

RVAH2O Technical Stakeholder Meeting

Tuesday, April 25, 2023



Welcome!

If you have access, feel free to put questions or comments in the chat as we go.

As always, we'll have Q&A at the end of the meeting today.



Thank You for Joining Us!



DEPARTMENT OF
**PARKS, RECREATION
AND COMMUNITY
FACILITIES**



DEPARTMENT OF
**PUBLIC
WORKS**



CHESAPEAKE BAY
FOUNDATION
Saving a National Treasure



CAPITAL REGION
LAND CONSERVANCY



Today's Agenda

Flood Mitigation Projects

Green Infrastructure Projects

Alliance for the Chesapeake Bay

Department of Parks, Recreation, and Community Facilities

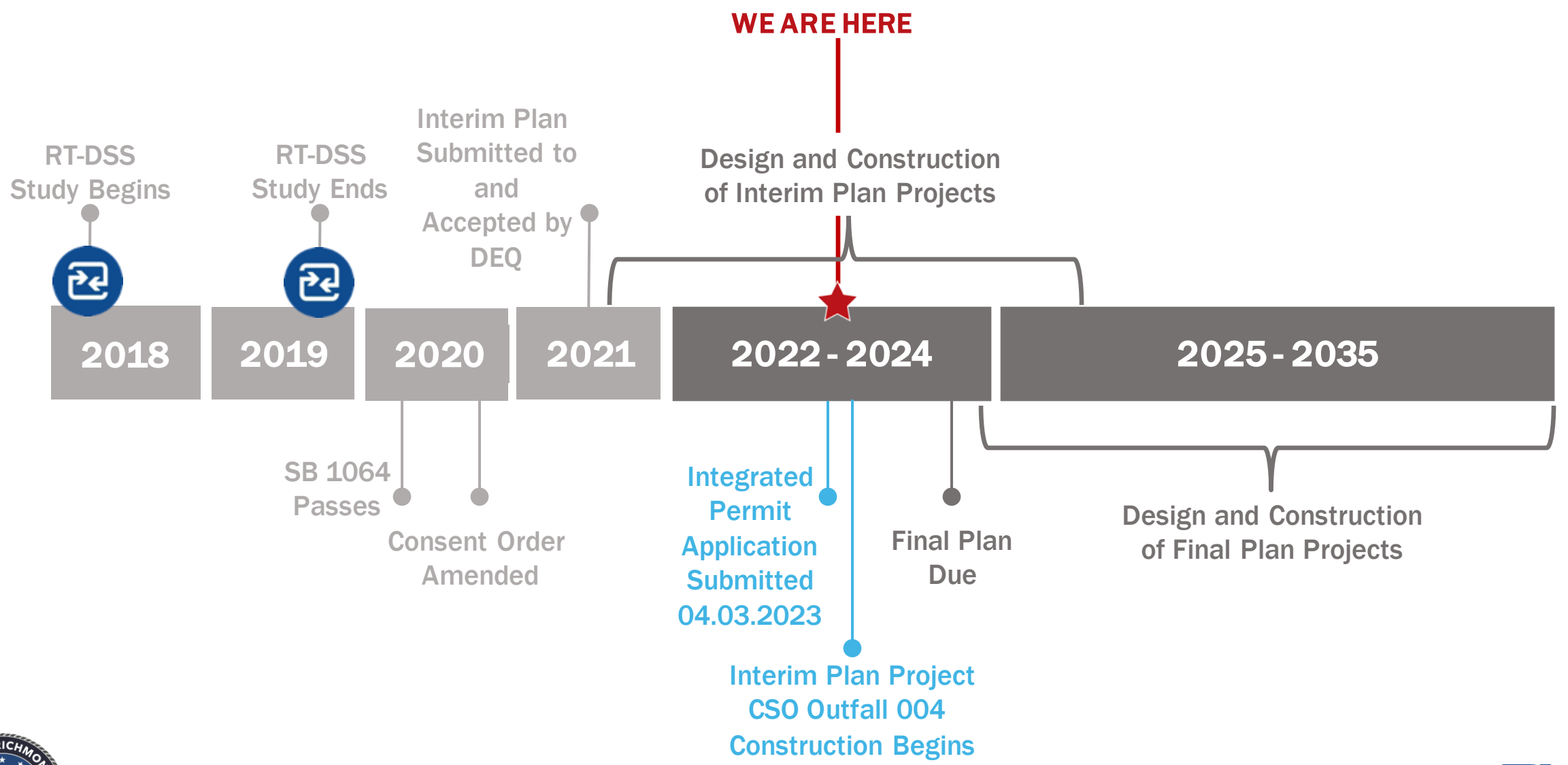
Interim Plan Projects Update

Final Plan Update

Permit Renewal



Timeline

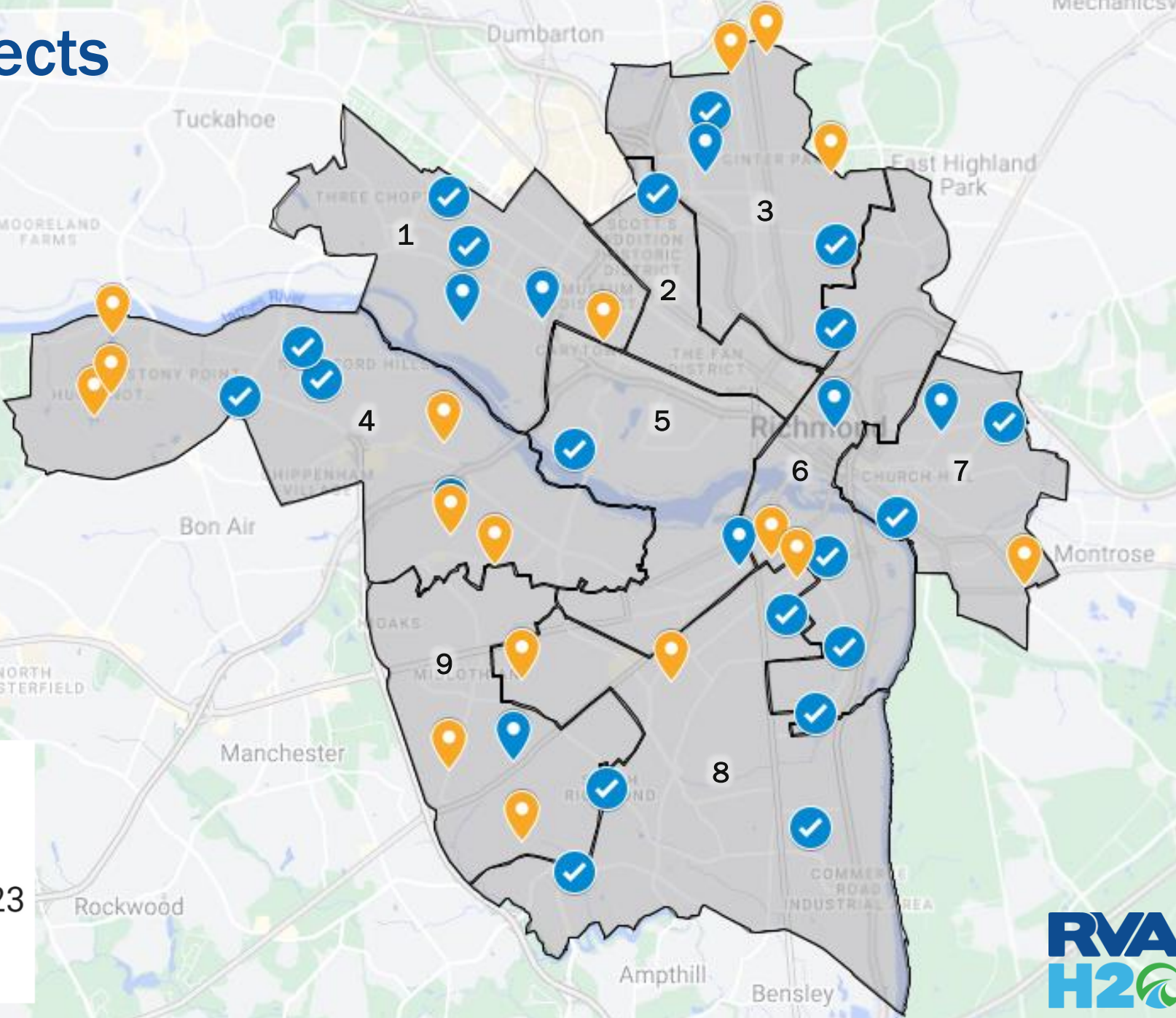


Flood Mitigation Projects

Flood Mitigation Projects

Legend

- ✓ Completed in FY23
- 📍 To be completed by the end of FY23
- 📍 To be completed in FY24



McGuire and Chapel Drive Drainage Improvements Project



before



after



Green Infrastructure Partner Projects

Alliance for the Chesapeake Bay and DPU Green Infrastructure Partnerships in Richmond

Christina Bonini, Senior Green Infrastructure Projects Manager
Alliance for the Chesapeake Bay
cbonini@allianceforthebay.org

Alliance for the Chesapeake Bay

Mission

The Alliance brings together communities, companies, and conservationists to improve our lands and waters.

Vision

Clean streams and rivers flowing through resilient landscapes, cared for by the people who live, work, and play in the Chesapeake Bay watershed

Program Areas

- Green Infrastructure
- Agriculture
- Forestry
- Stewardship and Engagement



Greening Greater Fulton

Goal

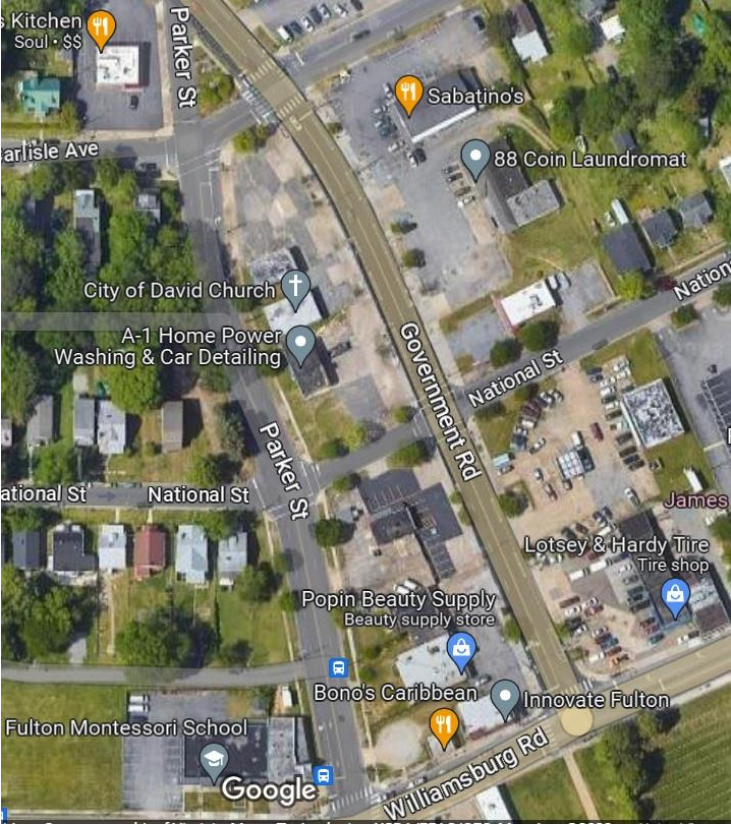
Green street that creates a vibrant, green commercial district to revitalize Fulton and bring new, neighbor owned businesses into the area

Project Area

- Gillies Creek Watershed
- 2 blocks of Government Road
- Large, impervious right of way

Community Need

- Shade
- Safer pedestrian experience
- Beautification



Project Team

- Alliance for the Chesapeake Bay
- Innovate Fulton
- Richmond Dept of Public Utilities
- Groundwork RVA
- Matt Lively and Tim Harper
- Hamilton Glass
- VHB



5000 and 4900 Blocks of Government Road



ILLUSTRATIVE RENDER - VIEW 1
FULTON HILL GREEN STREET
CITY OF RICHMOND, VA
DECEMBER 2, 2021



ILLUSTRATIVE RENDER - VIEW 2
FULTON HILL GREEN STREET
CITY OF RICHMOND, VA
DECEMBER 2, 2021

Stormwater Benefits

- 14,000+ sq ft BMPs
- Removing impervious surfaces
- Permeable pavers (thanks DPU!)
- Rain gardens
- Native plants
- Native street trees
- 17.1 lbs/yr reduction N
- 2.23 lbs/yr reduction P



Construction Begins Summer 2023



BEFORE



AFTER

Improvements to Blackwell Park

Goal

Use green infrastructure to implement community desired park improvements

Project Area

- Goose Creek/Manchester Canal Watershed
- 15.5 acre park
- Former landfill

Community Need

- Recreation amenities
- Safer access to the park



Project Team

- Alliance for the Chesapeake Bay
- Richmond Parks & Recreation
- Richmond Department of Public Utilities
- Southside ReLeaf
- Timmons Group





MASTER PLAN - BLACKWELL PARK (15.5 ACRES)

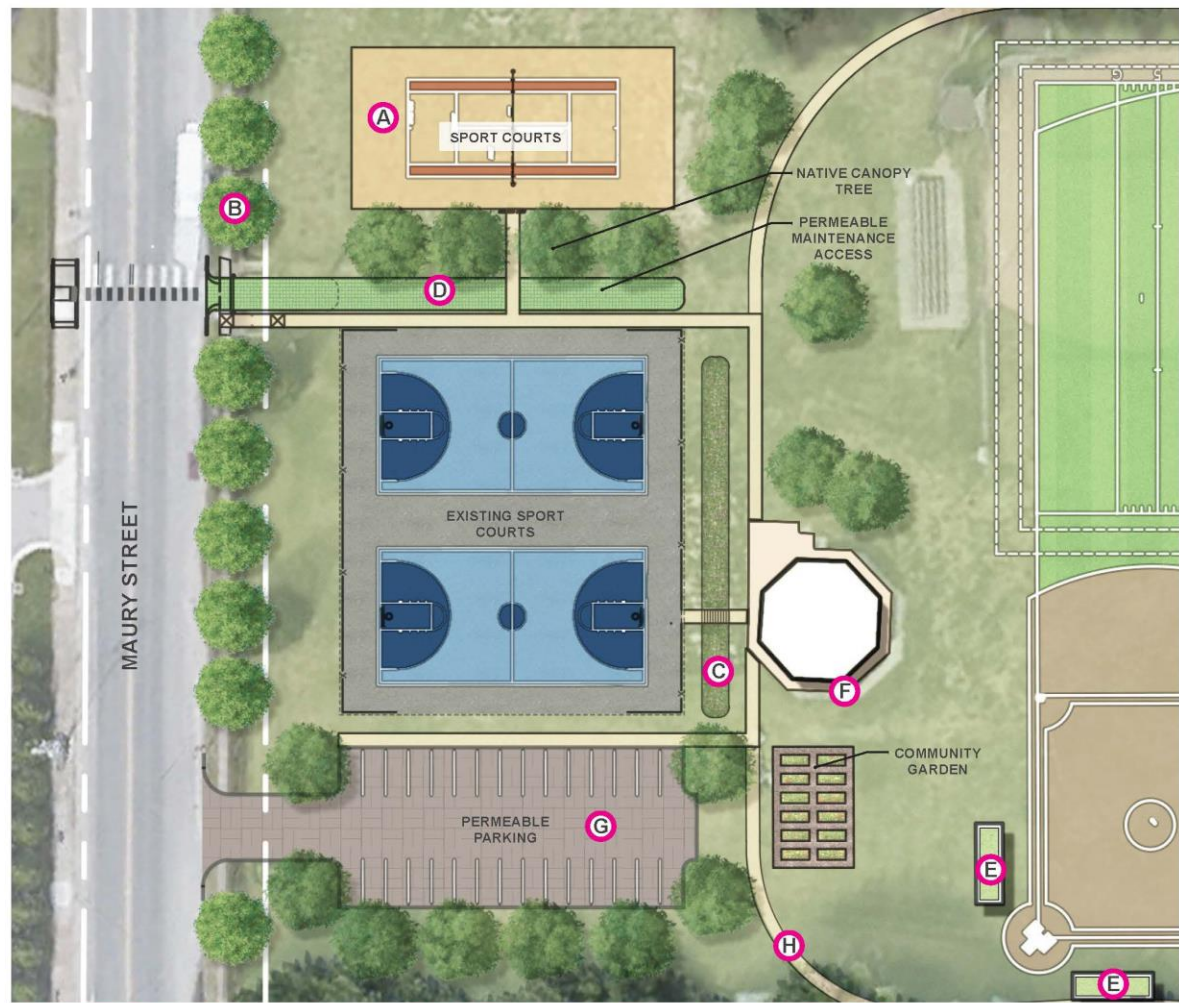
RICHMOND, VIRGINIA



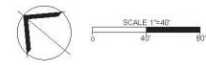
SCALE 1"=100'
0 100 200

Stormwater Benefits

- Permeable parking (thanks DPU!)
- Amended sports fields
- Bioretention areas
- Native plants
- 300+ native trees
- 18.5 lbs/yr reduction N
- 2.47 lbs/yr reduction P



MASTER PLAN - BLACKWELL PARK (15.5 ACRES)
 RICHMOND, VIRGINIA



Questions?

Please comment in the chat box or unmute!

Parks, Recreation, and Community Facilities

Nissa Richardson, Capital Projects Deputy Director

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Ryan Rinn, Capital Projects Planner

ryan.rinn@rva.gov

Pine Camp Safety Project and Stream Rehabilitation



Why?

- Safety!
- Dangerous vertical streambanks
- Unstable, falling outfall pipe
- Drastic erosion will continue without intervention





Additional Benefits

- Trail added
- 786 native trees and shrubs to be planted
- Excellent watershed education opportunities
- Outdoor classroom and educational signage
- Improved habitat for wildlife, native plants, and the community



What You Can Expect

- Pine Camp Cultural Arts and Community Center remains open!
- Temporary trail rerouting
- Temporary, minimal tree loss
- Construction traffic and land disturbance
- Changes to stream channel
- The 786 native plants will take some time to establish



Trees

- 1,000+ trees surveyed
- 43 of those are in poor health
- 40 trees will be removed
- These trees will be utilized as in-stream structures, trail borders, steps, and benches
- Remaining trees protected, actively saving approximately 250
- 786 native trees and shrubs will be planted



Timeline

Past	Now	Fall 2023	2024 - 2029
<ul style="list-style-type: none">• PRCF has provided input on designs• Site visit with Councilperson Lambert (April 2021)• Permitting approvals	<ul style="list-style-type: none">• Second round of outreach with public, elected officials, and advocates to prepare for construction this fall	<ul style="list-style-type: none">• Construction begins in November of this year• Construction expected to last 6 to 9 months	<ul style="list-style-type: none">• Five-year post-construction monitoring• Plants will start to grow and fill-in during this time—this is when the magic will happen!

Funding

- This project is being supported by Stormwater Utility
- Stormwater Utility has secured a grant for 50% of costs from the Virginia DEQ Stormwater Local Assistance Fund





Replace Falling Pipe Outlet with New, Stable Structure

Step-Pool Sequences

Existing Trail

Repair Eroded, Unstable Streambanks Throughout

Bench & Educational Signage



Existing Pipe Outlet



Existing Stream Bank Erosion



Existing Stream Bank Erosion



Example of Step Pools



Example Gully Repair



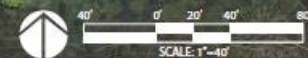
Example Bank Stabilization

Bench & Educational Signage

Native Log Structures Harvested on Site

Proposed Trail

Repair Damaged Pipes and Gully





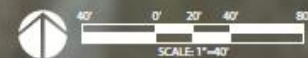
Example of Engineered Log Jam



Example Outdoor Classroom



Example Bench & Educational Signage



PRCF & DPU – Supporting Green Infrastructure

- Pine Camp
- TB Smith Community Center
- Luck's Field Community Center
- Blackwell Playground
- Fonticello Carter Jones Park
- Westover Park
- We're here for GREEN INFRASTRUCTURE!

Thank you!



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Interim Plan Projects Update

Interim Plan Projects

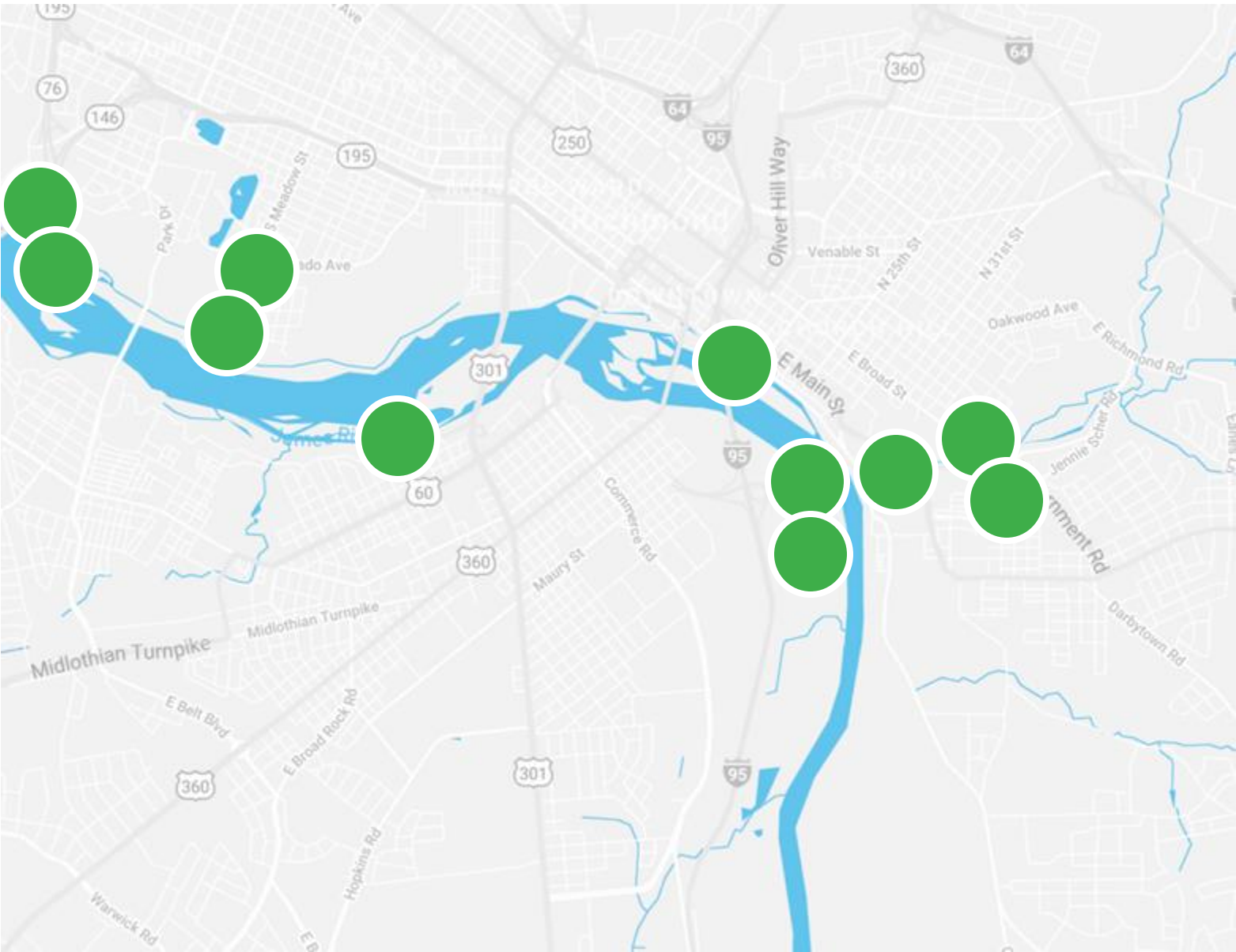
10 Projects

- Control overflows by **maximizing and using existing capacity** in the combined sewer system
- Estimated 182.3 MG capture

92% CSO Capture

Estimated Annual Basis

July 1, 2027
Construction Deadline



Interim Plan Projects – Implementation

Year	2022				2023				2024				2025				2026				2027			
Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
CSO Outfall 004	Blue	Blue	Blue	Blue	Yellow	Green	Green	Green	Green	Green	Green	Green												
Level 1 Controls	Blue	Blue	Blue	Blue	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green							
Level 2 Controls	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Yellow	Green	Green	Green	Green	Green								
CSO Outfalls 024 and 039	Blue	Blue	Blue	Blue	Blue	Blue	Yellow	Green	Green	Green	Green	Green	Green											
CSO Outfalls 021 and 040 #1	Blue	Blue	Blue	Blue	Blue	Blue	Yellow	Green	Green	Green	Green	Green	Green											
CSO Outfalls 019A, 019B, and 020	Blue	Blue	Blue	Blue	Blue	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green										

TODAY

Planning and Design
 Procurement
 Construction

Deadline 7/1/27



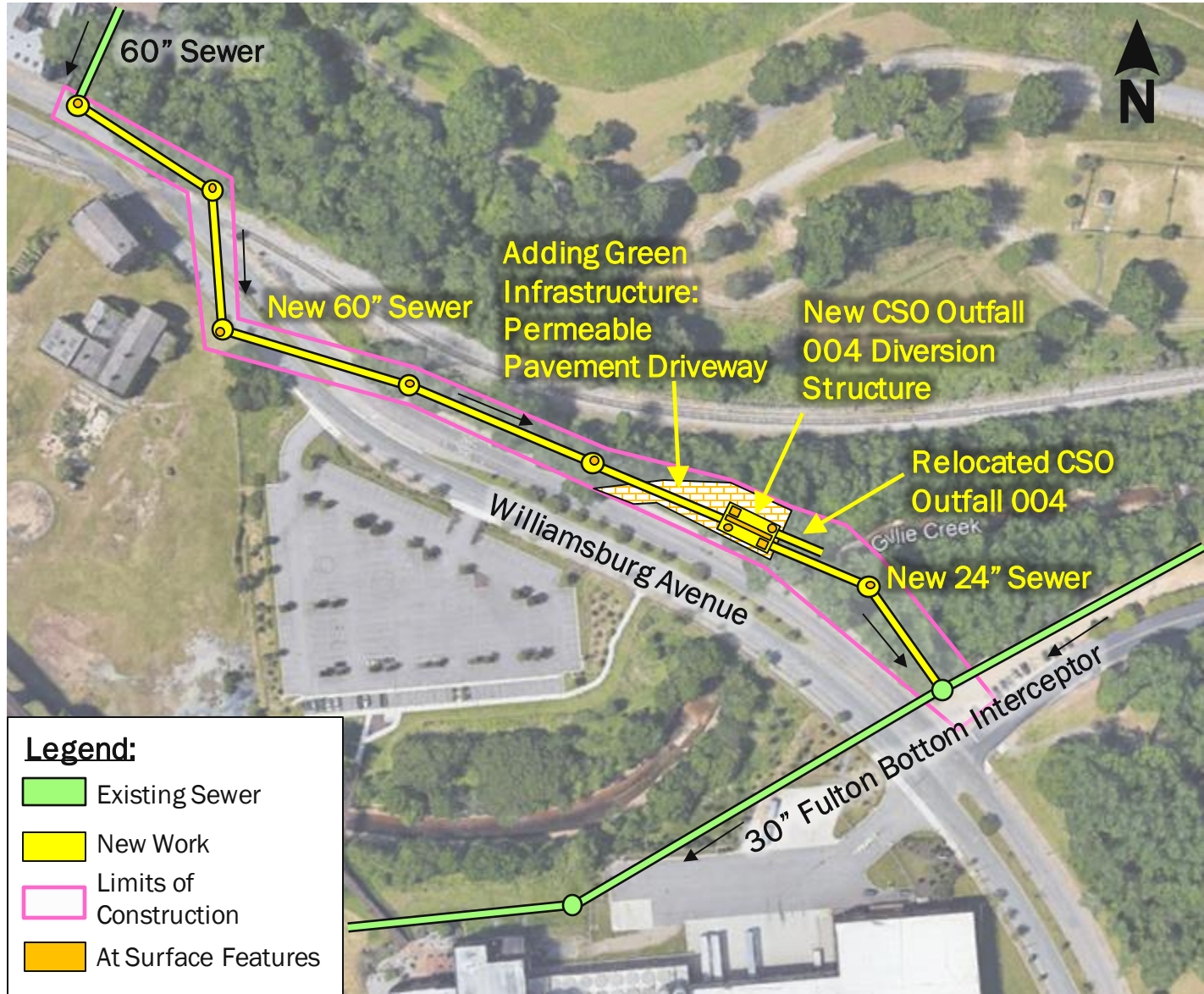
Interim Plan Project – CSO Outfall 004

Divert additional wet weather flow to the Fulton Bottom Interceptor

Overflow Volume Reduction (MG)	5.1
Overflow Event Reduction (#)	48

Contractor Award Date:
Late May 2023

Construction Start Date:
Summer 2023



Interim Plan Project – CSO Outfall 004 Groundbreaking Event

Invitation coming soon for a
late summer groundbreaking!
Please join us!

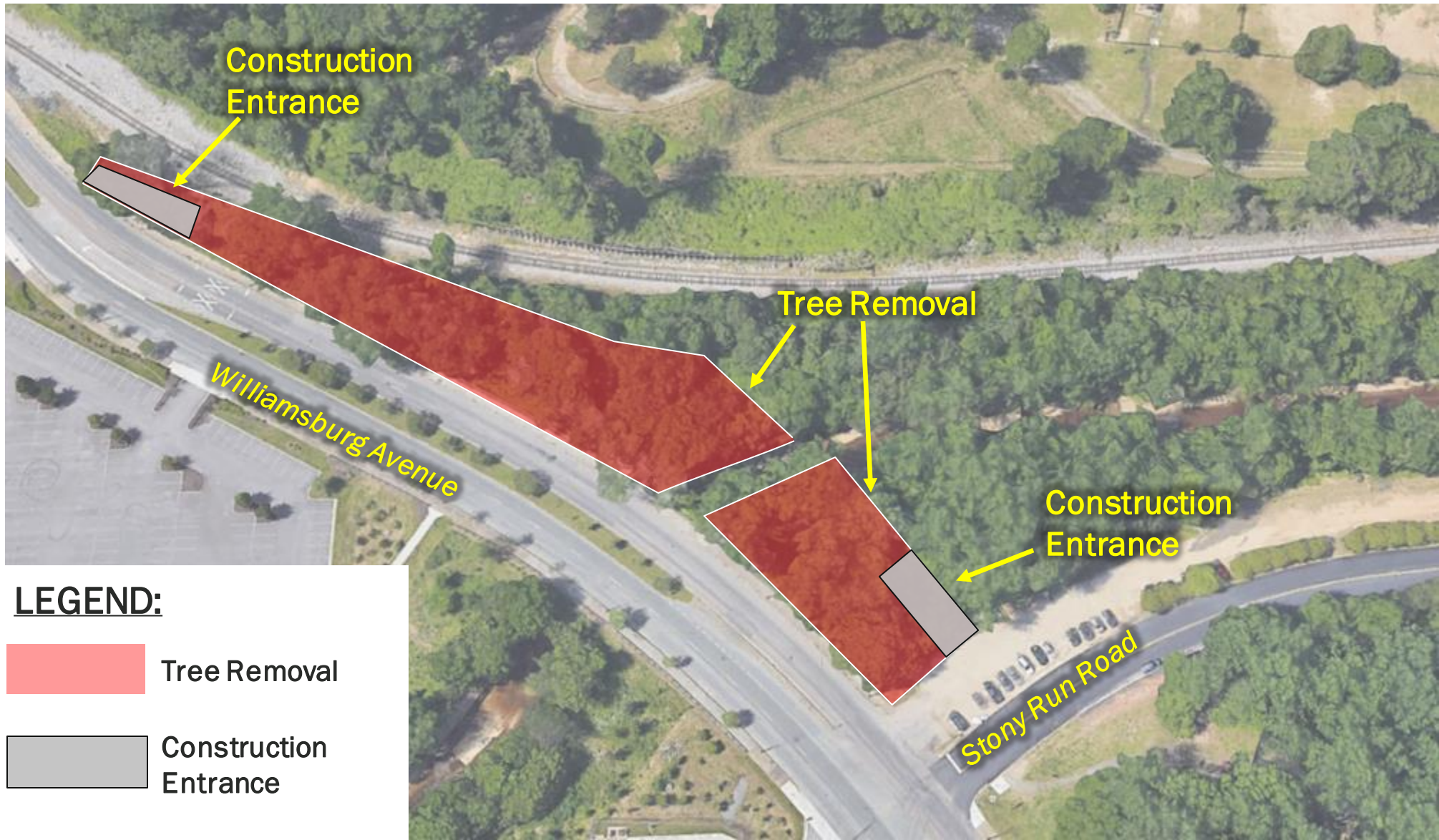


Interim Plan Project – CSO Outfall 004



Tree Removal and Replacement

Removal
Acreage:
1.1 acres

Replacement:
Coordinating with DPW
and Parks on
replacement



LEGEND:

-  Tree Removal
-  Construction Entrance

Interim Plan Project – CSO Outfall 004

Potential Traffic Detour Plan

Why?

Installation of pipeline in Williamsburg Avenue

When?

Towards the end of the project (Fall 2024)

How long?

~4 months



Final Plan Update

Final Plan – Regulatory Requirements

Purpose:

Meet/exceed the performance (bacteria removal) of the remaining 2005 Order Projects

Plan Due Date:

7/1/2024

Implementation Deadline:

7/1/2035



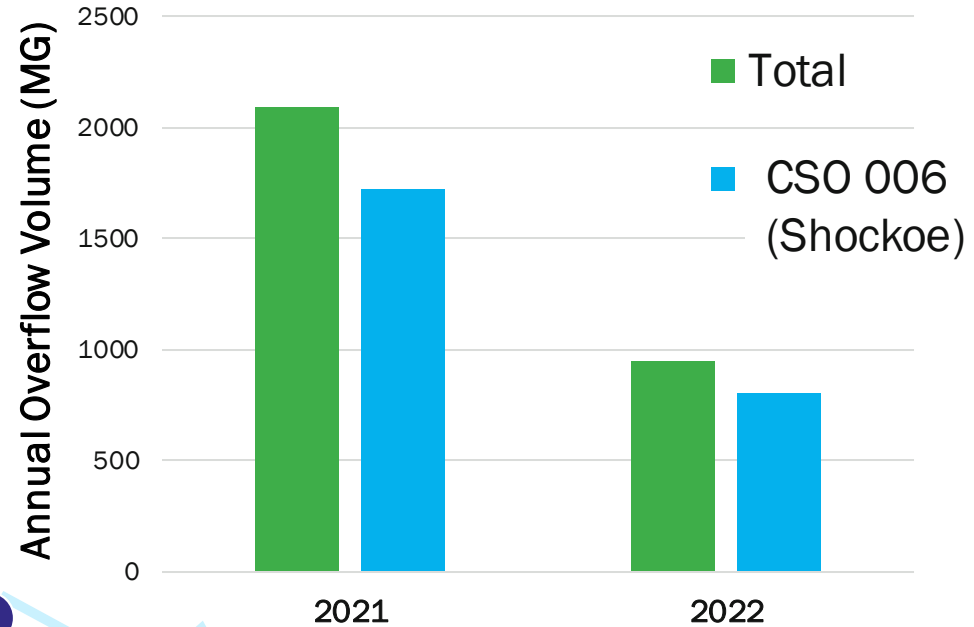
CSO Outfalls Overview



Legend

- █ Key Infrastructure
- █ Shockoe Retention Basin
- PS Pump Station
- CSO Outfall
- Key CSO Outfall

2021 & 2022 Reported Overflows



CSO 006 Alternative #1

Local Storage



Need an additional 75 MG of storage (not enough space on Chapel Island)





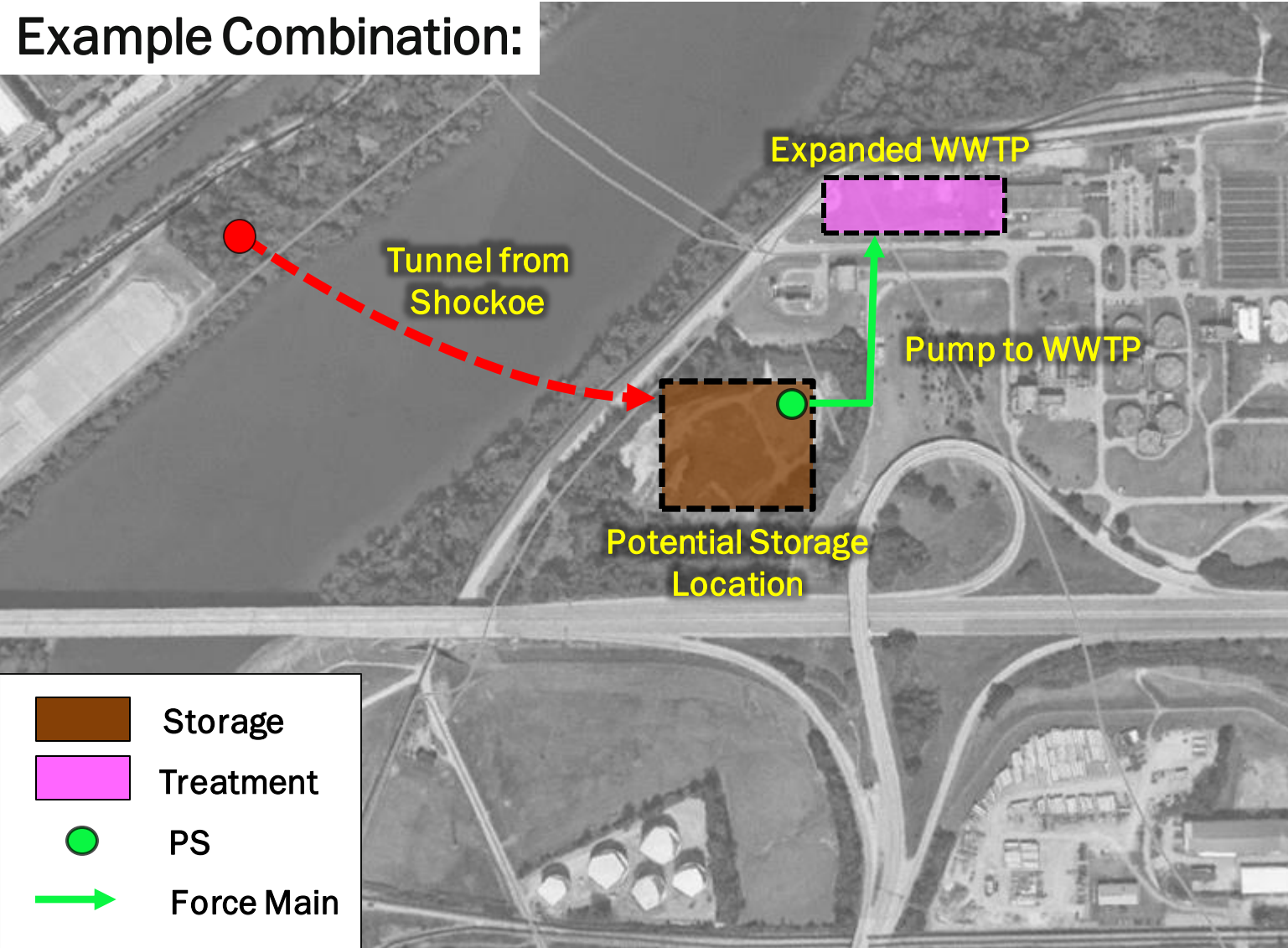
CSO 006 Alternative #2

Conveyance to Storage and Treatment

Storage:
Tunnel and Storage Basin

Treatment:
Expanded WWTP

Example Combination:



CSO 006 Alternative #3

Local Treatment



Final Plan Schedule Update





Public Stakeholder Group

Final Plan Public Stakeholder Group

Solutions Identification:

Spring 2023

Solutions Evaluation:

Summer 2023

Solutions Selection:

Fall 2023 and Winter 2024

Final Plan Review:

Spring 2024



Meeting Materials and Recordings



**Permit Renewal
Submitted April 3rd**

Questions?

Please comment in the chat box or unmute!

NEXT MEETING FALL 2023



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