtained from the Federal Emergency Management Agency.

§ 63-12. Interpretation of district boundaries.

Initial interpretations of the boundaries of the Floodplain Districts shall be made by the Floodplain Administrator. Should a dispute arise concerning the boundaries of any of the districts, the Board of Building Appeals shall make the necessary determination. The person questioning or contesting the location of the district boundary shall be given a reasonable opportunity to present his case to the Board and to submit his own technical evidence if he so desires.

§ 63-13. Submission of technical data.

A community's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community shall notify the Federal Emergency Management Agency of the changes by submitting technical or scientific data. Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and floodplain management requirements will be based upon current data.

§ 63-14. Letters of map revision.

When development in the floodplain causes a change in the base flood elevation, the applicant, including state agencies, must notify FEMA by applying for a conditional letter of map revision or a letter of map revision. Examples:

A. Any development that causes a rise in the base flood elevations within the floodway.

B. Any development occurring in Zone AE without a designated floodway, which will cause a rise of more than one foot in the base flood elevation.

C. Alteration or relocation of a stream (including but not limited to installing culverts and bridges) 44 Code of Federal Regulations 65.3 and 65.6(a)(12).

ARTICLE III
Establishment of Zoning Districts

§ 63-15. Description of special flood hazard districts.

Basis of districts:

A. The various special flood hazard districts shall include the SFHAs. The basis for the delineation of these districts shall be the FIS and the FIRM for Mathews County prepared by the Federal Emergency Management Agency, Federal Insurance Administration, dated 12-9-2014, and any subsequent revisions or amendments thereto.

B. Mathews County may identify and regulate local flood hazard or ponding areas that are not delineated on the FIRM. These areas may be delineated on a "Local Flood Hazard Map" using best available topographic data and locally derived information such as flood of record, historic high water marks or approximate study methodologies.

C. The boundaries of the SFHA Districts are established as shown on the FIRM which is declared to be a part of this chapter and which shall be kept on file at the Mathews County Building Department (office of the Building Official and Floodplain Administrator). According to the FIRM, Mathews County contains A, AE, Coastal A and VE Zones. Mathews County does not contain any delineated floodways or AO Zones.

(1) The AE Zone on the FIRM accompanying the FIS shall be those areas for which one-percent-annual-chance flood elevations have been provided and the floodway has not been delineated. The following provisions shall apply within an AE Zone:

(a) Until a regulatory floodway is designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within the areas of special flood hazard, designated as Zone AE on the FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within Mathews County. This requirement only applies along rivers, streams and other watercourses where FEMA has provided base flood elevations. The requirement does not apply along lakes, bays and estuaries, and the ocean coast.

(b) Development activities in Zone AE, on the Mathews County FIRM, which increase the water surface elevation of the base flood by more than one foot may be allowed, provided that the applicant first applies, with Mathews County endorsement, for a conditional letter of map revision, and receives the approval of the Federal Emergency Management Agency.

(2) The A Zone on the FIRM accompanying the FIS shall be those areas for which no detailed flood profiles or elevations are provided, but the one-percent-annual-chance floodplain boundary has been approximated. For these areas, the following provisions shall apply:

(a) The Approximated Floodplain District shall be that floodplain area for which no detailed flood profiles or elevations are provided, but where a one-hundred-year floodplain boundary has been approximated. Such areas are shown as Zone A on the maps accompanying the FIS. For these areas, the base flood elevations

and floodway information from federal, state, and other acceptable sources shall be used, when available. Where the specific one-percent-annual-chance flood elevation cannot be determined for this area using other sources of data, such as the United States Army Corps of Engineers Floodplain Information Reports, United States Geological Survey Flood-Prone Quadrangles, etc., then the applicant for the proposed use, development and/or activity shall determine this base flood elevation. For development proposed in the approximate floodplain, the applicant must use technical methods that correctly reflect currently accepted nondetailed technical concepts, such as point on boundary, high-water marks, or detailed methodologies hydrologic and hydraulic analyses. Studies, analyses, computations, etc., shall be submitted in sufficient detail to allow a thorough review by the Floodplain Administrator.

(b) The Floodplain Administrator reserves the right to require a hydrologic and hydraulic analysis for any development. When such base flood elevation data is utilized, the lowest floor shall be elevated to or above the base flood level.

(c) During the permitting process, the Floodplain Administrator shall obtain:

[1] The elevation of the lowest floor (including the basement) of all new and substantially improved structures; and

[2] If the structure has been floodproofed in accordance with the requirements of this chapter, the elevation (in relation to mean sea level) to which the structure has been floodproofed.

(d) Base flood elevation data shall be obtained from other sources or developed using detailed methodologies comparable to those contained in a FIS for subdivision proposals and other proposed development proposals (including manufactured home parks and subdivisions) that exceed 50 lots or five acres, whichever is the lesser.

(3) The Coastal A Zone shall be those areas, as defined by the VA USBC, that are subject to wave heights between 1.5 feet and three feet, and identified on the FIRM as the area between the limits of moderate wave action (LiMWA) line and the VE Zone.

(a) Buildings and structures within this Zone shall have the lowest floor elevated to or above the base flood elevation plus one foot of freeboard, and must comply with the provisions in Article III, § 63-15C(1), and Article IV, §§ 63-17 and 63-18.

(4) The VE or V Zones on FIRMs accompanying the FIS shall be those areas that are known as "coastal high hazard areas," extending from offshore to the inland limit of a primary frontal dune along an open coast. For these areas, the following provisions shall apply:

(a) All new construction and substantial improvements in Zones V and VE (V if base flood elevation is available) shall be elevated on pilings or columns so that:

[1] The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to or above the base flood elevation if the lowest horizontal structural member is parallel to the

direction of wave approach or elevated at least one foot above the base flood elevation if the lowest horizontal structural member is perpendicular to the direction of wave approach; and

[2] The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one-percent chance of being equaled or exceeded in any given year (one-percent-annual-chance).

(b) A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of this chapter and the VA USBC.

(c) The Floodplain Administrator shall obtain the elevation (in relation to mean sea level) of the bottom of the lowest horizontal structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures in Zones V and VE. The Floodplain Administrator shall maintain a record of all such information.

(d) All new construction and substantial improvement shall be located landward of the reach of mean high tide.

(e) All new construction and substantial improvements shall have the space below the lowest floor either free of obstruction or constructed with nonsupporting breakaway walls, open wood-lattice work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purpose of this section, a breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by local codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

[1] Breakaway wall collapse shall result from water load less than that which would occur during the base flood; and

[2] The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and nonstructural). Maximum wind and water loading values to be used in this determination shall each have a one-percent chance of being equaled or exceeded in any given year.

(f) The enclosed space below the lowest floor shall be used solely for parking of vehicles, building access, or storage. Such space shall not be partitioned into multiple rooms, temperature-controlled, or used for human habitation.

(g) The use of fill for structural support of buildings is prohibited. When

nonstructural fill is proposed in a coastal high hazard area, appropriate engineering analyses shall be conducted to evaluate the impacts of the fill prior to issuance of a development permit.

(h) The man-made alteration of sand dunes, which would increase potential flood damage, is prohibited.

ARTICLE IV
District Provisions

§ 63-16. Permit and application requirements.

A. Permit requirement. All uses, activities, and development occurring within any floodplain district, including placement of manufactured homes, shall be undertaken only upon the issuance of a building and/or zoning permit. Such development shall be undertaken only in strict compliance with the provisions of this chapter and with all other applicable codes and ordinances, as amended, such as the Virginia Uniform Statewide Building Code (VA USBC), the Mathews County Zoning Ordinance[4] and the Mathews County Subdivision Regulations.[5] Prior to the issuance of any such permit, the Floodplain Administrator shall require all applications to include compliance with all applicable state and federal laws and shall review all sites to assure they are reasonably safe from flooding. Under no circumstances shall any use, activity, and/or development adversely affect the capacity of the channels or floodways of any watercourse, drainage ditch, or any other drainage facility or system.

B. Site plans and permit applications. All applications for development within any floodplain district and all building permits issued for the floodplain shall incorporate the following information:

(1) The elevation of the base flood at the site.

(2) The elevation of the lowest floor (including basement) or in VE or V Zones the lowest horizontal structural member.

(3) For structures to be floodproofed (nonresidential only), the elevation to which the structure will be floodproofed.

(4) Topographic information showing existing and proposed ground elevations.

§ 63-17. General standards.

A. The following provisions shall apply to all permits:

(1) New construction and substantial improvements shall be according to the VA USBC, and anchored to prevent flotation, collapse or lateral movement of the structure.

(2) Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable state anchoring requirements for resisting wind forces.

(3) New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

(4) New construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.

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4. Editor's Note: See Ch. 175, Zoning.

5. Editor's Note: See Ch. 140, Subdivision of Land.

(5) Electrical, heating, ventilation, plumbing, air-conditioning equipment and other service facilities, including duct work, shall be located above the base flood elevation or designed so as to prevent water from entering or accumulating within the components during conditions of flooding.

(6) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

(7) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.

(8) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.

B. In addition to provisions in A(1) through (8) above, in all special flood hazard areas, the additional provisions shall apply:

(1) Prior to any proposed alteration or relocation of any channels or of any watercourse, stream, etc., within this jurisdiction a permit shall be obtained from the United States Corps of Engineers, the Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission. (A joint permit application is available from any of these organizations.) Furthermore, in riverine areas, notification of the proposal shall be given by the applicant to all affected adjacent jurisdictions, the Department of Conservation and Recreation (Division of Dam Safety and Floodplain Management), other required agencies, and the Federal Emergency Management Agency.

(2) The flood-carrying capacity within an altered or relocated portion of any watercourse shall be maintained.

§ 63-18. Elevation and construction standards.

In all identified flood hazard areas where base flood elevations have been provided in the FIS or generated by a certified professional in accordance with § 63-15C, the following provisions shall apply:

A. Residential construction. New construction or substantial improvement of any residential structure (including manufactured homes) in Zones AE and A with detailed base flood elevations shall have the lowest floor, including basement, elevated to or above the base flood elevation (BFE), and, in VE Zones, shall have the lowest horizontal structural member elevated to or above the base flood elevation (BFE), per Article III, § 63-15C(4).

B. Nonresidential construction. New construction or substantial improvement of any commercial, industrial, or nonresidential building (or manufactured home) shall have the lowest floor, including basement, elevated to or above the base flood elevation (BFE). Buildings located in all AE Zones may be floodproofed in lieu of being elevated, provided that all areas of the building components below the elevation corresponding to the BFE are watertight with walls substantially impermeable to the passage of water, and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification, including the specific elevation

(in relation to mean sea level) to which such structures are floodproofed, shall be maintained by the Floodplain Administrator.

C. Space below the lowest floor. In Zones A and AE, fully enclosed areas, of new construction or substantially improved structures, which are below the regulatory flood protection elevation (BFE) shall:

(1) Not be designed or used for human habitation, but shall only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment (standard exterior door), or entry to the living area (stairway or elevator).

(2) Be constructed entirely of flood-resistant materials below the regulatory flood protection elevation (base flood elevation);

(3) Include measures to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. To meet this requirement, the openings must either be certified by a professional engineer or architect or meet the following minimum design criteria:

(a) Provide a minimum of two openings on different sides of each enclosed area subject to flooding.

(b) The total net area of all openings must be at least one square inch for each square foot of enclosed area subject to flooding.

(c) If a building has more than one enclosed area, each area must have openings to allow floodwaters to automatically enter and exit.

(d) The bottom of all required openings shall be no higher than one foot above the adjacent grade.

(e) Openings may be equipped with screens, louvers, or other opening coverings or devices, provided they permit the automatic flow of floodwaters in both directions.

(f) Foundation enclosures made of flexible skirting are not considered enclosures for regulatory purposes, and, therefore, do not require openings. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires openings as outlined above.

D. Standards for manufactured homes and recreational vehicles.

(1) All manufactured homes placed, or substantially improved, on individual lots or parcels, must meet all the requirements for new construction, including the elevation and anchoring requirements in Article IV, §§ 63-17 and 63-18, and, if in the VE Zone, Article III, § 63-15C(4).

(2) All recreational vehicles placed on sites must either:

(a) Be on the site for fewer than 180 consecutive days, be fully licensed and ready for highway use (A recreational vehicle is ready for highway use if it is on its

wheels or jacking system, is attached to the site only by quick-disconnect-type utilities and security devices and has no permanently attached additions.); or

(b) Meet all the requirements for manufactured homes in Article IV, § 63-18D, and, if in the VE Zone, Article III, § 65-15C(4).

§ 63-19. Standards for subdivision proposals.

A. All subdivision proposals shall be consistent with the need to minimize flood damage;

B. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;

C. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards; and

D. Base flood elevation data shall be obtained from other sources or developed using detailed methodologies, hydraulic and hydrologic analysis, comparable to those contained in a Flood Insurance Study for subdivision proposals and other proposed development proposals (including manufactured home parks and subdivisions) that exceed 50 lots or five acres, whichever is the lesser.

ARTICLE V
Existing Structures in Floodplain Areas

§ 63-20. Conditions for continuation.

A structure or use of a structure or premises which lawfully existed before the enactment of these provisions, but which is not in conformity with these provisions, may be continued subject to the following conditions:

A. Existing structures in the Floodway Area shall not be expanded or enlarged unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practices that the proposed expansion would not result in any increase in the base flood elevation.

B. Any modification, alteration, repair, reconstruction, or improvement of any kind to a structure and/or use located in any floodplain areas to an extent or amount of less than 50% of its market value shall conform to this chapter and the VA USBC.

C. The modification, alteration, repair, reconstruction, or improvement of any kind to a structure and/or use, regardless of its location in a floodplain area to an extent or amount of 50% or more of its market value shall be undertaken only in full compliance with this chapter and shall require the entire structure to conform to the VA USBC.

ARTICLE VI
Variances

§ 63-21. Factors to be considered.

A. Variances shall be issued only upon:

(1) A showing of good and sufficient cause;

(2) After the Board of Building Appeals has determined that failure to grant the variance would result in exceptional hardship to the applicant; and

(3) After the Board of Building Appeals has determined that the granting of such variance will not result in:

(a) Unacceptable or prohibited increases in flood heights;

(b) Additional threats to public safety;

(c) Extraordinary public expense; and will not

(d) Create nuisances;

(e) Cause fraud or victimization of the public; or

(f) Conflict with local laws or ordinances.

B. While the granting of variances generally is limited to a lot size less than 1/2 acre, deviations from that limitation may occur. However, as the lot size increases beyond 1/2 acre, the technical justification required for issuing a variance increases. Variances may be issued by the Board of Building Appeals for new construction and substantial improvements to be erected on a lot of 1/2 acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with the provisions of this section.

C. Variances may be issued for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use, provided that the criteria of this section are met, and the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

D. In passing upon applications for variances, the Board of Building Appeals shall satisfy all relevant factors and procedures specified in other sections of this chapter and consider the following additional factors:

(1) The danger to life and property due to increased flood heights or velocities caused by encroachments. No variance shall be granted for any proposed use, development, or activity within any Floodway District that will cause any increase in the one-hundred-year flood elevation.

(2) The danger that materials may be swept on to other lands or downstream to the injury of others.

(3) The proposed water supply and sanitation systems and the ability of these systems to

prevent disease, contamination, and unsanitary conditions.

(4) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owners.

(5) The importance of the services provided by the proposed facility to the community.

(6) The requirements of the facility for a waterfront location.

(7) The availability of alternative locations not subject to flooding for the proposed use.

(8) The compatibility of the proposed use with existing development and development anticipated in the foreseeable future.

(9) The relationship of the proposed use to the comprehensive plan and floodplain management program for the area.

(10) The safety of access by ordinary and emergency vehicles to the property in time of flood.

(11) The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters expected at the site.

(12) The historic nature of a structure. Variances for repair or rehabilitation of historic structures may be granted upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as an historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

(13) Such other factors which are relevant to the purposes of this chapter.

E. The Board of Building Appeals may refer any application and accompanying documentation pertaining to any request for a variance to any engineer or other qualified person or agency for technical assistance in evaluating the proposed project in relation to flood heights and velocities, and the adequacy of the plans for flood protection and other related matters.

F. Variances shall be issued only after the Board of Building Appeals has determined that the granting of such will not result in:

(1) Unacceptable or prohibited increases in flood heights;

(2) Additional threats to public safety;

(3) Extraordinary public expense; and will not

(4) Create nuisances;

(5) Cause fraud or victimization of the public; or

(6) Conflict with local laws or ordinances.

G. Variances shall be issued only after the Board of Building Appeals has determined that the variance will be the minimum required to provide relief.

§ 63-22. Notifications.

The Board of Building Appeals shall notify the applicant for a variance, in writing, that the issuance of a variance to construct a structure below the one-hundred-year flood elevation:

A. Increases the risks to life and property; and

B. Will result in increased premium rates for flood insurance.

§ 63-23. Recordkeeping.

A record shall be maintained of the above notification as well as all variance actions, including justification for the issuance of the variances. Any variances that are issued shall be noted in the annual or biennial report submitted to the Federal Insurance Administrator.

ARTICLE VII
Glossary

§ 63-24. Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

APPURTENANT OR ACCESSORY STRUCTURE — Accessory structures not to exceed 256 square feet.

BASE FLOOD — The flood having a one-percent chance of being equaled or exceeded in any given year.

BASE FLOOD ELEVATION — The Federal Emergency Management Agency designated one-percent-annual-chance (one-hundred-year) water surface elevation. The water surface elevation of the base flood in relation to the datum specified on the community's Flood Insurance Rate Map. For the purposes of this chapter, the one-hundred-year flood or one-percent-annual-chance flood.

BASEMENT — Any area of the building having its floor subgrade (below ground level) on all sides.

BOARD OF BUILDING APPEALS — The board appointed to review appeals made by individuals with regard to decisions of the Floodplain Administrator in the interpretation of this chapter. The Board of Building Appeals is also known as and referred to as the Local Board of Building Code Appeals (LBBCA).

COASTAL A ZONE — Flood hazard areas that have been delineated (and defined by the VA USBC) as subject to wave heights between 1.5 feet and three feet. Coastal A Zones are identified on the FIRM as areas of limits of moderate wave action (LiMWA).

DEVELOPMENT — Any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

ELEVATED BUILDING — A nonbasement building built to have the lowest floor elevated above the ground level by means of solid foundation perimeter walls, pilings, or columns (posts and piers).

ENCROACHMENT — The advance or infringement of uses, plant growth, fill, excavation, buildings, permanent structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

EXISTING CONSTRUCTION — Structures for which the start of construction commenced before February 4, 1987. "Existing construction" may also be referred to as "existing structures."

FLOOD INSURANCE RATE MAP (FIRM) — An official map of a community, on which the Federal Emergency Management Agency has delineated both the special hazard areas and the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a "Digital Flood Insurance Rate Map (DFIRM)."

FLOOD INSURANCE STUDY (FIS) — A report by FEMA that examines, evaluates and determines flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudflow and/or flood-related erosion hazards.

FLOOD or FLOODING —

A. A general or temporary condition of partial or complete inundation of normally dry land areas from:

(1) The overflow of inland or tidal waters; or

(2) The unusual and rapid accumulation or runoff of surface waters from any source;

(3) Mudflows which are proximately caused by flooding as defined in Subsection A(2) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

B. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in Subsection A(1) of this definition.

FLOODPLAIN OR FLOOD-PRONE AREA — Any land area susceptible to being inundated by water from any source.

FLOODPROOFING — Any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

FLOODWAY — The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

FREEBOARD — A factor of safety usually expressed in feet above a flood level for purposes of floodplain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization in the watershed. When a freeboard is included in the height of a structure, the flood insurance premiums may be less expensive.

FUNCTIONALLY DEPENDENT USE — A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and shipbuilding and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

HIGHEST ADJACENT GRADE — The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

HISTORIC STRUCTURE — Any structure that is:

A. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

B. Certified or preliminarily determined by the Secretary of the Interior as contributing to the

historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

C. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or

D. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:

(1) By an approved state program as determined by the Secretary of the Interior; or

(2) Directly by the Secretary of the Interior in states without approved programs.

HYDROLOGIC AND HYDRAULIC ENGINEERING ANALYSIS — Analyses performed by a licensed professional engineer, in accordance with standard engineering practices that are accepted by the Virginia Department of Conservation and Recreation and FEMA, used to determine the base flood, other frequency floods, flood elevations, floodway information and boundaries, and flood profiles.

INCREASED COST OF COMPLIANCE (ICC) COVERAGE — Coverage under the standard flood insurance policy that provides for payment of a claim to help pay for the cost to comply with federal, state or community floodplain management laws or ordinances from a flood event in which a building has been declared substantially damaged or repetitively damaged.

LETTERS OF MAP CHANGE (LOMC) — A "letter of map change" is an official FEMA determination, by letter, that amends or revises an effective Flood Insurance Rate Map or Flood Insurance Study. "Letters of map change" include:

A. LETTER OF MAP AMENDMENT (LOMA) — An amendment based on technical data showing that a property was incorrectly included in a designated special flood hazard area. A LOMA amends the current effective Flood Insurance Rate Map and establishes that a land as defined by metes and bounds or structure is not located in a special flood hazard area.

B. LETTER OF MAP REVISION (LOMR) — A revision based on technical data that may show changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features.

C. LETTER OF MAP REVISION BASED ON FILL (LOMR-F) — A determination that a structure or parcel of land has been elevated by fill above the base flood elevation and is, therefore, no longer exposed to flooding associated with the base flood. In order to qualify for this determination, the fill must have been permitted and placed in accordance with the community's floodplain management regulations.

D. CONDITIONAL LETTER OF MAP REVISION (CLOMR) — A formal review and comment as to whether a proposed flood protection project or other project complies with the minimum NFIP requirements for such projects with respect to delineation of special flood hazard areas. A CLOMR does not revise the effective Flood Insurance Rate Map or Flood Insurance Study.

LOWEST ADJACENT GRADE — The lowest natural elevation of the ground surface next to the walls of a structure.

LOWEST FLOOR — The lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access

or storage in an area other than a basement area is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of 44 CFR 60.3.

MANUFACTURED HOME — A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For floodplain management purposes, the term "manufactured home" also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days, but does not include a recreational vehicle.

MANUFACTURED HOME PARK OR SUBDIVISION — A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

MARKET VALUE — For the purposes of this chapter, market value shall be determined by the most current appraisal available. When an appraisal is not available, the market value of the structure will be determined by the most current county tax assessment.

MEAN SEA LEVEL — An elevation point that represents the average height of the ocean's surface (such as the halfway point between the mean high tide and the mean low tide) which is used as a standard in reckoning land elevation.

NEW CONSTRUCTION — For the purposes of determining insurance rates, structures for which the start of construction commenced on or after February 4, 1987, and includes any subsequent improvements to such structures. For floodplain management purposes, "new construction" means structures for which the start of construction commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

POST-FIRM STRUCTURE — A structure for which construction or substantial improvement occurred on or after February 4, 1987.

PRE-FIRM STRUCTURE — A structure for which construction or substantial improvement occurred on or before February 4, 1987.

PRIMARY FRONTAL DUNE — A continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a district change from a relatively steep slope to a relatively mild slope.

RECREATIONAL VEHICLE — A vehicle which is:

A. Built on a single chassis;

B. Four hundred square feet or less when measured at the largest horizontal projection;

C. Designed to be self-propelled or permanently towable by a light-duty truck; and

D. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational camping, travel, or seasonal use.

REPETITIVE LOSS STRUCTURE — A building covered by a contract for flood insurance that has incurred flood-related damages on two occasions during a ten-year period ending on the date of the event for which a second claim is made, in which the cost of repairing the flood damage, on the average, equaled or exceeded 25% of the market value of the building at the time of each flood event.

SHALLOW FLOODING AREA — A special flood hazard area with base flood depths from one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

SPECIAL FLOOD HAZARD AREA — The land in the floodplain subject to a one-percent or greater chance of being flooded in any given year as determined in Article III, § 63-15, of this chapter.

START OF CONSTRUCTION — For other than new construction and substantial improvement, under the Coastal Barriers Resource Act (P.L. 97-348),[6] means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, substantial improvement or other improvement was within 180 days of the permit date. The "actual start" means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. "Permanent construction" does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of the construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

STRUCTURE — For floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above the ground, as well as a manufactured home.

SUBSTANTIAL DAMAGE — Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT — Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure before the start of construction of the improvement. This term includes structures which have incurred substantial damage regardless of the actual repair work performed. The term does not, however, include either:

A. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or

B. Any alteration of an historic structure, provided that the alteration will not preclude the structure's continued designation as an historic structure;

C. Historic structures undergoing repair or rehabilitation that would constitute a substantial improvement as defined above, must comply with all ordinance requirements that do not preclude the structure's continued designation as an historic structure. Documentation that a specific ordinance requirement will cause removal of the structure from the National Register of Historic Places or the State Inventory of Historic Places must be obtained from

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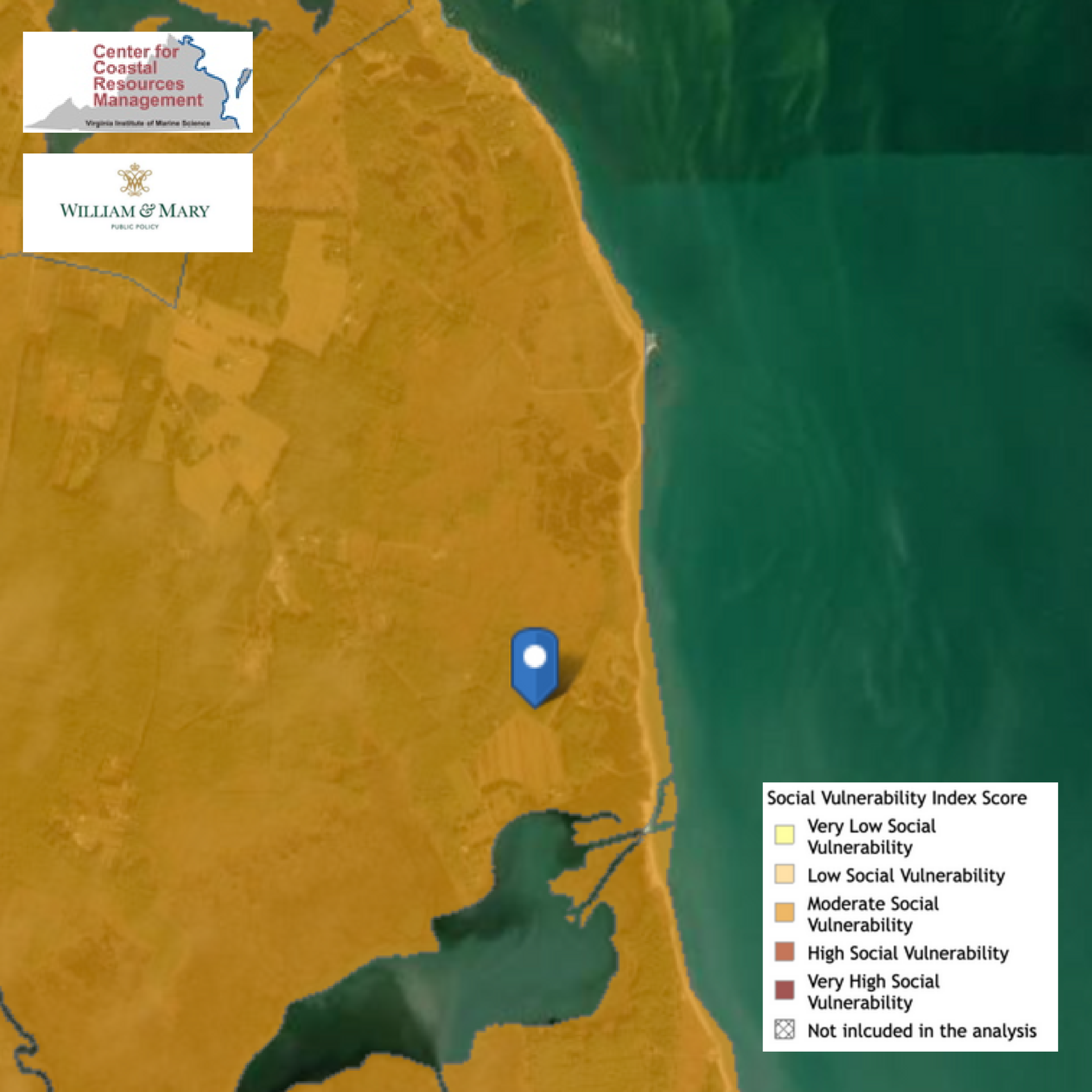
6. Editor's Note: See 16 U.S.C. § 3501 et seq.

the Secretary of the Interior or the State Historic Preservation Officer. Any exemption from ordinance requirements will be the minimum necessary to preserve the historic character and design of the structure.

VA USBC — The Virginia Uniform Statewide Building Code.

VIOLATION — The failure of a structure or other development to be fully compliant with the community's Floodplain Management Ordinance and regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in 44 CFR 60, Subparts A, B and C, is also presumed to be in violation until such time as that documentation is provided.

WATERCOURSE — A lake, river, creek, stream, wash, channel or other topographic feature on or over which waters flow at least periodically. "Watercourse" includes specifically designated areas in which substantial flood damage may occur.


Center for Coastal Resources Management
Virginia Institute of Marine Science
William & Mary
Public Policy
Social Vulnerability Index Score
Very Low Social Vulnerability
Low Social Vulnerability
Moderate Social Vulnerability
High Social Vulnerability
Very High Social Vulnerability
Not inlcuded in the analysis

Historic Flooding Data and Hydrologic Studies Projecting Flood Frequency

The entirety of the site is located within a mapped floodplain, with portions located within FEMA Flood Zones AE and VE. The shoreline has eroded at a rate of about -1 to -1.5 ft per year since 1994 (Shoreline Studies Program Shoreline Change Database). The project site is impacted by ever increasing effects of coastal and tidal influences, resulting in site flooding and drainage issues. Due to the project site's adjacency to the York River and relatively low elevation, the site has an extensive history of experiencing flooding events that have resulted in significant impacts to infrastructure and the environment. For example, the project location has long been, and continues to be, impacted by tropical, sub-tropical, and Nor'easter events.

Since 2003 there have been several significant coastal events resulting in flooding impacts to the services building and site:

- Hurricane Isabel in 2003, resulting in 5 feet of water in the concession room/restroom building
- A nor-easter in 2005 resulting in 3 feet of water in the concession room/restroom building
- A nor'easter in 2010
- A nor'easter in June 2011
- Hurricane Irene in August 2011 that resulted in 1 foot of water in the concession room/restroom building
- A nor'easter in 2012
- A coastal storm in October 2015
- Hurricane Matthew (2016): This storm caused severe flooding from intense rainfall and storm surges, leading to damage to infrastructure and erosion along shorelines.
- Tropical Storm Michael (2018): Gloucester suffered heavy flooding
- Nor'easters: In October 2022, remnants of a nor'easter associated with Hurricane Ian brought substantial flooding, pushing water levels up to 2-3 feet in some places. This was noted as some of the worst flooding in 10-15 years, particularly at Gloucester Point, and led to erosion along shorelines and road closures.
- Tropical Storm Isaias (2020): This storm triggered flooding across eastern Virginia, and Gloucester experienced issues with standing water and road blockages, contributing to erosion of coastal areas.

The damage from Hurricane Isabel in 2003 was extensive, likely the storm of record in the Park's 40-year existence. In addition to approximately 5' of water in the building, the storm ripped up the Park's pier, pushed the stage through one of the services building's cinderblock walls and damaged the playground.

Despite not being named storm events, the site is subjected to regular flooding events, that result in damages, although perhaps not to the degree of the aforementioned events. With nearly every nor'easter the boat landing, parking lot, and park flood.

During other smaller storms, water ponds within the park and lots. A design is needed to achieve the goals of stormwater management, to keep the Park as usable as possible and to protect the expensive infrastructure and amenities. While flood insurance is maintained for the services building (a claim was filed for approximately $47,000 in 2003 due to Hurricane Isabel) retaining the building in a condition

that is subject to flooding impacts is not the best way to manage resilience long term, subjecting the County, its taxpayers, and even state and federal taxpayers to incremental and varying costs.

According to NOAA's Coastal Flood Mapper, this project location is at the highest risk of coastal flooding in the future. According to a recent study conducted by the Center for Coastal Resources Management, a 1.5-foot rise in sea level coupled with a three-foot storm surge - similar to what would be experienced in a strong tropical storm - would lead to 13% of Gloucester County's land mass being flooded – including 118 miles of roads. Notably, only 3% of this projected flood area is currently developed.

See included files:

- Gloucester Point Beach Park - Map of Project Location
- Gloucester Point Beach Park - FIRMette
- Gloucester Point Beach Park - Flood Exposure Map

County of Mathews Administration Office

mathewscountyva.gov

November 4, 2024

Mr. Jake Shaw
Virginia Department of Conservation and Recreation
Community Flood Preparedness Fund
600 East Main Street, 24th Floor
Richmond, VA 23219-2094

RE: Application Authorization and Match Commitment for Haven Beach Breakwaters and Living Shoreline

Dear Mr. Jake Shaw,

Mathews County authorizes and supports Middle Peninsula Planning District Commission staff to request funding through the Virginia Department of Conservation and Recreation's Community Flood Preparedness Fund Round 5 (CID510096_Mathews County CFPF). This proposal is for funding to complete a shovel-ready project. The County has already acquired all the necessary design and construction documents and permits and procured a qualified contractor to complete the construction of two breakwaters at locked in pricing and has procured proposals pending with other qualified contractors to install dune grasses and dune fencing. Two breakwaters are currently under construction and 40,000 cubic yards of coarse sand dredged from the nearby Hole in the Wall navigation channel have been beneficially reused upon Haven Beach. Funding is needed to construct two additional breakwaters, dune grasses and fencing to complete a living shoreline to provide comprehensive flood and erosion protection. Completing the full project as designed will provide a living shoreline that widens the beach and raises dune heights to provide greater protection during storms and reduce flooding at the County's popular public beach in a low-income area.

This letter is also a commitment to match this project with $69,678 (5% of project costs). The County will pay the match contribution during the agreement period and has the ability to fund the project upfront, requesting reimbursements on a quarterly basis.

If you have any questions about the proposal application, please feel free to reach out to me by email at rwilson@mathewscountyva.gov or by phone at 804-725-7172.

Sincerely,

Ramona Wilson
County Administrator
Mathews County, VA

County of Mathews Administration Office

mathewscountyva.gov

November 4, 2024

Mr. Jake Shaw
Virginia Department of Conservation and Recreation
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Sincerely,

Ramona Wilson
County Administrator
Mathews County, VA

Link to the Mathews County Comprehensive Plan:

https://www.mathewscountyva.gov/DocumentCenter/View/213/2030-Comprehensive-Plan-PDF

Maintenance Plan

Provide more detailed versions of those outlined as General Requirements. For ongoing projects or projects that will require future maintenance, such as infrastructure, flood warning and response systems, signs, websites, or flood risk applications, a maintenance, management, and monitoring plan for the projects must be provided demonstrating how they will be maintained, managed, and monitored after the lifespan of this award for a minimum of ten years or the expected lifespan of the project, whichever is longer.

VIMS-SSP will use post-construction monitoring data to evaluate the effectiveness of the project ensuring the dune is growing and retaining sand, which is crucial for shoreline stabilization. County staff, who have maintained the park for over 40 years, will conduct long-term maintenance. VIMS-SSP staff will provide guidance on proper maintenance techniques to the County staff.

Standard maintenance of living shorelines includes:

- Debris removal: Regular removal of debris, such as litter, to prevent accumulation that could disrupt the natural processes of the living shoreline and affect its stability.
- Vegetation management: Replanting vegetation and removing invasive species to maintain the health and stability of the living shoreline.
- Erosion control: Regular assessment and management of erosion, which may include adding addition sand to enhance the shoreline's protective function.

Monitoring Plan

Mathews County – Haven Beach Renourishment Project

JPA File NAO-2021-01953/ VMRC- 20211533

Mathews, Virginia

December 2022

The Proposed Monitoring Plan has been reviewed by Mathews County legal counsel which has determined the plan is consistent with the required elements per permit NAO-2021-01953. The Plan has been accepted by Mathews County on March 15, 2023.

Mathews County further recognizes the cost required for monitoring is a separate and distinct cost, not included in the Virginia Port Authority Grant Award. The cost for monitoring is to be carried by Mathews County. If the selected contractor is unable to cover the cost for monitoring in the bid award, Mathews County fully accepts the cost as a requirement as per NAO-2021-01953.

Introduction –

Mathews County has been issued a permit from the Virginia Marine Resources Commission (VMRC 21-V1533 issued December 21, 2021) and the United States Army Corps of Engineers (USACE) Norfolk District (NAO-2021-01953 issued September 2, 2022) for a dredging and beneficial reuse project at the Hole in the Wall and Haven Beach in Mathews County.

To ensure compliance with the Department of the Army authorization and the Endangered Species Act, Mathews County, as the permittee, is responsible for implementing and complying with the terms and conditions of the Biological Opinion (B.O.) provided by the U.S. Fish and Wildlife Service (USFWS) on August 3, 2022, regarding the Northeastern Beach Tiger Beetle (NBTB). The terms and conditions of the B.O. include the “REASONABLE AND PRUDENT MEASURES” (1-2), “TERMS and CONDITIONS” (1-5), and the “MONITORING AND REPORTING REQUIREMENTS” (1-4).

The USFWS B.O. states that the project will occur in two phases as described in the following:

Phase 1 – to include Dredging and Beach Renourishment and

Phase 2 – to include Breakwater Construction and Beach Grass Planting.

Monitoring Plan Scope -

The monitoring plan described in the following meets the requirements set forth in Item #4 of the Terms and Conditions and Item #3 of the Monitoring and Reporting Requirements set forth in the USFWS B.O. dated August 3, 2022. The intent of the monitoring plan is to provide sufficient monitoring of the impacts of incidental take on NBTB and to determine if the amount or extent of take is exceeded. The Plan addresses only the requirements for Phase 2 preconstruction, construction and post construction required activities

The B.O. requires that the monitoring is to occur in the action area depicted in the highlighted areas in “Figure 5” below. This includes the beach renourishment, beach grass planting and breakwater construction area; the breakwaters and extension area; the staging and project access area; and the indirect impact area. The indirect impact area is the stretch of shoreline 300 meters to the south of the southernmost breakwater location. It is important to note that the northernmost portion of the indirect impact area consists of property owned by Mathews County and southern portion of the area is located on privately owned property. Mathews County and its designated agents cannot legally enter onto the privately owned property within the indirect impact area without the consent and permission of the private property owner. Mathews County will contact the private property owner to request consent and permission to conduct project monitoring activities but should the private property owner decline to grant access, then monitoring activities will be conducted solely on the County owned Haven Beach property. USFWS staff will be notified on the access status of the private property once the owner has been contacted.

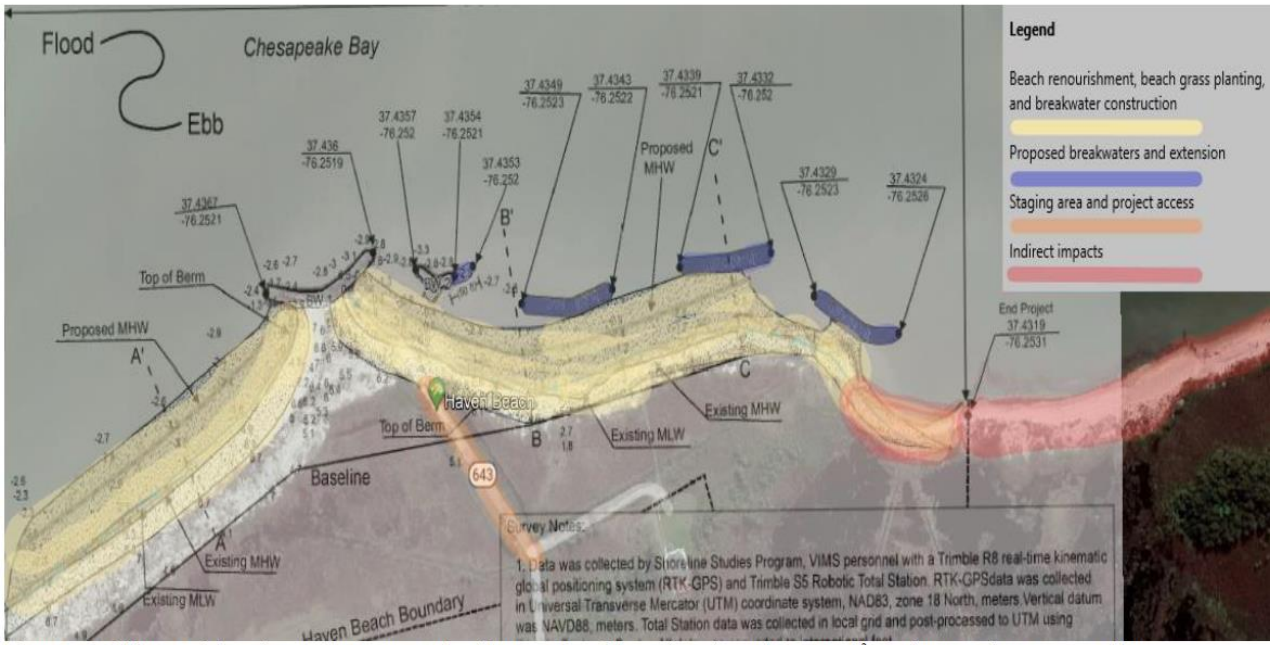


Figure 5. Aerial image of the action area at Haven Beach with an overlay of the project plans. The 22,200 ft^2 of subaqueous bottom covered by the proposed breakwaters and breakwater extension are shown in purple; the 10,000 ft^2 of uplands for the staging area and project access are shown in orange; the 334,860 ft^2 of area for beach renourishment, breakwater construction, and beach grass planting shown in yellow; and the 300 m of shoreline associated with indirect effects shown in red.

Mathews County or its designated agent will conduct the following activities and report to USFWS staff accordingly (per p. 29 #3 of the USFWS B.O.):

1- Aerial imagery of the action area will be conducted:
   a. Once prior to the initiation of work on Haven Beach,
   b. Once immediately after construction, and
   c. Twice at regular annual intervals post-construction (once in Year 1 and once in Year 3).

   Aerial imagery will be conducted by a USFWS approved individual or agency (federal, state, academic, etc.). The proposed source's qualifications will be sent to USFWS staff for review and approval at least 30 days prior to the initiation of surveys. To the greatest extent practical, the same individual will perform the surveys to ensure consistency in methods, techniques, data gathering, etc. Surveys will be conducted near end of September or early October during the same time during each year and will not be conducted during a King Tide or significant flooding event.

2- Beach profiles of the indirect impact area delineated in red in Figure 5 and 50 m downdrift of this area will be conducted:
   a. Once prior to the initiation of work on Haven Beach,
   b. Once immediately after construction, and
   c. Twice at regular annual intervals post-construction (once in Year 1 and once in Year 3).

   Beach profiling will be conducted by a USFWS approved individual. The proposed individual's qualifications will be sent to USFWS staff for review and approval at least 30 days prior to the initiation of surveys. To the greatest extent practical, the same individual will perform the surveys to ensure consistency in methods, techniques, data gathering, etc. Surveys will be conducted near end of September or early October during the same time during each year and will not be conducted during a King Tide or significant flooding event.

   As noted previously, the shorelines south of the County-owned Haven Beach property are privately owned and monitoring is only permissible should the owners grant consent and permission. Should Mathews County or its designated agent not be granted access to privately-owned property, beach profiles will only occur on the portion of the indirect impact area owned by Mathews County.

3- Adult and larval NBTB surveys in the action area in Figure 5 will be conducted as follows.
   a. Phase 2 pre-construction construction path staking -
      Before the start of phase 2 construction, in coordination with the applicant, a USFWS-approved NBTB surveyor will stake out a construction path on

the beach that minimizes impacts on NBTB larval areas. During phase 2 construction all equipment will utilize that construction path.

b. Adult Surveys:
    i. Once after construction on warm, sunny days between July 1 and July 25, and
    ii. Twice at regular annual intervals post-construction on warm, sunny days between July 1 and July 25 (Year 1 and Year 3).
c. Larval Surveys:
    i. Once after construction between October 10 and 30 during low tide on cool and/or cloudy days, and
    ii. Twice at regular annual intervals post-construction between October 10 and 30 during low tide on cool and/or cloudy days (Year 1 and Year 3).

Surveys will be conducted by a USFWS-approved NBTB surveyor. If a non-approved surveyor is selected, the proposed surveyor's qualifications will be sent to USFWS staff for review and approval at least 60 days prior to the survey. The total number of adults observed will be recorded for each adult survey. The total number of larval burrows will be recorded for each larval survey. An attempt to identify instar stage of larvae will be made during surveys. A report will be provided to USFWS staff documenting/including the following for both adult and larval surveys: surveyor and dates, methods, results, photographic monitoring, and any habitat/population observations of significance within 30 days following the competition of the larval survey.

As noted previously, the shorelines south of the County-owned Haven Beach property are privately owned and monitoring is only permissible should the owners grant consent and permission. Should Mathews County or its designated agent not be granted access to privately-owned property, NBTB surveys will only occur on the portion of the action area owned by Mathews County.

Mathews County or its designated agent will conduct the following activities and report to USFWS staff accordingly (per p. 29-30 #1, 2, and 4 of the USFWS B.O.):

1- Any spills of motor oil, hydraulic fluid, coolant, or similar fluids, not contained before entry into the action area, will be reported to USFWS staff and National Response Center (800-424-8802) immediately.

2- USFWS staff will be notified by the County or its designated agent regarding the projected and actual start dates, progress, and completion of the project. The County or its designated agent will verify that the disturbance of 357,060 ft^2 between latitude: 37.4386, longitude: -76.254 and latitude: 37.4319, longitude: -76.2531 was not exceeded by beach renourishment, the proposed breakwaters and their construction, and beach grass planting; and that all conservation measures were followed. A report will be provided to USFWS staff by the County

or its designated agent containing this information by December 31 of each year until the year after construction is complete.

3- Care will be taken in handling any dead specimens of proposed or listed species to preserve biological material in the best possible state. In conjunction with the preservation of any dead specimens, the finder has the responsibility to ensure that evidence intrinsic to determining the cause of death of the specimen is not unnecessarily disturbed. The finding of dead specimens does not imply enforcement proceedings pursuant to the ESA. The reporting of dead specimens is required to enable the USFWS to determine if take is reached or exceeded and to ensure that the terms and conditions are appropriate and effective. Upon locating a dead specimen, the USFWS Virginia Law Enforcement Office and the Virginia Field Office will be contacted.

Haven Beach – Map of Project Area

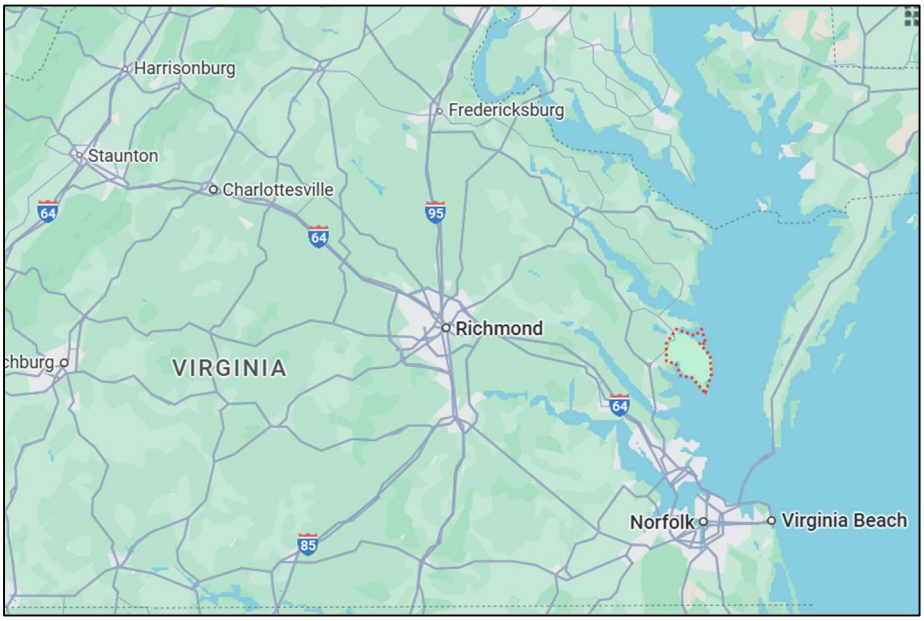


Figure 1 - Location of Mathews County (outlined in red) in Virginia

Figure 2 - Map of Mathews County (outlined in red) and Location of Haven Beach (outlined in black)

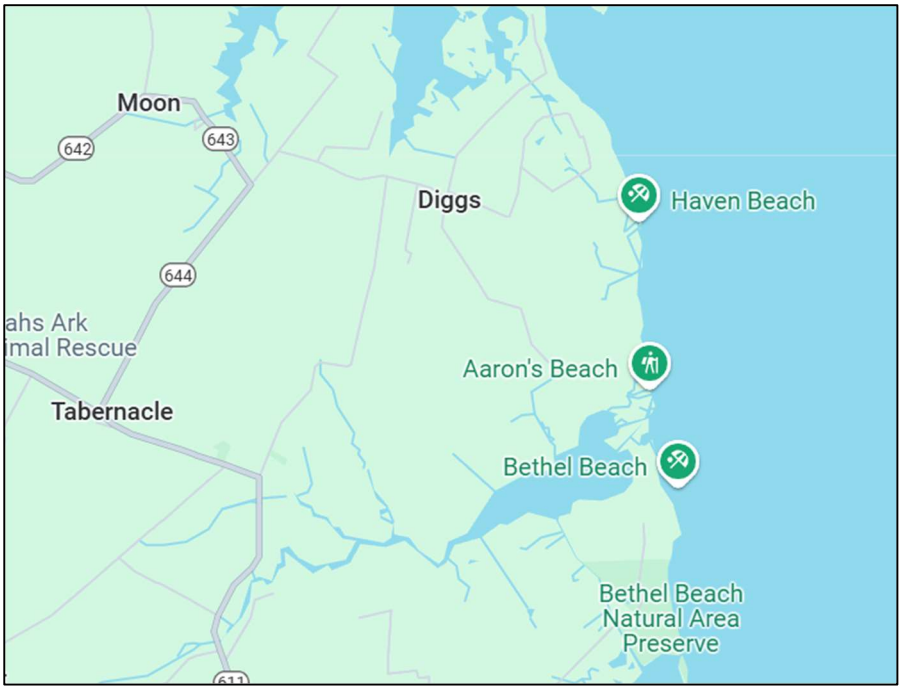


Figure 3 - Location of Haven Beach (noted)

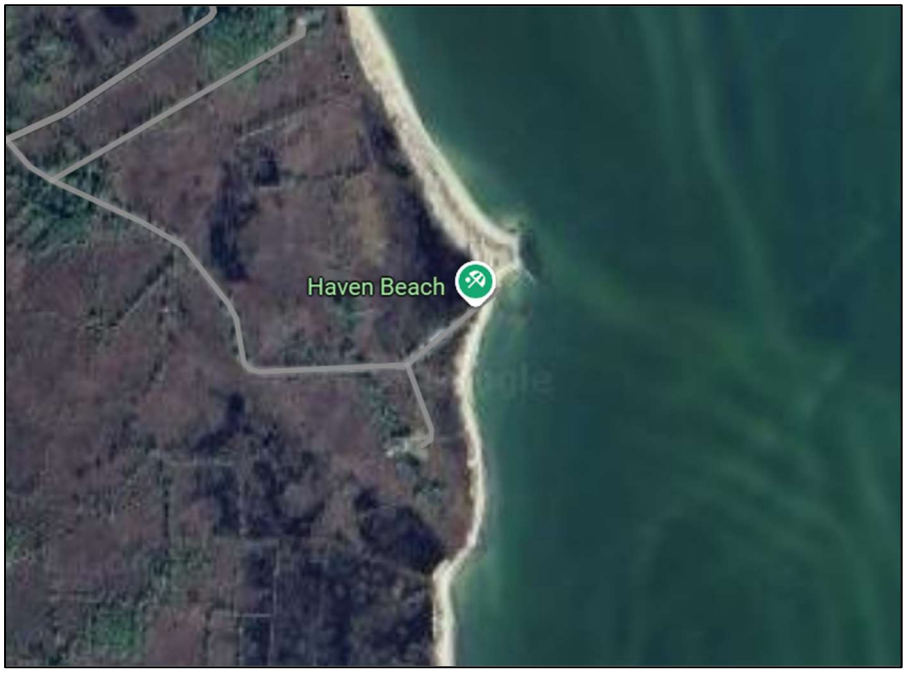


Figure 4 - Map of Haven Beach

Relationship to Other Projects

Where applicable, briefly describe the relationship between this project and other past, current, or future resilience projects. If the applicant has received or applied for any other grants or loans through the CFPF, please identify those projects, and, if applicable, describe any problems that arose with meeting the obligations of the grant and how the obligations of this project will be met. Provide more detailed versions of those outlined as General Requirements.

The Park has frequently been damaged by storms during its ~40-year history. The damage from Hurricane Isabel in 2003 was extensive and likely serves as the storm of record for the Park. In addition to approximately 5 feet of water in the services building at the site, the storm ripped up the Park's pier, pushed the stage through one of the services building's cinderblock walls, and damaged the playground. A flood insurance claim was filed for approximately $47,000 for repairs. The playground was removed. No claims for damage from other storms were filed. The County handled the repair work following Isabel and has continued to do so with every impact experienced at the site. The County continues to invest in park amenities and maintenance and would like to protect their investment with the proposed project.

Adjacent to the Park, VIMS constructed attached headland breakwaters consisting of rock, sand, and plants for a living shoreline. The project included a stone spur extending southwest from the VIMS revetment by 70 feet across the County shoreline. This had a significant positive impact by abating the chronic erosion along that section of Gloucester Beach. As part of this proposed project, the spur will be lengthened slightly to extend the diffraction point and work better within the current design.

Gloucester Point Beach Park, as the primary public waterfront facility, is envisioned to serve the next generation of users as a thriving recreational hub for the County and the wider region.
Gloucester County is planning many improvements to the site over the coming years; however, the additional improvements planned for the park cannot occur with protecting the shoreline. There is no need to seek funding of a higher and wider fishing pier if the parking lot and infrastructure are not protected. The same is true for replacing the bathrooms that routinely flood. Constructing a raised structure and accompanying walkway would be wasteful if shoreline stabilization is not funded. Installing the living shoreline is the first and most crucial step, and it is also hoped that completing this project will aid in securing funds for other improvements to the park.

In addition, MPPDC staff have worked throughout the years to understand the policy, research and impacts of flooding (i.e., stormwater, coastal, riverine, sea-level rise) and coastal resiliency to the region. Below is a list of projects that have built upon each other over the year that have contributed to our understanding and the region's coastal resilience.

Fight the Flood Program (2020 to present): The Fight the Flood program (www.FightTheFloodVA.com) was launched in 2020 to connect property owners to contractors who can help them protect their property from rising flood waters and erosion. FTF also offers a variety of financial tools to fund these projects including but not limited to the Septic Repair revolving loan program, Living Shoreline incentives revolving loan fund program, and plant insurance for living shorelines. Since the beginning of the program FTF has brought $44,506,804 in flood protection via direct loans and grants to the Middle Peninsula. Currently the program has 200 registrants that have expressed their interest and need in funding to mitigate funds. Additionally, the program partners with 41 business throughout the nation to

provide solutions to FTF program registrants. As part of the FTF program, MPPDC staff diligently and consistently apply for grant and/or loan funds to implement resiliency projects within the Middle Peninsula. In 2024 alone, MPPDC staff have submitted 58 applications requesting $104,378,663. Since the program's inception in 2020, 235 applications have been submitted requesting $159 Million in funding. To date this level of production has occurred practically in an organic matter via word of mouth. MPPDC has received funding through the Virginia Department of Conservation and Recreation's Community Flood Resiliency Fund (Project # CFPF-24-04-20) to increase the capacity of the FTF Program and begin actively promoting the program and soliciting additional participation. With this funding MPPDC has hired a new Deputy Director of Operations that will administer and manage project funded through Round 5 CFPF. This unique program has brought an unparalleled level of success in implementing coastal resilience solutions and continues to serve as the only municipal coastal resilience and flood protection municipal program of its kind in the nation and Commonwealth.

Living Shoreline Incentive Program (2016 to present): In 2011 Virginia legislation was passed designating living shorelines as the preferred alternative for stabilizing Virginia tidal floodplain shorelines. The Virginia Marine Resources Commission, in cooperation with the Virginia Department of Conservation and Recreation and with technical assistance from the Virginia Institute of Marine Science (VIMS), established and implemented a general permit regulation that authorizes and encourages the use of living shorelines however, no financial incentives were put in place to encourage consumers to choose living shorelines over traditional hardening projects in the Commonwealth. To fill this, need the MPPDC developed the MPPDC Living Shoreline Incentives Program to offer loans and/or grants to private property owners interested in installing living shorelines to stabilize their shoreline. Living Shoreline loan funding is available to waterfront homeowners with financing living shorelines, permitted by the Virginis Marine Resources Commission. Loans up to $10,000 can be financed for up to 5 years (60 months). Loans over $10,000 can be financed for up to 10 years (120 months). Loans up to $10,000 can be financed for up to 5 years (60 months). Loans over $10,000 can be financed for up to 10 years (120 months). Loans over $35,000 have the option of financing up to 120 months. Interest is at 50% the published Wall Street Journal Prime rate on the date of loan application. Minimum loan amount is $1,000. Maximum determined by income and ability to repay the loan. Limited loan forgiveness is available for qualified applicants. Since 2016 under the MPPDC Living Shoreline Revolving Loan program, ~~8~~ 10 living shorelines have been financed and built encumbering over $800,000 in VRA loan funding and ~400,000 in NFWF grant funding. Living Shoreline construction cost to date range per job $14,000-$180,000. MPPDC oversees all aspects (planning, financing, construction, and loan servicing) of these projects from cradle to grave.

Emergency Management - Hazard Mitigation Planning (2009 to Present): Since 2009, the Middle Peninsula Planning District Commission has assisted regional localities in meeting the federal mandate to have an adopted local hazard plan. The Regional All Hazards Mitigation Plan addresses the natural hazards prone to the region, including hurricanes, winter storms, tornadoes, coastal flooding, coastal/shoreline erosion, sea level rise, winter storms, wildfire, riverine flooding, wind, dam failures, drought, lightning, and earthquakes. This plan also consists of a HAZUS assessment of hurricane wind, sea level rise (i.e., Mean High Higher Water and the NOAA 2060 intermediate-high scenario), and flooding (coastal and riverine flooding) that estimates losses from each hazard. The Middle Peninsula All-Hazard Mitigation Plan was updated and approved by FEMA in April 2021.

Oyster Bag Sill Construction and Monitoring at Two Sites in Chesapeake Bay (2018): VIMS Shoreline Studies Program worked with the PAA to (1) install oyster bag sills as shore protection at two PAA sites with the goal of determining effective construction techniques and placement guidelines for

Chesapeake Bay shorelines and (2) assess the effectiveness for shore protection with oyster bags on private property through time.

Virginia Stormwater Nuisance Law Guidance (2018): This report was developed by the Virginia Coastal Policy Center to understand the ability of a downstream recipient of stormwater flooding to bring a claim under Virginia law against an upstream party, particularly a nuisance claim. The report summarizes how Virginia courts determine stormwater flooding liability between two private parties.

Mathews County Ditch Project - VCPC White Papers (2017): This report investigated the challenges presented by the current issues surrounding the drainage ditch network of Mathews County. The study summarized research conducted in the field; examined the law and problems surrounding the drainage ditches; and proposed some next steps and possible solutions.

Mathews County Ditch Mapping and Database Final Report (2017): This project investigated roadside ditch issues in Mathews County through mapping and research of property deeds to document ownership of ditches and outfalls. This aided in understanding the needed maintenance of failing ditches and the design of a framework for a database to house information on failing ditches to assist in the prioritization of maintenance needs.

Mathews County Rural Ditch Enhancement Study (2015): In contract with Draper Aden Associates, a comprehensive engineering study was developed to provide recommendations and conceptual opinions of probable costs to improve the conveyance of stormwater and water quality through the ditches in Mathews County.

Drainage and Roadside Ditching Authority (2015): This report explored the enabling mechanism in which a Regional Drainage and Roadside Ditching Authority could be developed. An Authority would be responsible for prioritizing ditch improvement needs, partnering with Virginia Department of Transportation (VDOT) to leverage available funding, and ultimately working toward improving the functionality of the region's stormwater conveyance system.

Land and Water Quality Protection (2014): In light of changing Federal and State regulations associated with Bay clean up-nutrient loading, nutrient goals, clean water, OSDS management, storm water management, TMDLs, etc., staff from the Middle Peninsula Planning District Commission (MPPDC) will develop a rural pilot project which aims to identify pressing coastal issue(s) of local concern related to Bay clean up and new federal and state legislation which ultimately will necessitate local action and local policy development. Staff has identified many cumulative and secondary impacts that have not been researched or discussed within a local public policy venue. Year 1-3 will include the identification of key concerns related to coastal land use management/water quality and Onsite Sewage Disposal System (OSDS) and community system deployment. Staff will focus on solution based approaches, such as the establishment of a regional sanitary sewer district to manage the temporal deployment of nutrient replacement technology for installed OSDS systems, assessment of land use classifications and taxation implications associated with new state regulations which make all coastal lands developable regardless of environmental conditions; use of aquaculture and other innovative approaches such as nutrient loading offset strategies and economic development drivers.

Department of Conservation and Recreation Stormwater Management (2014): The Virginia General Assembly created a statewide, comprehensive stormwater management program related to construction and post-construction activities (HB1065 - Stormwater Integration). The Virginia

Department of Conservation and Recreation requires stormwater management for projects with land disturbances of one acre or more. This new state mandate requires all Virginia communities to adopt and implement stormwater management programs by July 1, 2014, in conjunction with existing erosion and sediment control programs. Additionally, the communities within the MPPDC are required to address stormwater quality as stipulated by the Chesapeake Bay TMDL Phase II Watershed Implementation Plan and the Virginia Stormwater Regulations. The MPPDC Stormwater Program helped localities develop tools specific to the region necessary to respond to the state mandate requirement for the development of successful stormwater programs.

Stormwater Management-Phase II (2014): MPPDC staff and Draper Aden Associates worked with localities (i.e. Middlesex, King William, and Mathews Counties and the Town of West Point) interested in participating in a Regional Stormwater Management Program. While each locality sought different services from the regional program, this project coordinated efforts, developed regional policies and procedures, and the proper tools to implement a regional VSMP.

Climate Change & Sea Level Rise (2009 to 2012): The MPPDC was funded for a 3 Phase project through the Virginia Coastal Zone Management Program to assess the impacts of climate and sea level rise throughout the region. With over 1,000 miles of linear shoreline, the Middle Peninsula has a substantial amount of coast under direct threat of accelerated climate change and more specifically sea-level. In Phase 1, MPPDC staff assessed the potential anthropogenic and ecological impacts of climate change. Phase 2 focused on the facilitating presentations and develop educational materials about sea level rise and climate change for the public and local elected officials. Finally Phase 3 focused on developing adaptation public policies in response to the assessments. Links to the reports are below:

- *Phase 1:* Middle Peninsula Climate Change Adaptation: Facilitation of Presentations and Discussions of Climate Change Issues with Local Elected Officials and the General Public
- *Phase 2:* Climate Change III: Initiating Adaptation Public Policy Development
- *Phase 3:* Phase 3 Climate Change: Initiating Adaptation Public Policy Development

April L. Rounds
County Administrator
202 South Church Lane
Post Office Box 1079
Tappahannock, Virginia 22560
(804) 443-4331
www.essex-virginia.org

Established 1692

Essex County
Virginia

October 8, 2024

Lewis L. Lawrence, Executive Director
Middle Peninsula Planning District Commission
P.O. Box 286
Saluda, VA 23149

RE: Applications Submitted by MPPDC to Virginia Community Flood Preparedness Fund ROUND 5

Dear Lewie,

Essex County supports the Middle Peninsula Planning District Commission's (MPPDC) application requesting funding under the Department of Conservation and Recreation (DCR)'s Community Flood Preparedness Fund (CFPF). The proposals submitted by MPPDC staff enhance and build upon regional and local resilience efforts within the Middle Peninsula. We further support project proposals that demonstrate a primary purpose of prevention or protection to reduce coastal, riverine, or inland flooding.

The MPPDC Fight the Flood (FTF) Program serves as the region's flood resiliency coordination program. The MPPDC Living Shoreline Incentive Program design and the MPPDC FTF Program design provide the operational and administrative oversite for resiliency planning, coordination, and implementation. These programs, especially MPPDC FTF program, recognize the inherent risk to the delivery of essential governmental services, including public safety, posed by coastal storms and recurrent flooding of all types and the relationship between at-risk waterfront real estate values and funding of essential governmental services.

Should you have any questions concerning Essex County's support for the work of the MPPDC, I can be reached at 804-443-4331.

Respectfully,

April L. Rounds
Administrator

GLOUCESTER COUNTY
County Administrator's Office
6489 Main Street
Gloucester, VA 23061
(804) 693-4042
www.gloucesterva.gov

Lewis L Lawrence, Executive Director
Middle Peninsula Planning District Commission
P.O. Box 286
Saluda, VA 23149

RE: Applications Submitted by MPPDC to Virginia Community Flood Preparedness Fund ROUND 5

Dear Lewie:

Gloucester County supports the Middle Peninsula Planning District Commission's (MPPDC) application requesting funding under the Department of Conservation and Recreation (DCR)'s Community Flood Preparedness Fund (CFPF). The proposals submitted by MPPDC staff enhance and build upon regional and local resilience efforts within the Middle Peninsula. We further support project proposals that demonstrate a primary purpose of prevention or protection to reduce coastal, riverine, or inland flooding.

The MPPDC Fight the Flood (FTF) Program serves as the region's flood resiliency coordination program. The MPPDC Living Shoreline Incentive Program design and the MPPDC FTF Program design provide the operational and administrative oversite for resiliency planning, coordination, and implementation. These programs, especially MPPDC FTF program, recognize the inherent risk to the delivery of essential governmental services, including public safety, posed by coastal storms and recurrent flooding of all types and the relationship between at-risk waterfront real estate values and funding of essential governmental services.

As a partnering locality applying for grant funds, we appreciate the ability to work with the MPPDC to preserve the Gloucester Point Beach Park through the construction of a living shoreline. The project will ensure public access to the County's only public beach and the adjacent recreational area. Gloucester County does not have the financial means to implement the project on our own. Utilizing the CFRF for Gloucester's site and similar locations will impact tens of thousands of Virginia residents and visitors.

Should you have any questions concerning our support for the work of the MPPDC, I can be reached by email at csteele@gloucesterva.info or phone at 804-693-4042.

Sincerely,

Carol Steele

Carol. E. Steele
County Administrator

KING AND QUEEN COUNTY VIRGINIA

Founded 1691

Vivian R. Seay
County Administrator | County Attorney
Direct Telephone 434-607-0717
vseay@kingandqueenco.net

242 Allen's Circle, Suite 211
Post Office Box 177
King and Queen Court House, Virginia 23085
Office Telephone 804-785-5975

October 21, 2024

Lewis L. Lawrence, Executive Director
Middle Peninsula Planning District Commission
Post Office Box 286
Saluda, Virginia 23149

Re: Middle Peninsula Planning District Commission (MPPDC) Application
Virginia Community Flood Preparedness Fund - ROUND 5

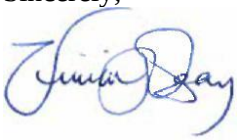
Dear Lewie,

King and Queen County supports all MPPDC applications requesting funding under the Department of Conservation and Recreation (DCR)'s Community Flood Preparedness Fund (CFPF). The proposals submitted by MPPDC staff enhance and build upon regional and local resilience efforts within the Middle Peninsula. We further support project proposals that demonstrate a primary purpose of prevention or protection to reduce coastal, riverine, or inland flooding.

The MPPDC Fight the Flood (FTF) Program serves as the region's flood resiliency coordination program. The MPPDC Living Shoreline Incentive Program design and the MPPDC FTF Program design provide the operational and administrative oversite critical for resiliency planning, coordination, and implementation. These programs, especially the MPPDC FTF program, recognize the inherent risk coastal flooding poses to the delivery of essential governmental services, like public safety services, the need for which arises due to coastal storms and recurrent flooding of all types; and resiliency services to protect at-risk waterfront real estate values upon which the funding of essential governmental services is based. In basic terms, we must in every way possible counter coastal flooding to ensure the safety of our citizens and the longevity of our boundaries.

Should you have any questions concerning our support for the work of the MPPDC, I can be reached at vseay@kingandqueenco.net.

Sincerely,



Vivian R. Seay
County Administrator | County Attorney

From:	Lewis Lawrence
To:	Jackie Rickards
Subject:	KW Support of Applications Submitted by MPPDC to Virginia Community Flood Preparedness Fund ROUND 5
Date:	Tuesday, October 22, 2024 11:35:39 AM
Attachments:	image001.png image002.png Outlook-jeywl3dq.png

KW below

Lewis L Lawrence
Executive Director
Middle Peninsula Planning District Commission
P.O.Box 286
Saluda,Va 23149
804-758-2311
www.mppdc.com

From: Stacey Davenport <stacey.davenport@kwc.gov>
Sent: Tuesday, October 22, 2024 11:13 AM
To: Lewis Lawrence <llawrence@mppdc.com>
Subject: Support of Applications Submitted by MPPDC to Virginia Community Flood Preparedness Fund ROUND 5

Lewis L Lawrence, Executive Director
Middle Peninsula Planning District Commission
P.O. Box 286
Saluda, Va 23149

RE: Applications Submitted by MPPDC to Virginia Community Flood Preparedness Fund ROUND 5

Dear Lewie,

King William County supports the Middle Peninsula Planning District Commission's (MPPDC) application requesting funding under the Department of Conservation and Recreation (DCR)'s Community Flood Preparedness Fund (CFPF). The proposals submitted by MPPDC staff enhance and build upon regional and local resilience efforts within the Middle Peninsula. We further support project proposals that demonstrate a primary purpose of prevention or protection to reduce coastal, riverine, or inland flooding.

The MPPDC Fight the Flood (FTF) Program serves as the region's flood resiliency

coordination program. The MPPDC Living Shoreline Incentive Program design and the MPPDC FTF Program design provide the operational and administrative oversite for resiliency planning, coordination, and implementation. These programs, especially MPPDC FTF program, recognize the inherent risk to the delivery of essential governmental services, including public safety, posed by coastal storms and recurrent flooding of all types and the relationship between at-risk waterfront real estate values and funding of essential governmental services.

Should you have any questions concerning our support for the work of the MPPDC, I can be reached at 804-769-4927.

Sincerely,

Stacey Davenport

Stacey T. Davenport
County Administrator
King William County
180 Horse Landing Road, #4
King William, VA 23086
(804) 769-4926
stacey.davenport@kwc.gov

County of Mathews Administration Office
mathewscountyva.gov

Lewis Lawrence, Executive Director
Middle Peninsula Planning District Commission
P.O. Box 286
Saluda, VA 23149

RE: Applications Submitted by MPPDC to Virginia Community Flood Preparedness Fund ROUND 5

Dear Lewie,

Mathews County supports the Middle Peninsula Planning District Commission's (MPPDC) application requesting funding under the Department of Conservation and Recreation (DCR)'s Community Flood Preparedness Fund (CFPF). The proposals submitted by MPPDC staff enhance and build upon regional and local resilience efforts within the Middle Peninsula. We further support project proposals that demonstrate a primary purpose of prevention or protection to reduce coastal, riverine, or inland flooding.

The MPPDC Fight the Flood (FTF) Program serves as the region's flood resiliency coordination program. The MPPDC Living Shoreline Incentive Program design and the MPPDC FTF Program design provide the operational and administrative oversite for resiliency planning, coordination, and implementation. These programs, especially MPPDC FTF program, recognize the inherent risk to the delivery of essential governmental services, including public safety, posed by coastal storms and recurrent flooding of all types and the relationship between at-risk waterfront real estate values and funding of essential governmental services.

Should you have any questions concerning our support for the work of the MPPDC, I can be reached at (804) 725-7172 or via email rwilson@mathewscountyva.gov.

Sincerely,

Ramona Wilson. P.E., MPA
Mathews County Administrator

Matthew L. Walker
County Administrator

Ann Marie Ricardi
Assistant County Administrator

County of Middlesex
Office of the County Administrator

October 9, 2024

Lewis L Lawrence, Executive Director
Middle Peninsula Planning District Commission
P.O. Box 286
Saluda, Va 23149

RE: Applications Submitted by MPPDC to Virginia Community Flood Preparedness Fund ROUND 5

Dear Lewie,

Middlesex County supports the Middle Peninsula Planning District Commission's (MPPDC) application requesting funding under the Department of Conservation and Recreation (DCR)'s Community Flood Preparedness Fund (CFPF). The proposals submitted by MPPDC staff enhance and build upon regional and local resilience efforts within the Middle Peninsula. We further support project proposals that demonstrate a primary purpose of prevention or protection to reduce coastal, riverine, or inland flooding.

The MPPDC Fight the Flood (FTF) Program serves as the region's flood resiliency coordination program. The MPPDC Living Shoreline Incentive Program design and the MPPDC FTF Program design provide the operational and administrative oversite for resiliency planning, coordination, and implementation. These programs, especially the MPPDC FTF program, recognize the inherent risk to the delivery of essential governmental services, including public safety, posed by coastal storms and recurrent flooding of all types and the relationship between at-risk waterfront real estate values and funding of essential governmental services.

Should you have any questions concerning our support for the work of the MPPDC, I can be reached at 804-758-4330.

Sincerely,

Matt Walker, County Administrator

Three Rivers Health District

COMMONWEALTH OF VIRGINIA

VIRGINIA DEPARTMENT OF HEALTH
THREE RIVERS HEALTH DISTRICT

SERVING ESSEX, GLOUCESTER, KING & QUEEN, KING WILLIAM, LANCASTER, MATHEWS, MIDDLESEX, NORTHUMBERLAND, RICHMOND, & WESTMORELAND COUNTIES

BRENDEN RIVENBARK
DISTRICT HEALTH DIRECTOR

P.O. BOX 415
SALUDA, VIRGINIA 23149
TELEPHONE: (804) 758-2381

Lewis L Lawrence, Executive Director
Middle Peninsula Planning District Commission
P.O. Box 286
Saluda, Va 23149

RE: Applications Submitted by MPPDC to Virginia Community Flood Preparedness Fund ROUND 5

Dear Lewie,

The Three Rivers Health District supports the Middle Peninsula Planning District Commission's (MPPDC) application requesting funding under the Department of Conservation and Recreation (DCR)'s Community Flood Preparedness Fund (CFPF). The proposals submitted by MPPDC staff enhance and build upon regional and local resilience efforts within the Middle Peninsula. We further support project proposals that demonstrate a primary purpose of prevention or protection to reduce coastal, riverine, or inland flooding.

The MPPDC Fight the Flood (FTF) Program serves as the region's flood resiliency coordination program. The MPPDC Living Shoreline Incentive Program design and the MPPDC FTF Program design provide the operational and administrative oversite for resiliency planning, coordination, and implementation. These programs, especially MPPDC FTF program, recognize the inherent risk to the delivery of essential governmental services, including public safety, posed by coastal storms and recurrent flooding of all types and the relationship between at-risk waterfront real estate values and funding of essential governmental services.

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

We feel strongly that this work will further strengthen the drinking and wastewater infrastructure in the Middle Peninsula. Should you have any questions concerning our support for the work of the MPPDC, I can be reached at **Brenden.rivenbark@vdh.virginia.gov and (804) 382-9391.**

Sincerely,

Brenden Rivenbark
District Health Director

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

TOWN OF TAPPAHANNOCK

P. O. Box 266

Tappahannock, Virginia 22560

(804) 443-3336 Fax (804) 443-1051

www.tappahannock-va.gov

October 8, 2024

Lewis L Lawrence, Executive Director
Middle Peninsula Planning District Commission
P.O. Box 286
Saluda, Va 23149

RE: Applications Submitted by MPPDC to Virginia Community Flood Preparedness Fund ROUND 5

Dear Lewie,

The Town of Tappahannock supports the Middle Peninsula Planning District Commission's (MPPDC) application requesting funding under the Department of Conservation and Recreation (DCR)'s Community Flood Preparedness Fund (CFPF). The proposals submitted by MPPDC staff enhance and build upon regional and local resilience efforts within the Middle Peninsula. We further support project proposals that demonstrate a primary purpose of prevention or protection to reduce coastal, riverine, or inland flooding.

The MPPDC Fight the Flood (FTF) Program serves as the region's flood resiliency coordination program. The MPPDC Living Shoreline Incentive Program design and the MPPDC FTF Program design provide the operational and administrative oversite for resiliency planning, coordination, and implementation. These programs, especially MPPDC FTF program, recognize the inherent risk to the delivery of essential governmental services, including public safety, posed by coastal storms and recurrent flooding of all types and the relationship between at-risk waterfront real estate values and funding of essential governmental services.

Should you have any questions concerning our support for the work of MPPDC, I can be reached at 804-443-3336.

Sincerely,

Eric S. Pollitt
Town Manager
Town of Tappahannock

TOWN OF URBANNA
390 VIRGINIA ST. SUITE B, PO BOX 179, URBANNA, VA 23175
PHONE: 804-758-2613, FAX: 804-758-0389

October 8, 2024

Lewis L Lawrence, Executive Director
Middle Peninsula Planning District Commission
P.O. Box 286
Saluda, Va 23149

RE: Applications Submitted by MPPDC to Virginia Community Flood Preparedness Fund ROUND 5

Dear Mr. Lewis:

The Town of Urbanna supports the Middle Peninsula Planning District Commission's (MPPDC) application requesting funding under the Department of Conservation and Recreation (DCR)'s Community Flood Preparedness Fund (CFPF). The proposals submitted by MPPDC staff enhance and build upon regional and local resilience efforts within the Middle Peninsula. We further support project proposals that demonstrate a primary purpose of prevention or protection to reduce coastal, riverine, or inland flooding.

The MPPDC Fight the Flood (FTF) Program serves as the region's flood resiliency coordination program. The MPPDC Living Shoreline Incentive Program design and the MPPDC FTF Program design provide the operational and administrative oversite for resiliency planning, coordination, and implementation. These programs, especially MPPDC FTF program, recognize the inherent risk to the delivery of essential governmental services, including public safety, posed by coastal storms and recurrent flooding of all types and the relationship between at-risk waterfront real estate values and funding of essential governmental services.

Should reviewing entities have any questions concerning our support for the work of the MPPDC, they can reach me at 804-758-2613 or t.costin@urbannava.gov.

Sincerely,

P. S. T. (Ted) Costin
Town Administrator

TOWN OF WEST POINT

October 7, 2024

Lewis L Lawrence, Executive Director
Middle Peninsula Planning District Commission
P.O. Box 286
Saluda, Va 23149

RE: Applications Submitted by MPPDC to Virginia Community Flood Preparedness Fund ROUND 5

Dear Lewie,

The Town of West supports the Middle Peninsula Planning District Commission's (MPPDC) application requesting funding under the Department of Conservation and Recreation (DCR)'s Community Flood Preparedness Fund (CFPF). The proposals submitted by MPPDC staff enhance and build upon regional and local resilience efforts within the Middle Peninsula. We further support project proposals that demonstrate a primary purpose of prevention or protection to reduce coastal, riverine, or inland flooding.

The MPPDC Fight the Flood (FTF) Program serves as the region's flood resiliency coordination program. The MPPDC Living Shoreline Incentive Program design and the MPPDC FTF Program design provide the operational and administrative oversite for resiliency planning, coordination, and implementation. These programs, especially MPPDC FTF program, recognize the inherent risk to the delivery of essential governmental services, including public safety, posed by coastal storms and recurrent flooding of all types and the relationship between at-risk waterfront real estate values and funding of essential governmental services.

Should you have any questions concerning our support for the work of the MPPDC, I can be reached at (804) 843-3330.

Sincerely,

John B. Edwards, Jr.
Town Manager

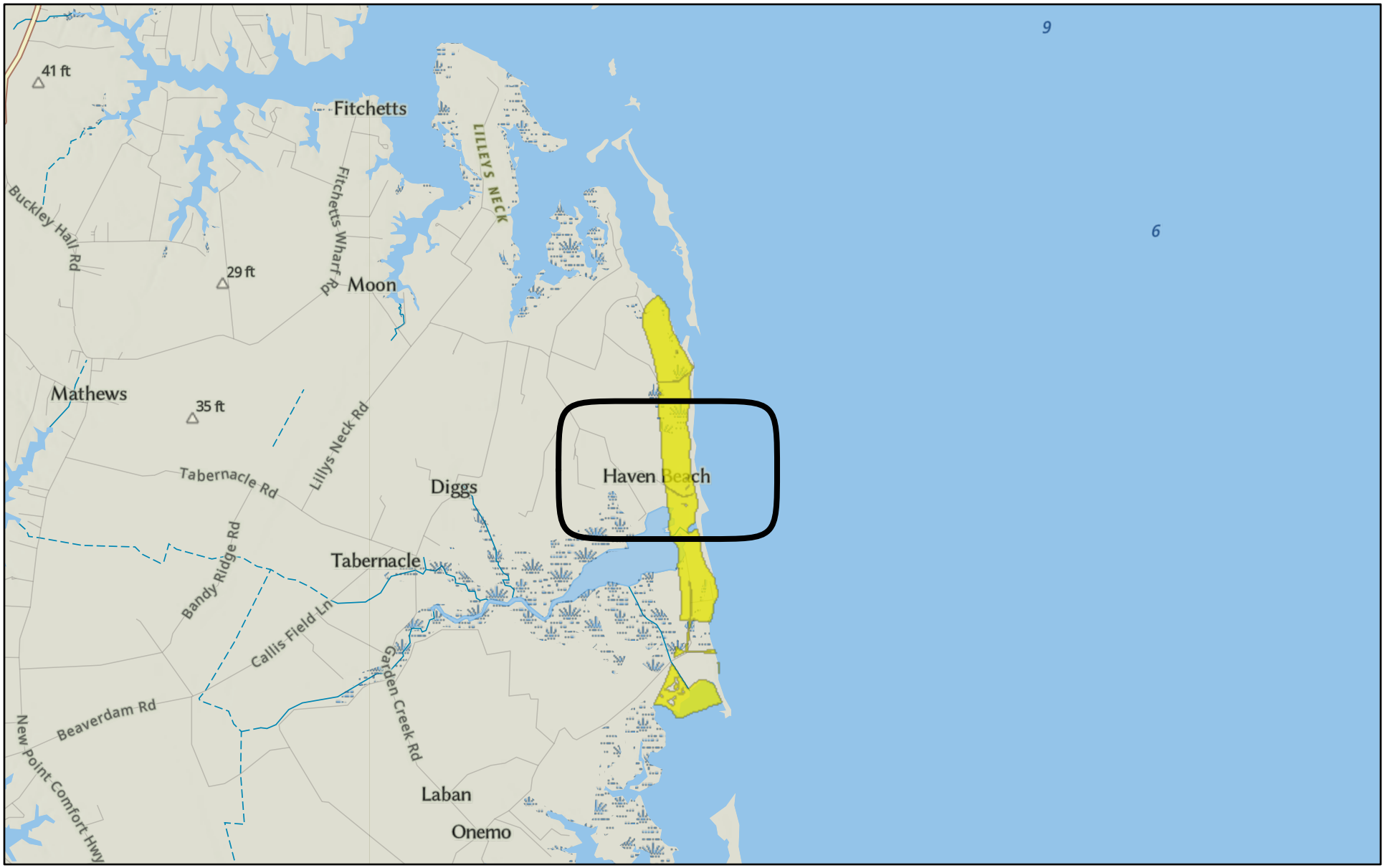
329 6th Street
P.O. Box 152, West Point, Virginia 23181
(804) 843-3330 / Fax (804) 843-4364
www.west-point.va.us

The ability of the local government to provide its share of the cost

This must include an estimate of the total project cost, a description of the source of the funds being used, evidence of the local government's ability to pay for the project in full or quarterly prior to reimbursement, and a signed pledge agreement from each contributing organization. Provide more detailed versions of those outlined as General Requirements.

Based upon the identified scope of work, the estimated total project cost is **$1,393,557.** Mathews County will appropriate the requisite 5% or **$69,678** from its VPA-WMF award in required local match funds, to be combined with the **$1,323,897** in grant assistance to equal the total estimated project cost (**$1,393,557**). The County's match commitment letter has been uploaded to the grants portal.

Haven Beach



October 31, 2024

Adjacent States

Natural Habitat & Ecosystem Diversity Category

1:68,688

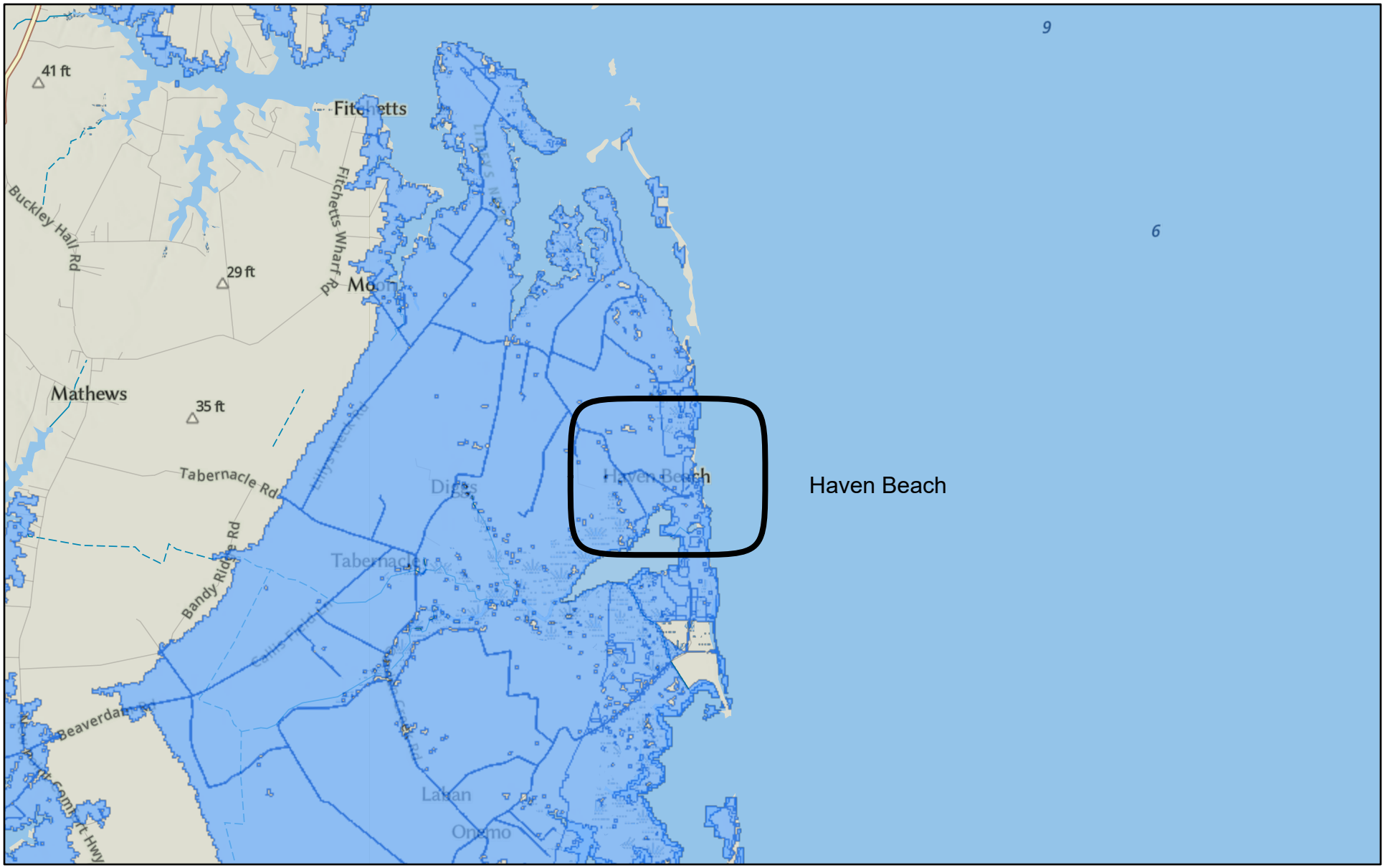
0 0.45 0.9 1.8 mi

0 0.75 1.5 3 km

VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, USDA, USFWS, Esri, NASA, NGA, USGS, FEMA,

MPPDC

Haven Beach



October 31, 2024

Adjacent States

Floodplains & Flooding Resilience Category

1:68,688

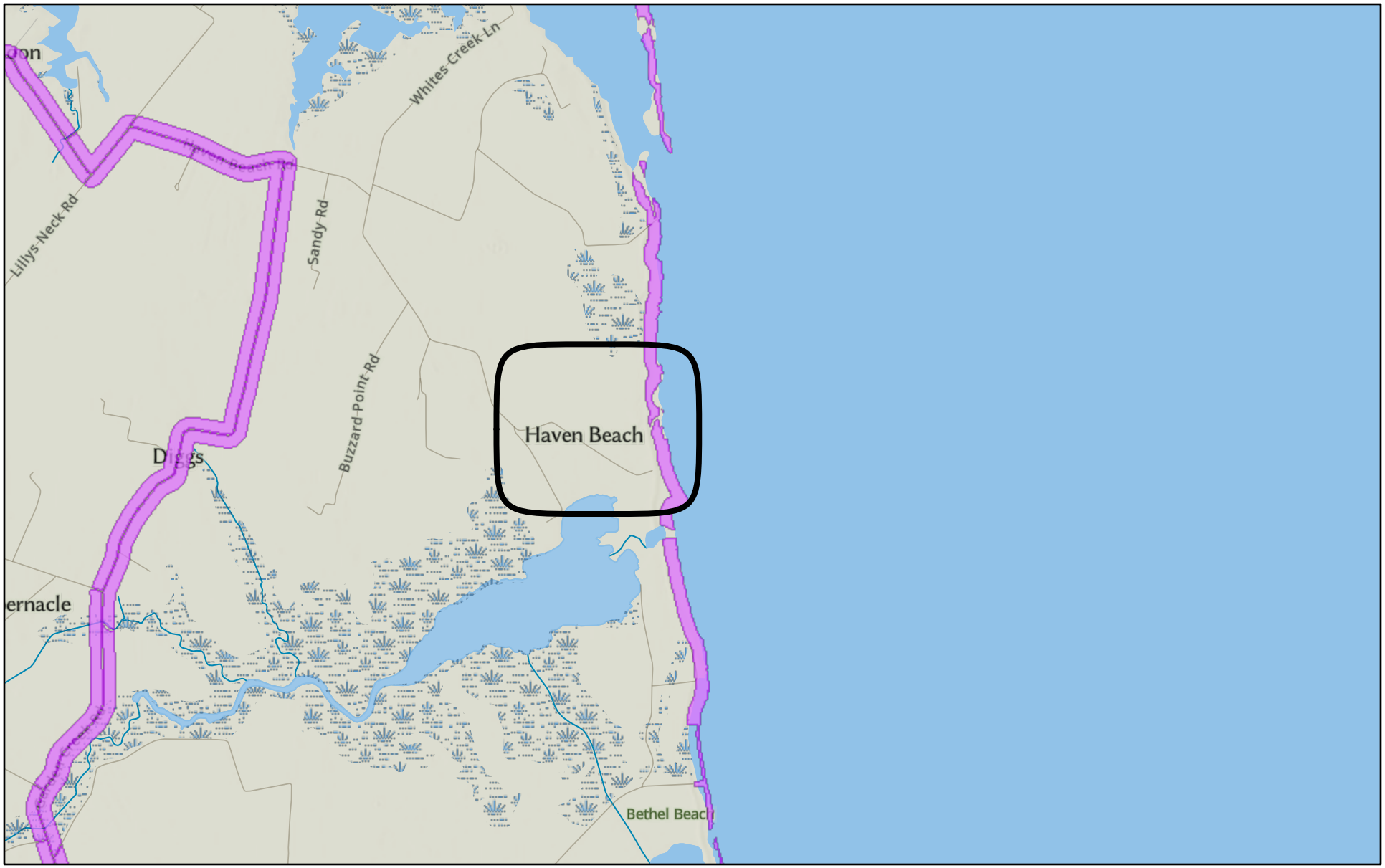
0 0.45 0.9 1.8 mi

0 0.75 1.5 3 km

VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, USDA, USFWS, Esri, NASA, NGA, USGS, FEMA,

MPPDC

Haven Beach



October 31, 2024

Adjacent States

Scenic Preservation Category

1:34,344

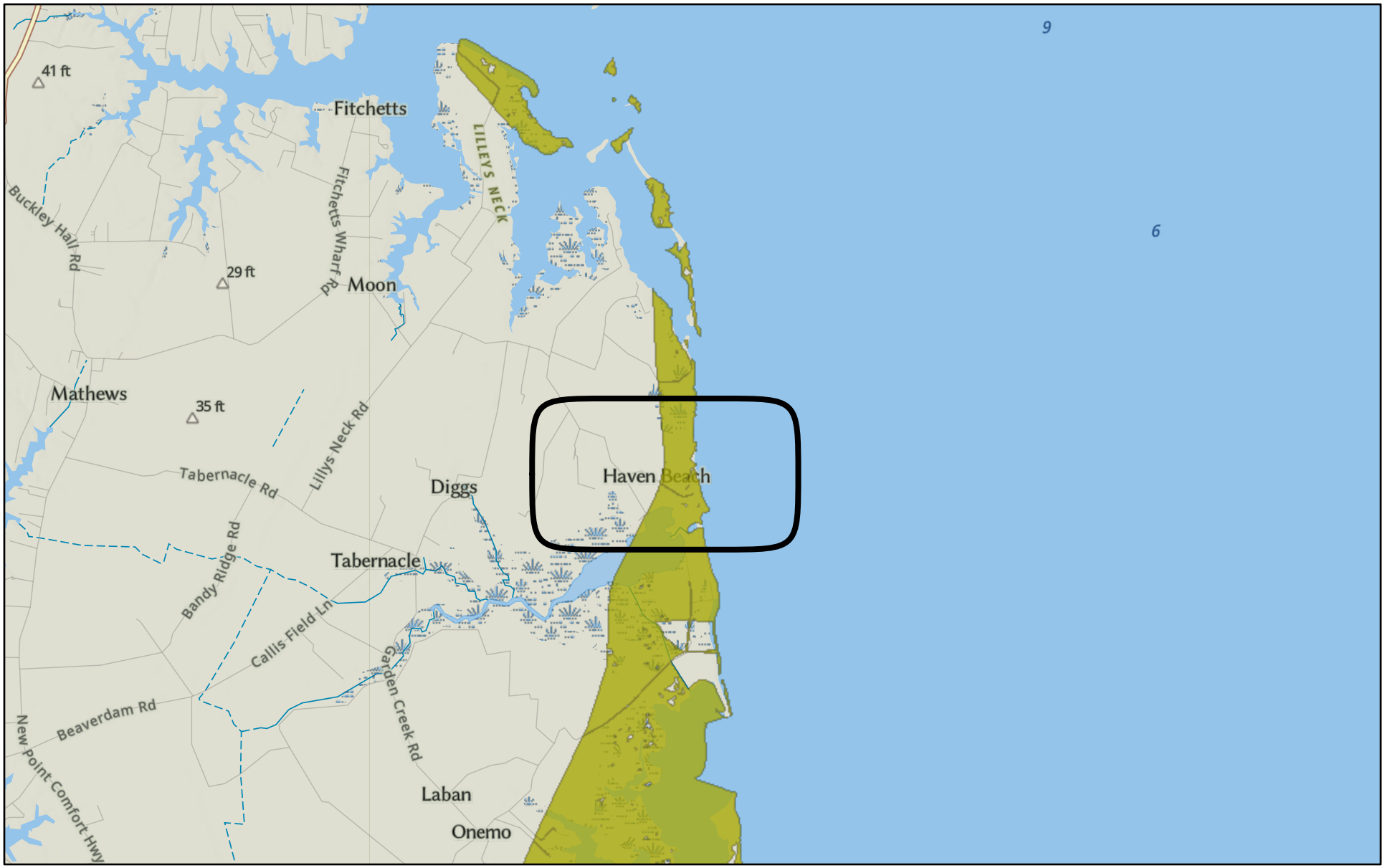
0 0.23 0.45 0.9 mi

0 0.38 0.75 1.5 km

VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, Esri, NASA,

MPPDC

Haven Beach



October 31, 2024

Adjacent States

Protected Landscapes Resilience Category

1:68,688

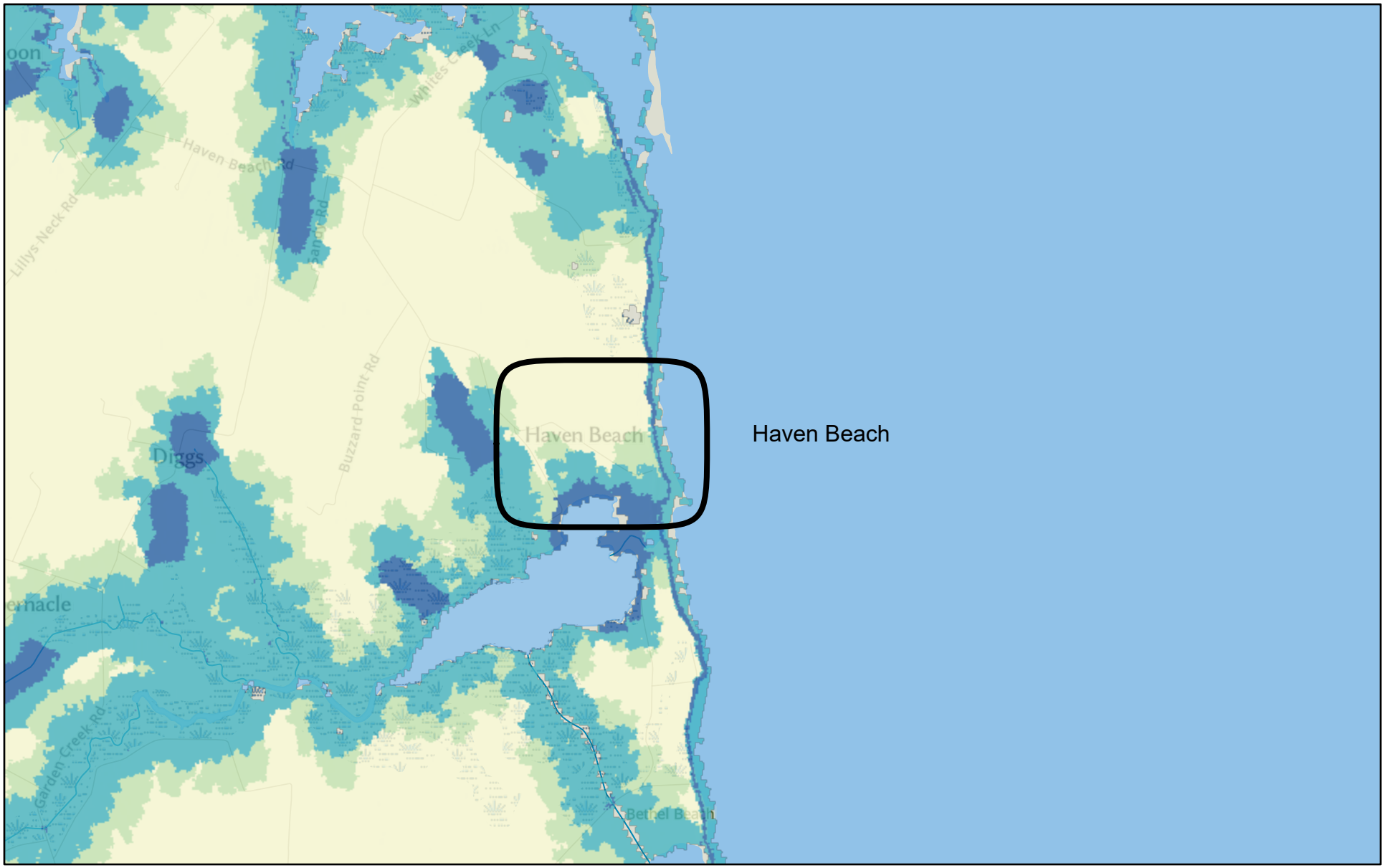
0 0.45 0.9 1.8 mi

0 0.75 1.5 3 km

VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, USDA, USFWS, Esri, NASA, NGA, USGS, FEMA,

MPPDC

Haven Beach



October 31, 2024

Adjacent States

Watershed Impact Model

1 - 20 (Lowest Impact)

21 - 40

41 - 60

61 - 80

81 - 100 (Highest Impact)

1:34,344

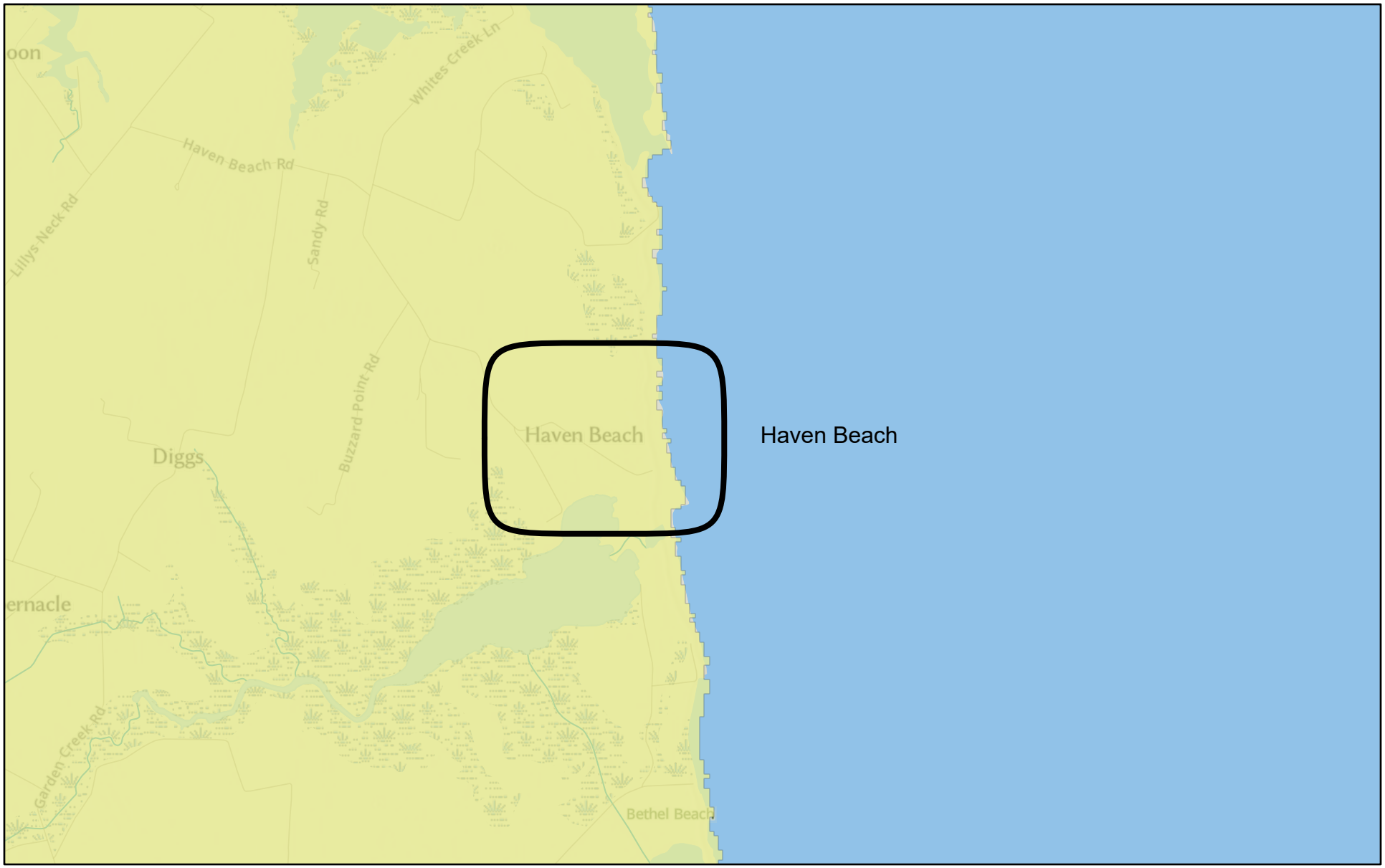
0 0.23 0.45 0.9 mi

0 0.38 0.75 1.5 km

VA DCR, Division of Natural Heritage, VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US

MPPDC

Haven Beach



October 31, 2024

Adjacent States

Land-based Recreation Need

1: Very Low

2: Low

3: Moderate

4: High

5: Very High

1:34,344

0 0.23 0.45 0.9 mi

0 0.38 0.75 1.5 km

VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, Esri, NASA,

MPPDC

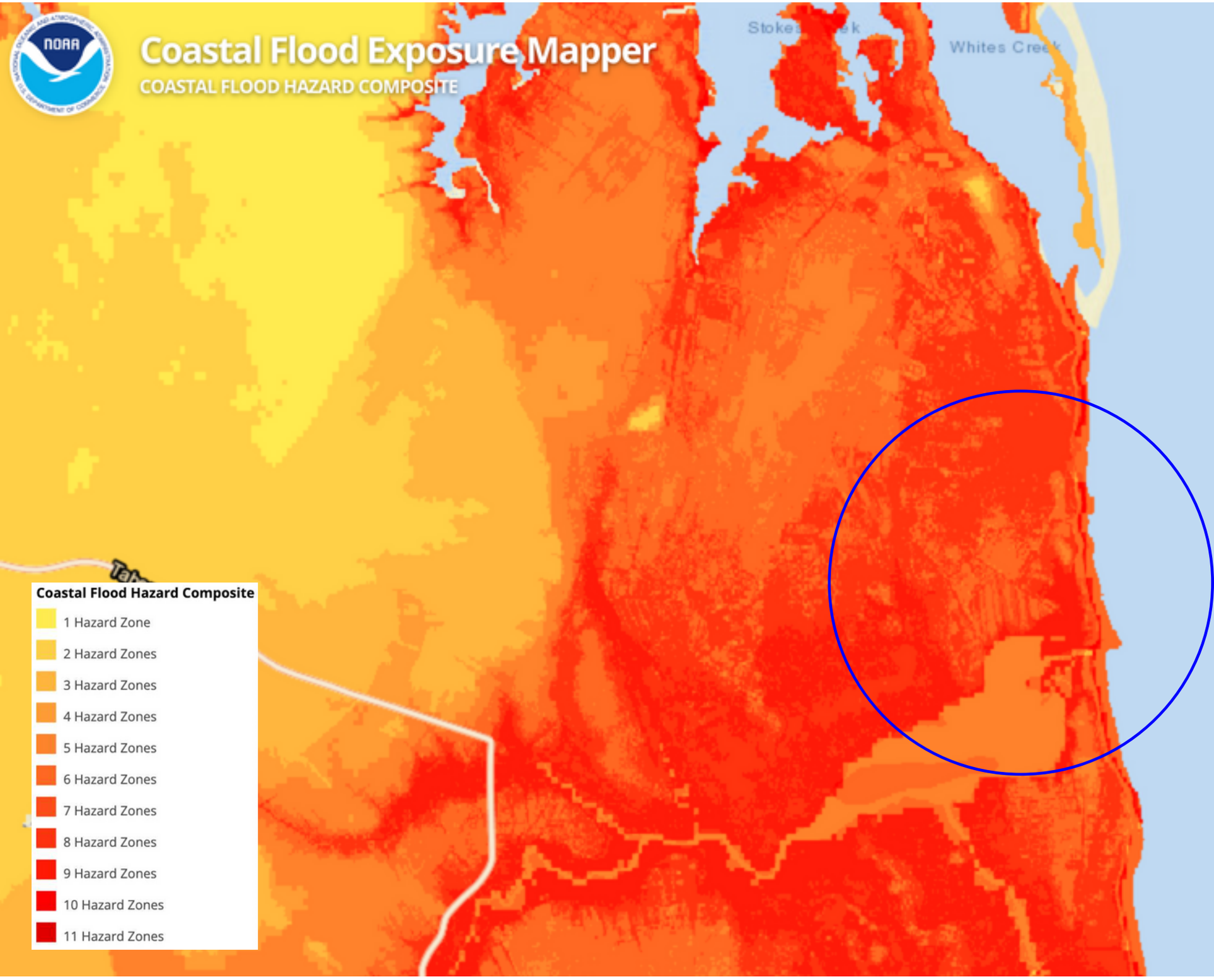
Proximity to Floodplain and Potential for Recurrent Flooding

The identified site locations on land are:

- Gloucester Point Beach Park, 1255 Greate Rd, Gloucester Point, VA 23062 (37.24634, -76.50287).
- **Haven Beach, State Rte 645, Diggs, VA 23045 (37°26'25", -76°15'28").**
- Town of West Point, Virginia 23181 (37.53666, -76.79994).
- Captain Sinclair's Pool House, 9524 Whittaker Drive Ware, VA 23061 (37.32546, -76.427569).
- The entire MPPDC region, including the counties of Essex, Gloucester, King and Queen, King William, Mathews, and Middlesex and the towns of Tappahannock, Urbanna, and West Point, VA.

Based on the FEMA FIRMettes provided, all project sites, or portions of sites, are located within a regulatory floodplain and subject to recurrent flooding.

Denise Nelson, PE, CFM, ENV SP, LEED AP
Sustainable and Resilient Infrastructure Engineer
Denise Nelson Advising, LLC
804-363-7437
DNAdvising@gmail.com


Coastal Flood Exposure Mapper
COASTAL FLOOD HAZARD COMPOSITE
Whites Creek
Coastal Flood Hazard Composite
1 Hazard Zone
2 Hazard Zones
3 Hazard Zones
4 Hazard Zones
5 Hazard Zones
6 Hazard Zones
7 Hazard Zones
8 Hazard Zones
9 Hazard Zones
10 Hazard Zones
11 Hazard Zones

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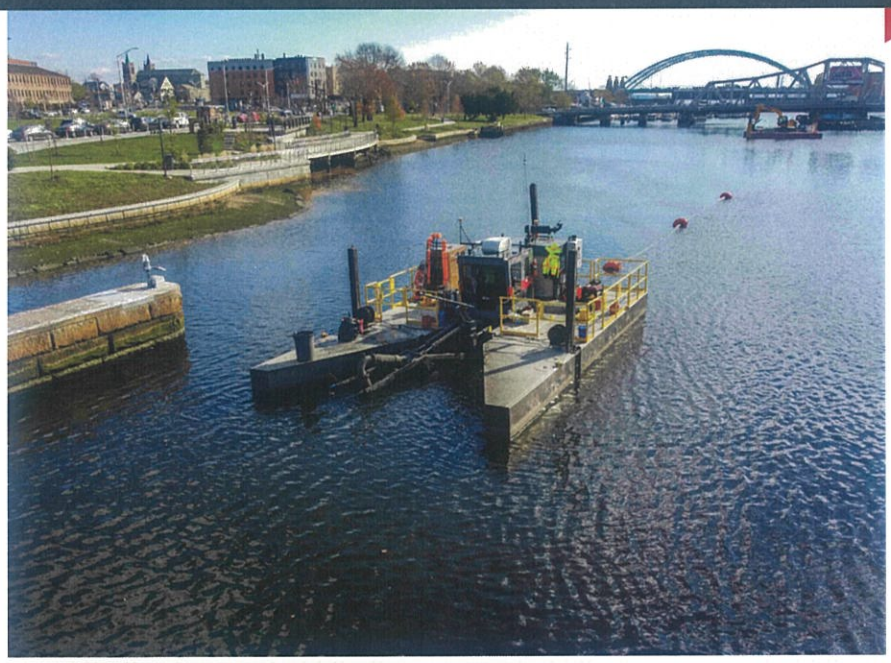
Hole in the Wall Channel Dredging Project & Beneficial Use Placement at Haven Beach

RFP-FY23-HITW

Middle Peninsula Planning District Commission

April 14, 2023



WE DO THAT ... & **MORE**

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April 14, 2023

Curtis Smith, Deputy Director
Middle Peninsula Planning District Commission
125 Bowden Street, P.O. Box 286
Saluda, VA 23149

Re: Hole in the Wall Channel Dredging Project & Beneficial Use Placement at Haven Beach

Mr. Smith,

The Hole in the Wall Channel Dredging Project & Beneficial Use Placement at Haven Beach is a significant step in a comprehensive plan to address navigability of coastal waterways. Michels Marine, a Division of Michels Construction, Inc., supports your commitment to this initiative and is excited to have the opportunity provide the following bid for this project.

Michels is a large privately held business, family-owned and operated, headquartered in Brownsville, Wisconsin, where it was founded in 1959. We have a team of over 8,000 people who bring their talents and skills to work each day. We are proud to own and operate one of the newest, largest, and most dependable equipment fleets in the industry, with more than 17,000 major pieces of equipment available for work throughout the country. Michels will utilize the Baltimore, MD office to manage this project, however we have over 50 offices across the world to support.

In 2022, Michels was ranked No. 27 among Engineering News-Record's (ENR) Top 400 Contractors in the United States. Our bonding capacities for single projects are in excess of $500 million and our aggregate bonded work program is up to $3 billion.

Through a great deal of discussion and planning, we have developed a throughput of processes that is constructable and reasonably reproducible in the conditions given. As with all our marine endeavors, we staff each project with professionals who work in similar conditions day in and day out. Our methodology has garnered safe and efficient results in similar work environments, and we look forward to implementing and executing our plan at Haven Beach. Above all, we feel that our plan can be executed with safety as the primary driver.

In closing, we thank you for the opportunity and look forward to your feedback. Should you have any questions regarding the following documents provided in this proposal, or require clarification, please contact me directly at 920.924.4300 or by email at lploessl@michels.us.

Sincerely,

Luke Ploessl
General Manager of Maine Operations
Michels Marine, a Division of Michels Construction, Inc.

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Section 2

Proposal Form

WE DO THAT ... & **MORE**

Section 2 – Proposal Form and Written Proposal

April 13, 2023

Curtis Smith (csmith@mppdc.com)
Middle Peninsula Planning District Commission (MPPDC)
125 Bowden Street
Saluda, VA 23149
804-758-2311

RE: Dredging Proposal For
Hole in the Wall Channel Dredging Project and Beneficial Use Placement at Haven Beach
Milford Haven, VA

Curtis,

Michels Construction Inc. (Michels) is pleased to present the following proposal for dredging and related services at the Hole in the Wall site. Based on the plans and specifications provided, Michels Construction understands the scope of work will include:

- Mobilization of equipment and manpower to the site to perform dredging, material transport, and material disposal (options included for) of approximately 40,000 CY of sediment located within the identified channel.
- To support this work, Michels intends to include within its workforce a superintendent, dredge operator, pump operators, project surveyor, and a project manager.
- The material will be hydraulically dredged and material will be conveyed utilizing HDPE piping and booster pumps. 12" to 14" pumps and piping will be utilized.
- Transport of the dredged material will be via pipeline approximately 13,000' to the designated disposal area at Haven Beach.
- Phase 2 will include the design and construction of Shoreline Protection Structures at Haven Beach.
- Rock for the new shoreline protection structures will be placed via floating barges and excavators.
- Phase 3 will include approximately 67,000 plants to be planted on a 1.5 ft grid pattern.

Based on the scope of work described above, Michels proposes the following services at the respective costs.

Mob & Demob Dredging Work (Phase 1):	$ 1,086,000.00
Dredging & Disposing of 40,000 CY (Phase 1):	$ 624,000.00
Mob & Demob Shoreline Protection Work (Phase 2):	$ 1,100,000.00
Construction of Shoreline Protection Structures (Phase 2):	$ 2,000,000.00
Plants & Dune Fencing (Phase 3):	$ 266,000.00
Total:	$ 5,076,000.00

****Note: Mobilization & Demobilization rates above are based on award of a single phase. If multiple phases are awarded to Michels Construction Inc. there will be reduced Mobilization & Demobilization rates.****

Clarifications:

- Michels shall be provided a minimum of a 30-working day notice to mobilize.
- **Pricing above is based on one mobilization and the ability to perform the work in one non interrupted operation. If additional mobilizations are required, there will be additional costs.**
- Michels assumes a suitable area will be provided to allow for access to the work, muster of crew members and mobilization of resources. Michels to determine ultimate suitability.
- Mobilization and Demobilization work will be performed on a 6 workday schedule Monday through Saturday, approximately 12 hours per shift. Holidays have not been included.
- Dredging work will be performed on a 6 workday schedule Monday through Saturday, 12 hours per day.
- This proposal assumes a coordinated construction schedule agreed upon by both the Owner and Michels.
- Dredging to be performed in river conditions typical to the time of year and historical averages. No account has been made or included for delays due to flood conditions.
- Michels reserves the right to determine factors that constitute safe working conditions.
- We assume consecutive work with only normal construction interruptions due to weather.
- Project Impacts Caused by Coronavirus/Covid-19-In the event Contractor's supply chain, labor force, or Work is, directly or indirectly, delayed, suspended, or otherwise impacted in any manner as a result of, or in relation to, the novel Coronavirus outbreak, a COVID-19 infection or infections, mutations of the foregoing, or other widespread or infectious disease or illness or the response of any private organization or governmental entity in relation thereto, Contractor shall be entitled to a Change Order equitably adjusting its compensation and time for completing the Work to account for all impacts arising from such delay, suspension, or other impact.
- Retainage shall be no more than 10% of the contract price. Within ten (10) days after substantial completion of Michels' work, 50% of the retainage shall be released to Michels. The remaining 50% of retainage shall be released to Michels within ten (10) days after final acceptance of Michels' work by the General Contractor.
- This proposal and scope of work must be fully incorporated in any contractual agreement and is to take precedence over any conflicting terms and agreements embodied in any other agreement or documents.
- This proposal assumes mutually understood contract terms and conditions can be agreed upon.
- The above items are tied and shall not be split.
- The above rates shall not be prorated without written preapproval from Michels.

- Fuel rates are based on the Virginia average fuel rates as of April 13, 2023. Increases in fuel rates may be subject to additional cost.

Michels will mobilize workforces who sole responsibility will be to perform work at the rates listed above and excludes all other scopes of work including but not limited to the following:

- Due to the lack of information provided in the plans and specs, we have based our dredging production numbers off of a fine sandy material with silty material at a cut thickness that optimizes production for our chosen equipment.
- Access road installation, maintenance, and removal.
- We require a work surface capable of supporting our equipment and have assumed that the existing facilities can handle the loads that will be applied during mobilization, construction/deliveries, and demobilization. We have excluded improvements and/or repair of access areas and/or roadways at the proposed staging property and/or leading up to the property.
- Traffic Control, Site Security, Barriers, Tracking Pads, Street Sweeping/road cleaning.
- Location, removal, protection and/or relocation of conflicting utilities including but not limited to overhead structures that interfere with our work. Our work shall not be encumbered by utilities.
- Engineering, Testing, Monitoring, Inspections, etc.
- Temporary facilities including but not limited to: shoring, bridges, causeways, dock walls, etc.
- Dewatering, Water Diversion, Etc.
- Site Restoration other than what is included within the contract.
- Dive Work
- We do not anticipate providing the following for anyone but Michels Employees: sanitation facilitates, potable water
- Permits and notifications or the cost of.
- Liquidated Damages - Michels will not accept responsibility resulting in liquidated damages for either non-performance or from unacceptable performance of anything other than Michels scopes of work.
- Handling/Hauling/Disposal of Hazardous/Contaminated Materials
- Ice Mitigation and or snow removal - All work is assumed to be performed in non-freezing conditions
- Owner and/or regulatory agency required oversight/management including but not limited to: Site Safety Health Officer, Quality Control, Etc.
- Any and all delays including but not limited to those associated with navigational traffic, crews are anticipated to be able to work a full shift without interruption.
- Environmental Exclusion Windows - We assume this work will take place during a period of time satisfactory to all government agencies.

Thank you for the opportunity to provide this proposal. Feel free to reach out with any questions.

Sincerely,

Andrew Wetor,
Project Manager & Estimator
Michels Construction, Inc.

office: 920.924.4300 | cell: 920.392.9935
awetor@michels.us
PO Box 128 | 817 Main Street | Brownsville, WI 53006

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Appendix C: PROPOSAL FORM

IN COMPLIANCE WITH THIS REQUEST FOR PROPOSAL (RFP) AND ALL THE CONDITIONS IMPOSED IN THIS RFP, THE UNDERSIGNED FIRM HEREBY OFFERS AND AGREES TO FURNISH THE SERVICES DESCRIBED AND THE UNDERSIGNED FIRM HEREBY CERTIFIES THAT ALL INFORMATION IS TRUE, CORRECT AND COMPLETE.

Offeror submits proposals for the following Phase(s) of the RFP by so indicating on the line(s) below.

Yes **Phase #1** Dredging of "Hole in the Wall" Channel to a minimum depth of -7ft. MLLW with 1 ft. over dredge (estimated 40,000 CY) and placement of dredged sand onto Haven Beach, in Mathews County, Virginia as shown on Virginia Marine Resources Commission Permit.

Yes **Phase #2** Design and Construction of Shoreline Protection Structures at Haven Beach, in Mathews County, Virginia, using traditional structures (granite), in accordance with the plans and designs dated November 19, 2021 on Exhibit A:

Yes **Phase #3** Approximately 67,000 plants to be planted on a 1.5 ft grid. Plants will be planted and fertilized with one row of dune fencing installed, in accordance with the plans and designs dated November 19, 2021.

CONTRACT AWARD: Contract may be awarded for each Phase individually to separate contractors, for one contractor to perform all three Phases for the Lump Sum Price listed above or for one contractor to perform two Phases with a second contractor awarded the contract to perform the remaining Phase.

CONTRACT EXECUTION: The County reserves the right to accept or reject any or all proposals or and waive any informalities it determines are in its best interest. The County reserves the right to award a proposal in a split order, lump sum or per item basis, any combination that will best serve the needs of Mathews County.

Once a notice to proceed is given, the contractor shall have 15 days to initiate discussions with all permitting authorities prior to mobilizing its equipment on site. Contractors will comply with all conditions of the respective permits governing this project as required during this 15-day period.

State Corporation Commission ID Number: 87-1363378

NAME AND ADDRESS OF FIRM:

Michels Construction Inc.
817 Main Street
Brownsville, WI 53006

DATE: 04-13-23

6

BY: _____
(Signature in Ink)

NAME: Luke Ploessl

TITLE: GM Marine Operations

EVA Vendor ID or DUNS#:
11-827-7023

PHONE: 920-924-4300

E-MAIL: lploessl@michels.us

FAX: N/A

Acknowledgment of Addenda:

No. 1, Date 04-13-23 Signature _____

No. 2, Date _____ Signature _____

No. 3, Date _____ Signature _____

RETURN PROPOSAL FORM TO THE MPPDC. SIGN CERTIFICATION ABOVE.

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Section 3

Description of Services to be Provided and Project Approach

WE DO THAT ... & **MORE**

Section 3 – Description of Services to be Provided and Project Approach

Introduction

Michels Marine (Michels), a division of Michels Construction Inc., provides full-scale solutions for clients both public and private on the inland waters and near coastal areas throughout the United States. Experienced minds within our leadership and tradespeople guide controlled processes during field operations to provide value throughout the life of complex marine projects. Our goal is to maintain lockstep communication with project stakeholders to ensure that operations are conducted in the most mutually beneficial way possible. Below you will find a brief summary of our plans to safely and efficiently execute the project goals for the Hole in the Wall Channel Dredging Project and Beneficial Use Placement at Haven Beach. We look forward to the opportunity to discuss any of these details with you further.

General Requirements

Upon receipt of Notice to Proceed, Michels will begin a thorough investigation of all facets of the project to determine where any gaps may lie between initial plans and field conditions. It is our intent to begin a series of regularly scheduled calls amongst Middle Peninsula Planning District Commission (MPPDC) and our project staff to begin developing a positive working relationship with open lines of communication. Topics of discussion will include site conditions and any additional known history, nuances of working in the local area and developing a priority list to accomplish the tasks in an orderly fashion. These calls will help support planning for any necessary stakeholder and community engagement events that may be necessary during the project lifecycle. Michels will dedicate knowledgeable staff to any public outreach events necessary to facilitate the efficacy of the project.

Pre-Work Submittals and Investigations

Upon receipt of Notice to Proceed, Michels will begin a thorough investigation of all facets of the project to determine where any gaps may lie between initial plans and field conditions. It is our intent to begin a series of regularly scheduled calls amongst Middle Peninsula Planning District Commission (MPPDC) and our project staff to begin developing a positive working relationship with open lines of communication. Topics of discussion will include site conditions and any additional known history, nuances of working in the local area and developing a priority list to accomplish the tasks in an orderly fashion. These calls will help support planning for any necessary stakeholder and community engagement events that may be necessary during the project lifecycle. Michels will dedicate knowledgeable staff to any public outreach events necessary to facilitate the efficacy of the project.

Mobilization

Mobilization of equipment and personnel will be based generally out of the access areas indicated by Haven Beach. This area will serve as the main muster point for water-based activities. At this location crews will accept, assemble and deploy all marine based equipment to support the dredging operations as well as the shoreline protection structures. It is anticipated that the mobilization process will take approximately 2-3 weeks to perform, based negotiated,

availability of area available to the contractor. During this time the crew will perform the following tasks:

- Accept, Assemble and Deploy 1 Hydraulic Cutter-Suction Dredge
- Accept, Assemble and Deploy Sectional Barge Platforms for Booster Pumps and Support Work
- Accept, Assemble and Deploy Booster Pumps
- Accept, Assemble and Deploy HDPE Transport Pipeline
- Accept, Assemble and Deploy Project Marine Vessels.
- Construct Temporary Project Office Location/Crew Parking Area/Laydown Area

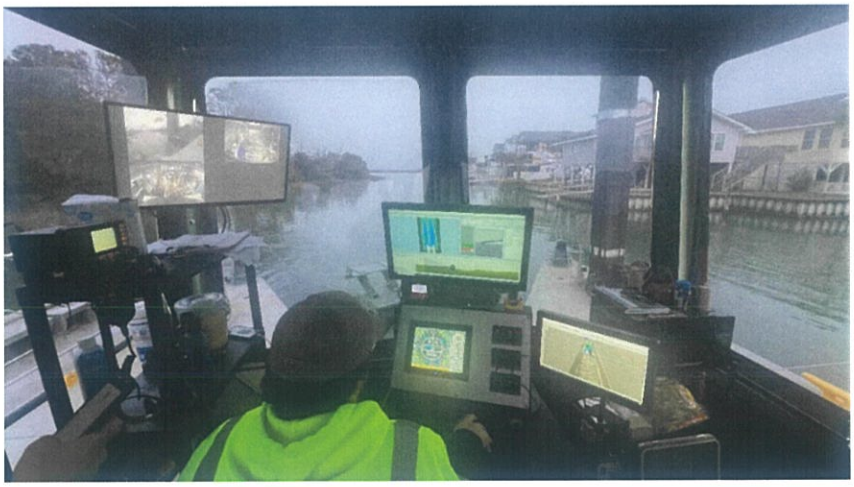
Mobilization of equipment to the beach will also be performed during this time as well, here crew will accept earthmoving equipment such as a GPS guided dozer and excavator. Dredge discharge pipeline will also be routed and marked to the beach discharge location taking into account the environmental considerations such as oyster beds, habitat, etc.

Surveying

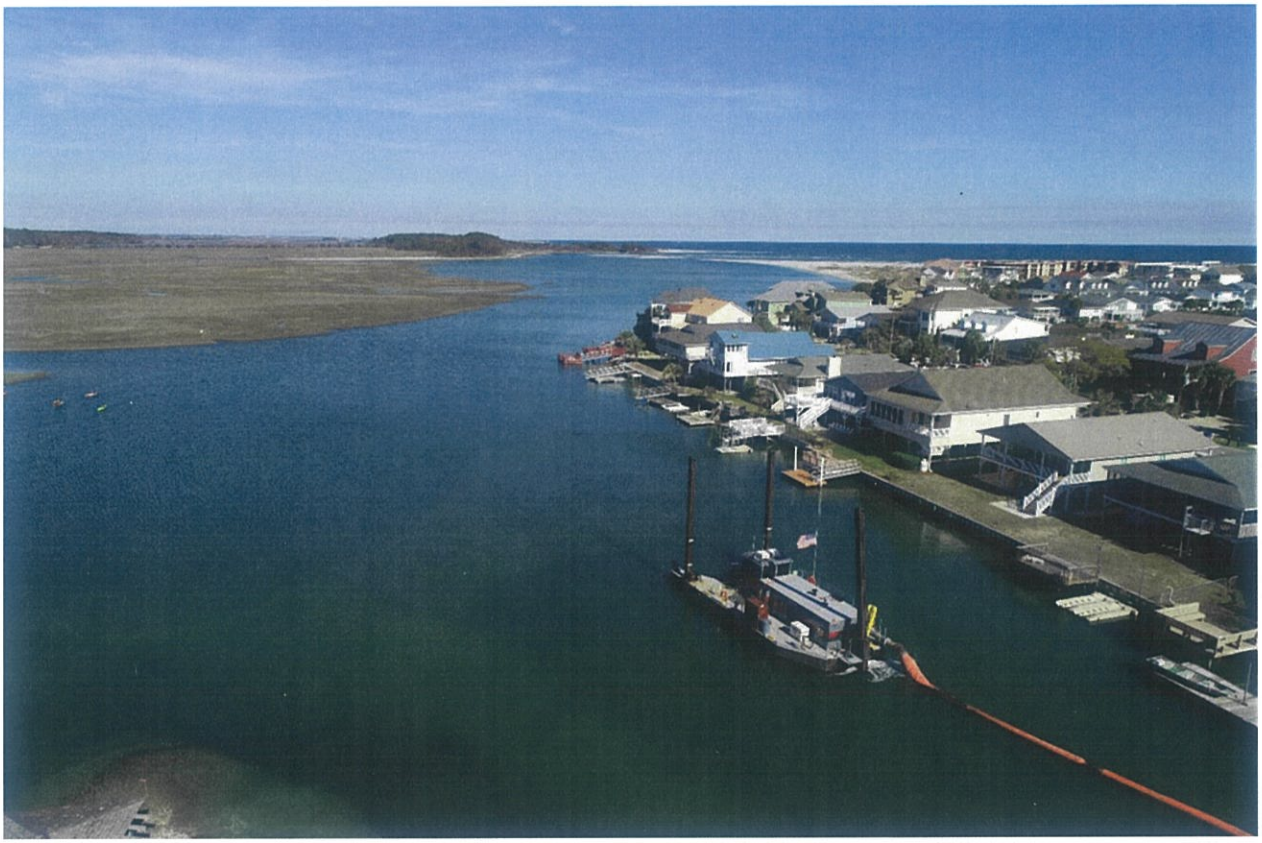
Michels Marine is able and willing to perform hydrographic survey services to support the project. We employ qualified individuals who operate under the guidance of a Certified Hydrographer and in conformance with U.S. Army Corp of Engineers EM-1110-2-1003 Hydrographic Surveying Manual. If necessary, we can also provide pre-work photo/video surveys of the site to document existing conditions prior to the initiation of construction activities.

Dredging

Michels intends to use one of its customized, hydraulic, swinging ladder cutter suction dredges to perform the maintenance dredging services identified within the plans. All of our dredges are guided by an RTK-GPS system translated through the Trimble TMC software suite which allows the dredge operator to view all dredge related movements from an onboard computer screen. Production tracking is further optimized by regularly performed in-house surveys to map dredge progress which allows our staff to adjust to changing conditions throughout the course of the work. These techniques have allowed our crews to effectively remove target materials while comfortably staying within over-depth parameters.



Once the hydraulic dredge, pipeline and beach placement equipment are in place, dredging operations will commence. Michels will collaborate with MPPDC to subdivide the planned dredge area into effective management units based on project goals. Michels plans to begin removal of the 40,000 cubic yards of State-owned subaqueous bottom along the Hole in the Wall Channel, from Milford Haven to the Chesapeake Bay, to attain depths of minus seven (-7) feet mean low water, and place the dredged material upon Haven Beach as beach nourishment.



Beach Placement and Grading

Prior to initiation of material placement within the beach placement area, the area will be surveyed, mapped and delineated to provide a clear understanding of the placement process and plan. Markings will be installed at the increments provided within the project plan set. Material removed from the shallow-draft maintenance dredging area will be hydraulically transported to beach placement area where it will be controlled, dewatered and graded by use of an excavator and GPS-guided dozer.

Demobilization

Upon completion of dredging activities and final survey verification, Michels will begin demobilizing equipment and personnel from site. Again, the Haven Beach Access areas will serve as the main hub for demobilization of water-based equipment demobilization. All equipment and remaining materials will be removed from site in a safe and efficient manner. Prior to leaving site, Michels staff will coordinate a punch list walk with the MPPDC to ensure that site conditions are left to conditions satisfactory to all parties.

Michels holds the safety of its personnel and equipment in the highest regard. We understand this unique scope of work presents safety risks and conditions that may not be foreseen prior to initiation of the project. Our core staff is trained to identify areas of uncertainty and bring them forward for discussion prior to initiation of tasks. We feel that we have a strong culture of safety awareness that allow our crews to make safe and efficient changes to the work as the conditions dictate.

Section 4 – Statement of Qualifications

Who is Michels?

Michels has been pioneering innovative new technologies for more than six decades, growing from a small pipeline construction company into one of the largest, most diversified international energy and infrastructure contractors in North America. ***Michels delivers construction, engineering and procurement services that exceed customers' expectations in the water, energy, transportation, and infrastructure construction industries***. Our services are constantly growing and evolving to meet customers' needs and to provide them with solutions to complex problems.

Company History & Ownership

Michels supports its customers' projects with more than 8,000 employees, over 50 offices and yards across North America, and more than 17,000 pieces of equipment. In 2022, Michels was ranked No. 27 among Engineering News-Record's (ENR) Top 400 Contractors in the United States. Michels is one of the largest, most diversified energy and infrastructure contractors in North America. As a family-owned and operated business, we have the ability to swiftly make critical decisions to support customers' goals.

Michels Corporation was founded in 1959 and formally incorporated in 1960 as Michels Pipeline Construction, Inc. The company officially changed its name to Michels Corporation in 2000 to acknowledge its diverse menu of services and expanding client base. On November 1, 2021, Michels Foundations, an operating division of Michels Corporation, was incorporated by way of merger, as Michels Construction, Inc., a wholly owned subsidiary. As part of this merger, Michels Foundations', a division of Michels Corporation contracts, employees, experience, equipment, and other assets were allocated by operation of law to Michels Construction, Inc. Operating divisions of Michels Construction, Inc. that continue to be supported by employees, experience, equipment, and other assets include Marine, Foundations, Industrial, and Infrastructure.

Services Offered

Michels Marine, a Division of Michels Construction, Inc. (Michels) provides a full palette of marine construction services to support client needs throughout the inland lakes and river systems. We employ an experienced staff and well maintained, customized equipment to bring value to each facet of the work. Our dredging team provides hydraulic, mechanical, and amphibious solutions to waterway restoration, wetland restoration, contaminated sediments, and maintenance and navigation projects.

Experience

Michels has successfully completed multiple projects using shallow draft maintenance dredging and sediment disposal. Below are some examples for your review, but please reference Appendix A – Project Profiles for more information on a few of the projects mentioned below.

Cherry Grove – North Myrtle Beach, SC
- o 105,000 cubic yards were hydraulically removed within an intercoastal tidal environment
- o Passive dewatering was performed using a Confined Disposal Facility (CDF)

Seneca Lake – Cambridge, OH
- o 80,000 cubic yards hydraulically removed
- o Restoration of Reservoir for flood storage

Schuylkill River – Philadelphia, PA
- o 26,000 cubic yards were hydraulically removed
- o Named material was transported over 8 miles in scow barges, and offloaded into an 80-acre USACE CDF
- o Urban waterway dredging
- o Debris mitigation

Lake Adger – Mill Spring, NC
- o Roughly 10,000 cubic yards were hydraulically removed
- o Constructed a 1,500 foot silt fence and a 1,000 foot silt curtain for erosion/sediment control

Dorn Creek – Waunakee, WI
- o Hydraulic removal of sediment contaminated with phosphorus
- o 2.5 miles of stream restoration
- o Shallow draft dredging

North Lake – Oconomowoc, WI
- o 135,000 cubic yards were hydraulically removed
- o Passive dewatering was performed using constructed CDF

Providence River, Providence, RI
- o 35,000 cubic yards were hydraulically removed
- o Dewatering via Geotextile Tubes
- o Urban waterway dredging
- o Debris Mitigation

Dunes Lake – Sturgeon Bay, WI
- o 58,000 cubic yards hydraulically removed
- o Designed and operated onsite disposal and water treatment

Token Creek – Burke, WI
- o 2.2 miles of creek and ponds were hydraulically dredged
- o 2 acre disposal area
- o Basin dewatering with a polymer treatment was performed

Lake Mohawk – Malvern, OH
- o 120,000 cubic yards were hydraulically removed
- o 9 acre disposal area
- o Basin dewatering with a polymer treatment was performed

Syracuse Harbor – Syracuse, NY
- o 35,000 cubic yards were hydraulically removed
- o 3.5 Acre Disposal Area
- o Basin dewatering with a polymer treatment was performed

Stamp Sands Lake Superior – Gay, MI
- o 135,000 cubic yards were hydraulically removed
- o Basin dewatering with a polymer treatment was performed

Safety

Due to the ambiguous nature of working on the water in tidally influenced conditions, are crews are experienced and trained to regularly monitor conditions for change and assess changes against scheduled plans of execution. By monitoring our environment in a constant manner, we can more readily prepare initial plans as well as contingencies when adverse arise. Each day's activities begin with a safety meeting where tasks and plans for the day are discussed. If conditions change throughout the day, our staff is trained to regroup and re-access. Due to the ever-changing conditions of dredging work, we regularly build in contingency plans to maintain efficiency.

Safety is the cornerstone of our culture. Creating a strong safety culture takes years of dedication and commitment from leadership and crew members alike. We understand that our culture determines our performance and to have continuous positive performance, Michels must constantly focus on culture.

To empower our employees and keep safety personal, we have intertwined the following themes into our HSE framework on every project:

- **Stop Work Promise** – If at any time, an individual feels uncomfortable with their ability to safely complete work or sees work that is or appears to be unsafe, they are expected to speak up and use their Stop Work Promise.

- **Accountability** – Our people are held accountable for following the Michels' HSE Program, regardless of position or authority. Integrity is a core value of Michels.

- **Make Safety Personal** – We developed and implemented the Michels Promise Me, Mi-Promises, and the My VIP & Me safety campaigns to focus on safety 24/7 at work and at home. The internationally recognized safety campaigns, in which employees and employees' loved ones (i.e. spouses/significant others, children and parents) were filmed imploring their VIPs (Very Important People) to promise them that they would work safely and speak up if an unsafe condition/situation arose, so that they could return home to them, continues to have a profound impact on Michels employees, and has been shared-with and shared by customers to improve the overall safety culture across

the industries in which we work. The basic premise of the campaign is to encourage our people (subcontractors and service providers included) to make a personal promise and commitment to their loved ones to work safely, speak-up when they recognize anything that may be unsafe or hazardous, and above all else, to make it home to their families/loved ones at the end of the day.

- **Behavior-Based Safety & Error Reduction Focus** – The implementation of the Human Performance Improvement (HPI) Program, which recognizes employees who actively identify and correct at-risk and undesired behaviors (human errors), for reporting near hits and good catches, and using the Stop Work Promise.

The Michels family is dedicated to the continuous pursuit of excellence in our safety, environmental, and quality performance, practices, and responsibility. As such, the Michels family and leadership team fully support the resources dedicated to ensuring our teams are working safe and are held accountable for their personal safety and that of those around them. We assign HSE Professionals to the projects as per risk assessment and/or customer requirement(s), and we are confident in our team's qualifications, experience, and ability. In addition to those HSE Professionals at the work location, Michels employs more than 170 HSE Professionals with a wide range of expertise who are available as a resource to support our operations anytime they are needed.

With more than 60 years of experience as an energy and infrastructure contractor, Michels understands and is currently performing work that meets and exceeds safety standards and procedures. We will continue to build on the trust already established and bring our firsthand knowledge of the requirements to this project. Due to the large size of our Health, Safety & Environmental Manual (roughly 400 pages), we are not including it in this document, but would be happy to provide it upon request.

Quality Control

Michels will develop a project specific Construction Quality Control Plan (CQC Plan) which will be in effect to establish the quality requirements across all portions of the project. The CQC Plan will be tailored to the uniqueness of the project and the various processes and work products. Key highlights of the CQC Plan include:

- Each project team member will take responsibility for the quality of their individual work.
- Prior to commencing work, processes, procedures, and controls will be in place to make sure that work performed fulfills the technical and administrative requirements.
- Project plans will have adequate reviews to ensure the complete scope of work and will include appropriate quality reviews and controls.

The main tenants of the CQC Plan will be used to document inspections, monitoring, surveys, and other actions taken during the project. The CQC Plan will contain the following information:

- The QC organization, including an organizational chart showing the various QC team members, along with their designated responsibilities and lines of authority.
- Acknowledgement that the QC staff will inspect the Work specified and shall report to the QM.
- The name, qualifications, duties, responsibilities, and authorities of each person assigned a primary QC function.
- Qualifications of the proposed field superintendent(s).
- Qualifications of the proposed dredge operators(s).
- A summary of the delegated responsibilities of Quality Control Manager (QCM).
- Information relating to scheduling and managing submittals, including those of subcontractors, off-site fabricators, and material suppliers.
- Identification of testing methods, procedures, schedules, records, and forms used to report QC information to the Owner's Representative, including samples of the various reporting forms.
- The project construction schedule.
- Description of project sequencing.
- Definition of chain of command.

Meet Our Team – Key Personnel

Michels Marine intends to provide a skilled and knowledgeable core staff who have applicable experience in all facets of this project. We will also team with local labor union to supplement project staffing needs. Our core staff members have direct experience hydraulically pumping on long-line and short-line systems. Michels staff has experience experience working in tidally influenced areas as well as with hydraulic, conventional cutter suction dredges working in close confines of riparian areas and adjacent structures with environmental sensitivity. Much of the material encountered and removed on these projects has been inconsistent mix of materials such as silt, sand, and organics.

By assembling a team of industry experts who understand the fundamentals of each facet of work as their core discipline, we will be able to responsibly complete this project. Ultimately, our team has been selected based on overall knowledge and aptitude in their craft, willingness to adapt and innovate, and level of dedication to the team. We are proud to present a team that we feel has unmatched knowledge and experience in key fields of work presented on the site.

Luke Ploessl, General Manager of Marine Operations

A marine construction veteran with three decades of experience in safety-first leadership, customer-focused operations and successful project management, Luke is committed to the development of the crews he works with and of the marine construction industry. He is involved in several industry associations and serves on the AMSC board of directors and the AWO steering committee.

Paul Olander, Sr. Manager of Dredging Operations

With more than 17 years of experience, Paul has held multiple positions, such as Project Engineer/Surveyor, Assistant Project Manager, Project/Operations Manager and Senior Project Manager. He has developed strategies and teams to effectively overcome uncertainty and mitigate risk. He effectively uses cost management, reporting, compliance, and overall management skills to optimize project delivery and ensure project success.

Ross Johnson, Regional Project Manager

Ross supports the team with approximately 20 years of experience in the Marine industry. His project management skills allow him to provide leadership in planning, monitoring, and managing projects from initiation through completion. To ensure project success, Ross follows standardized policies and procedures by managing resources, budgets, risks, and coordinating team members so company and client safety requirements are met. Ross is involved in the Western Dredging Association as a member and continues to actively pursue relevant certifications and training opportunities.

Tom Burgess, Site Project Manager

Tom has extensive experience in energy project development and project management, with leaderships roles that have allowed him to build financial and organizational skills. Tom previously worked for Waller LNG Services, developing methanol and LNG projects on the US Gulf with emphasis on creating feasibility studies, business plans, model financial performance, and build transportation models to serve export facilities and emerging marine bunker market opportunities.

Jeremy Marker –Superintendent

With more than 30 years of experience, Jeremy's responsibilities are to supervise specialized marine construction projects with a focus on sediment transport, mitigation, and habitat creation. He maintains and executes plans and goals established by clients while coordinating with management to effectively schedule personnel, equipment, and subcontractors.

Enrique Estevan – Foreman

Enrique supports the Marine team with more than 26 years of experience in the maritime industry, with positions that have included Chief Engineer Assistant, Dredge Superintendent, Field Superintendent, Deck Captain and Mate, Dredge Tender and Boat Operator. This broad palette of positions has allowed Enrique to develop specialized experiences with hydraulic dredges, obtaining dredge depths with specialized excavators, and proficiency with IHC and Dredge Pack GPS Excavator Positioning Systems.

Randall Ceplina - Dredge Operator

Randy has about 18 years of experience in the marine construction industry, of which he has had the opportunity to gain knowledge in the dredging area and develop skills effective for these projects. He is responsible for Project execution including, planning, scheduling and budget development, progress monitoring and management of personnel. As a dredge operator, Randy works closely with Site Superintendents, Project Field Engineers, PMs, Quality Managers, and HSE Representatives to execute the project in a timely and compliant manner.

James Dunkley, Certified Hydrographer

James has almost 30 years of experience in hydrographic surveying, mapping, and marine positioning. He has managed teams of hydrographers, equipment, and financials, and supervised and participated in after field data collection of hydrographic data, post-processing of field data, drafting of proposals for hydrographic work, calculating cost for personnel, and equipment to bid projects. His expertise includes environmental dredging projects and detailed inspection surveys of marine infrastructure along with general bathymetry for mapping.

Please see Appendix B for a copy of our team members' resumes, as well as an organizational chart.

MICHELS®
CONSTRUCTION, INC.

Section 5

Response Capability

WE DO THAT ... & **MORE**

Section 5 – Response Capability

Michels has more than 200 jobs in progress at any given time and has already secured various construction projects slated for completion in 2023-2024. Our current workload changes on a weekly basis, and while we can report generally on our customers and the work we have previously performed, all other ongoing construction may be contractually proprietary in nature and subject to confidentiality provisions of those contracts. However, our current workload and backlog does not in any way limit our ability to take on more work.

In summary, Michels has the available staff and equipment to successfully complete the Hole in the Wall Channel Dredging Project & Beneficial Use Placement at Haven Beach.

MICHELS®
CONSTRUCTION, INC.

Section 6

Insurance

WE DO THAT ... & **MORE**

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 01/24/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Willis Towers Watson Midwest, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 372305191 USA	**CONTACT NAME:** Willis Towers Watson Certificate Center **PHONE (A/C, No, Ext):** 1-877-945-7378 **FAX (A/C, No):** 1-888-467-2378 **E-MAIL ADDRESS:** certificates@willis.com
INSURED Michels Construction Inc. 817 Main Street P.O. Box 128 Brownsville, WI 53006	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** INSURER A : Greenwich Insurance Company — 22322 INSURER B : XL Insurance America Inc — 24554 INSURER C : XL Specialty Insurance Company — 37885 INSURER D : AIG Specialty Insurance Company — 26883 INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** W27959070 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:			CGD740955306	02/01/2023	02/01/2024	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 3,000,000 $ 1,000,000 $ $ 3,000,000 $ 6,000,000 $ 6,000,000
A	AUTOMOBILE LIABILITY [X] ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY			CAD740955406	02/01/2023	02/01/2024	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 5,000,000 $ $ $
B	[ ] UMBRELLA LIAB [X] OCCUR [X] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			US00077661LI23A	02/01/2023	02/01/2024	EACH OCCURRENCE AGGREGATE	$ 5,000,000 $ 5,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: No If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		CWD740955106	02/01/2023	02/01/2024	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
C	Workers Compensation - WI and Employers Liability Work Comp: Per Statute			CWR740955206	02/01/2023	02/01/2024	E.L. Each Accident E.L. Disease-Each Emp E.L. Disease-Pol Lmt	$1,000,000 $1,000,000 $1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

SEE ATTACHED

CERTIFICATE HOLDER

Evidence of Insurance

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Christopher A. Harvey

SR ID: 23653501 BATCH: 2824155

AGENCY CUSTOMER ID: _____

LOC #: _____

ADDITIONAL REMARKS SCHEDULE

AGENCY	NAMED INSURED
Willis Towers Watson Midwest, Inc.	Michels Construction Inc. 817 Main Street P.O. Box 128 Brownsville, WI 53006
POLICY NUMBER See Page 1	
CARRIER: See Page 1 / NAIC CODE: See Page 1	EFFECTIVE DATE: See Page 1

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 FORM TITLE: Certificate of Liability Insurance

INSURER AFFORDING COVERAGE: AIG Specialty Insurance Company NAIC#: 26883

POLICY NUMBER: CPO 8197229 EFF DATE: 02/01/2023 EXP DATE: 02/01/2024

TYPE OF INSURANCE:	LIMIT DESCRIPTION:	LIMIT AMOUNT:
Professional Liability	Each Claim	$5,000,000
	Aggregate Limit	$5,000,000

INSURER AFFORDING COVERAGE: AIG Specialty Insurance Company NAIC#: 26883

POLICY NUMBER: CPO 8197229 EFF DATE: 02/01/2023 EXP DATE: 02/01/2024

TYPE OF INSURANCE:	LIMIT DESCRIPTION:	LIMIT AMOUNT:
Contractors Pollution	Each Loss	$5,000,000
	Aggregate	$5,000,000

SR ID: 23653501 BATCH: 2824155 CERT: W27959070

ENDORSEMENT #

This endorsement, effective 12:01 a.m., February 1, 2023, forms a part of Policy No. CGD740955306 issued to M10, INC. by Greenwich Insurance Company.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

CANCELLATION NOTIFICATION TO OTHERS ENDORSEMENT

In the event coverage is cancelled for any statutorily permitted reason, other than nonpayment of premium, advanced written notice will be mailed or delivered to person(s) or entity(ies) according to the notification schedule shown below:

Name of Person(s) or Entity(ies)	Mailing Address:	Number of Days Advanced Notice of Cancellation:
As per schedule on file with company		30

All other terms and conditions of the Policy remain unchanged.

IXI 405 0910

ENDORSEMENT #

This endorsement, effective 12:01 a.m., February 1, 2023 forms a part of Policy No.CWD7409551-06

issued to M10,INC. by XL Specialty Insurance Company.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

CANCELLATION NOTIFICATION TO OTHERS ENDORSEMENT

This endorsement modifies insurance provided under the following:

WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY INSURANCE POLICY

In the event coverage is cancelled for any statutorily permitted reason, other than nonpayment of premium, advanced written notice will be mailed or delivered to person(s) or entity(ies) according to the notification schedule shown below:

Name of Person(s) or Entity(ies)	Mailing Address:	Number of Days Advanced Notice of Cancellation:
As per schedule on file with company		30

All other terms and conditions of the Policy remain unchanged.

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective February 1, 2023 Policy No. CWD7409551-06 Endorsement No.

Insured M10, INC. Premium

Scott A. Horn

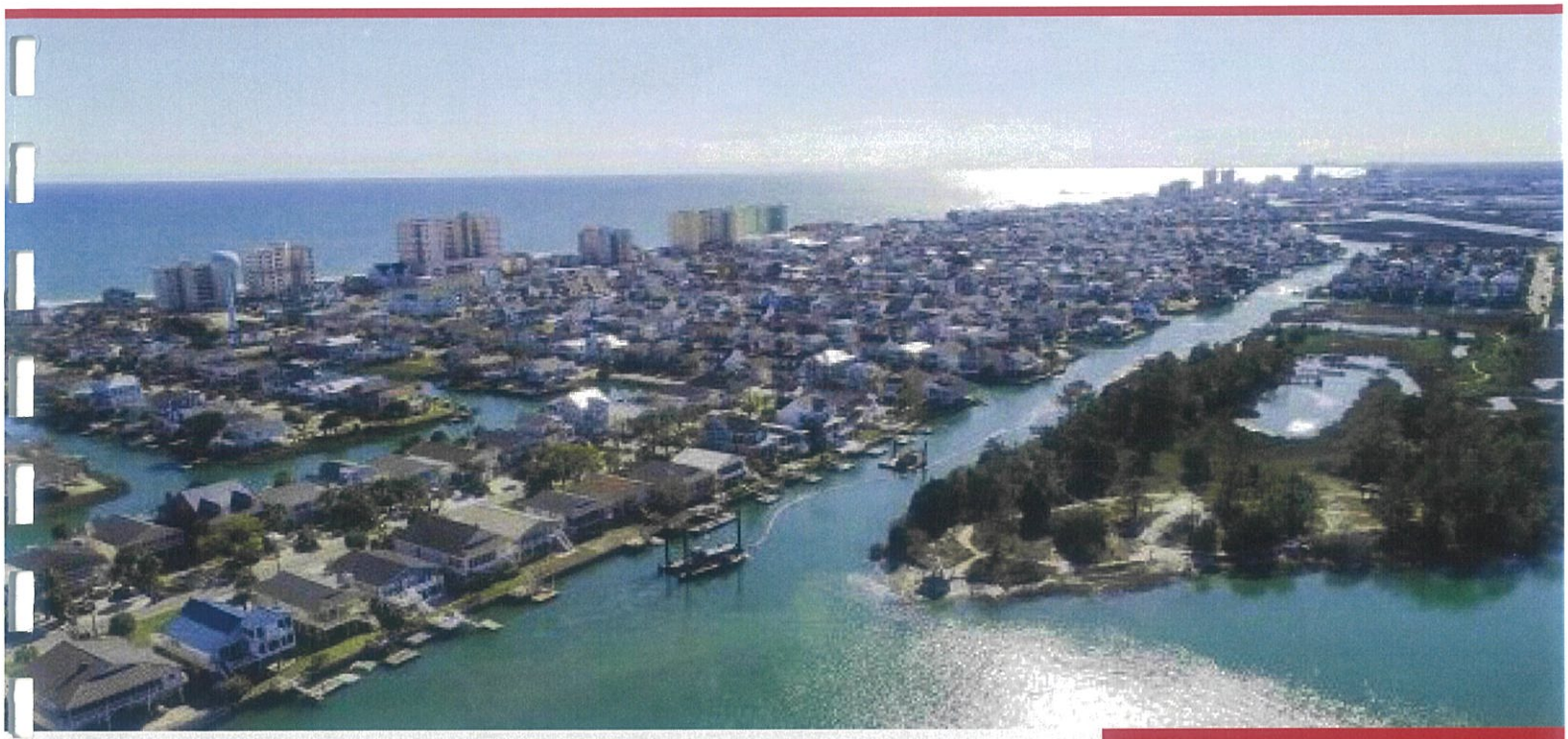
Insurance Company
XL Specialty Insurance Company

Countersigned by _____

Maintenance Dredging of Cherry Grove Canals - Cycle 2

Sewer & Water

MICHELS® CONSTRUCTION, INC.



SCOPE

The Michels Marine team was contracted to hydraulically dredge and remove sediment from the depths of over 30 connecting canals of Cherry Grove Beach, a neighborhood located on northeast side of North Myrtle Beach, SC. Throughout this project, the team has worked to hydraulically dredged and transport the unwanted to sediment to a confined disposal facility (CDF), owned by the customer. An Amphibious excavator, DSC Barracuda Dredge, shallow draft push boats, and modular barges were all use throughout this project. In order to maximize production rates, the team also used real-time kinematic (RTK) GPS positioning to obtain highly accurate locations of the dredging work. After the project has been completed, it is approximated that the Michels team would have removed 120,000 cubic yards of sediment from the narrow channels and canals of Cherry Grove Beach.

ACHIEVEMENTS

With limiting staging areas, restricted water access, lengthy dredging pipeline routes, and marine areas with high tourist traffic, the Michels team has gone above and beyond to deliver quality results. Such quality, that after 50% of the project was completed, the customer requested an estimate of additional work, and awarded Michels another 20% of dredging work to the original scope of work. In addition to overcoming these challenges, the team will have also been able to achieve the transformation of silted and inoperative canals, into deep navigable waterways for over 500 homeowners.

CUSTOMER
City of North Myrtle Beach

CONTACT
Mike Kirby | 864.590.0256

CONTRACT VALUE
3,600,000.00

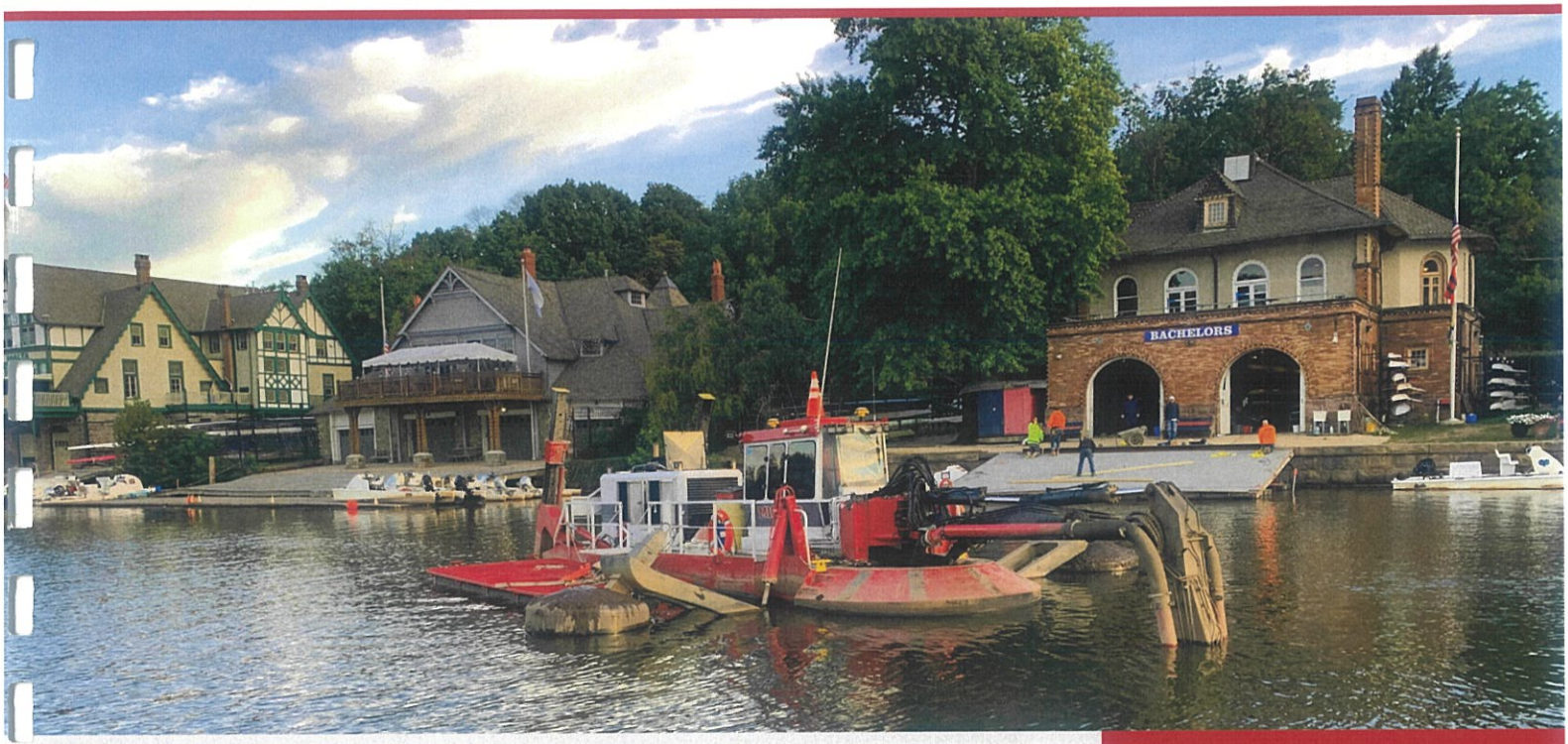
LOCATION
North Myrtle Beach, SC

TIMELINE
October 2022 - March 2023

CONSTRUCTION METHODS
Hydraulic Dredging

Schuylkill River above Fairmount Dam

MICHELS®
CONSTRUCTION, INC.



SCOPE

Michels Construction utilized hydraulic dredging techniques assisted by an excavator mounted on a barge to mitigate debris and coal deposits to effectively remove dredge sedimentation from the historic Boathouse Row in downtown Philadelphia.

Dredging conditions were extremely challenging due to debris embedded in the mud. Items including trees and branches, old dock pilings, oil and chemical barrels, washing machines, bowling balls, and car tires had to be removed before the dredge could be effective. Conditions changed from silt to mud to sand to coal tailing from long-ago days of coal production on the Schuylkill River.

The dredge material was hydraulically transported in a 10-inch HDPE pipe from the dredge through a booster pump that propelled the material through another 2,500-foot pipe over a historic hickory dam built in the 1830s to a moored transload barge. An excavator aboard the barge handled the pipe discharge and loaded a fleet of four scows that were hauled by a push boat approximately 8 miles down river to a second transloading area. At this location, dredged sediment was offloaded by a specialty submersible pump which transported the sediment as a slurry through an additional booster pump en route to a U.S. Army Corps of Engineers confined disposal facility.

ACHIEVEMENTS

Boathouse Row is a national historic site of rowing clubs dating back to the 1850s, a training site for Olympic rowers and an iconic setting in the city of Philadelphia. The currents of the river had deposited sediment and debris in front of the boathouses, making it difficult for the clubs to launch boats. As a result, the rowing community that has hosted national races for decades had lost those races due to the lack of sufficient water conditions for rowing.

Michels used its dredging equipment and experience to return the Schuylkill River and Boathouse Row to its national prominence as a competitive rowing race course.

The project had to be completed around a strict rowing schedule and environment operating windows including fish spawning and turtle hibernation. The project was completed on time.

CUSTOMER
Dredgit / United States Army Corps of Engineers

CONTACT
Eric Wells, 502.593.4368

CONTRACT VALUE
$3,059,317

LOCATION
Philadelphia, PA

TIMELINE
August - October 2022

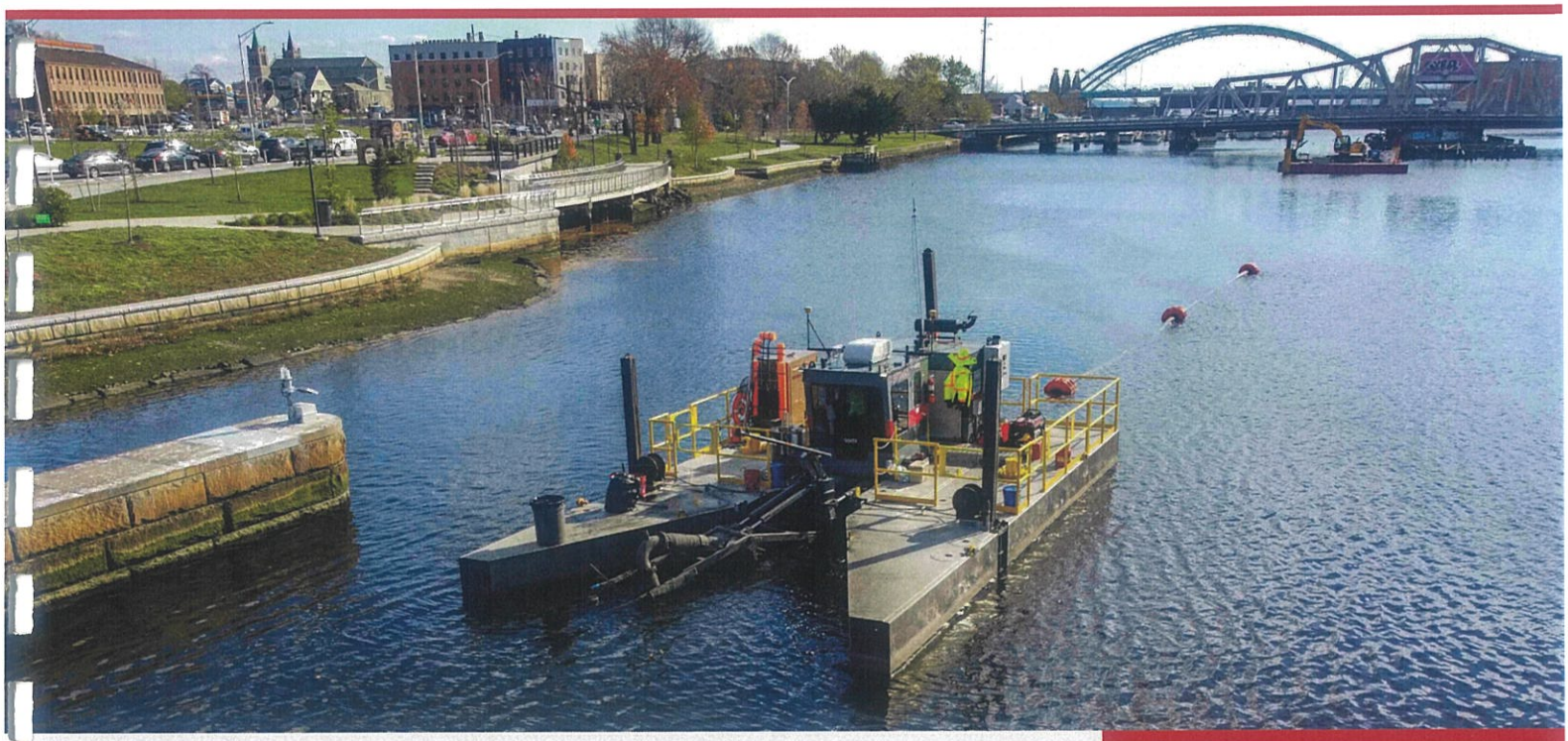
CONSTRUCTION METHODS
Hydraulic dredging

Schuylkill River above Fairmount Dam

MICHELS®
CONSTRUCTION, INC.

Waterfire Dredging Project Phase 1

MICHELS®
CONSTRUCTION, INC.



SCOPE

Michels Construction, Inc. performed hydraulic dredging on the Providence River from Crawford Street Bridge to Point Street Bridge as part of a restorative effort with use of its customized swinging-ladder, cutter suction dredge, Providence. Material removed included a mixture of silts and sands with a heavy dose of general refuse debris. Removed material was transported by pipeline through the Narragansett Bay to a geotextile dewatering area over 1.5 miles away in nearby East Providence. Mobilization efforts began in Fall of 2022 and took approximately 1 month to complete. During this time the crew constructed a 3-acre geotextile tube dewatering pad, fused and weighted all pipeline across Narragansett Bay and navigated the dredge under low-clearance bridges to the target dredge area. Hydraulic dredging was conducted from late October of 2022 into January of 2023. Approximately 30,000 cubic yards of sediment and debris were removed from this portion of the river. Dewatered sediment was later amended with Portland cement and stockpiled to be used as fill for future developments in the area. Dredging of this area provided many beneficial results. Because the area is a tidally influenced, shoaling of sediment and refuse debris resulted in virtually no depth at low tide on the east side of the river which was detrimental for the aesthetics of the downtown area and posed a safety concern for boats and other watercraft navigation on the river. Removal of the sediment and refuse debris benefitted the natural ecosystem used by crabs, shellfish, striped bass, blue fish and other aquatic species living on and in the sediment by providing higher dissolved oxygen and better water quality.

ACHIEVEMENTS

The project is in an urban environment and on a portion of the river that had not been dredged in many years. There was a large amount of trash, plastic, and debris in the waterway. Michels Construction used mechanical methods to remove larger debris, such as bikes, scooters, and furniture. Trash and plastic were often caught in the pumps and had to be removed manually. Due to the proximity of the work to the active harbor, the project team worked diligently with local, state, and federal entities to ensure that commercial activities were not impacted by the dredging work.

CUSTOMER
Rhode Island Resources Management Council

CONTACT
Dan Goulet, 401.374.9413

CONTRACT VALUE
$3,957,787

LOCATION
Providence, RI

TIMELINE
October 2022 - January 2023

CONSTRUCTION METHODS
Hydraulic dredging, earthwork, dewatering

Maintenance and New Work Dredging, Wormley Creek Channel

Heavy Civil Construction

MICHELS®

SCOPE

Project included maintenance and new work material from the Wormley Creek Main Channel to the York River, West Branch of Wormley Creek from the Main Channel to the BFC Turning/Boat Basin, and the BFC Turning/Boat Basin at USCG Training Center Yorktown (TRACEN) located in Yorktown, Virginia.

Unsuitable material was disposed of off shore via split hull hopper barge to the Wolftrap Alternate Placement Site (WTAPS) in the Chesapeake Bay. Suitable material was used to maintain and restore approximately 3,300 feet of beach area. USCG 5th District provided oversight during the relocation and removal efforts. Approximately 89,257 cubic yards of material was dredged from the 30-foot wide channel and from the turning basin, which is approximately 300 feet wide and 400 feet long. Dredging went up to six-feet below existing bottom of channel elevation.

Michels as a subcontractor performed 100% of the dredging work. Offshore disposal was completed by the Prime.

Solicitation Number: W9123616B0006.

CUSTOMER
USACE, Norfolk District

CONTACT
Nicole Woodward 757.201.7122

CONTRACT VALUE
$3,500,000

LOCATION
Yorktown, VA

TIMELINE
August - October 2017

CONSTRUCTION METHODS
Marine Construction
Dredging

Dorn Creek Sediment Removal

Sewer & Water

MICHELS® CONSTRUCTION, INC.

SCOPE

PCi Dredging, a company acquired by Michels Construction, Inc., used hydraulic dredging to remove phosphorus-contaminated sediment from Dorn Creek in the Yahara Watershed. Research in 2014 by the Wisconsin Department of Natural Resources showed that phosphorus concentrations in the sediment were seven times greater than nearby crop fields. High levels of phosphorus has proven to cause increased growth of algae, which not only can result in decreased oxygen levels in water, but these algae blooms can also produce harmful algal toxins. As it creates hazards to both wildlife and people, this phosphorus leftover from decades of farming needed to be removed. In total, 2.5 miles of stream restoration was completed, all within and on top of wetland habitats. Custom dredge equipment was fabricated to allow dredging operations in the shallow water without disturbing the natural uncontaminated substrate. The team demonstrated to the Wisconsin DNR that the proposed system had less of an environmental impact than anticipated, even though the equipment was much larger then the permitting agencies had expected.

ACHIEVEMENTS

This section of Dorn Creek was the first site decontaminated, part of a much larger group of projects known as the Dane County Legacy Sediment Removal Project. The main goal of this initiative was to eliminate the frequency and extent of large algae blooms that were affecting the Yahara chain of lakes. If left alone, phosphorus from the sediment in Dorn Creek would have continued to leech into these lakes for the next 100 years.

CUSTOMER
Dane County Department of Public Works

CONTACT
Ryan Shore 608.266.4475

CONTRACT VALUE
$1,498,190

LOCATION
Waunakee, WI

TIMELINE
October 2017 - October 2018

CONSTRUCTION METHODS
Civil
Dewatering & Ground Control
Dredging
Marine Construction
Surveying

MICHELS®
CONSTRUCTION, INC.

Appendix B

Organizational Chart & Resumes

WE DO THAT ... & **MORE**

MIDDLE PENINSULA
PLANNING DISTRICT COMMISSION

General Manager

Luke Ploessl

Manager of Dredging

Paul Olander Sr.

Site Project Manager

Tom Burgess

Regional Project Manager

Ross Johnson

Certified Hydrographer

James Dunkley

Foreman

Jeremy Marker

Foreman

Enrique Estevan

MICHELS®
CONSTRUCTION, INC.

Luke Ploessl

General Manager of Marine Operations
31 years of experience

Luke has over 30 years of industry experience and has been with Michels Family of Companies for 4 years. He fosters an environment for safe and profitable operations through planning and oversight of regional operations. General Managers set the strategic goals in coordination with the Regional VP and work with Senior and Project Managers to execute on them. Relationship management with clients and networking within the industry are other key objectives of a Michels GM.

2021 – Present: **General Manager of Marine Operations | Michels Construction, Inc. | Brownsville, WI**

2019 – 2021: **HSE Senior Manager | Michels Corporation | Brownsville, WI**
Development and implementation of on-site procedure, emergency response plan, on-site safety inspections, equipment inspections and reporting to supervisors. Assigned the responsibility for coordinating and maintaining the company safety program. Advises management in matters of safety and health, and monitors day-to-day operations to ensure that the company's safety policies and procedures are followed.

2017 – 2019: **Director of Operations Software | HCSS | Sugarland, TX**
Oversaw the development, sales and marketing of seven heavy civil construction software products for 100 to 125 million in sales. Oversaw the product managers for all products.

2008 – 2018: **Port Captain/Vice President of Safety and Compliance | J.F. Brennan | La Crosse, WI**
Oversaw all marine activities, helped acquire all marine assets, developed people to become an industry leader in marine work. Oversaw compliance and marine safety as well as related contracts including insurance coverages. Developed and maintained client relationships.

1993 – 2008: **Fleet Captain | Archer Daniels Midland | Decatur, IL**
Oversaw all compliance, safety and crewing for multiple fleets. Provided excellent customer service and maintained customer relationships as well as fostered new contracts.

PROJECT PROFILES

Fox River Cleanup | Green Bay, WI
1 billion dollar project. It was the largest environmental clean up in North America and was a super-fund site

Excel Energy | Cap-Ex Project
Worked on strategic areas of transmission lines that were complicated areas in the overall project

HCSS
Helped oversee and write a software program for safety that is currently being used by over 300 heavy civil companies around the US

TRAINING & CERTIFICATIONS

Inland River Radar
OSHA 132
OSHA 500
OSHA 5400
40-Hour HAZWOPER
Certified Marine Auditor
USACE QC training
Designated Examiner for Maritime
MSHA Part 46 and Part 48

INDUSTRY INVOLVEMENT

WEDA
AMSC board member
DCA
AWO Steering Committee member

EDUCATION

University of Wisconsin - La Crosse | La Crosse, WI
Business Administration

MICHELS®
CONSTRUCTION, INC.

Paul Olander

Senior Manager of Dredging Operations
18 years of experience • Office-Brownsville, WI

2021 – Present: **Senior Manager of Dredging Operations | Michels Construction, Inc. | Brownsville, WI**

2021: **Senior Manager of Dredging Operations | Michels Foundations | Brownsville, WI**

2006 – 2021: **Senior Project Manager | J.F. Brennan Company, Inc. | Green Bay, WI**
Held multiple positions such as Project Engineer/Surveyor, Assistant Project Manager, Project/Operations Manager and Senior Project Manager. Skilled in developing strategies and teams to effectively overcome uncertainty and mitigate risk. Responsible for overall division cost management, reporting and compliance as well as overall management of the Green Bay, WI satellite branch.

PROJECT PROFILES

2020 | Neenah Slough Sediment Remediation | Neenah, WI
Amphibious, mechanical dredging of heavy metalimpacted sediments defined within the Neenah Slough Watershed extents; project involved precision removal of over 15,000 CY of impacted sediments located within difficult to access and unique conditions as well as restoration operations

2019 | The Dredging at Waterplace Park | Providence, RI
Hydraulic dredging for restorative purposes in a highly populated dense urban waterway. The presence of significant historical critical structures presented unique conditions which presented challenges to overall scope implementation and completion. The project was collaboratively completed with very favorable results to each of the stakeholders

2018 | Lake Zumbro Dredging - CDF Construction | Lake Zumbro, MN
Maintenance dredging of approximately 500,000 CY of sedimentary material for restoration purposes, transporting dredged material approximately 1.7 MI to a constructed, confined disposal facility (CDF), implementing sediment resuspension controls and best management practices during dredging, managing material within the CDF and decant water, and restoring contractor work areas

2016-2018 | Cedar Creek Operable Unit 2A | Cedarburg, WI
Mechanical/hydraulic dredging of polychlorinated biphenyl (PCB)impacted sediments defined within the Cedar Creek Operable Unit (OU) 2A boundary extents; project involved precision removal of over 80,000 CY of impacted sediments under extremely tight tolerances as well as restoration operations

2016 | Fox Lake Generating Station Coal Combustion Residuals Pond Closure | Sherburn, MN
Mitigating the risk of exposing coal combustion residuals (CCR) to the water table by hydraulically dredging approximately 9,000 CY of CCR and soft sediment to de minimus levels, as well as dewatering and material disposal, at an ash pond

2014-2016 | Mill River Remediation, Areas I–V | Fairfield, CT
Lead and chromiumimpacted sediment remediation in 5 areas (Study Areas I–V) within the Mill River. Hydraulic dredging of lead and chromium impacted sediment; first largescale sediment remediation effort led by CT DEEP. Project involved precision removal of approximately 30,000 CY of impacted sediments under extremely tight tolerances

TRAINING & CERTIFICATIONS

2019 JF Brennan Corporate Client Service Award

Certificate of Appreciation - Awarded by the United States Army Corps of Engineers (USACE) for work performed on the Lake Erie Watershed project

Project Management Professional (PMP)

OSHA 40-Hour HAZWOPER

OSHA 30-Hour Construction

Texas A&M University Dredging Engineering short course

Texas A&M University Dredge Simulator course

Leadership Training

de Maximis Radiation Worker Training

United States Coast Guard (USCG) Boater Safety Course

First Aid/CPR Certified

INDUSTRY INVOLVEMENT

Western Dredging Association (WEDA) - member

Project Management Institute (PMI)

EDUCATION

University of Wisconsin - Oshkosh | Oshkosh, WI
B.S. in Urban and Regional Studies

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2008-2014 | | Fox River Sediment Remediation, Operable Units 2–5 | Green Bay, WI
Multiyear, $226M project involving remediation of PCB contamination along a 15mile length of the Lower Fox River. Included the precision removal of over 5M CY of contaminated sediment installation of hundreds of acres of caps and covers as well as debris removal and fish habitat creation

2007-2008 |Ashtabula Area of Concern Phases 1 and 2 | Ashtabula, OH
Environmental cleanup of polychlorinated biphenyl (PCBs) and heavy metals; hydraulic dredging operations removed over 500,000 CY of contaminated sediments from the Area of Concern (AOC). Phase I footprint extended from just North East 24th Street to Bridge Street; Phase 2 footprint extended from Bridge Street to extents of the inner harbor

2006-2007 | Grand Calumet River Sediment Remediation | Gary, IN
Performed marinerelated facets of what was, at the time, the largest nonnative sediment remediation dredging project in the United States; hydraulic dredging operations of polycyclic aromatic hydrocarbons (PAH)contaminated sediments in the Grand Calumet River adjacent to the US Steel Site

2006 | Fox River Sediment Remediation, Operable Unit 1 | Neenah, WI
Hydraulic dredging and capping operations of polychlorinated biphenyls (PCB)impacted sediments at the Little Lake Butte des Morts site

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CONSTRUCTION, INC.

Ross Johnson

Midwest Regional Manager of Dredging
20 years of experience • Office-Brownsville, WI

2021 – Present: **Midwest Regional Manager of Dredging | Michels Construction, Inc. | Brownsville, WI**

2012 – 2021: **J.F. Brennan Company, Inc.**

2010 – 2012: **Brennan Marine, Inc.**

2004: **United States Forest Service**

TRAINING & CERTIFICATIONS

USACE Construction Quality Management for Contractors (CQM-C) Certification

Boater Safety

Federal Aviation Administration (FAA) Certified Remote Pilot Small Unmanned Aerial Systems (UAS)

MSHA Certified

Certified Rigger/Signalperson

HYPACK® Volumes and Dredge Training

First Aid/CPR/AED Certification

Blood Borne Pathogens Training

Texas A&M University Dredging Engineering Short Course

OSHA 30-Hour Construction

OSHA 40-Hour HAZWOPER

INDUSTRY INVOLVEMENT

Western Dredging Association member

EDUCATION

Vermilion Community College | Ely, MN
Associate in Applied Science

PROJECT PROFILES

2021 | Harpers Slough HREP | Project Manager | Harpers Ferry, IA

Island and habitat reconstruction in Upper Mississippi River including mechanical dredging of granular and fines, rock feature construction, construction layout and design, and shallow water access

2020-2021 | Conway Lake HREP | Project Manager | Lansing, IA

Island and habitat construction in Upper Mississippi River including mechanical and hydraulic dredging, rock feature construction, island layout and design, granular stockpile offload, with remote shallow water access

2018-2020 | Lake Zumbro Dredging | Project Manager | Lake Zumbro, MN

Maintenance dredging of approximately 500,000 CY of sedimentary material for restoration purposes, transporting dredged material approximately 1.7 MI to a constructed, confined disposal facility (CDF), implementing sediment resuspension controls and best management practices during dredging, managing material within the CDF and decant water, and restoring contractor work areas

2016-2018 | Ashland Phase II Full-Scale Wet Dredge | Manufactured Gas Plant Remediation Project Manager | Ashland, WI

Mechanical and hydraulic dredging to remove polycyclic aromatic hydrocarbons (PAHs) at this Superfund site along the shoreline of Chequamegon Bay of Lake Superior. Completed dredging and placed a restorative sand layer, riprap for peninsula backfill, and fish habitat structures

2017-2018 | Cedar Creek Operable Unit 2A | Assistant Project Manager | Cedarburg, WI

Mechanical/hydraulic dredging of PCB-impacted sediments defined within the Cedar Creek Operable Unit (OU) 2A boundary extents; project involved removal of over 80,000 CY of impacted sediments as well as restoration operations

2012-2015 | Fox River Sediment Remediation, Operable Units 2–5 | Hydrographer | Green Bay, WI

This $226M project involved remediation of PCB contamination along the 39-MI length of the Lower Fox River. Dredging and capping environmental remediation work. Worked on Operable Units 4–5

2015 | Ashland Breakwater Sediment Removal | Lead Hydrographer | Ashland, WI

Targeted removal of contaminated sediment with dredge faces ranging in thickness from 6 IN to 5 FT, to expose the underlying hard bottom to support a rock breakwater (installed in a subsequent remediation phase)

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2015 | Krispin Drain Area of Concern Habitat Restoration | Lead Hydrographer | Harsens Island, MI

Habitat restoration of approximately 5 MI of wetlands near the center of the island, including removal of sediment from the Krispin Drain to promote flow, removal of invasive phragmites, and installation of clean substrate material at strategic locations for fish spawning

2014-2015 | East Branch Grand Calumet River Remediation | Hydrographer | Hammond, IN

Remediation and restoration of a 1.8-MI track of the Grand Calumet River and adjacent Seidner Marsh; a total of 360,000 CY of PCB-contaminated material was removed using several innovative methods. This project also included installation of both an inert and a reactive sediment cap, followed by complete restoration of the remediated wetlands

2013 | Capoli Slough UMR Island Construction | Assistant Project Manager/Hydrographer

Project built 27 acres of islands in the upper Mississippi River. Utilized both hydrographic and topographic surveys

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CONSTRUCTION, INC.

Entrance Channel & Truman Harbor Dredging | Key West, FL
Project Hydrographer

River Raisin AOC Cleanup | Monroe , MI
Lead Project Hydrographer

Connecticut River Capping Pilot Study | Springfield, CT
Lead Project Hydrographer

Stevens Point Former MGP Cleanup | Stevens Point, WI
Lead Project Hydrographer

Lower Fox River Cleanup OU1 | Neenah, WI
Lead Project Hydrographer

Lower Fox River Cleanup OU2-5 | Green Bay, WI
Lead Project Hydrographer

Matthew J. Strickler
Secretary of Natural and Historic Resources and Chief Resilience Officer

Clyde E. Cristman
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

Rochelle Altholz
Deputy Director of Administration and Finance

Nathan Burrell
Deputy Director of Government and Community Relations

Darryl M. Glover
Deputy Director of Dam Safety & Floodplain Management and Soil & Water Conservation

Thomas L. Smith
Deputy Director of Operations

August 19, 2021

Mr. Lewis L. Lawrence, Executive Director
Middle Peninsula Planning District Commission
Saluda Professional Center
125 Bowden Street
PO Box 286
Saluda, Virginia 23149

Re: MPPDC Resilience Plan Second Submission - CFPF

Dear Mr. Lawrence:

Thank you for the resubmission of the Middle Peninsula Planning District Commission's (MPPDC) Regional Flood Resiliency Plan. After careful review and consideration, the Virginia Department of Conservation and Recreation has deemed the Plan meets the criteria outlined in the June 2021 Community Flood Preparedness Grant Manual. This approval will remain in effect for a period of three years, ending on August 20, 2024.

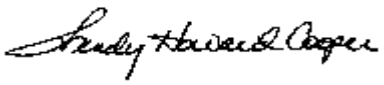
1. **Element 1: It is project-based with projects focused on flood control and resilience. VA-DCR RESPONSE:**
    a. Meets criteria as written.
2. **Element 2: It incorporates nature-based infrastructure to the maximum extent possible. VA-DCR RESPONSE**:
    a. Meets criteria as written.
3. **Element 3: It includes considerations of all parts of the local government regardless of socioeconomics or race. VA-DCR RESPONSE:**
    a. Meets criteria as written.
        i. The provided plan meets the requirements of Element 3 in Appendix G of the Grant Manual. However, flood data referenced in the MPPDC portrays the majority of flooding as coastal. As we discussed during our meeting with you on August 4, 2021, there are additional types of flooding in MPPDC localities. DCR recommends the commission develop a more comprehensive planning document(s) addressing the MPPDC's overarching approach to furthering flood resilience beyond shoreline protection in all nine member localities.

4. **Element 4: It includes coordination with other local and inter-jurisdictional projects, plans, and activities and has a clearly articulated timeline or phasing for plan implementation. VA-DCR RESPONSE:**
    a. Meets criteria as written.
        i. DCR recognizes that both program designs make participation available to residents of all MPPDC member localities who have the ability to qualify, and that the individual program designs offer detailed breakdowns of the timeline and terms for loans disbursed pursuant to individual projects once accepted. This does not constitute a project-based timeline or phasing plan for addressing flooding resilience at the regional, locality, or community level. DCR recommends additional consideration be given to how all flooding, regardless of ability to pay, will be addressed in the MPPDC.

5. **Element 5: Is based on the best available science, and incorporates climate change, sea level rise, storm surge (where appropriate), and current flood maps. VA-DCR RESPONSE:**
    a. Meets criteria as written.

VA DCR looks forward to working with the MPPDC in its efforts to develop a resilience plan that addresses flooding for its nine member communities.

Sincerely,



Wendy Howard Cooper, Director
Dam Safety and Floodplain Management

cc: Darryl M. Glover, DCR

Middle Peninsula Regional Flood Resiliency Plan

Resubmittal #3 8/6/21

Approved DCR 8/19/21 until 8/20/24

The Middle Peninsula is located on the western shore of the Chesapeake Bay, bound to the north by the Rappahannock River and to the south by the York River. As the region is in the Virginia coastal plain, it has a relatively flat topography with approximately 4,000 National Flood Insurance policies, approximately 415 repetitive loss and 30 severe repetitive loss structures, all of which are located along or near 1,000 miles of privately-owned shorelines generating necessary tax revenue to fund essential local governmental services. The southeastern portions of the region are located at or close to sea level, while elevation rises to approximately 200 feet above sea level moving in a northwesterly direction. Flooding is the most frequent and costly natural hazard in the United States as well as the Middle Peninsula. Since 1978 more than $60,000,000 in Federal Flood Insurance losses have been paid due to all forms of flooding in the region.

Flooding impacts all socioeconomic groups (regardless of race, gender, age, ethnicity, diversity, or income). All land uses are subject to the destructive forces of water including, but not limited to residential, commercial, industrial, retail, agricultural, silvicultural, recreational, and publicly owned assets. All of the Middle Peninsula is subject to all types of flooding including but not limited to coastal, riverine, storm surge, inland, stormwater, flash flooding, groundwater, areal, ponding (pluvial), or urban.

The Middle Peninsula Planning District Commission (MPPDC) recognizes the need to better secure the tax base of coastal localities against the risk of flooding and the expectation to deliver essential governmental services, including public safety. All of which are more frequently challenged by coastal storms and recurrent flooding of all types. There is an unfortunate and eroding relationship between at-risk real estate values and funding of essential governmental services. Without proactive flood mitigation for coastal lands and structures, the rural coastal tax base will literally and figuratively erode into the Chesapeake Bay. Revenue will continue to decline with flood insurance claims, agricultural claims and uninsured costs will continuing to increase.

In response to emerging flood challenges, the MPPDC Commission has authorized staff to develop the **Middle Peninsula Fight the Flood (FTF) Program** which leverages state and federal funding to deliver flood mitigation solutions directly to constituents, for both the built environment and the natural environment with an emphasis on nature-based flood mitigation solutions. The Middle Peninsula **Living Shoreline Resiliency Incentive Funding Program** has been the only structured program in the Commonwealth offering loan and grants to all qualified waterfront citizens and waterfront businesses since its establishment in 2015.

The Middle Peninsula **FTF** program helps property owners gain access to programs and services to better manage challenges posed by flood water.

The Middle Peninsula's Regional Flood Resiliency Plan is comprised of two primary approved policy documents which form the implementation and foundation of the Middle Peninsula flood protection approach and are indirectly and directly supported by multiple specific regional planning documents, both approved by various required federal, regional or local partners as required by statute. These documents contain the elements described in the DCR Virginia Community Flood Preparedness Fund to qualify as the region's Resiliency Plan.

Long Term Planning

- **Middle Peninsula All Hazard Mitigation Plan, FEMA and Middle Peninsula locality approved 2016 (MPPDC Website)**

- **Middle Peninsula Comprehensive Economic Development Strategy, MPPDC Approved March 2021 (MPPDC Website)**

- **Middle Peninsula VDOT Rural Long Range Transportation Plan - MPPDC Approved ~annually**

Short Term Implementation

- **Middle Peninsula Planning District Commission Fight the Flood Program Design MPPDC Commission approved June 2020 (Attached) Chairman approved 8/6/21 update**
- **Middle Peninsula Planning District Commission Living Shoreline Resiliency Incentive Funding Program-Virginia Revolving Loan Fund Program Design and Guidelines approved 2015 (Attached)**

These five documents contain the required elements described in the 2021 Grant manual for the Virginia Community Flood Preparedness Fund.

For applications made under the Virginia Community Flood Preparedness Fund and if grants and loans are made available, it is the policy of the MPPDC to provide such to qualified participants based on the terms and conditions associated with flood risk, as well as providing various grant and loan funds available to support the public purpose(s) for which the funds have been allocated. The program utilizes income guidelines for residential participation based on household income and ability to pay. Businesses will provide documentation such as profit and loss statement and/or other documentation of adequate business equity to collateralize the public investment). Grant/Loan awards, if available will be based on the program requirements of the source of the funds, if any. Unless otherwise dictated by the source of the grant funds, MPPDC will distribute grant funds on a sliding scale according to FEMA Flood insurance zones for any qualified resiliency project that meets the definition of a living shoreline found in § 28.2-104.1 of

the Code of Virginia and is designed to attenuate the impinging wave climate across the sill and marsh system during significant storm events. FEMA flood zone determination is based on the best available science recognized by FEMA. Unless prohibited by the funding source or type of project, at a minimum, project designs shall be designed to and based on site conditions identified within the locality FEMA Flood Insurance Study (FIS) which use statistical water levels, wave heights and fetch exposure.

> **FEMA FIS:** A compilation and presentation of flood risk data for specific watercourses, lakes, and coastal flood hazard areas within a community. When a flood study is completed for the NFIP, the information and maps are assembled into an FIS. The FIS report contains detailed flood elevation data in flood profiles and data tables.

Projects funded must have a primary purpose of prevention or protection to reduce coastal, riverine or inland flooding and focus on:

> **Nature-based solutions:** including but not limited to: wetland restoration, floodplain restoration, swales and settling ponds, living shorelines and vegetated buffers.
>
> **Additional flood control solutions:** including, but not limited to: floodwalls, levees, berms, flood gates, structural conveyances and storm water systems.
>
> **Preservation and creation of open space:** including property acquisition and relocation and the permanent conservation of lands identified as having flood resilience value by the Conserve Virginia Floodplain and Flooding Resilience layer or a similar data driven analytic tool.

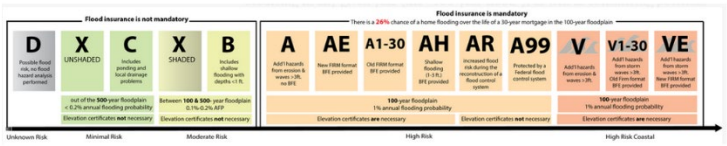
Designs will be recognized and considered that are sourced to other qualified metrics which include:

- Appropriate company certification illustrating and documentation of
    - nature based solution and
    - flood control solutions including documentation of BMP approval for erosion control, water quality or flood protection.
- Designed and certified by a licensed professional who routinely designs projects for the flood mitigation space.

Designs shall take into consideration any additional requirements, such as required sea-level rise rates.

Unless prohibited or directed by the funding program, MPPDC has established grant funding thresholds based on flood risk established by FEMA.

Living Shoreline Resiliency Grant Limits



0% Up to 10% Grant 11% up to 50% Grant 51% up to 80% Grant

The DCR guidelines require that an approved plan shall meet the following criteria:

- It is project-based with projects focused on flood control and resilience. MPPDC YES
- It incorporates nature-based infrastructure in specific projects. MPPDC YES
- It includes considerations of all parts of a locality regardless of socioeconomics or race. MPPDC YES
- It includes coordination with other local and inter-jurisdictional projects, plans, and activities and has a clearly articulated timeline or phasing for plan implementation. MPPDC YES
- Is based on the best available science, and incorporates climate change, sea-level rise, and storm-surge (where appropriate), and current flood map MPPDC YES

The following MPPDC program designs for the Middle Peninsula Planning District Commission **Fight the Flood Program** and the **Living Shoreline Resiliency Incentive Funding Program** are the implementation structure for administering the expenditure of funding provided by the Virginia Community Flood Preparedness Fund

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Middle Peninsula Planning District Commission
Fight the Flood Program
Program Design
MPPDC Commission Approved
6/24/20
Amended Per PDC Chairman 8/6/21
OVERVIEW

The Program Design for the Middle Peninsula Fight the Flood Program (FTF) outlines marketing strategies, loan application, review process, funds management, administration, and loan agreements with property and business owners. This document can be administratively reviewed with minor programmatic amendments subject to MPPDC Chairman approval. Significant programmatic changes require Commission approval.

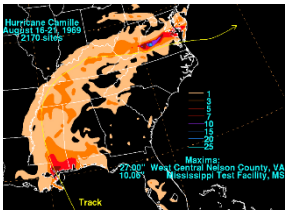
Fight the Flood: Public Purpose Statement

The MPPDC Fight the Flood (FTF) program recognizes the need to better secure the tax base of coastal localities; the inherent risk to the delivery of essential governmental services, including public safety, posed by coastal storms and recurrent flooding of all types; and the relationship between at-risk waterfront real estate values and funding of

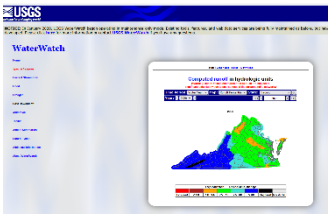
essential governmental services. The FTF program exists to help flood-prone property owners access programs and services to better manage challenges posed by flood water. When grants and loans are available, it is the policy of the MPPDC to provide such to qualified participants based on the terms and conditions associated with flood risk, as well as providing various grant and loan funds available to support the public purpose(s) for which the funds have been allocated.

The Fight the Flood program goals are to generate and facilitate community resiliency by addressing all types of flooding which impact all socioeconomic groups (regardless of race, gender, age, ethnicity, diversity, or income). All land uses are subject to the destructive forces of water including, but not limited to residential, commercial, industrial, retail, agricultural, silvicultural, recreational, and publicly owned assets. All of the Middle Peninsula is subject to all types of flooding including but not limited to coastal, riverine, storm surge, inland, stormwater, flash flooding, groundwater, areal, ponding (pluvial), or urban.

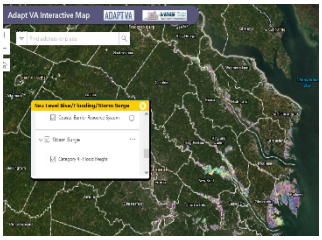
Water impacts the Middle Peninsula from a variety of sources and conditions including velocity, duration, frequency, and volume.



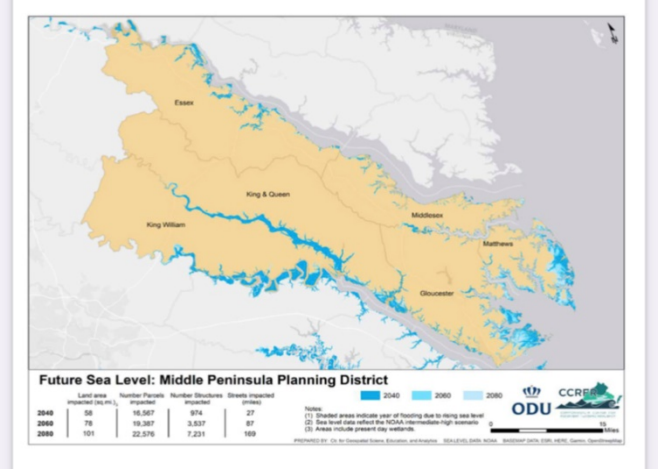
Fast Moving: Hurricane Camille was a fast-moving storm with massive rainfall over a quick time period. This type of event has major and widespread flooding impacts across the entire Middle Peninsula.



Slow Moving: According to the USGS, all of the Middle Peninsula experiences stormwater runoff between the 10-75% range causing water to move over the landscape with the ability to cause erosion.



Storm Surge: Land uses along the riverfront, Chesapeake Bay front and streams subject to tidal influence will experience surge that encompasses all land area, including the built and natural environment for the duration of the surge.



Sea-LevelRise: Land uses along the riverfront, Chesapeake Bay front and streams are subject to increasing sunny day flooding events and more frequent flooding due to sea-level rise and subsidence. By 2040, the estimates 16,567 Middle Peninsula parcels with be impacted by sea level rise [Commonwealth Center for Recurrent Flooding Resiliency]

The Fight the Flood program looks to help mitigate flooding issues which impact all socioeconomic groups while also enhancing water quality, and to encourage economic growth by targeting and attracting businesses to provide flood mitigation products and services for flood-prone properties, including shorelines and buildings. When appropriate, projects should be designed not only for today's flooding challenges, but also designed for future flooding challenges by extrapolating FEMA flood risk using FEMA Insurance Studies or other appropriate methodologies.

To accomplish its stated goal, the Fight the Flood program identified three core **Objectives** that develop the program's policy framework:

Objectives

1. Provide financial products to influence consumer behavior for managing and mitigating flood risk
    a. Offer a suite of financial products (i.e. loans, grants, insurance) with a correlation to lower interest rates and grants for shorelines under greater risk; higher rates and less grant funding for lower risk shorelines using FEMA flood zones
    b. **When possible, leverage General Assembly legislation such as § 58.1-3228.1.** *Partial exemption from real property taxes for flood mitigation efforts for grant matching funds.*
2. Provide consumer to professional services connections through the Fight the Flood program
    a. Registered consumers with a flood mitigation issue will have direct access to a pool of established resiliency professionals.
    b. Participating companies are evaluated on a regular basis
    c. Resiliency professional registered under Fight the Flood may provide discounted professional services to consumers in need.

3. Utilize reach-based Shoreline Implementation "Battle Plans" to facilitate multi parcel mitigation projects for economy of scale. These plans will be prepared and or reviewed by qualified professionals in the field of coastal flooding, such as Virginia Institute of Marine Science Shoreline Studies Program or plans funded under the Virginia Coastal Zone Management Program

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I. Marketing Strategy

A. Geographic Area of Program: The Program shall be available to homeowners located in the Middle Peninsula Planning District Commission ("MMPDC"). The MPPDC comprises of the following member-localities: counties of Essex, Gloucester, King and Queen, King William, Mathews, and Middlesex; and the towns of Tappahannock, Urbanna, and West Point.

B. Solicitation of Fight the Flood/Marketing:

1. Referrals from private sector contractors, design professionals, flood mitigations companies and engineers
2. Referrals from local governments, including local wetland boards and/or other State agencies
3. Social Media Channels, Websites, News releases, Public Information Notices, i.e. newspapers, fliers at public locations, educational displays

C. Outcomes from FTF Participation:

1. Encourage homeowners to purchase flood insurance;
2. Encourage homeowners with existing flood insurance to evaluate cost effectiveness for premium relief;
3. Encourage homeowners to practice coastal resilience to manage flood risk and reduce damage

D. Available FTF financial & insurance products:
Current existing products are included in the FTF program

1. MPPDC Revolving Loan Program Funding
   - Living Shorelines Resiliency Incentive Funding Program
     - **a.** Nature-based shoreline BMP construction
     - **b.** Coastal stormwater BMP construction
   - Septic Repair Program
   - Energy Efficiency Revolving Loan Program
   - Small Business Financing, Training, loan and grants
   - Other loans programs as available
2. MPPDC Grants

- Grants shall be leveraged and utilized to provide protection for hazard and flood prone areas with an enhanced focus on socioeconomically vulnerable property owners.
    - **a.** Nature-based shoreline BMP construction
    - **b.** Coastal stormwater BMP construction
    - **c.** Residential infrastructure resiliency improvements (i.e. structures, septic systems, utilities, etc.)
- Loan Forgiveness options when available
- VCAP Grants (offered by the Soil Water and Conservation District) when available
- Other grants and grant programs as available

3. MPPDC Insurance

- Parametric insurance for living shorelines and septic systems
- MPPDC Living Shoreline Plant Insurance Program
- Other insurance products as available

E. Income Guideline: Residential participation will be based on the household income and ability to pay. Businesses shall provide documentation such as profit-and-loss statements and/or other documentation of adequate business equity to collateralize the public investment. Grant/loan awards, if available will be based on the program requirements of the source of the funds, if any.

F. Terms of Loan:
Homeowners who are eligible to receive a revolving loan from the existing MPPDC Living Shoreline Loan program (see MPPDC program design for specific requirement) shall be subject to the following terms:

1. All loans over $3,000 shall be secured with a Deed of Trust granted to the Middle Peninsula Planning District Commissioner. Businesses may use a deed of trust, security agreement, UCC liens, etc.

2. The owner of the property must agree that, if the property is sold, transferred, or otherwise conveyed voluntarily, when the owner is living, or if the real estate ceases for any reason to be the owner's principal place of residence, any outstanding balance must be paid back to the Middle Peninsula Planning District Commission.

3. If a business is sold and the Living Shoreline Loan program debt is to be assumed, a business may carry forward the loan debt as part of the business sale, assuming approval is granted by the MPPDC prior to the sale.

- If not, any outstanding principal (and grant) amount must be paid back to the Middle Peninsula Planning District Commission.

G. All beneficiaries must make monthly loan payments by automated clearing house debit from a valid checking or savings account.

II. Vendors: Qualifications & Expectations

A. The MPPDC has a fiduciary responsibility to protect the expenditure of loans/grants. Thus, it sets forth the following qualifying criteria and expectations for vendors to comply.

B. Qualifying businesses need not be located within the Middle Peninsula region, although we encourage and invite businesses with physical footprints within the Middle Peninsula to join.

C. Prospective vendors to be listed on the FTF website must match at least one of the qualifying criteria below to participate in the Fight the Flood business marketplace and have taken and completed appropriate professional training(s), from the Virginia Institute of Marine Science or other universities, colleges, government or other professional programs offering certifications or credentials related to professional trade or profession directly related to the services to be provided.

1. Class A Contractors License
    - Automatically accepted upon proof of successful project completion (project completion statement, closed permit, release of performance bond, etc.)
2. Class B or C licenses
    - Proof of permitted and completed similar jobs, at least 3 jobs within the last 24 months in a Tidewater locality.
3. Other applicable methods presented and accepted by Fight the Flood program manager.

D. To be listed on the FTF website, qualifying vendors shall complete the "Fight the Flood Business Survey" as provided by the MPPDC.

1. The MPPDC shall maintain a database of qualifying vendors and made available to FTF registered property owners who request financial assistance. Property owners are not required to use qualified FTF vendors but are encouraged to.
2. It is mutually understood by all parties that the homeowners select the vendor

E. Participating FTF qualified vendors are encouraged to:

1. Support the FTF program by offering services on discount (5%–15%+) to only those homeowners who are registered in the FTF program;
2. Carry necessary insurance such commercial general liability. Homeowners using any contractor are encourage to ask for proof of insurance: For example, Class A Contractors $1,000,000 Class B and C $500,000-$250,000.

3. Acknowledgement that all financial payments from the MPPDC are released to the homeowner when approval is granted from the appropriate permitting agency denoting the completion of the work.
    - Loan proceeds can be released upon recordation of loan documents
    - Grant proceeds can be released upon satisfactory completion of the job, with proof of acceptance by the permitting agency
    - Some cost can be pre-paid under the program upon issuance of required permits or cost necessary to apply for permits such as design and engineering, etc.
4. Commit to prompt communication with the homeowners

Continued next page

Middle Peninsula Planning District Commission
Living Shoreline Resiliency Incentive Funding Program

Virginia Revolving Loan Fund Program Design
And Guidelines – December, 2015
Amended 6/24/2020
OVERVIEW

The Program Design and Guidelines for the Middle Peninsula Living Shoreline Resiliency Incentive Funding Program (LSIP) will delineate marketing strategies, loan application and review process, environmental review, funds management and administration, and loan agreements with property (residential and business) owners.

This program will provide incentives in the form of funding and insurance for homeowners to install living shorelines in lieu of shore hardening approaches for shoreline stabilization on private property.

I. Marketing Strategy

- Geographic Area of Program: The Program will be available to homeowners of property located in the Middle Peninsula Planning District of Virginia. The localities of the Middle Peninsula are the counties of Essex, Gloucester, King and

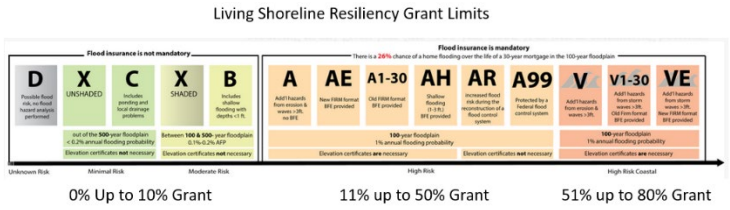
Queen, King William, Mathews, and Middlesex; and the towns of Tappahannock, Urbanna, and West Point.

- Solicitation of Applications: Loan applications will be sought through the following means:

    - Referrals from private sector contractors and engineers.
    - Referrals from Local Governments or other agencies.
    - News releases, Public Information Notices-Newspapers, fliers at public locations, educational displays at Captain Sinclair Landing

- Income Guideline –Residential participation will be based on the household income and ability to pay. Businesses will provide documentation such as profit and loss statement and/or other documentation of adequate business equity to collateralize the public investment). Grant/Loan awards, if available will be based on the program requirements of the source of the funds, if any.

    Unless otherwise dictated by the source of the grant funds, MPPDC will distribute grant funds on a sliding scale according to FEMA Flood insurance zones for any qualified resiliency project that meets the definition of a living shoreline found in § 28.2-104.1 of the Code of Virginia and is designed to attenuate the impinging wave climate across the sill and marsh system during significant storm events. A design will use statistical water levels and wave heights per FEMA flood zones and the fetch exposure referenced in FEMA flood insurance rate study or other qualified study.



- Terms of Loan:

    All loans over $3,000 will be secured with a deed of trust granted to the Middle Peninsula Planning District Commission. Businesses may use a deed of trust, security agreement, UCC Liens etc . The owner of the property must agree that, if the property is sold, transferred, or otherwise conveyed voluntarily, when the owner is living, or if the real estate ceases for any reason to be the owner's principal place of residence, any outstanding principal amount must be paid back to the Middle Peninsula Planning District Commission. If a business is sold and the living shoreline debt is to be assumed, a business may carry forward loan debt as part of the business

sale, assuming approval is granted by the MPPDC prior to sale. If not, any outstanding principal (and grant) amount must be paid back to the Middle Peninsula Planning District Commission

- All beneficiaries must make monthly loan payments by automated clearing house debit from a valid checking or savings account.

-

1. Interest and principal payments will commence as soon as funds are released. Final payment to owner or contractor will not be released until review by VMRC or local wetlands board staff to ensure the project has been completed consistent with the terms and conditions of the VMRC or wetlands permit.
2. Loan interest rates will be at the WSJ Prime Rate as published at http://www.bankrate.com/rates/interest-rates/wall-street-prime-rate.aspx
3. Alternatively, if the applicant has a banking relationship with a lending institution with a physical foot print within the Middle Peninsula, the program will match a verified HELOC rate to a floor of 2% rate. An additional ¼% rate reduction below a verified HELOC rate can be included for any project located in a FEMA A, AE, AH, AR, A99, VorVE flood zone designed to attenuate wave energy and storm surge.
4. In order to close out lending on an existing MPPDC-DEQ-VRA loan, the applicant may negotiate an interest rate to facilitate the closure of any outstanding loan balance to assist the Commission with refunding of the program. A rate floor of 1.5% is established.

5. Low income homeowners may be offered grants and lower interest rates based on household income.

- Loan Process
  - Applicant shall complete application provided by MPPDC
  - MPPDC staff can assist with application as needed
  - Loan terms and payments options will be discussed with client. Loans shall be amortized by monthly installment payments.
  - Completed application will be provided to MPPDC Closing Agent for loan processing and loan closing
  - Applicant and MPPDC will close loan. Loan Closing will take place at the office of the Middle Peninsula Planning District Commission, loan closing agents office or other agreed to location.

- Loan term:

  - Loans of $10,000 or less will be financed for up to 60 months.

- Loans over $10,000 to $35,000 will have the option of financing for up to 120 months.
- Loans over $35,000 will have the option of financing for up to 180 months, with approval from VRA.
- For eligible applicants receiving VRA loan forgiveness, terms of forgiveness will be included within the promissory note. If the applicant pays off the note before maturity, any outstanding loan forgiveness must be repaid and included as part of the payoff calculations. VRA funding for reach based, multi parcel projects will be handled on a case by case basis with terms included in the promissory note(s)

- Property transfer criteria: Balance of the principal of the loan shall be due and payable to The Middle Peninsula Planning District Commission upon sale or transfer of the property.

- Identification of Prior Existing Debt:

  - No subordination of loan shall be done for equity mortgage requests by beneficiary.
  - Applications found to carry a delinquent or defaulted first mortgage shall be ineligible for assistance. Applicants whose property is financed must carry a current first mortgage in good standing. This mortgage must have been current for at least the 12-month period prior to application or since inception of mortgage if in existence less than 12 months.

- Size of Loan: Loans shall not be less than $1,000.

- Fees and Service Charges:

  - Application Fee-$40 required at time of application.

  - Administrative Fee – To be determined based on cost of necessary documentation and closing costs. May be amortized with loan funds.
  - Late Fee-5% charged on unpaid payment due applies when 7 days past due date of payment.

- Security: Individual property owners receiving loans will sign a promissory note for the term of the loan. Loans over $3,000 are to be secured by a Deed of Trust.

- Financing, Permits, Inspections, Contractor Selection and Certification, Disbursement of Funds

  The Middle Peninsula Planning District Commission Living Shoreline Incentive and Funding Program will authorize VRA financing of any project not prohibited by any local ordinance and approved by VMRC or the applicable local wetlands board that satisfies the definition of a living shoreline consistent with § 28.2-104.1 of the Code of Virginia.

  If required by either the permitting agency or terms of a grant award, monitoring of the site, absent other requirements will be required for 3 years after installation following protocol elements outlined in Milligan et al 2019. Monitoring cost can be financed as part of the project.

  Applicants are encouraged to review the MPPDC Fight the Flood Program Design for access to information related to contractor services

  Contractor may request partial reimbursement payment for ordering of materials necessary for the job. Pre-draws will collect interest at the rate agreed to in the promissory note. Accrued interest for pre-draws will be added to the final note payment. Principal and interest payments will commence when the project has been completed.

Final funds will be disbursed to homeowners/contractor only after acknowledgement by local wetlands board and/or VMRC of satisfactory completion of projects.
Homeowner/Contractor shall provide to MPPDC a statement of final project completion

- Insurance Program: Dependent on securing the necessary funding, the Middle Peninsula Planning District Commission Living Shoreline Incentive and Funding Program will "insure" the plants of eligible living shoreline installations for up to two (2) years following initial construction dependent on funds available in the insurance pool program at the time of claim. In the event the plants die, the reason must be explained for the need to be replaced. If applicable, the program will provide grant funds necessary to purchase and replant the same or similar plants in any installation that was previously funded by the program. This insurance can be utilized up to 2 times per project as long as insurance funds remain in the program. All claims must be certified by program partners (VIMS/VMRC)
- Parametric Living Shoreline Insurance policies can be financed as part of the loan package. The applicant may choose how many years of insurance to finance.

II. Loan Application and Review

- Application Guidelines:

- Income Eligibility: An applicant shall complete an Income Eligibility worksheet to determine income qualification for determination of ability to repay loan.

- Application Fee: A $40 application fee shall be charged at the time of application. The fee shall be nonrefundable.
- Place and Time of Application: Applications are available at the offices of the Middle Peninsula Planning District Commission,

Saluda Professional Center, 125 Bowden Street,
Saluda, Virginia between the hours of 8:30 a.m. to 4:30 p.m.,
Monday through Friday, except holidays, by mail request at PO Box 286, Saluda VA 23149, and by phone at (804) 758-2311. A downloadable application is also available at www.mppdc.com

- Review and Approval of Applications:

1. Staff Review- The staff of the Middle Peninsula Planning District Commission will review each application for Completeness and to verify income eligibility.
2. Project Management Committee- The Middle Peninsula Planning District Commission will designate a committee to review and approve each application. If grant funds are available the Committee will determine eligibility for grant funding following the criteria required by the funder or the program design. The Committee shall consider the following in determining project priorities:
    - Need for shoreline management at the project site (in consultation with VMRC staff)
    - FEMA Flood zone
    - Number of projects funded in a jurisdiction - Localities that have never received funding for a project will be given priority
    - Ability to pay – the ability of the homeowner to repay the loan
3. The MPPDC Board may authorize the Executive Director to complete all loan agreements and notes pursuant to approved loans.

III. Administration of VRA Financing Funds

- Security: The Living Shoreline Incentive Funding Program will secure the loan with the Virginia Revolving Loan Fund through the revenues generated through loan payments made by individual property owners and through investment of capital funds.

1. Interest Security- The Program will offer loans at interest rates of WSJ Prime as published at www.bankrate.com

B. Alternatively, if the applicant has a banking relationship with a lending institution with a physical foot print within the Middle Peninsula, the program will match a verified HELOC rate to a floor of 2% rate. An additional ¼% rate reduction below a verified HELOC rate can be included for any project located in a FEMA A,AE,AH,AR,A99,VorVE flood zone designed to attenuate wave energy and storm surge

C. In order to close out lending on an existing MPPDC-DEQ-VRA loan, the applicant may negotiate an interest rate to facilitate the closure of any outstanding loan balance to assist the Commission with refunding of the program. A rate floor of 1.5% is established.

2. Principal Security- The MPPDC Program will borrow funds from the Virginia Resource Authority under terms and conditions agreeable to each party. Historically, VRA has loaned the Commission $250,000 for a period of 15 years at a 0% interest rate, but terms and conditions will vary as the Commission recapitalizes its program over time.
3. Total Annual Security/Annual Debt Payments- At program start up, annual debt payments will be $16.667, to be paid in semi-annual payments of $8,333. Future annual debt payments will vary based on recapitalization of the fund and terms offered by VRA. MPPDC will manage the loan fund and portfolio to ensure repayment of indebtedness.
4. MPPDC will establish a Loan Loss Reserve in the amount of $16,667 or an amount equal to one (1) year debt service payments. These funds will be designated as "Restricted Cash – MPPDC Series 2017 Reserve Fund"" on the MPPDC balance sheet until such time as the loan is repaid in full.

B. Administration:

1. The Middle Peninsula Planning District Commission will dedicate staff personnel to administer the Program. The Executive Director will provide supervisory guidance to the program.
2. The MPPDC will work closely with the State agencies involved in the protection of water quality. The Department of Environmental Quality and the Virginia Marine Resources Council will provide project guidance and assist through the permitting process.

3. The MPPDC Board will designate a Project Management Committee to provide input into the loan review and financial management aspects of the Program. The Board will also be involved in oversight of the entire program.
4. Fund Administration-The Program will invest any undisbursed portion of the loan proceeds with banks operating in the region or the Commonwealth of Virginia Department of the Treasury Local Government Investment Pool. Revenues from loan payments will be invested in said accounts providing liquidity to coincide with debt payments to the VRLF. Interest earnings from the Program will be available for administration costs and loan security. All revenues available after debt payments and administration costs may be utilized to provide additional assistance through the form of additional loans and/or grants to qualified applicants.

IV. Notification of Changes to the Local Program

The MPPDC will notify the Department of Environmental Quality and the Virginia Resources Authority of any anticipated changes to the Program Design at least 60 days prior to the effective date of such changes.

Need for Assistance

Provide more detailed versions of those outlined as General Requirements. Identify issues or problems that will be addressed by the project.

- *Explain the **local government's financial and staff resources**.*
  - *o Identify relevant staff members (floodplain administrators, planners, emergency managers, building officials, engineers) employed with the local government.*
  - *o Identify relevant software the local government has access to.*
  - *o Explain the local government's capabilities.*

Local Government's Financial and Staff Resources

MPPDC

The MPPDC is a 52-year-old political subdivision of the Commonwealth of Virginia formed by the Middle Peninsula localities (Essex, Gloucester, King & Queen, King William, Mathews, and Middlesex Counties and the Towns of Urbanna, Tappahannock, and West Point) under VA Code §15.2-4203 to provide solutions to problems of greater than local significance. The MPPDC and its participating localities have worked diligently on topics associated with the land water interface, including coastal use conflicts and policies, sea level rise, stormwater flooding, roadside ditch flooding, erosion, living shorelines, coastal storm hazards (e.g., hurricanes, tropical storms), riverine and coastal flooding, and coastal resiliency.

In 2020, the MPPDC launched the Fight the Flood (FTF) Program to connect property owners to contractors who can help them protect their property from rising flood waters. FTF offers a variety of financial tools to fund resiliency projects including but limited to the Septic Repair revolving loan program, Living Shoreline incentives revolving loan fund program, and plant insurance for living shorelines. Since the beginning of the program FTF has invested $44,506,804 in flood protection to the Middle Peninsula Localities. The proposed project in this application relates to Middle Peninsula regional resilience efforts.

Currently MPPDC staff manages 49 projects funded by a variety of funding state and federal agencies, including National Oceanic and Atmospheric Administration (NOAA), US Department of Transportation, Federal Emergency Management Agency, National Fish and Wildlife Foundation, Virginia Department of Housing and Community Development, Virginia Housing Development Authority, Virginia Department of Conservation Recreation, Virginia Coastal Zone Management Program, Virginia Department of Environmental Quality, Virginia Department of Health, and Virginia Department of Transportation. The MPPDC adopted an $10,082,854 agency budget for FY2025 (July 2024 to June 2025). Several of these projects involve multiple sub-projects and some involve dozens of individual projects, most of which are located on private properties.

To ensure that projects are complete according to the scope of work, project timeline and budget, MPPDC staff work together. Staff includes the following:
- ***Lewis Lawrence, MPPDC Executive Director,*** coordinates project partners, assist with project execution, and will provide updates to the MPPDC Board.
- ***Curt Smith, MPPDC Deputy Director,*** *will advise and assist with project partner coordination, advise on project execution and will provide updates to the MPPDC Board.*

- ***Rachael Peabody, MPPDC Deputy Director****, will administer and manage CFPF funded projects.*
- ***Julie Kaylor, MPPDC Chief Financial Officer****, will oversee all financial activities of this project including preparation of financial reports and budget management. She has also been in charge of administrating the MPPDC Living Shoreline Incentives Revolving Loan and Grant Program*
- ***Taylor Ovide, MPPDC Coastal Planner,*** *will assist in managing partners, the activities and information gathered from the proposed project and project reports.*
- ***Jackie Rickards, Senior Planning Project Manager,*** *will oversee reporting for CFPF funded projects.*
- ***Jennifer Farmer, Hybrid Financial Clerk, Clerk to the Board, and Regional Planner,*** will assist the CFO with administrative, fiscal, and clerical tasks and provide assistance to planning staff as needed,

Staff has access to Microsoft Suite (i.e., Outlook, PowerPoint, Excel, Word) for daily work tasks and uses ArcGIS to hold all data associated with the Fight the Flood Program, including, but not limited to program participants, business participants, sea level rise data, grant funding eligibility polygons, and repetitive loss and severe repetitive loss structures.

Mathews County

Mathews County's Administrator, Ramona Wilson, has been involved in the current project construction and the preparation of this application. Ms. Wilson has committed to providing upfront funding for the project prior to reimbursements from the fund and providing the match for the project.

The Mathews County **Building Department** administers the Mathews County Floodplain Management Ordinance and maintains the county floodplain maps (FEMA Flood Insurance Rate Maps).

The Mathews County **Planning and Zoning Department** is currently experiencing severe staffing shortages and has two vacant positions. At full staff, the Mathews County Planning, Zoning and Wetlands Office has a multitude of responsibilities including:

- Administration and enforcement of the Erosion and Sediment Ordinance, Subdivision Ordinance, Zoning Ordinance, and Wetlands Administration;
- Long range land use planning; and
- Serving as the chief administrative officer for:
    - The Board of Zoning Appeals, a five-member citizen board which decides variances and may review decisions of the Zoning Administrator and
    - The seven-member Planning Commission which advises the Board of Supervisors on land use issues.

*• Include the **project area's Social Vulnerability Score.***
o Social Vulnerability Index (SVI) layer is available at this link: Virginia Flood Risk Information System (VFRIS)
o The index score for the census block that contains the project area should be used. If the project area falls within multiple census blocks, please average the score across the blocks.
o SVI scores are required and will be used in scoring. For more information, please see ADAPT Virginia's fact sheet.

The entire County has been identified with a '**Moderate Social Vulnerability**' score in the Virginia Social Vulnerability Index (SVI) Viewer (Figure 1). This means individuals or groups in the area have a moderate ability to prepare for and recover from hazards, like flooding.

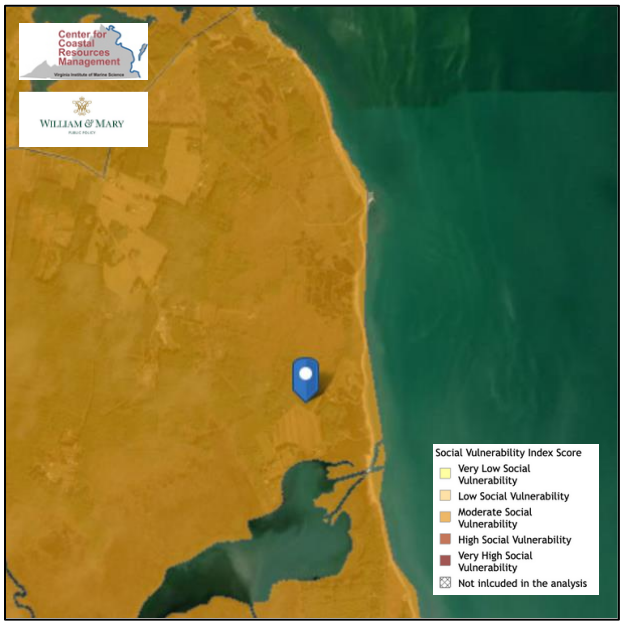


Figure 1 - Social Vulnerability Index Score.

Population

*Provide **population data** for the local government in which the project is taking place, including identification of any **low-income geographic area** and the **estimated number of residents that will be impacted by this project.** Provide more detailed versions of those outlined as General Requirements.*

According to the US Census, Mathews County has a human **population** of 8,514 (as of July 1, 2023). The County's demographic trends match those of the MPPDC region.

The County includes "**low-income geographic areas**" defined by DCR in the 2024 Funding Manual for the Virginia Community Flood Preparedness Fund as:

- "any locality, or community within a locality, that has a median household income that is not greater than 80 percent of the state median household income or
- any area in the Commonwealth designated as a qualified opportunity zone by the U.S. Secretary of the Treasury via his/her delegation of authority to the Internal Revenue Service."

According to the US Census, Virginia's median household income (MHI) from 2018 to 2022 was $87,249 in 2022 dollars. A "low-income geographic area" (Census Block Group, Census Tract, or Zip Code Tabulation Area) would have an MHI lower than $69,799 (80% of the state MHI) or be designated as a qualified opportunity zone.

The mean household income (MHI) in Mathews County is $79,054 (from 2018 to 2022 in 2022 dollars), so the County as a whole is not a "low-income geographic area." However, there are smaller areas in the County that meet the definition. The Census Tract in the northern portion of Matthews County has a MHI that qualifies (Figure 1). In addition, four different Block Groups in the County qualify as eligible communities (Figure 2). The County-wide map combining these eligible areas is provided in Figure 3.

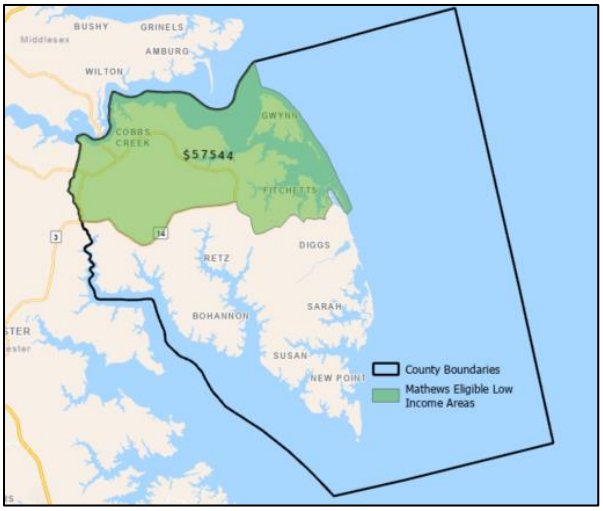


Figure 1. "Low-income geographic area" Census Tract.

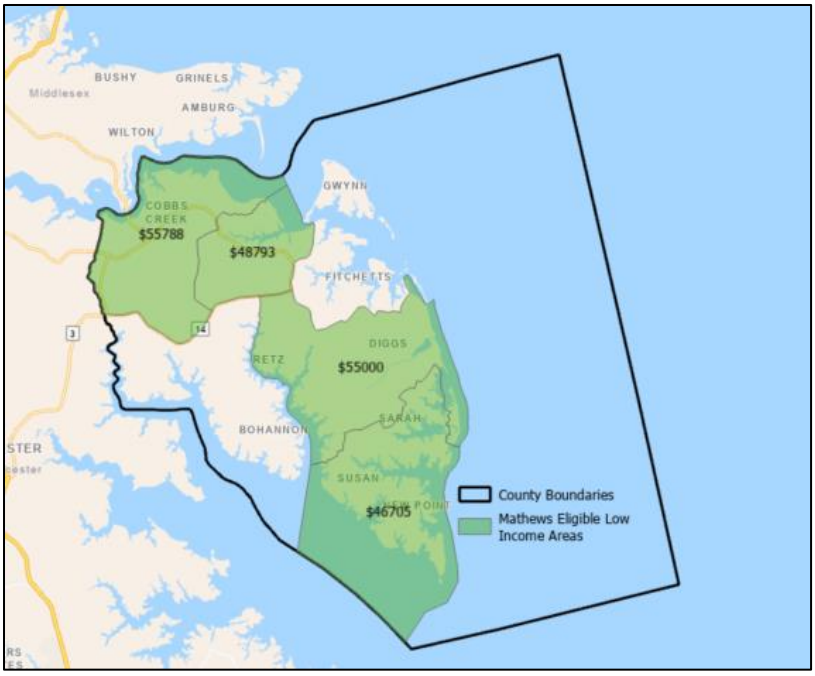


Figure 2. “Low-income geographic area” Block Groups.

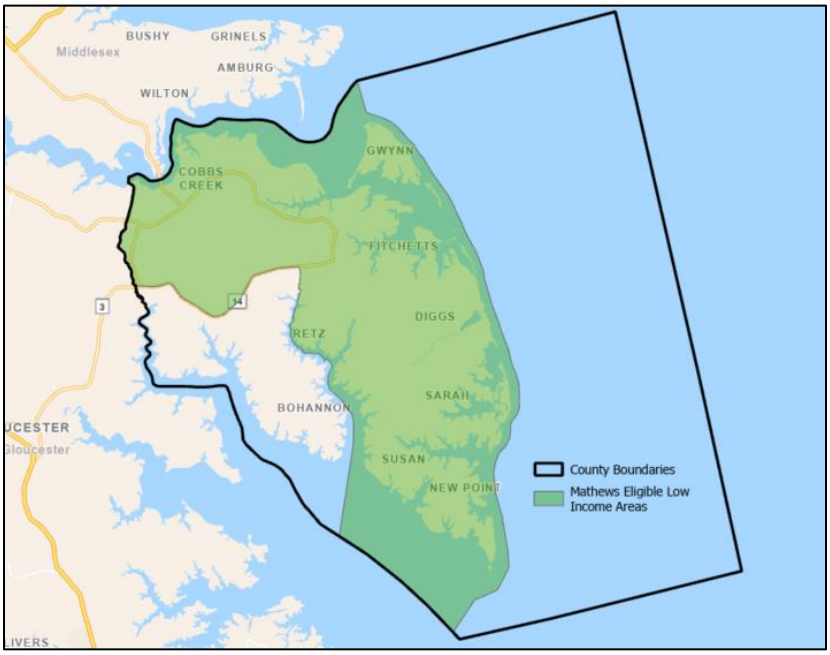


Figure 3. “Low-income geographic area” County-wide.

The entire County has been identified with a ‘**Moderate Social Vulnerability**’ score in the Virginia Social Vulnerability Index (SVI) Viewer (Figure 4). This means individuals or groups in the area have a moderate ability to prepare for and recover from hazards, like flooding.

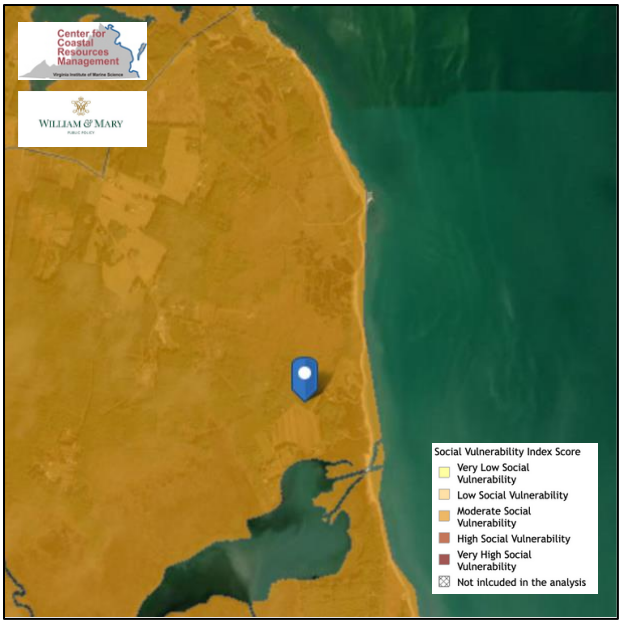


Figure 4 - Social Vulnerability Index Score.

The region's **economy** is primarily based in services, government, and trade sectors, with the greatest employment in education and health care, according to community profile information assembled by the Virginia Economic Development Partnership in 2008. Lumber, paper and wood products, and seafood are the major products of the region.

In 2007, **tourism** expenditures in Mathews County were over $27 million, which amounted to approximately 15% of the region's expenditures. This resulted in approximately $812,500 in tax revenue for Mathews County. Mathews County residents alone purchased 706 Recreational Licenses and Permits (totaling $21,537) and 1,178 Commercial Licenses and Permits (totaling $54,198) from the Virginia Marine Resources Commission in 2018. Identified as the "Pearl of the Chesapeake," the County is a destination for seasonal visitors seeking a rural coastal lifestyle among natural vistas and quaint business areas. The County contains over 280 miles of waterfront shoreline, and an abundance of forests, wetlands and special environmental areas. Mathews County is located at the eastern edge of the Middle Peninsula with shores on the Chesapeake Bay and the North, East, and Piankatank Rivers. Increased tourism efforts could be economically beneficial to Mathews County and the region in the future. Benefits could include increased employment opportunities for County residents.

The Mathews County Comprehensive Plan emphasizes the planning theme "**increased cooperative approaches and initiatives to enhance the economy through heritage tourism, ecotourism, aquaculture, and working waterfront business development that complements the environment**." The proposed project at Haven Beach coincides with Mathews County's economic and cultural vision for the future.

In addition, Haven Beach is an important **ecological hub** for the County and the wider Middle Peninsula region. It is a County-owned stretch of partially vegetated coastline that provides important habitat for the threatened Northeastern Beach Tiger Beetle population. A living shoreline (constructed from sand, rock, and plants local to the region) makes excellent habitat for the local small fish species as well as hard substrate for oyster settlement and growth, as observed at other living shorelines in the region.

Based on these factors, the **estimated number of residents that will be impacted** by this project **includes all of the residents of Mathews County (8,514) and the residents in surrounding counties that rely on the recreational areas, businesses, and coastal protection provided by the County (human or otherwise).**