Prince William County Schools, Virginia

Municipal Separate Storm Sewer System Annual Report

For

General Permit No. VAR040100

Permit Year

July 1, 2024 through June 30, 2025

This annual report is submitted in accordance with 9VAC25-890-40 as part of the requirement for permit coverage to discharge stormwater to surface waters of the Commonwealth of Virginia consistent with the VAR04 General Permit effective per letter dated November 1, 2023.

Submitted: September 30, 2025

TABLE OF CONTENTS

APPENDICES

TABLES

ACRONYMS

BMP	Best Management Practices
DEQ	Virginia Department of Environmental Quality
IDDE	Illicit Discharge Detection and Elimination
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer System
POC	Pollutants of Concern
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
VPDES	Virginia Pollution Discharge Elimination System
WLA	Wasteload Allocation

1.0 GENERAL ANNUAL REPORTING REQUIREMENTS

1.1. General Information (Part I.D.3.a)

Permitee Name: Prince William County Schools

Permit Number: VAR040100

1.2. Reporting Period (Part I.D.3.b)

The reporting period for which the annual report is being submitted.

July 1, 2024 through June 30, 2025

1.3. Signed Certification (Part I.D.3.c)

A signed certification as per Part IV K.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Julius R. Williams

Title: Administrative Coordinator of Environmental Division

Signature: Julius R Williams Date: 9/26/2025

1.4. Reporting for MCMs #1 - #6 (Part I.D.3.d)

Include information for each annual reporting item specified in Part I.E.

Reporting information for each Minimum Control Measure is provided in Section 2.0.

1.5. Evaluation of the MS4 Program Implementation (Part I.D.3.e)

An evaluation of the MS4 program implementation, including a review of each MCM to determine the MS4 program's effectiveness and whether changes to the MS4 Program Plan are necessary.

An evaluation for each Minimum Control Measure is provided in Section 2.0. Changes that are necessary to be made to the MS4 Program Plan are summarized in Table 1.

Table 1: Summary of MS4 Program Plan Changes
No changes required.

2.0 MINIMUM CONTROL MEASURES

2.1. MCM #1: Public Education and Outreach

2.1.1. High Priority Stormwater Issues (Part I.E.1.g(1))

A list of high-priority stormwater issues addressed in the public education and outreach program.

A list of high-priority stormwater issues addressed in public education and outreach program is provided in Table 2.

2.1.2. High Priority Stormwater Issue Communication Strategies (Part I.E. 1.g(2))

A summary of the public education and outreach activities conducted for the report year, including the strategies used to communicate the identified high-priority issues.

A summary of the public education and outreach activities conducted for the report year, including the strategies used to communicate the identified high-priority issues is provided in Table 2. Appendix A includes documentation of the communication efforts described in Table 2.

Table 2: High Priority Stormwater Issues

#	Stormwater Issue	Strategy	Communication	Metric	Beneficial	Included Climate Change Education
1	Chesapeake Bay Water Quality	Curriculum Materials	Watershed education throughout the year	13,500 4th and 6th grade students received education	☒ Yes ☐ No	☐ Yes ☒ No
2	Illicit Discharge from Local Sources	Traditional Written Materials	After the Storm email about Stormwater sent 08/30/2024	350 Principals, Assistant Principals, Bookkeepers, & Administrative Assistants	☒ Yes ☐ No	☐ Yes ☒ No

3	Local Waterways	Traditional Written Materials	Clean Water Partners Quarterly Newsletter sent May 2025	900 sent	☒ Yes ☐ No	☐ Yes ☒ No

2.1.3. Description of Changes in High Priority Stormwater Issues (Part I.E. 1.g(3))

A description of any changes in high-priority stormwater issues, including strategies used to communicate high-priority stormwater issues or target audiences for the public education and outreach plan. The permittee shall provide a rationale for any of these changes.

A description of any changes in high-priority stormwater issues and rationale for any of these changes are provided in Table 3. The changes to the strategies used to communicate high-priority stormwater issues or target audiences for the public education and outreach plan are provided in Table 2.

Table 3: Description of Changes in High Priority Stormwater Issues

#	Stormwater Issue	Description of Any Changes	Rationale for Changes
1	Public education on stormwater runoff	Not Applicable	Not Applicable
2	TMDLs and Local Impaired Waters	Not Applicable	Not Applicable
3	Pollution Prevention	Not Applicable	Not Applicable

2.1.4. Description of Activities Regarding Climate Change (Part I.E. 1.g(4))

A description of public education and outreach activities conducted that included education regarding climate change.

A description of public education and outreach activities conducted that included education regarding climate change is provided in Table 2.

2.1.5. MCM #1 Evaluation (Part I.D.3.e)

Review the MCM to determine the MS4 Program's effectiveness and whether or not changes to the MS4 Program Plan are necessary.

Were all MCM #1 measurable goals completed in accordance with the MS4 Program Plan?

☒ Yes ☐ No ( )

Are the MS4 Program measurable goals effective?

☒ Yes (Effective) ☐ No (Ineffective, necessary changes to the MS4 Program are included in Section 1.5.)

2.2. MCM #2: Public Involvement and Participation

2.2.1. Public Input Summary (Part I.E.2.i(1))

A summary of any public comments on the MS4 program received and the responses.

Were any public comments on the MS4 Program received?

☐ Yes, responses are provided in Table 4. ☒ No

Table 4: Responses to Public Comments on the MS4 Program Plan		
#	Comment(s)	Response(s)
1		

2.2.2. Summary of Stormwater Pollution Complaints (Part I.E.2.i(2))

A summary of stormwater pollution complaints received under the procedures established in Part I.E.2.a(1), excluding natural flooding complaints, and how the permittee responded.

Were any stormwater pollution complaints received under the procedures established in Part I.E.2.a(1), excluding natural flooding complaints?

☐ Yes, responses are provided in Table 5. ☒ No

Table 5: Responses to Stormwater Pollution Complaints		
#	Comment(s)	Response(s)
1		

2.2.3. MS4 Program and Stormwater Webpage (Part I.E.2.i(3))

A webpage address to the MS4 program and stormwater website.

PWCS has both internal and external webpages. The internal webpage is accessible to PWCS teachers/staff/admin and describes MS4 educational programs available, GeoCurve adoption program information and forms and upcoming training events, surveys, other pertinent information to internal staff.

The external facing webpage address is www.pwcs.edu/departments/risk_safety/environmental_services/stormwater_management

2.2.4. Internal MS4 Program Webpage (Part I.E.2.i(4))

Federal and state nontraditional permittees with security policies preventing the MS4 program and stormwater pollution prevention webpage from being publicly accessible utilizing an internal staff accessible website, such as intranet, shall provide evidence of the current internal MS4 program and stormwater pollution prevention webpage.

Is there an internal MS4 program and stormwater pollution prevention webpage?

☐ Yes, ☒ No

2.2.5. Public Involvement Activities Implemented (Part I.E.2.i(5))

A description of the public involvement activities implemented including any efforts to reach out and engage all economic and ethnic groups.

A description of the implemented public involvement activities are provided in Table 6.

2.2.6. Public Education and Outreach Regarding Climate Change (Part I.E.2.i(6))

A description of the public education and outreach activities conducted that also included education regarding climate change.

A description of the public education and outreach activities conducted that also included education regarding climate change is provided in Table 6.

2.2.7. Public Involvement Activity Metric and Evaluation (Part I.E.2.i(7))

A report of the metric as defined for each activity and an evaluation as to whether or not the activity is beneficial to improving water quality.

A report of the metric as defined for each activity and an evaluation as to whether or not the activity is beneficial to improving water quality is provided in Table 6. Appendix B includes documentation of the public involvement activities.

Table 6: Public Involvement Activities Implemented

#	Activity Description /Date	Category	Metric	Collaboration	Included Climate Change Education	Beneficial to Improving Water Quality
1	Springwoods ES Tree Planting October 2024	Restoration	10 Teachers, 78 Students, 40 Trees	No	☐ Yes ☒ No	☒ Yes ☐ No

2	Student Environmental Awareness Showcase (SEAS) Event 4/24/24	Educational	24 Teachers, 237 Students, 500 Total Attendees	No	☐ Yes ☒ No	☒ Yes ☐ No
3	Meaningful Watershed Educational Experience,. Multiple Dates	Educational	34 Teachers, 1,030 Students, 12 Events	PWC Conservation District/PWC Public Works	☒ Yes ☐ No	☒ Yes ☐ No
4	Watershed Game event (teaching students about stormwater management decision making, budgeting, partnering, politics) Dec. 18-19, 2024	Educational	2 Teachers, 120 Students	No	☐ Yes ☒ No	☒ Yes ☐ No

2.2.8. MS4 Collaboration (Part I.E.2.i(8))

The name of other MS4 permittees collaborated with in the public involvement opportunities.

If applicable, the name of other MS4 permittees collaborated with for any of the public involvement opportunities are provided in Table 6.

2.2.9. MCM #2 Evaluation (Part I.D.2.e)

Review the MCM to determine the MS4 Program's effectiveness and whether or not changes to the MS4 Program Plan are necessary.

Were all MCM #2 measurable goals completed in accordance with the MS4 Program Plan?
☒ Yes ☐ No ( )

Are the MS4 Program measurable goals effective?
☒ Yes (Effective) ☐ No (Ineffective, necessary changes to the MS4 Program are included in Section 1.5.)

2.3. MCM #3: Illicit Discharge Detection and Elimination

2.3.1. MS4 Map and Information Table (Part I.E.3.e(1))

A confirmation statement that the MS4 map and information table have been updated to reflect any changes to the MS4 occurring on or before June 30 of the reporting year.

Were the MS4 map and outfall information table updated to reflect any changes to the MS4 occurring on or before June 30 of the reporting year? ☒ Yes ☐ No ( )

2.3.2. Dry Weather Screening (Part I.E.3.e(2))

The total number of outfalls and observation points screened during the reporting period as part of the dry weather screening program.

The number of outfalls and observation points screened during the reporting year as part of the dry weather screening program is 111.

2.3.3. Illicit Discharges (Part I.E.3.e(3))

A list of illicit discharges to the MS4 including spills reaching the MS4.

Were there any illicit discharges to the MS4 including spills reaching the MS4?
☒ Yes (Refer to Table 7) ☐ No

Table 7: Illicit Discharges
Illicit Discharge 1 (DEQ #314693)
Part I.E.3.e(3)(a) Location and Source: 14715 Bristow Road. Kelly Learning Center
Part I.E.3.e(3)(b) Date Observed & Date Reported: 7/15/2024
Part I.E.3.e(3)(c) Detected during Screening, Reported by Public or Other (Describe): Self inspection.
Part I.E.3.e(3)(d) Investigation Resolution: Not IDDE
Part I.E.3.e(3)(e) Description of Follow-up Activities: None required
Part I.E.3.e(3)(f) Date Investigation Closed: 7/17/2024

2.3.4. MCM #3 Evaluation (Part I.D.2.e)

Review the MCM to determine the MS4 Program's effectiveness and whether or not changes to the MS4 Program Plan are necessary.

Were all MCM #3 measurable goals completed in accordance with the MS4 Program Plan?
☒ Yes ☐ No ( )

Are the MS4 Program measurable goals effective?
☒ Yes (Effective) ☐ No (Ineffective, necessary changes to the MS4 Program are included in Section 1.5.)

2.4. MCM #4: Construction Site Stormwater Runoff and Erosion and Sediment Control

2.4.1. Land Disturbing Activities (Part I.E.4.a(5))

The MS4 inspects projects resulting in a land disturbance as defined in § 62.1-44.15.51 of the Code of Virginia occurring on lands owned or operated by the permittee that result in the disturbance of 10,000 square feet or greater, 2,500 square feet or greater in accordance with areas designated under the Chesapeake Bay Preservation Act, or in accordance with more stringent thresholds established by the local government, as follows:

(a) During or immediately following initial installation of erosion and sediment controls;

(b) At least once per every two-week period; (c) Within 48 hours following any runoff producing storm event; and (d) At the completion of the project prior to the release of any performance bond.

2.4.1.1. Site Stormwater Runoff Inspections (Part I.E.4.e(1))

Total number of erosion and sediment control inspections conducted.

PWC and PWCS have signed an agreement stating PWC's legal authority over PWCS construction sites. As the VESMP authority, PWC conducts inspections on PWCS construction sites and reports the total number of inspections in PWC's annual report as a total, not distinguishing PWCS inspections. See Appendix C.

2.4.1.2. Enforcement Actions (Part I.E.4.e(2))

The total number and each type of compliance actions and enforcement implemented.

As the VESMP authority, PWC conducts inspections on PWCS construction sites, issues notices of violation, and stop work orders. The total number and each type of compliance actions and enforcement implemented are included in PWC's annual report as a total, not distinguishing PWCS inspections.

Table 8: Construction Project(s) Inspections and Compliance Actions and Enforcement

Total Number of Inspections	Total Number of Notices of Violation Issued	Total Number of Stop Work Orders Issued
See Section 2.4.1.1.	See Section 2.4.1.2	See Section 2.4.1.2

2.4.1.1. Land Disturbance under Prince William County (Part I.E.4.e(3)(a))

A confirmation statement that land disturbing projects that occurred during the reporting period have been conducted in accordance with the current Prince William County ordinances and VESCP for erosion and sediment control.

Were all land disturbing projects that occurred during the reporting period conducted in accordance with current Prince William County ordinances and VESCP for erosion and sediment control?

☒ Yes ☐ No ( ) ☐ Other ( )

2.4.2. MCM #4 Evaluation (Part I.D.3.e)

Review the MCM to determine the MS4 Program's effectiveness and whether or not changes to the MS4 Program Plan are necessary.

Were all MCM #4 measurable goals completed in accordance with the MS4 Program Plan?

☒ Yes ☐ No ( )

Are the MS4 Program measurable goals effective?

☒ Yes (Effective) ☐ No (Ineffective, necessary changes to the MS4 Program are included in Section 1.5.)

2.5. MCM #5: Post-Construction Stormwater Management

2.5.1. VSMP Inspection and Maintenance Program (Part I.E.5.a(1))

The traditional MS4 has an approved Virginia Stormwater Management Program (VSMP) and implements the VSMP consistent with the Virginia Stormwater Management Act (§62.1-44.15:24 et seq. of the Code of Virginia) and VSMP Regulations (9VAC25-870) as well as maintain an inspection and maintenance program in accordance with Part I E 5 b and c.

2.5.2. MS4 Owned or Operated Inspections (Part I.E.5.e(2))

Total number of inspections conducted on stormwater management facilities owned or operated by the permittee.

The number of MS4 owned stormwater management facility inspections conducted are 158.

2.5.3. MS4 Owned or Operated Maintenance (Part I.E.5.e(3))

A description of the significant maintenance, repair, or retrofit activities performed on the stormwater management facilities owned or operated by the permittee to ensure it continues to perform as designed. This does not include routine activities such as grass mowing or trash collection.

Were any significant maintenance, repairs, or retrofit activities performed on any stormwater management facilities during the reporting year?

☒ Yes ☐ No ( ) ☐ Not Applicable (No significant maintenance required)

If yes, a description of significant maintenance, repair, or retrofit activities performed on the stormwater management facilities owned or operated by the MS4 to ensure it continues to perform as designed is provided in Table 9.

Table 9: Maintenance Activities Performed on Stormwater Management Facilities

Stormwater Management Facility	Significant Maintenance Activity
Hylton HS	Riser replacement.
Garfield HS	Remove 150’ concrete ditch, replace with topsoil, vegetation, riprap where swale enters basin.
Colgan HS	Stabilization of grates near baseball field. Native plantings.
Sinclair ES	Underground system repairs/cell replacement due to collapse.
Reagan MS	SWB repairs to include regrading/stabilization at level spreader, remove excess sediment, restore riser to proper elevation, new riprap.

2.5.4. Virginia Construction Stormwater General Permit Database (Part I.E.5.e(4))

A confirmation statement that the permittee submitted stormwater management facility information through the Virginia Construction Stormwater General Permit database for those land disturbing activities for which the permittee was required to obtain coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities in accordance with Part III B 1 or a statement that the permittee did not complete any projects requiring coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities (9VAC25-880).

Stormwater management facility information was submitted through the Virginia Construction Stormwater General Permit database for those land disturbing activities for which the permittee was required to obtain coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities in accordance with Part III B 1.

☒ Yes ☐ Not Applicable (No Projects completed requiring coverage under the General VPDES Permit.)

2.5.5. DEQ BMP Warehouse Reporting New BMPs (Part I.E.5.e(5))

A confirmation statement that the permittee electronically reported stormwater management facilities using the BMP Warehouse in accordance with Part III B 1 and 2.

Did the MS4 electronically report using the DEQ BMP Warehouse any stormwater management facilities installed that disturbed less than one acre and for which a General VPDES Permit for Discharges of Stormwater Construction Activities was not required and BMPs implemented as part of a TMDL action plan to achieve nitrogen, phosphorous, and total suspended solids reductions?

☐ Yes ☐ No ( ) ☒ Not Applicable

2.5.6. DEQ BMP Warehouse Reporting Existing BMP Inspections (Part I.E.5.e(6))

A confirmation statement that the permittee electronically reported stormwater management facilities inspected using the DEQ BMP Warehouse in accordance with Part III B 5.

Did the MS4 electronically report using the DEQ BMP Warehouse stormwater management facilities inspections information?

☒ Yes (However, the process of reconciling the existing data to the current data is still ongoing.)

☐ No ( )

2.5.7. MCM #5 Evaluation (Part I.D.3.e)

Review the MCM to determine the MS4 program's effectiveness and whether or not changes to the MS4 Program Plan are necessary.

Were all MCM #5 measurable goals completed in accordance with the MS4 Program Plan?
☒ Yes ☐ No ( )

Are the MS4 Program measurable goals effective?
☒ Yes (Effective) ☐ No (Ineffective, necessary changes to the MS4 Program are included in Section 1.5.)

2.6. MCM #6: Pollution Prevention and Good Housekeeping

2.6.1. Operational Procedures (Part I.E.6.y(1))

A summary of any written procedures developed or modified in accordance with Part I E 6 a and b during the reporting period.

Were any operational procedures developed or modified in accordance with Part I E 6 a during the reporting period?

☒ Yes (Refer to Table 10) ☐ No (No modifications required.)

Table 10: Good Housekeeping Operational Procedures Developed or Modified
"MS4 Project Manager or designee" because the MS4 Project Manager designates certain tasks to other staff.
Removed the Training Quiz which was integrated into the distributed link and has been incorporated by reference.
Removed Findings Follow up Form and replaced with MS4 Tracking spreadsheet incorporated by reference.
Included other language concerning MS4 Tracking spreadsheet e.g. SWPPP Inspection Summary, Spill Log, etc.
Removed TSS as Chespeake Bay TMDL Pollutant of Concern.
Added language to Road and Sidewalk Maintenance BMP concerning practices for anti-icing and deicing agent application, transport, and storage.
Added language to Landscape Management BMP prohibiting the application of any anti-icing or deicing agent containing urea or other forms of nitrogen or phosphorus.
Developed a new BMP for Temporary Storage of landscaping materials.
Developed a new BMP for Fertilizer Use and Storage concerning the application of fertilizer shall not exceed maximum application rates established by applicable nutrient management plans. For areas not covered under nutrient management plans where fertilizer is applied, application rates shall not exceed manufacturer's recommendations.
Developed a new BMP for absorbent matting maintenance.

2.6.2. High Priority Facility Review (Part I.E.6.y(2))

A confirmation statement that all high-priority facilities were reviewed to determine if SWPPP coverage is needed during the reporting period.

Were all high-priority facilities reviewed to determine if SWPPP coverage is needed during the reporting period?

☒ Yes ☐ No ( )

2.6.3. Newly Developed SWPPPs (Part I.E.6.y(3))

A list of any new SWPPPs developed in accordance Part I E 6 i during the reporting period.

Were any new SWPPPs developed in accordance Part I E 6 i during the reporting period?

☐ Yes (Refer to Table 11) ☐ No ( ) ☒ Not Applicable (No new high priority facilities)

Table 11: New SWPPPs Developed	
SWPPP Name	**SWPPP Address**

2.6.4. Modified SWPPPs (Part I.E.6.y(4))

A summary of any SWPPPs modified in accordance with Part I E 6 j, 6 l, or 6 m.

Were any SWPPPs modified after an unauthorized discharge, release or spill reported?

☐ Yes (Refer to Table 12) ☐ No ( ) ☒ Not Applicable (No modifications required)

Table 12: Modified SWPPPs	
SWPPP Name	**SWPPP Address**
Not Applicable	

2.6.5. Delisted SWPPPs (Part I.E.6.y(5))

The rationale of any high priority facilities delisted in accordance with Part I E 6 l or m during the reporting period.

Were any high priority facilities delisted in accordance with Part I.E.6 l or m during the reporting period?

☐ Yes (Refer to Table 13) ☒ No

Table 13: Delisted SWPPPs	
Delisted SWPPPs	**Rationale for Delisting**
Not Applicable	Not Applicable

2.6.6. Nutrient Management Plans status (Part I.E.6.y(6))

The status of each nutrient management plan as of June 30 of the reporting year (e.g., approved, submitted and pending approval, and expired).

Refer to Table 14 for the status of each nutrient management plan as of June 30 of the reporting year.

Table 14: Turf and Landscape Nutrient Management Plans	
Nutrient Management Plan	**Status**
Alvey E.S.	Approved
Antietam E.S.	Approved
Ashland E.S.	Approved
Battlefield H.S.	Approved
Bel Air E.S.	Approved
Belmont E.S.	Approved
Bennett E.S.	Approved
Benton M.S.	Approved
Beville M.S.	Approved
Brentsville H.S.	Approved
Bristow Run E.S.	Approved
Buckland E.S.	Approved
Bull Run M.S.	Approved
Cedar Point E.S.	Approved
Chris Yung E.S.	Approved
Coles E.S.	Approved
Colgan H.S.	Approved
Covington-Harper E.S.	Approved
Dale City E.S.	Approved
Dumfries E.S.	Approved
Ellis E.S.	Approved
Enterprise E.S.	Approved
Fannie-Fitzgerald E.S.	Approved
Featherstone E.S.	Approved
Forest Park H.S.	Approved
Fred Lynn M.S.	Approved
Freedom H.S.	Approved
Gainesville H.S.	Approved
Gainesville M.S.	Approved
Gar-Field H.S.	Approved
Glenkirk E.S.	Approved
Graham Park M.S.	Approved
Gravely E.S.	Approved
Hampton M.S.	Approved
Haymarket E.S.	Approved
Henderson E.S.	Approved
Hylton H.S.	Approved

Independence Nontraditional	Approved
Innovations E.S.	Approved
Jenkins E.S.	Approved
Kelly Leadership Center	Approved
Kerrydale E.S.	Approved
Kilby E.S.	Approved
King E.S.	Approved
Kyle Wilson E.S.	Approved
Lake Ridge E.S.	Approved
Lake Ridge M.S.	Approved
Leesylvania E.S.	Approved
Loch Lomond E.S.	Approved
Marshall E.S.	Approved
Marstellar M.S.	Approved
Marumsco E.S.	Approved
McAuliffe E.S.	Approved
Minnieville E.S.	Approved
Montclair E.S.	Approved
Mountain View E.S.	Approved
Mullen E.S.	Approved
Neabsco E.S.	Approved
Occoquan E.S.	Approved
Old Bridge E.S.	Approved
Osbourn Park H.S.	Approved
PACE West E.S.	Approved
Parkside M.S.	Approved
Patriot H.S.	Approved
Pattie E.S./Washington-Reid	Approved
Penn E.S.	Approved
Pennington Traditional	Approved
Piney Branch E.S.	Approved
Porter Traditional	Approved
Potomac H.S.	Approved
Potomac M.S.	Approved
Potomac Shores M.S.	Approved
Potomac View E.S.	Approved
Reagan M.S.	Approved
Rippon M.S.	Approved
River Oaks E.S.	Approved

Rockledge E.S.	Approved
Rosa Parks E.S.	Approved
Saunders M.S.	Approved
Signal Hill E.S.	Approved
Sinclair E.S.	Approved
Springwoods E.S.	Approved
Sudley E.S.	Approved
Swans Creek E.S.	Approved
T. Clay Wood E.S.	Approved
The Nokesville School	Approved
Triangle E.S.	Approved
Tyler E.S.	Approved
Unity Braxton M.S.	Approved
Unity Reed H.S.	Approved
Vaughan E.S.	Approved
Victory E.S.	Approved
West Gate E.S.	Approved
West Ridge E.S.	Approved
Williams E.S.	Approved
Woodbridge H.S.	Approved
Woodbridge M.S.	Approved
Yorkshire E.S.	Approved

2.6.7. Training Events (Part I.E.6.y(7))

A list of the training activities conducted in accordance with Part I.E.6.d, including the following information: (a) The completion date for the training activity; (b) The number of employees who completed the training activity; and (c) The objectives and good housekeeping procedures covered by the training activity.

Was training conducted?

☒ Yes (See Table 15) ☐ No ( ) ☐ Not Applicable (Not required this report year)

Table 15: Training Activities

Dates	# of Employees	Training Objectives and Good Housekeeping Procedures Covered
5/5/25 - 5/29/25	15	Good Housekeeping and Pollution Prevention, Illicit Discharge Detection and Elimination and TMDLs
Feb. & Mar. 2025	10	Pesticide Training

2.6.8. MCM #6 Evaluation (Part I.D.3.e)

Review the MCM to determine the MS4 Program's effectiveness and whether or not changes to the MS4 Program Plan are necessary.

Were all MCM #6 measurable goals completed in accordance with the MS4 Program Plan?

☒ Yes ☐ No ( )

Are the MS4 Program measurable goals effective?

☒ Yes (Effective) ☐ No (Ineffective, necessary changes to the MS4 Program are included in Section 1.5.)

3.0 LOCAL TMDL ACTION PLANS

3.1. Bacteria Action Plan (Part II.B.5)

3.1.1. Occoquan River Bacteria TMDL Implementation

A summary of actions conducted to implement each local TMDL action plan.

A summary of actions conducted to implement the Occoquan River Bacteria TMDL action plan is provided in Table 16.

Table 16: Occoquan River Bacteria TMDL Action Plan Summary of Actions

Strategy	Summary of Actions	Description	Completion Status
Dumpster Inspection and Repairs	PWCS staff or contractors will inspect dumpster areas for potential issues, including illicit discharges. The inspection includes checking that lids are closed and in good condition to prevent urban wildlife access/food sources. In addition, the inspection will ensure there are no leaking dumpsters to prevent non-stormwater discharges. Dumpsters will be repaired and/or replaced as necessary.	Dumpster inspections are done periodically throughout the year on all school campuses as part of Good Housekeeping surveys. Training has occurred to train custodians, admin on dumpster inspections and what to do if dumpsters are found deficient or lids are not closed.	☒ Yes ☐ No
Portable Toilet Inspections	PWCS will develop an inspection checklist to document the portable toilet inspections annually.	Portable toilets are assessed quarterly by staff during campus good housekeeping assessments. The toilets are checked for placement away from storm drains, leaks and general good repair. If toilets need repair or to be moved, a work order is submitted and units repaired and/or moved.	By June 30, 2026, and inspected annually thereafter

Sanitary Sewer Overflow Standard Operating Procedures	PWCS will develop and implement a Sanitary Sewer Overflow SOP to be incorporated in the Good Housekeeping and Pollution Prevention Manual		June 30, 2027
Bacteria TMDL Training	Incorporate information concerning the dumpster inspections, portable toilet inspections, and sanitary sewer overflow SOPs into the biennial MS4 training.	Information concerning toilets and dumpsters is incorporated into the SWPPP training to staff.	June 30, 2028

3.1.2. Neabsco Creek Bacteria TMDL Implementation

A summary of actions conducted to implement each local TMDL action plan.

A summary of actions conducted to implement the Neabsco Creek Bacteria TMDL action plan is provided in Table 17.

Table 17: Neabsco Creek Bacteria TMDL Action Plan Summary of Actions

Strategy	Summary of Actions	Description	Completion Status
Dumpster Inspection and Repairs	PWCS staff or contractors will inspect dumpster areas for potential issues, including illicit discharges. The inspection includes checking that lids are closed and in good condition to prevent urban wildlife access/food sources. In addition, the inspection will ensure there are no leaking dumpsters to prevent non-stormwater discharges. Dumpsters will be repaired and/or replaced as necessary.	Dumpster inspections are done periodically throughout the year on all school campuses as part of Good Housekeeping surveys. Training has occurred to train custodians, admin on dumpster inspections and what to do if dumpsters are found deficient or lids are not closed.	☒ Yes ☐ No
Portable Toilet Inspections	PWCS will develop an inspection checklist to document the portable toilet inspections annually.	Portable toilets are assessed quarterly by staff during campus good housekeeping assessments. The toilets are checked for placement away from storm drains, leaks and general good repair. If toilets need repair or to be moved, a work order is submitted and units repaired and/or moved.	By June 30, 2026, and inspected annually thereafter
Sanitary Sewer Overflow Standard Operating Procedures	PWCS will develop and implement a Sanitary Sewer Overflow SOP to be incorporated in the Good Housekeeping and Pollution Prevention Manual		June 30, 2027

Bacteria TMDL Training	Incorporate information concerning the dumpster inspections, portable toilet inspections, and sanitary sewer overflow SOPs into the biennial MS4 training.	Information concerning toilets and dumpsters is incorporated into the SWPPP training to staff.	June 30, 2028

3.1.3. Tributaries of The Potomac River Bacteria TMDL Implementation

A summary of actions conducted to implement each local TMDL action plan.

A summary of actions conducted to implement the Tributaries of the Potomac River Bacteria TMDL action plan is provided in Table 18.

Table 18: Tributaries of the Potomac River Bacteria TMDL Action Plan Summary of Actions

Strategy	Summary of Actions	Description	Completion Status
Dumpster Inspection and Repairs	PWCS staff or contractors will inspect dumpster areas for potential issues, including illicit discharges. The inspection includes checking that lids are closed and in good condition to prevent urban wildlife access/food sources. In addition, the inspection will ensure there are no leaking dumpsters to prevent non-stormwater discharges. Dumpsters will be repaired and/or replaced as necessary.	Dumpster inspections are done periodically throughout the year on all school campuses as part of Good Housekeeping surveys. Training has occurred to train custodians, admin on dumpster inspections and what to do if dumpsters are found deficient or lids are not closed.	☒ Yes ☐ No
Portable Toilet Inspections	PWCS will develop an inspection checklist to document the portable toilet inspections annually.	Portable toilets are assessed quarterly by staff during campus good housekeeping assessments. The toilets are checked for placement away from storm drains, leaks and general good repair. If toilets need repair or to be moved, a work order is submitted and units repaired and/or moved.	By June 30, 2026, and inspected annually thereafter
Sanitary Sewer Overflow Standard Operating Procedures	PWCS will develop and implement a Sanitary Sewer Overflow SOP to be incorporated in the Good Housekeeping and Pollution Prevention Manual		June 30, 2027

Bacteria TMDL Training	Incorporate information concerning the dumpster inspections, portable toilet inspections, and sanitary sewer overflow SOPs into the biennial MS4 training.	Information concerning toilets and dumpsters is incorporated into the SWPPP training to staff.	June 30, 2028

3.2. Sediment Action Plan (Part II.B.6)

3.2.1. Bull Run Sediment TMDL Implementation

A summary of actions conducted to implement each local TMDL action plan:

A summary of actions conducted to implement the Bull Run Sediment TMDL action plan is provided in Table 19.

Table 19: Bull Run Sediment TMDL Action Plan Summary of Actions

Strategy	Summary of Actions	Completion Status
Programmatic Planning of Reductions	• Evaluate funding for Resilience Plan Development. • Continue evaluation and implementation of land use conversions. • Continue education efforts as to the benefit of non-managed areas.	June 30, 2026
Implementation and planning of Strategies	• Prepare a Resilience Plan to identify potential projects. • Outfall Stabilization and Stream Restoration Feasibility Study. • Assess the numerical progress toward meeting the WLA. Consider implementation of additional strategies. • Continue evaluation and implementation of land use conversions. • Continue education efforts as to the benefit of non-managed areas.	June 30, 2028
Continued Implementation and planning of Strategies. Program Evaluation.	• Continue evaluation of strategies from Section 5.0. • Continue evaluation and implementation of land use conversions. • Continue education efforts as to the benefit of non-managed areas. • Annual evaluation of practices and assessment of future efforts to meet the WLA.	June 30, 2029 – June 30, 2040

A summary of sediment reductions implemented is provided in Table 20.

Table 20: Bull Run Sediment TMDL Action Plan TSS Reduction Summary				
BMP Type	**Land Use From**	**Land Use To**	**Acres Converted**	**Reductions Achieved TSS (lbs./ac./yr.)**
Existing BMPs				
Land Use Change @ Unity Braxton - Reforestation 1	Turf	Forest	2.8	1,559.60
Land Use Change @ Unity Braxton - Reforestation 2	Turf	Forest	1.39	774.23
New BMPs				
N/A				0
			Subtotal	2,333.83
			Total Reductions Required	2,333.83

3.3. PCB Action Plan (Part II.B.7)

3.3.1. Potomac and Anacostia Rivers PCB TMDL Implementation

A summary of actions conducted to implement each local TMDL action plan.

A summary of actions conducted to implement the Potomac and Anacostia Rivers PCB TMDL action plan is provided in Table 21.

Table 21: Potomac and Anacostia Rivers PCB TMDL Action Plan Summary of Actions

Strategy	Summary of Actions	Completion Status
Continued Implementation of Training	Training	☒ Yes ☐ No
Site-specific SWPPPs for High-Priority Facilities	SWPPPs developed and implemented	☒ Yes ☐ No
MS4 Program MCMs	MCMs 1 - 4 and 6 and PWC Ordinances developed and implemented	☒ Yes ☐ No
New discoveries previously unidentified significant sources of PCBs reported, if found	Notification to DEQ in writing within 30 days of discovery, if found	☐ Yes ☒ Not Applicable

The metrics for Public Education and Outreach and employee training as described in the PCB TMDL Action Plan is provided in Table 22.

Table 22: Public Education & Outreach and Employee Training on PCBs	
Actions	**Number of Attendees**
Grade One: Curriculum includes identification of natural resources, factors that affect air and water quality, and recycling, reusing, and reducing consumption of natural resources.	5,613
Grade Three: Curriculum includes aquatic ecosystems, the effects of human activity on air/water/habitat quality.	6,828
Grade Four: Curriculum includes Virginia natural resources, watersheds and water resources, ocean environment, and the influences of human activity on ecosystems.	6,673
Grade Five: Curriculum includes the human role in conserving limited resources.	6,844
Grade Six: Curriculum includes the importance of protecting and maintaining water resources, the location and structure of Virginia's regional watershed systems, conservation/health/safety issues associated with watersheds, wetlands, and estuaries.	6,910
Grade Nine: Earth Science class curriculum includes dependence on freshwater resources and the effects of human usage on water quality, regional Virginia watersheds (including the Bay and its tributaries), economic and public policy issues concerning the oceans and the coastal zone (including the Chesapeake Bay), conservation issues, and watershed monitoring.	7,527
Staff receive specific training in the following concepts: • PCB contamination identification, risk factors, and significant sources • Proper storage and disposal of cleaning chemicals • Proper dumpster usage • Illicit discharge prevention • Parking lot pollution prevention • Proper pesticide and herbicide storage and usage	207

Appendix A: Documentation of Public Education and Outreach Activities

High Priority Stormwater Issue #1

MS4 Stormwater Program

Most App. Grade Levels	Program Title	Program Description	SOLs
	Stormwater Walk	Students will learn about the stormwater system at their school campus. Students will be able to assess the system and will learn about local watersheds into which the system exits.	
	No Mow Zone Walk	Students will learn about No Mow Zones and why they are in place. Study will include discussions on stormwater infiltration, native vs. invasive/non-native plant and insect species, expectations regarding "lawns". Students will be able to "plant" native seeds to enhance the zones.	
	GeoCurves	Students will be offered an opportunity to "Adopt" a Geocurve on their campus. Study will include monitoring of trash, sediment and other materials filtered by the Geocurve. This program can include math (weighing and counting of materials), recycling, science, English (marketing to other students to reduce pollution)	
7-12	Watershed Game	This game allows student to learn about how decisions must be made on a local government/civic level regarding protection of waterways vs. other needs of communities, finances available, creative ways to work with others.	
	What is Stormwater?	Basic program teaching students what happens to rain when it hits the ground. Types of ground cover vs. Infiltration rates explored.	
	What is a Watershed? (Enviroscape Model)	Basic program explores watersheds from local level to the Bay.	
7-12	What's A BMP?	Students will learn about Best Management Practices and have a chance to design their own.	

High Priority Stormwater Issue #2

MS4 Stormwater Program

Most App. Grade Levels	Program Title	Program Description	SOLs
	Stormwater Walk	Students will learn about the stormwater system at their school campus. Students will be able to assess the system and will learn about local watersheds into which the system exits.	
	No Mow Zone Walk	Students will learn about No Mow Zones and why they are in place. Study will include discussions on stormwater infiltration, native vs. invasive/non-native plant and insect species, expectations regarding "lawns". Students will be able to "plant" native seeds to enhance the zones.	
	GeoCurves	Students will be offered an opportunity to "Adopt" a Geocurve on their campus. Study will include monitoring of trash, sediment and other materials filtered by the Geocurve. This program can include math (weighing and counting of materials), recycling, science, English (marketing to other students to reduce pollution)	
7-12	Watershed Game	This game allows student to learn about how decisions must be made on a local government/civic level regarding protection of waterways vs. other needs of communities, finances available, creative ways to work with others.	
	What is Stormwater?	Basic program teaching students what happens to rain when it hits the ground. Types of ground cover vs. Infiltration rates explored.	
	What is a Watershed? (Enviroscape Model)	Basic program explores watersheds from local level to the Bay.	
7-12	What's A BMP?	Students will learn about Best Management Practices and have a chance to design their own.	

High Priority Stormwater Issue #3

nvrc
Northern Virginia Regional Commission

STRENGTHENING our region

NORTHERN VIRGINIA REGIONAL COMMISSION

2024 ANNUAL REPORT

NVRC IS PROUD OF ITS WORK WITH OUR LOCAL GOVERNMENT PARTNERS, NGOS AND OTHERS in providing important services for the betterment of our communities, region and Commonwealth.

NVRC JURISDICTIONS

Arlington County
Fairfax County
Loudoun County
Prince William County
City of Alexandria
City of Fairfax
City of Falls Church
City of Manassas
City of Manassas Park
Town of Dumfries
Town of Herndon
Town of Leesburg
Town of Vienna

2023/2024 OFFICERS

Chairman: Honorable John T. Chapman
Vice-Chair: Honorable Matthew deFerranti
Treasurer: Honorable Andrea Bailey
Executive Director: Robert W. Lazaro, Jr.

nvrc
Northern Virginia Regional Commission

NORTHERN VIRGINIA REGIONAL COMMISSION
3040 Williams Drive | Suite 200 | Fairfax, VA 22031
www.novaregion.org

Solarize NoVA Reaches Milestone with 1,000th Solar Array

PROGRAM HAS RESULTED IN 9.2 MW OF SOLAR AND MORE THAN $28 MILLION IN PRIVATE SECTOR INVESTMENT

Solarize NOVA proudly announces achieving its 1,000th solar contract, marking a significant milestone in the region's journey towards sustainable energy. The achievement underscores the program's commitment to empowering communities and advancing renewable energy adoption across the state.

Launched in 2014 by the Local Energy Alliance Program (LEAP) in partnership with the Northern Virginia Regional Commission and local government partners with the vision of accelerating solar energy deployment, Solarize NOVA has swiftly become a leader in environmental stewardship and community collaboration. Through strategic partnerships and educational outreach, the program has democratized access to solar technology while driving down installation costs.

Since its inception, Solarize NOVA has empowered residents and businesses to embrace clean energy solutions, reducing their carbon footprint and contributing to a greener future. The 1,000th solar array exemplifies the collective efforts of individuals, organizations, and local governments dedicated to sustainability and environmental resilience.

"We are thrilled to celebrate this momentous occasion," said the Honorable John T. Chapman, Chairman of the Northern Virginia Regional Commission. "Our 1,000th solar array represents a significant achievement in our mission to promote renewable energy adoption and combat climate change. We are immensely grateful to the residents, businesses, and community partners who have supported us on this journey."

"We are incredibly proud to reach this in Northern Virginia through the Solarize Virginia program," said Katie VanLangen, Co-Executive director of LEAP. "This achievement highlights the vital role LEAP plays in making solar energy more accessible and affordable for our communities. We are honored to work alongside local municipalities to provide residents with the tools, resources,

and support they need to embrace clean energy solutions. Our partnership with these communities is at the heart of our mission, and we are excited to continue empowering Virginians to reduce their carbon footprints and contribute to a sustainable future."

The impact of Solarize NOVA extends far beyond the installation numbers. By harnessing the power of solar energy, participants have not only reduced their energy bills but also contributed to the creation of local green jobs and support of the local solar industry. Moreover, each solar array installed represents a tangible step towards building a more sustainable and resilient future for generations to come.

As Solarize NOVA celebrates this milestone, the program remains steadfast in its commitment to expanding access to clean energy solutions, fostering community engagement, and advocating for policies that promote renewable energy development. Together, we can continue to drive positive change and build a brighter, more sustainable future for Northern Virginia and beyond.

NVRC staff from left: Allie Wagner, Dale Medearis, Jill Kaneff and Nora Jackson with staff from Loudoun Water.

NVRC STAFF TOURS LOUDOUN WATER BROAD RUN PLANT

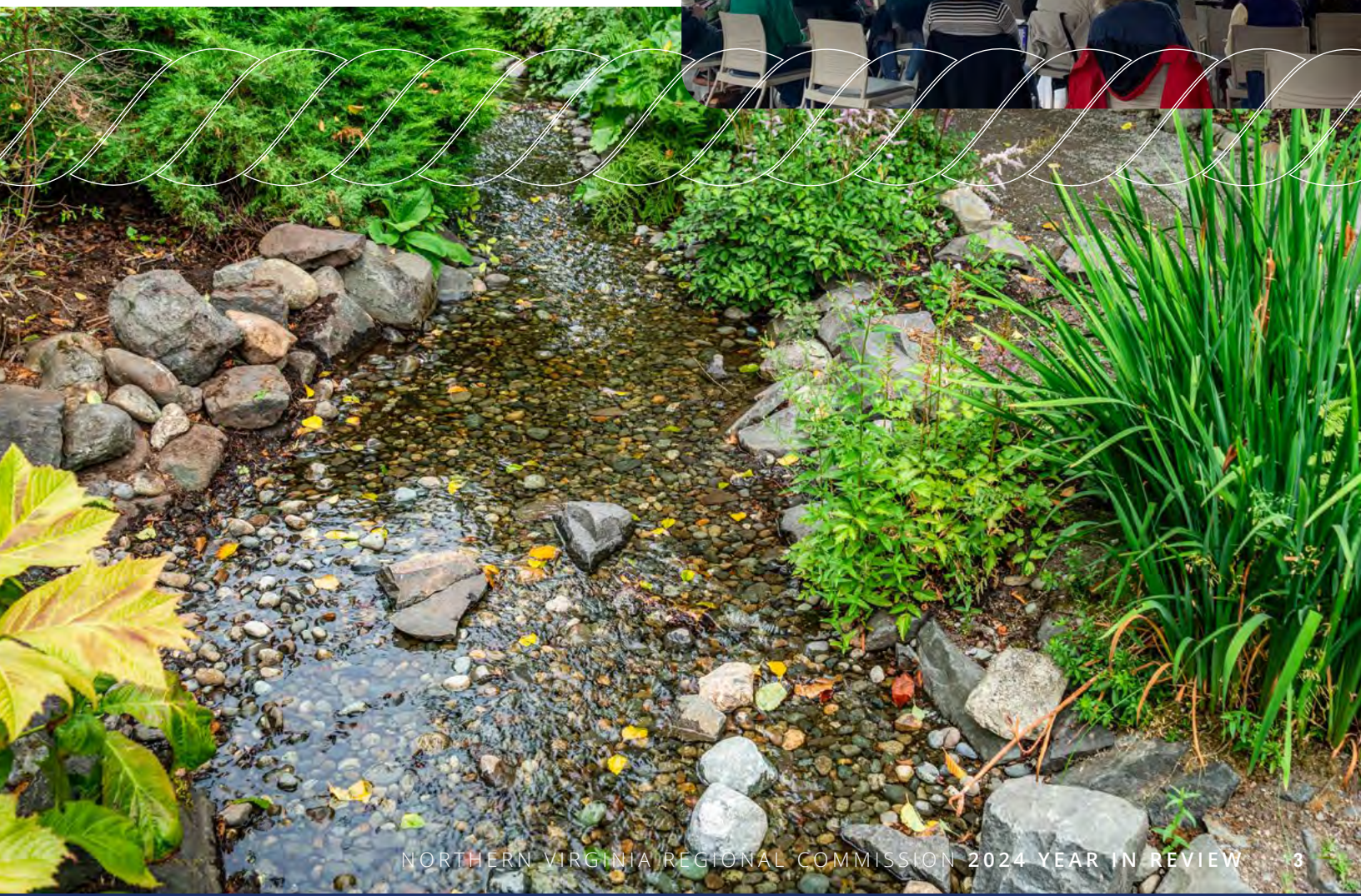
Loudoun Water generously welcomed NVRC technical and policy staff for a tour and discussion of their Broad Run treatment facility. The visit provided valuable insights into the facility's innovative policies and technologies, showcasing the practices that have elevated its operations to a world-class level. A key focus of the discussions was the facility's significant role in water reuse and its contributions to sustainable water management.

NVRC and Partners Host Rain Garden Workshop

Rain gardens are attractive landscape features that allow rainwater and snowmelt to absorb into the ground, slowing runoff and removing pollutants before the water reaches local creeks and streams.

On February 10 NVRC and its partners at the Northern Virginia Soil and Water Conservation District and the Arlington County Department of Environmental Services hosted a rain garden workshop. The free in person event provided information on how to design, construct, and maintain a rain garden for your property that can absorb rainwater, improve wildlife habitat, and support the health of waterways and drinking water supplies.

NVRC's participation is funded, in part, by Virginia Coastal Zone Management Program at the Department of Environmental Quality through grants provided by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended.



New Racial and Ethnic Metrics and Standards: Northern Virginia Analysis

IF NORTHERN VIRGINIA WERE A STATE, AS OF 2020, IT WOULD BE THE SECOND MOST DIVERSE STATE IN THE COUNTRY, AFTER HAWAII

Northern Virginia's racial and ethnic composition makes it more diverse today than the United States and Virginia and this has been the case for decades.

Diversity is important in many areas of life, including fostering inclusivity and learning from each other's unique backgrounds through environments such as the workplace and education.

The Northern Virginia Regional Commission (NVRC), a planning district of the Commonwealth, has transitioned its demographic data on racial and ethnic characteristics of the population to include the U.S. Census Bureau's new diversity index metric that was introduced with the 2020 Decennial Census data releases. NVRC has also transitioned its race and ethnicity data to combined race and Hispanic/Latino ethnic origin. NVRC's new analysis and other demographic data can be found on the Northern Virginia Regional Commission's data dashboard www.novaregiondashboard.com.

Prior to now, NVRC assessed race and ethnicity separately because U.S. Census Bureau survey questionnaires ask race and ethnicity in two separate questions, and because Hispanic/Latino people are considered an ethnicity and may be of any race. The transition to the combined race and ethnicity categories, was embarked upon following the new race/ethnicity standards that were adopted by the U.S. Office of Management and Budget (OMB) on March 28, 2024. The new standards require a single combined question in future questionnaires instead of separate race and ethnicity questions, as well as data reporting with combined categories. The new categorization standards will offer individuals more precise ways to self-identify, especially for people who self-identify as multiracial or multiethnic. This will result in a more accurate representation of the U.S. population's race and ethnic characteristics. Federal agencies, including the U.S. Census Bureau, must implement the new standards into data collections as soon as possible, but no later than March 28, 2029. Planning now for these upcoming changes is crucial.

Measuring Diversity

In the past, the U.S. Census Bureau and the Northern Virginia Regional Commission (NVRC) measured diversity using the concept of "majority" and "minority" population. Minority was defined as people other than white non-Hispanic. The diversity index overcomes some of the limitations of the "majority" and "minority" measure. NVRC has transitioned its racial and ethnic diversity data to the diversity index measure to follow in the U.S. Census Bureau's footsteps.

Limitations of the "majority" and "minority" measure are summed up well by the U.S. Census Bureau:

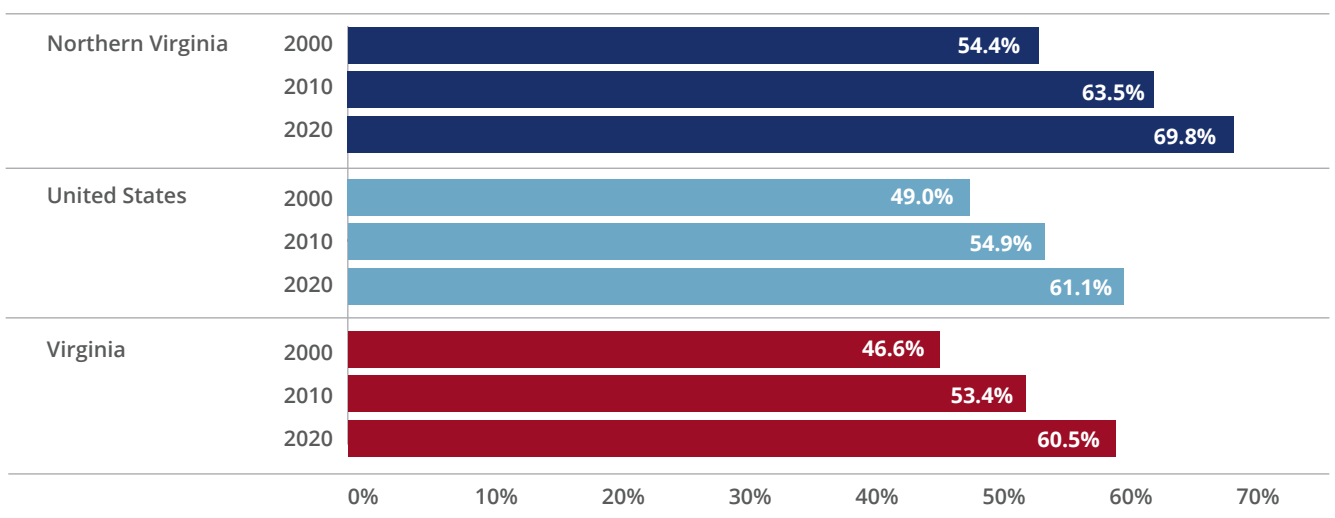
> *"While some people classify individuals who identify with multiple population groups (such as Hispanic and White; White and Black or African American; and White and Asian) as part of the majority population, others classify them as part of the minority population. The dual identities of these groups highlight the social, political, and economic complexities of race and ethnicity in 21st century U.S. society.*
>
> *The inclusion of certain groups as part of the "majority" or "minority" has also become more complex and contested in recent decades, especially as many people may not identify with certain population groups even if that is how they are classified and tabulated per federal standards."* [1]

The diversity index is a better measure. It measures the chance that two people chosen at random are from different racial or ethnic groups. The diversity index metric that is now used by the U.S. Census Bureau and NVRC utilizes combined race and ethnicity categories.

For more information on the diversity index and other measures of diversity, see the U.S. Census Bureau's document on Measuring Racial and Ethnic Diversity for the 2020 Census.

Northern Virginia's Diversity

A big story of the Northern Virginia region is its racial and ethnic diversity and continuing diversification.



Source: NVRC analysis of 2000, 2010, and 2020 Decennial Census data.

NVRC's new analysis and other demographic data can be found on the Northern Virginia Regional Commission's data dashboard www.novaregiondashboard.com. You can reach NVRC's Senior Regional Demographer at jkaneff@novaregion.org.

[1] U.S. Census Bureau, Measuring Racial and Ethnic Diversity for the 2020 Census, August 4, 2021. https://www.census.gov/newsroom/blogs/random-samplings/2021/08/measuring-racial-ethnic-diversity-2020-census.html

SHARING POLICY INNOVATION

NVRC continued to develop and apply its unique global engagement program. The latest involved the formation of a quadrilateral partnership among George Mason University, the University of Stuttgart, the NVRC and its regional governmental counterpart, the "Verband Region Stuttgart" (regional council of Stuttgart, Germany). The goal of this particular partnership with the science and academic institutions of two regions is to more formally coordinate applied scientific research towards stronger and more robust local-level climate resilient and energy programs in both regions.

The nine-member team of GMU and NVRC climate scientists and researchers, policy and technical practitioners from Northern Virginia discussed structuring applied science cooperation on joint priority issues such as green infrastructure, stormwater modeling, urban heat island mitigation, renewable energy, flood mitigation and social inclusion that will improve local and regional level climate and energy programs in both regions.

The workshop resulted in the identification of multiple shared applied research topics, prospective plans and short- and long-term coordinated activities among the four institutions and other civil society commercial and governmental partners.

NVRC Environmental and Resilience Planning staff with members of the GMU Virginia Climate Center, the Verband Region Stuttgart and the University of Stuttgart.

NVRC Host Third Annual Recreational Trails Summit

The Northern Virginia Regional Commission and partner organizations hosted the third annual Northern Virginia Recreational Trails Summit in September 2024. The summit was split between two days on September 5th and 9th to provide both in-person and virtual events for local, regional, and state level trail stakeholders.

The first day of the summit on September 5th was a virtual event comprised of lightning updates from local jurisdictions and trail organizations on the status of trails projects, planning, funding, and mapping. This event also featured several presentations highlighting best practices and programming from Northern Virginia and beyond the region.

Day 2 of the summit was an in-person event at Lubber Run Community Center in Arlington, VA, which included a networking breakfast and interactive panel discussions on local, regional, and state trails planning.

Overall, both days provided the opportunity for local and state governments, non-profit organizations, businesses, and other members of the community to engage and collaborate on important priority trail topics, as well as to gain new knowledge, resources, and tools to enhance their individual trails programming in Northern Virginia.

We are grateful to the following partners who helped us plan this event:

- East Coast Greenway
- Greater Prince William Trails Coalition
- The National Park Service
- Washington Area Bicyclist Association (WABA).

The Innovative International Programs of NVRC

As guests of Ambassador Andreas Michaelis, Ambassador for Germany to the United States, NVRC was invited to deliver a keynote talk about its precedent-setting international programs over dinner at the Embassy of the Federal Republic of Germany. The guests included a delegation of six mayors from the cities of Aachen, Bremen, Cologne, Hannover, Muenster and Neubrandenburg, as well as the U.S. Department of State and various, academic, research, commercial and civil society organizations involved with international work by local governments.

Climate change, economic development, immigration, public health, public safety, education, mobility, infrastructure, applied science are among the 1,000s of issues that push U.S. local governments onto the global stage.

But cities, counties and towns across the United States struggle to prioritize their engagement overseas. Too often there is a lack of clearly defined goals to be attained through global engagement, an allocation of staff time or finances to attain goals and filters to determine which countries and on which issues to focus.

Since 1999, the Northern Virginia Regional Commission (NVRC) has been redefining global work at the local level. The NVRC has developed its own “Global Engagement Model” with potential applications to other local governments across the Commonwealth of Virginia and United States.

The NVRC *Global Engagement Model* consists of three core foundations. It frames everything NVRC does overseas.

GLOBAL ENGAGEMENT MODEL

Foundation #1

A Focus on Transfers and Adoptions of Policy and Technical Innovations to Northern Virginia. NVRC prioritizes its global work first and only to outcomes that will benefit Northern Virginia communities environmentally, economically and socially. NVRC focuses on the transfer and adoption of policy and technical lessons for application to Northern Virginia.

Foundation #2

The Prioritization of Engagement with Countries Economically Invested in Northern Virginia. NVRC further prioritizes its international engagement with countries that have invested in the region economically —mostly foreign direct investment.

Foundation #3

Partner Formally with Region's Science, Research, Commercial, Civil Society Institutions to Accelerate Transfers of Policy and Technical Innovations. NVRC limits the distraction to the time on local government officials by forming applied science and research partnerships with local colleges, universities, research institutions, schools and businesses. The purpose is to partner with these institutions to accelerate the transfer and adoption of policy and technical innovations to Northern Virginia.

NVRC Executive Director Robert Lazaro, German Ambassador to the United States Andreas Michaelis, Arlington County Chair Libby Garvey and Dr. Dale Medearis, Senior Environmental Planner at NVRC.

Through this model, NVRC has worked with metropolitan regions such as Stuttgart, Hamburg and Bottrop to:

- Inform comprehensive climate mitigation and energy plans for Arlington and Loudoun counties;
- Help develop impermeable surface stormwater codes in the City of Alexandria;
- Apply bioswales, green rooftops and watershed restoration plans across Northern Virginia;
- Create a model residential solar photovoltaic program for the entire region;
- Introduce traffic calming and pedestrian-friendly central business districts.

There are dozens of additional examples of this successful engagement that helped transform Northern Virginia environmentally, economically and socially.

Looking ahead, NVRC aspires to refine and apply this model over the next 25 years to further advance the transfer and application of other policy and technical innovations to Northern Virginia in the energy, climate as well as social services, public health and education sectors.

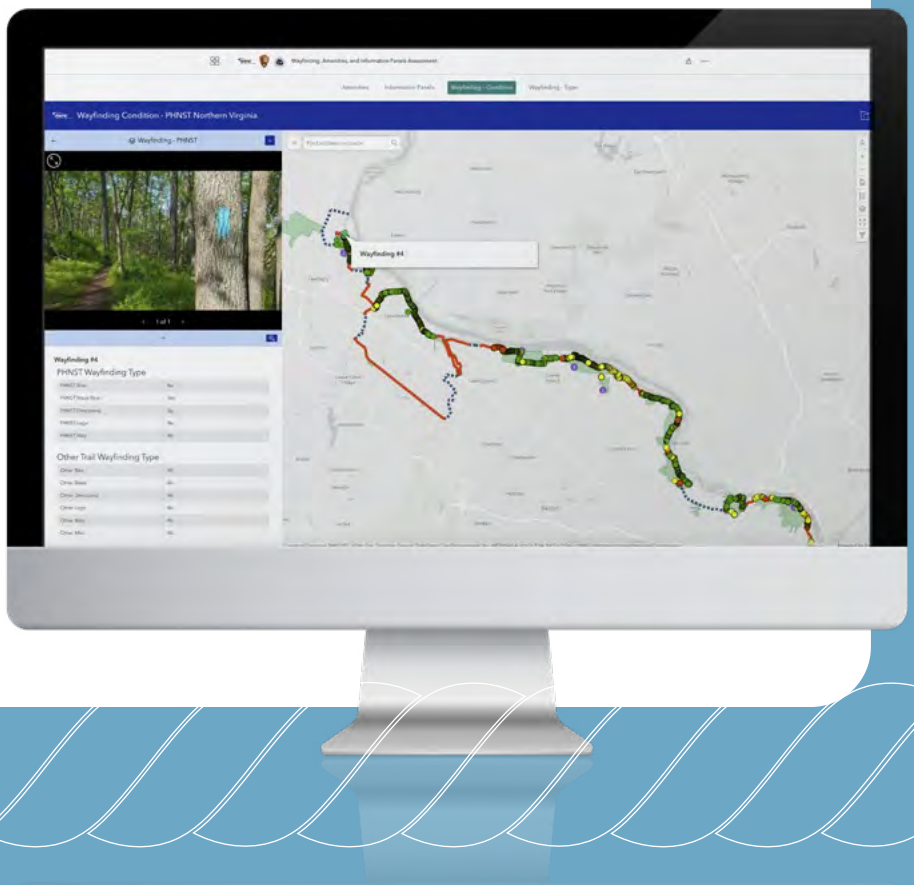
NVRC COMPLETE PHASE ONE OF STUDY ON POTOMAC HERITAGE NATIONAL SCENIC TRAIL

NVRC completed Phase One of the two-phase Wayfinding and Amenities Implementation Study. The project was developed to address findings from the 2022 study, Health, Social Equity, and Economic Impact of the Potomac Heritage National Scenic Trail in Northern Virginia, as well as the wayfinding objectives laid out in the National Park Service's The Potomac Heritage National Scenic Trail Route Marking & Graphic Identity Guide.

The Wayfinding and Amenities Implementation Study intends to assess how consistently the PHNST is promoted throughout the Northern Virginia region, to evaluate where there are gaps in the trail's promotion and navigation [e.g., logos, blazes, and informational signs (see below)], and to collect data to share with trail managers and the general public on the location and condition of the variety of wayfinding types, amenities, and points of interest.

Phase One, as outlined in a recently published report, resulted in an inventory of existing wayfinding and amenities along the trail using volunteer collected data. The data inventory is displayed in associated interactive maps. The study's interactive maps are primarily intended to be used by PHNST trail managers to inform planning and funding efforts. The amenities and points of interest will soon be added to the existing visitor information maps on the Potomac Heritage Dashboard to show PHNST visitors where current amenities are located and to expand the points of interest, and ultimately to improve the future user experience of the PHNST network.

Phase Two of the project, to be conducted in 2025, will examine where the trail requires increased and improved signage and amenities for greater trail accessibility. NVRC will hire a consultant to utilize data collected from Phase One to create a full wayfinding and amenities implementation plan, including the prioritization of recommended sites to install new signage and amenities.



Waxpool Affordable Housing Project Completed

NVRC was pleased to attend the ribbon cutting for a project funded with the Virginia Housing grant provided to the Commission. Joining NVRC staff were Loudoun County Supervisors Michael Turner and Juli Briskman.

The project consists of 52 units and has received a number of environmental certifications for energy efficiency. Waxpool Apartments is the first building in Loudoun County to be certified by four independent green building programs: 1) National Green Building Standard (Silver); 2) Energy Star Multifamily New Construction; 3) ZERO Energy Ready Home; and 4) Indoor Air Plus. The solar array will help offset 46% of the common area electricity use of the building.

Total investment for the project from NVRC is $644,091. The project is in Ashburn (Loudoun County).

NORTHERN VIRGINIA ADDS 6.3 MILLION SQUARE FEET OF LEED CERTIFIED BUILDINGS IN 2023

In 2023, Northern Virginia added 6.3 million square feet across 23 newly certified buildings and 239,100 square feet in one newly certified interior space, for a total of 6.5 million newly added square feet of LEED green space. LEED commercial buildings and space is abundant in Northern Virginia. Existing by 2023 was a total of 123.6 million square feet across 621 buildings and 74 interior spaces.

LEED is the most widely recognized green building system for designing, construction, and operation of buildings and interior spaces of buildings. LEED buildings and interior spaces improve energy efficiency for businesses, lower carbon emissions, and create a healthier environment to live and work. LEED buildings and interior spaces are a critical part of addressing the world's climate crisis, resiliency, and supporting more equitable communities.

Northern Virginia's Opportunity to Link District Energy, Residual Heat and Data Centers

Sustaining reductions of greenhouse gases and supplying efficient and reliable energy to Northern Virginia's data centers is a complex economic and environmental process. Roughly 70% of all global Internet traffic passes through Northern Virginia's approximately 350 data centers—the highest concentration of data centers in the world. Collectively, data centers contribute over a billion dollars of tax revenue to the budgets of Northern Virginia's local governments.

Power demand in Virginia is expected to grow by about 85% over the next 15 years. By 2035 the industry in Virginia will require 11,000 megawatts—or nearly quadruple what it needed in 2022. The accelerated applications of artificial intelligence are projected to further multiply power demands over the next decade.

Among various technical and policy factors capable of balancing data centers' vital economic contributions and their rapidly escalating energy consumption is the movement of heat between sources and users via district energy systems. Generally speaking, district energy systems convey heat between suppliers and users (or buyers) between or among buildings.

In cities such as Paris, France and Frankfurt, Germany, data centers have out-sourced heat to purchasers of power such as public swimming pools, green houses and commercial buildings. These cities deploying district energy have combined integrated energy planning and zoning with the operation of public utilities to create markets for the sale, purchase and conveyance of heat.

The development of networks to convey heat and residual energy among data centers and utilities is technically and regulatory possible in Northern Virginia. In 2012, the Northern Virginia Regional Commission (NVRC) commissioned a study about the feasibility of district energy systems under existing Virginia energy and commercial laws and regulations. The report concluded

that the development of district energy systems is achievable in Virginia—especially for the movement of heat.

Equinix, a major operator of data centers around the world, including Northern Virginia, has called for "municipal planning agencies, energy utilities and heat network operators around the work to join the Equinix Heat Export program to unlock the value of the residual heat generated in its International Business Exchange (IBX) data centers.

NVRC agrees this is an opportunity to be a showcase of this innovation.

In 2024, NVRC took further steps to advance the possible development of district energy systems for conveying heat among the region's data centers. NVRC created a map that characterizes the co-location of the region's data centers and public buildings and some potential fundamental commercial exchanges of residual heat among suppliers and users.

NVRC looks forward to working with its regional partners and the data center industry to achieve a pilot project of district energy in the region.

NVRC HOSTS DELEGATION FROM BARCELONA

NVRC was proud to work with Arlington County staff Ms. Demetra McBride and Mr. Rich Dooley, to introduce Northern Virginia's climate and sustainability programs to a three-member delegation of elected officials and policy staff from the region of Barcelona, Spain.

Ms. Elisenda Alamany, Vice President for International Relations and Digital Metropolis for Area Metropolitana de Barcelona (AMB), led a team to Arlington County to learn more about its programs to reduce greenhouse gas emissions and promote urban climate resiliency.

The delegation from Catalonia, which included Ms. Carlota Roses, Head of International Relations for AMB, and Mr. Marc Grau, Chief of Staff to Ms. Alamany, expressed special interest in learning more about the sustainability of large-scale urban redevelopment projects such as Crystal City and socially inclusive urban heat island mitigation—especially in public spaces.

Dr. Dale Medearis (NVRC), Ms. Demetra McBride (Arlington County), Ms. Elisenda Alamany, Ms. Carlota Roses and Mr. Marc Grau.

Affordable Housing Grant Program Concludes its Third Year

NVRC submitted its annual report for Year Three of the **PDC Virginia Housing Grant Program** making this the perfect opportunity to provide an update on progress of this affordable housing development activity.

The award from Virginia Housing made to NVRC in July 2021 originally was planned to be a 3-year program. Given pandemic delays and start-up time for Planning District Commissions (PDCs) new to housing development like NVRC, Virginia Housing later extended the project period to run four years ending June 30, 2025.

At the three quarters point in the grant timeline:

One hundred forty of 337 affordable units associated with this funding (42%) have been delivered. The remainder are under construction or in predevelopment activities.

Two developers finished their projects during the 3rd grant year—Green Street Housing/GoodWorks (GSGW) and Habitat for Humanity DC/NOVA (Habitat DC/NOVA).

GSGW completed its project called Waxpool Apartments in Ashburn in March 2024. This attainable apartment building consisted of 52 total rental units, 39 of which received some underwriting from NVRC's Virginia Housing Affordable Housing Grant. Most units are geared to residents at 60%AMI, but a few are available for residents at 30% AMI. Eight units in the building were completely accessible.

Habitat DC/NOVA completed its construction of three 4-bedroom homes on Groveton in the Mt. Vernon section of Fairfax County in October 2023. These homes serve families between 40% and 80% AMI. A multigenerational family resides in one of the homes. The homes are part of the Virginia Statewide Community Land Trust, which owns

the land thus reducing the home ownership costs to the families. The picture shows several of the new homeowner families. NVRC's funding contributed the largest amount of funding by any one source on this project.

- $2.65 million, or 88% of the award disbursed so far has underwritten predevelopment, acquisition, construction, and project management expenses.
- By far the largest proportion of funds, nearly 77%, has reimbursed predevelopment and soft costs which include items such as legal and architecture fees, building permits, environmental reviews, and construction management. Increases in sewer/water tap fees by one water authority affected four of six grant recipients.
- Construction costs represent about 11% of reimbursements so far, with acquisition costs (6%) and project management costs (6%) making up the remainder.

FUNDS DISBURSED THUS FAR HAVE ALREADY LEVERAGED $73.6 MILLION IN OTHER DEVELOPER AND NVRC GENERAL FUNDS FOR A 25 TO 1 RETURN ON INVESTMENT.

In addition to Loudoun View Senior, Habitat DC/NOVA, and Waxpool, these projects are forthcoming:

Loudoun Habitat for Humanity is getting ready to site a manufactured duplex on Prince Street in the Town of Leesburg that will offer homeownership to two modest income families. This project is emerging from a variety of unforeseen permitting issues, as well as a groundswell of community sentiment to save a large tree on the property. Anticipated delivery is late-2024.

NVRC staff joined with Loudoun County Supervisor Juli Briskman (second from left) and Supervisor Mike Turner (third from left) with Mr. John Payne (far left) of Virginia Housing with the developers of the Waxpool Affordable Housing project in Ashburn.

Housing Alexandria, Seminary Road Townhomes and Flats project includes 15 first-time homebuyer townhomes assisted with NVRC's Virginia Housing Affordable Housing Grant. This project has also run the permitting gauntlet and has recently begun pouring footers and working on utilities undergrounding. This project is anticipated for delivery slightly past the grant deadline in late-2025.

Cornerstones/Wellington Development's Tuscarora Crossing Apartments has experienced significant delays. As part of a large land tract development in the Leesburg area of Loudoun County, the project relies on the overall site developer to secure water/sewer infrastructure, which is now not slated to be in place until June 2025. It's estimated the facility will be built and available for lease-up around the spring of 2027, well past the project deadline. Reimbursements to Tuscarora Crossing for costs incurred for the project were capped at expenses through December 2023, with unspent funds remaining in the contract recouped and awarded to three other developers with uncovered costs. Once built Tuscarora Crossing will feature 180 affordable rental units, with some units paired with support services for formerly homeless tenants.

NVRC Commuter Survey at Joint Base Myer-Henderson Hall Completed

The Northern Virginia Regional Commission as part of its Military Installation Resilience Review project (MIRR 2.0) conducted a commuter survey of Joint Base Myer-Henderson Hall. This survey, conducted in March and April 2024, collected responses from 219 individuals working at Joint Base Myer-Henderson Hall (JBM-HH). **Here are the key findings.**

Employee Demographics

- A balanced representation of military (active, retired) and civilian employees.
- Most respondents travel to the main JBM-HH campus.
- Employees reside in a wide range of zip codes across the region.

Commute Patterns

- Driving alone is the dominant mode of transportation (70%).
- Telework is a popular option, especially on Fridays.
- Most employees work a consistent schedule with similar commute patterns.
- Weekend commute patterns are similar to weekdays.

Commute Times and Distances

- Most respondents have commutes under 40 minutes.
- 34% have commutes over 40 minutes one-way.
- Drive-alone commuters tend to have shorter commutes than transit riders.
- Transit riders tend to travel longer distances and experience longer commutes.

Commute Satisfaction

- Overall commute satisfaction is moderate (4.96/10).
- Transit riders are more satisfied with their commutes than drive-alone commuters (6.41/10).
- Respondents rate access to parking and total travel time more favorably than other aspects of their travel experience.

Barriers to Green Travel

- Lack of convenient and reliable transit options: Limited access to transit stops, insufficient midday mobility options, and perceived unreliability of public transportation are major barriers.
- Last-mile connections: Difficulty getting to and from the Base, particularly from nearest transit stops.
- Logistical challenges: Dependent care, inconsistent work schedules, personal needs, and a preference for independent travel also hinder green travel options.

Motivators for Green Travel

- Enhanced transit connections: Convenient shuttle services, on-base transit stops, and increased transit fare subsidies are top motivators.
- Carpool/vanpool assistance: Finding ride-sharing partners, flexible work hours, and guaranteed ride home services are key.
- Walking/cycling improvements: Safe bicycle routes, secure bike parking, showers, and lockers would encourage walking and cycling.

Other Notable Findings

- A large majority of respondents are interested in flexible work arrangements, particularly telework.
- Respondents are open to exploring alternative travel modes with the right incentives and infrastructure.

Overall, the survey highlights the need for improved transit options and infrastructure, as well as employer-supported initiatives, to encourage green travel at JBM-HH.

THANKING OUR DEPARTING COMMISSIONERS

At its December meeting the members of the Commission took time to recognize three members of the Commission who are leaving public service. Arlington Supervisor Libby Garvey, Dumfries Council Member Tyrone Brown and Herndon Mayor Sheila Olem. The Commission thanks them for their service not only to their localities, but the region as a whole. We wish them good health and happiness in the years ahead.

Libby Garvey
Arlington Supervisor

Tyrone Brown
Dumfries Council Member

Sheila Olem
Herndon Mayor

Regional Partners Co-Host Annual Northern Virginia Regional Elected Leaders Summit

The Arlington Chamber of Commerce, with premier partner NVC and co-hosts Alexandria Chamber of Commerce, Loudoun Chamber of Commerce, and Northern Virginia Regional Commission, hosted the 9th Annual Northern Virginia Regional Elected Leaders Summit.

More than 200 business, government, and community leaders from across the region gathered for the summit held at Northern Virginia Community College, Alexandria Campus. The program was moderated by NBC Washington Reporter Joseph Olmo and consisted of a panel discussion of local elected leaders of jurisdictions in Northern Virginia: Juli E. Briskman, Vice Chair of the Loudoun County Board of Supervisors; Libby Garvey, Arlington County Board Chair; Jeff McKay, Chair of the Fairfax County Board of Supervisors; and Justin Wilson, Mayor of Alexandria.

Beginning with economic development, Libby Garvey, Arlington County Board Chair, emphasized her support for a robust network of internships for students and workers to develop skills. "We need a lot more paid internships; these opportunities just don't happen enough," said Garvey. She noted the success of the Arlington Talent Program, a paid internship program run by Arlington Economic Development and Exelaration that recently graduated a cohort of 25 interns, adding "That's something that the region really needs to be doing more of."

Jeff McKay, Chair of the Fairfax County Board of Supervisors, discussed Fairfax County's approach to adaptive reuse of office buildings as a component of modern development. "It had less to do with COVID and more to do with … creating places where people

Photo: Left to right: Alexandria Chamber of Commerce President & CEO Joe Haggerty; NBC Washington Reporter Joseph Olmo; Arlington Chamber of Commerce President & CEO Kate Bates; Vice Chair of the Loudoun County Board of Supervisors Juli E. Briskman; Arlington County Board Chair Libby Garvey; Chair of the Fairfax County Board of Supervisors Jeff McKay; City of Alexandria Mayor Justin Wilson; NVC Board of Directors Chair Mark Carrier; Northern Virginia Regional Commission Chair John T. Chapman

want to be," said McKay. "What we were seeing in the county is a lot of businesses and offices moving to places in the county where people want to be; which is along transit lines, in mixed use communities."

Also, on the topic of economic development, Juli E. Briskman, Vice Chair of the Loudoun County Board of Supervisors, articulated the need to consider child care as a key issue facing residents. "Two-thirds of the people who left the workforce during COVID were women, mostly because of the childcare issue. This isn't just a family issue—this is a workforce issue, it is a business issue," noted Briskman.

Shifting gears to the topic of housing, Justin Wilson, Mayor of Alexandria, noted that housing policy "is the rare place where local government has most of the authority." Regarding division on housing policy reform, Wilson added that "in order to have coherent and consistent housing policies, you have to build support. We have to work with the public to help them understand how we connect new policies with problems we're seeing."

NORTHERN VIRGINIA WASTE MANAGEMENT REPORT RELEASED

The Northern Virginia Waste Management Board recently released the 2023 Solid Waste Services in Northern Virginia Report, it's 18th edition.

Although Northern Virginia jurisdictions manage solid waste and recycling programs independently, they collaborate on common regional concerns through the Northern Virginia Waste Management Board, staffed by the Northern Virginia Regional Commission.

The Northern Virginia Waste Management Board, composed of solid waste managers and public works directors from each of NVRC's member jurisdictions, was created in 1989 to promote regional approaches and solutions to recycling and waste management issues in Northern Virginia.

The report relies on locality program reporting, Virginia Department of Environmental Quality facility and local recycling and disposal data, as well as permitting data. Finally, this information is augmented with household, employment, and population data.

The report is extensive in its analysis and technical information on Northern Virginia waste management, geared to solid waste managers to share and understand regional programs and facilities.

The report provides key findings, regional context and demographics, waste generation and diversion, facility information, and local programs. Extensive supporting data tables provide supporting information.

SHARING BEST PRACTICES—GERMAN BUNDESTAG DELEGATION VISITS ARLINGTON COUNTY

On May 1, the NVRC partnered with Arlington County staff to host a 10-member delegation of the German Parliament (Bundestag's) "Committee for Housing, Building, City Development & Municipalities". Arlington County Chair Libby Garvey and Vice-Chair, Takis P. Karantonis welcomed and addressed the delegation.

Supervisor Garvey and Karantonis were accompanied by senior Arlington County staff officials, Mr. Anthony Fusarelli, Planning Division Chief and Ms. Anne Venezia, Housing Division Chief, as well as Ms. Demetra McBride, Chief, Office of Sustainability and Environmental Management and Mr. Rich Dooley.

The German delegation traveled to Arlington County to learn more about the County's and Northern Virginia's pioneering work in urban planning, development, and infrastructure—especially the County's 50-year experiment with "Smart Growth" development programs and policies. The delegation also wanted to study more about the County's and region's work to promote affordable housing, economic development and public transit, climate resiliency and climate mitigation programs.

NVRC and Arlington County officials shared how Arlington County's planning and development programs balanced green and gray infrastructure that helped create viable public transportation programs, a thick constellation of "green" buildings, that have helped to reduce greenhouse gas emissions and aid climate resiliency initiatives. Special attention was given to the ways that Arlington County's climate and sustainability programs have been informed over the last 50-years by applying lessons from metropolitan regions in Germany.

Arlington County Supervisor Takis Karantonis (front right) hosted numerous members of the German Parliament's Committee for Housing, Building, City Development and Municipalities.

DEMOGRAPHICS AND ECONOMICS NORTHERN VIRGINIA

December 5, 2024

POPULATION

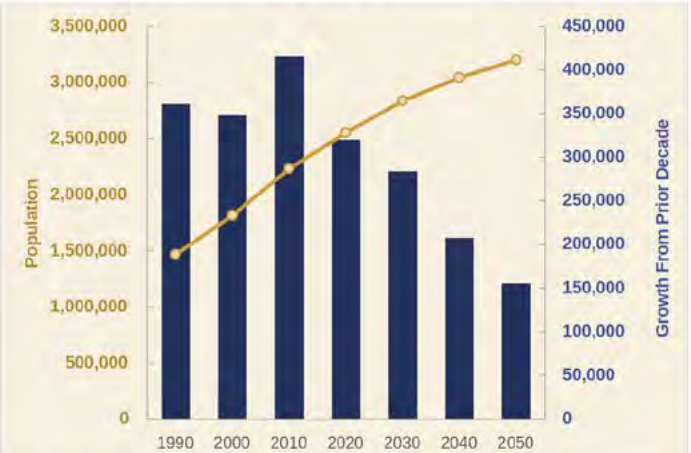
Population
2023 Estimate

2,556,143

Source: U.S. Census Bureau, *Population Estimates Program*, Vintage 2023, released March 2024.

There are 9 counties/cities in NOVA. By 2040, the region is forecasted to surpass **3-million** people; double the population of 1990.

Population - Historic and Forecast



Sources: U.S. Census Bureau, *1980-2020 Decennial Census*; MWCOG, *Round 10.0 Forecasts* (2020-2050 population growth), approved June 14, 2023.

Land Area
1,338 Sq. Miles

Population Density, 2023
1,911 Persons/Sq. Mile

Sources: NVRC, *County Boundaries Northern Virginia GIS*, Oct. 4, 2022. U.S. Census Bureau, *Population Estimates Program*, Vintage 2023.

Share of Virginia Population, 2023
29.3%

Share of Virginia Growth Since 2010
44.9%

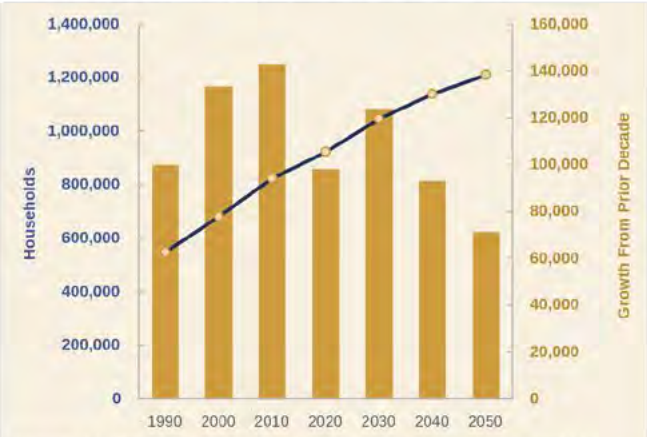
Sources: U.S. Census Bureau, *Population Estimates Program*, Vintage 2019, 2023.

HOUSEHOLDS

NOVA's total households is forecasted to be over **1-million** by 2030.

NOVA's income is nearly **double** the nation. Four of the top 10 localities in the nation for income are in NOVA.

Households - Historic and Forecast



Sources: U.S. Census Bureau, *1980-2020 Decennial Census*; MWCOG, Round 10.0 Forecasts (2020-2050 population growth), approved June 14, 2023.

Median Household Income, 2018-2022

Source: NVRC analysis of U.S. Census Bureau, , 2022 American Community Survey 5-Year Estimates.

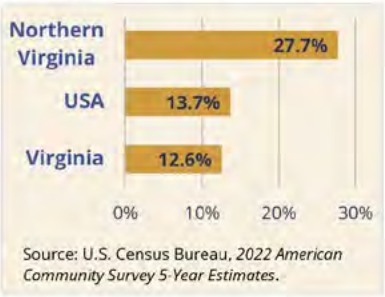
nvrc
Northern Virginia Regional Commission

NVRC
www.novaregion.org

NOVA Region Dashboard: Demographics/Economics
www.novaregiondashboard.com

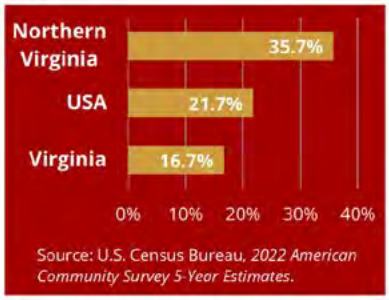
DIVERSITY

Foreign Born, 2018-2022



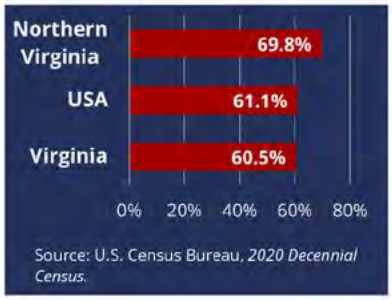
Source: U.S. Census Bureau, *2022 American Community Survey 5-Year Estimates*.

Speak Language Other than English at Home (Age 5+), 2018-2022



Source: U.S. Census Bureau, *2022 American Community Survey 5-Year Estimates.*

Racial/Ethnic Diversity Index, 2020



Source: U.S. Census Bureau, *2020 Decennial Census.*

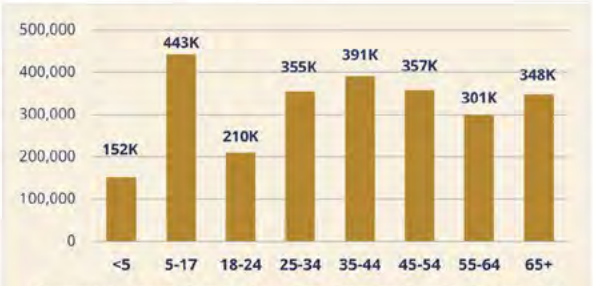
The chance that two people chosen at random will be from different racial and ethnic groups is indicated by the index.

AGE

Prime Working Age (Ages 25 to 54), 2023

Source: U.S. Census Bureau, *Population Estimates Program*, Vintage 2023.

Age of Population, 2023



Source: U.S. Census Bureau, *Population Estimates Program*, Vintage 2023.

NOVA's thriving business community, entertainment, and top education systems draw families and younger populations. The median age for the USA is 38.9, while NOVA is a younger population with a median age of 37.8 and higher prime working age share.

ECONOMY

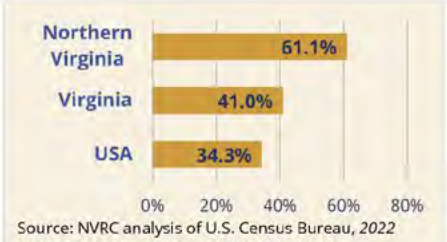
One of the most **highly educated** workforces in the nation. Five of the top 10 localities in the nation with bachelor's or higher are in NOVA.

GDP, 2023
$302 Billion

- 42.0% of Virginia's GDP
- Larger than 24 states and D.C.
- Larger than at least 139 countries and 47th largest if NOVA were a country

Sources: U.S. Bureau of Economic Analysis, County Current Dollar GDP *(CAGDP1)*, Dec. 4, 2024 and State Current Dollar GDP (*SAGDP1)*, Sept. 27, 2024; World Bank, *World Development Indicators*, Nov. 14, 2024.

Bachelor's Degree or Higher (Age 25+), 2018-2022



Source: NVRC analysis of U.S. Census Bureau, *2022 American Community Survey 5-Year Estimates.*

Unemployment Rate, Oct. 2024 (Non-Seasonally Adjusted)

Source: Bureau of Labor Statistics, *Local Area Unemployment Statistics*, retrieved Dec. 2, 2024.

Employment by Industry, 2024 2Q

Industry	2024 2Q #	2024 2Q %
Professional, scientific, and technical services	265,676	20.54%
Health care and social assistance	145,807	11.27%
Educational services	110,779	8.56%
Retail trade	108,436	8.38%
Accommodation and food services	107,923	8.34%
Public administration	97,424	7.53%
Administrative, support, and waste management	79,775	6.17%
Construction	69,242	5.35%
Transportation and warehousing	53,161	4.11%
Other services (except public administration)	52,466	4.06%
Information	38,591	2.98%
Finance and insurance	38,170	2.95%
Management of companies and enterprises	30,930	2.39%
Arts, entertainment, and recreation	27,860	2.15%
Wholesale trade	22,824	1.76%
Real estate and rental and leasing	20,300	1.57%
Manufacturing	19,177	1.48%
Utilities	4,812	0.37%
Agriculture, forestry, fishing and hunting	189	0.01%
Mining, quarrying, and oil and gas extraction	177	0.01%

Source: Bureau of Labor Statistics, *Quarterly Census of Employment and Wages*, released Dec. 4, 2024.
Note: Excludes unclassified employment.

Appendix B: Documentation of Public Involvement Activities

Public Involvement Activity #1

Williaj3@PWCS.edu

From: Diane Beyer <BeyerD@PWCS.EDU>
Sent: Thursday, October 24, 2024 7:30 AM
To: William W. Miller <MillerWW@pwcs.edu>; Julius R. Williams <WilliaJ3@PWCS.EDU>
Cc: Dominik A. Bonshire <BonshiDA@PWCS.EDU>
Subject: Re: Springwoods tree planting School Board Write up.

Bill,
See what you think of these pics. Julius has some pics from Tuesday's presentations that may be nice to include.

Springwoods Elementary School Stormwater Mitigation Project.

"The MS4 team of the Risk, Safety and Environmental Department of PWCS recently planted 38 native trees and shrubs around the playground campus at Springwoods Elementary. The project was in response to a request from the Principal, Ms. Janeene Mainor, who indicated she was experiencing flooding near the playgrounds. Ms. Diane Beyer, MS4 Program Manager and an ISA Arborist, designed a project where American sycamores, river birch and bald cypress were planted along the hillside above the playground and also to areas in the rear of the playground. A number of native inkberry bushes were also planted to help with stormwater mitigation and provide habitat. This natural solution not only mitigates the costly issue of flooding and runoff but also enhances the school environment. For many years to come, the trees will provide stormwater mitigation, wildlife habitat and shade for students at Springwoods Elementary.

The PWCS Landscaping Division of Facilities did a great job planting and mulching the trees in conjunction with the MS4 team.

On October 22 and 23, Diane Beyer and Dominic Bonshire visited Springwoods to present to 130 enthusiastic fourth graders in 4 sessions over the 2 days. Ms. Mainor and Mr. Jessie, Occoquan school board representative, were also in attendance. The students were well-prepared by their teachers, who utilized resources and lessons pre-provided by the MS4 staff. This preparation enabled the students to engage deeply, process the information, and ask high-level questions during the outdoor sessions. Students were able to observe bluebirds and woodpeckers already engaging in the tree canopies during their outdoor time, where they learned about environmental job opportunities, stormwater and why the trees are great for mitigation, why certain species were planted, how trees "talk" and grow, and how to take care of the trees for the long term. They also learned about "No Mow" zones that will be initiated along the adjacent hillside, where native grasses and pollinator plants will be encouraged. The No Mow zones reduce carbon emissions and increase infiltration of stormwater and uptake of excess nutrients.

For a total of less than $10,000, the Springwoods campus will be able to enjoy decades of environmental benefits from this project. Greenspace with trees is proven to increase learning and focus, lessen depression, encourage longer engagement with others in lush shady spaces, lessen anger, frustration and anxiety and also provides cleaner air, carbon sequestration, reduced emissions and improved energy efficiencies! That's a pretty great bang for the buck!

The trees will also provide necessary credits for PWCS's MS4/Stormwater permit, issued by DEQ. The MS4 stormwater team works diligently all year to make sure stormwater facilities are maintained, and works with teachers and administrators to add greenspace and maintain current stormwater facilities on all school campuses.

These outdoor sessions provided a hands-on learning experience for the students, fostering a deeper connection to environmental stewardship. We plan to return throughout the school

year to continue our instructional relationship with the students of Springwoods. There is much yet to teach!"

Diane Beyer
Prince William County Schools
MS4/Stormwater Project Manager/Inspector
ISA Arborist
Urban Nut Man Planner
Chesapeake Bay Landscape Professional (Level 1)

PWCS Stormwater/MS4

What is Stormwater?

From: William W. Miller <MillerWW@pwcs.edu>
Sent: Wednesday, October 23, 2024 3:26 PM
To: Diane Beyer <BeyerD@PWCS.EDU>; Julius R. Williams <WilliaJ3@PWCS.EDU>
Cc: Dominik A. Bonshire <BonshiDA@PWCS.EDU>
Subject: RE: Springwoods tree planting School Board Write up.

This is awesome, Diane! Please re-send with a few photos so I can share it with Mollie Rosenburg in comms.

Regards,

Bill Miller

Director of Risk, Safety, and Environmental
Prince William County Public Schools
Office 703-791-8328
Cell 571-220-2579

From: Diane Beyer <BeyerD@PWCS.EDU>
Sent: Wednesday, October 23, 2024 2:01 PM
To: William W. Miller <MillerWW@pwcs.edu>; Julius R. Williams <WilliaJ3@PWCS.EDU>
Cc: Dominik A. Bonshire <BonshiDA@PWCS.EDU>
Subject: Re: Springwoods tree planting School Board Write up.

Bill/Julius,

See what you think. Is this enough? Too much? Just right?

I have some pics if you'd like those.

"The MS4 team of the Risk, Safety and Environmental Department of PWCS recently planted 38 native trees and shrubs around the playground campus at Springwoods Elementary. The project was in response to a request from the Principal, Ms. Janeene Mainor, who indicated she was experiencing flooding near the playgrounds. Ms. Diane Beyer, MS4 Program Manager, designed a project where American sycamores, river birch and bald cypress were planted along the hillside above the playground and also to areas in the rear of the playground. A number of native inkberry bushes were also planted to help with stormwater mitigation and provide habitat. This natural solution not only mitigates the costly issue of flooding and runoff but also enhances the school environment. For many years to come, the trees will provide stormwater mitigation, wildlife habitat and shade for students at Springwoods Elementary.

The PWCS Landscaping Division of Facilities did a great job planting and mulching the trees in conjunction with the MS4 team.

On October 22 and 23, Diane Beyer and Dominic Bonshire visited Springwoods to present to 130 enthusiastic fourth graders in 4 sessions over the 2 days. Ms. Mainor and Mr. Jessie, Occoquan school board representative, were also in attendance. The students were well-prepared by their teachers, who utilized resources and lessons pre-provided by the MS4 staff. This preparation enabled the students to engage deeply, process the information, and ask high-level questions during the outdoor sessions. Students were able to observe bluebirds and woodpeckers already engaging in the tree canopies during their outdoor time, where they learned about environmental job opportunities, stormwater and why the trees are great for mitigation, why certain species were planted, how trees "talk" and grow, and how to take care of the trees for the long term. They also learned about "No Mow" zones that will be initiated along the adjacent hillside, where native grasses and pollinator plants will be encouraged. The No Mow zones reduce carbon emissions and increase infiltration of stormwater and uptake of excess nutrients.

For a total of less than $10,000, the Springwoods campus will be able to enjoy decades of environmental benefits from this project. Greenspace with trees is proven to increase learning and focus, lessen depression, encourage longer engagement with others in lush shady spaces, lessen anger, frustration and anxiety and also provides cleaner air, carbon sequestration, reduced emissions and improved energy efficiencies! That's a pretty great bang for the buck!

The trees will also provide necessary credits for PWCS's MS4/Stormwater permit, issued by

DEQ.

These outdoor sessions provided a hands-on learning experience for the students, fostering a deeper connection to environmental stewardship. We plan to return throughout the school year to continue our instructional relationship with the students of Springwoods. There is much yet to teach!"

Diane Beyer
Prince William County Schools
MS4/Stormwater Project Manager/Inspector
ISA Arborist
Urban Nut Man Planner
Chesapeake Bay Landscape Professional (Level 1)

PWCS Stormwater/MS4

What is Stormwater?

From: William W. Miller <MillerWW@pwcs.edu>
Sent: Tuesday, October 22, 2024 1:09 PM
To: Diane Beyer <BeyerD@PWCS.EDU>; Dominik A. Bonshire <BonshiDA@PWCS.EDU>
Cc: Julius R. Williams <WilliaJ3@PWCS.EDU>
Subject: Springwoods tree planting

Diane and Dominik,

Congratulations and great job on this project. The trees look amazing, and Dominik did a great job presenting to the students this morning!

School Board Member Richard Jessie asked us to provide a write up on the project he could share at the next school board meeting.

Could you please collaborate with Janeen Mainor on a write up we can share through comms?

P.S. Diane, I hope you're feeling better as you read this.

Regards,

Bill Miller

Director of Risk, Safety, and Environmental
Risk, Safety, and Environmental Department
Prince William County Public Schools
14800 Joplin Road, Building 51

Public Involvement Activity #2

SEAS

PWCS STUDENT ENVIRONMENTAL ACTION SHOWCASE

Schedule of Events

The shuttle bus between the Kelly Leadership Building and Independence Nontraditional School will run between 3 and 8 pm.

Time	Event
3:00 - 5:00 pm	Student project set up. Community partner set up. Check in through door 1.
4:15 - 5:15 pm	Judge arrival, training, and meal. Check in through door 1.
5:15 - 6:30 pm	Student project judging. Families, students, and staff visit the community partner tables for hands-on activities and career information.
6:30 - 7:00 pm	Dr. JaNay Brown-Wood reading “Logan’s Greenhouse.” Main stage between the gym and cafeteria.
7:00 - 7:30 pm	Awards ceremony on the stage.
7:30 - 8:15 pm	Clean-up projects. Pack up community partner table event.

Public Involvement Activity #3

2024-2025 Virginia Watershed Educational Programs Grant

This school year, 2024-25, Prince William Soil and Water Conservation District (PWSWCD), Prince William County Schools (PWCS) Office of Energy and Sustainability, and Envirocatalysts, LLC, offered two separate days of Meaningful Watershed Educational Experience (MWEE) Teacher Trainings to increase the opportunity for teachers to be trained. We chose to work with High School teachers; a group that rarely does a MWEE. Each training was 8 hours long and instructed teachers and volunteers in facilitation of an on-site MWEE and student-led action project.

Our goal for these trainings was to educate and help connect teachers with the resources in our community. County school teachers and Prince William Master Gardeners and Master Naturalists spent the day learning about MWEEs, watersheds, natural resources, macroinvertebrates, and how their school fits in with all of those concepts. We had discussions on how students can use the knowledge they learned at a MWEE event and what types of action projects they can implement.

Teachers received materials and lesson plans to do activities with their students. All participants were fully engaged and interested in the activities, and there was lively discussion on how they would use those lessons for students in High School. We talked about how the activities are cross-curricular and could even be used for reading, math, science, social studies, and history. Overall, we received positive feedback about the 2024-25 MWEE trainings and had a measurably improved understanding of MWEE concepts. We asked the same assessment questions before and after the training, and found teachers had a better understanding of MWEE and watershed education concepts after the training was complete. After training, more attendees could correctly define watershed and indicator species; attendees were able to give more examples of pollutants and environmental action projects for students; and there was a much higher rate of teachers who felt comfortable hosting their own MWEE event. When we requested additional feedback on the training's effectiveness, we also received positive feedback. One teacher when asked if the activities were helpful in implementing a complete MWEE responded, "The training made me feel more confident about completing my own MWEE because I better understand how to include high school learners."

Our MWEE focused trainings gave teachers a much better understanding of how our partner organizations can help them host a successful and ongoing MWEE event. We realized that students going on a field trip to do a MWEE was counterproductive to the end goal of a student-led action project. The transportation and time constraints to do a field trip has always been a hurdle; case in point, we attempted to run a field trip MWEE as requested by a teacher this spring and it was cancelled due to bussing issues.

We are hugely appreciative to DCR for this opportunity to bring MWEEs to the classroom. These trainings were a great way to introduce teachers and community partners to hosting MWEEs at the students' schools and help them accomplish their projects locally.

PWCS MWEEs Volunteer/Staff List

School/Date/Grade	Volunteer/Staff	Volunteer/Staff	Volunteer/Staff	Volunteer/Staff	Volunteer/Staff
Potomac Shores/6th/ April 23, 2025	Kim Lowther	Nell Benton	Jeanne Jabara	Drew Uglow	Josie Anderson
Potomac Shores/6th/ April 24, 2025	Kim Lowther	Drew Uglow		Dominik	Josie Anderson
Potomac Shores/6th/ April 25, 2025	Kim Lowther	Drew Uglow	Diane Beyer	Dominik	Alex Murphy?
Buckland Mills/5th/ May 2, 2025	Kim Lowther	Nell Benton	Melinda Landry	Drew Uglow	Josie Anderson
Bull Run MS/6th/ May 13, 2025	Kim Lowther	Drew Uglow	Jeanne Jabara	Barb Ermler	Diane Beyer Dominik Bonshire
Bull Run MS/6th/ May 14, 2025	Kim Lowther	Drew Uglow	Nell Benton	Diane Beyer	Dominik Bonshire
Bull Run MS/6th/ May 16, 2025	Kim Lowther	Drew Uglow	Barb Ermler	Diane Beyer	Dominik Bonshire
Dale City ES/5th/ June 5, 2025	Kim Lowther	Drew Uglow	Diane Beyer	Dominik Bonshire	Josie Anderson
Potomac View ES/4th grade/ at OBNWF/June 11, 2025	Kim Lowther	Melinda Landry	Diane Beyer	Dominik Bonshire	Josie Anderson

From: Diane Beyer
To: Sara Shelton
Cc: Colin Walthall
Subject: Fw: Future MWEE events
Date: Monday, September 29, 2025 6:41:07 AM
Attachments: Outlook-jxeoo5c5.png

Listing of MWEEs for annual report.

D.

Diane Beyer

Prince William County Schools
MS4/Stormwater Project Manager/Inspector
ISA Arborist
Urban Nut Man Planner
Chesapeake Bay Landscape Professional (Level 1)

PWCS Stormwater/MS4

What is Stormwater?

From: Kim Lowther <education@pwswcd.org>
Sent: Wednesday, April 9, 2025 8:57 AM
To: 'Uglow, Andrew' <AUglow@pwcgov.org>
Cc: Diane Beyer <BeyerD@PWCS.EDU>; Dominik Bonshire <BonshiDA@PWCS.EDU>; Ian Sumers <SUMERIX@pwcs.edu>
Subject: [External] RE: Future MWEE events

Drew, I actually have Diane and Dominik signed up for April 24 and 25. Do you have any staff on your end that could help?

Diane, I would love help in May and June if you are free:

Buckland Mills Elementary School 5th grade

- May 2, 2025

Bull Run Middle School 6th grade

- May 13, 2025

- May 14, 2025
- May 16, 2025

Dale City Elementary School 5th grade

- June 5, 2025

And lastly,

***Potomac View Elementary School 4th grade**

- June 11, 2025

*This MWEE day will be held at Occoquan Bay National Wildlife Refuge from 9:30AM – 1:00PM! We will have 5 stations that students will rotate through:
Station 1: Macroinvertebrates Investigation
Station 2: Chemistry of Pond
Station 3: Macroinvertebrate Matching Game
Station 4: Watershed Model
Station 5: Chesapeake Bay Food Chain Game
Let me know if you would like to lead a station!

If you have any questions feel free to email me.

I hope you can help! Thank you in advance!!

Warm regards,

Kim Lowther
Education Specialist
Prince William Soil and Water Conservation District
8850 Rixlew Lane
Manassas, VA 20109

Office: (571) 379-7514
Cell: (703) 927-7549
Fax: (571) 379-8305
education@pwswcd.org
www.pwswcd.org

From: Uglow, Andrew <AUglow@pwcgov.org>
Sent: Tuesday, April 8, 2025 2:33 PM
To: Kim Lowther <education@pwswcd.org>
Cc: Diane Beyer <BeyerD@PWCS.EDU>; Dominik A. Bonshire <BonshiDA@PWCS.EDU>; sumerix@pwcs.edu

Subject: Future MWEE events

Afternoon Kim,

I am reaching out to you and including the Schools MS4 personnel. These folks will be glad to help out with any MWEE future events if you need additional personnel. If they would like they can cover the MWEE for April 23-25 from 8-3pm as I have some items that have come up.

If any questions or concerns please let me know.

Andrew F. Uglow
Senior Environmental Analyst
MS4 Coordinator
Environmental Management Division
Prince William County Public Works
5 County Complex, Suite 170
Prince William, VA 22192
phone 703-792-7104
mobile 703-357-8577

Public Involvement Activity #4

From:	Diane Beyer
To:	Sara Shelton
Cc:	Colin Walthall; Chris Schrinel
Subject:	Fw: Science Class Presentations. Dec 18/19
Date:	Monday, September 29, 2025 6:45:52 AM
Attachments:	Outlook-k0tzb3lq.png Outlook-bi5zmdkt.png

Watershed game email for one set of dates.

Diane Beyer

Prince William County Schools

MS4/Stormwater Project Manager/Inspector

ISA Arborist

Urban Nut Man Planner

Chesapeake Bay Landscape Professional (Level 1)

PWCS Stormwater/MS4

What is Stormwater?

From: Diane Beyer <BeyerD@PWCS.EDU>
Sent: Tuesday, December 3, 2024 3:03 PM
To: Gina M. Healy <TreatGM@pwcs.edu>
Cc: Dominik A. Bonshire <BonshiDA@PWCS.EDU>
Subject: Science Class Presentations. Dec 18/19

Hi Gina,

We are excited about coming to speak/work with your students on the 18th and 19th!

18th: 12:30 PM

19th: 7:30 AM

12:30 PM

Are these times correct?

If so, can you tell us how many students for each class/session so we can plan accordingly? We have a new watershed game that teaches them that stormwater options must be managed, planned and that decisions vary for each type of land use. I think you'll like it!

Look forward to hearing from you soon!

Appendix C: PWC VESMP Authority and Oversight for PWCS

Department of Public Works
Khattab Shammout, Director

Designation of VESMP Authority and Oversight for Prince William County Schools
September 8, 2025

To whom it may concern,

Prince William County (County) and Prince William County Schools (Schools) have established defined roles and responsibilities under the Virginia Erosion and Sediment Control and Stormwater Management Program (VESMP), in accordance with Virginia Department of Environmental Quality (DEQ) requirements.

As the designated VESMP Authority, the County shall be responsible for administering all aspects of erosion and sediment control and stormwater management for construction activities within its jurisdiction, including those undertaken by the Schools. This includes the review and approval of land disturbance activities, Erosion and Sediment Control and Stormwater Management Plans, Pollution Prevention measures, permitting, inspections, and enforcement.

Sincerely,

khattab Shammout
Digitally signed by khattab Shammout
Date: 2025.09.10 11:21:00 -04'00'

Khattab Shammout P.E.
Director of Public Works
Prince William County

Received by:

William Miller
Digitally signed by William Miller
Date: 2025.09.30 10:33:41 -04'00'

William Miller
Director of Risk, Safety and Environmental
Prince William County Schools