



*Prince George's County*

7<sup>th</sup> GREEN SUMMIT

DEPARTMENT OF THE ENVIRONMENT

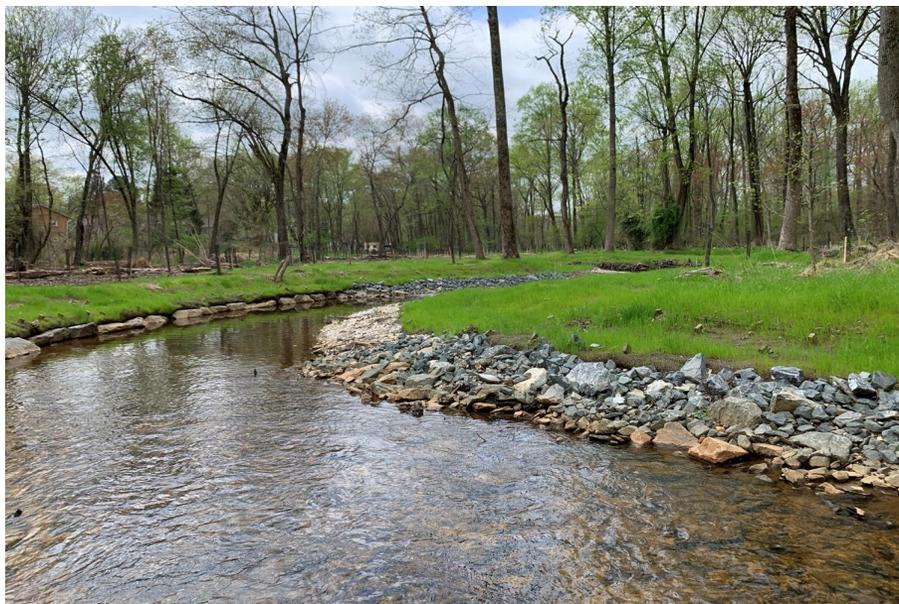
2021

annual

C L E A N W A T E R W A Y S



# WATER QUALITY RESTORATION PROJECTS



A circular logo in the top left corner featuring a green leaf above three white wavy lines representing water, all set against a dark green background.

# WATER QUALITY RESTORATION PROJECTS

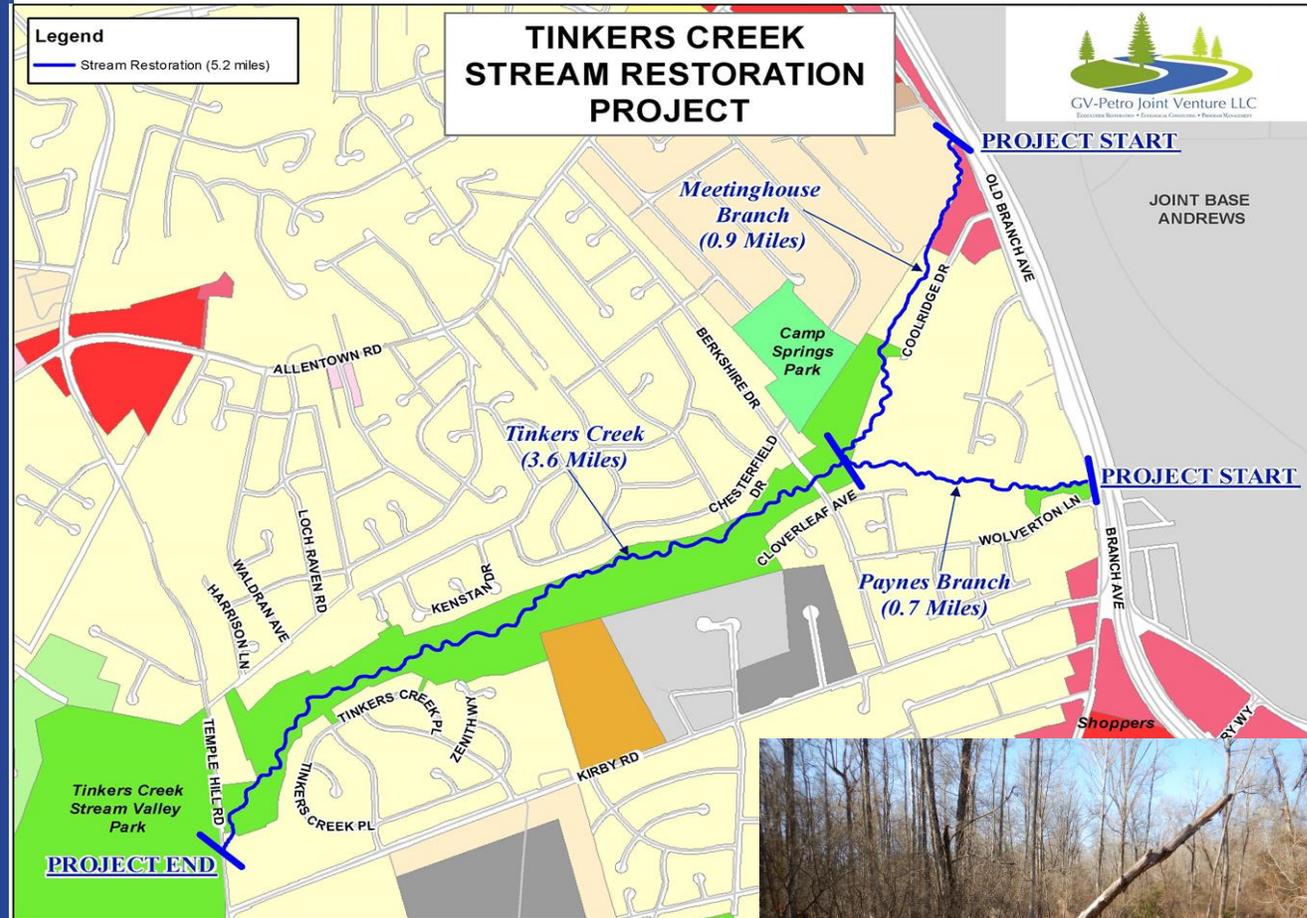
The following presentation illustrates environmental restoration projects implemented by the Capital Improvement Program (CIP). These projects are intended to improve water quality in the local watersheds and meet the MS4-NPDES Permit mandates.

- Tinkers Creek Stream Restoration, Clinton MD, Recently Completed
- Bear Branch Stream Restoration, City of Laurel, MD, Under Construction
- Henson Creek Stream Restoration, Morningside, MD, Completed 2019
- Bishops Content Stream Restoration, Woodmore, MD, Completed 2021
- Outfall 36 Stream Restoration, Hyattsville, Completed 2020
- Fairland Regional Park Urban Retrofit, Laurel, Completed 2019
- Publick Playhouse Urban Retrofit, Cheverly, Completed 2021
- Anacostia Watershed Restoration Stream Restoration, Under design partnership with Army Corp. of Engineers

# Tinkers Creek Stream Restoration

- Meetinghouse Branch
  - 8,001 LF
  - Downstream of Old Branch Ave and Coolridge Dr. to Confluence with Tinkers Creek
- Paynes Branch
  - 5,082 LF
  - Downstream of Old Branch Ave and Wolverton Ln. to Confluence with Tinkers Creek
- Tinkers Creek
  - 27,465 LF
  - Upstream of Berkshire Dr. to 500 lf upstream of Temple Hills Rd.
- Credits
  - 819.9 Impervious Acres
  - 3,074.4 TN lbs./ yr.
  - 2,787.5 TP lbs./ yr.
  - 10,166,142.5 TSS lbs./yr.

# PROJECT AREA



**Status:** Completed  
**Stakeholders:**  
 Department of Natural Resources (DNR)  
 MNCPPC  
 GV-Petro  
**Grant Funding:** \$4.5M



# Tinkers Creek Stream Restoration



[youtu.be/7WhlNFKywDM](https://youtu.be/7WhlNFKywDM)

# Tinkers Creek Stream Restoration



Stream Restoration with  
Floodplain reconnection,  
Riffles, Grade Controls, and  
Toe Wood design approach



# Tinkers Creek Stream Restoration



# Bear Branch Stream Restoration

- Mainstem
  - 2078 LF
  - Van Dusen Road to Laurel Lake
- Tributary 1
  - 668 LF
  - Downstream of Olive Branch Way to Confluence
- Tributary 2
  - 556 LF
  - Intersection of Wicklow Lane and Kilcoroney Court to Confluence
- Credits
  - 341.80 Impervious Acres
  - 1094 TN lbs./ yr.
  - 333 TP lbs./ yr.
  - 609,326 TSS lbs./yr.

## PROJECT AREA



# Bear Branch Stream Restoration

Status: Under Construction

Stakeholders:

- Department of Natural Resources (DNR)
- City of Laurel
- Villages of Wellington HOA

Estimated Completion: May 2022

Grant Funding: \$1.75M



Design Approach:

Floodplain Reconnection  
Creation of Wetland  
Complexes  
Grade Controls  
Toe Wood Protection

# Henson Creek Trib. 3 Stream Restoration

- Mainstem
  - 790-834 LF
  - 6810 Woodland Road to Henson Creek Mainstem
- Design Approach
  - Floodplain Design
  - Restore ecological functions
  - Wetland complex
  - Home Protection
- Credits
  - 63.94 Impervious Acres
  - 267 TN lbs./ yr.
  - 88 TP lbs./ yr.
  - 167,200 TSS lbs./yr.
- Project Status:
  - Completed

## PROJECT AREA



# Henson Creek Trib. 3 Stream Restoration

Design Approach:

Floodplain Reconnection  
Creation of Wetland  
Complexes  
Grade Controls  
Home Protection



# Bishops Content Stream Restoration

- Mainstem
  - 513 LF
  - Bishops Content Road to Pleasant Prospect
- Credits
  - 10.26 Impervious Acres
  - 15.4 TN lbs./ yr.
  - 24.4 TP lbs./ yr.
  - 49,619.4 TSS lbs./yr.
- Project Status:
  - Completed
- Stakeholders:
  - Woodmore HOA

## PROJECT AREA



# Bishops Content Stream Restoration

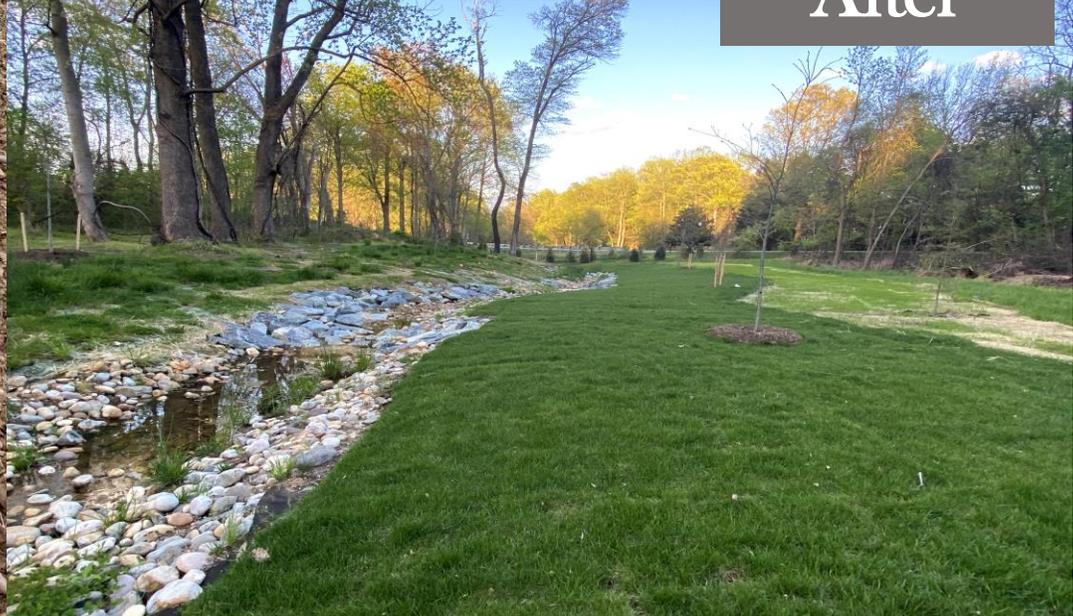
Design Approach:  
Riffles, Pools, Grade  
Controls, and Riparian  
Planting



Before



After



# Outfall 36 Stream Restoration

- Mainstem
  - 379 LF
  - Bishops Content Road to Pleasant Prospect
- Credits
  - 50.5 Impervious Acres
  - 448 TN lbs./ yr.
  - 248 TP lbs./ yr.
  - 116,745 TSS lbs./yr.
- Project Status:
  - Completed
- Stakeholders:
  - MNCPPC

## PROJECT AREA



# Outfall 36 Stream Restoration

Design Approach:  
Riffles, Pools, Grade  
Controls, Toe Protection,  
and Riparian Planting



# Fairland Regional Park Urban Retrofit

## Urban Retrofit using Innovative Bioretention Design Enhanced Nutrient Removal Bioretention Cells



**BMP TYPE:** 7 Micro-bioretention cells,  
1 Permeable Payment, 3 Filtreras Systems

**Credits:**

- 2.24 Impervious Acres
- 22 TN lbs./ yr.; 3.98 TP lbs./ yr.
- 12,062 TSS lbs./yr.

	Large		Small	
	Inflow (kg/ha/yr)	Outflow (kg/ha/yr)	Inflow (kg/ha/yr)	Outflow (kg/ha/yr)
<b>TSS</b>	217	11.9	186	4.20
<b>TP</b>	2.38	0.20	1.53	0.08
<b>DP</b>	1.21	0.09	0.88	0.03
<b>PP</b>	1.17	0.10	0.64	0.04
<b>TN</b>	12.8	4.19	12.2	1.94
<b>NH4-N</b>	1.74	1.15	1.32	0.65

**Stakeholders:** National Fish & Wildlife Foundation (NFWF), MNCPPC & University of Maryland

# Publick Playhouse Urban Retrofit



**BMP TYPE:** 4 Micro-bioretention cells

**Challenges:** Soils contaminated with Benzene, VOCs & SVOCs exceeding regulatory standards

**Credits:**

- 1.25 Impervious Acres
- 22 TN lbs./ yr.
- 3.98 TP lbs./ yr.
- 12,062 TSS lbs./yr.

**Project Status:** Completed

**Stakeholders:** Chesapeake Bay Trust (CBT) & MNCPPC

# ANACOSTIA WATERSHED RESTORATION STREAM RESTORATION PROJECTS

## Prince George's County and US Army Corps of Engineers partner to restore the Anacostia Watershed

- ❖ A regional 2010 “Anacostia River Watershed Restoration Plan and Report” was approved by various regional stakeholders; including Prince George’s and Montgomery counties, MWCOG, MNCPPC, and the USACE. This plan identified projects for the restoration within the Anacostia River watersheds, including projects that the County and the federal partner, the USACE could potentially implement as stream restoration, wetland restoration, and fish blockage removal/modification.
- ❖ In January 2014 Prince George's County and the US Army Corps of Engineers entered into a Partnership agreement for a feasibility study for restoration of various streams within the Anacostia watershed. This included various stream reaches in Indian Creek Paint Branch, Little Paint Branch, Northeast and Northwest Branches,
- ❖ In December 2016, a recommended plan was approved by the County and USACE is to restore three stream sites in the Northwest Branch and three stream sites in the Northeast Branch. These combined restoration sites will restore 7 miles of in-stream habitat, opening 4 miles for fish passage and connecting 14 miles of stream to previously restored stream reaches. This restoration will also be included under the County’s NPDES MS4 permit requirements for water quality improvements.
- ❖ In August 2021 the Design and Pre-construction Agreement was signed by the County and the USACE. The engineering design is scheduled to commence in the Fall of 2021.
- ❖ The current plan is to restore of six (6) sites (~ 37,500 LF of Stream restoration) within the Anacostia watershed including: Sligo Creek, Paint Branch, Indian Creek, the Northeast and Northwest main stems of the Anacostia, and the upper Northwest Branch of the Anacostia

# ANACOSTIA WATERSHED RESTORATION STREAM RESTORATION PROJECTS

## COUNTY AND USACE PARTNESHIPS: ANACOSTIA WATERSHED RESTORATION STREAM RESTORATION INVENTORY

ANACOSTIA WATERSHED RESTORATION PROJECTS	Stream Length (LF)
Northwest Branch - AWR Site 3	6,792
Paint Branch - AWR Site 5	6,275
Sligo Creek - AWR Site 9	3,171
Indian Creek - AWR Site 11	9,409
Upper Northwest Branch - AWR Site 13	8,189
Northeast Branch - AWR Site 15	4,924

### Estimated Credits:

- 775 Impervious Acres
- 2,234 TN lbs./ yr.
- 2,636 TP lbs./ yr.
- 7,405,533 TSS lbs./yr.

Estimated Completion: FY 27





# LIDC in CHEVERLY



[youtu.be/J5BpGmhBSxl](https://youtu.be/J5BpGmhBSxl)