



# Flood Protection Program

Status Report | December 2025

**\*All asterisks represent updated information.**

*Prepared for*  
City of Virginia Beach

January 6, 2026



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# PROGRAM PROGRESS HIGHLIGHTS

The City of Virginia Beach citizens passed a bond referendum on November 2, 2021, to allow the utilization of real estate taxes to fund flood protection projects. The referendum specifically included the design and construction of flood protection strategies making up the Flood Protection Program (FPP). Since the approval of the referendum, a 10-year (2022-2032) implementation plan comprising seven (7) Master Projects was developed to design and construct projects city-wide to mitigate flooding impacts on the community.

This monthly report intends to inform the City Council and the Flood Prevention Bond Referendum Oversight Board (FPBROB) of the program's progress along with risk and strategic decisions that may require Council support.



Image of Bow Creek Stormwater Park pedestrian walkway over the lake.

## \*Monthly Highlights

- ✓ Community Meetings:
  - A District 9 community meeting was hosted by Councilmember Joash Schulman on Monday, December 1, 2025, 6:00 PM – 8:00 PM at the Bayside Recreation Center, 4500 First Court Road, Virginia Beach.
  - A District 2 community meeting was hosted by Councilmember Barbara Henley on Thursday, December 4, 2025, 5:15 PM – 7:00 PM at the Municipal Center – Building 19, 2416 Courthouse Drive, Virginia Beach.
- ✓ On December 2, 2025, a public hearing was held and the Flood Protection Program proposed to amend the Fiscal Year 2025-2026 Capital Improvement Program (CIP). The CIP amendment transferred funds from several projects and sources to the Mega Bundle project so the guaranteed maximum price construction contract can be issued. City Council approved the amendment on December 9, 2025. See *Monthly Appropriations Project Transfers* section for transfer amounts.
- ✓ Blog post topics for December included:
  - [“The Ripple Effect: VB311 Helps Residents Report Flooding and Standing Water”](#)
  - [“The Ripple Effect: Bow Creek Stormwater Park Update — Protecting Neighborhoods While Rebuilding Nature”](#)
  - Video production for December included: [“How It Works: Protecting Military Readiness with Flood Protection Projects”](#)
- ✓ The FPP website pages for [Marsh Restoration in Back Bay](#) and the [Elizabeth River Wetland and Floodplain Restoration](#) were updated.
- ✓ The Windsor Woods Tide Gate Project and the South Plaza Trail Presidential Blvd Drainage Project have reached substantial completion.
- ✓ Bids were opened for Eastern Shore Drive – BRIC bundle on December 18, 2025. Three bidders submitted and will be considered for award.

## \*Upcoming Activities

- ✓ Community Meetings:
  - A District 2 community meeting will be hosted by Councilmember Barbara Henley on Thursday, January 22, 2026, 5:15 PM – 7:00 PM at the Municipal Center – Building 19, 2416 Courthouse Drive, Virginia Beach.
- ✓ Coastal Storm Risk Management Study public meetings will be held on the following dates:
  - Monday, January 26, 2026 from 6:00 PM – 8:00 PM at Kempsville High School, 5194 Chief Trail, Virginia Beach
  - Wednesday, January 28, 2026 from 6:00 PM – 8:00 PM at Kellam High School, 2665 West Neck Road, Virginia Beach
  - Thursday, January 29, 2026 from 6:00 PM – 8:00 PM at Cooke Elementary School, 1501 Mediterranean Avenue, Virginia Beach
  - Saturday, January 31, 2026, time and location TBD
  - Two virtual meetings will be held Thursday, January 22, 2026 from 2:00 PM - 3:30 PM and Tuesday, January 27, 2026 from 2:00 PM - 3:30 PM.
- ✓ The Elizabeth River Wetland and Floodplain Restoration pre-construction meeting will be held on Wednesday, January 6, 2026.

- ✓ Blog post topics for January will include:
  - Wrap up of five program milestones from 2025
  - Promotion of the January Coastal Storm Risk Management Study public engagement meetings
- ✓ In January, the “How It Works: The Windsor Woods Tide Gate and Bow Creek Stormwater Park” video will be made available to the public.

## Program Estimates

**\*This month's estimate change reflects adjustments to Windsor Woods, Princess Anne Plaza, and The Lakes Mega Bundle projects guaranteed maximum price of construction.** The table below presents the FPP estimates at the master project level showing the program level benchmark estimate at \$1,489 and the current program cost estimate of **\*\$1,501M**.

MASTER PROJECTS	BENCHMARK ESTIMATE (\$M)	CURRENT ESTIMATE (\$M)
WINDSOR WOODS/PAP/THE LAKES	\$766	<b>*\$752</b>
EASTERN SHORE DRIVE	\$101	\$110
LAKE BRADFORD/CHUBB LAKE	\$178	\$181
CENTRAL RESORT DISTRICT	\$113	\$113
SOUTHERN RIVERS WATERSHED	\$279	\$279
STORMWATER GREEN INFRASTRUCTURE	\$38	\$55
LINKHORN BAY DRAINAGE BASIN	\$14	\$12
<b>TOTAL</b>	<b>\$1,489</b>	<b>*\$1,501</b>

## Project Cost

There are no monthly cost changes. The table below identifies the projects in planning totaling \$521M.

PROJECTS IN PLANNING	PLANNING ESTIMATE* (\$M)	VARIANCE (\$M)
CENTRAL RESORT DISTRICT DRAINAGE IMPROVEMENTS BUNDLE (DESIGN-BUILD)	\$113	\$0
CHURCH POINT/THOROUGHGOOD BMP & CONVEYANCE PHASE 1B	\$30	\$0
LAKE BRADFORD/ CHUBB LAKE PS & OUTFALL (DESIGN-BUILD)	\$107	\$0
PUNGO FERRY ROAD IMPROVEMENTS	\$50	\$0
WEST NECK BRIDGE (DESIGN-BUILD)	\$221	\$0
<b>TOTAL</b>	<b>\$521</b>	<b>\$0</b>

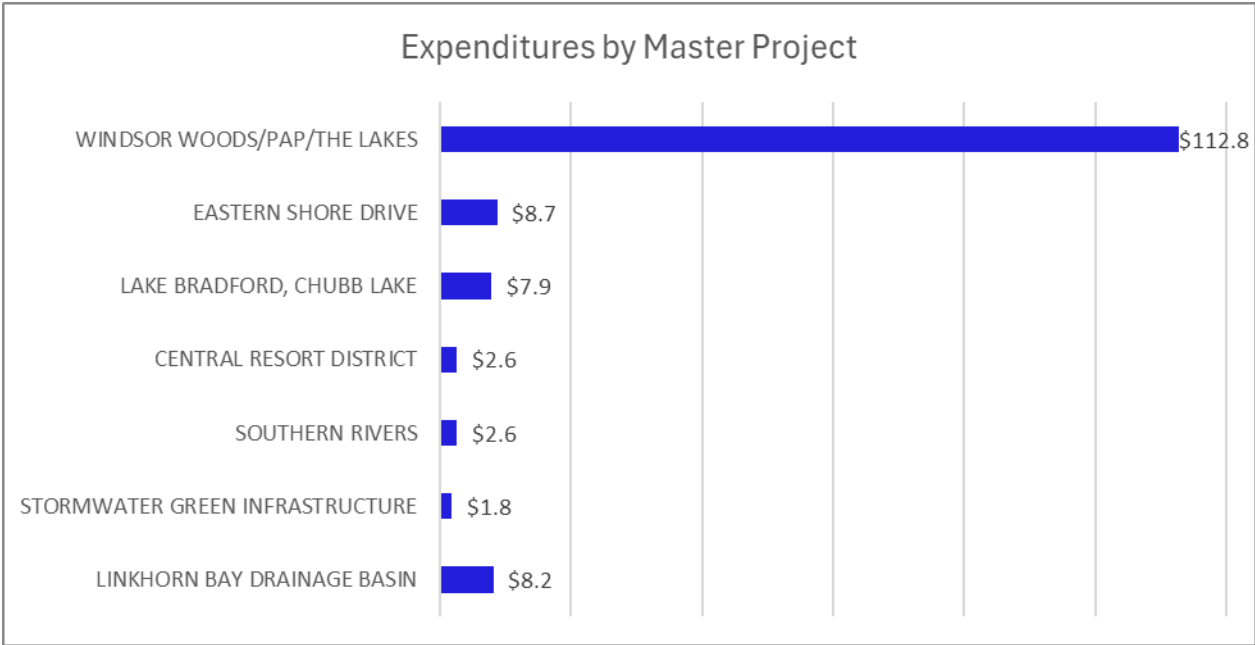
\*Planning estimates do not calculate variances and are subject to change until the project is baselined at 30% design.

The table below identifies the projects with baseline estimates totaling \$968M. Currently, these project costs are estimated at **\*\$1,501M** with a variance of **\*\$12M**.

PROJECTS WITH BASELINES	ESTIMATE PHASE	BASELINE ESTIMATE (\$M)	CURRENT ESTIMATE (\$M)	VARIANCE (\$M)
WINDSOR WOODS/PAP/THE LAKES BUNDLE (DESIGN-BUILD)	DESIGN	\$637	<b>*\$586</b>	<b>*-\$51</b>
CHURCH POINT/THOROUGHGOOD BMP & CONVEYANCE PH.1A	DESIGN	\$38	\$38	\$0
SANDBRIDGE/NEW BRIDGE INTERSECTION IMPROVEMENTS	DESIGN	\$8	\$8	\$0
EASTERN SHORE DRIVE POINCIANA PUMP STATION	DESIGN	\$18	\$27	\$9
BOW CREEK STORMWATER PARK (GOLF COURSE - SECTION 2)	DESIGN	\$60	\$68	\$8
EASTERN SHORE DRIVE BUNDLE	DESIGN	\$76	\$76	\$0
EASTERN SHORE DRIVE NORTH SHORE DRIVE, STREET DRAINAGE IMPROVEMENTS, 1F	DESIGN	\$4	\$4	\$0
MARSH RESTORATION IN BACK BAY	DESIGN	\$27	\$47	\$20
ELIZABETH RIVER FLOODPLAIN RESTORATION PROJECT	DESIGN	\$11	\$8	-\$3
FIRST COLONIAL RD AND OCEANA BLVD DRAINAGE IMPROVEMENT	CONSTRUCTION	\$7	\$5	-\$2
SEATAK NEIGHBORHOOD DRAINAGE IMPROVEMENT	CONSTRUCTION	\$7	\$7	\$0
WINDSOR WOODS TIDE GATE	CONSTRUCTION	\$11	\$21	\$10
BOW CREEK STORMWATER PARK (GOLF COURSE - SECTION 1)	CONSTRUCTION	\$42	\$42	\$0
EASTERN SHORE DRIVE GRAVITY SEWER RELOCATION 1C	COMPLETE	\$3	\$2	-\$1
LAKE BRADFORD/CHUBB LAKE PARENT	COMPLETE	\$3	\$6	\$3
WINDSOR WOODS DRAINAGE PARENT	MULTIPLE	\$16	\$35	\$19
<b>TOTAL</b>		<b>\$968</b>	<b>*\$980</b>	<b>*\$12</b>

# Program Spending

As detailed in the following graphic, the FPP Master Project expenditures through **\*December 2025**, totaling **\*\$144.6M**





## Monthly Appropriation Project Transfers

\*This month's appropriation transfers are in the table below. The Windsor Woods, Princess Anne Plaza, and The Lakes Mega Bundle project had transfers from multiple sources to support the guaranteed maximum price of construction.

Transfer From:	Transfer Amount
Stormwater Revenue Bonds	-\$41,125,623
Fund Balance of the General Fund	-\$13,988,208
Referendum Charter Bonds	-\$11,800,000
Public Facility Revenue Bonds	-\$63,939,955
100061 – Central Resort District - 24th Street & Culvert	-\$5,100,000
100062 - Central Resort District Drainage Improvements	-\$87,060,259
100595 - Lake Bradford/Chubb Lake Pump Station & Outfall	-\$33,769,220
100596 - Church Point / Thoroughgood BMP & Drainage Improvements	-\$32,139,893
100601 - First Colonial Road & Oceana Blvd Drainage Improvements	-\$343,486
100548 - Pungo Ferry Road Improvements	-\$5,997,395
100602 - West Neck Creek Bridge	-\$66,763,223
100603 - Sandbridge/ New Bridge Intersection Improvements	-\$7,495,002
100551 - Stormwater Green Infrastructure	-\$34,100,000
<b>Total</b>	<b>-\$403,622,264</b>

Transfer To:	Transfer Amount
100418 - The Lakes - Holland Road Gate	\$28,745,917
100487 - Windsor Woods Pump Station	\$79,702,083
100517 - Princess Anne Plaza North London Bridge Creek Pump Station	\$135,966,876
100521 - The Lakes - South London Bridge Creek Channel & Gate	\$55,113,831
100553 - Windsor Woods - Thalia Creek / Lake Trashmore Improvements	\$33,192,969
100604 - The Lakes - Flood Barriers	\$41,288,162
100605 - Windsor Woods Flood Barriers	\$29,612,426
<b>Total</b>	<b>\$403,622,264</b>

## Program Schedule

The table below represents a high-level summary of the planning (P), design (D), and construction (C) phases included in the master program schedule for active projects. Project milestones are outlined in the project level information section.

FPP PROJECTS	2025	2026	2027	2028	2029	2030	2031	2032
<b>WINDSOR WOODS/PAP/THE LAKES MASTER PROJECT</b>								
WINDSOR WOOD TIDE GATE	C							
SOUTH PLAZA TRAIL/PRESIDENTIAL BLVD	C							
BOW CREEK STORMWATER PARK (SECTIONS 1)	C	C	C					
BOW CREEK STORMWATER PARK (SECTIONS 2)	D	C	C	C	C	C		
WINDSOR WOODS/PAP/THE LAKES BUNDLE (DESIGN-BUILD)	D	C	C	C	C	C	C	
<b>EASTERN SHORE DRIVE MASTER PROJECT</b>								
ESD CAPE HENRY CANAL DRAINAGE IMPROVEMENTS 1F	C	C	C					
ESD POINCIANA PUMP STATION	D	C	C	C				
EASTERN SHORE DRIVE BUNDLE	D	C	C	C				
<b>LAKE BRADFORD/CHUBB LAKE MASTER PROJECT</b>								
CHURCH POINT/THOROUGHGOOD BMP & CONVEYANCE 1A	D	D	D	C	C	C	C	
CHURCH POINT/THOROUGHGOOD BMP & CONVEYANCE 1B	D	TBD	TBD	TBD	TBD	TBD	TBD	TBD
LAKE BRADFORD/CHUBB LAKE PS & OUTFALL (DESIGN-BUILD)	P	TBD	TBD	TBD	TBD	TBD	TBD	TBD
<b>CENTRAL RESORT DISTRICT MASTER PROJECT</b>								
CENTRAL RESORT DISTRICT DRAINAGE (DESIGN-BUILD)	P	TBD	TBD	TBD	TBD	TBD	TBD	TBD
<b>SOUTHERN REIVERS MASTER PROJECT</b>								
SANDBRIDGE/NEW BRIDGE INTERSECTION IMPROVEMENTS	D	D	D	D	C	C		
PUNGO FERRY ROAD IMPROVEMENTS	P	TBD	TBD	TBD	TBD	TBD	TBD	TBD
WEST NECK BRIDGE (DESIGN-BUILD)	P	TBD	TBD	TBD	TBD	TBD	TBD	TBD
<b>STORMWATER GREEN INFRASTRUCTURE MASTER PROJECT</b>								
MARSH RESTORATION IN BACK BAY			C	C				
ELIZABETH RIVER FLOODPLAIN RESTORATION	C	C						
<b>LINKHORN BAY DRAINAGE MASTER PROJECT</b>								
SEATACK NEIGHBORHOOD DRAINAGE IMPROVEMENT	C							
FIRST COLONIAL RD & OCEANA BLVD DRAINAGE	C	C						

*Note: The dominant activity is shown for each calendar year on the above table. Actual work phases are likely to span multiple years. Planning projects scheduled activities beyond 2025 are to-be-determined (TBD) until the project is baselined.*

## Program Phase Overview

The table below shows the current delivery phase for each FPP project. Project phases include preliminary engineering, design, design-build, construction in progress, and construction complete. **\*Windsor Woods Tide Gate and South Plaza Trail Presidential Blvd have reached substantial complete in December 2025.**

Preliminary Engineering	Design	Design-Build	Construction In-Progress	Construction Complete
West Neck Creek Bridge	Eastern Shore Drive (ESD) Drainage Bundle <i>(Bid &amp; Award)</i>	Windsor Wood, PAP, The Lakes Bundle	Bow Creek Stormwater Park (Section 1)	Club House Road Drainage
Pungo Ferry Road Improvements	ESD Roadway Drainage 1F & 1G	Lake Bradford/ Chubb Lake Pump Station & Outfall	Seatack Drainage	Cape Henry Canal Gravity Sewer Relocation
Central Resort District Drainage Improvements	Poinciana Pump Station		First Colonial Rd & Oceana Blvd Drainage	Lake Pleasure House Outfall
Church Point/ Thoroughgood BMP & Conveyance 1B	Sandbridge/New Bridge Intersection <i>(On Hold)</i>			Lake Bradford Dredging
	Bow Creek Stormwater Park (Section 2)			Old Forge Road & Red Lion Drainage
	Elizabeth River Floodplain Restoration <i>(Bid &amp; Award)</i>			<b>*Windsor Woods Tide Gate</b>
	Back Bay Marsh Restoration			<b>*South Plaza Trail, Presidential Blvd Drainage</b>
	Church Point/ Thoroughgood BMP & Conveyance 1A			

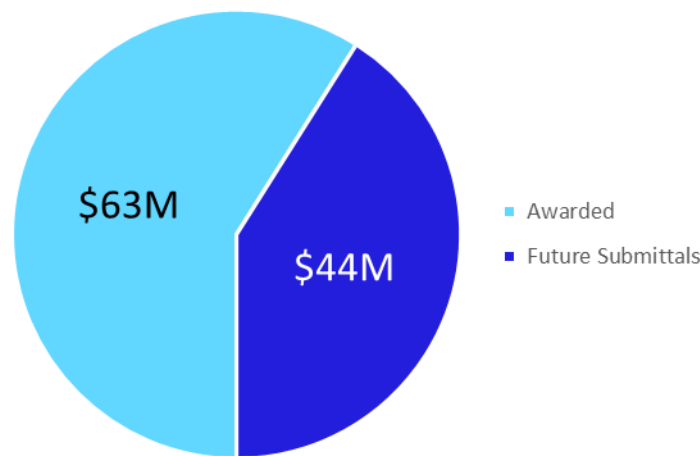
## Procurement Activity

- ✓ The Elizabeth River Floodplain Restoration Project is currently in bid and award phase for construction **\*with a construction notice-to-proceed in January 2026.**
- ✓ The Eastern Shore Drive Drainage Improvements BRIC Project (includes Lynnhaven Colony Park Pump Station, Widen and Deepen Cape Henry Ditch, Lynnhaven Drive Pump Station, and Elevate Lynnhaven Drive) Project is currently in bid and award phase for construction.

**\*Updated Since Last Report**

# Grant Program

The City has received \$63M and continues to seek grant funding from various state and federal grant programs.



The Federal Emergency Management Agency (FEMA) awarded \$25.1M to the Eastern Shore Drive Drainage Bundle from the Building Resilient Infrastructure and Communities (BRIC) fund. The Virginia Department of Conservation and Recreation (DCR) awarded grants from the Virginia Community Flood Preparedness Fund (CFPF) for the following projects: \$3.0M for Elizabeth River Floodplain Restoration, \$1.9M for Seatack Neighborhood Drainage Improvements, \$2.0M for First Colonial Road and Oceana Boulevard Drainage Improvements and, \$5.0M for the Marsh Restoration Project in Back Bay. The Marsh Restoration Project in Back Bay returned the \$9.9M grant to the National Fish and Wildlife Foundation (NFWF), National Coastal Resilience Fund due to project delays exceeding the grant period of performance. The U.S. Department of Transportation Federal Highway Administration (FHWA) awarded \$19.0M to the Pungo Ferry Road Project from the Promoting Resilient Operations for Transportation (PROTECT) Discretionary Grant Program. The Bow Creek Stormwater Park Project was selected to receive \$7M from the DCR Community Flood Preparedness Fund (CFPF).

The West Neck Creek Bridge Project is still under consideration for the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grants.

The following table summarizes the total grant amounts awarded for a specific FPP Master Project and anticipated grant funding which may be received from future grant applications.

FPP Master Projects	Awarded	Future Submittals
Eastern Shore Drive	\$25M	-
Southern Rivers	\$19M	-
Stormwater Green Infrastructure	\$8M	-
Linkhorn Bay Drainage	\$4M	-
Lake Bradford/Chubb Lake	-	\$35M
Windsor Woods, Princess Anne Plaza, The Lakes	\$7M	\$4M
Central Resort District	-	\$5M

**\*Updated Since Last Report**

## Program Communications

### \*December 2025 Highlights

- ✓ The following blogs were posted to VirginiaBeach.gov in December, sent to 12,000 “Be in the Know” email subscribers, and shared across social media channels:
  - December 5: [“The Ripple Effect: VB311 Helps Residents Report Flooding and Standing Water”](#) received 224 views.
  - December 19: [“The Ripple Effect: Bow Creek Stormwater Park Update — Protecting Neighborhoods While Rebuilding Nature”](#) received 1,164 views.
  - Excluding Pleasure House Point content, this was the second most viewed FPP blog article of the year behind February’s [“The Ripple Effect: Windsor Woods Tide Gates Put to the Test.”](#)
  - Blog article content in December received 1,388 views, up from 750 in November.
- ✓ Social media wrap up:
  - Eleven Flood Protection Program posts in December received 79,770 impressions, up from 42,304 in November.
- ✓ On December 17, the [“How It Works: Protecting Military Readiness with Flood Protection Projects”](#) video was posted to YouTube and shared on social media. It featured the First Colonial Road and Oceana Boulevard Drainage Improvements and received 5,342 views across YouTube.
- ✓ The following FPP website updates were made:
  - The [Marsh Restoration in Back Bay](#) landing page was updated with information and FAQs.
  - The [Elizabeth River Wetland and Floodplain Restoration](#) landing page was updated with the current status including future construction.
  - Two December blog articles were added to the carousel on the [Flood Protection Landing](#) page.

### \*Upcoming Communications Activities

- ✓ Upcoming blog article topics will include a wrap up of five program milestones from 2025, and promotion of the January Coastal Storm Risk Management feasibility study public engagement meetings.
- ✓ The “How It Works: The Windsor Woods Tide Gate and Bow Creek Stormwater Park” video will go live to the public on January 23. It is the 19th video in the “How It Works” series.
- ✓ Messaging for January’s Coastal Storm Risk Management public engagement meetings will include a blog article, social media promotion and information slide shown before City Council meetings.

### \*Updated Since Last Report

# PROJECT LEVEL INFORMATION

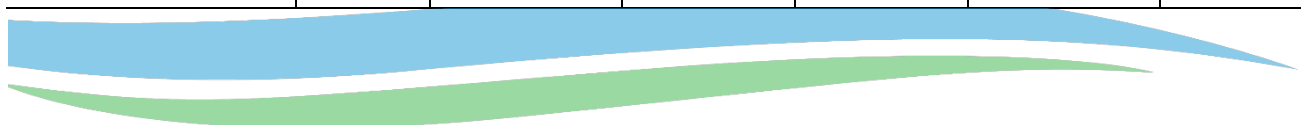
## Windsor Woods, Princess Anne Plaza, and The Lakes Master Project

The Windsor Woods, Princess Anne Plaza, and The Lakes Master Project has contractually obligated \$167.1M of which **\*\$112.8M** has been spent.

The anticipated project schedules are illustrated below.

South Plaza Trail and Presidential Boulevard Drainage Improvements schedule delay is due to weather. Old Forge Road and Red Lion Road Drainage Improvements schedule delay is due to weather, franchise utilities and design changes related to site conditions. **\*Bow Creek added time to the schedule for additional storage to align with capacity goals.**

Anticipated Schedule Design-Bid-Build	Status	Preliminary Engineering	Design Start	Invitation to Bid	Construction Start	Construction Complete
Club House Road	BL	Q2 2017	Q1 2018	Q3 2020	Q1 2021	Q4 2022
	Current	√	√	√	√	√
Windsor Woods Tide Gate	BL	Q3 2019	Q4 2021	Q2 2022	Q4 2022	Q2 2025
	Current	√	√	√	√	Q4 2025*√
South Plaza Trail and Presidential Blvd Drainage Improvements	BL	Q1 2017	Q1 2018	Q2 2022	Q2 2023	Q2 2025
	Current	√	√	√	√	Q4 2025*√
Old Forge Rd and Red Lion Rd Drainage Improvements	BL	Q1 2017	Q1 2018	Q1 2023	Q3 2023	Q3 2024
	Current	√	√	√	√	Q4 2024√
Bow Creek Stormwater Park Section 1	BL	Q4 2019	Q3 2020	Q1 2023	Q3 2023	Q4 2026
	Current	√	√	√	√	Q2 2027→
Bow Creek Stormwater Park Section 2	BL	Q4 2019	Q3 2023	Q1 2026	Q3 2026	Q2 2030
	Current	√	→			



Projects Identified in the Bond Referendum | Baseline (BL)  
 \*Updated Since Last Report | Activity complete √  
 Variance | Activity in-progress →

## Windsor Woods, Princess Anne Plaza, and The Lakes Master Project (Continued)

Anticipated Schedule Design-Build	Status	Bridging Documents	Design-Builder RFP	Design-Builder Selected	GMP	Construction Start	Construction Complete
Windsor Woods, Princess Anne Plaza, and The Lake Bundle*	BL	Q2 2022	Q1 2023	Q3 2023	Q4 2025	Q2 2026	Q2 2031
	Current	✓	✓	✓	*✓		

\*Windsor Woods, Princess Anne Plaza, and The Lakes Bundle includes the following projects:

1. Windsor Woods Pump Station
2. Windsor Woods Flood Barriers
3. Windsor Woods Thalia Creek/Lake Trashmore Improvements
4. PAP North London Bridge Creek Tide Gate, Pump Station, and Barriers
5. The Lakes Holland Road Gate
6. The Lakes Flood Barriers
7. The Lakes South London Bridge Creek Channels and Gate

Projects Identified in the Bond Referendum

\*Updated Since Last Report

Variance

Baseline (BL)

Activity complete ✓

Activity in-progress →

## Eastern Shore Drive Master Project

The Eastern Shore Drive Master Project has contractually obligated **\*\$8.7M** of which \$7.7M has been spent.

The anticipated project schedules are illustrated on the table below.

Poinciana Pump Station schedule adjustments were made due to value engineering and relocating the pump station outfall to a different street. **\*The schedule for Eastern Shore Drive Bundle was adjusted with the actual construction advertisement date and timeline.**

Anticipated Schedule Design-Bid-Build	Status	Preliminary Engineering	Design Start	Invitation to Bid	Construction Start	Construction Complete
Cape Henry Canal Phase II Gravity Sewer Relocation	BL	Q2 2017	Q1 2020	Q4 2021	Q2 2022	Q3 2023
	Current	√	√	√	√	√
North Shore Drive Street Drainage Improvements (1F)*	BL	Q2 2017	Q2 2023	Q2 2025	Q3 2025	Q2 2027
	Current	√	√	√	√	→
Poinciana Pump Station	BL	Q1 2017	Q2 2023	Q2 2025	Q3 2025	Q3 2028
	Current	√	→	*Q2 2026	*Q3 2026	Q4 2028
Eastern Shore Drive Bundle**	BL	Q1 2017	Q2 2022	Q2 2025	Q4 2025	Q4 2028
	Current	√	→	Q3 2025√	*Q2 2026	*Q2 2029

\*North Shore Drive Street Drainage Improvements (1F) will be constructed with the transportation project 100381, Shore Drive Phase III.

\*\*Eastern Shore Bundle includes the following projects:

1. Elevate Lynnhaven
2. Lynnhaven Colony Park Pump Station
3. Lynnhaven Drive Pump Station
4. Cape Henry Canal Phase II – Widen and Deepen Canal
5. Cape Henry Drive – Street Drainage Improvements (1G)

Projects Identified in the Bond Referendum

\*Updated Since Last Report

Variance

Baseline (BL)

Activity complete √

Activity in-progress →



## Lake Bradford/Chubb Lake Master Project

The Lake Bradford/Chubb Lake Master Project has contractually obligated \$20.9M of which **\*\$7.9M** has been spent.

The anticipated project schedules are illustrated below.

Anticipated Schedule Design-Bid-Build	Status	Preliminary Engineering	Design Start	Invitation to Bid	Construction Start	Construction Complete
Lake Pleasure House Outfall	BL	Q2 2018	Q2 2019	Q3 2021	Q3 2022	Q3 2023
	Current	√	√	√	√	√
Lake Bradford Dredging	BL	Q2 2018	Q2 2019	Q2 2022	Q4 2022	Q4 2023
	Current	√	√	√	√	√
Church Point/ Thoroughgood BMP and Drainage Improvements 1A	BL	Q1 2022	Q2 2024	Q1 2028	Q3 2028	Q2 2031
	Current	√	→			
Church Point/ Thoroughgood BMP and Drainage Improvements 1B	No BL	Q1 2022	Q2 2024	TBD	TBD	TBD
	Current	√	→			

Anticipated Schedule Design-Build	Status	Bridging Documents	Design-Builder RFP	Design-Builder Selected	GMP	Construction Start	Construction Complete
Lake Bradford/Pump Station & Outfall	No BL	Q3 2022	Q2 2024	Q2 2025	TBD	TBD	TBD
	Current	√	√	√	→		

Projects Identified in the Bond Referendum

\*Updated Since Last Report

Variance

Baseline (BL)

Activity complete √

Activity in-progress →

## Central Resort District Master Project

The Central Resort District Master Project has contractually obligated **\*\$3.5M** of which **\*\$2.6M** has been spent.

The anticipated project schedules are illustrated below.

Anticipated Schedule Design-Build	Status	Bridging Documents	Design-Builder RFP	Design-Builder Selected	Construction Start	Construction Complete
Central Resort District Bundle*	No BL	Q2 2023	TBD	TBD	TBD	TBD
	Current	→				

\*Central Resort Bundle includes:

- ✓ 21st and Baltic
- ✓ **24<sup>th</sup> Street Culvert**
- ✓ **Central Resort District Drainage Improvements**

Projects Identified in the Bond Referendum

\*Updated Since Last Report

**Variance**

Baseline (BL)

Activity complete ✓

Activity in-progress →

## Southern Rivers Master Project

The Southern Rivers Master Project has contractually obligated \$5M of which **\$2.6M** has been spent.

The anticipated project schedules are illustrated below.

Anticipated Schedule Design-Bid-Build	Status	Preliminary Engineering	Design Start	Invitation to Bid	Construction Start	Construction Complete
<b>Sandbridge/ New Bridge Intersection Improvements*</b>	<b>BL</b>	<b>Q2 2018</b>	<b>Q4 2022</b>	<b>Q3 2027</b>	<b>Q1 2028</b>	<b>Q1 2030</b>
	Current	√	→			
<b>Pungo Ferry Road Improvements</b>	<b>No BL</b>	<b>Q1 2023</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>
	Current	→				

\*The Sandbridge/New Bridge Intersection Improvements Project is on hold pending the completion of the Environmental Impact Statement for the Nimmo Parkway VIIIB road project.

Anticipated Schedule Design-Build	Status	Bridging Documents	Design- Builder RFP	Design- Builder Selected	Construction Start	Construction Complete
<b>West Neck Bridge</b>	<b>No BL</b>	<b>Q4 2023</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>
	Current	→				

Projects Identified in the Bond Referendum

\*Updated Since Last Report

Variance

Baseline (BL)

Activity complete √

Activity in-progress →

## Stormwater Green Infrastructure Master Project

The Stormwater Green Infrastructure Master Project has contractually obligated \$8.9M of which **\*\$1.8M** has been spent.

The anticipated project schedules are illustrated below.

The City has not received the critical environmental permits for the Marsh Restoration in Back Bay and Elizabeth River Floodplain Restoration projects. While the City is working diligently with the regulators, we must also look realistically at the project schedule. Due to the construction moratorium for environmental concerns that must be considered annually from October to March, we are now forecasting the Marsh Restoration in Back Bay project will need a third construction season in 2027.

Anticipated Schedule Design-Bid-Build	Status	Preliminary Engineering	Design Start	Invitation to Bid	Construction Start	Construction Complete
Marsh Restoration In Back Bay	BL	Q3 2021	Q4 2021	Q4 2023	Q2 2024	Q4 2026
	Current	✓	→	Q4 2026	Q1 2027	Q1 2028
Elizabeth River Floodplain Restoration	BL	Q3 2021	Q2 2022	Q1 2024	Q3 2024	Q1 2025
	Current	✓	✓	Q2 2025*✓	Q1 2026	Q2 2026



## Linkhorn Bay Master Project

The Linkhorn Bay Master Project has contractually obligated \$11.1M of which **\*\$8.2M** has been spent.

The anticipated project schedules are illustrated below.

The schedule delay for the First Colonial Road and Oceana Boulevard Drainage Improvements is due to coordination with an existing transportation project. The Seatack Neighborhood Drainage Improvements completion of construction delay due to unforeseen private utility conflicts.

Anticipated Schedule Design-Bid-Build	Status	Preliminary Engineering	Design Start	Invitation to Bid	Construction Start	Construction Complete
Seatack Neighborhood Drainage Improvements	BL	Q4 2020	Q3 2022	Q4 2023	Q1 2024	Q1 2025
	Current	√	√	√	√	<b>*Q1 2026→</b>
First Colonial Road and Oceana Boulevard Drainage Improvements	BL	Q4 2020	Q1 2023	Q1 2024	Q2 2024	Q3 2025
	Current	√	√	<b>Q4 2024√</b>	<b>Q2 2025√</b>	<b>Q1 2026→</b>



Projects Identified in the Bond Referendum

**\*Updated Since Last Report**

**Variance**

Baseline (BL)

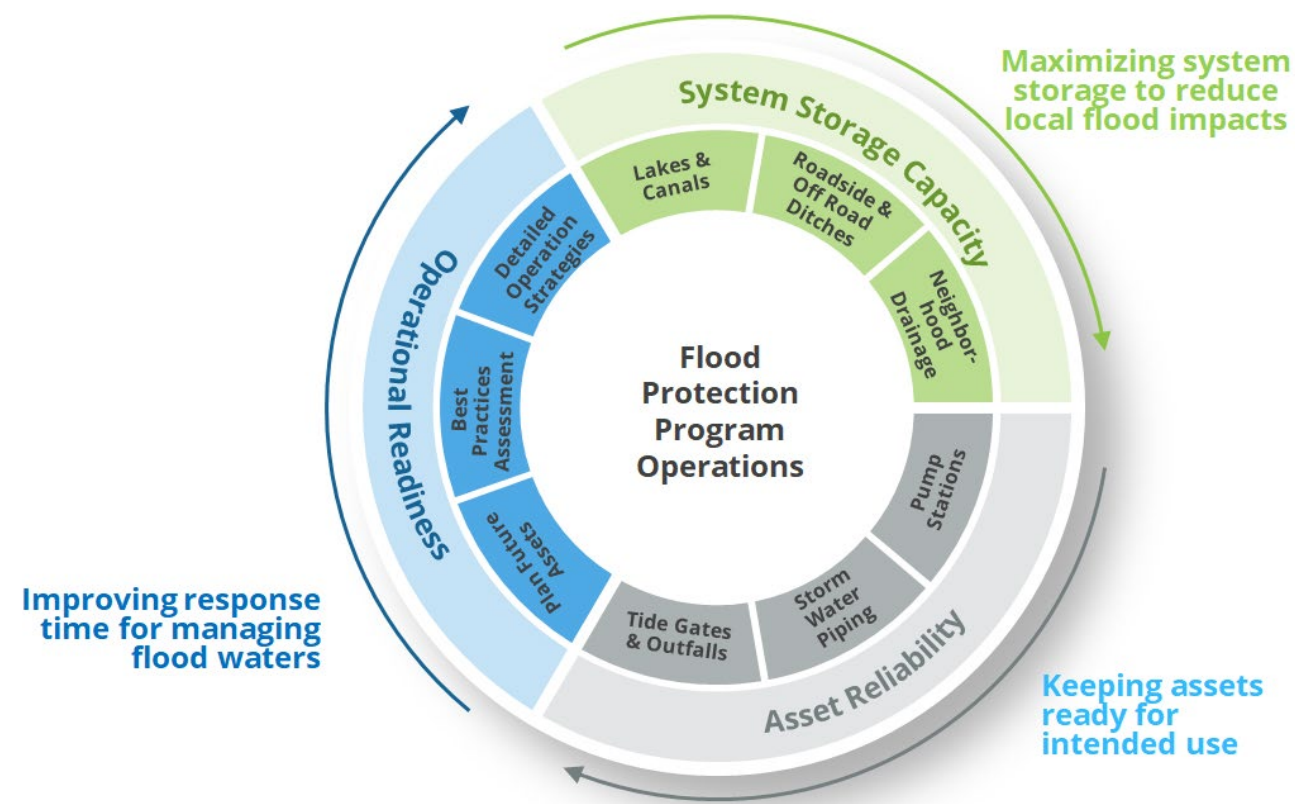
Activity complete √

Activity in-progress →

# SUPPORTING CAPITAL INVESTMENTS

The Phase 1 FPP Master projects are not the only flood mitigation and protection work underway in the City. This section lists other capital investment projects and operational activities that support key flood protection drivers such as maximizing system storage to reduce local flood impacts; keeping assets ready for their intended use; and maintaining operational readiness that continuously improves the City’s response time for managing flood waters.

The following figure presents how the system storage capacity projects, such as lakes, canals, roadside ditches, off-road ditches, and neighborhood drainage improvements, help maximize available system storage to reduce local flood impacts. Also shown are the asset reliability improvements to tide gates, outfalls, stormwater piping, and pump stations to keep assets ready for their intended use. Finally, the figure connects how activities such as planning for future assets; best practices; and detailed operation strategies help improve response time for managing flood waters.



**\*Updated Since Last Report**

## System Storage Capacity

### Ashville Park Drainage Improvements Phase 1 Projects

- Princess Anne Farm Ditch Stabilization – Complete
- Roadway/Drainage/Intersection Improvements – Complete
- Stormwater Pump Station – Complete
- Cost Participation Ashville Developer – Complete
  - 3 new Stormwater Ponds (BMPs)
  - Existing Pond Expansion
  - Channels Connecting Ponds
  - Regrade and Stabilize Existing Ditches

### South Lake Holly Watershed Section IIIB Project - Complete

### Operations Activities for System Maintaining Storage Capacity

- Canal Management Program
- Lake Management Program
- Off-Road Ditch Cleaning Program
- Roadside Ditch Cleaning Program

### ARPA Funded Lake Dredging Projects

- The Stormwater Operations Group is working on completing \$15.34 million of lake dredging projects funded by the American Rescue Plan Act (ARPA). Funds for these projects must be encumbered by December 2024 and fully spent by December 2026. The status of each lake dredging project is presented in the following table.
- The scope of this program currently includes dredging at 13 sites. The overall program estimate currently exceeds the allocated ARPA funding. Authorization to remove Package #4 from the ARPA funded projects list was approved and the projects will be completed utilizing CIP funds in the future.
  - Through **\*December** 2025, the City spent \$8.2 million and encumbered \$15.34 million for these projects.
- There are currently no concerns with the timeline, and all projects remain on schedule for completion by December 31, 2026.

**\*Updated Since Last Report**

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The following table lists the Lake Dredging bid packages and the status and estimated project completion quarter for each location.

Lake Dredging Bid Package	Lake to be Dredged	Project Status	Estimated Project Completion
1	Indian Lakes #2	Pending Completion of Post Stabilization	Completed
	Lynnhaven Mall #1		Completed
	Lynnhaven Mall #3		Completed
	Sabre Street Ext #1		Completed
2	Chandler Creek Canal	Pending Completion of Post Construction	Completed
	Green Meadows Lake		Completed
	Rosemont Road Lake Dredging		Completed
3	Chapel Lake	Chapel Lake Under Construction	*Q1 2026
	Salem Lakes #1		Q3 2026
4	Charlestowne Lake South #3	Removed from Program	N/A
	Turtle Lake		N/A
5	Reedtown Lake	Pending Completion of Post Stabilization	Completed
	John B. Dey Lake		Completed
	Lovetts Pond		Completed
	Great Neck Lake #2		Completed

## Asset Reliability

### Neighborhood Stormwater Infrastructure Improvements Phase II Projects

- Country Club Circle Drainage Improvement: Construction started in October 2024. Construction complete, working on punch list and as-builts.
- Goodspeed Road Pump Station Upgrade: Construction has started.

### College Park and Level Green Drainage Improvement Project

- Drainage improvement project construction is complete. Public Works Operations will perform additional storm drain pipe cleaning.

### Operations Activities for Asset Reliability

- BMP/SWMF Maintenance Program
- Stormwater Pump Station Improvements
- Pipe Cleaning and Repair: Operations continues to transition from reactive work to proactive work.

**\*Updated Since Last Report**



## ARPA Funded Neighborhood Drainage Rehabilitation Projects

- The Stormwater Operations Group is working on completing \$32.08 million of neighborhood stormwater infrastructure rehabilitation. This amount increased from \$25 million given the City Council's approval to transfer ARPA funds from lake dredging to drainage improvements.
- The scope of this project currently includes CCTV inspection/cleaning, recommendations and execution of repairs to the stormwater infrastructure systems in 24 neighborhoods. The overall project estimate currently exceeds allocated ARPA funding and CIP funds will supplement to fully fund the projects. Authorization to remove packages #12, #13, #14, and #15 that have not yet been spent, or encumbered funding was approved as they are not needed to exceed the level of ARPA funding.
- Projects funded by the American Rescue Plan Act (ARPA). Funds for these projects must be encumbered by December 2024 and fully spent by December 2026. The status of each neighborhood drainage project is presented in the following table.
- Through **\*December** 2025, the City has spent \$32.1 million on neighborhood drainage rehabilitation projects. A total of 100% of ARPA funds have been encumbered.
- There are currently no concerns with the timeline, and all projects remain on schedule for completion by December 31, 2026.

The following table lists the neighborhood drainage rehabilitation bid packages and the status and estimated project completion quarter for each location.

Package #	Neighborhood Drainage Rehabilitation Project Name	Project Status	Estimated Project Completion
1	Redwing Rehab	Completed	Completed
	Upton Estates Rehab	Completed	Completed
2	Great Neck Meadows Rehab	Completed	Completed
	Seatack Rehab	Completed	Completed
3	Birchwood Gardens Rehab	Completed	Completed
	Pembroke Meadows Rehab	Completed	Completed
	Thalia Manor Rehab	Completed	Completed
4	Courthouse Estates Rehab	Completed	Completed
5	Charlestown Lake South Rehab	Completed	Completed
	Hillcrest Farm Rehab	Completed	Completed
6	Red Mill Farms Rehab	Completed	Completed
7	Foxfire Rehab	Completed	Completed
8	Rock Creek Rehab	Completed	Completed
	Salem Village Rehab	Completed	Completed
9	Southgate Rehab	Completed	Completed
	Three Oaks Rehab	Completed	Completed
10	Lynnhaven Colony Rehab	Completed	Completed
	Northeast Basin - Bay Colony Rehab	Completed	Completed
	Northeast Basin - Birdneck Point	Completed	Completed
	Northeast Basin - Great Neck Estate	Completed	Completed
11	Groveland Park	Completed	Completed
12	Bellwood Estates, Lamplight Manor, Princess Anne Crossing	Removed from Program	N/A
13	Kempsville Colony, Point of View		
14	Broad Bay Estates, Laurel Cove	Completed	Completed
15	Cypress Point North, Hudgins Shores, L&J Gardens, Lakeville Estates	Removed from Program	N/A
16	Tier 2 repairs for Green Run	<b>*Completed</b>	<b>*Completed</b>

**\*Updated Since Last Report**

Package #	Neighborhood Drainage Rehabilitation Project Name	Project Status	Estimated Project Completion
All	Construction Inspection Services #1	Completed	N/A
All	Construction Inspection Services #2	Completed	N/A
All	Construction Inspection Services #3	<b>*Completed</b>	N/A
All	Staff Augmentation Services	Ongoing	N/A

## Operational Readiness

### Asset Management Program Development

Arcadis and Kennedy-Jenks have developed the asset management framework related to the stormwater pump stations. A total of 384 individual assets have been entered into Cartegraph with maintenance schedules. Asset inventory efforts are continuing for non-pump station equipment.

The following tasks have been completed under this program:

- (a) Pump Station Operational Plans
- (b) Review/update asset inventory
- (c) Develop asset hierarchy
- (d) Risk assessment

The following asset management program tasks are currently underway:

- (a) Benchmark O&M practices
- (b) Confirm AM program goals and levels of service
- (c) Formalize an Asset Management Plan
- (d) Tracking and reporting template development

### Quarterly Stormwater Engineering-Operations Coordination Meeting

- The next coordination meeting will be held during **\*Q1 2026**.

### System-wide Sensor Network Evaluation

- SCADA and sensor components are being coordinated by Stormwater Operations staff with vendors and City IT staff.
- System-wide storm impact maps were created and reviewed as post-storm action reports with the Stormwater Operations Team.

### Stormwater Master Planning

- All stormwater master plans have been completed.
- The City is in the process of having the consultants update the master plans to meet ADA Accessibility requirements.

**\*Updated Since Last Report**