

2664 - Bow Creek Stormwater Park

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: Nov 8, 2024 2:42 PM

Initially Submitted By: Stanley Smith

Last Submit Date:

Last Submitted By:

Contact Information

Primary Contact Information

Active User*: Yes

Type: External User

Name*: Mr. Stanley Middle Name Smith
Salutation First Name Last Name

Title: Engineer IV

Email*: sfsmitjr@vbgov.com

Address*: 484 Viking Drive
Suite 200

Virginia Beach Virginia 23452
City State/Province Postal Code/Zip

Phone*: 757-385-8459 Ext.
Phone
###-###-####

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

Comments:

Organization Information

Status*: Approved

Name*: VIRGINIA BEACH, CITY OF

Organization Type*: Local Government

Tax ID*:

Unique Entity Identifier (UEI)*:

Organization Website: <https://www.vbgov.com/Pages/default.aspx>

Address*: 2875 Sabre Street
Suite 250

Virginia Beach Virginia 23452
City State/Province Postal Code/Zip

Phone*: (757) 385-8746 Ext.
###-###-####

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

Benefactor:

Vendor ID:

Comments:

VCFPF Applicant Information

Project Description

Name of Local Government*: City of Virginia Beach

Your locality's CID number can be found at the following link: [Community Status Book Report](#)

NFIP/DCR Community Identification Number (CID)*: 515531

If a state or federally recognized Indian tribe,

Name of Tribe:

Authorized Individual*: Michael Tippin
First Name Last Name

Mailing Address*: 2875 Sabre Street, Suite 250
Address Line 1
Address Line 2

Virginia Beach Virginia 23452
City State Zip Code

Telephone Number*: 757-385-1673

Cell Phone Number*: 757-385-4131

Email*: mtippin@vbgov.com

Is the contact person different than the authorized individual?

Contact Person*: Yes

Contact: Jeffrey VanFossen
First Name Last Name
2875 Sabre Street, Suite 250
Address Line 1
Address Line 2
Virginia Beach Virginia 23452
City State Zip Code

Telephone Number: 757-385-3933

Cell Phone Number: 757-385-4131

Email Address: jvanfossen@vbgov.com

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

Project Description*:

The project converts an existing city owned golf course into a multi-faceted facility that will provide significant stormwater storage (over 300 acre-feet), will aid to mitigate flooding, and restore natural systems while simultaneously providing active and passive recreational opportunities. This project provides the opportunity to store a significant amount of stormwater, which in combination with other watershed improvements, serves to reduce flood impacts for both structures and Roadways.

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*: No

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

Census Block(s) Where Project will Occur*: 51

Is Project Located in an NFIP Participating Community*: Yes

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

Flood Zone(s) (if applicable): A, AE, FW, X

Flood Insurance Rate Map Number(s) (if applicable): 5155310104G

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*: N/A
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*:

Construction of swales and settling ponds, Floodplain restoration, Living shorelines and vegetated buffers, Restoration of floodplains to natural and beneficial function, Stream bank restoration or stabilization, Wetland restoration

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*: Very Low Social Vulnerability (Less than -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*: No

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*: 50-100% of census block

Expected Lifespan of Project

Expected Lifespan of Project*: Over 20 Years

Comments:

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*: BCSP_CFPF Round 5-scope of work.pdf

Comments:

Budget Narrative

Budget Narrative Attachment*: BCSP_CFPF Round 5- budget.pdf

Comments:

Scope of Work Supporting Information - Projects

Supporting Information - Projects

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

Population*: 459470.00

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*: HH Narrative.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*:

HH Narrative.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*:

BCSP_CFPF Round 5 - CM.pdf

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

Benefit-Cost Analysis*:

FEMA BCA Tool Report.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*:

BCSP_CFPF Round 5 - Flood plain letter.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*:

Land use is primarily medium-density residential and most residences were constructed from the early 1970s to the early 1980s. Residences are a combination of single-family attached housing, townhouses, and apartments. Apartment buildings are located along the east side of South Club House Road and in Green Lakes Circle area. All homes are concrete slab on grade construction and most have finished floors less than one foot above top of curb. There are over 800 structures within the project area. Elevations range from EL 5.0 to EL 12.0 feet NAVD88. Based on FRIM Map 5155310112G, a substantial portion of the neighborhood is in Flood Zone AE with a base flood elevation (100-year storm) of EL 7.0 feet NAVD88.

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

Critical Facilities/Infrastructure*:

Critical infrastructure include sanitary sewer pump station that serving the adjacent neighborhoods and recurring road flooding that inhibits emergency responsiveness during major rain/flood event. There is also a Fire Station on South Plaza Trail that is adjacent to and serves the project area.

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*:

This project is a collaborative effort being led by the City of Virginia Beach Dept. of Public Works in coordination with Planning and Parks & Recreation Department. Other City Departments, such as Planning, Housing & Neighborhood Preservation, the City Attorney's Office, Public Utilities, stormwater operations, and Traffic have also been engaged along with the residents and public through multiple open house meetings, surveys, mailings, and newsletters to provide guidance and responses to the development of the site. The City of Virginia Beach is well versed in State and Federal grants and has the applicable staff in place to adequately manage any awarded projects. The City has a plethora of software and is willing to attain any additional software needed to complete the project and its reporting requirements.

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*:

The primary goal of the project is to create over 300 acre-feet of stormwater storage, which will reduce repetitive (reoccurring) flooding conditions for residential dwellings, businesses, and infrastructure within approximately two square miles (2 miles) of the project site.

The storage created by converting the golf course into a stormwater management facility provides substantial flood mitigation, both structural and roadway. Preliminary Hydrologic and Hydraulic modeling shows this storage facility, in combination with other proposed improvements, reduces structure flooding in the area by an estimated 90% (approximately 400 structures) during the 100-year design storm and reduces street flooding by 40% (approximately 12,000 linear feet) during the 10-year storm.

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 Milestones.pdf

Deliverables*:

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*:

The is an excerpt from Preliminary Engineering Report that describes the Bow Creek Stormwater Park's relation to adjacent stormwater facilities:

The 2014 PAP-WW PER recommended a combination of improvements essentially conforming to the BERM-POND-PUMP mitigation concept. BERM-POND-PUMP mitigation provides for constructing a 'Berm' to keep tides and/or flood waters out the project area, providing stormwater retention to form a 'Pond' to store runoff within the project area and removing runoff from within the project area with a 'Pump'.

Specific recommendations included:

- Dredge the Windsor Woods Canal and the Bow Creek Canal;
- Install a tide gate at the convergence of Bow Creek and Northgate Ditch;
- Install a tide gate on Thalia Creek at the south end of the triple I-264 culverts;
- Install a pump station at the northwest section of Lake Windsor;
- Install a pump station at the eastern end of Northgate Ditch;
- Create of a series of connected ponds on the Bow Creek Golf Course:
- Elevate S. Rosemont Road to an elevation of at least 6.3' (feet NAVD88); and
- A variety of stormwater pipe improvement projects.

All of the recommended items above were required to provide flood mitigation. Dredging and maintenance of canals is needed to restore and improve capacity, clear obstructions and preventing future siltation at outfall locations. The pump station and sluice gate effectively remove tidal impacts to the upstream drainage system; however, the existing stormwater infrastructure was still undersized and could not adequately convey minor more frequent storm events. The 2014 PAP-WW PER recognized it was unlikely all the action items could be completed at the same time and recommended the actions items be phased based on the priority of the City, and best value.

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

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*:

Public Works Engineering Stormwater and Support staff as well as contracted environmental and engineering design consultants are responsible for the content of this application. Please review attached narratives and support documentation in which these criteria and the how project meets each, is discussed in detail.

Budget

Budget Summary

Grant Matching Requirement*: Projects that will result in nature-based solutions - Fund 70%/Match 30%

Is a match waiver being requested?

Match Waiver Request No

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

*:

Total Project Amount (Request + Match)*: \$31,197,290.00
**This amount should equal the sum of your request and match figures

REQUIRED Match Percentage Amount: \$9,359,187.00

BUDGET TOTALS

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

Match Percentage:

77.56%

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

Total Requested Fund Amount: \$7,000,000.00
Total Match Amount: \$24,197,290.00
TOTAL: \$31,197,290.00

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
Construction Costs	\$7,000,000.00	\$24,197,290.00	Cash
	\$7,000,000.00	\$24,197,290.00	

Contracts

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

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

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)	BCSP Project Map	BCSP Project Map.pdf	pdf	549 KB	11/08/2024 08:47 AM
FIRMette of the project area(s) (Projects/Studies)	FEMA Firmette Map of Project Area	FIRMETTE_d480a75f-8eb9-429b-a841-8987d83fa4dd.pdf	pdf	789 KB	11/08/2024 08:54 AM
Historic flood damage data and/or images (Projects/Studies)					
A link to or a copy of the current floodplain ordinance	City of Virginia Beach Floodplain Ordinance	CVB Floodplain Ord.pdf	pdf	336 KB	11/08/2024 08:57 AM
Maintenance and management plan for project	Maintenance Plan	maintenance plan.pdf	pdf	58 KB	11/08/2024 09:33 AM
A link to or a copy of the current hazard mitigation plan	Hazard Mitigation Plan	2022 Hampton Roads Hazard Mitigation Plan PDF.pdf	pdf	28 MB	11/08/2024 09:01 AM
A link to or a copy of the current comprehensive plan	City of Virginia Beach Comprehensive Plan	Comp-Plan-2016_policy-doc.pdf	pdf	16 MB	11/08/2024 08:58 AM
Social vulnerability index score(s) for the project area	Social Vulnerability Map	_ags_4109e86f-9ddb-11ef-8ff3-0050569081d2.pdf	pdf	1 MB	11/08/2024 09:12 AM
Authorization to request funding from the Fund from governing body or chief executive of the local government	Letter from City Manager's Office	CFPF Bow Creek.pdf	pdf	100 KB	11/08/2024 08:42 AM
Signed pledge agreement from each contributing organization					
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.

Named Attachment	Required Description	File Name	Type	Size	Upload
					Date
Benefit Cost Analysis	Cost Benefit from FEMA	FEMA BCA Tool Report.pdf	pdf	533 KB	11/08/2024 08:49 AM
Other Relevant Attachments	Project Concept Map	BCSP Concept.pdf	pdf	253 KB	11/08/2024 02:41 PM

Letters of Support

Description	File Name	Type	Size	Upload Date
Letter of Support from the Princess Anne Civic League	PAPCL Letter of Support.pdf	pdf	172 KB	11/08/2024 08:40 AM

Resilience Plan

Resilience Plan

Description	File Name	Type	Size	Upload Date
CVB Resiliency Plan (Sea Level Wise)	Virginia-Beach-Sea-Level-Wise-Adaptation-Strategy-March-2020.pdf	pdf	108 MB	11/08/2024 09:06 AM