October 2025 - Draft
July 2026 - Revised

Annual MS4 Report – FY25
VSMP Permit No. VA0088595



Cover Photo: Powells Creek Ph 1 Stream Restoration

Submitted by:
Prince William County
Department of Public Works

Appendices

Appendix A - Site Inspector and Plan Reviewer Certifications
Appendix B - Land Disturbance Permits Issued
Appendix C - List of County-Maintained Roadways and Parking Lots
Appendix D - Illicit Discharge Summary
Appendix E - Oil and Household Hazardous Waste Disposal Summary
Appendix F - Spill Response Summary
Appendix G - Industrial and High Risk Inspection Summary
Appendix H - County-Maintained SWM Facilities - Inspection Summary
Appendix I - Privately-Maintained SWM Facilities – Inspection Summary
Appendix J - Summary of SWM Facilities Added to Inventory
Appendix K - Clean Water Partners Annual Report
Appendix L - Summary of County Training Program
Appendix M - Dry Weather Screening – Inspection Summary
Appendix N - Wet Weather Screening Reports
Appendix O - Annual VDOT Coordination Meeting – Participant List
Appendix P - Biological Monitoring Report
Appendix Q - In-Stream Monitoring Summary
Appendix R - Floatables Monitoring Report
Appendix S - Chesapeake Bay TMDL Reductions Summary
Appendix T – Local TMDL Action Plan Implementation
Appendix U – Roles and Responsibilities
Appendix V - Annual Program Budget
Appendix W - Summary of Storm Water and Erosion & Sediment Control Programs
Appendix X - Public Outreach Summary
Appendix Y - Nutrient Management Plans
Appendix Z - Summary of Program Plan Updates
Appendix AA - Chesapeake Bay TMDL BMP Project Calculations

Certification

"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 assure 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."

Benjamin Eib

Benjamin Eib

7/6/26

Date

Sr Environmental Program Manager

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
	A. DISCHARDGES AUTHORIZED UNDER THIS STATE PERMIT				
	A.1. Authorized Discharges				
A.1.a.	*This state permit authorizes the discharge of stormwater from all existing and new municipal separate stormwater point source discharges to surface waters from the Municipal Separate Storm Sewer System (MS4) owned or operated by the County of Prince William in Virginia.*				
A.1.b.	*The following discharges, whether discharged separately or commingled with municipal stormwater, are also authorized by this state permit for discharge through the MS4:*				
A.1.b.1.	*Non-stormwater discharges and stormwater discharges associated with industrial activity (defined at 9VAC25-31-10) that are authorized by a separate Virginia Pollutant Discharge Elimination System (VPDES) permit;*				
A.1.b.2.	*Discharges from construction activities that are regulated under the Virginia Stormwater Management Program (VSMP) (9VAC25-870-10 et seq.) and authorized by a separate VSMP authority permit or state permit; and*				

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A.1.b.3.	*The following non-stormwater discharges unless the State Water Control Board or the permittee determines the discharge to be a significant source of pollutants to surface waters:* *(a) water line flushing, managed in a manner to avoid instream impact;* *(b) landscape irrigation;* *(c) diverted stream flows;* *(d) rising ground waters;* *(e) uncontaminated ground water infiltration (as defined at 40 CFR Part 35.2005(20));* *(f) uncontaminated pumped ground water;* *(g) discharges from potable water sources, managed in a manner to avoid instream impact;* *(h)foundation drains;* *(i) air conditioning condensation;* *(j) irrigation water;* *(k) springs;* *(l) water from crawl space pumps;* *(m) footing drains;* *(n)lawn watering;* *(o)individual residential car washing;* *(p)flows from riparian habitats and wetlands;* *(q) dechlorinated swimming pool discharges, managed in a manner to avoid instream impact;* *(r) street wash water that do not contain cleaning additives or otherwise managed in a manner to*	DPW, EMD, COD	• Non-stormwater discharges are tracked as part of the Illicit Discharge Detection and Elimination program. • See MS4 Action ID B.2.e.1.		

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	avoid instream impact; *(s) routine external building was down provided no soaps, solvents, or detergents are used, external building surfaces do not contain hazardous substances, and the wash water is filtered, settled, or similarly treated prior to discharge;* *(t) discharges or flows from fire fighting activities;* *(u) discharges or flows of water for fire protection or firefighting training activities managed in a manner to avoid instream impact in accordance with § 9.1-207.1 of the Code of Virginia;* *(v) discharges from noncommercial fundraising car washes if the washing uses only biodegradable, phosphate-free, water-based cleaners in accordance with § 12.2-2114.1 of the Code of Virginia; or* *(w) other activities generating discharges identified by the Department as not requiring VPDES authorization.*				
A.1.b.4.	*Materials from a spill are not authorized unless the discharge of material resulting from a spill is necessary to prevent loss of life, personal injury, or severe property damage. The permittee shall take, or require the responsible party to take, all reasonable steps to minimize or prevent any adverse effect on human health or the environment in accordance with the permittee's program under Part I.B.2.f). (Spill Prevention and Response). This state permit does not transfer liability for a spill itself from the party(ies) responsible for the spill to the permittee nor relieve the party(ies) responsible for a spill from the reporting requirements of 40 CFR Part 117 and 40 CFR Part 302. The permittee is responsible for any reporting requirement listed under Part III.G of this state permit.*				
	A.2. Permittee Responsabilities				

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A.2.	*This state permit establishes the specific requirements applicable to the permittee for the term of this state permit. The permittee is responsible for compliance with this state permit. The permittee shall implement and update the MS4 Program Plan (as set forth in Part I.B) to ensure compliance with this state permit. The Department has determined that implementation of the MS4 Program Plan reduces the discharge of pollutants to the maximum extent practicable. Where wasteloads have been allocated for pollutant(s) of concern in an approved Total Maximum Daily Load (TMDL), the permittee shall implement the special conditions as set forth in Part I.D of this state permit. Compliance with the requirements of this state permit shall also constitute adequate progress for this permit term towards complying with the assumptions and requirements of the applicable TMDL wasteload allocations such that the discharge does not cause or contribute to violations of the water quality standards.*				
A.2-1.	*The permittee shall clearly define the roles and responsibilities of each of the permittee's departments, divisions or subdivisions in maintaining permit compliance. If the permittee relies on another party to implement portions of the MS4 Program Plan, both parties must document the agreement in writing. The agreement shall be retained by the permittee with the MS4 Program Plan. Roles and responsibilities shall be updated as necessary. Where the permittee relies on another party to implement a portion of this state permit, responsibility for compliance with this state permit shall remain with the permittee.*	DPW, EMD, COD	• Roles and responsibilities are provided as part of the County's MS4 program plan. Roles and responsibilities can be reviewed as part of each BMP section within the MS4 Program Plan. • The county has written agreements with the following organizations to support implementation of portions of the MS4 Program Plan: o Prince William County Soil and Water Conservation District (PWCSWCD) o Keep Prince William Beautiful (KPWB) o Northern Virginia Regional Commission (NVRC) Clean Water Partners o Prince William Water (Previously known as Prince William County Service Authority) o Virginia American Water o Upper Occoquan Service Authority (UOSA) o Virginia Cooperative Extension (VCE)	*Each annual report shall include a current list of roles and responsibilities*	• A detailed list of roles and responsibilites is included as Appendix U.

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A.2-2.	*In the event the permittee is unable to meet conditions of this state permit due to circumstances beyond the permittee's control, a written explanation of the circumstances that prevented permit compliance shall be submitted to the Department in the annual report. Circumstances beyond the permittee's control may include abnormal climatic conditions; weather conditions that make certain requirements unsafe or impracticable; or unavoidable equipment failures caused by weather conditions or other conditions beyond the reasonable control of the permittee (operator error and failure to properly maintain equipment are not conditions beyond the control of the permittee). The failure to provide adequate program funding, staffing or equipment maintenance shall not be an acceptable explanation for failure to meet permit conditions. The Department will determine, at its sole discretion, whether the reported information will result in an enforcement action. In addition, the permittee must report noncompliance which may adversely affect surface waters or endanger public health in accordance with Part III.I.*	DPW, EMD, COD	If Prince William County is unable to meet the conditions of this permit due to circumstances beyond its control, the county will provide a list of circumstances that prevented permit compliance.	*Each annual report shall include a list of those circumstances of non-compliance outside of the permittee's control.*	There were no circumstances of non-compliance beyond the county's control during the reporting period.
	A.3. Legal Authority				
A.3.	*The permittee shall maintain and utilize its legal authority authorized by the Commonwealth of Virginia to control discharges to and from the MS4 in the manner established by the specific requirements of this state permit. The legal authority shall enable the permittee to:*				

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A.3.a.	*Control the contribution of pollutants to the MS4;*	DPW, EMD, COD	• These regulations are contained in section 700 of the County's Design & Construction Manual Standards Manual (DCSM), and Chapter 23.2, Article IV - Stormwater Management in Prince William County Code, which is available at the following link: https://library.municode.com/va/prince_william_county/codes/code_of_ordinances?nodeId=CH8ENP R		
A.3.b.	*Prohibit illicit discharges to the MS4;*	DPW, EMD, COD	• These regulations are contained in section 700 of the County's Design & Construction Manual Standards Manual (DCSM), and Chapter 23.2, Article IV - Stormwater Management in Prince William County Code, which is available at the following link: https://library.municode.com/va/prince_william_county/codes/code_of_ordinances?nodeId=CH8ENP R		
A.3.c.	*Control the discharge of spills and the dumping or disposal of materials other than stormwater (e.g. industrial and commercial wastes, trash, used motor vehicle fluids, leaf litter, grass clippings, animal wastes, etc.) into the MS4;*	DPW, EMD, COD	• These regulations are contained in section 700 of the County's Design & Construction Manual Standards Manual (DCSM), and Chapter 23.2, Article IV - Stormwater Management in Prince William County Code, which is available at the following link: https://library.municode.com/va/prince_william_county/codes/code_of_ordinances?nodeId=CH8ENP R		

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A.3.d.	*Require compliance with conditions in ordinances, permits, contracts, inter-jurisdictional agreements, or orders; and,*	DPW, EMD, COD	The county has the authority to require compliance related to implementing the permit requirements, including but not limited to: • Conditions in ordinances (including permits and orders issued under ordinances): The county has authority as authorized by state law and as stated in local ordinances, including options for escalating enforcement steps as appropriate in the county's exercise of its enforcement discretion as the regulator of covered third party activities.		
A.3.e.	*Carry out all inspections, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the MS4.*	DPW, EMD, COD	The county has authority to conduct inspections/monitoring etc. related to implementing the permit requirements.		
A.3-1.	*The permittee shall review and update its ordinances and other legal authorities such as permits, orders, contracts and inter-jurisdictional agreements as necessary to continue providing adequate legal authority to control discharges to and from the MS4.*	DPW, EMD, COD	Prince William County's current ordinances and other legal authorities provide adequate legal authority to control discharges to and from the MS4. Ordinances and other legal authorities will be reviewed annually as part of the Program Plan review.	*Each annual report shall provide a list of any updates to applicable ordinances, permits, orders, contracts, and/or agreements performed over the reporting year.*	No updates were made during the reporting period.
	A.4. MS4 Program Resources				
A.4.	*The permittee shall submit to the Department a copy of each fiscal year's budget including its proposed capital and operation and maintenance expenditures necessary to accomplish the activities required by this state permit. The permittee shall describe its method of funding the stormwater program with the copy of the fiscal year budget.*	DPW, EMD, COD	The fiscal year's budget will be provided as required.	*A copy of the fiscal year's budget including its proposed capital and operation and maintenance expenditures necessary to accomplish the activities required by this state permit shall be submitted with each annual report.*	The Annual Program Budget can be found in Appendix V.
	A.5. Permit Maintanence Fees				

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A.5.	*Permit maintenance fees shall be paid in accordance with Part XIII of the VSMP regulations (9VAC25-870- 700 et seq.).*	DPW, EMD, COD	The permit fees have been paid as required.	*A statement regarding payment of the applicable MS4 permit maintenance fee, including check date and check number shall be included with each annual report. Note: Please do not include copies of checks or other bank records.*	Prince William County's MS4 permit maintenance fee was paid with check number 115318 dated 9/16/24.
	A.6. MS4 Program Plan				
A.6.	*The permittee shall maintain, implement and enforce an MS4 Program Plan accurately documenting the MS4 Program including all additions, changes and modifications. For the purposes of this state permit, the MS4 Program Plan is considered a single document, but may actually consist of separate documents (e.g., dry weather screening plans, wet weather monitoring plans, TMDL Action Plans, annual reports). Policies, ordinances, strategies, checklists, watershed plans and other documents may be incorporated by reference provided the latest revision date is included in the MS4 Program Plan and all documents are available upon request. Specific reference shall be made to any ordinance more stringent than the Virginia Stormwater Management Act (§ 62.1-44.15:24 et seq) and VSMP regulations (9VAC25-870 et. seq.), the Virginia Erosion and Sediment Control Law (§ 62.1-44.15:51 et seq.) and Regulations (9VAC25-840 et seq.) and the Chesapeake Bay Preservation Act (§ 62.1-44.15:67 et seq.) and Chesapeake Bay Preservation Area Designation and Management Regulations (9VAC25-830 et seq).* *The permittee shall updated the MS4 Program Plan annually and the most up-to-date version of the MS4 Program Plan shall be posted on the permittee's website within 30 days of updating the MS4 program Plan.* *The most recent MS4 Program Plan shall be maintained on the permittee's website and provided in at least one other location easily accessible to the public.*	DPW, EMD, COD	The MS4 Program Plan will be reviewed annually and updated as needed.	The annual report shall include a summary of any updates to the MS4 Program Plan made during the reporting year.	A summary of changes made to the MS4 Program Plan can be found in Appendix Z.
	A.7. MS4 Program Review and Updates				

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A.7.	*MS4 Program Review: The permittee will review the current MS4 Program Plan annually, in conjunction with the preparation of the annual report required under Part I.E of this state permit.*	DPW, EMD, COD	The MS4 Program Plan will be reviewed annually and updated as needed.	All modifications and proposed modifications shall be reported in accordance with this section of the permit.	Prince William County has reviewed the MS4 Program Plan in accordance with the requirements of the renewed permit. A summary of updates made to the MS4 Program Plan can be found in Appendix Z.
A.7.a.	*MS4 Program Updates and Modifications: Modifications to the MS4 Program Plan are expected throughout the life of this state permit as part of the iterative process to reduce pollutant loading and protect water quality. As such, modifications made in accordance with this state permit as a result of the iterative process do not require modification of this state permit unless the Department determines the changes meet the criteria referenced in 9VAC25- 870-630 or 9VAC25-870-650. Updates and modifications to the MS4 Program Plan may be made during the life of the permit in accordance with the following procedures:*				
A.7.a.1.	*Adding (but not eliminating or replacing) components, controls, or requirements to the MS4 Program Plan may be made by the permittee at any time. Additions shall be reported as part of the annual report.*				
A.7.a.2.	*Updates and modifications to specific standards and specifications, schedules, operating procedures, ordinances, manuals, checklists and other documents routinely evaluated and modified are authorized under this state permit provided that the updates and modifications are performed in a manner (i) that is consistent with the conditions of this state permit, (ii) that ensure public notice and participation requirements established in this state permit are followed, and (iii) that the updates and modifications are documented in the annual report.*				

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A.7.a.3.	*Replacing, or eliminating without replacement, any ineffective or infeasible strategies, policies and Best Management Practices (BMPs) specifically identified in this state permit with alternate strategies, policies, and BMPs may be requested at any time. Such requests shall include the following:* *(a) An analysis of how and/or why the BMPs, strategies, or policies are ineffective or infeasible including information on whether the BMPs, strategies, or policies are cost prohibitive;* *(b) Expectations on the effectiveness of the replacement BMPs, strategies, or policies;* *(c) An analysis of how the replacement BMPs are expected to achieve the goals of the BMPs to be replaced;* *(d) A schedule for implementing the replacement BMPs, strategies, and policies; and* *(e) An analysis of how the replacement strategies and policies are expected to improve the permittee's ability to meet the goals of the strategies and policies being replaced.*			Requests or notifications shall be made in writing to the Department and signed in accordance with 9VAC25-870-370 of the VSMP regulations. Modification to the MS4 Program Plan shall become effective and enforceable upon written approval from the Department. Major modifications to the MS4 Program Plan as defined in 9VAC25-870-10 may require that the permit be reopened and modified pursuant to 9VAC25-870-630.	

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A.7.b.	*MS4 Program Updates Requested by the Department: In a manner and following procedures in accordance with the Virginia Administrative Processes Act, the VSMP regulations and other applicable State laws, statutes and regulations, the Department may request changes to the MS4 Program Plan to assure compliance with the statutory requirements of the Virginia Stormwater Management Act and associated regulations and to:* *1) Address impacts on receiving water quality caused by discharges from the MS4;* *2) Include more stringent requirements necessary to comply with new State or Federal statutory or regulatory requirements; or* *3) Include such other conditions necessary to comply with State or Federal statutory or regulatory requirements.*			• *Proposed changes requested by the Department shall be made in writing and set forth the basis for and objective of the modification as well as the proposed time schedule for the permittee to develop and implement the modification. The permittee may propose alternative program modifications and/or time schedules to meet the objective of the requested modification, but any such modifications are at the discretion of the Department.* • *All modifications and proposed modifications shall be reported in accordance with this section of the permit.*	
	B. STORMWATER MANAGEMENT *The following subparts describe the requirements for the permittee to implement in its MS4 Program Plan during this state permit term:*				
	B.1. Planning				

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.1-1.	*No later than 12-months after the effective date of this state permit, the permittee shall submit to the Department, a cost benefit analysis of the stormwater pollutant reduction utilized to select priority projects from the conceptual stormwater projects including those identified in the permittee's completed watershed studies. The permittee shall include in their development of the cost benefit analysis the number of BMP acres treated, impervious area draining into BMP, condition of the downstream channel, amount of pollutant reduction, feasibility for implementation, the unit costs for pollutant reduction and other benefits from the proposed BMP. The cost benefit analysis shall include a prioritized list of the identified conceptual projects for consideration of implementation.* *The permittee shall continue to seek public comment in development of the plan. A copy of the completed plan shall be placed on the permittee's website no later than 30 days after any updates are made.*	DPW, EMD, COD	The watershed management plan has been completed and links to the completed plans are provided on the county's website: https://www.pwcva.gov/department/environmental-services/community-ms-4-program	*The permittee shall provide the Department a current web link to the watershed management plan no later than 12 months after the effective date of this state permit.*	The County's Watershed Management Plan was submitted to DEQ on January 10th, 2025.
	B.2. MS4 Program Implementation				
	B.2.a. Construction Site Runoff and Post Construction Runoff from Areas of New Development and Development on Prior Developed Lands				
B.2.a.1.	*The permittee shall implement a local erosion and sediment control program consistent with the Virginia Erosion and Sediment Control Law §62.1-44.15:51 of the Code of Virginia and Virginia Erosion and Sediment Control Regulations 9VAC25-840 et seq. and a stormwater management program consistent with the Virginia Stormwater Management Act §62.1-44.15:24 of the Code of Virginia and Virginia Stormwater Management Program Regulations 9VAC25-870 et seq.*	DPW, EMD, COD	• The county's erosion and sediment control program and stormwater management program have been approved by DEQ as consistent with the Virginia Erosion and Sediment Control Law, the Virginia Stormwater Management Act, and their attendant regulations. • The county uses 2,500 square feet, which is the threshold for land disturbing activities to be regulated under the county's erosion and sediment control program, as the threshold for reporting the number of regulated land disturbing activities and the total number of acres disturbed.	• *Each annual report shall contain the number of regulated land disturbing activities approved and the total number of acres disturbed.* • *Each annual report shall contain the number of land disturbing activity inspections conducted and the number and type of each enforcement action taken.*	• For the period July 1, 2024 thru June 30, 2025, Prince William County approved a total of 114 land development plans with a cumulative land disturbance of 1,727.18 acres. Refer to Appendix B for a list of land disturbance permits issued during the period. • FY 25 Erosion and Sediment Control Program Summary **FY25** / **Site Inspections** / **Violations** / **Notices to Comply** **Total** / 31,645 / 53 / 8

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B.2.a.2.	*The permittee shall identify in the MS4 Program Plan all legal authorities for erosion and sediment control and stormwater management that are more stringent than those required under 9VAC25- 840 et seq. and/or 9VAC25-870 et seq. that have been adopted in accordance with § 62.1-44.15:65 and/or § 62.1-44.15:33 of the Code of Virginia.*	DPW, EMD, COD	The county has identified current county requirements that are more stringent than state law/regulations.	• *The initial annual report shall include the permittee's strategy to address maintanence of stormwater management controls that are designed to treat stormwater runoff solely from the individual residential lot on which they are located* • *The initial annual report shall include a list of all known land disturbing projects that qualify under the 'Grandfathering' provision of the VSMP regulations found at 9VAC25-870-48.* •*Each annual report shall include a summary of actions taken by the permittee to implement Part I.B.2.a)1) and 2) of this state permit.*	Refer to Appendix W for a Summary of the County's Virginia Stormwater and Erosion & Sediment Control Programs.
	B.2.b. Retrofitting on Prior Developed Lands				

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B.2.b.	*From the list of stormwater management projects included in the analysis required in Part I.B.1, the permittee shall select at least seven (7) projects no later than the expiration date of this state permit. Projects implemented to meet the requirements of Part I.D of this state permit (TMDL Action Plan and Implementation for the Chesapeake Bay Special Condition or TMDL Action Plans other than the Chesapeake Bay TMDL) may be used to meet the requirements of this special condition.* *For retrofit projects that do not serve to meet the requirements of Part I.D, the permittee shall submit a summary of projects implemented during the reporting period with each annual report including type of land use being retrofitted, retrofit performed, completion date or anticipated completion date, total acreage retrofitted, total impervious and pervious acreage, and location by latitude and longitude (decimal degrees).*	DPW, EMD, COD	The county will implement at least seven projects from the list of projects required in Part I.B.1 no later than the expiration date of this permit.	*Each annual report shall include a status update for those projects for which implementation began during the reporting period.*	A status update on the implementation of these projects can be found in Appendix S.
	B.2.c. Roadways				
B.2.c.	*Streets, roads, and parking lots maintained by the permittee shall continue to be operated and maintained in a manner to minimize discharge of pollutants, including those pollutants related to deicing or sanding activities.*	DFFM	The county meets this requirement through implementation of the actions described below.		

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B.2.c.1.	*The permitee shall maintain an accurate list of permitee-maintained raods, streets, and parking lots that includes the street name, the miles of roadway not treated by BMPs, and miles of roadway treated with BMPs.*	DFFM	• The majority of public roads in the county (interstate, primary, secondary, and residential) are maintained and operated by the Virginia Department of Transportation (VDOT), which is covered by a separate Phase II MS4 permit. Prince William County is responsible for maintaining 13 miles of impervious roadway. • The county currently operates and maintains 87 parcels with impervious parking lots associated with county facilities totaling 132.5 acres.		A list of county-maintained roads and parking lots can be found in Appendix C.
B.2.c.2.	*The permittee shall implement written protocols for permittee-maintained road, street and parking lot maintenance, equipment maintenance, and material storage designed to minimize pollutant discharge.*	DFFM	Prince William County Buildings and Grounds is responsible for snow removal at all county facilities maintained by Buildings and Grounds. Snow removal activities are not performed on any other County-maintained roads, streets, or parking lots. Salt, sand, and calcium chloride are the specified materials used in snow removal activities. Any materials used for deicing and sanding activites are stored and maintained in a manner to prevent runoff from precipitation. Prince William County established a county-wide IDDE policy to promote good housekeeping practices across all municipal facilities.	*The permittee shall include an updated version of the written protocols identified in Part I.B.2.c)(2) if any changes are made during the reporting year.*	In FY25, Prince William County implemented an updated SOP for Illicit Discharge Elimination and MS4 Permit Compliance, which is designed to minimize pollutant discharge and promote good housekeeping practices across County facilities. This SOP is located in Appendix 10 of the Prince William County MS4 Program Plan.

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B.2.c.3.	*Within 24 months of permit issuance, the permittee shall develop or review and update, if necessary, its existing procedures for snow and ice management, as well as identify oppurtunities to implement best management practices that promote efficient management and application of anti-icing and deicing agent applications to any permittee-maintained parking lots, roadways, and sidewalks or other paved surfaces.*	DFFM			
B.2.c.4.	*Materials utilized for deicing and sanding activities shall remain covered from precipitation until application.*	DFFM	Prince William County Buildings and Grounds is responsible for snow removal at all county facilities maintained by Buildings and Grounds. Snow removal activities are not performed on any other County-maintained roads, streets, or parking lots. Salt, sand, and calcium chloride are the specified materials used in snow removal activities. Any materials used for deicing and sanding activites are stored and maintained in a manner to prevent runoff from precipitation. Prince William County established a county-wide IDDE policy to promote good housekeeping practices across all municipal facilities.		
B.2.c.5.	*The permittee shall not apply any deicing agent containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, and sidewalks or other paved surfaces.*	DFFM	The County uses salt, sand, and calcium chloride as specified snow removal materials. No deicing agent containing nitrogen or phosphorus is used by the County.		
	B.2.d. Pesticide, Herbicide, and Fertilizer Application				
B.2.d.	*The permittee shall continue to control the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers applied to permittee rights of way, parks, and other permittee property, as follows:*	DFFM, DPRT	The county meets this requirement through implementation of the actions described below.		

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.d.1.	*The permittee shall implement and maintain turf and landscape nutrient management plans that have been developed by a certified nutrient management planner in accordance with § 10.1-104.2 of the Code of Virginia on all lands owned or operated by the MS4 permittee where nutrients are applied to a contiguous area greater than one acre. Nutrient management plans shall be submitted to the Departement of Conservation and Recreation (DCR) for approval no later than 30 prior to plan expiration. No nutrient management plans maintained by the permittee shall be considered expired while DCR is reviewing the plan for approval.*	DFFM, DPRT			
B.2.d.1.a.	*The permittee shall maintain a list of all permittee lands where nutrients are applied to a contiguous area of more than one acre (including latitude and longitude).*	DFFM, DPRT	County staff has identified all county lands where nutrients are applied to a contiguous area of more than one acre. A latitude and longitude have been provided for each area.		
B.2.d.1.b.	*The permittee shall annually track the following:* *(1) The total acreage of permittee lands upon which nutrients are applied and controlled using general permittee guidelines or standard operating procedures;* *(2) The acreage of permittee lands where turf and landscape nutrient management plans are required; and,* *(3) The acreage of permittee lands covered by turf and landscape nutrient management plans have been implemented.*	DFFM, DPRT	• County staff will track the total acreage where nutrients are applied on identified county lands with a contiguous area greater than one acre. • County staff will track the acreage where turf and landscape nutrient management plans are required. • County staff will track the acreage of county lands covered by turf and landscape nutrient management plans.	*Each annual report shall include the three elements under Part I.B.2.d)1)(b) above and list of properties identified under Part I.B.2.d)1)(a) including the approval date of the most recent nutrient management plan.*	A summary of Nutrient Management Plans can be found in Appendix Y.

<table>
<tr><th>MS4 Action ID</th><th>Permit Requirement</th><th>Responsible Party</th><th>2025 Program Plan Elements
(July 1, 2024 through June 30, 2025)</th><th>Specific Reporting Requirement</th><th>2025 Annual Report
(July 1, 2024 through June 30, 2025)</th></tr>
<tr><td>B.2.d.2.</td><td>The permittee shall continue to employ good housekeeping/pollution prevention measures in the application, storage, transport and disposal of pesticides, herbicides and fertilizers.</td><td>DFFM, DPRT</td><td>• Prince William County Public Works will promote and encourage the proper use, application, and disposal of pesticides , herbicides, and fertilizers by public, commercial, and private applicators and distributors.
• The Virginia Cooperative Extension Service help support Prince William County applicators and distributors with proper training and coordination with the Virginia Department of Agriculture and Consumer Services (VDACS).
• VDACS provides ongoing communication with all certified applicators and distributors.
• The Virginia Cooperative Extension Service provides training and education on the use, application, and disposal of pesticides, herbicides, and fertilizers.</td><td></td><td></td></tr>
<tr><td>B.2.d.3.</td><td>The permittee may regulate the use, application, or storage of fertilizers pursuant to §3.2-3602 of the Code of Virginia.</td><td>DFFM, DPRT</td><td>No additional local fertilizer requirements are in place at this time beyond state requirements.</td><td></td><td></td></tr>
<tr><td>B.2.d.4.</td><td>The permittee shall track the acreage of county lands managed under Integrated Pest Management Plans.</td><td>DFFM, DPRT</td><td>Prince William County tracks the acreage of county lands managed under Integrated Pest Management Plans.</td><td>Each annual report shall include the number of acres managed under Integrated Pest Management Plans.</td><td>There are two golf courses owned by the County that are under an Integrated Pest Management Plan. Neither course is located within the County's MS4 services area. The following table identifies the acreage under an IPM.<table><tr><th>County Land</th><th>Acres</th></tr><tr><td>Forest Greens GC</td><td>105.42</td></tr><tr><td>Prince William GC</td><td>114.33</td></tr></table></td></tr>
<tr><td></td><td>B.2.e. Illicit Discharges and Improper Disposal</td><td></td><td></td><td></td><td></td></tr>
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MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.e.	*Discharges to the MS4 not authorized by this state permit shall be effectively prohibited.*	DPW, EMD, COD	Prince William County's Illicit Discharge Detection and Elimination (IDDE) Program consists of elements designed to identify, mitigate, and prevent the release of non-stormwater discharges into its storm sewer system, and thus into State and Federal waters. Through development of County Fire Protection, Zoning, Building Development, and Stormwater Management Ordinances. Prince William County has prohibited the discharge of any non-stormwater element determined to be contributing significant amounts of pollutants to its storm sewer system.		
B.2.e.1.	*In accordance with Part I.A.1.b), certain non-stormwater discharges to the MS4 need not be addressed as illicit discharges or improper disposal. The MS4 Program Plan shall identify any nonstormwater discharges listed under Part I.A.1.b), where the permittee has imposed any conditions on the discharges to the MS4. The permittee shall prohibit, on a case-by-case basis, any individual nonstormwater discharge (or class of non-stormwater discharges) otherwise allowed under this paragraph that is determined to be contributing significant amounts of pollutants to the MS4.*	DPW, EMD, COD	Prince William County has prohibited the discharge of any non-stormwater element determined to be contributing significant amounts of pollutants to its storm sewer system. The County defines all discharges categorized as non-stormwater discharges, as well as those discharges not addressed as illicit discharges in accordance with Part I.A.1.b) of the permit in Article II sec. 23.2-4.1 of Prince William County's Code of Ordinances.		
B.2.e.2.	*The permittee shall continue to follow-up with the PWCSA to identify the efforts taken to limit the exfiltration of sanitary sewage into the MS4 including maintenance and repair activities.*	DPW, EMD, COD	The identification and correction of deficiencies is aided by PWC through its Dry Weather Monitoring, Storm Sewer Maintenance, General Stormwater Discharge, and Stream Restoration Programs. Cross connections, leaks, and other maintenance issues are discovered through the County's Dry Weather Monitoring and Storm Sewer Maintenance Programs. PWC continues to identify and report concerns to the PWCSA when sanitary sewer system maintenance and repairs are needed.	*Each annual report shall include the amount of linear feet of sanitary sewer inspected PWCSA during the reporting year.*	In FY25, Prince William Water (formerly PWCSA) inspected 712,951 linear feet of sanitary sewer.

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.e.3.	*The permittee will continue to implement a program to reduce the discharge of floatables (e.g. litter and other human-generated solid refuse) in accordance with Part I.C.3.*	DPW, EMD, COD	Prince William County participates in the following programs to help reduce the discharge of floatables: • Adopt-A-Spot Program: litter cleanup and recycling program sponsored by the Virginia Dept. of Waste Management. • Adopt-A-Stream Program: stream cleanup program managed by the Prince William County Soil & Water Conservation District (SWCD). • Floatables Monitoring Program: program admisinistered by PWC SWCD, designed to assess refuse loading to 5 selected stream sites throughout the County. • Keep Prince William Beautiful Storm Drain Labeling Program: identify storm drains as draining into the Chesapeake Bay, as well as remind citizens not to dump items/fluids into them. • Public Works Litter Control Crew: team established by PWC Public Works to pick up highly traveled roadways, handle cleanups of illegal dumpsites, and haul material from community cleanup events. • Prince William County Public Works, Enviromental Management Divsion, manages a Bandalong Litter Trap in the Neabsco Creek.		
B.2.e.4.	*The permittee shall prohibit the dumping or disposal of used motor vehicle fluids, household hazardous wastes, sanitary sewage, grass clippings, leaf litter, and animal wastes into the MS4. The permittee shall ensure the implementation of programs to collect used motor vehicle fluids (such as oil and antifreeze) for recycling, reuse, or proper disposal and to collect household hazardous waste materials (including paint, solvents, pesticides, herbicides, and other hazardous materials) for recycling, reuse, or proper disposal. Such programs shall be readily available to all private residents and shall be publicized and promoted on a regular basis but not less than twice per year.*	DPW, EMD, COD	• Prince William County has prohibited the discharge of any non-stormwater element determined to be contributing significant amounts of pollutants, including the dumping or improper disposal of motor vehicle fluids, household hazardous wastes, sanitary sewage, grass clippings, leaf litter, and animal wastes. • Working with our partners, Prince William County Public Works will promote, publicize, and facilitate the proper management and disposal of used oil and household hazardous waste. Public Works has created and maintains a robust management program for the collection and disposal of household hazardous waste and collection and recycling of used oil.		More information on oil and hazardous waste disposal can be found in Appendix E.

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.e.5.	*The permittee shall continue to implement a program to locate and eliminate illicit discharges and improper disposal into the MS4. This program shall include dry weather screening activities to locate portions of the MS4 with suspected illicit discharges and improper disposal, as described in Part I.B.2.l)(1) of this state permit.*	DPW, EMD, COD	Prince William County hosts several programs under its IDDE program dedicated to the detection, identification, and elimination of unauthorized discharges to its MS-4 system. These programs include the Dry Weathering Monitoring, General Discharge, Wet Weather Monitoring, Service Authority's Inflow and Infiltration Program, and Industrial and High Risk Monitoring Programs.		
B.2.e.6.	*The permittee shall require the elimination of illicit discharges and improper disposal practices within 30-days of discovery. Where elimination of an illicit discharge within 30-days is not possible, the permittee shall require an expeditious schedule for removal of the discharge. In the interim, the permittee shall require the operator of the illicit discharge to take all reasonable and prudent measures to minimize the discharge of pollutants to the MS4.*	DPW, EMD, COD	By issuance of a Notice of Violation, iilicit discharges are required to be eliminated within 30 days of discovery, unless removal is not possible within that timeframe. In these instances, reasonable and prudent measures to minimize discharge will be taken and an action plan for mitigation/removal will be required.	*Each annual report shall include a list of illicit discharges identified, the source, a description of follow-up activities and whether the illicit discharge has been eliminated.*	A summary of illicit discharge inspections and actions taken can be found in Appendix D.
	B.2.f. Spill Prevention and Response				

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.f.	*The permittee shall continue to implement a program that coordinates with the Fire Department and other permittee-operated departments to prevent, contain, and respond to spills that may discharge into the MS4. The spill response program may include a combination of spill response actions by the permittee (and/or another public or private entity), and legal requirements for private entities within the permittee's jurisdiction.*	DFR	The County has designated a full-time Hazardous Materials Officer. Prince William County participates in the Commonwealth Department of Emergency Management Services' regional Hazardous Materials response programs and maintains a National Incident Management System Type I HAZMAT Team for emergency response. The County's Fire and Rescue System responds to all complaints of hazardous spills and hazardous illicit discharge. If the complaints relate to sewage, the appropriate agency, such as, Prince William County Service Authority or Virginia American Water will be contacted. The complaints on the failing septic systems and drain fields are referred to the County's Health Department. The County staff makes every effort to direct complaints to the appropriate agency as expeditiously as possible.	*Each annual report shall include a list of spills, the source (identified to the best of the permittee's ability), and a description of follow-up activities taken.*	The Spill Response Summary Report can be found in Appendix F.
	B.2.g. Industrial & High Risk Runoff				
B.2.g.	*The permittee shall implement a program to identify and control pollutants in stormwater discharges to the MS4 from industrial and high risk runoff facilities (e.g., municipal landfills; other treatment, storage, or disposal facilities for municipal waste; hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to EPCRA Title III, Section 313). Facilities with individual VPDES stormwater permits or coverage under the industrial stormwater general permit may be included in the program at the discretion of the permittee.*	DPW, EMD, COD	High Risk and Industrial VPDES permitted facilities that are found to be contributing significant pollutants to the storm sewer system will be referred to DEQ for compliance review.		

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.g.1.	*The permittee shall maintain, and update as necessary, a list of all known industrial and high-risk dischargers to the MS4.*	DPW, EMD, COD	In FY16, the County performed used GIS to analyze and generate a list of potential High Risk outfalls according to a probability of pollutant discharge. This probability takes in to account an assumed potential for discharge to occur, possible pollutant discharge effect according to the type of facility and its operations, and the potential for environmental damage according to the facilities proximity to environmentally sensitive areas. From this analysis, 518 outfalls were deemed as potentially high risk. In addition, any outfalls found to be contributing a significant source of pollutants during routine Dry Weather Monitoring inspections will be added to this list and updated annually.	*The annual report shall include a list of all known industrial and high risk dischargers including any non-VPDES regulated industrial and commercial stormwater dischargers determined by the permittee as contributing a significant pollutant load and that discharge to the MS4 system, a schedule of inspections and procedures for inspecting outfalls.*	A list of Industrial and High Risk Runoff Sites can be found in Appendix G.
B.2.g.2.	*The permittee shall maintain a list of any industrial and/or commercial stormwater dischargers not regulated under the Virginia State Water Control Law that it determines may be contributing a significant pollutant loading to the MS4. This list may be individual discharges or categories of discharges.* *(a) The list shall include, but shall not be limited to: major automotive facilities such as repair shops, body shops, auto detailers, tire repair shops and service stations.* *(b) Visual inspections of exposed areas and points of connections to the MS4 or outfalls at these facilities shall be conducted, in accordance with the schedule outlined in the MS4 program Plan, to identify potential sources of pollutants that could enter the MS4 and surface waters.* *(c) The permittee shall require control measures as necessary and/or appropriate for stormwater discharges from these dischargers to the MS4.*	DPW, EMD, COD	As outfalls for facilities determined to have a high risk for pollutant discharge are inspected, those which do not fall under VPDES permitting requirements or Virginia State Water Control Law are included under the County's Non-VPDES High Risk Designation. Potential Non-VPDES High Risk facilities are identified, along with associated outfalls, through GIS desktop analysis. Using County land-use information, land-uses that are identified to have ahigh potential for the discharge of pollutants are isolated. As with VPDES permitted facilities, a buffer is placed around a high risk parcel and the containing outfalls are identified. These outfalls are considered to be potentially High Risk outfalls. During Dry Weather Monitoring activities, outfalls determined to potentially contribute a significant source of pollutants to the storm sewer system are identified and added to the list of high risk discharges.	*Each annual report shall include a report on implementation of the inspection schedule and include a list of the facilities and/or facility outfalls or points of connection to the permittee's MS4 inspected during the reporting period.*	A list of inspected outfalls is included in Appendix M.

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.g.3.	*The permitee may conduct monitoring, or may require the facility to conduct monitoring, of any stormwater discharges it believes may be a source of significant pollutant loadings to the MS4.*	DPW, EMD, COD	PWC receives Discharge Monitoring Reports (DMR's) from applicable (non-exempt) VPDES permitted facilities that discharge into the County's MS-4.		
B.2.g.4.	*The permittee shall coordinate with the Department to report any non-VPDES permitted industrial facility from which the permittee has evidence that a significant pollutant load is entering the MS4 system. Inspections of facilities for which the permittee has evidence of significant pollutant loading may be carried out in conjunction with other county programs.*	DPW, EMD, COD	Outfalls are monitored in accordance with the County's Dry Weather Monitoring Protocols. Facilities whose outfalls are found to discharge significant pollutant flows within 3 consecutive inspections are referred to DEQ for compliance review. Follow-up inspections are scheduled according to IDDE protocols. Outfalls of VPDES permitted facilities are inspected once a year, while High Risk outfalls are inspected once a permit cycle.		
B.2.g.5.	*The permittee shall refer the following facilities to the Department of Environmental Quality, Northern Regional Office, for Department compliance review under the Virginia State Water Control Law any industrial or commercial facility, if the permittee becomes aware of a violation of any industrial stormwater management requirement contained in an individual or gerneral VPDES permit issued to the facility by the Department.*	DPW, EMD, COD	Prince William County will report these facilities to the DEQ for compliance review under the Virginia State Water Control Law.	*Each annual report shall include a list of referrals to the Department including a document detailing any coordination activites with the Department.*	During the reporting period, no facilities required referral to DEQ.
	B.2.h. Stormwater Infrastructure Management				

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.h.	*The permittee shall continue to maintain and implement programs to maintain the permittee's stormwater infrastructure and to update the accuracy and inventory of the storm sewer system.*	DPW, EMD, COD	Prince William County conducts routine inspection of its storm drainage system, inspecting the entire system within the permit term. Storm sewer is inspected using visual inspection techniques, as well as using CCTV. The County continues to implement a program to inspect all new drainage systems (eligible for County maintenance) using video cameras, prior to accepting the systems into the County's maintenance program.		As of June 30, 2025, there are 892.54 miles (4.71 million linear feet) of storm sewer system owned and/or operated within the County. During FY25, the County inspected 758.93 miles (4.01 million linear feet) of storm sewer system. The County inspected 85% of County-owned or operated storm sewer system, well exceeding the required 20% for the reporting year.
B.2.h.1.	*For stormwater management (SWM) facilities and infrastructure maintained by the permittee including residential properties where SWM facilities, BMP and Storm Drainage Systems qualify for permittee maintenance (excluding apartments and mobile home parks), the following conditions apply:* *(a) The permittee shall provide for adequate long-term operation and maintenance of its SWM facilities owned or operated by the permitee in accordance with written inspection and maintenance procedures included in the MS4 Program Plan.* *(b) The permittee shall inspect annually all SWM facilities owned or operated by the permittee. The permittee may choose to implement an alternative schedule to inspect these SWM facilities based on a risk assessment that includes facility type and expected maintenance needs provided that the alternative schedule is included in the MS4 Program Plan in accordance with plan modifications as listed in Part I.A.7.a) of this state permit.* *(c) The permittee shall conduct maintenance on SWM facilities owned or operated by the permittee as necessary to ensure the facilities function as designed.* *(d) The permittee shall continue its stormwater*	DPW, EMD, COD	Prince William County continues a program for the inspection and maintenance of SWM facilities maintained by the County. County-maintained facilities include those owned by HOA's and residential communities or by the County Board of Supervisors, and where basic maintenance responsibilities are performed by the owners. County-maintained SWM/BMP facilities are typically inspected under two scenarios: under the general inspection program which occurs once a year, or as requested by an impacted property-owner. Maintenance is prioritized by the severity of maintenance needs for the facility. Maintenance of publicly maintained SWM facilities is performed by the County's Construction and Operations Division, as necessary. All applicable permitting requirements will be met during maintenance activities.	*•The permittee shall submit with the initial annual report the written inspection and maintenance procedures.* *•Each annual report shall include a list of activities including inspections, maintenance, and repair of stormwater infrastructure operated by the permittee as required in Part I.B.2.hi)1) including the type and number of stormwater structures owned or operated by the permittee: the total linear feet of storm sewer system owner and/or operated by the permittee, and the linear feet of storm sewer system inspected.*	As of June 30, 2025, the County is responsible for the maintenance of approximately 1,079 facilities, including dry ponds, wet ponds, infiltration trenches, sand filters, bioretention and proprietary BMP facilities. In FY25, 97% of County-maintained stormwater management facilities were inspected. A list of these facilities and their inspection date are included in Appendix H.

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
	system inspection program and shall either (a) implement a department approved risk-based prioritization inspection program for the stormwater system within 12 months or (b) inspect not less than 15% of the MS4 annually and 80% of the system during the term of the permit. The permittee shall perform maintenance as necessary based on findings during the inspection. If for any reason an inspection cannot be conducted, the permittee shall document the reason in the annual report. *(e) The permittee shall dispose of all wastes and wastewaters collected during stormwater system cleaning in accordance with local, state, and federal laws and regulations.* *(f) The permittee shall obtain any required state or federal permit necessary to complete maintenance activities.*				
B.2.h.2.	*For SWM facilities not maintained by the permittee and that discharge into the MS4, the following conditions apply:*	DPW, EMD, COD	The county meets this requirement through implementation of the actions described below.		
B.2.h.2.a.	*The permittee shall continue to implement a program to ensure proper maintenance of each privately maintained SWM facility that discharges into the MS4 system. The program shall include the following elements:*	DPW, EMD, COD	The County has a program in place to inspect all privately-maintained facilities within the term of the permit and to pursue enforcement actions in instances where maintenance is needed. These facilities are comprised of dry ponds, wet ponds, constructed wetlands, bioretention facilities, proprietary stormwater inlet BMP facilities, underground storage facilities, and infiltration trenches.		

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.h.2.a.1.	*Beginning with the effective date of this state permit and in accordance with 9VAC25-870-112 B, maintenance agreements may be used but are not required for stormwater control measures that are designed to treat stormwater runoff solely from the individual residential lot on which they are located provided that the permittee has developed and implemented a strategy to address maintenance of such stormwater management controls. Should the permittee choose a strategy other than a maintenance agreement, such a strategy shall be provided in writing no later than 12 months after the effective date of this state permit and shall include an inspection schedule, homeowner outreach and education, or other methods targeted at promoting the long term maintenance of such facilities.*	DPW, EMD, COD	Before a privately maintained facility can be removed from bond, maintenance agreement must be recorded to ensure the proper upkeep of the facility. A majority of the privately maintained SWM facilities have duly recorded Maintenance Agreements that require the owner to perform the inspection and maintenance at a frequency identified in the Agreement.		
B.2.h.2.a.2.	*For SWM facilities that are privately maintained and for which maintenance agreements have been established between the permittee and the owner, the permittee shall inspect privately maintained SWM facilities no less than once per 5 years and conduct follow-up activities to ensure the required maintenance has been completed. Inspections may be conducted by the permittee or their designee as defined in 9 VAC 25-870-114.*	DPW, EMD, COD	Facilities in compliance with maintenance requirements are scheduled for re-inspection during the following permit cycle. For facilities with deficiencies, the owner is provided with a detailed report outlining those deficiencies. If the deficiencies are not corrected within the time given, a second notice is given, and additional time is provided for repairs. If the facility is still not repaired, Prince William County Construction Services conducts maintenance on the facility and the facility owner is required to reimburse the County for expenses. Follow-up inspections are performed to ensure maintenance requirements are followed. Facility owners are urged to self-report maintenance activities to the County in the form of a detailed engineering report.	•*Each annual report shall include a list of activities including inspections performed and notifications of needed maintenance and repair of stormwater facilities not operated by the permittee as required by Part I.B.2.h)2).* •*Each annual report shall provide a summary of actions taken by the permittee to address failure of privately maintained SWM facilities owners to abide by maintenance agreements.*	As of June 30, 2025, there are 1,127 privately maintained facilities within the County. In FY25, the County inspected 140 privately-maintained facilities and are on track to have all privately-maintained facilities inspected by the end of the 5-year permit cycle as required. A table describing inspection, maintenance, and enforcement of privately maintained facilities for the reporting period can be found in Appendix I.

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.h.2.a.3.	*The permittee shall continue to implement a program ensuring the inspection and maintenance of SWM facilities that are privately maintained and for which maintenance agreements have not been established between the permittee and the owner.*	DPW, EMD, COD	For those facilities that do not have Maintenance Agreements, our County Attorney has determined that the maintenance note on the plan is still enforceable.		
B.2.h.3.	*The permittee shall update and maintain an accurate MS4 map and information table as follows:*	DPW, EMD, COD	• Prince William County has identified all outfalls owned or operated by Prince William County that discharge to surface waters (i.e. MS4 outfalls). • Each MS4 outfall has an individual identification number, the local watershed, HUC and receiving water in which it is located are identified, and its latitude and longitude are provided in in decimal degrees. • The county has delineated the drainage area to each of its MS4 outfalls (i.e. the MS4 service area). • The county updates the mapping layers to incorporate new outfalls once as-built plans are provided by the party responsible for constructing the new outfall.		
B.2.h.3.a.	*An updated map of the MS4 owned or operated by the permittee, no later than 12 months after the permit effective date that includes, at a minimum:*	DPW, EMD, COD		*The MS4 service area map including outfalls and information included in Part I.B.2.h)3) shall be submitted no later than 12 months after the effective date of this state permit. The information shall be submitted as an electronic file described in Part I.B.2.h)3)(e).*	

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.h.3.a.1-6.	*(1) MS4 outfalls discharging to surface waters, except as follows:* *(i) In cases where the outfall is located outside of the MS4 permittee's legal responsibility, the permittee may elect to map the known points of interconnection upstream and downstream of the actual outfall; and* *(ii) In cases where the MS4 outfall discharges to receiving water channelized underground, the permittee may elect to map the point downstream at which the receiving water emerges above ground as an outfall discharge location. If there are mutliple outfalls discharging to an underground channelized receiving water, the map shall identify that the outfall discharge location represents more than one outfall. This is an option a permittee may choose to use recognizing the difficulties in accessing outfalls to underground channelized stream conveyances for purposes of mapping, screening or monitoring.* *(2) A unique identifier for each mapped item required in part I B.2.h)3);* *(3) The name and location of receiving waters to which the MS4 outfall or point of interconnection discharges;* *(4) The MS4 regulated service area;* *(5) Pipe and open channel conveyances that are upstream of MS4 outfalls; and* *(6) Stormwater management facilities owned or operated by the permittee.*	DPW, EMD, COD	Prince William County maintains an inventory of all SWM/BMP facilities in the County.		A total of 63 facilities were added to the County's inventory during the reporting period. A list of new facilities is provided as Appendix J.
B.2.h.3.b.	*The permittee shall update its MS4 service area map as necessary if any changes to direct drainage to VDOT's MS4 service area occur. The permittee shall maintain a map to assist with coordination of VDOT MS4 coverage areas for roadways and streets. Where practical, the permittee map shall clearly delineate gap areas that drain to VDOT MS4 areas not included as part of the Prince William MS4 service area. This information shall be maintained and kept up to date and made available when requested.*	DPW, EMD, COD			

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.h.3.c.	*The permittee shall maintain an outfall information table associated with the MS4 map that includes the following information for each outfall or point of discharge for those cases in which the permittee elects to map the known point of discharge in accordance with Part I.B.2.h)3)(a)(1). The outfall information table may be maintained as a shapefile attribute table. The outfall information table shall include the following, at a minimum:* *(1) A unique identifier as specified on the MS4 map;* *(2) The latitude and longitude of the outfall, or point of discharge;* *(3) The 6th Order Hydrologic Unit Code of the receiving water;* *(4) An indication as to whether the receiving water is listed as impaired in the Virginia 2022 305(b)/303(d) Water Quality Assessment Integrated Report; and* *(5) The name of any EPA-approved TMDLs for which the permittee is assigned a wasteload allocation.* *If available, the outfall table should include the following:* *(1) The estimated regulated acreage draining to the outfall, or point of discharge: and* *(2) The name of the receiving water.*	DPW, EMD, COD			

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.h.3.d.	*No later than 12 months after permit issuance, the permittee shall submit to DEQ, a format file geodatabase or two shapefiles that contain at a minimum:* *(1) A point feature class or shapefile for outfalls with an attribute table containing outfall data elements required in accordance with Part I.B.2.h)3)(c); and* *(2) A polygon feature class or shapefile for MS4 service area as required in accordance with Part I.B.2.h)3)(a)(4) with an attribute table containing the following information:* *Permit No. VA0088595* *(i) MS4 operator name;* *(ii) MS4 permit number, and* *(iii) MS4 service area pervious, impervious and total acreage rounded to the nearest hundredth*	DPW, EMD, COD			Prince William County submitted these items to DEQ on January 10th, 2025.
B.2.h.3.e.	*All file geodatabase feature classes or shapefiles shall meet the following data format standards:* *(1) Point data collected in NAD83 or WGS84 decimal degrees global positional system coordinates;* *(2) Data projected in Virginia Lambert Conformal Conic format;* *(3) Outfall location accuracy shall be represented in decimal degrees rounded to at least the fifth decimal place for latitude and longitude to ensure point location accuracy (e.g., 37.61741, -78.15279); and* *(4) Metadata shall provide a description of each feature class or shapefile dataset, units of measure as applicable, coordinate system, and projection.*	DPW, EMD, COD			
B.2.h.3.f.	*No later than October 1 of each year, the permittee shall update the MS4 map and outfall information table to include any new outfalls constructed or TMDLs approved or both during the immediate preceding reporting period.*	DPW, EMD, COD			

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.h.3.g.	*The permittee shall provide written notification to any downstream adjacent MS4 of any new physical interconnection from the permittee-owned system to another regulated MS4 established or discovered after the effective date of this permit.*	DPW, EMD, COD			
	B.2.i. County Facilities				
B.2.i.	*Facilities owned or operated by the permittee shall be operated and maintained as follows:*	DFFM, DPRT, DPW, SWD	The county meets this requirement through implementation of the actions described below.		
B.2.i.1.	*The permittee shall develop, implement, and maintain written good housekeeping procedures designed to:* *(a) Prevent illicit discharges;* *(b) Ensure permittee staff or contractors properly dispose of waste materials to minimize floatables and landscape wastes entering the MS4;* *(c) Prevent the discharge of wastewater or washwater or both into the MS4 without authorization under a separate VPDES permit: and* *(d) Preventing pollutant discharge into the MS4 from leaking permittee-owned or operated vehicles and equipment. Leaked fluids shall be cleaned up and disposed of properly, as soon as possible but no later than 24 hours after discovery.*	DFFM, DPRT	• Prince William County promotes good housekeeping practices throughout all its municipal facilities through its Environmental Management System (EMS) program and other methods. The EMS program and the County's Good Housekeeping SOP promote consistency and accountability in the method for addressing environmental concerns through the allocation of resources, assignment of responsibility and ongoing evaluation of practices, procedures, and processes. This program emphasizes objectives such as the identification and prevention of spills, hazardous material storage and removal, storage tank inspection and maintenance, waste disposal and recycling, proper equipment and material storage, and many other environmental good housekeeping practices. • PWC Parks and Rec facilities are inspected biennially, to ensure good housekeeping practices are being followed. This includes properly managing yard waste and grass clippings. • Police and fire vehicles are required to be washed in an environmentally safe manner, allowing no wash water to enter storm drain systems. Most vehicles are washed in commercial car washing facilities. • PWC Fleet Management has worked closely with Risk Management and Watershed Management to set up a system to prevent the leaking or spilling of vehicles on site waiting for maintenance.		

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.i.2.	*The permittee shall maintain markings on all stormwater inlets located on high priority municipal facilities, as defined at Part I.F, and on permittee properties with greater than 2-acres of impervious surface.*		• Prince William County's storm drain labeling program targets high priority municipal facilities to maintain markings on storm drain inlets. This program not only labels inlets at high priority municipal facilities, but in multiple areas of the county including high-risk shopping centers and residential neighborhoods.		
B.2.i.3.	*High Priority Municipal Facilities :*				
B.2.i.3.a.	*The permittee shall maintain a list of all high priority municipal facilities that do not require a separate VPDES industrial stormwater permit as well as identify which of the high priority municipal facilities have a high potential of discharging pollutants. Facilities with a high potential for discharging pollutants are those facilities where any of the following materials or activities occur and are expected to have exposure to stormwater resulting from rain, snow, snowmelt, or runoff;* *(1) Areas where residuals from using, storing or cleaning machinery or equipment remain and are exposed to stormwater;* *(2) Materials or residuals on the ground or in stormwater inlets from spills or leaks;* *(3) Material handling equipment (except adequately maintained vehicles);* *(4) Materials or products that would be expected to be mobilized in stormwater runoff during loading/unloading or transporting activities (e.g., rock, salt, fill dirt);* *(5) Materials or products stored outdoors (except final products intended for outside use where exposure to stormwater does not result in the discharge of pollutants);* *(6) Materials or products that would be expected to*	DFFM, DPRT	The County operates several municipal facilities. Some, like the PWC landfill facility, are covered under their own VPDES permit for stormwater discharges. During FY17, the County assessed all municipal facilities within its MS4 service area and evaluated their need for a SWPPP. High risk facilities included composting facilities, equipment storage and maintenance facilities, materials storage yards, pesticide storage facilities, public works yards, recycling facilities, salt storage facilities, solid waste handling and transfer facilities, and vehicle storage and maintenance yards.	*The initial annual report shall include a list of all high priority municipal facilities and those with a high potential to discharge pollutants as identified in Part I.B.2.i)3)(a).*	The following four facilities have been identified as being high risk, and are currently maintaining a SWPPP: **Facility Name** Fleet Administration Ben Lomond Maintenance Building Hellwig Maintenance Building PWC Stadium Maintenance Building

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
	be mobilized in stormwater runoff contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers; *(7) Waste material except waste in covered, non-leaking containers (e.g., dumpsters);* *(8) Application or disposal of process wastewater (unless otherwise permitted); or* *(9) Particulate matter or visible deposits of residuals from roof stacks, vents or both not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater runoff.*				
B.2.i.3.b.	*The permittee shall develop and/or update and implement individual stormwater pollution prevention plans for each high priority municipal facility identified under Part I.B.2.i)2)(a) no later than 36-months after the effective date of this state permit. Stormwater pollution prevention plans (SWPPP) shall include:* *(1) A site description that includes a site map identifying all outfalls, direction of flows, existing source controls, and receiving water bodies;* *(2) A discussion and checklist of potential pollutants and pollutant sources; (3) A discussion of all potential non-stormwater discharges;* *(4) A maintenance schedule for all existing source controls;* *(5) All policies and procedures implemented at the facility to ensure source reduction;* *(6) An inspection schedule and checklist to ensure that all source reductions are continually implemented and all source controls are appropriately maintained. The date of each inspection and associated findings and follow-up shall be logged in each SWPPP;* *(7) Appropriate training as required in Part I.B.2.k);* *(8) Procedures to conduct an annual comprehensive site compliance evaluation;*	DFFM, DPRT	SWPPPs will include a site description that includes site map showing all outfalls, direction of flows, existing source controls, and receiving water bodies; a checklist of potential pollutants and pollutant sources; all potential non-stormwater discharges; a maintenance schedule for all source controls; policies and procedures implemented at the facility for source reduction; an inspection schedule to ensure source reduction controls are implemented and maintained properly; training schedules for facility employees; procedures for annual evaluations of the facility; dry weather monitoring procedures; and all modifications made as a result of a spill or release of pollutant.		SWPPP's have been developed and maintained at each high priority facility.

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
	(9) Procedures to conduct dry weather screening; and *(10) All modifications made as the result of any release or spill.*				
B.2.i.3.c.	*A copy of each SWPPP shall be kept at each high priority municipal facility and be kept updated.*	DFFM, DPRT	A copy of the high priority municipal facility SWPPP will be kept at each facility requiring one. Where the SWPPP cannot be physically kept on site, a copy of the high priority municipal facility SWPPP will be kept on file by the department that manages the site.		
	B.2.j. Public Education/Participation				
B.2.j.	*The permittee shall continue to implement a public education program with the goal of increasing the stormwater knowledge of target audiences and changing behavior to result in pollutant reductions. The permittee may fulfill all or part of the requirements of this state permit through regional outreach programs involving two or more MS4 localities.*	DPW, EMD, COD	Prince William County strives to share relevant and useful information with our community to help protect our local waterways and natural environment. We undertake several projects and special events to provide citizens with the opportunity to help in these goals. Public Works also partners with residents, businesses, other government agencies and organizations to advance our goals to protect and preserve natural resources.		

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.j.1.	*The permittee shall identify, schedule, implement, evaluate, and modify, as necessary, public outreach activities designed to meet the following public education and outreach goals:* *(a) Promote, publicize, and facilitate public reporting of the presence of illicit discharges or improper disposal of materials into the MS4;* *(b) Continue to promote individual and group involvement in local water quality improvement initiatives including the promotion of local restoration and clean-up projects, programs, groups, meetings and other opportunities for public involvement;* *(c) Continue outreach programs with public and private golf courses located within the county that discharge to the permittee's MS4 that would encourage implementation of integrated management practice (IMP) plans and techniques to reduce runoff of fertilizer and pesticides;* *(d) Promote, publicize, and facilitate the proper management and disposal of used oil and household hazardous wastes;* *(e) Promote and publicize the proper disposal of pet waste and household yard waste;* *(f) Promote and publicize the use of the permittee's litter prevention program; (g) Promote and publicize methods for residential car washing that minimize water quality impacts;* *(h) Promote and publicize the proper use, application, and disposal of pesticides, herbicides, and fertilizers by public, commercial, and private applicators and distributors;* *(i) Encourage private property owners to implement voluntary stormwater management techniquest and/or retrofits; and* *(j) Target strategies towards local groups of commercial, industrial, and institutional entities likely to have significant stormwater impacts.*	DPRT, DPW, EMD, COD, SWD	• The public education and outreach program is reviewed on an annual basis to determine the effectiveness of the program and to identify future efforts to improve the program. Due to the nature of some of the education and outreach elements, a determination of effectiveness is more qualitative in nature and based on the number of individuals reached through the activities, as well as feedback from the staff involved with those activities. Each activity is reviewed and discussed, and recommendations for future improvements are identified in the annual report. For other program elements, included in the annual report, effectiveness is based on the results of the activity such as pounds of trash removed or percent of participants adopting recommended practices for example. • Prince William County has many outreach partners that conduct outreach events and activities all year round. Some of those partners include Keep Prince William Beautiful, Prince William Soil and Water Conservation District, Virginia Cooperative Extension, and Northern Virginia Clean Water Partners. Prince William County is able to provide funding to these organizations so that they may conduct these activities within Prince William County, as well as assisting the County with meeting other goals and requirements set forth in this permit.	•*Each annual report shall include a list of permittee public outreach and education activities and the estimated number of individuals reached through the activities. An evaluation of program effectiveness, as outlined in the MS4 Program Plan with recommendations for future changes shall also be included.* •*Each annual report shall provide a summary of voluntary retrofits completed on private property used to demonstrate pollutant reduction requirements. Note that any voluntary project for which the permittee seeks to use for pollutant reduction requirements must be tracked and reported.* •*Each annual report shall provide a summary of voluntary stormwater management techniques encouraged on private property.*	•Included as Appendix K are our outreach partners' annual reports. •Public Outreach Summary can be found in Appendix X.

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.j.2.	*The permittee shall post a copy of this state permit on its web page no later than 30-days after the effective date of this state permit and continue to retain a copy of the permit online for the duration of this state permit.*	DPW, EMD, COD	• The county's MS4 permit (VA0088595), effective January 12, 2024 and was posted to the county website. • The permit is available at: https://www.pwcva.gov/department/environmental-services/community-ms-4-program		
B.2.j.3.	*The permittee shall post copies of each annual report on its website no later than 30 days after the report submittal to the Department and continue to retain copies of the annual reports online for the duration of this state permit.*	DPW, EMD, COD	• Annual reports are posted to the county website within 30 days of submittal to DEQ. • Annual reports are available at: https://www.pwcva.gov/department/environmental-services/community-ms-4-program		
B.2.j.4.	*The permittee shall post the most current MS4 Program Plan on its website no later than 30 days after the effective date of this permit and maintain a current copy on the website. If the MS4 Program Plan is modified or revised, the updated plan shall be posted within 30 days of the revision(s). Copies of the most current MS4 Program Plan shall be made available for public review upon request of interested parties in compliance with all applicable open records requirements.*	DPW, EMD, COD	• The county's most current MS4 Program Plan was posted to the county website. • Updates to the MS4 Program Plan will be posted to the county's website within 30 days of submittal to DEQ. • The MS4 Program Plan is available at: https://www.pwcva.gov/department/environmental-services/community-ms-4-program		
	B.2.k. Training				
B.2.k.	*The permittee shall conduct stormwater training for permittee employees. The training requirement may be fulfilled all or in part through regional training programs involving two or more MS4 localities; provided, however, that the permittee shall remain individually liable for its failure to comply with the training requirements in this state permit. The permittee shall determine the appropriate employees to receive the following types of training based on the specific topic for which training is to be provided:*	DPW, EMD, COD	The county meets this requirement through implementation of the actions described below.		

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.k.1.	*The permittee shall provide biennial training to appropriate field personnel in the recognition and reporting of illicit discharges.*	DPW, EMD, COD	Prince William County Staff are trained in the recognition and reporting of Illicit Discharges as well as implementation of good housekeeping practices. Currently, appropriate staff are trained in basic good housekeeping, spill prevention, and illicit discharge prevention practices through EMS training. This training is conducted biennially and is required for all staff including full-time Parks and Rec staff.	*Each annual report shall include a list of training events, the date and the estimated number of individuals attending each event.*	A list of training courses offered in FY25 and the number of participants can be found in appendix L.
B.2.k.2.	*The permittee shall provide biennial training to appropriate employees in good housekeeping and pollution prevention practices that are to be employed during road, street, and parking lot maintenance.*	DFFM, DPRT, DPW, SWD		See MS4 Action ID B.2.k.1.	A list of training courses offered in FY25 and the number of participants can be found in appendix L.
B.2.k.3.	*Within 36 months of the effective date of the permit, the permittee shall incorporate good housekeeping training strategies for each of the following activities:* *a. Discharging water pumped from construction and maintenance activities;* *b. Bulk storage of soil, compost, mulch and landscaping waste stockpiles; and* *c. Preventing pollutant discharge into the MS4 from leaking permittee-owned or operated vehicles and equipment. Leaked fluids shall be cleaned up and disposed of properly, as soon as possible but no later than 24 hours after discovery.*	DFFM, DPRT, DPW, SWD			
B.2.k.4.	*The permittee shall provide biennial training to appropriate employees in good housekeeping and pollution prevention practices that are to be employed in and around permittee maintenance and public works facilities.*	DFFM, DPW, SWD		See MS4 Action ID B.2.k.1.	A list of training courses offered in FY25 and the number of participants can be found in appendix L.
B.2.k.5.	*The permittee shall ensure that employees, and require that contractors, who apply pesticides and herbicides are properly trained or certified per the Virginia Pesticide Control Act (§3.2-3900 et seq. of the Code of Virginia). The requirements of the Virginia Pesticide Control Act are established by the Virginia Pesticide Control Board.*	DFFM, DPRT	Appropriate County staff and contractors receive appropriate training in pesticide and herbicide application. Appropriate staff are required to stay current in applicable training and certifications.		

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.k.6.	*The permittee shall have a program to ensure that County plan reviewers, inspectors, program administrators and construction site operators (e.g. responsible land disturber) are trained and obtain the appropriate certifications to the extent required under the Virginia Erosion and Sediment Control Law and attendant regulations.*	DPW, EMD, COD	Engineering staff who review E&S, SWM and VSMP plans have certifications. Site inspectors and stormwater management facility inspectors have erosion and sediment control inspector and stormwater management inspector certifications.		For a list of inspector and plan reviewer certifications, see appendix A.
B.2.k.7.	*The permittee shall have a program to ensure that the applicable County employees obtain the appropriate certifications as required under the Virginia Erosion and Sediment Control Law and its attendant regulations to implement the modified stormwater management design criteria.*	DPW, EMD, COD	Appropriate employees have been certified as program administrators, inspectors, plan reviewers or combined administrators as required under the Virginia Stormwater Management Act and its attendant regulations.		For a list of inspector and plan reviewer certifications, see appendix A.
B.2.k.8.	*The permittee shall provide biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed in and around county recreation facilities.*	DPRT	Applicable employees who conduct maintenance, repair, and custodial work at county recreational facilities receive biennial training.	See MS4 Action ID B.2.k.1.	A list of training courses offered in FY25 and the number of participants can be found in appendix L.
B.2.k.9.	*The appropriate emergency response employees shall have training in spill response. A summary of the training and/or certification program provided to emergency response employees shall be included in the first annual report.*	DFR	All uniform personnel are trained to the hazmat first responder operations level. This training teaches spill control as a defensive manner. This training is regulated by 29 CFR 1910.120(q) and NFPA 472. Staff are required to be current in this training, including annual refresher training. During the reporting period, all required personnel were current in Emergency Spill Response training.	*The initial report shall include documentation of employee emergency spill response training and/or certification.*	
B.2.k.10.	*Documentation shall be kept of all training events including the training date, number of employees attending the training, and the objective of the training event for a period of three years after each training event. Additionally, all events shall be listed in the annual report for the year in which the training event occurred.*	DF, RMD	Training documentation is kept on file by the appropriate office. A list of training events will be provided in the MS4 Annual Reports.	See MS4 Action ID B.2.k.1. and B.2.k.8.	A list of training courses offered in FY25 and the number of participants can be found in appendix L.
	B.2.l. Water Quality Screening Programs				
B.2.l.	*The following screening programs shall be implemented in addition to the monitoring required by Part I.C:*				

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.l.1.	*Dry Weather Screening Program: The permittee shall continue ongoing efforts to detect the presence of illicit connections and unauthorized discharges to the permittee's MS4.*	DPW, EMD, COD	The county meets this requirement through implementation of the actions described below.		
B.2.l.1.a.	*The permittee shall continue to implement a program of dry weather screening in areas of concern as identified by the permittee including but not limited to: commercial car washes, car dealerships, pet kennels, restaurants, areas with a history of complaints, and areas upstream of sensitive ecosystems. The permittee shall screen at a minimum, 25% of the outfalls discharging to the County's MS4 within the permit cycle.*	DPW, EMD, COD		*Each annual report shall include a list of locations upon which dry weather screening was conducted, the results and any follow-up actions including maintenance and/or repair of infrastructure or outfalls performed as a result of the dry weather screening.*	The Dry Weather Screening Summary can be found in Appendix M. In FY25, the County inspected 7.6% of total outfalls. The County is on track to inspect the required 25% of all outfalls within the 5-year permit cycle.
B.2.l.1.b.	*Criteria for selection of outfalls to be screened as required by Part I.B.2.l)1)(a) above shall include but is not limited to the following:* *(1) List of sites requiring further investigation, as previously identified;* *(2) Age and density of development with the likelihood of illicit connections such as older residential, commercial and industrial areas;* *(3) Outfalls representing the general land uses of the County;* *(4) Poorly maintained gas stations, service stations, and shopping centers;* *(5) Presence of environmentally sensitive features downstream; and* *(6) History of complaints received on illicit discharges.*	DPW, EMD, COD			
B.2.l.1.c.	*The permittee may adopt a risk-based approach to dry weather screening identifying observation points based upon illicit discharge risks upstream of an outfall. Observation points may include points of interconnection, manholes, points of discharge, conveyances, or inlets suspected to have a high likelihood of receiving illicit discharges:*	DPW, EMD, COD	Prince William County conducts routine inspection of its storm drainage system, inspecting the entire system within the permit term. Storm sewer is inspected using visual inspection techniques, as well as using CCTV. The County continues to implement a program to inspect all new drainage systems (eligible for County maintenance) using video cameras, prior to accepting the systems into the County's maintenance program.		

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.l.1.d.	*Each observation point screened may be counted as one outfall screening activity equivalent and counted towards the requirements of Part I.B.2.l)1)(a), however, at least 50% of the minimum annual screening events must include outfall screening;*	DPW, EMD, COD			
B.2.l.1.e.	*Illicit discharges reported by the public and subsequent investigations may not be counted as screening events; however, once the resolution of the investigation and the date the investigation was closed has been documented, an observation point may be established for future screening events; and*	DPW, EMD, COD			
B.2.l.1.f.	*The permittee's dry weather screening program shall use a checklist or mechanism to track the following information for dry weather screening events:* *(1) The unique outfall identifier for the outfall or observation point;* *(2) Indication a minimum of 72 hours has passed since the last precipitation event;* *(3) Site descriptions (e.g., conveyance type and dominant watershed land uses);* *(4) Observed indicators of possible illicit discharge events such as, floatables, deposits, stains, and vegetative conditions (e.g., dying or dead vegetation, excessive vegetative growth, etc.);* *(5) Whether or not a discharge was observed;* *(6) If a discharge was observed, the visual characteristics of the discharge (e.g., odor, color, clarity) and the physical condition of the outfall; and* *(7) For observation points, the location, downstream outfall unique identifier, and risk factors or rationale for establishing the observation point.*	DPW, EMD, COD			

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.l.2.	*Wet Weather Screening Program: In addition to the monitoring required in Part I.C., the permitteeshall continue to investigate, and address areas within their jurisdiction that are suspected to becontributing excessive levels of pollutants to the MS4. The permittee shall maintain writtenprocedures for a wet weather screening program which shall include standard operating procedure to be used for initial screening and follow-up purposes. The written procedures shall be incorporated as part of the MS4 Program Plan.*	DPW, EMD, COD	Prince William County's Wet Weather Screening Program began at the end of FY16, with first the sample occurring in September of 2017.	Each annual report shall include a list of locations upon which wet weather screening was conducted, the results, weather conditions at the time sample was collected to include date and approximate time of most recent storm event preceding sample collection, long term trends analyses, and any follow-up actions including maintenance and/or repair of infrastructure or outfalls performed as a result of the wet weather screening.	Two sites were selected for sampling and sampling occurs during qualifying storm events. The quarterly Wet Weather Monitoring reports are included as Appendix N.
	B.2.m. Infrastructure Coordination				
B.2.m.	*The permittee shall coordinate with the Virginia Department of Transportation (VDOT) regarding issues of MS4 physical-interconnectivity as described below:*	DPW, EMD, COD	The county meets this requirement through implementation of the actions described below.		
B.2.m.1.	*Annual Coordination Meeting – The permittee shall meet annually with VDOT for purposes of overall coordination on priority issues for the permittee's MS4 program plan (including operations and maintenance elements) and TMDL action planning relevant to the interconnectivity of the MS4s.*	DPW, EMD, COD	Prince William County will meet annually with VDOT as required.		A list of the meeting participants and meeting summary is included as Appendix O.

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.m.2.	*Mapping – The permittee shall inform VDOT of the status of its mapping program, identifying any uncertainty regarding ownership or actual location of MS4 components associated with the physically-interconnected MS4s, and working to resolve such uncertainty. The permittee shall coordinate with VDOT to identify any areas within the permittee's municipal boundaries that drain to the VDOT MS4.*	DPW, EMD, COD	• At the annual meeting (MS4 Action ID B.2.m.1), VDOT will be informed of the status of the county's mapping program. • The county will work with VDOT to resolve ownership and location uncertainties.		
B.2.m.3.	*Chesapeake Bay TMDL Action Plans – The permittee shall inform VDOT of the means, methods, and schedule by which the permittee will implement the reductions required by the Chesapeake Bay TMDL Special Condition (Part I.D.1) when those means and methods may impact the physically-interconnected MS4s. The parties are encouraged to cooperate with one another where the siting or design of best management practices (BMPs) may be accelerated or otherwise improved by mutual cooperation. The permittee shall coordinate with VDOT to identify any areas within the permittee's municipal boundaries that drain to the VDOT MS4 and are unaccounted for in the Chesapeake Bay TMDL Action Plan developed by VDOT or the permittee. The unaccounted areas shall be quantified (acres) in the Chesapeake Bay TMDL Action Plan submitted by the permittee.*	DPW, EMD, COD			
B.2.m.4.	*Other TMDL Action Plans – The permittee shall inform VDOT of TMDL Action Plans and major milestones implemented for other (i.e., non-Chesapeake Bay) TMDLs when those plans may impact the physically-interconnected MS4s. The parties are encouraged to cooperate with one another where the siting or design of BMPs may be accelerated or improved by mutual cooperation.*	DPW, EMD, COD			

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
B.2.m.5.	*Credit for TMDL Implementation – Permit specific BMP retrofit requirements shall not be doublecounted in the calculation of load reductions. If the permittee undertakes the project, the permittee shall be entitled to full credit for the project, but may share credit with VDOT on mutually agreeable terms, which shall be in writing.*	DPW, EMD, COD			
B.2.m.6.	*Illicit Discharge Detection & Elimination – The permittee shall continue to be responsible for implementing a program for illicit discharge detection and elimination, including dry weather field screening, for the permittee's portion of the physically-interconnected MS4. As part of the annual coordination meeting, described in item (1) above, the permittee shall coordinate with VDOT on the identification of high risk industrial facilities. The permittee shall establish procedures for notifying VDOT when an illicit discharge is identified in the VDOT MS4.*	DPW, EMD, COD			
B.2.m.7.	*Water Quality Monitoring – The permittee shall conduct water quality monitoring as required by Part I.B.2.l) and Part I.C of this state permit. The permittee shall make available to VDOT all monitoring data collected from areas where the physically-interconnected MS4 discharges to the VDOT MS4 or received flow from the VDOT MS4. The permittee and VDOT are encouraged to cooperate with one another to establish a joint monitoring network.*	DPW, EMD, COD			
B.2.m.8.	*Annual Reports – As part of its Annual Report, the permittee shall document coordination efforts with VDOT that occurred during the reporting year pursuant to requirements (1) through (7) above.*	DPW, EMD, COD			
	C. MONITORING REQUIREMENTS				
	C.1. Biological Stream Monitoring				

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
C.1.	*The permittee shall continue to implement a biological stream monitoring program to evaluate the condition of select stream sites within Prince William County as follows:*	DPW, EMD, COD	The county meets this requirement through implementation of the actions described below.		
C.1.a.	Five (5) stream sites within the county shall be selected for monitoring during the term of this permit	DPW, EMD, COD		*The initial annual report shall include the list of sites to be monitored during the term of the state permit and monitoring protocols.*	Sample collection occurred at five locations in Prince William County: Cow Branch, Dawkins Branch, Little Bull Run, Neabsco Creek, and Purcell Branch.
C.1.b.	*Monitoring shall be conducted twice per year with one sample collected between July 1st and December 31st and one sample collected between January 1st and June 30th each year at each selected stream site.*	DPW, EMD, COD		*Each annual report shall include a summary of the monitoring results and analyses and an interpretation of that data with respect to long-term patterns/trends*	Prince William County continued its Biological Monitoring Program in FY25 with its monitoring taking place in the Fall of 2024 and Spring of 2025. A copy of the Biological Monitoring Report is included as Appendix P.
C.1.c.	*The permittee shall use a biological stream monitoring approach based on the "USEPA's Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers" and shall include an assessment of the benthic macroinvertebrate community and habitat assessment.*	DPW, EMD, COD	Benthic sampling was conducted in accordance with the Sampling Plan.		
	C.2. In-Stream Monitoring				
C.2..	*The permittee shall continue to implement an in-stream monitoring program to evaluate the condition of select streams within Prince William County as follows:*	DPW, EMD, COD	The county meets this requirement through implementation of the actions described below.		
C.2.a.	*Five (5) stream sites within the county shall be selected for monitoring during the term of this permit.*	DPW, EMD, COD		*The initial annual report shall include the list of sites to be monitored during the term of the state permit and monitoring protocols.*	There are five stream monitoring stations for this reporting period: Cow Branch, Dawkins Branch, Little Bull Run, Neabsco Creek, and Purcell Branch.

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
C.2.b.	*Monitoring shall be conducted once per two months between January 1 st and December 31st at each monitoring location*	DPW, EMD, COD	The county will conduct monitoring once per two months between January 1st and December 31st at each monitoring location.	*Each annual report shall include a summary of the monitoring results and analyses and an interpretation of that data with respect to long-term patterns/trends.*	Refer to Appendix Q for the data summary for the in-stream monitoring.
C.2.c.	*Monitoring shall be performed for the following parameters:* *1) pH* *2) Dissolved Oxygen* *3) Temperature* *4) Total Suspended Solids* *5) Ammonia as Nitrogen* *6) Nitrate plus Nitrite Nitrogen* *7) Total Kjeldahl Nitrogen* *8) Total Nitrogen (calculated)* *9) Dissolved Phosphorus* *10) Total Phosphorus* *11) Escherichia Coli*	DPW, EMD, COD			
C.2.d.	*Monitoring for the parameters listed in Part I.C.2.c) shall be in accordance with Part III.A. of this state permit.*	DPW, EMD, COD			
C.2.e.	*The permittee may replace a sampling location with a new proposed location after 15 samples are collected and analyzed. Written notification of the monitoring plan revisions shall be given to the Department in writing and shall include a statistical analysis of the monitoring results, conclusions regarding the data, the proposed new monitoring location, and the reasoning for site location choice.*	DPW, EMD, COD			There were no changes to the sampling locations during the FY25 reporting period.
	C.3. Floatables Solids Monitoring				

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
C.3.	*The permittee shall maintain a floatables monitoring program. The intent of the monitoring program is to determine the loading of floatables from the MS4 to streams within Prince William County. The permittee will implement the floatables monitoring program as follows:*	DPW, EMD, COD	The county meets this requirement through implementation of the actions described below.		
C.3.a.	*Monitoring shall be conducted at five (5) monitoring sites located at MS4 outfalls and/or streams receiving discharges from the MS4.*	DPW, EMD, COD	Monitoring occurred quarterly at five locations.		
C.3.b.	*Monitoring shall be conducted once per quarter.*	DPW, EMD, COD	Monitoring occurred quarterly at five locations.		
C.3.c.	*The monitoring program shall include the count of floatables visually observed and length or area of sites assessed.*	DPW, EMD, COD		*Each annual report shall include a list of sites monitored, a summary of the monitoring protocols used, and a summary of the monitoring results and analyses.*	Please refer to Appendix R for the Floatables Monitoring Summary.
	D. TMDL ACTION PLAN AND IMPLEMENTATION				
	D.1. Chesapeake Bay Special Condition				
D.1.	*The Commonwealth in its Phase I, Phase II, and Phase III Chesapeake Bay TMDL Watershed Implementation Plans (WIP) committed to a phased approach for MS4s permittees to implement necessary reductions. This state permit requires a cumulative 40% of the L2 scoping run reductions by June 30, 2026, and 100% of the L2 scoping run reductions by June 30, 2028. Conditions of future permits will be consistent with the TMDL or WIP conditions in place at the time of permit issuance.*				

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
D.1.a.	*a) Definitions The following definitions apply to Part I.D.1* *1) "Existing Sources" means pervious and impervious urban land uses served by the MS4 as of June 30, 2009.* *2) "New Sources" means pervious and impervious urban land uses served by the MS4 developed or redeveloped on or after July 1, 2009.* *3) "Pollutants of concern" or "POC" means total nitrogen and total phosphorus.*				
D.1.b.	***Reduction Requirements - Existing Development:*** *Following a phased approach, the permittee shall reduce the load of total nitrogen and total phosphorous from existing sources within the MS4 service area by at least 40% of the Level 2 Scoping Run reductions by June 30, 2026, and 100% of the reductions by June 30, 2028. The 40% reduction is the sum of:* *(i) the first phase of reduction of 5.0% percent of the L2 Scoping Run Reductions based on the lands located within the MS4 service area as required by June 30, 2018;* *(ii) the second phase reduction of at least 35% of the L2 Scoping Run based on lands within the MS4 service area required by June 30, 2026; and* *(iii) the reduction of at least 40% of the L2 Scoping Run which shall only apply to the additional lands that were added to the MS4 service area since June 30, 2018, as required by June 30, 2026.* *As part of this permit's phased approach, the permittee shall reduce the load of total nitrogen and total phosphorus from existing developed lands served by the MS4 by 100% of the Level 2 Scoping Run Reductions by June 30, 2028. The required reduction shall be calculated using Table 1a for reductions by June 30, 2026 and Table 1b for reductions by June 30, 2028 included herein.*	DPW, EMD, COD	• The Chesapeake Bay TMDL Action Plan was submitted to DEQ on November 22, 2016. • The Chesapeake Bay TMDL Action Plan became effective and enforceable on June 28,2017, when DEQ approved the plan.	*In accordance with PartI D.1.b)1), the permittee shall submit the Chesapeake Bay TMDL Action Plan no later than 24 months after the permit effective date.*	

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
D.1.c.	***Required Reductions – New Development:*** *No later than the expiration date of this permit (June 30, 2028), the permittee shall offset 100% of the increased loads from new sources initiating construction between July 1, 2009 and June 30, 2024 and designed in accordance with 9VAC25-870-47 and 9VAC25-870-93 et seq.* *if the following conditions apply:* *1) The activity disturbed one acre or greater; and* *2) The resulting total phosphorous load was greater than 0.45 lb/acre/year, which is equivalent to an average land cover condition greater than 16% impervious cover.* *The permittee shall utilize Table 2 included herein to develop the equivalent pollutant load for nitrogen for new sources meeting the requirements of this condition.*				
D.1.d.	***Required Reductions – Grandfathered Projects:*** *No later than the expiration date of this permit, the permittee shall offset 100% of the increased loads from projects grandfathered in accordance with 9VAC25- 870-48 that began construction after July 1, 2014, if the following conditions apply:* *1) The activity disturbs one acre or greater; and* *2) The resulting total phosphorous load was greater than 0.45 lb/acre/year, which is equivalent to an average land cover condition of 16% impervious cover.* *The permittee shall utilize Table 2 included herein to develop the equivalent pollutant load for nitrogen for grandfathered sources meeting the requirements of this condition.*				
D.1.e.	*Reductions achieved in accordance with the Permit for Discharges of Stormwater from Municipal Separate Storm Sewer Systems effective April 01, 2015, shall be applied toward the total reduction requirements to demonstrate compliance with Part I.D.1.b), c) and d).*				

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
D.1.f.	*Reductions required under Part I.D.1 b), c) and d) shall be achieved in each river basin in which the existing development, new development and grandfathered projects are located.*				
D.1.g.	*Loading and reduction values greater than or equal to 10 pounds calculated in accordance with Part I.D.1.b), c) and d) shall be calculated and reported to the nearest pound without regard to mathematical rules of precision. Loading and reduction values of less than 10 pounds reported in accordance with Part I.D.1.b), c) and d) shall be calculated and reported to two significant digits.*				
D.1.h.	*Reductions required in Part I.D.1.b), c) and d) shall be achieved through one or more of the following:* *1) BMPs approved by the Chesapeake Bay Program;* *2) BMPs approved by the Department; or* *3) A trading program described in Part I.D.1.i).*	DPW, EMD, COD	The county meets this requirement through implementation of the actions described below.		

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
D.1.i.	*The permittee may acquire and use total nitrogen and total phosphorous credits in accordance with §62.1-44.19:21 of the Code of Virginia for purposes of compliance with the required reductions in Table 1 contained herein, provided the use of credits has been approved by the Department. The exchange of credits is subject to the following requirements:* *1) The credits are generated and applied to a compliance obligation in the same calendar year;* *2) The credits are generated and applied to a compliance obligation in the same tributary;* *3) The credits are acquired no later than June 1 immediately following the calendar year in which the credits are applied;* *4) No later than June 1 immediately following the calendar year in which the credits are applied, the permittee certifies on an MS4 Nutrient Credit Acquisition Form that the permittee has acquired the credits;* *5) Total nitrogen and total phosphorous credits shall be either point source credits generated by point sources covered by the Watershed Permit for Total Nitrogen and Total Phosphorous Discharges and Nutrient Trading in the Chesapeake Bay Watershed general permit issued pursuant to §62.1-44.19:14 of the Code of Virginia, or nonpoint source credits pursuant to §62.1-44.19:20 of the Code of Virginia.*	DPW, EMD, COD		*Each annual report shall include a list of control measures implemented during the reporting period and the cumulative progress toward meeting the compliance targets for total nitrogen, phosphorus, and total suspended solids.*	See Appendix S for the Chesapeake Bay TMDL Reductions Summary.

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
D.1.j.	*The permittee shall submit an updated Chesapeake Bay TMDL action plan for the cumulative 40% reductions required in Part I.D.1.b), c) and d) within 12 months of the permit effective date. The permittee shall submit an updated Chesapeake Bay TMDL action plan for the cumulative 100% reductions required in Part I.D.1.b), c) and d) by June 30, 2026. The action plans shall include the following information:* *1) Any new or modified legal authorities, such as ordinances, permits, policy, specific contract language, orders and inter-jurisdictional agreements, implemented or needing to be implemented, to meet the requirements of Parts I.D.1.b), c) and d) to include a review in the development of these actions;* *2) The load and cumulative reduction calculations for each river basin calculated in accordance with Parts I.D.1.b), c) and d);* *3) The total reductions achieved to date for each pollutant of concern in each river basin;* *4) A list of BMPs implemented to date to achieve reductions associated with the Chesapeake Bay TMDL including:* *(a) The date of implementation; and* *(b) The reductions achieved.* *5) The BMPs to be implemented by the permittee*			*Each annual report shall include a list of control measures that were implemented during the reporting cycle and the estimated reduction achieved by the control. For stormwater management controls, the report shall include the information required in Part I.C.4.a) and shall include whether an existing stormwater management control was retrofitted, and if so, the existing stormwater management control type retrofit used.*	See Appendix S for the Chesapeake Bay TMDL Reductions Summary.

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
	prior to the expiration date of this permit to meet the cumulative reductions calculated in Parts I.D.1.b), c) and d), including, as applicable: *(a) Type of BMP;* *(b) Project name;* *(c) Location;* *(d) Percent removal efficiency for each pollutant of concern; and* *(e) Calculation of the reduction expected to be achieved by the BMP calculated and reported in accordance with the methodologies established in Part I.D.1.g) for each pollutant of concern.* *6) An estimate of the expected cost to implement the necessary reductions during the permit cycle; and* *7) A summary of any comments received as a result of public participation required in Part I.D.1.k), the permittee's response, identification of any public meetings to address public concerns, and any revisions made to the Chesapeake Bay TMDL action plan as a result of public participation.*	DPW, EMD, COD			
D.1.k.	*Prior to submittal of the action plan required in Part I.D.1.j), the permittee shall provide an opportunity for public comment on the additional BMPs proposed to meet the reductions not previously approved by the Department in the first phase Chesapeake Bay TMDL action plan for no less than 15 days.*	DPW, EMD, COD			See Appendix S for the Chesapeake Bay TMDL Reductions Summary.

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
D.1.l.	*As part of the development of the Chesapeake Bay TMDL action plan, the permittee may consider use of the following:* *1) Implementation of BMPs on unregulated lands, provided any necessary baseline reduction is not included toward meeting the required reduction in this permit;* *2) Utilization of stream restoration projects, provided the credit applied to the required POC load reduction is prorated based on the ratio of regulated urban acres to total drainage acres upstream of the restored area;* *3) Establishment of a memorandum of understanding (MOU) with other MS4 permittees that discharge to the same or adjacent eight-digit hydrologic unit within the same basin to implement BMPs collectively. The MOU shall include a mechanism for dividing the POC reductions created by BMP implementation between the cooperative MS4s; and* *4) Any BMPs installed after June 30, 2009 as part of a retrofit program may be applied towards meeting the required load reductions provided any necessary baseline reductions are not included.*	DPW, EMD, COD			See Appendix S for the Chesapeake Bay TMDL Reductions Summary.
D.1.m.	*The permittee shall address any modification to the TMDL or watershed implementation plan that occurs during the term of this permit as a part of its permit reapplication as required in Part III.M of this permit.*	DPW, EMD, COD			
D.1.n.	*Chesapeake Bay TMDL action plan implementation. The permittee shall implement the TMDL action plan required in Part I.D.1.j) of this permit according to the schedule therein. Compliance with this requirement represents adequate progress for this permit term towards achieving TMDL wasteload allocations consistent with the assumptions and requirements of the TMDL.*	DPW, EMD, COD			

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
D.1.o.	*Documentation identifying which BMPs were completed within the current annual reporting period. The following information shall also be included:* *(a) For BMPs used to meet the Chesapeake Bay TMDL requirements of Part I.D.1, the SWM facility unique identifier number, total acreage treated, total impervious and total pervious acreage treated, the pollutants of concern load reductions reported in pounds per year, the pollutant removal efficiencies and source of each efficiency, as well as proposed BMPs planned for implementation during the next reporting cycle.* *(b) For retrofit projects used to meet the Chesapeake Bay TMDL requirements of Part I.D.1, the type of land use being retrofitted, the existing stormwater management facility type before retrofit, if applicable, retrofit type used, retrofit performed, completion date or anticipated completion date, total acreage retrofitted, total impervious and total pervious acreage retrofitted, the SWM facility unique identifier number, and if applicable, the incremental reduction credit achieved with the retrofit (the incremental credit is defined as the difference between the existing SWM facility reduction credit and the retrofit reduction credit attained) including pre and post pollutant*				One project used to meet the Chesapeake Bay TMDL requirements was implemented in the FY25 reporting year. All required information for Powells Creek Phase 2 Stream Restoration can be found in Appendix S and Appendix AA. The County did not acquire credits to meet the required Chesapeake Bay TMDL reductions in Part I.D.2.b), c), or d).

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
	retrofit removal efficiencies and source of each efficiency. *3) A list of BMPs implemented during the reporting period but not reported to the DEQ BMP Warehouse in accordance with Part II and the estimated reduction of pollutants of concern achieved by each and reported in pounds per year.* *4) If the permittee acquired credits during the reporting period to meet all or a portion of the required reductions in Part I.D.1.b), c) or d), a statement that credits were acquired.* *5) Documentation that sufficient control measures have been implemented (or documentation detailing that implementation will be complete by June 30, 2026, for the cumulative 40% reductions and June 30, 2028 for the cumulative 100% reductions) to meet the compliance targets identified in this section. If temporary credits or offsets have been purchased in order to meet the compliance* *targets, the list of temporary reductions utilized to meet the cumulative required reductions of L2 in this permit and a schedule of implementation to ensure permanent cumulative 40% and 100% reductions shall be provided.* *6) Following notification from the department of the start date for the required electronic submission of Chesapeake Bay TMDL implementation annual status reports, as provided for in 9VAC25-31-1020, such forms and reports submitted after that date shall be electronically submitted to the department in compliance with this section and 9VAC25-31-1020. There shall be at least three months' notice provided between the notification from the department and the date after which such forms and reports must be submitted electronically.*	DPW, EMD, COD			
	D.2. TMDL Action Plans other than the Chesapeake Bay TMDL				

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
D.2.a.	*The Permittee shall update, as necessary, and maintain a local TMDL action plan designed to reduce loadings for pollutants of concern if the permittee discharges the pollutants of concern to an impaired water for which a TMDL has been approved by the U.S. Environmental Protection Agency (EPA) as described in Part I D 2 a 1 and 2:*	DPW, EMD, COD			
D.2.a.1.	*For TMDLs approved by EPA prior to April 1, 2015 and in which an individual or aggregate wasteload has been allocated to the permittee (see Attachment 3 to the Fact Sheet), the permittee shall develop and initiate or update as applicable the local TMDL action plans to meet the conditions of Part I D 2 c, d, e, f, and g, as applicable, no later than 18 months after the permit effective date and continue implementation of the action plan. Updated action plans shall include:* *a) An evaluation of the results achieved by the previous action plan; and* *b) Any adaptive management strategies incorporated into updated action plans based on action plan evaluation.*	DPW, EMD, COD	•TMDL Action Plans other than the Chesapeake Bay TMDL Action Plan were submitted to DEQ in December of 2016. • The TMDL Action Plans will become effective and enforceable upon written approval from DEQ.		
D.2.a.2.	*For TMDLs approved by EPA on or after April 1, 2015, and prior to the effective date of this permit, and in which an individual or aggregate wasteload has been allocated to the permittee, the permittee shall develop and initiate implementation of action plans to meet the conditions of Part I D 2 c, d, e, f, and g, as applicable no later than 30 months after the permit effective date.*	DPW, EMD, COD			
D.2.b.	*The permittee shall complete implementation of the TMDL action plans as determined by the schedule. TMDL action plans may be implemented in multiple phases over more than one permit cycle using the adaptive iterative approach provided adequate progress is achieved in the implementation of BMPs designed to reduce pollutant discharges in a manner that is consistent with the assumptions and requirements of the applicable TMDL.*	DPW, EMD, COD			

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
D.2.c.	*Each local TMDL action plan developed by the permittee shall include the following:* *1) The TMDL project name;* *2) The EPA approval date of the TMDL;* *3) The wasteload allocated to the permittee (individually or in aggregate), and the corresponding percent reduction, if applicable;* *4) Identification of the significant sources of the pollutants of concern discharging to the permittee's MS4 that are not covered under a separate VPDES permit. For the purposes of this requirement, a significant source of pollutants of concern means a discharge where the expected pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL;* *5) The BMPs designed to reduce the pollutants of concern in accordance with Part I D 2 d, e, f, and g;* *a) Any calculations required in accordance with Part I D 2 d, e, f, and g;* *b) For action plans developed in accordance with Part I D 2 d, e, f, and g, an outreach strategy to enhance the public's education (including employees) on methods to eliminate and reduce discharges of the pollutants; and* *c) A schedule of anticipated actions planned for implementation during this permit term.*	DPW, EMD, COD			
D.2.d.	*Bacterial TMDLs.* *1) The permittee shall implement at least six strategies designed to reduce the load of bacteria to the MS4. Table 3 provides a list of strategies which correspond to sources identified in Part I D 2 c 4. Additional strategies that are equivalent or better than the strategies provided in Table 3 may be used as approved by the Department.*	DPW, EMD, COD			

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
D.2.e.	*Local sediment, phosphorus, and nitrogen TMDLs.* *1) The permittee shall select and implement strategies designed to reduce the loads associated with sediment, phosphorus, or nitrogen to the permittee's MS4. The permittee may implement this requirement through one or more of the following:* *a) One or more of the BMPs from the Virginia Stormwater BMP Clearinghouse listed in 9VAC25-870-65 or other approved BMPs found on the Virginia Stormwater BMP Clearinghouse website;* *b) One or more BMPs approved by the Chesapeake Bay Program. Pollutant load reductions generated by annual practices, such as street and storm drain cleaning, shall only be applied to the compliance year in which the annual practice was implemented; or* *c) Land disturbance thresholds lower than Virginia's regulatory requirements for erosion and sediment control and post development stormwater management.* *2) The permittee may meet the local TMDL requirements for sediment, phosphorus, or nitrogen through BMPs implemented or sediment, phosphorus, or nitrogen credits acquired. BMPs implemented and nutrient and sediment credits acquired to meet the requirements of the Chesapeake Bay TMDL in Part I D 1 may also be utilized to meet local TMDL requirements as long as the BMPs are implemented, or the credits are generated in the watershed for which local water quality is impaired.* *3) The permittee shall calculate the anticipated load reduction achieved from each BMP and include the calculations in the action plan required in Part I D 2 c 5.* *4) No later than 36 months after the effective date of this permit, the permittee shall submit to the department an update on the progress made toward achieving local TMDL action plan goals and the anticipated end dates by which the permittee will meet each wasteload allocation for sediment, phosphorus, or nitrogen. The proposed end date may be developed in accordance with Part II B 3.*	DPW, EMD, COD			

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
D.2.f.	*Polychlorinated biphenyl (PCB) TMDLs.* *1) For each PCB TMDL action plan, the permittee shall include an inventory of potentially significant sources of PCBs owned or operated by the permittee that drains to the MS4 that includes the following information:* *a) Location of the potential source;* *b) Whether or not the potential source is from current site activities or activities previously conducted at the site that have been terminated (i.e., legacy activities); and* *c) A description of any measures being implemented or to be implemented to prevent exposure to stormwater and the discharge of PCBs from the site.* *2) If at any time during the term of this permit, the permittee discovers a previously unidentified significant source of PCBs within the permittee's MS4 regulated service area, the permittee shall notify DEQ in writing within 30 days of discovery.* *3) As part of its annual reporting requirements, the permittee shall submit results of any action plan PCB monitoring or product testing conducted.*	DPW, EMD, COD			
D.2.g.	*Prior to submittal of the action plan required in Part I D 2 a, the permittee shall provide an opportunity for public comment for no fewer than 15 days on the proposal to meet the local TMDL action plan requirements.*	DPW, EMD, COD			
D.2.h.	*The MS4 Program Plan as required by Part I A 6 of this permit shall incorporate each local TMDL action plan. Local TMDL action plans may be incorporated by reference into the MS4 Program Plan provided that the Program Plan includes the date of the most recent local TMDL action plan and identification of the location where a copy of the local TMDL action plan may be obtained.*	DPW, EMD, COD			
D.2.i.	*For each reporting period, each annual report shall include a summary of actions conducted to implement each local TMDL action plan.*	DPW, EMD, COD			
	E. ANNUAL REPORTING				

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
E.1.	*The permittee shall submit the annual report to the Department, no later than March 31 st of each year. The report shall cover the previous fiscal year from July 1st to June 30th and include the following separate sections:*		The annual reports will be submitted in accordance with the schedule laid out in the permit.		
E.1.a.	*Background Information* *a) The permittee and permit number of the program submitting the annual report;* *b) Any modifications to the MS4 Program Plan as a result of the annual report;* *c) The reporting dates for which the annual report is being submitted; and,* *d) Certification as per Part III.K.*		All annual reports will include the required background information.	*Each annual report shall include the required background information.*	
E.1.b.	*A summary of the compontents implemented under Part I.B. and an evaluation of the effectiveness of each component. The permittee should attempt to limit any component's narrative summary to no longer than two-pages plus any necessary tables and figures.*		The annual reports will include a summary of components implemented and an evaluation of the effectiveness of each component.	*Each annual report shall include a summary of components implemented and an evaluation of the effectiveness of each component.*	See Section B above.
E.1.c.	*A summary report of the monitoring programs listed under Part I.C.*		The annual reports will include a summary of the monitoring programs listed under Part I.C.	*Each annual report shall include a summary report of the monitoring programs listed under Part I.C.*	See Appendix P.
E.1.d.	*A summary of the implementation of each component listed under Part I.D.*		The annual reports will include a summary of the implementation of components under Part I.D.	*Each annual report shall include a summary of the implementation of each component listed under Part I.D.*	See Appendix T for a summary of the implementation of the TMDL Action Plans.
E.1.e.	*The Specific Reporting Requirements identified in this state permit.*		The annual reports will include the Specific Reporting Requirements.	*Each annual report shall include the Specific Reporting Requirements identified in this state permit.*	The Specific Reporting Requirements identified in the permit are contained in the Specific Reporting Requirement column of this table.

MS4 Action ID	Permit Requirement	Responsible Party	2025 Program Plan Elements (July 1, 2024 through June 30, 2025)	Specific Reporting Requirement	2025 Annual Report (July 1, 2024 through June 30, 2025)
E.2.	Following notification from the department of the start date for the required electronic submission of annual reports, as provided for in 9VAC25-31-1020, such forms and reports submitted after that date shall be electronically submitted to the department in compliance with this section and 9VAC25-31-1020. There shall be at least three months' notice provided between the notification from the department and the date after which such forms and reports must be submitted electronically.				

Appendix A

Site Inspector and Plan Reviewer Certifications

Site Inspector Certifications

Name	Certification	Number	Exp. Date
Vijay Dindigal	Professional Engineer	402048764	6/30/2027
Principal Engineer	Land Surveyor	403002810	6/30/2026
	GISP	67810	2/25/2028
	DEQ-Dual Combined Adminstrator	DCA 0563	11/12/2028
Robert Cook	DEQ Dual Inspector	DIN0533	7/11/2028
Supervisor (West)	DEQ Qualified Personnel	QP00261	4/7/2028
	VDOT Asphalt I	n/a	12/31/2027
	VDOT Asphalt II	n/a	12/31/2028
Stefan Gitchev	DEQ Dual Inspector	DIN0535	10/3/2025
Supervisor (East)	DEQ Dual Program Admin	DPA0172	7/29/2027
	DEQ ESC Plan Reviewer	ESPR0558	3/28/2028
	DEQ Qualified Personnel	QP00630	4/18/2028
	VDOT Soils & Aggregate	n/a	12/31/2028
	VDOT Asphalt I	n/a	12/31/2026
	VDOT Asphalt II	n/a	12/31/2027
	ACI Concrete Field	2271172	2/14/2029
Shawn Wray	DEQ Dual Inspector	DIN0927	10/15/2027
CCTV - Storm Drainage	DEQ Dual Program Admin	DPA0176	4/14/2028
Special projects	DEQ Qualified Personnel	QP00959	5/9/2028
	Nassco Cert	U-0319-070305018	5/2/2028
Philip Darko	DEQ Dual Inspector	DIN0538	1/28/2028
Inspector (West)	DEQ Dual Program Admin	DPA0154	11/7/2026
	DEQ ESC Plan Reviewer	ESPR0563	4/9/2028
	DEQ Qualified Personnel	QP00701	4/22/2028
	VDOT Asphalt I	n/a	6/1/2027
	VDOT Asphalt II	n/a	6/1/2027
	VDOT Soils & Aggregate	n/a	1/1/2029
	ACI Concrete Field	n/a	4/17/2029
	EPA - CGP Site Inspector Training Course	n/a	4/17/2027
	EPA - Water Quality Standards & Criteria	n/a	n/a
Morris Gilbert	DEQ SWM Inspector	SWIN2944	4/4/2027
Inspector (West)	DEQ ESC Inspector	ESIN3189	10/25/2027
Amadu Jalloh-Jamboria	DEQ Dual Inspector	DIN2084	7/28/2026
Inspector (West)	VDOT Work Zone Cert	60923316	6/30/2027
	VDOT GR Cert	N/A	
	OSHA 10-hour Cert	N/A	
	Nuclear Gauge Cert	23011-168-667-1388	6/13/2026
	DEQ SWM Cert	SWIN2754	7/28/2026
Jalal Qaradaghi	DEQ Dual inspector	DIN0536	11/30/2025
Inspector (West)	VDOT Asphalt I	n/a	5/31/2027
	DEQ Qualified Personnel	OP00843	5/1/2028
Roger Barnes	DEQ Dual Inspector	DIN0220	10/27/2027
Inspector (East)	DEQ Qualified Personnel	QP00727	4/23/2028
Thomas French	DEQ Dual Inspector	DIN1764	10/25/2028

Inspector (East)	ISA Certified Aborist	MA-5485A	12/31/2025
	ISA Tree Risk Assement	MA-5485A	3/20/2029
	DEQ Qualified Personnel	QP00717	4/23/2028
Adnan Manzoor	DEQ E&S Inspector	ESIN2833	11/15/2026
Inspector (East)	DEQ SWM Inspector	SWIN 2878	2/6/2027
	DEQ Qualified Personnel	QP00764	4/25/2028
	VDOT Asphalt I	n/a	12/31/2027
	VDOT Soils & Aggregate	n/a	12/31/2026
	ACI Concrete Field	2159575	2/11/2027
Mick Tilley	DEQ Dual Inspector	DIN1234	11/4/2027
Inspector (East)	DEQ Qualified Personnel	QP00719	4/23/2028
	ACI Concrete Field	2271169	2/14/2029
	VDOT Soils & Aggregate	n/a	12/31/2027
	VDOT Asphalt I	n/a	12/31/2027
	VDOT Asphalt II	n/a	12/31/2028

Plan Reviewer Certifications

Name	Certification	Number	Exp. Date
Raj Bidari	DEQ Dual Plan Reviewer	DPR0117	12/28/2027
Engineer Manager Plan Reviewer	DEQ SWM Program Administrator	SWP0156	3/9/2028
Bodha Adhikari	DEQ Dual Combined Administrator	DCA0323	12/29/2026
Sr. Engineer			
Geotechnical			
Youssef Djebbari	DEQ SWM Plan Reviewer	SWPR0217	4/18/2028
Sr Engineer	DEQ SWM Program Administrator	SWPA0165	9/3/2028
Michael El-Hage	DEQ SWM Plan Reviewer	SWPR0213	4/2/2028
Principle Engineer	DEQ Erosion and Sediment Control Combined Admin	304	11/30/2026
Mirza Baig	DEQ Combined Administrator	DCA0188	10/22/2027
Sr Engineer			

Appendix B

Land Disturbance Permits Issued

PUBLIC WORKS - ENVIRONMENTAL SERVICES

Land Plans with 2500 SqFt or more Disturbed Area with Land Permit Issued

07/01/2024 Through 06/30/2025

Plan Name / Plan Number / Permit Number	Parcel Number / Address	Developer / Owner	Phone	Disturbed Area	Plan Approval Date
BENEDICTINE SISTERS PROPERTY SEC II SDR2022-00057 LND2025-00042	7495-99-3943 9541 LINTON HALL RD BRISTOW, VA 20136	SOIL CONSULTANTS ENGINEERING, LLC		12.700	07/19/2024
POTOMAC SHORES - BLOCK 7 - TOWN CENTER SDR2023-00039 LND2025-00137	8389-52-6846 1800 POTOMAC SHORES PKWY DUMFRIES, VA 22026	J2 ENGINEERS, INC.		10.130	01/08/2025
POTOMAC SHORES LANDBAY 4 SEC 3 - REVISION #5 SDR2023-00041 LND2023-00285	8388-39-8543 1875 RIVER HERITAGE BLVD DUMFRIES, VA 22026	J2 ENGINEERS, INC.		44.730	07/09/2024
INDEPENDENT HILL VILLAGE PHASE 1 SDR2023-00048 LND2025-00108 LND2025-00117	7891-57-4571 14603 BRISTOW RD MANASSAS, VA 20112	ELM STREET DEVELOPMENT	7037349730	28.990	11/26/2024
QUARTZ DISTRICT - EAST VILLAGE PHASE 1 - LANDBAY F SDR2024-00053 LND2025-00131	8192-93-1868 13804 MINNIEVILLE RD WOODBRIDGE, VA 22193	BUCHANAN PARTNERS LLC	3014170510	14.060	11/20/2024
BEACON PARK TOWNS AT BELMONT BAY SECTION 5 SDR2024-00056 LND2025-00045	8492-43-4228 13769 CHRISSWIND AVE WOODBRIDGE, VA 22191	DEWBERRY	7034682240	5.460	08/02/2024
QUARTZ DISTRICT - WEST NEIGHBORHOOD PHASE I SDR2024-00057 LND2025-00143	8192-93-1868 13804 MINNIEVILLE RD WOODBRIDGE, VA 22193	BUCHANAN PARTNERS LLC	3014170510	16.020	01/21/2025
QUARTZ DISTRICT - EAST VILLAGE PHASE 2 - LANDBAY F SDR2024-00058 LND2025-00130	8192-93-7349 13804 MINNIEVILLE RD WOODBRIDGE, VA 22193	BUCHANAN PARTNERS, LLC	3014170510	6.200	11/18/2024

PUBLIC WORKS - ENVIRONMENTAL SERVICES

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07/01/2024 Through 06/30/2025

Plan Name / Plan Number / Permit Number	Parcel Number / Address	Developer / Owner	Phone	Disturbed Area	Plan Approval Date
DARBYDALE SDR2024-00064 LND2025-00107	8191-38-0020 4505 DALE CREEK WAY WOODBRIDGE, VA 22193	THE ENGINEERING GROUPE	7039863990	9.270	10/30/2024
QUARTZ DISTRICT - WEST NEIGHBORHOOD PHASE 2 SDR2024-00065 LND2025-00142	8192-93-7349 13804 MINNIEVILLE RD WOODBRIDGE, VA 22193	BUCHANAN PARTNERS LLC	3014170510	4.840	01/21/2025
POTOMAC SHORES TOWN CENTER - BLOCK 4 SDR2024-00083 LND2025-00186	8389-44-6550 17350 HARRISON RIDGE DR DUMFRIES, VA 22026	HARBOR STATION COMMUNITIES LLC	7034931747	4.180	04/08/2025
BRIGHTWOOD FOREST PHASE 3 SEC 1 SDR2024-00085 LND2025-00067	8291-21-7856 15255 BALLERINA LOOP WOODBRIDGE, VA 22193	TAYLOE RIDGE LLC	7035901111	32.800	08/12/2024
LOMOND VILLAGE SITE PLAN SDR2024-00097 LND2025-00051	7696-59-4936 10514 ENCORE DR MANASSAS, VA 20109	RYAN HOMES, INC. POTOMAC DIVISION	7036492600	0.220	07/25/2024
TOWNS AT DALE WOODS SDR2024-00098 LND2025-00109	8092-17-9492 13225 NIXON LN WOODBRIDGE, VA 22193	BEAZER HOMES LLC	7038957382	4.650	11/27/2024
BEACON PARK TOWNS AT BELMONT BAY LAND BAY F ESC SDR2024-00099 LND2025-00011	8492-32-4965 201 BELMONT BAY DR WOODBRIDGE, VA 22191	MILLER AND SMITH LAND, INC	7038565144	3.000	07/08/2024
INNOVATION TOWN CENTER - SECTION 1 SDR2024-00101 LND2025-00170	7596-91-3584 9016 KATHERINE JOHNSON AVE MANASSAS, VA 20109	STANLEY MARTIN HOMES, LLC		28.180	11/12/2024
DARBYDALE SDR2025-00029	8191-38-0020 4505 DALE CREEK WAY WOODBRIDGE, VA 22193	THE RESERVE AT WOODBRIDGE, LLC	7577190274	9.270	04/07/2025

PUBLIC WORKS - ENVIRONMENTAL SERVICES

Land Plans with 2500 SqFt or more Disturbed Area with Land Permit Issued

07/01/2024 Through 06/30/2025

Plan Name / Plan Number / Permit Number	Parcel Number / Address	Developer / Owner	Phone	Disturbed Area	Plan Approval Date
LND2025-00244					
POTOMAC SHORES - BLOCK 7 - TOWN CENTER REVISION 1 SDR2025-00032 LND2025-00242	8389-52-8235 1600 THOROUGHGOOD DR DUMFRIES, VA 22026	STANLEY MARTIN HOMES LLC	7033467005	10.130	05/15/2025
POTOMAC SHORES ROUTE 1 AND 234 IMPROVEMENTS SPR2018-00226 LND2025-00086	8289-15-5145 17361 DUMFRIES RD DUMFRIES, VA 22026	HOFFMAN, SEAN	(703) 361-155(	35.840	10/08/2024
VRE POTOMAC SHORES TRAIN STATION - PI PLAN SPR2021-00135 LND2025-00259	8389-53-8427 1800 POTOMAC SHORES PKWY DUMFRIES, VA 22026	STV INCORPORATED	6103858425	4.060	04/07/2025
POTOMAC SHORES TOWN CENTER BLOCK 5-H - SITE PLAN SPR2022-00105 LND2025-00194	8389-63-0024 1542 CHERRY HILL RD DUMFRIES, VA 22026	HINES	2024340262	3.301	03/17/2025
INNOVATION - MANASSAS DC - 4 SPR2022-00270 LND2025-00232	7695-38-4751 9351 FREEDOM CENTER BLVD MANASSAS, VA 20110	QTS MANASSAS I DC4 LLC		18.480	05/01/2025
INDEPENDENCE PARCEL "A-1-A" AND PARCEL "A-1-B" SPR2023-00027 LND2025-00138	7596-36-8439 7424 WELLINGTON RD MANASSAS, VA 20109	THE PRUITT CORPORATION		11.350	11/01/2024
PMG ROUTE 1 SPR2023-00129 LND2025-00097	8392-82-3292 13805 MOUNT PLEASANT DR WOODBRIDGE, VA 22191	COLLIERS ENGINEERING & DESIGN	7034304330	1.030	08/23/2024
MANASSAS LOGISTICS CENTER - PHASE II SPR2023-00165 LND2025-00118	7594-79-5880 10535 BRISTOW RD BRISTOW, VA 20136	TC MIDATLANTIC DEVELOPMENT LLC	2025559318	44.420	12/17/2024

PUBLIC WORKS - ENVIRONMENTAL SERVICES

Land Plans with 2500 SqFt or more Disturbed Area with Land Permit Issued

07/01/2024 Through 06/30/2025

Plan Name / Plan Number / Permit Number	Parcel Number / Address	Developer / Owner	Phone	Disturbed Area	Plan Approval Date
PWCS H.L. MOONEY ADVANCED WATER SPR2023-00364 LND2025-00095	8391-51-7302 1851 RIPPON BLVD WOODBRIDGE, VA 22191	PRINCE WILLIAM COUNTY SERVICE AUTHORITY	7033932062	3.990	07/10/2024
CHINN PARK STREAM RESTORATION & STORMWATER BMP SPR2023-00397 LND2025-00223	8192-79-9203 13001 CHINN PARK DR WOODBRIDGE, VA 22192	PWC ENVIRONMENTAL SERVICES	7037925534	4.750	04/01/2025
SOUTH POINT PHASE II SPR2024-00010 LND2025-00162	7596-16-5979 8400 BUCKEYE TIMBER DR MANASSAS, VA 20109	BOHLER ENGINEERING		22.020	01/15/2025
QUARTZ DISTRICT - WEST MOT SPR2024-00013 LND2025-00132	8192-93-1868 13804 MINNIEVILLE RD WOODBRIDGE, VA 22193	IMEG CORPORATION	7033345652	57.480	11/18/2024
MANASSAS TECH CENTER SPR2024-00026 LND2025-00113	7596-61-9286 8870 HORNBAKER RD MANASSAS, VA 20109	TA REALTY	6174762751	18.010	11/19/2024
BARRACKS ROW AT QUANTICO SPR2024-00028 LND2025-00205	8189-68-3173 4115 TALON DR DUMFRIES, VA 22025	FORMDESIGN, LLC	7035035555	6.150	03/27/2025
TOP SHINE CAR WASH - HAYMARKET SPR2024-00044 LND2025-00135	7298-61-3823 6361 JOHN JAMES WAY HAYMARKET, VA 20169	1555VA LLC		0.700	12/09/2024
INNOVATION SOUTH SPR2024-00050 LND2025-00124	7695-37-4637 10671 UNIVERSITY BLVD MANASSAS, VA 20110	BUCHANAN PARTNERS LLC	3014170510	7.040	12/29/2024
7211 SOUTH HILL DRIVE SPR2024-00054	7697-56-8308 7211 SOUTH HILL DR MANASSAS, VA 20109	TAWIL, NADIR & SILVIA		1.470	07/03/2024

PUBLIC WORKS - ENVIRONMENTAL SERVICES

Land Plans with 2500 SqFt or more Disturbed Area with Land Permit Issued

07/01/2024 Through 06/30/2025

Plan Name / Plan Number / Permit Number	Parcel Number / Address	Developer / Owner	Phone	Disturbed Area	Plan Approval Date
LND2025-00216					
AVANTI INNOVATION NONRESIDENTIAL PRECONSTRUCTION P SPR2024-00096 LND2025-00087	7595-66-9467 9530 HORNBAKER RD MANASSAS, VA 20109	STACK INFRASTRUCTURE, INC	7039650580	94.960	10/14/2024
KESSINGER HUNTER BUILDING VA3, VA4, VA5 SPR2024-00127 LND2025-00048	7596-65-1125 7729 WELLINGTON RD MANASSAS, VA 20109	IRON MOUNTAIN DATA CENTERS LLC		69.140	07/02/2024
SUDLEY ROAD CAR WASH SPR2024-00140 LND2025-00239	7696-85-1866 8590 SUNNYGATE DR MANASSAS, VA 20109	LAND DESIGN CONSULTANTS	7032910360	2.120	05/23/2025
YOUTH FOR TOMORROW - DATA CENTER SITE PLAN SPR2024-00146 LND2025-00188	7595-54-7695 10145 LINTON HALL RD BRISTOW, VA 20136	WCLW		47.670	04/07/2025
POTOMAC SHORES - VRE STATION SPR2024-00154 LND2025-00012	8389-54-9553 17390 POTOMAC STATION WAY DUMFRIES, VA 22026	BREV MANAGEMENT LLC	7039883215	8.300	07/16/2024
BATTLEFIELD BUSINESS PARK - LOT 10A SPR2024-00160 LND2025-00050	7697-36-3895 7070 INFANTRY RIDGE RD MANASSAS, VA 20109	HOLLADAY PROPERTIES	8044990870	1.887	08/08/2024
NVA05D DATA CENTER SPR2024-00165 LND2025-00120	7696-42-2354 8819 WELLINGTON RD MANASSAS, VA 20109	SI NVA05D, LLC	9132420683	8.050	12/13/2024
FARM BREW LIVE EXPANSION DEVELOPMENT PROJECT SPR2024-00186 LND2025-00038	7695-15-2228 9849 DISCOVERY BLVD MANASSAS, VA 20109	NLT HOTEL LLC		8.400	07/23/2024

PUBLIC WORKS - ENVIRONMENTAL SERVICES

Land Plans with 2500 SqFt or more Disturbed Area with Land Permit Issued

07/01/2024 Through 06/30/2025

Plan Name / Plan Number / Permit Number	Parcel Number / Address	Developer / Owner	Phone	Disturbed Area	Plan Approval Date
NVA05D WATERMAIN RELOCATION SPR2024-00192 LND2025-00099	7696-32-8070 8765 WELLINGTON RD MANASSAS, VA 20109	STACK INFRASTRUCTURE		1.630	11/06/2024
NOKESVILLE PARK BASEBALL FIELD IMPROVEMENTS SPR2024-00200 LND2025-00061	7493-54-9131 12560 ADEN RD NOKESVILLE, VA 20181	PWC DEPT OF PARK, REC & TOURISM	7037924270	1.150	07/19/2024
AVANTI PHASE 4 SPR2024-00205 LND2025-00136	7595-66-9467 9530 HORNBAKER RD MANASSAS, VA 20109	STACK INFRASTRUCTURE, INC	9132420683	19.490	01/17/2025
OCCOQUAN GREENWAY TRAIL SEGMENT 2 BRIDGE SPR2024-00208 LND2025-00129	8293-19-1773 3521 AVIARY WAY WOODBRIDGE, VA 22192	PWC DEPARTMENT OF PARKS, RECREATION & TOURISM	5717190619	0.114	07/29/2024
WELLINGTON COMMERCE CENTER SPR2024-00211 LND2025-00073	7497-21-1283 5780 WELLINGTON RD GAINESVILLE, VA 20155	SKYWORKS OF VIRGINIA	7033670060	5.350	07/25/2024
SECTION 8 - WWTP REPLACEMENT SPR2024-00216 LND2025-00150	8192-30-2849 14421 DELANEY RD WOODBRIDGE, VA 22193	BOWEN ENGINEERING CORPORATION		0.130	09/25/2024
CRISIS RECEIVING CENTER SPR2024-00218 LND2025-00115	8292-71-6115 14011 WORTH AVE WOODBRIDGE, VA 22192	PUBLIC WORKS PROPERTY MANAGEMENT	7037926886	0.080	12/04/2024
USTA NORTH SPR2024-00226 LND2025-00166	7696-41-1654 9001 FREEDOM CENTER BLVD MANASSAS, VA 20110	HITT CONTRACTING	(703) 928-827	14.390	03/19/2025
POTOMAC SHORES CENTRAL PARK SPR2024-00258	8389-52-6846 1800 POTOMAC SHORES PKWY DUMFRIES, VA 22026	HARBOR STATION COMMUNITIES	7034931747	5.630	02/11/2025

PUBLIC WORKS - ENVIRONMENTAL SERVICES

Land Plans with 2500 SqFt or more Disturbed Area with Land Permit Issued

07/01/2024 Through 06/30/2025

Plan Name / Plan Number / Permit Number	Parcel Number / Address	Developer / Owner	Phone	Disturbed Area	Plan Approval Date
LND2025-00148					
NETO PARK- LOT 35A-1 SPR2024-00261 LND2025-00204	7597-70-8465 11475 CONNECTIVITY DR MANASSAS, VA 20109	NETO PARK LLC	7036755777	1.340	04/11/2025
VETERANS MEMORIAL PARK SHELTER REPLACEMENT SPR2024-00262 LND2025-00077	8492-00-2786 14300 VETERANS DR WOODBRIDGE, VA 22191	DEPT. PARKS, RECREATION & TOURISM	5717198208	0.340	09/20/2024
TESLA @ WAWA #661 SPR2024-00268 LND2025-00103	8292-55-5225 13355 MINNIEVILLE RD WOODBRIDGE, VA 22192	WAWA, INC.	6103065462	0.060	09/19/2024
HEATHCOTE MARKETPLACE - SPROUTS SITE PLAN SPR2024-00272 LND2025-00140	7298-92-4359 14891 HEATHCOTE BLVD HAYMARKET, VA 20169	BUCHANAN PARTNERS, LLC	3014170510	7.430	01/24/2025
CHALMERS PROPERTY SPR2024-00273 LND2025-00181	7397-45-1913 14251 JOHN MARSHALL HWY GAINESVILLE, VA 20155	JK LAND HOLDINGS	7032603001	4.620	09/18/2024
INNOVATION EXECUTIVE CENTER - MANASSAS DC-6 SPR2024-00275 LND2025-00066	7695-47-3376 9540 GODWIN DR MANASSAS, VA 20110	QTS DATA CENTERS		9.310	08/26/2024
LOCUST SHADE PARK MAINTENANCE FACILITY SPR2024-00281 LND2025-00156	8188-13-1748 4701 LOCUST SHADE DR TRIANGLE, VA 22172	PWC PARKS AND RECREATION	703-792-7185	1.650	08/22/2024
NOVEC - HORNBAKER SUBSTATION SPR2024-00287 LND2025-00196	7595-85-0592 9680 HORNBAKER RD MANASSAS, VA 20109	STACK INFRASTRUCTURE, INC	9132420683	20.960	04/04/2025

Land Plans with 2500 SqFt or more Disturbed Area with Land Permit Issued

07/01/2024 Through 06/30/2025

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FORTUNA CENTER PLAZA - EROSION & SEDIMENT CONTROL SPR2024-00291 LND2025-00155	8190-61-3792 4421 FORTUNA CENTER PLZ DUMFRIES, VA 22025	1788 HOLDINGS, LLC	9545998445	0.370	02/10/2025
HORNER PARK & RIDE - LOT 6 EXPANSION SPR2024-00293 LND2025-00213	8392-05-3246 13455 TELEGRAPH RD WOODBRIDGE, VA 22192	PRINCE WILLIAM COUNTY	(703) 792-808	1.060	03/20/2025
TRUCK DRIVING SCHOOL @ PROGRESS COURT SPR2024-00305 LND2025-00054	7497-10-0688 13200 UNIVERSITY BLVD GAINESVILLE, VA 20155	13200 UNIVERSITY LLC	5714272208	2.490	08/27/2024
BUILDING VA6 SPR2024-00309 LND2025-00027	7596-64-9220 7749 WELLINGTON RD MANASSAS, VA 20109	IRON MOUNTAIN	(401) 636-568	13.510	07/30/2024
GAINESVILLE CROSSING DATA CENTER SPR2024-00316 LND2025-00071	7497-56-0118 13700 UNIVERSITY BLVD GAINESVILLE, VA 20155	PATRINELY GROUP LLC		74.420	09/16/2024
USTA NORTH SPR2024-00319 LND2025-00090	7696-41-1654 9001 FREEDOM CENTER BLVD MANASSAS, VA 20110	STACK INFRASTRUCTURE, INC	9132420683	15.000	10/24/2024
AVANTI PHASE 3 SPR2024-00326 LND2025-00146	7595-75-2306 9640 HORNBAKER RD MANASSAS, VA 20109	STACK INFRASTRUCTURE, INC	9132420683	16.870	02/02/2025
VIRGINIA MEADOWS INDUSTRIAL PARK LOT 6 SPR2024-00331 LND2025-00160	7596-23-6190 12001 WILTON MEADOWS CT MANASSAS, VA 20109	BENFIELD ELECTRIC	7039060884	3.370	12/11/2024
DOMINION WOODBRIDGE EV CHARGING STATION PLAN SPR2024-00334	8391-45-0989 1901 REDDY DR WOODBRIDGE, VA 22191	VIRGINIA ELECTRIC AND POWER COMPANY, DBA DOMINION ENERGY	8043143552	328.000	07/11/2024

PUBLIC WORKS - ENVIRONMENTAL SERVICES

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07/01/2024 Through 06/30/2025

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LND2025-00044					
ATCC HCF BUILDING SPR2024-00339 LND2025-00139	7695-28-5256 10801 UNIVERSITY BLVD MANASSAS, VA 20110	AMERICAN TYPE CULTURE COLLECTION	7033652700	4.250	01/22/2025
PROJECT GAINESVILLE SPR2024-00365 LND2025-00014	7497-41-7199 5945 WELLINGTON RD GAINESVILLE, VA 20155	JAYADE, SWANAND		47.810	07/09/2024
HEATHCOTE MARKETPLACE - NORTH SITE PLAN SPR2024-00366 LND2025-00222	7298-93-9607 14890 HEATHCOTE BLVD HAYMARKET, VA 20169	IMEG CORPORATION	7033345652	5.820	05/08/2025
AVANTI AT INNOVATION SPR2024-00369 LND2025-00224	7595-85-6929 9730 HORNBAKER RD MANASSAS, VA 20109	STACK INFRASTRUCTURE, INC	9132420683	18.500	04/16/2025
HAYMARKET JUNCTION WENDY'S SPR2024-00373 LND2025-00199	7298-61-3823 6361 JOHN JAMES WAY HAYMARKET, VA 20169	FLYNN GROUP	2165252775	1.020	03/19/2025
BUILDING VA7 SPR2024-00383 LND2025-00047	7596-66-8266 8328 BETHLEHEM RD MANASSAS, VA 20109	IRON MOUNTAIN		17.380	09/04/2024
PRINCE WILLIAM RNG PRODUCTION FACILITY SPR2024-00399 LND2025-00024	7991-09-6721 14811 DUMFRIES RD MANASSAS, VA 20112	PRINCE WILLIAM RNG LLC		3.170	07/17/2024
SES MSP MINOR SITE PLAN SPR2024-00400 LND2025-00022	7496-69-5972 8050 PINEY BRANCH LN BRISTOW, VA 20136	SES AMERICOM, INC	2026990482	0.660	07/18/2024

Land Plans with 2500 SqFt or more Disturbed Area with Land Permit Issued

07/01/2024 Through 06/30/2025

Plan Name / Plan Number / Permit Number	Parcel Number / Address	Developer / Owner	Phone	Disturbed Area	Plan Approval Date
MNZ03 DATA CENTER SPR2024-00409 LND2025-00200	7496-88-1217 13050 HANSEN FARM RD BRISTOW, VA 20136	CLARK CONSTRUCTION GROUP, LLC		63.040	03/11/2025
BELMONT PARK BRIDGE REPLACEMENT PROJECT SPR2024-00419 LND2025-00094	8492-14-8364 900 ALEXIS RD WOODBRIDGE, VA 22191	PWC DEPT OF PARK, REC & TOURISM	7037924270	0.200	10/03/2024
PROJECT MANGO HUB SITE PLAN - REVISION #1 SPR2024-00420 LND2025-00100	7496-47-2405 13035 ROLLINS FORD RD BRISTOW, VA 20136	NOVA MANGO FARMS LLC C/O BOWMAN CONSULTING GROUP	7034432400	4.540	11/12/2024
LANDING AT MASON'S BRIDGE SPR2024-00424 LND2025-00064	8392-98-6267 1230 ANNAPOLIS WAY WOODBRIDGE, VA 22191	BOWMAN CONSULTING GROUP	5403710268	0.110	08/12/2024
MERIDIAN BAY APARTMENTS - REVISION SPR2025-00011 LND2025-00070	8290-52-1605 2902 FOX LAIR DR WOODBRIDGE, VA 22191	JTD FOX RUN, LTD	8044534974	4.780	09/04/2024
OCCOQUAN ELEMENTARY SCHOOL SPR2025-00019 LND2025-00145	8393-70-4327 12915 OCCOQUAN RD WOODBRIDGE, VA 22192	PWC PUBLIC SCHOOLS	7037918109	10.180	01/31/2025
ALI KREIGER SPORTS COMPLEX PEDESTRIAN IMPROVEMENTS SPR2025-00026 LND2025-00104	8289-91-8537 2400 RIVER HERITAGE BLVD DUMFRIES, VA 22026	DEPT. PARKS, RECREATION & TOURISM	5717198208	2.250	11/14/2024
YOUTH FOR TOMORROW SPR2025-00030 LND2025-00141	7595-54-7896 10145 LINTON HALL RD BRISTOW, VA 20136	EE REED EAST COAST		47.380	01/24/2025
NEABSCO/POTOMAC COMMUTER PARKING GARAGE SPR2025-00032	8291-96-6718 2501 OPITZ BLVD WOODBRIDGE, VA 22191	THE WHITING-TURNER CONTRACTING COMPANY		11.330	09/11/2024

Land Plans with 2500 SqFt or more Disturbed Area with Land Permit Issued

07/01/2024 Through 06/30/2025

Plan Name / Plan Number / Permit Number	Parcel Number / Address	Developer / Owner	Phone	Disturbed Area	Plan Approval Date
LND2025-00059					
ABEL INDUSTRIES SPR2025-00037 LND2025-00176	8289-08-8069 16815 INTERSTATE DR DUMFRIES, VA 22026	BTS GENERAL CONTRACTORS, LLC	7036250805	0.071	03/04/2025
PROJECT GAINESVILLE SPR2025-00038 LND2025-00144	7497-41-7199 5945 WELLINGTON RD GAINESVILLE, VA 20155	AMAZON DATA SERVICES, INC.		47.810	01/19/2025
BUILDING VA7 SPR2025-00053 LND2025-00134	7596-66-8266 8328 BETHLEHEM RD MANASSAS, VA 20109	JCL CONSULTING LLC	7034889877	18.230	12/17/2024
POTOMAC SHORES ELEMENTARY SCHOOL SPR2025-00059 LND2025-00243	8389-52-2989 1720 THOROUGHGOOD DR DUMFRIES, VA 22026	PRINCE WILLIAM COUNTY PUBLIC SCHOOLS	5717199313	6.000	05/23/2025
VALLEY VIEW PARK TRAIL IMPROVEMENTS SPR2025-00060 LND2025-00183	7594-60-6443 11930 VALLEY VIEW DR NOKESVILLE, VA 20181	PWC DPRT		2.060	01/29/2025
DALE CITY REC CENTER PEDESTRIAN IMPROVEMENT SPR2025-00075 LND2025-00174	8192-30-8906 14300 MINNIEVILLE RD WOODBRIDGE, VA 22193	PWC DPRT		2.100	12/26/2024
INNOVATION SOUTH SPR2025-00095 LND2025-00088	7695-37-4637 10671 UNIVERSITY BLVD MANASSAS, VA 20110	IMEG CORPORATION	7033345652	7.040	10/22/2024
JOSEPH READING PARK UPGRADES SPR2025-00114 LND2025-00210	7896-09-8423 8460 MAPLEWOOD DR MANASSAS, VA 20111	DEPT. PARKS, RECREATION & TOURISM	5717198208	0.140	04/28/2025

Land Plans with 2500 SqFt or more Disturbed Area with Land Permit Issued

07/01/2024 Through 06/30/2025

Plan Name / Plan Number / Permit Number	Parcel Number / Address	Developer / Owner	Phone	Disturbed Area	Plan Approval Date
SIGN STRUCTURE RELOCATION SPR2025-00132 LND2025-00165	8188-66-6289 18314 RICHMOND HWY TRIANGLE, VA 22172	CLEAR CHANNEL OUTDOOR		0.200	10/21/2024
HOME DEPOT GORDON PLAZA EGP SPR2025-00135 LND2025-00258	8492-07-1869 13271 GORDON BLVD WOODBRIDGE, VA 22191	THE HOME DEPOT USA		12.130	05/14/2025
MENA FARM - EROSION & SEDIMENT CONTROL PLAN SPR2025-00143 LND2025-00241	7400-26-5812 13300 ROCK HILL LN HAYMARKET, VA 20169	ARAYA, EKUBETEKLE	5712227222	2.810	02/21/2025
WINGATE INN SPR2025-00168 LND2025-00261	7897-24-7601 7408 CENTREVILLE RD MANASSAS, VA 20111	JAI BHAVANI LLC	5712306009	1.860	06/20/2025
SINCLAIR GLOBAL WELCOME CENTER SPR2025-00172 LND2026-00003	7697-61-1627 7801 GARNER DR MANASSAS, VA 20109	PRINCE WILLIAM COUNTY PUBLIC SCHOOLS	5717199313	1.550	06/26/2025
HARBOR RESERVE SPR2025-00177 LND2025-00206	8188-48-9462 17901 ALICIA AVE DUMFRIES, VA 22026	PENNONI ASSOCIATES (SMITH ENGINEERING)	7038404991	16.480	04/15/2025
POTOMAC TRANSPORTATION CENTER SPR2025-00185 LND2025-00211	8290-32-5908 3401 PANTHER PRIDE DR DUMFRIES, VA 22026	PADDOX, LLCF		0.150	03/11/2025
BRENTSVILLE DISTRICT HS - TURF MGMT FACILITY SPR2025-00186 LND2025-00215	7493-86-8825 12109 ADEN RD NOKESVILLE, VA 20181	PRINCE WILLIAM COUNTY SCHOOL BOARD	7037917311	0.930	05/08/2025
JEFFERSON PLAZA APARTMENTS SITE PLAN REVISION SPR2025-00189	8392-82-6884 1315 JEFFERSON PLZ WOODBRIDGE, VA 22191	STANDARD DEVELOPMENT ONWER LLC	2022309465	9.121	06/02/2025

Land Plans with 2500 SqFt or more Disturbed Area with Land Permit Issued

07/01/2024 Through 06/30/2025

Plan Name / Plan Number / Permit Number	Parcel Number / Address	Developer / Owner	Phone	Disturbed Area	Plan Approval Date
LND2025-00250					
BUILDING VA10 SPR2025-00199 LND2025-00251	7596-64-6285 11451 HAYDEN RD MANASSAS, VA 20109	KH DATA CAPITAL DEVELOPMENT LAND, LLC	7244062126	4.780	06/06/2025
BULL RUN PLAZA SPR2025-00202 LND2025-00187	7697-21-9518 7788 SUDLEY RD MANASSAS, VA 20109	THE RAPPAPORT COMPANIES	5713821200	0.060	03/06/2025
NVA05C DATA CENTER SPR2025-00211 LND2025-00182	7696-41-7535 8932 WELLINGTON RD MANASSAS, VA 20109	SI NVA05, LLC	9132620683	10.950	03/12/2025
CHASE BANK AT 4421 FORTUNA CENTER PLAZA SPR2025-00224 LND2025-00229	8190-61-3792 4421 FORTUNA CENTER PLZ DUMFRIES, VA 22025	1788 HOLDINGS, LLC	9545998445	0.300	05/05/2025
MILESTONE TOWERS @ RIPPON MS SPR2025-00227 LND2025-00262	8391-42-8911 15101 BLACKBURN RD WOODBRIDGE, VA 22191	MILESTONE TOWER LIMITED PARTNERSHIP IV D.B.A. MILESTONE COMMUNICATIONS	7038654697	0.177	06/12/2025
CRISIS RECEIVING CENTER SPR2025-00238 LND2025-00169	8292-71-6115 14011 WORTH AVE WOODBRIDGE, VA 22192	PWC FFM		0.300	03/06/2025
GRAHAM PARK MS RENOVATIONS SPR2025-00289 LND2025-00209	8288-07-3910 3613 GRAHAM PARK RD TRIANGLE, VA 22172	PRINCE WILLIAM COUNTY PUBLIC SCHOOLS	5717199313	0.490	05/06/2025
HOWISON HOMESTEAD PARK - ADMINISTRATIVE REVISION SPR2025-00292 LND2025-00233	8091-25-3681 14716 MINNIEVILLE RD WOODBRIDGE, VA 22193	PWC DEPARTMENT OF PARKS, RECREATION & TOURISM	5717190619	3.840	04/17/2025

Land Plans with 2500 SqFt or more Disturbed Area with Land Permit Issued

07/01/2024 Through 06/30/2025

Plan Name / Plan Number / Permit Number	Parcel Number / Address	Developer / Owner	Phone	Disturbed Area	Plan Approval Date
HAYDEN ROAD ABANDONMENT PI PLAN SPR2025-00305 LND2025-00193	7596-55-9338 11550 ELEVATE DR MANASSAS, VA 20109	IRON MOUNTAIN	(401) 636-568	16.460	04/13/2025
POTOMAC SHORES - TOWN CENTER - BLOCK 5 MULTIFAMILY SPR2025-00308 LND2025-00235	8389-53-9926 1542 CHERRY HILL RD DUMFRIES, VA 22026	HARBOR STATION COMMUNITIES LLC	9492418466	4.670	05/28/2025
PARKRIDGE WEST SPR2025-00353 LND2025-00255	7597-96-3757 11380 BULLOCH DR MANASSAS, VA 20109	PARKRIDGE WEST OWNER LP	4042717769	10.850	06/11/2025

Total Number of Land Plans: 114

Total Number of Disturbed Acres: 1,727.180

END OF REPORT

Appendix C

List of County-Maintained Roadways and Parking Lots

ST NO	ST NAME	ST TYPE	DEED ACRES	DESCRIPTION	Impervious Parking Lot? (Yes=1; No=0)	Area of Imp. Parking Lot (Acres)	Impervious Road? (Yes=1; No=0)	Imp. Road (Linear Ft)	Imp. Road (Acres)	Site BMPs (Yes=1; No=0)	Parking Lots Treated by BMPs (Acres)	Imp. Roads Treated by BMPs (Acres)	Imp. Roads Treated by BMPs (Miles)	Imp. Roads Not Treated by BMPs (Miles)
4925	CATHARPIN	RD	1.216	LAWNVALE ESTATES SEC 2 R/W PRIVATE ROAD	0		1	880	0.38	0	0	0	0	0.17
13001	CHINN PARK	DR	77.003	CHINN PARK	0		1	97	0.05	1	0	0.05	0.02	0
13131	PUBLIC SAFETY	DR	12.081	PUBLIC SAFETY FACILITY - ACREAGE	0		1	585	0.15	1	0	0.15	0.11	0
5049	WATERWAY	DR	8.21	MONTCLAIR LIBRARY (UNDER CONSTRUCTION)	0		1	716	0.801	1	0	0.801	0.14	0
8636	WELLINGTON	RD	0.857	PWC JUVENILE CTR	0		1	284	0.16	1	0	0.16	0.05	0
1040	EXPRESS	DR	2.538	VRE TRAIN STATION WOODBRIDGE	0		1	483	0.65	1	0	0.65	0.09	0
7625	AARON	LN	15.264	ELLIS L BARRON PARK	1	0.29	0			1	0.29	0	0	0
12560	ADEN	RD	97.074	NOKESVILLE COMMUNITY PARK	1	1.87	1	4393	1.4	1	1.87	1.4	0.83	0
5901	ANTIOCH	RD	3.8	FIRE STATION ANTIOCH ROAD/ DOMINION VALLEY	1	1.17	1	897	0.62	1	1.17	0.62	0.17	0
8051	ASHTON	AV	4.177	BULL RUN LIBRARY	1	1.94	1	231	0.15	1	1.94	0.15	0.04	0
7500	BEN LOMOND PARK	DR	240.607	BEN LOMOND PARK	1	1.92	1	1010	0.86	1	1.92	0.86	0.19	0
14730	BIRCHDALE	AV	8.656	BIRCHDALE PARK	1	0.77	0			0	0	0	0	0
14998	BIRCHDALE	AV	0.836	VFD FIRE STATION	1	0.33	1	58	0.038	0	0	0	0	0.01
15011	BIRCHDALE	AV	4.146	BIRCHDALE PARK	1	0.165	0			0	0	0	0	0
15520	BLACKBURN	RD	42.452	RIPPON LODGE	1	0.48	1	1050	0.58	1	0.48	0.58	0.2	0
12401	BRAEMAR	PY	15.172	BRAEMAR PARK	1	0.55	0			1	0.55	0	0	0
14418	BRISTOW	RD	132.734	HELWIG PARK & LIBRARY	1	6.5	1	3,800	2.18	1	6.5	2.18	0.72	0
14422	BRISTOW	RD	1.5	HELWIG PARK ENTRANCE	0		1	167	0.32	1	0	0.32	0.03	0
13065	CHINN PARK	DR	14.647	CHINN PARK COMPLEX (Library, Aquatic Center)	1	4.86	1	509	0.29	1	4.86	0.29	0.1	0
13850	CHURCH HILL	DR	5.086	COMMUNITY CENTER	1	0.49	1	547	0.25	0	0	0	0	0.1
15150	CLOVERDALE	RD	30.19	CLOVERDALE PARK	1	1.57	1	1122	0.49	0	0	0	0	0.21
10501	COPELAND	DR	2.974	SUDLEY MANOR COMMUNITY CENTER	1	0.74	0			0	0	0	0	0
12380	COTTON MILL	DR	4.77	LAKE RIDGE MARINA	0		1	1163	0.65	1	1.02	0.65	0.22	0
12371	COTTON MILL	DR	67.064	LAKE RIDGE PARK, GOLF COURSE	1	2.01	1	1179	0.66	1	2.01	0.66	0.22	0
12390	COTTON MILL	DR	4.675	LAKE RIDGE PARK	1	1.15	1	2430	1.16	1	1.15	1.16	0.46	0
7	COUNTY COMPLEX	CT	65.547	STADIUM COMPLEX	1	4.88	1	950	0.54	1	4.88	0.54	0.18	0
1	COUNTY COMPLEX	CT	40.676	McCOURT & DEVELOPMENT SERVICES BUILDINGS	1	7.03	1	5085	4.8	1	7.03	4.8	0.96	0
5180	DALE	BL	7.161	PARKS SKATE NATION	1	1.48	0			1	1.48	0	0	0
5070	DALE	BL	6.179	BOYS AND GIRLS CLUB	1	0.38	0			1	0.38	0	0	0
5100	DALE	BL	3.5	BOYS/ GIRLS CLUB/COMMUTER PARKING LOT	1	2.61	1	338	0.24	1	2.61	0.24	0.06	0
5301	DALE	BL	218.234	ANDREW LEITCH PARK	1	1.95	1	933	0.46	1	1.95	0.46	0.18	0

ST NO	ST NAME	ST TYPE	DEED ACRES	DESCRIPTION	Impervious Parking Lot? (Yes=1; No=0)	Area of Imp. Parking Lot (Acres)	Impervious Road? (Yes=1; No=0)	Imp. Road (Linear Ft)	Imp. Road (Acres)	Site BMPs (Yes=1; No=0)	Parking Lots Treated by BMPs (Acres)	Imp. Roads Treated by BMPs (Acres)	Imp. Roads Treated by BMPs (Miles)	Imp. Roads Not Treated by BMPs (Miles)
4249	DALE	BL	0.478	DALE CITY LIBRARY	1	0.1	0			0	0	0	0	0
14012	DAWSON BEACH	RD	6.23	COMMUNITY CENTER	1	0.16	1	1444	0.47	0	0	0	0	0.27
15941	DONALD CURTIS	DR	17.091	FERLAZZO BLDG	1	4.9	1	600	0.5	1	4.9	0.5	0.11	0
13712	DUMFRIES	RD	9.54	COLES FIRE STATION	1	0.98	1	925	0.5	1	0.98	0	0	0
4100	EXETER	DR	5.688	BRITTANY PARK	1	0.96	1	334	0.16	1	0.96	0.16	0.06	0
15611	FARM CREEK	DR	2.427	FARM CREEK VRE COMMUTER LOT	1	1.22	0			1	1.22	0	0	0
15601	FARM CREEK	DR	4.413	FARM CREEK VRE COMMUTER LOT	1	2.65	1	762	0.88	1	2.65	0.88	0.14	0
12993	FITZWATER	DR	0.287	NOKESVILLE LIBRARY - PCL 1	1	0.09	0			1	0.09	0	0	0
12983	FITZWATER	DR	0.287	NOKESVILLE LIBRARY - PCL 2	1	0.1	0			1	0.05	0	0	0
8900	FREEDOM CENTER	BL	15.398	WESTERN POLICE STATION	1	4.15	1	1453	1.03	1	4.15	1.03	0.28	0
18809	FULLER HEIGHTS	RD	42.26	FULLER HEIGHTS PARK	1	0.86	1	1137	0.52	1	0.86	0.52	0.22	0
13030	HARBOR	DR	2.293	COMMUTER LOT - TACKETTS MILL	1	1.47	0			1	1.47	0	0	0
13509	HILLENDALE	DR	3.426	COMMUTER LOT - HILLENDALE RD	1	2.23	0			1	2.23	0	0	0
13499	HILLENDALE	DR	21.901	JOHN JENKINS PARK	1	0.16	1	413	0.26	1	0.16	0.26	0.08	0
12940	HUNTING	CO	2.52	BROAD RUN PARK	1	0.31	0			1	0.31	0	0	0
4603	JAMES MADISON	HY	163.633	JAMES LONG PARK	1	3.55	1	3025	2.02	1	3.55	2.02	0.57	0
15904	RICHMOND	HY	0.96	EASTERN FUELING STATION	1	0.74	0			1	0.74	0	0	0
14945	RICHMOND	HY	5.065	HILDA BARG HOMELESS CENTER	1	0.3	1	468	0.25	1	0.3	0.25	0.09	0
14450	JOHN MARSHALL	HY	3.847	FIRE STATION	1	0.86	1	435	0.26	1	0.86	0.26	0.08	0
9250	LEE	AV	2.307	OLD COURTHOUSE/PARKING	1	0.67	0			1	0.67	0	0	0
9254	LEE	AV	0.201	OLD COURTHOUSE/PARKING	1	0.07	0			1	0.07	0	0	0
9252	LEE	AV	0.186	OLD COURTHOUSE/PARKING	1	0.05	0			1	0.05	0	0	0
9256	LEE	AV	0.154	OLD COURTHOUSE/PARKING	1	0.04	0			1	0.04	0	0	0
9258	LEE	AV	0.163	OLD COURTHOUSE/PARKING	1	0.04	0			1	0.04	0	0	0
9300	LEE	AV	8.502	OLD COURTHOUSE/PARKING	1	2.2	0			1	2.2	0	0	0
9301	LEE	AV	4.68	OLD COURTHOUSE/PARKING	1	2.03	0			1	2.03	0	0	0
14870	LIGHTNER	RD	4.248	GAINESVILLE LIBRARY	1	1.1	1	160	0.15	1	1.1	0	0	0
4701	LOCUST SHADE	DR	642.151	LOCUST SHADE PARK AND FOREST GREEN GOLF	1	3.9	1	7170	3.95	1	3.9	3.95	1.36	0
8460	MAPLEWOOD	DR	27.478	JOSEPH READING PARK	1	0.4	1	1162	0.62	1	0.4	0.62	0.22	0
8601	MATHIS	AV	2.748	CENTRAL LIBRARY MANASSAS	1	1.35	0			0	0	0	0	0

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14716	MINNIEVILLE	RD	26.333	HOWISON HOMESTEAD PARK	1	1.3	1	899	0.53	1	1.3	0.53	0.17	0
14400	MINNIEVILLE	RD	0.367	DALE CITY RECREATION CENTER PARKING LOT	1	0.23	0			1	0.23	0	0	0
14300	MINNIEVILLE	RD	30.862	DALE CITY RECREATION CENTER	1	1.4	1	164	0.31	1	1.4	0.31	0.03	0
9320	MOSBY	ST	4.759	COURTHOUSE PARKING	1	1.85	0			1	1.85	0	0	0
9350	MOSBY	ST	9.452	COURTHOUSE PARKING	1	0.05	0			1	0.05	0	0	0
2081	OLD BRIDGE	RD	0.7	OLD BRIDGE COMMUTER LOT	1	0.39	0			1	0.39	0	0	0
2095	OLD BRIDGE	RD	1.138	OLD BRIDGE COMMUTER LOT	1	1.12	0			1	1.12	0	0	0
2201	OPITZ	BL	3.778	POTOMAC REGIONAL LIBRARY	1	0.93	1	53	0.038	0	0	0	0	0.01
9212	PEABODY	ST	3.74	COURTHOUSE PARKING	1	1.51	0			1	1.51	0	0	0
9307	PEABODY	ST	0.228	COURTHOUSE PARKING	1	0.18	0			0	0	0	0	0
9305	PEABODY	ST	0.151	COURTHOUSE PARKING	1	0.15	0			0	0	0	0	0
9303	PEABODY	ST	0.276	COURTHOUSE PARKING	1	0.12	0			0	0	0	0	0
10699	PIPER	LN	40.33	AIRPORT VRE STATION & COMMUTER LOT	1	4.44	1	1902	1.3	1	4.44	1.3	0.36	0
13800	POP MOUBRY	PL	20.88	LANCASTER PARK	1	0.17	1	258	0.13	1	0.17	0.13	0.05	0
14700	POTOMAC MILLS	RD	3.58	PRTC POTOMAC MILLS	1	1.78	1	419	0.34	1	1.78	0.34	0.08	0
14730	POTOMAC MILLS	RD	0.787	PRTC - HOMELESS SHELTER	1	0.35	0			1	0.35	0	0	0
14716	POTOMAC MILLS	RD	5.507	PRTC POTOMAC MILLS	1	1.9	0			1	1.9	0	0	0
13161	PUBLIC SAFETY	DR	8.276	PUBLIC SAFETY TRAINING FACILITY - PCL B	1	0.4	0			1	0.4	0	0	0
13101	PUBLIC SAFETY	DR	25.052	PUBLIC SAFETY TRAINING FACILITY - PCL A	1	2.29	1	2581	1.8	1	2.29	1.8	0.49	0
12731	RIDGEFIELD VILLAGE	DR	4.4	EARL CUNARD PARK	1	0.18	0			1	0.18	0	0	0
17301	RIVER RIDGE	BL	6.262	LACEY COMPTON PARK - WAYSIDE VILLAGE	1	0.35	1	310	0.15	1	0.35	0.15	0	0
16530	RIVER RIDGE	BL	5.656	RIVER OAKS FIRE STATION	1	1.03	1	854	0.57	1	1.03	0.57	0.16	0
16198	SILVER LAKE	RD	43.753	SILVER LAKE - EQUESTRIAN CENTER	1	0.8	0			1	0.8	0	0	0
15960	SINDLINGER	WY	4.4	FERLAZZO CENTER	1	1.42	0			1	1.42	0	0	0
13455	TELEGRAPH	RD	24.609	HORNER RD COMMUTER PARKING LOT	1	10.9	1	1531	2.3	1	10.9	2.3	0.29	0
12051	TYGART LAKE	DR	42.074	BROAD RUN LINEAR PARK - PUMP STATION	1	0.38	0			1	0.38	0	0	0
11930	VALLEY VIEW	DR	125.626	VALLEY VIEW PARK	1	5.4	1	3644	2.8	1	5.4	2.8	0.69	0
14300	VETERANS	DR	78.114	VETERANS MEMORIAL PARK	1	3.21	1	4221	2.3	1	3.21	2.3	0.8	0
14631	VINT HILL	RD	165	PRINCE WILLIAM GOLF COURSE	1	0.8	1	1736	0.804	1	0.8	0.804	0.33	0
4450	WATERWAY	DR	13.802	ANN MONCURE WALL PARK	1	1	1	1373	0.66	1	1	0.66	0.26	0

ST NO	ST NAME	ST TYPE	DEED ACRES	DESCRIPTION	Impervious Parking Lot? (Yes=1; No=0)	Area of Imp. Parking Lot (Acres)	Impervious Road? (Yes=1; No=0)	Imp. Road (Linear Ft)	Imp. Road (Acres)	Site BMPs (Yes=1; No=0)	Parking Lots Treated by BMPs (Acres)	Imp. Roads Treated by BMPs (Acres)	Imp. Roads Treated by BMPs (Miles)	Imp. Roads Not Treated by BMPs (Miles)
8642	WELLINGTON	RD	1.263	PWC JUVENILE CENTER	1	0.17	1	357	0.204	1	0.17	0.204	0.07	0
2430	WEST LONGVIEW	DR	4.156	HYLBROOK PARK	1	0.59	0			0	0	0	0	0
14811	DUMFRIES	RD	1061.984	FLEET BUILDING PARKING LOT ONLY	1	2.09	0			0	0	0	0	0
				TOTALS	87	132.5	53	68,697	43.685	78	122.9	41.2	12	0.8

Appendix D

Illicit Discharge Summary

Case #	Address	Issue description	Status	Assigned to	Date reported	Date of Inspection	Initial Findings	Source	Suspected Discharger	Violation Issued?	NOV #	Follow-up Inspecti	Follow-up Findings
50.2025	13805 Cynthiya Ct.	The county received a complaint regarding an illicit discharge happening from a neighbors house in 13805 Cynthiya Ct. They installed a pipe that drains into the ditch. It is the sump pump and water treatment system flushing out.	Completed	Poudel, Prem;#14	6/16/2025		Minor drainage case. Asked that resident stop any discharge to storm drain other than foundation drainage and rainwater	Neighbors' Property		No	NA		
49.2025	2198 Old Ironside Ct.	The source of the problem is a small white dog that resides at 2198 Old Ironside Ct. The dog is regularly let out to defecate on the public sidewalk, and the owner, a male of Asian descent consistently fails to clean up after it.	Completed	Poudel, Prem;#14	6/16/2025	6/16/2025	Dog poops were observed at reported.	Pet Belongs to 2198 Old Ironside Ct	Resident of 2198 Old Ironside Ct.	No	NA	7/16/2025	The undersigned could not meet the resident during inspection. Education materials were left at door for the owner. Follow up inspection will made after a month.
48.2025	3444 Jousters Way	The people living at 3444 Jousters Way Woodbridge, VA 22192, were observed trying to clean up a motor oil spill in the parking area in front of their home, while changing the oil in their vehicle.	Completed	Poudel, Prem;#14	6/6/2025	6/6/2025	Upon arrival, a dark patch was observed. The flow path was traced, and no adverse impacts were noted. It appears the discharge may have evaporated before reaching the storm drain. Spoke with homeowner, they will never repeat such activities in future.	Cleaning oil spill from pavement	The residents of 3444 Jousters Way	No	NA	6/9/2025	Spoke with the resident involved in cleaning the oil patch, provided education on proper spill response, and advised using absorbent material instead of allowing wash water to enter the storm drain.
47.2025	16225 Edgewood Dr	Montclair golf course recently painted their tennis courts. During the process this has been seen where paint was dumped in the ground.	Completed	Poudel, Prem;#14	6/6/2025	6/6/2025	Observed residual paint dumped and painting tools cleaned on the ground. Spoke with Mr. Adrian, provided education on proper disposal practices, and requested that he send photos confirming the paint has been removed from the area.	Montclair Tennis Court	Montclair Golf Course	No	NA	6/6/2025	Same as initial finding
46.2025	8548 wellington Rd	Prince William Water reported that 8548 wellington Rd has some sort of open sewer tank at their property. Neighbor have been complaining about sewer smell in the area.	Referred	Poudel, Prem;#14	6/3/2025	6/3/2025	Upon arrival, I noted sewage overflow forming a nearby lagoon, accompanied by a noticeable odor. The grass along the sewage flow path appeared significantly taller and darker green than the surrounding landscape, indicating prolonged exposure to stormwater.	Septic Tank/ Drain Field	8548 Wellington Rd	No	NA	6/3/2025	The case has forwarded to Health Department. Further steps will be taken by PWC Health Dept.
45.2025	5020 Observer Lane	Mr. Kabbani, a resident at 5022 Observer Lane, called to report a concern regarding a discharge from a neighboring property. He believes the discharge, which is coming from a white PVC pipe connected to the stormwater system, is originating from the neighbor's washing appliances. The water has an unusual odor, and the grass at the discharge point is noticeably damaged and remains in poor condition.	Completed	Poudel, Prem;#14	6/3/2025	6/3/2025	Discharge confirmed to be AC condense water. Drain pipe will be diverted to the backyard by the homeowner soon with in a week.	AC condense water	5020 Observer Ln	No	NA	6/3/2025	PVC Pipe carrying AC condense water has diverted back to his own property.
44.2025	16330 Throughfare Rd	Transmission fluid buckets have been me dumped alongside the railway tracks right before the nature refuge. The Nearest address is 16330 Throughfare Rd Broad Run, VA 20137	Completed	Poudel, Prem;#14	6/2/2025	6/2/2025	The dumping site is located at the border of 16330 Thoroughfare Rd and the railway easement. Unfortunately, it's quite difficult to determine who is responsible for the dumping. The discarded buckets appear to have contained automotive transmission fluid and seem to have been there for over two years. These containers qualify as hazardous materials.	TBD	Not Known	No	NA	6/2/2025	Would it be possible to coordinate with the DFR Hazmat team to address and resolve this issue?
43.2025	14609 Potomac Mills Rd	received a complaint regarding grease being poured into storm drain behind Texas Roadhouse	Completed	Uglow, Andrew;#12;#Canizales, Hannah;#9	5/23/2025	5/27/2025	inspected storm drain behind Texas Roadhouse and found a lot of built up grease covering the surface area of the opening to the drain. Spoke to manager and asst. manager and they claimed that they had recently had a sewage spill in that area that caused the grease build up.	grease	Texas Roadhouse	No			
42.2025	18329 Williams Road	A foul-smelling black discharge, resembling sewage, is accumulating at the property located at 18329 Williams Road. It is suspected that the source of the discharge may be from the neighboring property at 18333 Williams Road, where recent septic tank work has been carried out.	Completed	Poudel, Prem;#14	5/20/2025	5/21/2025	The initial findings are consistent with the complainant's report. The investigation will continue, and follow-up inspections will be conducted as needed, but within a 30-day timeframe.	TBD	TBD	No	NA	5/21/2025	The finding is consistent with the complainant. The county staff will reach out to neighbor for inclusive investigation.
41.2025	11950 Lee Hwy, Manassas, VA	Stonewall Cemetery has made a soil pile on property that is running off into stream.	Completed	Poudel, Prem;#14	5/1/2025	5/1/2025	Soil piles appeared to have been exposed for an extended period, despite the presence of a silt fence and vegetative buffers. The impact on the downstream channel is considered insignificant.	Pile was made of soil deposited from grave of Stonewall Cemetery.	Stonewall Cemetery	No	NA	5/2/2025	The property owner has contacted their vendor to remove the soil piles promptly. I provided a verbal deadline of one week, and a follow-up inspection is scheduled for then.
40.2025	13301 Gateway Center Drive	During routine inspection, PWC staff discovered salt debris left over on the parking lot of 13301 Gateway Center Drive.	Completed	Poudel, Prem;#14	5/2/2025	5/2/2025	Salt debris left over on parking lot and adjoining landscape	Target corporation's activities	Vendor of Target Corporation	No	NA	5/2/2025	Resolved
39.2025	11814 Hilltop Drive	The County received a complaint about neighbors trash being by the road for over a month. Animals are picking through it and trash is blowing in the wind.	Completed	Poudel, Prem;#14	4/2/2025	4/3/2025		11850 Hilltop Drive	The owner of 11850 Hilltop Drive	No	NA	4/16/2025	The trash has found to be collected and hauled. The case resolved for now.
38.2025	Stormwater Inlet nearby12968 Queen Chapel Rd	Prince William County staff received a citizen complaint about snow melt salt being dumped into a storm drain at the entrance of Queen Chapel Road, on the right side when entering from Hoadly Road.	Referred	Poudel, Prem;#14	3/24/2025	3/24/2025	Winter operation salt has dumped into storm water inlet. The case has forwarded to VDOT.	Unknown	Not Known	No	NA	3/24/2025	Same as initial finding. The case belongs to VDOT. Hence it has forwarded to VDOT, confirmation number is 2102281.
37.2025	Occoquan River, closer to overpass at 234	A complaint was received regarding a strange black sludge found in the water of the Occoquan River beneath the 234 overpass, near the Occoquan Blueway Trailhead.	Completed	Poudel, Prem;#14	3/19/2025	3/19/2025	Same as reported.	Organic Decomposition	It is a natural phenomenon at the river	No	NA	3/19/2025	The black substance observed is a natural sludge created by the decomposition of plant and aquatic life. Cleaning or removing it is neither feasible nor necessary, as it plays a vital role in the ecosystem.
36.2025	The monitoring sites are (38.753736, -77.582993) for the upstream location and (38.753030, -77.580072) for the downstream location.	The staff of PWSWCD has reported the oil scene on Broad Run River at following two locations: The monitoring sites are (38.753736, -77.582993) for the upstream location and (38.753030, -77.580072) for the downstream location.	Completed	Poudel, Prem;#14	3/17/2025	3/17/2025	Oil scene was reported by PWSWCD staff.	Shallow gulley connected with Broad Run	NA	No	NA	3/17/2025	Inspection made, very minor organic decomposition noticed, water quality tests were performed, the results were normal.
35.2025	4247 Glendale Rd	Complainant called regarding creek in backyard being orange and smelling bad	Completed	Canizales, Hannah;#9;#Uglow, Andrew;#12	3/12/2025	3/12/2025	we found that the creek was orange most likely due to iron oxidizing bacteria within the creek. The smell most likely due to leaf decomposition in the water, which also caused a sheen.	iron oxidizing bacteria and leaf decomposition	NA	No			
34.2025	12658 Lakeside Ct Woodbridge	A pile of asphalt has been dumped in the Reid's Prospect neighborhood in Woodbridge. Nearby, mulch seems to have been spread over a pile of old snow. It's also been reported that Belmont Gardens dumped seven piles of snow in this area during the last major snowstorm. Belmont Gardens is suspected to be responsible for the asphalt dumping.	Completed	Poudel, Prem;#14	3/5/2025	3/6/2025	The County staff will do follow up and investigation.	TBD	TBD	No	NA	3/6/2025	It is under follow up.
33.2025	15701 Carrs Brooke Way	The car wash located at 15701 Carrs Brooke Way, Manassas, VA 20112 is releasing a substantial amount of car wash byproduct into the storm drains of the surrounding parking lots. The discharge is likely several gallons of fluid per minute.	Completed	Poudel, Prem;#14	3/3/2025	3/4/2025	Overflow of carwash discharge from sanitary sewer was reported to Prince William County.	Carwash of 15701 Carrs Brooke Way	7-Eleven with Carwash Company	No	NA	3/4/2025	The driveway and parking lots were dry. County staff spoke with the Manager on Duty, who explained that the drain had already been cleared, resolving the issue.
32.2025	14131 Dave's Store Ln	complaint received regarding trash from the cars at the carwash being allowed to blow away into storm drains	Completed	Canizales, Hannah;#9;#Uglow, Andrew;#12	3/4/2025	3/4/2025	Spoke to the manager about making sure the trash from the cars is going in the trash can and trying their best to make sure the trash does not blow down the storm drain.	trash	Flagship Carwash Gainesville	No			
31.2025	13177 Habrown Ct, Woodbridge	Doog poops containing green bags are found to be dumped at the landscape just beside the outfall (SWMP#337) and open spaces of Habrown Ct HOA property.	Completed	Poudel, Prem;#14	2/27/2025	2/27/2025	Doog poops	TBD by Brook Farm HOA	TBD	No	NA		
30.2025	Adjacent property of 14916 Slippery Elm Court	Mr. Lynn Hinman at 14916 Slippery Elm Court has complaint about a close neighbor that blows his leaves into the road, gutter and storm drains. Mr. Hinman is looking to see if there is anything we can do to help educate the neighbor about what it does to our water ways.	Completed	Poudel, Prem;#14	12/19/2024	12/20/2024		Adjacent property of 14916 Slippery Elm Court	TBD	No			
29.2025	3019 Seminole Rd	Received email from Jess regarding a complaint made to her about a broken sanitary line behind a townhome. Complainant advised that PW Water repaired the line, however, there is still waste water sitting on the ground. Complainant claims she has contacted PW Water and Health Dept., but they would not provide assistance.	Completed	Canizales, Hannah;#9	12/4/2024	12/4/2024	Observed water coming from clean out valve at complainants address, as well as standing water in the back of the property, which was draining directly into the creek located behind the property. Water did not have a foul odor. Spoke to the homeowner's plumber on site, and he advised that there may be a clog in the main line.	sewer line backup		No	NA	12/6/2024	issue with sanitary sewer pipe was fixed and water was dried up. Nothing flowing into creek.

28.2025	14123 Noblewood Plz	Driving by and saw uncovered salt piles in BJ's parking lot that were discharging salt into the nearby storm drain.	Completed	Canizales, Hannah;#9;#Uglow, Andrew;#12		12/4/2024	observed uncovered salt piles right next to a storm drain. Issued warning letter to store manager.	salt piles	REALTY INCOME PENNSYLVANIA PROPERTIES TRUST 2 C\O BJ'S WHOLESALE CLUB INC.	No	NA	12/9/2024	salt pile very nicely covered and contained
27.2025	2404 Gunwale Pl	contractors dumped floor tile, rocks, sediment that may contain asbestos. dumped it in the backyard, which drains down to the Occoquan.	Completed	Poudel, Prem;#14;#Canizales, Hannah;#9;#Uglow, Andrew;#12	12/3/2024	12/3/2024	found dumped floor tile/dug up material from the basement at the edge of the hill that leads down to Occoquan. Looked like material could possibly contain asbestos, which was confirmed by the homeowner.	Floor tile dug up from basement by contractor	Home Doctor Services		26-2025		
26.2025	Hedges Run Dr	excess fertilizer at multiple sidewalks and parking areas within Lakeridge community along Hedges Run Dr.	Completed	Canizales, Hannah;#9;#Uglow, Andrew;#12;#Poudel, Prem;#14		12/3/2024	Observed excess fertilizer on multiple side walks and parking areas in multiple communities along Hedges Run Rd.	fertilizer	Lakeridge HOA	No	NA		
25.2025	1430 Flagship Dr	A car tire that was dumped along the roadway infront of 1430 Flagship Dr in Woodbridge VA. The tire was seen on 11/25/2024.	Completed	Poudel, Prem;#14	12/3/2024	12/3/2024	Reported roadside tire dumping	Unknown	TBD	No	NA	12/9/2024	The county staff discovered a tire dumping at road side. Tire has picked up.
24.2025	Intersection of Ashton Ave and Sudley Manor Drive	A truck was reported dumping a bunch of liquid out of a tote. They stopped at the intersection, someone got out and reached in the back of the truck bed and then liquid started pouring out of their tote.	Completed	Poudel, Prem;#14	11/27/2024	11/27/2024	Reported discharge liquid from the truck.	Hauling Truck or Tanker	TBD	No	NA		Inspected the site reported about discharge. There was no physical evidence of discharge at the intersection. Tracked stormwater system, there was no impact on downstream CSWMP 5212.
23.2025	14510 Richmond Hwy	Observed discharge from laundry mat operation. Appears company cleans items outside .	Completed	Uglow, Andrew;#12	11/19/2024	11/19/2024	Talked with worker at site about observed conditions from outside of business. She called her boss. Met with boss and informed of the issue and they will find a different way to maintain equipment.		Laundromat Facility	No	NA		
22.2025	11809 Colvin Ln	Ms. Kelly Reams of 12060 Parkgate Dr (703-309-8122) reported that one of the residents living upside of the stream use to pump water from creek and discharge sediment back to the creek.	Referred	Poudel, Prem;#14	11/6/2024	11/7/2024	The farm located at 11809 Colvin Ln was developing 5 fish farming ponds. The sediment laden water was seemed to pumped out which eventually flows towards the downstream property 12060 Parkgate Drive.	The source of sediment was sediment laden flow from the ponds digging out at the property 11809 Colvin Lane.	The property owner of 11809 Colvin Ln.	Yes	Issued By NSD	11/7/2024	PWC NSD has issued the violation to the property owner digging ponds without taking permits. Sediment Laden pond water was pumping out which ultimately flow into downstorm channel passing through 12060 Parkgate Drive.
21.2025	Intersection of Route-1 & Neabsco Rd.	Littering was reported beside the bus stop at route one very close to the interaction with Neabsco Rd.	Completed	Uglow, Andrew;#12	8/16/2024	8/19/2024	Litters	Not known. Could be the people commuting by public bus services	Not known. Could be the people commuting by public bus services	No	NA	11/13/2024	Litters
20.2025	15720 Neabsco Rd	Littering around the wood log located beside Neasbco Rd across the road of wawa. The log located at the off side bank of creek. The creek is passing through road culvert.	Completed	Poudel, Prem;#14	11/4/2024	11/13/2024	Litters- Most of bear cans and water bottles	Not known	Not known	No	NA	11/13/2024	Litters were collected and dumped properly in trash
19.2025	Running waste water hauling business in PWC territory	The business owner requested about the protocol for dumping waste water from hauling tanker.	Completed	Poudel, Prem;#14	11/4/2024	11/4/2024	Inquiry about waste water disposal	Hauling Tanker from different businesses	Mr. Rayan Thomas, (703) 969-6394	No	NA	11/4/2024	Mr. Andrew Uglow, informed him to contact with UOSA/Prince William Water for specific places to dump. Dumping waste water does not allow into open ground, creeks and storm water system.
18.2025	7201 New Stable Way	The tanker of pool water supplier discharges water into storm drain.	Completed	Poudel, Prem;#14	10/19/2024	10/23/2024	Reported pictures indicate that Pool Water Tanker discharge water into storm drain.	Tanker	Pool Water Supplier	No	NA	10/23/2024	Same as initial finding. The county staff talked to the staff of supplier Ms. Cora Baker (703-661-4867) and got information that the tanker use to get water from Fire Hydrants which is drinkable. Information was transmitted to the complainant..
17.2025	4414 Marquis Place, Woodbridge	Discharge of Pool Water Into Storm Sewer System.	Completed	Poudel, Prem;#14	10/18/2024	10/18/2024	Upon arrival on County's Staff, the vendor American Pool Water (APW) was employed for pool maintenance. Educational Materials will be send to the vendors to make their crews aware about pool maintenance protocol. Call made to the complainant and formal information will be sent by emailing him at gregoryjcampbell86@gmail.com	Pool Water of 4414 Marquis Place	Homeowner- 4414 Marquis Place	No	NA	10/18/2024	As per the pool maintenance vendor, they checked the pH and found in standard range before discharging.
16.2025	7381 Kurt Kahn Trail	PWC IDDE staff received a citizen complaint regarding one or two tubes draining stuff into the creek. This is between Falling Creek Drive and Kurt Khans Road. The property with the drainage tubing is 7381 Kurt Kahn Trail, noticed from 11921 Falling creek drive Manassas VA 20112.	Completed	Poudel, Prem;#14	10/17/2024	10/18/2024	Will update after follow up.	TBD	Homeowner of 7381 Kurt Kahn	No	No	10/18/2024	Will update Later
15.2025	17365 Four Seasons Dr	Report of paint like substance near storm drain at the Four Seasons Community across the street from 17365 Four Seasons Dr.	Completed	Uglow, Andrew;#12	10/11/2024	10/11/2024	small salt pile and small unknown substance pile next to storm drain. Unknown substance was observed in the storm drain downhill from the piles.	salt and orange glittery substance	Unknown	No			Please see attached email from HOA Rep with photos of cleanup.
14.2025	4021 Prince William Pkwy	Senior Environmental Manager Ms. Jennifer Boeder reported the spill incident happened in Sheetz gas station with some pictures in the morning.	Completed	Uglow, Andrew;#12;#Poudel, Prem;#14	10/1/2024	10/1/2024	PWC DFR and Hazmat Team arrived on site and cordoned the spill areas. The manager of Sheetz Ms. Lisa also arrived with Environmental Contractor. The areas has cordoned, Sheetz will complete the cleanup work. The mitigation work has completed by the joint effort of PWC Hazmat team and vendor of Sheetz Company.	Gas Station	Sheetz Business	No	NA	10/1/2024	Will do randomly in future as it is one of the potential hot spots.
13.2025	14861 Potomac Branch Drive	Discharge wash water into storm drain by the Carpet Cleaner, Angela's General Cleaning.	Completed	Poudel, Prem;#14	9/26/2024	9/26/2024	The incident occurred on Wednesday, September 25 in the vicinity of 14861 Potomac Branch Drive. The investigation revealed that a cleaning contractor, poured soiled carpet cleaning water into the storm drain. The offender readily admitted his actions and clarified that he "...knew better." He also stated that he did not use any chemicals during the carpet cleaning process. We did not observe an accumulation of product on the ground nor in the storm drain. The offender was issued a Notice of Violation pursuant to the provisions of the Virginia Statewide Fire Prevention Code, for violating Section 5003.3.	14861 Potomac Branch Drive	Angela's General Cleaning	No	NA	9/26/2024	The County staff Inspected the storm water inlet and entire drainage system up to the outfall. The system has seemed to be flushed due to heavy rain of last night.
12.2025	12915 Occoquan Rd	E&S staff reported that the sediment laden flow into the stormwater channel passing through 1328 Devils Reach Road from active construction site of Occoquan Elementary School.	Completed	Poudel, Prem;#14	9/17/2024	9/17/2024	Our team confirmed that sediment laden flow was following from construction site to the channel of neighboring property, 1328 Devils Reach Rd through outlet. Sample was taken at the outlet. The collected sample was dense and opaque due to suspended very fine particles. Walked along the flow path, observed significant amount of sediments deposited though aggregate check dams were made in 4 different locations across the flow. Observed two mud bags (One Bigger and another small) laid one small over the big ones. Lower one was almost tight with full of sediment. Upper ones was directly observed backflow from the inlet as pumping into from an upstream pool.	New Construction Site	Occoquan Elementary School/ Contractor	No	NA	9/17/2024	The sediment laden flow generated from the active construction site need to be stopped and dredging of deposited sediment from downstream channel need to be carried out by the responsible party.
11.2025	5001 Burnside Farm Place Haymarket	White discharge observed on creek located behind the house 5001 Burnside Farm Place Haymarket.	Completed	Poudel, Prem;#14	9/11/2024	9/11/2024	The county staff inspected the creek and found approximately 2 lb white substance dump into water near by Walking Trail Bridge.	Unidentified	Unidentified	No	NA	9/12/2024	The white substance confirmed to be wheat flour. The incident was seemed to be happened once and the substance is biodegradable. The investigation is closed as there was no significance impact on creek.
10.2025	11101 University Blvd, Manassas	Amount of trash and debris scattered around the old Comcast parking lot off University Drive and 234	Completed	Poudel, Prem;#14	9/4/2024	9/4/2024	Upon arrival, the County staff discovered a lot of trash on parking lot and adjacent landscape which ultimately transported into stormwater inlet with different means, met the Customer Service Manager Mr. Sameer Shrestha, Educated and gave him verbal warning to collect and dispose all trash properly with in a week	MobileSentrix	MobileSentrix Company - Tenant	No	NA	9/4/2024	Follow up made on 9/16; Trash removed, Case Closed.
9.2025	7450 Wilmer Way	The smell was found to be exposed at the N-W corner of the House.	Completed	Poudel, Prem;#14	8/29/2024	8/29/2024	Noticed the smell of gas at the N-W corner of the house	TBD- Suspect Gas Pipe Leakage	TBD	No	NA	8/29/2024	The County staff suggested to homeowner to contact gas supply company for resolution. This case is not belongs to PWC Public Works.

8.2025	13101 Public Safety Drive	Dump large pile of burned wood and ash into SWM facility	Completed	Poudel, Prem;#14	8/27/2024	9/3/2024	Will mention initial finding after inspection	TBD	TBD	No	NA	9/3/2024	Will set up later
7.2025	404 Mill Street	Dumpster Juice was leaking out to the ground, compromised with runoff, died landscape grasses and contaminated runoff ultimately flow to the Occoquan reservoir.	Completed	Poudel, Prem;#14	8/20/2024	8/20/2024	The dumpster was leaking, out through the container and flowing all around the graveled ground and downstream landscape. The contaminated runoff was obviously flowing into Occoquan Reservoir.	Restaurant	The Secret Garden Cafe	No	NA	8/20/2024	The case will be forwarded to Town of Occoquan to mitigate the deficiencies.
6.2025	10501 Bristow Center Dr	The Citizen Complaint about trash build up on the pond located besides the Bristow Center Shopping Center. Some trash and litters are floating over the pond surface.	Completed	Poudel, Prem;#14	8/12/2024	8/12/2024	The facility in questions is a Commercial Stormwater Management Pond (CSWMP-5769). Upon arrival, the western part of pond behind the District BBQ Bristow was treated with Blue Dye Pond refresher and running a single sprinkler. Backup litters and trash were observed at the pond perimeter. Property Management Company have to aware tenants for good housekeeping practices and run periodic trash pick up as per needed. The county will reach out the Management to mitigate the deficiencies.	Bristow Center Shopping Center	Tenants of Bristow Center	No		8/27/2024	Will do on 27th August. Follow up made [8/28]. Trash were picked up. As per property Mgmt, all of the sprinklers will run shortly.
5.2025	5301 Dale Blvd	parks employees left water pump to fill pool on overnight. The chlorinated water overflowed and was discharged into the storm drains and dry ponds.	Completed	Uglow, Andrew;#12	8/5/2024	8/5/2024	Inspected both inside the facility and around it. Located storm drain and two SWM dry retention ponds that may have been contaminated. Also walked both upstream and downstream of the creek, including both outfalls. Noticed slight smell of chlorine at both outfalls, but no dead wildlife. We were able to located live fish and tadpoles upstream. We walked site again with DEQ and Risk. No adverse effects on the stream were found. Chlorine testing by Waterworks staff showed little to no chlorine present in stream. 120k gallons based on Parks calculations.	chlorinated pool water	PWC Parks	No		8/6/2024	Walked site and found live fish in the stream. Still no adverse effects on the stream detected.
4.2025	8002 Flannery Ct	The county staff discovered to use landscape for fertilizer dumping and handling, The consequences of this activities seemed denuded spots on landscape and potential for runoff contamination.	Completed	Canizales, Hannah;#9;#Poudel, Prem;#14	7/29/2024	7/29/2024	Upon arrival, observed denuded landscape with fertilizers and chemical lumps, white dust had been speeded on street, stormwater curbs and gutter, nearby dumpster. NOV has issued to mitigate the deficiencies.	Natural Lawn of America	Natural Lawn of America	Yes		8/15/2024	Follow up inspection was made [8/15] & [9/16]. Natural Lawn of America, has removed debris, collected white substance from street and seeding grass on denuded spots has been started by aerating the ground. Company waiting a good season for seeding grass.
3.2025	14990 Farm Creek Drive	Carwash Discharge into stormwater system	Completed	Poudel, Prem;#14	7/17/2024	7/17/2024	During rutine inspection, the County Staff observed chemically contaminated carwash water into stormwater system. Finally source confirmed from Koons Kia. Notice of violation issued to correct the deficiencies.	Carwash	Koons KIA	Yes		7/25/2024	Carwash volume decreased but still continued. 2nd follow up inspection made [8/8] by team of IDDE, educated to the manager about illicit discharge, decided to follow up after a month to assure incompliance.
2.2025	15004 Farm Creek Drive	During rutine inspection, the County Staff observed chemically contaminated carwash water into stormwater system. Finally source confirmed from Imperial Paint and Body. Notice of violation issued to correct the deficiencies.	Completed	Poudel, Prem;#14	7/17/2024	7/17/2024	During rutine inspection, the County Staff observed chemically contaminated carwash water into stormwater system. Finally source confirmed from Imperial Paint and Body. Notice of violation issued to correct the deficiencies.	Car Wash	Imperial Paint and Body	Yes		7/25/2024	County staff discovered minimizing carwash activities. Team of IDDE staff made followup inspection[Aug.8], educated business owner about control stormwater pollution.
1.2025	15000 Farm Creek Drive	The sanitary sewage was discovered overflowing through the clean out of sanitary lateral on random visit.	Completed	Poudel, Prem;#14	7/17/2024	7/17/2024	The sanitary sewage was discovered overflowing through the clean out of sanitary lateral on random visit. The evidence shows that the sanitary sewage overflow could happen from last few days. The clean out was found without a cap. Grease, Trash and debris were found at the pool of overflowing sewage.	Viet My Corp Food Company	Viet My Corp	Yes		7/29/2024	Initial follow up inspection made [July 25th], discharge stop and controlled, the clean out remained open, 2nd flow up made [29th July] clean out capped, trash and debris removed.

Appendix E

Oil and Household Hazardous Waste Disposal Summary

FY25 Oil and Hazardous Waste Disposal Summary

Prince William County owns and operates the Prince William County Landfill, a permitted municipal sanitary landfill located at 14811 Dumfries Road in Manassas, Virginia. The landfill serves all residents, businesses, and institutions within Prince William County. A household hazardous waste (HHW) collection facility is located on the landfill property, which is owned by the County and operated by a vendor, currently Clean Harbors of Laurel, Maryland. The HHW facility is open two days a week, year-round (Wednesdays and Saturdays), from 10:00 a.m. to 5:00 p.m. Clean Harbors is responsible for proper packaging and safe recycling or disposal of all HHW collected at the facility. The landfill also has collection locations for other wastes, including vegetative wastes, used motor oil, and other vehicle fluids. Information about the County landfill and acceptable wastes is published on the County's website at https://www.pwcva.gov/department/solid-waste-management. Specific information about the HHW program is located at https://www.pwcva.gov/department/solid-waste-management/household-hazardous-waste.

- **Residents**
  - Offer twice a week collection of household hazardous waste and electronics year-round at the County Landfill and once a month at the Balls Ford Road Compost Facility.
  - Maintain a safe building for residents to drop off household hazardous waste and electronics with proper storage as needed.
  - Offer daily collection of used motor oil, antifreeze, and car batteries.
  - Provide useful signs to direct residents on how to properly dispose of these materials when they arrive at the landfill and compost facility.
  - Provide clear and complete information about management, storage and delivery of household hazardous waste to the County landfill and compost facility through brochures and instruction sheets, web pages, public service announcements and newsletters
- **County Government**
  - Provide extensive training on the proper handling and disposal of chemicals and potentially hazardous materials
  - Provide extensive training on how to respond to and report a chemical spill.
  - Established an effective program for handling motor oil, antifreeze and other vehicle fluids at the Fleet Maintenance Shop
  - Conducted an inventory of chemicals in use by County agencies and arranged a collection of no longer used products with a licensed handler.
  - Piloted a program to collect chemicals from agencies and work with County contractor to accept them at designated intervals throughout the year.
  - Produced a preferred chemical list to reduce the use of potentially hazardous and harsh products.

Appendix F

Spill Response Summary

Incident #	Date	Location	Source	Incident Narrative	Status
FD240029284	7/10/2024	PW PKWY/University BLVD	Fuel	PE506, HM506, and HS506 were dispatched to an auto accident with a report of fuel leaking from a saddle tank. R506 and K506 were added to the call in order to respond with all assigned HM Techs and necessary apparatus. 506 units arrived on scene to find a dump truck with a saddle tank leaking diesel fuel. Units on scene had used absorbent and dirt to create a damn to capture the leaking diesel fuel and protect the adjacent storm drain. No product entered the storm drain. HM506 placed a 150-gallon pop-up pool under the leaking saddle tank and attempted to plug the leak using a wax ring, however the source of the leak was not accessible due to deformation of the tank and battery tray. The driver of the truck stated the saddle tank was 55 gallons and he estimated they were 60% full. We estimated approximately 30 gallons of product had leaked onto the roadway. DHM Lind spoke with the driver of the truck and the owner of the company (on the phone) and issued an LEPC form to the driver and explained to both parties what it meant. Waggy's towing arrived on scene and assumed clean up responsibility. The scene was turned over to county Police.	Closed
FD240030292	7/25/2024	12669 Classic Springs Dr	Underground Propane Tank	PE506, R506, HM506, and HS506 were dispatched to a Hazmat incident which was a reported underground propane tank leaking product. K506 was added to the call in order to respond with all assigned HM Techs and necessary apparatus. 506 units arrived on scene and completed a face-to-face interaction with PE507, who was the first arriving unit. PE507 reported hearing the propane leaking and identified where the tank was located. HM506 formed 2 entry teams for recon of the area. PE506 officer made contact with a representative from the construction company that owns the property, and he stated that the home and adjacent homes were unoccupied and not turned over to residents yet. Rep stated that an erosion control company was completing site work and ran over the tank lid of a 500-gallon propane tank with a skid steer loader. Crews cleared the area once they realized the tank was compromised. Rep also stated that Holtzman propane owns the tank, and they had been contacted prior to our arrival with a 2-hour ETA. The tank was filled two weeks ago but the current level was unknown. Entry teams donned PPE and investigated the tank. Readings directly around the tank were as high as 10% lel, but units monitoring the warm zone had zero readings. Entry team was able to secure the leak using a wooden cone, wax seal, and chem tape. The leak was secured approximately 20 minutes after our arrival. Once the leak was secured, crews continued to monitor every 5 minutes for any changes, and none were noted after over 30 minutes. PE507 remained on scene to monitor the tank and await the arrival of Holtzman Propane.	Closed
FD240030599	7/27/2024	2495 PW Pkwy	Gasoline	*Documentation Only* DHM Lt Lind and Peele fielded a phone consult (speakerphone) from T520 Officer regarding a gasoline spill at a fueling location. The spill was less than 10 gallons and contained to the area directly adjacent to the fuel pump. No product was in danger of entering any storm drains. T520 arrived to find the manager of the property using absorbent from their spill kit and T520 also used some of theirs. T520 notified the property manager that they were responsible for the clean up of the absorbed product and that the Duty FM (Lt. Schultz) would be following up to ensure they were compliant.	Closed
FD240031995	8/5/2024	18202 Possum Point Rd	Petroleum	DHM Lt Lind and Peele fielded a phone consult (speakerphone) from the Duty FM (Lt. Pat Reubens) regarding an incident which a vehicle had driven off the roadway and was fully submerged into a body of water. The body of water had two culvert pipes that passed under Possum Point Road and connected to the Potomac River. The concern was that the submerged vehicle would release petroleum product that could enter the waterway. PE506, R506, and HM506 went en route to the location and met with Lt. Reubens and county PD (Officer M. Mansour). Triangle Shell Towing was already on the scene planning the vehicle recovery. HM506 personnel investigated the area and made a plan for putting booms in place to isolate any potential product in the water. Due to the topography, accessing the water in any location would require a low-angle rope setup and would be higher risk due to the time of day and limited visibility. HM506 determined the most appropriate course of action would be to test the water with oil paper after the vehicle was winched out. Prior to and after the vehicle was removed, there was no visible petroleum sheen on the surface of the water. HM506 tested the water in several areas with oil paper and came back negative. The scene was turned over to county PD. *When VA EOC was notified, Captain Peele requested that Alan Lacy and Steven Fontenot were specifically made aware of this incident and Jock assured that they would be.	Closed

FD240032310	8/8/2024	I 66 W 38.2 mm	Diesel Fuel	DHM Lind and Peele fielded a phone consult (speakerphone) from BC501. Units were at the scene of an auto accident involving a semi-truck and another vehicle on I 66 W in between the 38.2 and 38.1 mile marker. The semi jackknifed which caused one of the saddle tanks to become compromised and ended up in the center median. PE506, R506, HM506, and HS506 responded to the scene. Arrived on scene and met with BC501 and R522 officer. R522 placed a pop-up pool to try and collect leaking diesel fuel and also attempted to plug the punctured tank with a wax seal. Based on information from the semi driver, it was estimated that approximately 50 gallons of diesel fuel leaked from the tank. No waterways were affected, however it started to rain heavily around the time HM506 was clearing the scene. HM506 used plug n dike to stop the leak which was successful. Redmans was on scene prior to our arrival and were going to recover the truck and clean up any product that leaked on the roadway. LEPC was issued to the driver of the semi and he confirmed that his company, Schnieder, had already contacted an environmental cleanup contractor for the product which leaked into the grass in the center median. VSP was made aware of the cleanup plans and the trooper on scene stated he would pass the information on to VDOT. When VA EOC was contacted to report the incident, they were asked to have DEQ follow up as well to ensure proper cleanup had occurred.	Closed
FD240033364	8/14/2024	MM48.4 I66W	Gasoline	Rescue and Hazmat 506 were dispatched to assist with an auto accident at the dispatched location. Via radio, the DHM cell phone number was given to E428's OIC to contact me. I spoke to the Captain on E438, and they advised that a commercial/industrial water truck for construction sites had crashed into the jersey wall on 66 WB. He initially advised that up to 30 gallons of gasoline had spilled onto the roadway. After further inspection, the fluid was found to be brake fluid from a ruptured line mixed with water that was being carried on board. He advised that he could handle the situation with stay dry and that the tow truck was already on their way. None of the product entered any waterways and the product was contained to the roadway. Company 6 units returned to service. E438's Captain was advised to call the DHM cell for further guidance if needed.	Closed
FD240034779	8/23/2024	1435 Old Bridge Rd	Motor Fluids	Lt Lind fielded a hazmat phone consult from AC DeSantis from the OWL VFD. He was the incident commander on a fatal vehicle fire at the incident location. He advised that there was a hybrid vehicle that had caught fire in the middle of Old Bridge Rd and that they had a small amount of run off from the vehicle. The fire was out and Fairfax Fire units had deployed their fire blanket on the vehicle. Units on scene also noted "off gassing" from the vehicle under the blanket. Safety 502 (Lt Uribe) was contacted since he was on scene and requested that he check the atmosphere in the vicinity of the vehicle with his MultiRae, and to check for run off down Old Bridge Rd. He advised that he had normal readings, that run off was at a minimum with no waterways affected, and that the car was checked with a thermal imager with a reading of 90 degrees Fahrenheit. I advised Safety 502 to continue to monitor the atmosphere and to report any abnormalities to me and the IC asap. DCO McCoy also contacted me from on scene and I advised him of the findings and recommendations given to the IC and Safety Officer. After investigation from PD, they advised that the deceased occupant sprayed gasoline from a nearby gas station inside the passenger area of her car. It is believed that most of this product burned with the vehicle, and that any run off was normal fluids as a result of a vehicle fire. The VA EOC was also notified of the incident involving the electric vehicle.	Closed
FD240035825	8/30/2024	17699 Four Seasons Dr	gasoline, diesel fuel, algae treatment (blue dye) and fertilizers	DHM consult fielded by Lt Lind. BC503 (Capt. Darabond) advised that there was a significant leak of a blue liquid as a result of a building fire. Other known chemicals in the building were gasoline, diesel fuel, algae treatment (blue dye) and fertilizers. These hazards had also potentially leaked as a result of the fire suppression efforts. Units on scene preformed defensive measures by placing booms and basic damming and diking until our arrival. Hazmat units from Station 6 AOS and preformed a hazard assessment of the runoff. It was determined that the blue chemical was an environmentally safe blue dye used for ponds and waterway around the development. Other hazards noted did not seem to be present in the runoff and were contained in the immediate area of the fire. Run off of blue dye was noted entering into a nearby creek and traveling downstream towards what appeared to be Quantico Creek. Since the product was deemed environmentally safe, no further action was required by hazmat resources. Additional damming utilizing soil and booms were preformed to help contain residual runoff from the scene. Oil paper was used to test various standing water around the scene with negative results. A sample of the blue liquid was obtained and tested on the GEMINI with no results. Notifications were made to the State EOC and to Alan Lacy with VA DEQ by HMO 501, Matt Adkins. An LEPC was issued to the responsible party/representative on site by BC Hubbel. Units returned to service without incident.	Closed

FD240038940	9/20/2024	9905 Godwin Dr	Engine Oil	RE521 requested a phone consult with the DHM for a hazard that involved a large quantity of engine oil (approximately 44 qt.) that spilled due to ground barrior striking the vehicle's oil pan at the entrance of a commercial building. RE521 stated that the oil was contained within the dispatched address storm drain. The property manager Greg Eaton took procautions and place absorbent pads and booms at the spill sight as well as the storm drain access location. HM506 decided to respond to the incident to asses the situation and to mitigate the hazard if needed. HM506 arrived on scene and confirmed the spill was contained to the facilities property only and had no hazardous affect on local waterways. Emily Italiano, who is the stormwater program analyst for Manassas arrived on scene to gather information of the situation as well.She also agreed with HM506 that the product did not contaminate addition waterways or watersources. The commercial vehicle that was involved was owned by Dominion Electric Supply. Anthony Crowne, a supervisor for Dominion Electric Supply claimed responsibility for the spill and stated that they have contacted their commercial insurance company to clean up the hazard. Later within the day, HM506 was contacted by a person named Rick Lawrence of Zurich American Insurance company for Dominion Electric Supply notified us that they will handle the cleanup.	Closed
FD240042887	10/17/2024	I 95 N 155.3 mm	Diesel Fuel	DHM Peele fielded a phone consult from PR510 OIC (Dimmel) for a semi-truck on its side leaking diesel fuel. Crews on scene were able to tighten the fuel tank cap which stopped the fuel from leaking. Crews also used earth dams to contain the fuel that had already leaked out. The driver of the semi was DOA so I advised Dimmel to work with VSP to ensure proper clean up procedures are followed. Courtesy notification was made to VA EOC after consult.	Closed
FD240046638	11/11/2024	Intersection of Wellington Road and Godwin Dr	Diesel Fuel	DHM Mirabile fielded a phone consult from T511 OIC. An American Disposal Trash Truck was involved in an auto accident with a ruptured with roughly 70 gallons of diesel fuel on the side of the road. The saddle tank was empty on arrival. T511 put large amounts of absorbent on the side of the road. The leak was approximately 100 feet long and stopped 10 feet prior to a storm drain. No further resources were requested from Hazmat. Road Runner Towing picked up the trash truck. VA EOC contacted. LEPC was not issued by unit onscene. T511 had already left scene. LEPC form emailed to POC below.	Closed
FD240048691	11/25/2024	Brady Ln / Balls Ford Rd	Diesel Fuel	BC 504 requested a hazmat consult for an overturned 18 wheeler that was leaking diesel fuel from the saddle tank. Units on scene created dams with absorbent to capture the fuel that was already on the ground. A pop up pool was utilized for residual fuel leaking. While on the phone with BC 504, crews reported they had stopped the leak, but were remaining onscene till the truck was uprighted. R506 and HM506 responded to the scene. HM 506 utilized a golf tee to plug the fuel line that had broken off and secure the leak. The saddle tank was in tact and no other hazards were found. Approxamtely 5 gallons of fuel leaked onto the road. No waterways were effected during this incident.	Closed
FD240050625	12/8/2024	8608 Liberia Ave	Propane	Duty Hazmat received a phone consult from Engine 501's officer concerning a propane tank on a Food truck that was leaking fluid onto the ground behind a residency. Duty Hazmat Officer advised crew on scene to pull a hose line and monitor immediate areas, while Capt. Adams upgraded the incident to a Hazmat call. Hazmat 506, Engine 506, Rescue 506, and Medic 506 responded to 8608 Liberia Avenue. When crews arrived on the scene Captain Adams received an update from the incident commander and established Hazmat Group Supervisor. Three members of Hazmat 506 then made entry in full turnout to monitor the environment and perform recon. Entry crew returned and informed the Group Supervisor that they found a 20 gallon Propane Cylinder under a food truck that was leaking liquid propane from what appeared to be a faulty valve. The crew decided the best approach would be to vent the cylinder, as the valve appeared to be rusty and too dangerous to close. Crews performed flaring operations under the supervision of a charged hose line off of engine 501. The flaring operations lasted 30 minutes, until the tank was fully empty. Crews monitored the area and the neighboring homes, and found normal readings in all locations.	Closed

FD240051038	12/11/2024	10685 Burwell Rd	Fuel	Accident with entrapment dispatched at the above address with units from Co. 5, 22 and 4. Units arrived on scene and found a 2,500 gal fuel oil home delivery truck upside down on Burwell Road. The vehicle was placarded with a 1993 placard and the driver confirmed that he had red dye diesel on board. Vehicle License – VA TW 22-266. The vehicle was reported to have 4 individual “pots”, and they were marked as “#2 Fuel Oil”. The incident was upgraded to a Hazmat and E506, R506, HM506 and HS506 were added to the incident. Units arrived on scene to find the truck inverted and leaking fuel from the saddle tank on the passenger side. There were no apparent leaks from the product tanks. E506 deployed two booms in the roadside culvert and spoke to the driver to confirm product and documentation. R522 secured power to the vehicle. The vehicle was owned by Southern States and was reported to have “900 gallons” of red dyed diesel on board. Jorge Saldana from Southern States was contacted who in turn had their spill response team and a new tanker arrive on scene. Jorge estimated a 40-minute response time for these assets. E506 and R506 monitored the culvert and did not see any evidence of leaks from the main product vessel. When Mr. Saldana arrived on scene, he was issued a Discharge form. Southern States representatives, Willow Springs Towing & Recovery and GEC Environmental arrived on scene. They drilled the one pot that had residual product in it and offloaded it using their own staff and equipment. R506 and E506 remained on scene during this to observe and assist if needed. E506 did provide one little giant ladder to the crews, and recovered it after operations concluded. When fuel was offloaded, GEC Environmental crews laid down more booms in the culvert and turned the vehicle over to the tow company, who then righted the vehicle and towed it away. E506 and R506 returned to service without incident. PWC FMO responded to the incident with Lt. Reubens and Lt. Berecz. They issued a Notice of Violation #FCE2025-00388 to Jorge Saldana for illicit discharge and responsibility to clean up.	Closed
FD2400041271	10/6/2024	2300 Opitz Blvd	Engine Fluid	On Duty Hazmat Officer received a call from BC Newell, on 10/6/2024 regarding a spill that occurred on 10/4/2024 at 2300 Opitz Blvd. On 10/4/2024 Medic 517 had a mechanical failure on the apron of the emergency room loading ramp. As a result M517 spilled a unknown amount of fluid out of the engine compartment. Crews on scene spread absorbent on the spill and notified Battalion Chief Newell and Fleet. Fleet arranged for M517 to be towed. While on the scene the dispatched tow truck driver failed to clean up the absorbent placed by m517. On 10/6/2024 at 1030hrs, the on duty Hazmat Officer was notified of the spill. The On Duty Hazmat Officer notified Hazmat Coordinator Matt Adkins and formulated a plan of mitigation. E506 responded to 2300 Opitz Blvd and collected the absorbent and disposed of the product correctly. The on Duty Hazmat Officer informed the responsible party assigned to m517 to submit a Spill Release form.	Closed
FD24080600044366	8/6/2024	PWC Landfill – 14811 Dumfries Road	Creosote	I received a spill report from Hallie Corzine at the PWC County Landfill, indicating a release of approximately 3 gallons creosote from a drum in the metal pile area. Due to the properties of creosote, I initiated an investigation and proceeded to the site. Upon arrival, I met with Polly Flory, Assistant Superintendent of the landfill. Hallie Corzine escorted me to the spill location. At the site, the spill had been covered by additional metal or mixed into the pile. Hallie reported applying three bags of absorbent to the spill, but no absorbent was visible during the inspection. A creosote odor was present, but no product was visible except for a small wet spot on the ground near the pile, which tested positive for hydrocarbons using oil-detecting paper. Air quality monitoring was not performed. I provided a discharge management handout and emphasized the need for spill remediation as this presented a hazard to staff and the environment. I discussed the situation with Jennifer Boeder, Risk and Wellness Environmental Manager, and we agreed to advise the landfill to engage a cleanup contractor. I also offered guidance on spill response and management to the landfill staff and proposed providing spill management training. During the visit, I observed three pressurized freon cylinders in the metal pile and assisted in their removal, due to the safety risk they pose to staff and equipment operators. Upon departure contact was already made with Clean Harbors. I requested an update be sent to myself and Jenny Boeder as soon as remediation has been completed.	Closed

FD24082600048601	8/26/2024	Fitzgerald Way / Nokesville Rd	Poly Utility Tank	E525 had arrived on scene to find a small pest control pickup truck had crashed into a school bus. No injuries reported, property damage incident only. A 100 gallon poly utility tank in the back of the pickup was leaking from a bung valve that had dislodged during the impact. The pest control truck driver reported that the tote was full when he left the shop this morning and post accident it was found to be approximately 90% empty. E525 completed Hazmat defensive measures by damming and diking with absorbent. Product released is called BIFEN I/T diluted to 0.06% with water. E525 identified that product had been spilled into the nearby storm drain. PD arrived on scene for crash investigation and requested VDOT for traffic management. Hazmat consult requested, HM506 and R506 responded non-emergent to the intersection of Fitzgerald Way and Nokesville drive for report of a pestiside spill secondary to an MVA. No symptoms reported by any occupants of the school bus or truck. HM506 met with the driver (Daniel Moore) and collected contact information as well spoke with the driver's manager (Responsible Party, Tyler Buckingham). Due to spill being in the waterway, the manager was provided with discharge responsibility form to begin the process of contacting a local Hazmat cleanup contractor. PH paper identified the product is diluted to a neutral solution. Product is intended to be used as a pest control measure on residential properties. R506 crew checked storm drains from the scene and down stream, it was confirmed that product was in the storm drain but but did not extend to the next manhole storm tank or to the retention pond to the north of the scene. Weather was 80 degrees F sunny skies with no expectant precipitation until 1600 hours. Investigation of the truck bed determined that the poly tank was previously held in place by a single orange ratchet strap, which likely was not capable of handling the weight capacity of a full poly tote. HM506 advised the manager that we would need copies of the SDS sheets and he would need to obtain straps and supplies to properly secure the poly tote before tow operations can proceed. Roadrunner towing arrived on scene and asked if they can begin setting up for towing operation to take the pickup back to the Mosquito Squad office/yard. Tow company was advised that until all the product in the truck bed has been absorbed and the tank secured properly for transit that the vehicle cannot be moved. While conferring with HM506 crew to ensure that the remaining product in the poly tank would not spill during transit, the tow truck driver placed the hose and bung back that had dislodged back into the damaged tank in an attempt to secure the load for transit. The valve on the hole was left open however and approximately 1 additional gallon of product released into the truck bed. HM506 placed additional absorbent in the truck bed and a pop-up pool below the truck bed to catch the run off. Leak was mitigated by these measure. Mr. Buckingham made contact with Miller Environmental for the Hazmat cleanup, they advised they are responding with a 1 hour ETA. HM506 and R506 cleared the call to respond to another pending Hazmat incident. HMO502 cleared scene upon arrival of Miller Environmental at approximately 1015 hours. Notifications made to VAEOC. SDS attached as separate PDF for this final report.	Closed
24082600048627	8/26/2024	2631 Prince William Pkwy	Diesel Fuel	HM506, HS506, E506M, R506 were dispatched to a diesel fuel spill at a 7-Eleven gas station at the above dispatched address. Captain McClelland with E520M requested a consult with the on duty DHM (TII Bergstresser) stating that there was a small diesel fuel leak from one of the gas pumps. Captain McClelland estimated that approximately 5 gallons of diesel fuel had spilled onto the ground, making its way to a storm drain. Captain McClelland stated that E520M's crew had controlled and prevented the diesel fuel from entering the storm drain by damming the product with absorbent. After consulting with the DHM, Captain McClelland upgraded the incident to a full Hazmat response. When Co.6 units arrived on scene to a diesel fuel spill of approximately 5-10 gallons from one of the gas pumps. E520M had placed absorbent on the ground to dam the product and prevent it from entering the storm drain. HM506 placed two bags of absorbent down over areas on the ground where the product had pooled. HM506 personnel lifted the manhole cover the storm drain and verified that no product had entered it. The owner of the 7-Eleven, Ali Sheikh, was on scene and informed HM506 personnel that cause of the incident was one of the diesel fuel nozzles had begun leaking and did not stop when the Emergency Stop button was pushed. Mr. Sheikh also stated that a cleanup company, Rappahannock Petroleum, LLC, had been contracted to come handle the spill. Mr. Sheikh stated that Rappahannock Petroleum had given him an ETA of "within 4 hours". The area of the spill was cordoned off with caution tape and cones, and Mr. Sheikh advised that either himself or one of his employees would control access to the scene in order to prevent vehicles from driving through the product and absorbent until the cleanup company arrived. E520M and Co. 6 units returned to service.	Closed

FD24082700048875	8/27/2024	I95 N 154	Diesel Fuel	Capt. Hauser (DHM) received a call from PE503 reporting a leaking saddle tank with approximately 80 gallons of diesel fuel, possibly entering a creek. Capt. Hauser advised PE503 to utilize a pop-up pool to contain the remaining fuel leaking and to begin defensie measures to ensure the spill did not travel further. HazMat Units (HM506, HS506, PE506, R506) responded and assessed the situation noting there was no water or fuel in the creekbed and the spill was contained. The driver was issued an discharge responsibility form and a courtesy notification was made to the VAEOC.	Closed
FD24082700048929	8/27/2024	I95 S 150	Oil and Diesel Fuel	Company 523 was dispatched for a tractor trailer rollover with possible entrapment. Crews arrived on scene and confirmed no entrapment, but did detect a leak of oil and diesel fuel. HazMat Units were added to the call and arrived to find a tractor trailer on its driver side in the median with a small fuel leak. Tow company on scene uprighted the vehicle and the leak stopped. The driver was issued an discharge responsibility form, and a courtesy notification was made to the VA EOC.	Closed
FD24083000049596	8/30/2024	I95 S 156	Diesel Fuel	PE520 was dispatched for an auto accident. Upon arrival on scene, crews observed a leaking saddle tank on a tractor trailer, which was punctured by the brush guard of another tractor trailer. The situation was escalated to a “Hazmat;” PE506 consulted with PE520 and confirmed that a pop-up pool containing approximately 80 gallons of diesel fuel was in place; PE520 noted they were also over a waterway. PE506 and HM506 responded, applying wax to the damaged saddle tank to halt the leak. Additionally, PE506 tested the bridge's expansion joints with oil paper to check for any potential runoff into the waterway; none was found. PE506 stayed on scene until Waggy's could separate the two vehicles. Extra wax was applied to prevent the leak from reopening. The driver of the truck with the leaking saddle tank received an LEPC form and was instructed to contact a cleanup contractor. Capt. Hauser engaged with a representative from the trucking company, who was in the process of contacting their environmental partner. VSP intended to reopen the roadway, and Waggy's relocated the pop-up pool to the shoulder. VSP was communicating with the trucking company to ensure a cleanup contractor was on their way as the Hazmat Units concluded their operations.	Closed
FD24083100050018	8/31/2024	2002 Daniel K. Ludwig Dr	Gasoline and Motor Oil	UFRO contacted the Duty HMT (Capt. Hauser) and requested them contact BC503 (Arft) for a phone consult. BC Arft stated they were on a water rescue call for a jet ski incident. While working on the marina boat ramp, an engine malfunctioned and spilled approximately 20 gallons of a mix of gasoline and motor oil on the dock. Crews from Company 523 placed absorbent and booms to prevent the product from leaking into the Potomac River. BC Arft provided pictures of the incident site and issued an LEPC to the responsible party. A courtest notification was provided to the VAEOC.	Closed
FD24093000056126	9/30/2024	10911 Reid Lane	Used Motor Oil	On September 29, 2024, I received a social media notification indicating that unidentified individuals had abandoned buckets of used motor oil along the side of Reid Lane. This area has a documented history of similar illegal disposal activities. In response to the information received, FMO Lieutenant Brady was assigned to investigate the report. On the evening of September 29, 2024, Lt. Brady visited the location and confirmed the presence of four five gallon closed buckets situated on the roadside of Reid Lane. On September 30, 2024, a site analysis and hazard characterization were conducted by FMO Lieutenant Reubens (HAZMAT Technician), FMO Lieutenant Berecz, and myself (HAZMAT Officer 501). Upon arrival, we observed several closed containers labeled as containing motor oil and hydraulic oil. The containers appeared to be in good condition with no visible signs of leakage or damage. We conducted a thorough visual inspection and assessed that it was safe to proceed with opening the containers for further examination. Utilizing a Composite Liquid Waste Sampler (COLIWASA), we carefully extracted samples from each container to analyze the contents without causing contamination or spillage. In addition to the physical sampling, we performed atmospheric monitoring around the containers using a four gas (CO, H2S, %LEL, O2) and Photoionization Detector (PID) with a resolution of 1 part per billion (ppb). The readings obtained were within normal parameters, indicating minimal to zero presence of Volatile Organic Compounds (VOCs) in the immediate environment. The samples extracted were examined for color and viscosity. Based on these observations, the liquid was consistent with the characteristics of used motor oil. The minimal VOC readings further suggest that there are no additional hazardous substances present within the containers beyond what was indicated on the	Closed

				present within the containers beyond what was indicated on the labels. After completing the inspection and sampling procedures, all container lids were securely fastened to prevent any potential spillage or environmental contamination. Subsequently, I contacted the Virginia Department of Environmental Quality (VA DEQ) Mark Miller to request the prompt removal of the containers. Given that the containers are located within the Commonwealth's right-ofway, their removal is necessary to prevent any environmental hazards or public safety concerns. The Fire Marshal's Office has initiated an investigation to identify and locate the responsible party involved in this illegal disposal. Efforts are ongoing to gather any additional evidence or witness statements that may aid in the investigation. All actions taken were in accordance with departmental protocols and environmental safety regulations to ensure public safety and environmental protection.	
FD24100200056514	10/2/2024	13581 Cridercrest Pl	Firefighting Foam, Gasoline, and Debris	Haz Mat Consult Only E510 called for a consult regarding an 11 vehicle car fire in the parking lot of an apartment complex. Officer stated that large amounts of run off from firefightng operations including firefighting foam, gasoline, and other debris was running off into the storm drain. E510 officer was advised that runoff from firefighting operations was not reportable as a hazardous materials release, but that efforts should be made to mitigate environmental damage. DHM suggested diverting run off into grassy or gravel areas away from storm drains if possible.	Closed
FD24100800057907	10/8/2024	Betwixt, Cotton Mill Dr and Hedges Run	Motor Oil	HAZMAT CONSULT ONLY: T2 Barnikel on PE514 called to request a consult regarding a small spill of motor oil. T2 Barnikel stated approximately 2 gallons of oil had flowed down a gutter after an oil change. The oil did not enter any waterways and was contained by absorbent. DHM advised to have the responsible party sweep up the contaminated absorbent and take it to the dump for proper disposal.	Closed
FD24120500069880	12/5/2024	152 N I95	Diesel Fuel	Company 6 units were dispatched for a Haz Mat call, reported tractor trailer leaking diesel fuel from a saddle tank on I 95 NB. E503 aos and reported that a large saddle tank of approximate 100 gallons had been punctured and was leaking on the shoulder of the interstate. Lt Moore radioed E503 and requested that they begin damming and diking and to cover any storm drains or access to waterways. When Company 6 units aos they found the saddle tank still leaking but the flow of fuel had been contained by absorbent. Company 6 units checked the tank and determined about 50 gallons of fuel had leaked out. A pop up pool was placed under the tank and more absorbent was placed on the roadway. No waterways were impacted and all fuel was contained by absorbent and the pop up pool. Lt Moore spoke with the driver and issued an LEPC. Lt Moore also spoke with a representative of the trucking company and explained the LEPC and the options for clean up. After a period of consideration the driver stated that Apex Environmental would conduct the clean up and had a 45 minute ETA. VDOT aos for traffic control and were informed of the situation, as was VSP. Waggys arrived to tow the leaking truck and Lt Moore spoke with VSP and turned the scene over to them to await the arrival of the clean up company. Company 6 units then cleared the scene. Approximately 10 bags of absorbent were used to contain the spill.	Closed
2025-0007196-000	2/5/2025	WELLINGTON RD W	Fuel Oil	Duty Hazmat Officer received a phone consult from the officer on Tw501, at about 1040hrs. The officer informed the Duty Hazmat that they had 3 large 55 gallon Drums under a overpass that had leaked. Officer believed these product could be oil. HM506, Support 506 responded to the scene. The addresses was located in the City of Manassas at intersection of Wellington and Nokesville Rd. Tw501 and BC581 were on the scene of what appeared to be a illegal dump site that had been reported on January 31. Representatives from Manassas City Engineering / Stormwater Department were on scene, when crews arrived. Ami Billman Manassas City engineer was the lead representative and took responsibility of clean up by excepting the LEPC form. Hazmat crews investigated the three drums and mitigated the leaks by standing the drums up. Crew noticed a 25 foot by 25 foot spill area that appeared to be covered in a oil like substance. Two of the drums were found to be mostly empty with a third drum being completely full. Crew collected a same and determined the substance to Hydrocarbon in nature. Crews deployed oil pads, a single boom, and caution tape around the area. The substance was determined to have entered a drainage pipe, but were unsure as to the amount that entered. Ms Billman informed the crews on duty that she would make the proper notifications (DEQ, Clean up company, etc)	Closed

2025-0009166-000	2/14/2025	12001 BRADY Ln	Diesel Fuel	55-gallon drum leaking an unknown substance. They were containing it with booms and asked for assistance. He called back while responding and said that there were underground tanks. The manhole to the underground tanks had an unknown liquid in them that they wanted tested. On arrival, there was one 55-gallon drum with a pin hole leak. Majority of the leak on the concrete had evaporated. The leak was currently being contained into a bin. The leak was contained with plumbing putty by R506 and PE506 personnel. The leak did not spread to any waterways. It never left the concrete pad the drum was on. There was a diesel identification sticker on the outside of the drum. The drum was seal. Oil finding paper indicated it was Diesel. In addition to the drum, there were also two manhole covers for the underground diesel tanks. Both had an unknown liquid inside. Bloedel indicated that the diesel tanks had been drained so there should not have been liquid in there. However, there was a clear liquid substance in the manhole. Samples were collected. Using water detection paper and oil test paper. It was determined the liquid in the manhole was water. Scene was turned back over to the fire marshal Lieutenant Bloedel. Lieutenant Bloedel had already notified Susan Tiffany at DEQ. VA EOC was contacted by Lieutenant Hendon. Point of contact for EOC was Nina. Report number was VDEM-2025-02-14-0067 The responsible party is Ryder Truck Rental. The point of contact is Robert Coon 540-717-0979. LEPC form was provided.	Closed
2025-0013098-000	3/5/2025	9423 BRENTSVILLE Rd	Algaecide	1. ISOLATION - Source of material release was determined to be in a duck pond at 9423 Brentsville Rd. Due to the rainy conditions, the pond overflowed out of the spill way into a creek which ultimately flowed into Broad Run approximately 1/2 mile away from source. 2. IDENTIFICATION - Material is tentatively identified as GreenClean (algaecide) pending contact with the property owner or confirmation from water authority lab tests on the liquid. The active ingredient is Sodium Carbonate Peroxyhydrate. Analysis at edge of pond revealed negative for hydrocarbons, pH of approximately 5, soluble in water, no VOC, no odor, Gemini - no result due to dilution. 3. NOTIFICATION - Notifications will be made to Water Authority, DEQ, EOC and Hazmat Officers 501 & 502. 4. MITIGATION - Phone consult was made with HMO 501. After discussing what crews found, physically and through analysis, it was determined to allow the product continue to flow from the pond into Broad Run. Water Authority will be monitoring water flow. 5. TERMINATION - Based off direction from the phone consult, crews cleared the scene and allowed product to continue to dilute. HMO 501 and or HMO 502 will need to follow-up because crews on scene were not able to make contact with homeowner. HM506 was dispatched for a hazmat investigation. Further information stated that caller reports there is a green substance in a stream close to there	Closed
2025-0015050-000	3/14/2025	15315 WASHINGTON St	Gasoline	R506 was notified by Captain Donelan on E524 of a gasoline spill at the Sheetz Gas Station at 15315 Washington Street in Haymarket. Captain Donelan stated between 5 and 10 gallons of gasoline had been spilled from a pump on the concrete pad of the gas station. She stated the business had placed absorbent immediately and her crew had placed an additional 2 bags as well. R506 and HM506 responded and found a spill approximately 25' by 50' of around 5 gallons of gasoline. The spill had been contained to the concrete apron around the pumps and had not impacted any waterways or soil. Lt Moore issued an LEPC to the store manager, Mr. Subhir Rahman and explained the need to contact a clean up company. Mr Rahman spoke to his regional environmental officer, Lindsey. After about half an hour Lindsey called back and stated that Miller Environmental had been contracted for clean up. Lt Moore verified that the clean up company would be on scene in the near future and turned the scene back over to the store manager. VDEM 2025-03-15-0068 taken by Jock.	Closed

2025-0019558-000	4/5/2025	2797 BRIER POND Cir	Crude Oil	Duty HM Officer Captain Peele was notified by DPSC that PE523 would like a HM consult. Captain Peele called (on speaker with Mirabile and Campbell) PE523 OIC Captain Darabond for the consult. Captain Darabond stated that they were dispatched to a “hazard” in which a resident witnessed a neighbor changing the oil of their vehicle in the parking area of a townhouse neighborhood. Allegedly the driver of the vehicle drained the oil directly onto the pavement then left the scene. PE523 observed approximately 6 quarts of used motor oil on the pavement. The oil was spread out but had not entered any storm drains or left the pavement. PE523 used absorbent to contain the discharged product and protect adjacent storm drains from any product entering. PE523 also added the duty FM to the incident and FM518, Lt Warren Broughton responded. PE523 sent Captain Peele photos of the scene documenting their actions. Captain Peele was also in contact with FM518, and he advised that the owner of the vehicle was not at his residence, but the owner’s wife was home, and she was issued an LEPC form by FM518 and made aware that they would be responsible for product clean up. FM518 also advised that the duty FM for the evening of 4/5/2025 would follow up and attempt to make contact with the vehicle owner to reiterate his responsibility for product cleanup. VAEOC (Casey) was notified by Captain Peele at 17:08.	Closed
2025-0020282-000	4/9/2025	7300 RAIL LINE Ct	Mineral Oil	Vulcan Plant manager called station 6 directly to report that one of his pieces of equipment had leaked hydraulic fluid onto the ground and some got into the holding tank on the property. The plant manager stated that absorbent had already been used and the spill was contained to aprox 2 gallons. He was requesting a couple booms from hazmat so he could place them around the spill until the clean up company got there. R506 and HM506 went out to the scene and found that the spill was completely contained by absorbent in two places. There was no active leak and no water ways were effected with this spill. The plant manager was given a couple booms to be used as a precaution. ACE Environmental was contacted to handle the clean up of the spill.	Closed
2025-0022503-000	4/20/2025	152 S I95 Hwy	Diesel Fuel	1. ISOLATION The leak was isolated to the roadway and the gravel next to the roadway. 2. IDENTIFICATION The driver of the vehicle said it was diesel fuel. 3. NOTIFICATION Notifications made to VAEOC, DEQ, and VDOT 4. MITIGATION The leak was self-mitigated. 5. TERMINATION Scene turned over to Virginia State Police. PE506, R506, HM506, HS506 arrived on scene to find a tractor trailer on the side of I-95 South, just off of exit 152. Traffic was being controlled by PE517. The vehicle was on all four wheels. The driver said that he had a saddle tank located on the undercarriage of the trailer. This saddle tank was used to refrigerate the contents he was hauling. The driver was hauling chicken. No placards on the vehicle. The saddle tank fell off and got caught on his rear axle. The saddle tank ripped open and began to leak. The saddle tank leaked for about 50 yards in a "slug trail". The driver said the tank only had 15 gallons of diesel fuel in it. The leak ran onto the soft shoulder of gravel. It did not make it to any waterways, grass, or storm drains. The fuel was contained to the highway and gravel. There were a few small puddles in the gravel. Virginia State Police contacted Waggys to help remove the saddle tank from under the vehicle. The driver provided the LEPC form to the driver. He contracted First Call Environmental in Fredericksburg, VA (800-432-7745) to come clean up the spill. The driver's name was Neaam Ahmad, and he will be the point of contact (514-746-5312). He worked for McGrath's Logistics. Virginia State Police and Waggys were on scene with the driver. The scene was turned over to VSP and company 6 units returned to service. The driver understood that he needed to wait for First Call Environmental to arrive, before he left. Notifications made to VAEOC, DEQ, and VDOT. No equipment used by company 6. First Call Environmental confirmed that the spill was cleaned up.	Closed

2025-0030465-000	5/28/2025	MINNIEVILLE RD	Motor Fuel	1. ISOLATION There was a motor fuel spill that began in the parking lot at the Islamic School on the corner of Minnieville Rd. and Caton Hill Rd. It appeared that the vehicle left the parking lot, turned right onto Caton Hill, and then entered the DMV parking lot. There was no vehicle in the parking lot of the DMV and there was no trail leaving the DMV. On arrival, units on scene were building dams made of dirt, in front of the storm drains. There was a sheen on the ground in the parking lot of the Islamic School. It did not go down to the creek behind the school. HM506 placed booms in front of the storm drains to assist the dams. HM506 was notified that there was also a spill on Caton Hill and in the DMV's parking lot. HM506 placed booms in the storm drains on Caton Hill and in the DMV parking lot. HM506 placed a total of 8 booms. 2. IDENTIFICATION No identification tools used. 3. NOTIFICATION Notifications made to DEQ. Allen Lacy was the DEQ representative. VDOT arrived on scene. Joe Warner (703) 638-8328 was the representative from VDOT. HazMat Coordinator Matt Adkins was notified. FMO was called to look for video evidence to help identify the responsible party. Lt. Paul Taylor was the representative from the FMO. FM report generated. PD250018924. 4. MITIGATION No active leak to mitigate. 5. TERMINATION Scene terminated after all notifications were made. VDOT said they would come collect the booms the following day.	Closed
2025-0027534-000	5/14/2025	14811 DUMFRIES Rd	Diesel Fuel	Lt Moore was notified as DHM of a firefighting run off and leaking diesel fuel and oil from a truck fire on Rt 234 just north of the landfill. R506 and HM506 responded to the scene and discovered a semi cab from a tractor trailer which had been badly burned, including the fuel and oil lines and a portion of the saddle tanks. Fuel, motor oil and firefighting run off flowed from the incident scene into a storm drain which emptied immediately into a small creek. This creek was badly contaminated with diesel and motor oil for about 100'. Most of the contamination had collected in a wide section of the creek which was partially dammed by a large tree. HM personnel placed booms and oil absorbent pads at the point where the storm drain entered the creek as well as at the wide section. Oil finding paper showed oil present further down stream, but no sheen was visible. Haz Mat personnel placed one more boom and collection of oil absorbent pads in the creek where it flows past the parking lot for the soccer fields at the landfill. This contained the majority of the spilled fluids. Redman's towing was contacted and responded to tow the vehicle and transfer the remaining diesel fuel. Matt Adkins accepted the role of responsible party and is handling the cleanup for the county and PWC DFR. No LEPC was issued as the driver was transported to the burn unit with serious injuries and was not reachable. 1. ISOLATION Absorbent was placed around the storm drain and booms and oil pads were deployed at three location on the creek, containing the majority of the spill 2. IDENTIFICATION Diesel Fuel and motor oil along with miscellaneous run off from firefighting. 3. NOTIFICATION Report # VDEM 2025-05-14-0058 reported to Sid at VDEM Matt Adkins has been in contact with DEQ and Risk Management 4. MITIGATION Remaining fuel transferred by Redmans. Matt Adkins is arranging for clean up of pads and booms. 5. TERMINATION Incident remediation is being supported by VADEQ, who will oversee activities engaging with Apex Environmental.	Closed

2025-0032909-000	6/9/2025	150 S I95 Hwy	Gasoline	Haz Mat units were added to the call after fuel was reported leaking from multiple vehicles. R506 aos to find three vehicle which had been involved in a collision and subsequent fire. Vehicles were still smoldering and one vehicle was repeatedly reigniting due to gasoline leaking from a damaged fuel tank or line. The state of the vehicles made it difficult to determine the exact source of the leak and mitigation at the source was not possible. DFR personnel were actively using firefighting foam to suppress the burning fuel. Foam and water, mixed with some fuel, were running off from the scene and traveling along both shoulders of the interstate. The fire was eventually stopped by cutting the batteries on the truck which were periodically reigniting the gasoline. 1. ISOLATION Absorbent was placed to allow foam to pool and to minimize run off, but this was not effective long term and was eventually abandoned. 2. IDENTIFICATION Three different products were involved. Diesel leaking from a fuel line in the engine of the tractor trailer, gasoline from the two damaged and burned police cruisers, and firefighting foam which was applied during suppression. Run off from the incident was tested at several locations. Initially there was some fuel in the run off on the east shoulder of the interstate, but this quickly dissipated within about 100 feet and the water tested negative beyond that point. Run off to the west shoulder was pushed by the firefighting streams and tested negative for fuel but did contain large amounts of foam. 3. NOTIFICATION Joe Warner from VDOT was onscene as were VSP. VDEM Report # VDEM-06-09-0031 (Eric) and DEQ were also notified. 4. MITIGATION No mitigation needed for small amounts of fuel. Foam was washed into a wooded/grassy area and diluted before being allowed to absorb into the ground. 5. TERMINATION TOT VSP after washing down roadway.	Closed
2025-0033652-000	6/12/2025	1101 Mountain Dr	Hydraulic Fluid	Lt Moore acting as DHM received a call from BC Hubbel stating that there was a 5 gallon bucket of unknown substance in the area of 1101 Mountain Drive. R506, E506, HM506 and HS 506 investigated and found a single bucket labelled as Tractor Hydraulic Fluid. Lt Moore approached the bucket on air in full PPE and took a sample as well as testing with Oil Finding and PH paper. The sample was analyzed with MX908 and Gemini, with negative results. The color, consistency and presence of Hydrocarbons indicated that the substance was most likely the same as that depicted on the container label. 1. ISOLATION 5 gallon bucket, unopened 2. IDENTIFICATION Labelled as Tractor Hydraulic Fluid. All tests and appearances were consistent with this identification 3. NOTIFICATION Matt Adkins will notify VDOT 4. MITIGATION VDOT will pick up 5 gallon bucket 5. TERMINATION Marked with caution tape.	Closed
2025-0036055-000	6/23/2025	2180 MONTGOMERY Ave	Cooking Oils	R506 contacted by FM 512 LT Gant and FM 525 LT Hart about a 3600lb tote dumped on the road in Woodbridge. The tote was labeled as Mulch Dye (Amerimulch Ultra Triple Black-Metal Oxide). R506 and HM506 dispatched to 2180 Montgomery Ave, Woodbridge. Actual location was the intersection of Pine St and Southhampton Ln in Woodbridge. Upon investigation it was determined to be a mix of different cooking oils. The tote was approximately halfway full, with about 200 gallons of liquid. There was no leak, and the product was contained to the tote but there was no cap on the tote. The scene was turned over to FM512 LT Gant and FM 525 LT Hart. VA EOC was contacted. The FMs contacted VDOT as the responsible party. R506 and HM506 returned to service. R506 personnel utilized Oil Paper and the Gemini FTIR for identification and came up with the following results: Cottonseed Oil Soybean Oil Peanut Oil Safflower Oil Olive Oil Linseed Oil Glyceryl Trioleate	Closed

PWC Internal Spill Incident Summary

Date	Location	Department	Submitter	What surface was impacted? W-Water SG-Soil/Gravel A-Asphalt O-Other	Material spilled	Quantity	Stormwater Impact? (Y/N)	Root Cause EF - Equipment Failure EA - Employee Accident VA - Vendor Accident CA -	Description / How it was resolved
7/3/2024	5 County Complex Court, Woodbridge, VA. 22192	B&G	Matt Fenn	O	Hydraulic Fluid	less than a gallon	N	VA	Trash service truck picking up trash dumpsters spilled hydraulic fluid and left. B&G used pads to soak up as much as possible.
7/17/2024	14811 Dumfries Road, Manassas, VA. 20112	PWC Landfill	Trent Magill	A	Gasoline	2 cups	N	EF	As required fuel amount was approached per the pump meter. I grabbed the dispenser handle. When
7/24/2024	14811 Dumfries Road, Manassas, VA. 20112	PWC Landfill	Aaron Martion	A, SG	Hydraulic Fluid	17.5 gallons	Y	EF, EA	A hydraulic line to a roll off truck busted and proceed to spill. The spill was promptly stopped with stay dry and absorbent socks. The nearby storm drain was covered with a rubber mat to protect it and surrounded with socks to help divert the spill.
7/27/2024	14811 Dumfries Road, Manassas, VA. 20112	PWC Landfill	Hallie Corzine	W	Antifreeze	5-10 gallons	Y	VA	An American Disposal repair truck had an open coolant valve. The driver reported that when the truck was turned on, coolant started spraying everywhere. Roughly 12 bags of stay dry, 4 dry socks, 5 pads, and a rubber storm drain mat were used to apprehend the spill. PWC employee reported coolant did make it into the storm drain. Upon visual inspection you could see red liquid inside the drain.
8/31/2024	14811 Dumfries Road, Manassas, VA. 20112	PWC Landfill	Chad Place	A	Cooking Oil	3 gallons	N	CA	The spill was on the pad at box #17. A resident was unloading his trash and had a 3gallon container of used cooking oil. As he was unloading his trash it fell from his truck before he could take it to HHW. Resident did not realize till after he had pulled away from the box to close his tal gate. He then got Mr. El-Haj attention to tell him what happend. Mohamad closed off the box grabed a bag of stay dry to recover as much of the spill as possible.
9/8/2024	14811 Dumfries Road, Manassas, VA. 20112	PWC Landfill	Matt Koons	SG	Diesel	20 gallons	N	VA	One of the light towers that is rented by RNG Direct had a fuel leak. they called United Rentals and they sent a mechanic out to repair the unit and called First Call Environmental to clean up the spill. They are on site removing the contaminated soil.
9/12/2024	14809 Dumfries Road, Manassas, VA. 20112	Fleet	Billy Davis	A	Motor Oil	64 oz.	N	EF	Double gasket on oil filter Oil was cleaned up with stay dry.
10/1/2024	14811 Dumfries Road, Manassas, VA. 20112	PWC Landfill	Wilfredo Diaz	A	Used Motor Oil	5 gallons	N	CA	Apply oil reclaimer material immediately, swipe, And use a skid steer to pick out all the contaminated material.
10/2/2024	14450 John Marshall Hwy. Gainesville, VA. 20155	Fire & Rescue	Bat Chief Kevin Artone	A	Hydraulic Fluid	10-15 gallons	N	EF	Contacted Hazardous Materials Officer (FRS) for consultation and direction. Leak contained on apparatus and spilled fluid soaked up with approved absorbent material. Absorbed material placed in plastic trash bags (double bagged) and placed in dumpster at Fire & Rescue Station 504.
10/4/2024	Sentara Hospital, 2300 Opitz Blvd. Woodbridge, VA. 22191	Fire & Rescue	Lt. Alex Thomson	A	Antifreeze	Approx. 6 gallons	N	EF	The back up/reserve medic unit that M517 was staffing blew a coolant line while parked at Sentara in the ambulance bay. Absorbent was placed on the spill. M517 called Lt. Trible and were advised that their front line unit was ready and they could swap onto that and the OOS unit would be towed after. BC Newell brought the front line unit over and told Lt. Trible to make sure the Tow company cleaned up the absorbent. The tow company did not clean it up and R506 took care of it on 10/6/24.
10/10/2024	14809 Dumfries Road, Manassas, VA. 20112	Fleet	Christoper Leypoldt	A	Antifreeze	32oz.	N	EF	Roll off truck had a cracked coolant reservoir tank leaked out was cleaned up with stay dry.
10/30/2024	14811 Dumfries Road, Manassas, VA. 20112	PWC Landfill	Wilfredo Diaz	A	Water and Oil	2 gallons	N	CA	The spill was from a garbage trash box from the citizen pad at the landfill.
11/5/2024	14450 John Marshall Hwy. Gainesville, VA. 20155	Fire & Rescue	John Gillis	A	Hydraulic Fluid	10 gallons	N	O	Trash vendor had a hydraulic leak on trash truck. unwitnessed by any county employee. Station personnel cleaned the spill up using absorbent. and then swept into trash bags and thrown away.
11/8/2024	14809 Dumfries Road, Manassas, VA. 20112	Fleet	Christoper Leypoldt	A	Motor Oil	32oz.	N	VA,O	Oil spot found in the parking lot. It was cleaned up as needed. checked surrounding vehicles and asked all technicians at the shop location if they were out there with a vehicle recently. Everyone said no. reaching out to security to check the parking lot/building cameras to see if it was UPS, FEDEX, or possible parts delivery parts who possibly did this.
12/8/2024	5026 Davis Ford Foad, Woodbridge VA. 22192	Fire & Rescue	Zach Sites	O	Diesel	1 gallon	N	EF	Employees noticed fuel dripping from fuel pump/valve. Slow drip was observed, concrete was wet on the ground below fuel pump. Stay-Dry was applied to the fuel on the ground. Valves on the pump were closed to stop the leak.
1/13/2025	14811 Dumfries Road, Manassas VA. 20112	Public Works	Ernest Smith	A	Hydraulic Fluid	20 gallons	N	EF	Sw 4108 blew a hydraulic line. Drivers along with myself contained the spill by utilizing 10 bags of absorbant.
1/13/2025	4693 James Madison Hwy James Long Park	Parks & Rec	Thomas Chappell	SG	Hydraulic Fluid	1 quart	N	EF	Hydraulic lines failed on snow removal equipment, causing small leak on gravel parking lot area. Leak was contained, but not before small amount leaked onto gravel below. Took machine to fleet and cleaned up the leak by digging approximately 6 inches down and double bagging it and deposing of it proper

1/20/2025	8177 Patton Ln (Station 508)	Fire & Rescue	Semyon Podobed	A	Diesel	12oz	N	EF	Employee was filling A508 and automatic shutoff of diesel fuel did not function as intended. Employee quickly shut off diesel flow manually and put down absorbent (6lbs total) in order to clean up spill. Due to potential rain/snow event, absorbent was only left for one hour before being swept up and placed in bag for disposal.
2/4/2025	14809 Dumfries Road, Manassas VA. 20112	FFM	Michael McCann	A	Transmission Fluid	1 quart	N	EF	Unit CP3513 was involved in an accident resulting in front end damage. When it was towed in and dropped off. there was transmission fluid leaking from the transmission and transmission cooler areas. Oil dry was used to clean up the spill.
2/5/2025	14811 Dumfries Road, Manassas VA. 20112	Public Works	Hallie Corzine	SG	Gasoline	1 gallon	N	EF	I pulled truck SW3576 over to the side of the scale house and parked in order to do an inspection. Once I got back in the truck and tried to start it, it stalled a few times. I then smelled gas, so I got out to check and saw that gas was spilling out from under the truck. I then proceeded to contain the spill and called the mechanics who came and were able to stop the leak.
4/15/2025	14811 Dumfries Road, Manassas VA. 20112	Public Works	Wil Diaz	A	Motor Oil	10 gallons	N	CA	We contained the spill using 17 bag of oil dry absorbent and waited for it to absorb. Then, we cleaned up the area and disposed of the waste at the landfill.
4/21/2025	14811 Dumfries Road, Manassas VA. 20112	Public Works	Wil Diaz	A	Motor Oil	3 gallons	N	CA	On the spill, we contained it with two bags of Oil Dry absorbent, and waited until it was absorbed, and cleaned up completly, and desposed of it at the landfill.
5/1/2025	14809 Dumfries Road, Manassas VA. 20112	FFM	Billy Davis	A	Transmission Fluid	64 oz.	N	EF	Crash unit, damage unit
5/6/2025	8900 Freedom Center Blvd, Manassas, VA. 20110	Parks & Rec	Yancee McLemore	W & SG	Diesel	>5 gallons	Y	EA	While operating lawnmower equipment near a ditch, the employee lost control and the equipment rolled down an incline, coming to rest on its side. As a result of the rollover, diesel fuel was spilled. The majority of the fuel was contained within the surrounding rocks, with some observed floating on a small amount of water in the retention ditch. Absorbent pads and booms were deployed to recover as much of the spilled fuel as possible.

Appendix G

Industrial and High Risk Inspection Summary

Landuse	Outfall Id	Last Inspection Date	Flow Present	Illicit Discharge	High Risk	Maintenance Required	Within PWC Service Area	VPDES Permitted
Planned Industrial Park	52158	6/13/2025	No	Unlikely	N	True	Y	N
Planned Industrial Park	31947	6/5/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	31945	6/5/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	55120	6/5/2025	No	Unlikely	N	True	Y	N
Planned Industrial Park	64441	8/6/2024	No	Unlikely	Y	False	N	N
Planned Industrial Park	31181	6/13/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	31941	6/5/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	51060	4/17/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	31195	6/13/2025	Yes	Unlikely	N	True	N	N
Planned Industrial Park	64173	4/17/2025	Yes	Unlikely	Y	False	N	N
Planned Industrial Park	64171	4/17/2025	Stagnant	Unlikely	Y	False	N	N
Planned Industrial Park	60394	8/6/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	31528	4/17/2025	Yes	Unlikely	Y	False	N	N
Planned Industrial Park	55117	6/5/2025	No	Unlikely	N	False	Y	N
Planned Industrial Park	30902	4/21/2025	Stagnant	Unlikely	Y	False	N	N
Planned Industrial Park	44899	4/17/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	11347	8/14/2024	No	Unlikely	Y	True	N	N
Planned Industrial Park	31191	6/6/2025	No	Unlikely	N	True	N	N
Planned Industrial Park	75321	4/17/2025	Yes	Unlikely	Y	False	N	N
Planned Industrial Park	31179	6/12/2025	No	Unlikely	N	True	N	N
Planned Industrial Park	62254	5/7/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	63690	5/7/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	31532	4/17/2025	No	Unlikely	Y	True	N	N
Planned Industrial Park	36110	6/13/2025	Stagnant	Unlikely	Y	False	Y	N
Planned Industrial Park	30908	4/21/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	44897	4/17/2025	No	Unlikely	Y	True	N	N
Planned Industrial Park	46043	8/15/2024	Stagnant	Unlikely	Y	False	N	N
Planned Industrial Park	5756-001	6/12/2025	Yes	Obvious	Y	True	N	Y
Planned Industrial Park	77181	6/13/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	51063	4/17/2025	Yes	Unlikely	Y	False	N	N
Planned Industrial Park	77142	6/13/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	40801	4/21/2025	Stagnant	Unlikely	Y	False	N	N
Planned Industrial Park	19322	6/13/2025	No	Unlikely	Y	False	Y	N
Planned Industrial Park	12987	6/13/2025	No	Unlikely	Y	False	Y	N
Planned Industrial Park	46039	8/15/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	31943	6/5/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	64433	8/6/2024	No	Unlikely	Y	False	N	N
Planned Industrial Park	30871	4/21/2025	No	Unlikely	N	True	N	N
Planned Industrial Park	77140	6/13/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	34289	8/6/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	31185	6/13/2025	No	Unlikely	Y	True	N	N
Planned Industrial Park	30921	4/21/2025	Stagnant	Unlikely	Y	False	N	N
Planned Industrial Park	40783	4/21/2025	No	Unlikely	Y	True	N	N
Planned Industrial Park	62255	5/7/2025	No	Unlikely	N	True	N	N
Planned Industrial Park	39466	5/7/2025	No	Unlikely	N	True	N	N
Planned Industrial Park	55113	6/5/2025	No	Unlikely	N	True	Y	N
Planned Industrial Park	39498	5/7/2025	No	Unlikely	Y	True	N	N
Other Industrial	20086	3/7/2025	No	Unlikely	N	True	N	N
Planned Industrial Park	55109	6/4/2025	Yes	Unlikely	N	False	Y	N
Planned Industrial Park	1118	6/5/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	24489	5/7/2025	No	Unlikely	N	True	N	N
Planned Industrial Park	31727	6/12/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	64160	4/17/2025	Yes	Unlikely	Y	False	N	N
Planned Industrial Park	24485	5/7/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	5992-002	3/4/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	31189	6/6/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	44483	6/5/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	34301	8/6/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	36535	6/13/2025	No	Unlikely	Y	False	Y	N
Other Industrial	12730	6/2/2025	No	Unlikely	N	True	N	N
Planned Industrial Park	24899	4/21/2025	Stagnant	Unlikely	Y	True	N	N
Planned Industrial Park	21510	6/12/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	31187	6/13/2025	Stagnant	Unlikely	Y	True	N	N
Planned Industrial Park	55102	6/5/2025	Stagnant	Unlikely	N	True	Y	N
Planned Industrial Park	35304	6/4/2025	No	Unlikely	Y	True	N	N
Planned Industrial Park	64437	8/6/2024	No	Unlikely	Y	False	N	N
Planned Industrial Park	21512	6/13/2025	No	Unlikely	Y	False	N	N
Other Industrial	12724	6/3/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	31183	6/13/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	40780	4/21/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	64155	8/15/2024	No	Unlikely	Y	False	N	N
Other Industrial	51058	4/17/2025	Stagnant	Unlikely	Y	True	N	Y

Planned Industrial Park	34739	6/13/2025	Stagnant	Unlikely	Y	False	Y	N
Planned Industrial Park	62257	5/7/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	77146	6/13/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	36531	6/13/2025	No	Unlikely	Y	False	Y	N
Planned Industrial Park	28930	5/7/2025	Yes	Unlikely	Y	True	N	N
Planned Industrial Park	63692	5/7/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	5872-001	6/5/2025	Yes	Unlikely	Y	False	N	N
Planned Industrial Park	44481	6/5/2025	No	Unlikely	N	True	Y	N

Landuse	Outfall Id	Last Inspection Date	Flow Present	Illicit Discharge	High Risk	Maintenance Required	Within PWC Service Area	VPDES Permitted
Residential	31587	8/15/2024	No	Unlikely	Y	False	Y	N
Other	30178	4/28/2025	Yes	Unlikely	Y	True	N	N
Vehicle Sale/Repair/Miscellaneous Automotive	47754	8/5/2024	Stagnant	Unlikely	Y	False	N	N
Planned Industrial Park	64441	8/6/2024	No	Unlikely	Y	False	N	N
Gas Station	59624	7/23/2024	No	Unlikely	Y	False	N	N
Planned Industrial Park	51060	4/17/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	64173	4/17/2025	Yes	Unlikely	Y	False	N	N
Residential	19950	3/7/2025	No	Unlikely	Y	True	N	N
Planned Industrial Park	64171	4/17/2025	Stagnant	Unlikely	Y	False	N	N
Other	52191	6/13/2025	No	Unlikely	Y	False	Y	N
Planned Industrial Park	31528	4/17/2025	Yes	Unlikely	Y	False	N	N
Planned Industrial Park	30902	4/21/2025	Stagnant	Unlikely	Y	False	N	N
Planned Industrial Park	44899	4/17/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	11347	8/14/2024	No	Unlikely	Y	True	N	N
Gas Station	3281	10/30/2024	No	Unlikely	Y	False	N	N
Other	64648	5/7/2025	No	Unlikely	Y	False	Y	N
Regional Mall	24949	4/11/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	75321	4/17/2025	Yes	Unlikely	Y	False	N	N
Residential	61346	4/29/2025	No	Unlikely	Y	False	Y	N
Residential	16564	8/23/2024	Yes	Unlikely	Y	False	Y	N
Planned Industrial Park	63690	5/7/2025	No	Unlikely	Y	False	N	N
Residential	54957	10/8/2024	No	Obvious	Y	True	Y	N
Gas Station	40770	3/7/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	31532	4/17/2025	No	Unlikely	Y	True	N	N
Gas Station	18904	3/24/2025	No	Unlikely	Y	False	Y	N
Planned Industrial Park	36110	6/13/2025	Stagnant	Unlikely	Y	False	Y	N
Other	25951	8/23/2024	No	Unlikely	Y	True	Y	N
Planned Industrial Park	30908	4/21/2025	No	Unlikely	Y	False	N	N
Gas Station	59620	7/23/2024	No	Unlikely	Y	False	N	N
Planned Industrial Park	44897	4/17/2025	No	Unlikely	Y	True	N	N
Planned Industrial Park	46043	8/15/2024	Stagnant	Unlikely	Y	False	N	N
Planned Industrial Park	5756-001	6/12/2025	Yes	Obvious	Y	True	N	Y
Other	22349	6/2/2025	Stagnant	Unlikely	Y	False	Y	N
Planned Industrial Park	77181	6/13/2025	No	Unlikely	Y	False	N	N
Hospital	65473	5/2/2025	No	Unlikely	Y	False	N	N
Residential	42834	3/17/2025	Yes	Unlikely	Y	False	Y	Y
Planned Industrial Park	51063	4/17/2025	Yes	Unlikely	Y	False	N	N
Residential	39830	2/26/2025	No	Unlikely	Y	False	N	N
Shopping Center	51841	6/3/2025	Stagnant	Unlikely	Y	False	Y	N
Planned Industrial Park	40801	4/21/2025	Stagnant	Unlikely	Y	False	N	N
Gas Station	18898	3/24/2025	Stagnant	Unlikely	Y	False	Y	N
Planned Industrial Park	19322	6/13/2025	No	Unlikely	Y	False	Y	N
Planned Industrial Park	12987	6/13/2025	No	Unlikely	Y	False	Y	N
Gas Station	50768	5/20/2025	Stagnant	Unlikely	Y	False	N	N
Other	62747	6/13/2025	No	Unlikely	Y	True	N	N
Planned Industrial Park	64433	8/6/2024	No	Unlikely	Y	False	N	N
Shopping Center	46112	8/20/2024	No	Unlikely	Y	False	N	N
Vehicle Sale/Repair/Miscellaneous Automotive	24017	6/13/2025	No	Unlikely	Y	True	Y	N
Planned Industrial Park	31185	6/13/2025	No	Unlikely	Y	True	N	N
Planned Industrial Park	30921	4/21/2025	Stagnant	Unlikely	Y	False	N	N
Residential	6196	3/18/2025	Yes	Unlikely	Y	False	Y	N
Vehicle Sale/Repair/Miscellaneous Automotive	5190	8/15/2024	No	Unlikely	Y	True	N	N
Planned Industrial Park	40783	4/21/2025	No	Unlikely	Y	True	N	N
Gas Station	34191	8/6/2024	No	Unlikely	Y	True	N	N
Planned Industrial Park	39498	5/7/2025	No	Unlikely	Y	True	N	N
Shopping Center	42751	8/20/2024	Yes	Unlikely	Y	True	Y	N
Shopping Center	40991	3/5/2025	No	Unlikely	Y	False	Y	N
Shopping Center	11574	3/4/2025	Yes	Unlikely	Y	False	Y	N
Residential	16557	8/23/2024	No	Unlikely	Y	False	Y	N
Planned Industrial Park	64160	4/17/2025	Yes	Unlikely	Y	False	N	N
Planned Industrial Park	31189	6/6/2025	No	Unlikely	Y	False	N	N
Vehicle Sale/Repair/Miscellaneous Automotive	34292	8/6/2024	Stagnant	Unlikely	Y	False	N	N
Planned Industrial Park	36535	6/13/2025	No	Unlikely	Y	False	Y	N
Other	21491	5/2/2025	Stagnant	Unlikely	Y	False	N	N
Planned Industrial Park	24899	4/21/2025	Stagnant	Unlikely	Y	True	N	N
Planned Industrial Park	31187	6/13/2025	Stagnant	Unlikely	Y	True	N	N
Restaurant	983	7/15/2024	Yes	Unlikely	Y	False	N	N
Shopping Center	11547	3/4/2025	No	Unlikely	Y	False	N	N
Shopping Center	53535	2/26/2025	No	Unlikely	Y	True	Y	N
Planned Industrial Park	35304	6/4/2025	No	Unlikely	Y	True	N	N
Planned Industrial Park	64437	8/6/2024	No	Unlikely	Y	False	N	N
Planned Industrial Park	21512	6/13/2025	No	Unlikely	Y	False	N	N
Other Industrial	12724	6/3/2025	No	Unlikely	Y	False	N	N
Gas Station	55774	7/3/2024	No	Unlikely	Y	False	N	N
Regional Mall	42107	4/22/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	40780	4/21/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	64155	8/15/2024	No	Unlikely	Y	False	N	N
Other Industrial	51058	4/17/2025	Stagnant	Unlikely	Y	True	N	Y
Shopping Center	43518	5/2/2025	Stagnant	Unlikely	Y	False	N	N
Planned Industrial Park	34739	6/13/2025	Stagnant	Unlikely	Y	False	Y	N
Planned Industrial Park	77146	6/13/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	36531	6/13/2025	No	Unlikely	Y	False	Y	N
Shopping Center	33614	5/2/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	28930	5/7/2025	Yes	Unlikely	Y	True	N	N
Residential	16580	8/23/2024	No	Unlikely	Y	True	Y	N
Planned Industrial Park	5872-001	6/5/2025	Yes	Unlikely	Y	False	N	N
Shopping Center	51105	8/19/2024	Stagnant	Unlikely	Y	False	N	N
Other	25332	4/11/2025	No	Unlikely	Y	False	N	N
Shopping Center	5181	7/23/2024	No	Unlikely	Y	False	N	N

Appendix H

County-Maintained SWM Facilities - Inspection Summary

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
1	1001	7/9/2024	Routine	No	Maintenance is needed (County)	No	Yes
2	1061	7/9/2024	Routine	No	Maintenance is needed (County)	No	Yes
3	1002	7/9/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
4	1063	7/9/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
5	1062	7/9/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
6	685	7/9/2024	Routine	Yes	No maintenance is needed at this time.	No	No
7	973	7/30/2024	Routine	Yes	No maintenance is needed at this time.	No	No
8	974	7/30/2024	Routine	Yes	No maintenance is needed at this time.	No	No
9	975	7/30/2024	Routine	Yes	No maintenance is needed at this time.	No	No
10	1037	7/30/2024	Routine	Yes	No maintenance is needed at this time.	No	No
11	1012	7/30/2024	Routine	Yes	No maintenance is needed at this time.	No	No
13	690	8/1/2024	Routine	No	Maintenance is needed (County)	No	Yes
12	627	8/1/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
14	891	8/1/2024	Routine	Yes	No maintenance is needed at this time.	No	No
15	789	8/2/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
16	890	8/2/2024	Routine	Yes	No maintenance is needed at this time.	No	No
17	864	8/2/2024	Routine	Yes	No maintenance is needed at this time.	No	No
18	30	8/6/2024	Routine	No	Maintenance is needed (County)	No	Yes
19	405	8/6/2024	Routine	No	Maintenance is needed (County)	No	Yes
20	470	8/6/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
21	954	8/6/2024	Routine	Yes	No maintenance is needed at this time.	No	No
22	390	8/6/2024	Routine	Yes	No maintenance is needed at this time.	No	No
23	535	8/6/2024	Routine	Yes	No maintenance is needed at this time.	No	No
24	922	8/6/2024	Routine	Yes	No maintenance is needed at this time.	No	No
25	235	8/6/2024	Routine	Yes	No maintenance is needed at this time.	No	No
26	232	8/6/2024	Routine	Yes	No maintenance is needed at this time.	No	No
27	1059	8/7/2024	Routine	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
28	1060	8/7/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
29	1058	8/7/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
30	471	8/7/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
31	1064	8/7/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
32	368	8/7/2024	Routine	Yes	No maintenance is needed at this time.	No	No
33	121	8/7/2024	Routine	Yes	No maintenance is needed at this time.	No	No
34	971	8/7/2024	Routine	Yes	No maintenance is needed at this time.	No	No
35	1068	8/8/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
36	1069	8/8/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
37	1071	8/8/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
38	1072	8/8/2024	Routine	Yes	No maintenance is needed at this time.	No	No
39	1070	8/8/2024	Routine	Yes	No maintenance is needed at this time.	No	No
40	258	8/13/2024	Routine	Yes	No maintenance is needed at this time.	No	No
41	1029	8/16/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
42	803	8/16/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
43	1021	8/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
44	1025	8/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
45	1022	8/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
46	1023	8/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
47	1024	8/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
48	1033	8/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
49	1034	8/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
50	1031	8/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
51	1030	8/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
52	1032	8/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
53	1065	8/19/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
54	1066	8/19/2024	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
55	1067	8/20/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
56	1052	8/20/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
57	1048	8/20/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
58	343	8/20/2024	Routine	Yes	No maintenance is needed at this time.	No	No
59	823	8/20/2024	Routine	Yes	No maintenance is needed at this time.	No	No
60	858	8/20/2024	Routine	Yes	No maintenance is needed at this time.	No	No
61	795	8/21/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
62	884	8/21/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
63	859	8/21/2024	Routine	Yes	No maintenance is needed at this time.	No	No
64	1050	8/21/2024	Routine	Yes	No maintenance is needed at this time.	No	No
65	652	8/21/2024	Routine	Yes	No maintenance is needed at this time.	No	No
66	887	8/22/2024	Routine	Yes	No maintenance is needed at this time.	No	No
67	1057	8/22/2024	Routine	Yes	No maintenance is needed at this time.	No	No
68	873	8/27/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
69	872	8/27/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
70	871	8/27/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
71	794	8/27/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
72	520	8/27/2024	Routine	Yes	No maintenance is needed at this time.	No	No
73	836	8/27/2024	Routine	Yes	No maintenance is needed at this time.	No	No
74	988	8/28/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
75	970	8/28/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
76	938	8/28/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
77	158	8/28/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
78	957	8/28/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
79	1073	8/28/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
80	1005	8/28/2024	Routine	Yes	No maintenance is needed at this time.	No	No
81	70	8/28/2024	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
82	555	8/29/2024	Other	No	Maintenance is needed (Owner)	Yes	No
83	959	8/29/2024	Routine	Yes	No maintenance is needed at this time.	No	No
84	924	9/3/2024	Other	No	Maintenance is needed (Owner)	Yes	No
85	444	9/3/2024	Other	No	Maintenance is needed (Owner)	Yes	No
88	270	9/4/2024	Routine	No	Maintenance is needed (County)	No	Yes
86	669	9/4/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
87	624	9/4/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
89	528	9/4/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
90	561	9/4/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
91	911	9/4/2024	Routine	Yes	No maintenance is needed at this time.	No	No
92	912	9/4/2024	Routine	Yes	No maintenance is needed at this time.	No	No
93	560	9/4/2024	Routine	Yes	No maintenance is needed at this time.	No	No
94	910	9/5/2024	Routine	Yes	No maintenance is needed at this time.	No	No
95	996	9/5/2024	Routine	Yes	No maintenance is needed at this time.	No	No
96	906	9/6/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
97	326	9/6/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
98	538	9/9/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
99	557	9/9/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
100	684	9/10/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
101	839	9/10/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
102	336	9/10/2024	Routine	Yes	No maintenance is needed at this time.	No	No
103	559	9/10/2024	Routine	Yes	No maintenance is needed at this time.	No	No
104	339	9/10/2024	Routine	Yes	No maintenance is needed at this time.	No	No
105	998	9/10/2024	Routine	Yes	No maintenance is needed at this time.	No	No
106	505	9/11/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
107	837	9/11/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
108	283	9/11/2024	Routine	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
109	894	9/11/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
110	340	9/11/2024	Routine	Yes	No maintenance is needed at this time.	No	No
111	338	9/11/2024	Routine	Yes	No maintenance is needed at this time.	No	No
112	318	9/11/2024	Routine	Yes	No maintenance is needed at this time.	No	No
113	631	9/11/2024	Routine	Yes	No maintenance is needed at this time.	No	No
114	630	9/11/2024	Routine	Yes	No maintenance is needed at this time.	No	No
115	217	9/12/2024	Routine	No	Maintenance is needed (County)	No	Yes
116	377	9/12/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
117	566	9/12/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
118	216	9/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
119	565	9/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
120	1039	9/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
121	1041	9/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
122	1040	9/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
123	532	9/13/2024	Routine	Yes	No maintenance is needed at this time.	No	No
124	533	9/13/2024	Routine	Yes	No maintenance is needed at this time.	No	No
125	424	9/13/2024	Routine	Yes	No maintenance is needed at this time.	No	No
126	534	9/16/2024	Other	No	Maintenance is needed (Owner)	Yes	No
127	689	9/16/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
128	688	9/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
129	553	9/17/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
130	854	9/17/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
131	972	9/17/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
132	853	9/17/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
133	820	9/17/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
134	564	9/17/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
135	558	9/17/2024	Routine	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
136	563	9/17/2024	Routine	Yes	No maintenance is needed at this time.	No	No
137	822	9/17/2024	Routine	Yes	No maintenance is needed at this time.	No	No
138	552	9/17/2024	Routine	Yes	No maintenance is needed at this time.	No	No
139	551	9/17/2024	Routine	Yes	No maintenance is needed at this time.	No	No
140	821	9/17/2024	Routine	Yes	No maintenance is needed at this time.	No	No
141	1042	9/19/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
142	999	9/19/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
143	1000	9/19/2024	Routine	Yes	No maintenance is needed at this time.	No	No
144	991	9/19/2024	Routine	Yes	No maintenance is needed at this time.	No	No
145	990	9/19/2024	Routine	Yes	No maintenance is needed at this time.	No	No
146	114	9/24/2024	Routine	No	Maintenance is needed (County)	No	Yes
147	459	9/24/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
148	868	9/24/2024	Routine	Yes	No maintenance is needed at this time.	No	No
149	866	9/24/2024	Routine	Yes	No maintenance is needed at this time.	No	No
150	867	9/24/2024	Routine	Yes	No maintenance is needed at this time.	No	No
151	458	9/24/2024	Routine	Yes	No maintenance is needed at this time.	No	No
152	483	9/25/2024	Routine	No	Maintenance is needed (County)	No	Yes
153	989	9/25/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
154	877	9/25/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
155	878	9/25/2024	Routine	Yes	No maintenance is needed at this time.	No	No
156	597	9/30/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
157	252	10/2/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
158	967	10/2/2024	Routine	Yes	No maintenance is needed at this time.	No	No
159	968	10/2/2024	Routine	Yes	No maintenance is needed at this time.	No	No
160	969	10/2/2024	Routine	Yes	No maintenance is needed at this time.	No	No
161	623	10/3/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
162	788	10/3/2024	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
164	387	10/4/2024	Routine	No	Maintenance is needed (County)	No	Yes
165	622	10/4/2024	Routine	No	Maintenance is needed (County)	No	Yes
163	238	10/4/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
166	312	10/4/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
167	1020	10/4/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
168	113	10/4/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
169	388	10/4/2024	Routine	Yes	No maintenance is needed at this time.	No	No
170	389	10/4/2024	Routine	Yes	No maintenance is needed at this time.	No	No
171	441	10/7/2024	Routine	No	Maintenance is needed (County)	No	Yes
172	440	10/7/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
173	569	10/7/2024	Routine	Yes	No maintenance is needed at this time.	No	No
174	789	10/8/2024	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
175	852	10/8/2024	Routine	Yes	No maintenance is needed at this time.	No	No
176	214	10/9/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
177	189	10/9/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
178	269	10/9/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
179	972	10/9/2024	Routine	Yes	No maintenance is needed at this time.	No	No
180	307	10/9/2024	Routine	Yes	No maintenance is needed at this time.	No	No
181	410	10/9/2024	Routine	Yes	No maintenance is needed at this time.	No	No
182	89	10/10/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
183	908	10/11/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
184	613	10/11/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
185	907	10/11/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
186	909	10/11/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
187	850	10/11/2024	Routine	Yes	No maintenance is needed at this time.	No	No
189	397	10/14/2024	Routine	No	Maintenance is needed (County)	No	Yes
188	518	10/14/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
190	256	10/14/2024	Routine	Yes	No maintenance is needed at this time.	No	No
191	534	10/15/2024	Routine	No	Maintenance is needed (County)	No	Yes
192	512	10/15/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
193	562	10/15/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
194	352	10/15/2024	Routine	Yes	No maintenance is needed at this time.	No	No
195	353	10/15/2024	Routine	Yes	No maintenance is needed at this time.	No	No
196	511	10/15/2024	Routine	Yes	No maintenance is needed at this time.	No	No
197	808	10/16/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
198	1068	10/16/2024	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
199	291	10/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
200	292	10/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
201	290	10/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
202	289	10/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
203	437	10/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
204	438	10/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
205	254	10/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
206	255	10/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
207	549	10/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
208	550	10/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
209	187	10/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
210	396	10/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
211	488	10/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
212	1077	10/18/2024	Routine	No	Maintenance is needed (County)	No	Yes
213	1074	10/18/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
214	1075	10/18/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
215	1076	10/18/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
216	587	10/21/2024	Routine	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
217	570	10/21/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
218	921	10/22/2024	Routine	No	Maintenance is needed (County)	No	Yes
219	442	10/22/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
220	920	10/22/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
221	1071	10/23/2024	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
222	1069	10/23/2024	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
223	174	10/23/2024	Routine	Yes	No maintenance is needed at this time.	No	No
224	1042	10/23/2024	60-day reinspection	Yes	No maintenance is needed at this time.	No	No
225	638	10/23/2024	Routine	Yes	No maintenance is needed at this time.	No	No
226	637	10/23/2024	Routine	Yes	No maintenance is needed at this time.	No	No
227	218	10/24/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
228	514	10/28/2024	Routine	No	Maintenance is needed (County)	No	Yes
229	510	10/28/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
230	516	10/28/2024	Routine	Yes	No maintenance is needed at this time.	No	No
231	515	10/28/2024	Routine	Yes	No maintenance is needed at this time.	No	No
232	804	10/28/2024	Routine	Yes	No maintenance is needed at this time.	No	No
233	44	10/29/2024	Routine	No	Maintenance is needed (County)	No	Yes
234	141	10/29/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
235	143	10/29/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
236	142	10/29/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
237	899	10/29/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
238	284	10/29/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
239	234	10/29/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
240	916	10/29/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
241	501	10/29/2024	Routine	Yes	No maintenance is needed at this time.	No	No
242	898	10/29/2024	Routine	Yes	No maintenance is needed at this time.	No	No
243	793	10/29/2024	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
244	144	10/29/2024	Routine	Yes	No maintenance is needed at this time.	No	No
245	455	10/31/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
246	805	10/31/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
247	874	10/31/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
248	882	10/31/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
249	881	10/31/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
250	567	10/31/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
252	1043	11/1/2024	Routine	No	Maintenance is needed (County)	No	Yes
253	297	11/1/2024	Routine	No	Maintenance is needed (County)	No	Yes
251	64	11/1/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
254	1051	11/1/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
255	1017	11/1/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
256	1018	11/1/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
257	653	11/1/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
258	337	11/1/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
259	920	11/1/2024	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
260	535	11/1/2024	60-day reinspection	Yes	No maintenance is needed at this time.	No	No
261	1046	11/1/2024	Routine	Yes	No maintenance is needed at this time.	No	No
262	1044	11/1/2024	Routine	Yes	No maintenance is needed at this time.	No	No
263	1045	11/1/2024	Routine	Yes	No maintenance is needed at this time.	No	No
264	971	11/1/2024	Routine	Yes	No maintenance is needed at this time.	No	No
265	953	11/1/2024	Routine	Yes	No maintenance is needed at this time.	No	No
266	628	11/4/2024	Routine	No	Maintenance is needed (County)	No	Yes
267	629	11/4/2024	Routine	No	Maintenance is needed (County)	No	Yes
268	649	11/4/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
269	650	11/4/2024	Routine	Yes	No maintenance is needed at this time.	No	No
270	355	11/5/2024	Routine	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
271	902	11/5/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
272	901	11/5/2024	Routine	Yes	No maintenance is needed at this time.	No	No
273	879	11/5/2024	Routine	Yes	No maintenance is needed at this time.	No	No
274	903	11/5/2024	Routine	Yes	No maintenance is needed at this time.	No	No
275	813	11/5/2024	Routine	Yes	No maintenance is needed at this time.	No	No
276	814	11/5/2024	Routine	Yes	No maintenance is needed at this time.	No	No
277	815	11/5/2024	Routine	Yes	No maintenance is needed at this time.	No	No
278	794	11/6/2024	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
279	938	11/7/2024	60-day reinspection	No	Maintenance is needed (County/Owner)	Yes	Yes
280	445	11/7/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
281	896	11/7/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
282	897	11/7/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
283	895	11/7/2024	Routine	Yes	No maintenance is needed at this time.	No	No
284	654	11/12/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
285	655	11/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
286	699	11/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
287	584	11/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
288	151	11/13/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
289	98	11/13/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
290	147	11/14/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
291	414	11/15/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
292	328	11/15/2024	Routine	Yes	No maintenance is needed at this time.	No	No
293	53	11/15/2024	Routine	Yes	No maintenance is needed at this time.	No	No
294	55	11/15/2024	Routine	Yes	No maintenance is needed at this time.	No	No
295	529	11/15/2024	Routine	Yes	No maintenance is needed at this time.	No	No
296	981	11/18/2024	Routine	Yes	No maintenance is needed at this time.	No	No
297	982	11/18/2024	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
298	983	11/18/2024	Routine	Yes	No maintenance is needed at this time.	No	No
299	985	11/18/2024	Routine	Yes	No maintenance is needed at this time.	No	No
300	984	11/18/2024	Routine	Yes	No maintenance is needed at this time.	No	No
301	796	11/18/2024	Routine	Yes	No maintenance is needed at this time.	No	No
303	856	11/19/2024	Routine	No	Maintenance is needed (County)	No	Yes
302	357	11/19/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
304	446	11/19/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
305	889	11/19/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
306	416	11/19/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
307	237	11/19/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
308	411	11/19/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
309	857	11/19/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
310	610	11/19/2024	Routine	Yes	No maintenance is needed at this time.	No	No
311	819	11/19/2024	Routine	Yes	No maintenance is needed at this time.	No	No
312	155	11/19/2024	Routine	Yes	No maintenance is needed at this time.	No	No
313	361	11/19/2024	Routine	Yes	No maintenance is needed at this time.	No	No
314	359	11/19/2024	Routine	Yes	No maintenance is needed at this time.	No	No
315	855	11/19/2024	Routine	Yes	No maintenance is needed at this time.	No	No
316	455	11/20/2024	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
317	805	11/20/2024	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
318	874	11/20/2024	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
319	882	11/20/2024	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
320	881	11/20/2024	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
321	809	11/20/2024	Routine	Yes	No maintenance is needed at this time.	No	No
322	313	11/21/2024	Routine	No	Maintenance is needed (County)	No	Yes
323	671	11/21/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
324	170	11/21/2024	Routine	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
325	962	11/21/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
326	171	11/21/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
327	1002	11/21/2024	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
328	73	11/21/2024	Routine	Yes	No maintenance is needed at this time.	No	No
329	5977	11/27/2024	Routine	No	Maintenance is needed (County)	No	Yes
330	68	11/27/2024	Routine	No	Maintenance is needed (County)	No	Yes
331	870	11/27/2024	Routine	No	Maintenance is needed (County)	No	Yes
332	157	11/27/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
333	154	11/27/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
334	123	11/27/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
335	444	11/27/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
336	5351	11/27/2024	Routine	Yes	No maintenance is needed at this time.	No	No
337	810	11/27/2024	Routine	Yes	No maintenance is needed at this time.	No	No
338	1004	11/27/2024	Routine	Yes	No maintenance is needed at this time.	No	No
339	51	11/27/2024	Routine	Yes	No maintenance is needed at this time.	No	No
340	317	11/27/2024	Routine	Yes	No maintenance is needed at this time.	No	No
341	124	11/27/2024	Routine	Yes	No maintenance is needed at this time.	No	No
342	986	12/3/2024	Routine	Yes	No maintenance is needed at this time.	No	No
343	812	12/3/2024	Routine	Yes	No maintenance is needed at this time.	No	No
344	326	12/4/2024	60-day reinspection	No	Maintenance is needed (County/Owner)	Yes	Yes
345	146	12/4/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
346	599	12/4/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
347	617	12/4/2024	Routine	Yes	No maintenance is needed at this time.	No	No
348	847	12/4/2024	Routine	Yes	No maintenance is needed at this time.	No	No
349	993	12/4/2024	Routine	Yes	No maintenance is needed at this time.	No	No
350	992	12/4/2024	Routine	Yes	No maintenance is needed at this time.	No	No
351	252	12/5/2024	Routine	No	Maintenance is needed (County)	No	Yes

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
352	439	12/5/2024	Routine	No	Maintenance is needed (County)	No	Yes
353	593	12/5/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
354	590	12/5/2024	Routine	Yes	No maintenance is needed at this time.	No	No
355	892	12/5/2024	Routine	Yes	No maintenance is needed at this time.	No	No
356	202	12/6/2024	Routine	No	Maintenance is needed (County)	No	Yes
357	955	12/6/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
358	233	12/10/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
359	125	12/10/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
360	414	12/10/2024	60-day reinspection	No	Maintenance is needed (County/Owner)	Yes	Yes
361	543	12/10/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
362	41	12/10/2024	Routine	Yes	No maintenance is needed at this time.	No	No
363	692	12/10/2024	Routine	Yes	No maintenance is needed at this time.	No	No
364	360	12/10/2024	Routine	Yes	No maintenance is needed at this time.	No	No
365	47	12/10/2024	Routine	Yes	No maintenance is needed at this time.	No	No
366	358	12/10/2024	Routine	Yes	No maintenance is needed at this time.	No	No
367	166	12/10/2024	Routine	Yes	No maintenance is needed at this time.	No	No
369	362	12/11/2024	Routine	No	Maintenance is needed (County)	No	Yes
368	363	12/11/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
370	5209	12/12/2024	Routine	No	Maintenance is needed (County)	No	Yes
371	379	12/12/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
372	1006	12/12/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
373	71	12/12/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
374	798	12/12/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
375	454	12/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
376	616	12/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
377	541	12/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
378	481	12/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
379	481	12/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
380	5909	12/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
381	5298	12/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
382	883	12/12/2024	Routine	Yes	No maintenance is needed at this time.	No	No
383	5929	12/13/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
384	5935	12/13/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
385	426	12/13/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
386	531	12/13/2024	Routine	Yes	No maintenance is needed at this time.	No	No
387	59	12/13/2024	Routine	Yes	No maintenance is needed at this time.	No	No
388	453	12/13/2024	Routine	Yes	No maintenance is needed at this time.	No	No
389	462	12/16/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
390	298	12/16/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
391	5823	12/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
392	939	12/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
393	271	12/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
394	5824	12/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
395	104	12/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
396	178	12/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
397	5154	12/16/2024	Routine	Yes	No maintenance is needed at this time.	No	No
398	191	12/17/2024	Routine	No	Maintenance is needed (County)	No	Yes
399	394	12/17/2024	Routine	No	Maintenance is needed (County)	No	Yes
400	528	12/17/2024	60-day reinspection	No	Maintenance is needed (County)	No	Yes
401	669	12/17/2024	60-day reinspection	No	Maintenance is needed (County)	No	Yes
402	519	12/17/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
403	314	12/17/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
404	72	12/17/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
405	190	12/17/2024	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
406	987	12/17/2024	Routine	Yes	No maintenance is needed at this time.	No	No
407	642	12/17/2024	Routine	Yes	No maintenance is needed at this time.	No	No
408	416	12/18/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
409	606	12/18/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
410	106	12/18/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
411	112	12/18/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
412	54	12/18/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
413	607	12/18/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
414	183	12/18/2024	Routine	Yes	No maintenance is needed at this time.	No	No
415	294	12/19/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
416	5126	12/19/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
417	128	12/19/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
418	286	12/19/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
419	300	12/19/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
420	1038	12/19/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
421	293	12/19/2024	Routine	Yes	No maintenance is needed at this time.	No	No
422	385	12/20/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
423	384	12/20/2024	Routine	Yes	No maintenance is needed at this time.	No	No
424	383	12/20/2024	Routine	Yes	No maintenance is needed at this time.	No	No
425	1074	12/20/2024	Routine	Yes	No maintenance is needed at this time.	No	No
426	1075	12/20/2024	Routine	Yes	No maintenance is needed at this time.	No	No
427	305	12/23/2024	Routine	Yes	No maintenance is needed at this time.	No	No
428	306	12/23/2024	Routine	Yes	No maintenance is needed at this time.	No	No
429	1076	12/23/2024	Routine	Yes	No maintenance is needed at this time.	No	No
430	45	12/26/2024	Routine	No	Maintenance is needed (County)	No	Yes
431	1077	12/26/2024	15-day reinspection	No	Maintenance is needed (Owner)	Yes	No
432	5749	12/26/2024	Routine	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
433	49	12/26/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
434	299	12/26/2024	Routine	Yes	No maintenance is needed at this time.	No	No
435	5337	12/27/2024	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
436	167	12/27/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
437	186	12/27/2024	Routine	No	Maintenance is needed (Owner)	Yes	No
438	5036	12/27/2024	Routine	Yes	No maintenance is needed at this time.	No	No
439	5035	12/27/2024	Routine	Yes	No maintenance is needed at this time.	No	No
440	329	1/3/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
441	5384	1/3/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
442	835	1/3/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
443	834	1/3/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
444	824	1/3/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
445	825	1/3/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
446	833	1/8/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
447	826	1/8/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
448	827	1/8/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
449	828	1/8/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
450	829	1/8/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
451	830	1/8/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
452	831	1/8/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
453	832	1/8/2025	Routine	Yes	No maintenance is needed at this time.	No	No
454	182	1/9/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
455	225	1/13/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
456	220	1/14/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
457	90	1/15/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
458	524	1/15/2025	Routine	Yes	No maintenance is needed at this time.	No	No
459	327	1/16/2025	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
460	199	1/16/2025	Routine	Yes	No maintenance is needed at this time.	No	No
461	198	1/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
462	604	1/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
463	579	1/27/2025	Routine	Yes	No maintenance is needed at this time.	No	No
464	482	1/28/2025	Routine	No	Maintenance is needed (County)	No	Yes
465	200	1/28/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
466	163	1/28/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
467	201	1/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
468	246	1/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
469	245	1/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
470	224	1/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
471	161	1/29/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
472	871	1/29/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
473	662	1/29/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
474	808	1/29/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
475	873	1/29/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
476	169	1/29/2025	Routine	Yes	No maintenance is needed at this time.	No	No
477	277	1/29/2025	Routine	Yes	No maintenance is needed at this time.	No	No
478	223	1/29/2025	Routine	Yes	No maintenance is needed at this time.	No	No
479	145	1/29/2025	Routine	Yes	No maintenance is needed at this time.	No	No
480	697	1/30/2025	Routine	Yes	No maintenance is needed at this time.	No	No
481	1006	1/31/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
482	670	2/3/2025	Routine	No	Maintenance is needed (County)	No	Yes
483	577	2/3/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
484	490	2/3/2025	Routine	Yes	No maintenance is needed at this time.	No	No
485	451	2/3/2025	Routine	Yes	No maintenance is needed at this time.	No	No
486	582	2/3/2025	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
488	576	2/4/2025	Routine	No	Maintenance is needed (County)	No	Yes
489	578	2/4/2025	Routine	No	Maintenance is needed (County)	No	Yes
490	581	2/4/2025	Routine	No	Maintenance is needed (County)	No	Yes
487	668	2/4/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
491	966	2/4/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
492	5877	2/4/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
493	140	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
494	295	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
495	139	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
496	138	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
497	116	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
498	115	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
499	119	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
500	227	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
501	226	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
502	228	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
503	117	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
504	118	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
505	136	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
506	135	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
507	495	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
508	499	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
509	500	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
510	496	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
511	497	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
512	498	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
513	963	2/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
514	919	2/5/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
515	377	2/5/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
516	863	2/5/2025	Routine	Yes	No maintenance is needed at this time.	No	No
517	893	2/6/2025	Routine	No	Maintenance is needed (County)	No	Yes
518	558	2/14/2025	Complaint Based	No	Maintenance is needed (County)	No	Yes
519	197	2/18/2025	Routine	No	Maintenance is needed (County)	No	Yes
520	1029	2/18/2025	Routine	No	Maintenance is needed (County)	No	Yes
521	1030	2/18/2025	Routine	No	Maintenance is needed (County)	No	Yes
522	1033	2/18/2025	Other	No	Maintenance is needed (County)	No	Yes
523	316	2/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
524	936	2/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
525	918	2/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
526	917	2/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
527	926	2/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
528	925	2/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
529	880	2/20/2025	Routine	Yes	No maintenance is needed at this time.	No	No
530	965	2/20/2025	Routine	Yes	No maintenance is needed at this time.	No	No
531	964	2/20/2025	Routine	Yes	No maintenance is needed at this time.	No	No
532	927	2/20/2025	Routine	Yes	No maintenance is needed at this time.	No	No
533	51	2/21/2025	Complaint Based	Yes	No maintenance is needed at this time.	No	No
534	399	2/24/2025	Routine	Yes	No maintenance is needed at this time.	No	No
536	599	2/25/2025	60-day reinspection	No	Maintenance is needed (County)	No	Yes
537	593	2/25/2025	60-day reinspection	No	Maintenance is needed (County)	No	Yes
538	513	2/25/2025	Routine	No	Maintenance is needed (County)	No	Yes
535	817	2/25/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
539	74	2/25/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
540	506	2/25/2025	Routine	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
541	507	2/25/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
542	816	2/25/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
543	92	2/25/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
544	456	2/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
545	334	2/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
546	335	2/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
547	50	2/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
548	4	2/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
549	3	2/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
550	75	2/26/2025	Routine	No	Maintenance is needed (County)	No	Yes
551	233	2/26/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
552	661	2/26/2025	Routine	Yes	No maintenance is needed at this time.	No	No
553	790	2/26/2025	Routine	Yes	No maintenance is needed at this time.	No	No
554	575	2/26/2025	Routine	Yes	No maintenance is needed at this time.	No	No
555	791	2/26/2025	Routine	Yes	No maintenance is needed at this time.	No	No
556	465	2/27/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
557	457	2/27/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
558	28	2/27/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
559	928	2/27/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
560	691	2/27/2025	Routine	Yes	No maintenance is needed at this time.	No	No
561	122	2/27/2025	Routine	Yes	No maintenance is needed at this time.	No	No
562	229	2/27/2025	Routine	Yes	No maintenance is needed at this time.	No	No
563	846	2/28/2025	Routine	No	Maintenance is needed (County)	No	Yes
564	653	2/28/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
565	803	2/28/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
566	1019	2/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
568	508	3/3/2025	Routine	No	Maintenance is needed (County)	No	Yes

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
567	509	3/3/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
569	296	3/3/2025	Routine	Yes	No maintenance is needed at this time.	No	No
570	239	3/4/2025	Routine	No	Maintenance is needed (County)	No	Yes
571	860	3/4/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
572	861	3/4/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
573	937	3/4/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
574	398	3/4/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
575	904	3/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
576	905	3/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
577	598	3/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
578	240	3/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
579	219	3/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
582	120	3/5/2025	Routine	No	Maintenance is needed (County)	No	Yes
583	934	3/5/2025	Routine	No	Maintenance is needed (County)	No	Yes
584	19	3/5/2025	Routine	No	Maintenance is needed (County)	No	Yes
580	619	3/5/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
581	602	3/5/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
585	278	3/5/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
586	574	3/5/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
587	797	3/5/2025	Routine	Yes	No maintenance is needed at this time.	No	No
588	137	3/5/2025	Routine	Yes	No maintenance is needed at this time.	No	No
589	29	3/5/2025	Routine	Yes	No maintenance is needed at this time.	No	No
590	82	3/5/2025	Routine	Yes	No maintenance is needed at this time.	No	No
591	83	3/5/2025	Routine	Yes	No maintenance is needed at this time.	No	No
592	489	3/5/2025	Routine	Yes	No maintenance is needed at this time.	No	No
593	694	3/5/2025	Routine	Yes	No maintenance is needed at this time.	No	No
594	478	3/5/2025	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
595	234	3/6/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
596	547	3/6/2025	Routine	Yes	No maintenance is needed at this time.	No	No
598	366	3/10/2025	Routine	No	Maintenance is needed (County)	No	Yes
599	400	3/10/2025	Routine	No	Maintenance is needed (County)	No	Yes
597	395	3/10/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
600	249	3/10/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
601	242	3/10/2025	Routine	Yes	No maintenance is needed at this time.	No	No
602	247	3/10/2025	Routine	Yes	No maintenance is needed at this time.	No	No
603	248	3/10/2025	Routine	Yes	No maintenance is needed at this time.	No	No
604	250	3/10/2025	Routine	Yes	No maintenance is needed at this time.	No	No
605	365	3/10/2025	Routine	Yes	No maintenance is needed at this time.	No	No
606	364	3/10/2025	Routine	Yes	No maintenance is needed at this time.	No	No
607	222	3/10/2025	Routine	Yes	No maintenance is needed at this time.	No	No
608	221	3/10/2025	Routine	Yes	No maintenance is needed at this time.	No	No
609	215	3/11/2025	Routine	No	Maintenance is needed (County)	No	Yes
610	403	3/11/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
611	402	3/11/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
612	844	3/11/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
613	243	3/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
614	244	3/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
615	205	3/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
616	204	3/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
617	241	3/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
618	588	3/13/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
619	843	3/13/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
620	378	3/13/2025	Routine	Yes	No maintenance is needed at this time.	No	No
621	391	3/13/2025	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
622	392	3/13/2025	Routine	Yes	No maintenance is needed at this time.	No	No
623	393	3/13/2025	Routine	Yes	No maintenance is needed at this time.	No	No
624	212	3/13/2025	Routine	Yes	No maintenance is needed at this time.	No	No
625	213	3/13/2025	Routine	Yes	No maintenance is needed at this time.	No	No
626	962	3/14/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
627	367	3/14/2025	Routine	Yes	No maintenance is needed at this time.	No	No
628	573	3/14/2025	Routine	Yes	No maintenance is needed at this time.	No	No
629	572	3/14/2025	Routine	Yes	No maintenance is needed at this time.	No	No
630	66	3/14/2025	Routine	Yes	No maintenance is needed at this time.	No	No
631	323	3/17/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
632	324	3/17/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
633	648	3/17/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
634	660	3/17/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
635	589	3/17/2025	Routine	Yes	No maintenance is needed at this time.	No	No
636	594	3/17/2025	Routine	Yes	No maintenance is needed at this time.	No	No
637	595	3/17/2025	Routine	Yes	No maintenance is needed at this time.	No	No
638	436	3/18/2025	Routine	No	Maintenance is needed (County)	No	Yes
639	601	3/18/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
640	600	3/18/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
641	382	3/18/2025	Routine	Yes	No maintenance is needed at this time.	No	No
642	1047	3/18/2025	Routine	Yes	No maintenance is needed at this time.	No	No
643	156	3/18/2025	Routine	Yes	No maintenance is needed at this time.	No	No
644	315	3/19/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
645	165	3/19/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
646	18	3/19/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
647	127	3/19/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
648	667	3/19/2025	Routine	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
649	530	3/19/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
650	1013	3/19/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
651	845	3/19/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
652	96	3/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
653	95	3/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
654	57	3/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
655	425	3/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
656	596	3/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
657	640	3/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
658	11	3/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
659	1009	3/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
660	2	3/19/2025	Routine	Yes	No maintenance is needed at this time.	No	No
661	567	3/20/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
662	605	3/20/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
663	151	3/20/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
664	411	3/20/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
665	643	3/20/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
666	477	3/21/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
667	88	3/25/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
668	22	3/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
669	67	3/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
670	698	3/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
671	27	3/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
673	460	3/26/2025	Routine	No	Maintenance is needed (County)	No	Yes
672	935	3/26/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
674	236	3/26/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
675	521	3/26/2025	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
676	251	3/26/2025	Routine	Yes	No maintenance is needed at this time.	No	No
677	484	3/27/2025	Routine	No	Maintenance is needed (County)	No	Yes
678	930	3/28/2025	Routine	No	Maintenance is needed (County)	No	Yes
679	644	3/28/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
680	980	3/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
681	646	3/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
682	886	3/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
683	525	3/31/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
684	950	3/31/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
685	641	3/31/2025	Routine	Yes	No maintenance is needed at this time.	No	No
687	818	4/1/2025	Routine	No	Maintenance is needed (County)	No	Yes
688	869	4/1/2025	Routine	No	Maintenance is needed (County)	No	Yes
686	132	4/1/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
689	800	4/1/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
690	325	4/1/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
691	811	4/1/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
692	548	4/1/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
693	664	4/1/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
694	36	4/1/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
695	970	4/1/2025	Routine	Yes	No maintenance is needed at this time.	No	No
696	430	4/1/2025	Routine	Yes	No maintenance is needed at this time.	No	No
697	618	4/1/2025	Routine	Yes	No maintenance is needed at this time.	No	No
698	272	4/1/2025	Routine	Yes	No maintenance is needed at this time.	No	No
699	1014	4/1/2025	Routine	Yes	No maintenance is needed at this time.	No	No
701	666	4/2/2025	Routine	No	Maintenance is needed (County)	No	Yes
702	281	4/2/2025	Routine	No	Maintenance is needed (County)	No	Yes
700	657	4/2/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
703	665	4/2/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
704	951	4/2/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
705	952	4/2/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
706	686	4/2/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
707	312	4/2/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
708	1020	4/2/2025	Routine	Yes	No maintenance is needed at this time.	No	No
709	435	4/2/2025	Routine	Yes	No maintenance is needed at this time.	No	No
710	210	4/2/2025	Routine	Yes	No maintenance is needed at this time.	No	No
711	682	4/2/2025	Routine	Yes	No maintenance is needed at this time.	No	No
712	888	4/2/2025	Routine	Yes	No maintenance is needed at this time.	No	No
714	1027	4/3/2025	Routine	No	Maintenance is needed (County)	No	Yes
713	862	4/3/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
715	929	4/3/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
716	865	4/3/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
717	1028	4/3/2025	Routine	Yes	No maintenance is needed at this time.	No	No
718	192	4/3/2025	Routine	Yes	No maintenance is needed at this time.	No	No
719	285	4/3/2025	Routine	Yes	No maintenance is needed at this time.	No	No
720	526	4/7/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
721	849	4/7/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
722	206	4/7/2025	Routine	Yes	No maintenance is needed at this time.	No	No
725	85	4/8/2025	Routine	No	Maintenance is needed (County)	No	Yes
723	468	4/8/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
724	134	4/8/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
726	196	4/8/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
727	39	4/8/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
728	979	4/8/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
729	237	4/8/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
730	469	4/8/2025	Routine	Yes	No maintenance is needed at this time.	No	No
731	568	4/8/2025	Routine	Yes	No maintenance is needed at this time.	No	No
732	467	4/8/2025	Routine	Yes	No maintenance is needed at this time.	No	No
733	1003	4/8/2025	Routine	Yes	No maintenance is needed at this time.	No	No
734	554	4/8/2025	Routine	Yes	No maintenance is needed at this time.	No	No
735	84	4/8/2025	Routine	Yes	No maintenance is needed at this time.	No	No
736	452	4/9/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
737	63	4/10/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
738	208	4/10/2025	Routine	Yes	No maintenance is needed at this time.	No	No
739	207	4/10/2025	Routine	Yes	No maintenance is needed at this time.	No	No
740	849	4/14/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
741	546	4/14/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
742	493	4/15/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
743	494	4/15/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
744	492	4/16/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
745	386	4/16/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
746	651	4/16/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
747	185	4/16/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
748	1049	4/16/2025	Routine	Yes	No maintenance is needed at this time.	No	No
749	786	4/21/2025	Routine	No	Maintenance is needed (County)	No	Yes
750	787	4/21/2025	Routine	No	Maintenance is needed (County)	No	Yes
751	977	4/21/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
752	978	4/21/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
753	851	4/21/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
754	785	4/21/2025	Routine	Yes	No maintenance is needed at this time.	No	No
755	779	4/21/2025	Routine	Yes	No maintenance is needed at this time.	No	No
756	781	4/21/2025	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
757	780	4/21/2025	Routine	Yes	No maintenance is needed at this time.	No	No
758	782	4/21/2025	Routine	Yes	No maintenance is needed at this time.	No	No
759	783	4/21/2025	Routine	Yes	No maintenance is needed at this time.	No	No
760	782	4/21/2025	Routine	Yes	No maintenance is needed at this time.	No	No
761	774	4/21/2025	Routine	Yes	No maintenance is needed at this time.	No	No
762	799	4/22/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
763	994	4/22/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
764	695	4/22/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
765	412	4/22/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
766	775	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
767	777	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
768	776	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
769	773	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
770	754	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
771	747	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
772	748	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
773	749	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
774	746	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
775	745	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
776	751	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
777	752	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
778	750	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
779	741	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
780	742	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
781	743	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
782	728	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
783	744	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
784	753	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
785	727	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
786	756	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
787	755	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
788	726	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
789	725	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
790	772	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
791	724	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
792	770	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
793	769	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
794	768	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
795	771	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
796	767	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
797	738	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
798	739	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
799	737	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
800	736	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
801	735	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
802	734	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
803	733	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
804	732	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
805	875	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
806	731	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
807	730	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
808	729	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
809	91	4/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
810	99	4/23/2025	Routine	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
811	81	4/23/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
812	164	4/23/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
813	764	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
814	765	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
815	784	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
816	778	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
817	740	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
818	760	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
819	757	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
820	758	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
821	759	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
822	709	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
823	706	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
824	707	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
825	708	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
826	716	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
827	717	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
828	763	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
829	700	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
830	761	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
831	762	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
832	766	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
833	61	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
834	472	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
835	150	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
836	149	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
837	434	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
838	80	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
839	792	4/23/2025	Routine	Yes	No maintenance is needed at this time.	No	No
840	632	4/24/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
841	885	4/24/2025	Routine	Yes	No maintenance is needed at this time.	No	No
842	633	4/24/2025	Routine	Yes	No maintenance is needed at this time.	No	No
843	133	4/24/2025	Routine	Yes	No maintenance is needed at this time.	No	No
844	15	4/24/2025	Routine	Yes	No maintenance is needed at this time.	No	No
845	86	4/24/2025	Routine	Yes	No maintenance is needed at this time.	No	No
846	701	4/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
847	702	4/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
848	703	4/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
849	704	4/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
850	705	4/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
851	427	4/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
852	723	4/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
853	722	4/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
854	131	4/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
855	721	4/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
856	130	4/25/2025	Routine	Yes	No maintenance is needed at this time.	No	No
857	710	4/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
858	718	4/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
859	719	4/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
860	720	4/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
861	715	4/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
862	711	4/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
863	712	4/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
864	714	4/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
865	713	4/28/2025	Routine	Yes	No maintenance is needed at this time.	No	No
866	354	4/29/2025	Routine	No	Maintenance is needed (County)	No	Yes
867	103	4/29/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
868	838	4/29/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
869	311	4/29/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
870	1036	4/29/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
871	976	4/29/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
872	330	4/29/2025	Routine	Yes	No maintenance is needed at this time.	No	No
873	443	4/29/2025	Routine	Yes	No maintenance is needed at this time.	No	No
874	394	4/30/2025	Other	No	Maintenance is needed (County/Owner)	Yes	Yes
875	997	5/2/2025	Routine	No	Maintenance is needed (County)	No	Yes
876	209	5/2/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
877	995	5/2/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
878	556	5/6/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
879	195	5/6/2025	Routine	Yes	No maintenance is needed at this time.	No	No
880	571	5/6/2025	Routine	Yes	No maintenance is needed at this time.	No	No
881	625	5/8/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
882	473	5/8/2025	Routine	Yes	No maintenance is needed at this time.	No	No
883	614	5/8/2025	Routine	Yes	No maintenance is needed at this time.	No	No
884	620	5/8/2025	Routine	Yes	No maintenance is needed at this time.	No	No
885	615	5/8/2025	Routine	Yes	No maintenance is needed at this time.	No	No
886	693	5/8/2025	Routine	Yes	No maintenance is needed at this time.	No	No
887	14	5/13/2025	Routine	No	Maintenance is needed (County)	No	Yes
888	13	5/13/2025	Routine	No	Maintenance is needed (County)	No	Yes
889	160	5/14/2025	Routine	No	Maintenance is needed (County)	No	Yes
890	591	5/14/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
891	683	5/14/2025	Routine	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
892	586	5/14/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
893	487	5/14/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
894	486	5/14/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
895	485	5/14/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
896	409	5/14/2025	Routine	Yes	No maintenance is needed at this time.	No	No
897	407	5/14/2025	Routine	Yes	No maintenance is needed at this time.	No	No
898	408	5/14/2025	Routine	Yes	No maintenance is needed at this time.	No	No
899	101	5/15/2025	Routine	No	Maintenance is needed (County)	No	Yes
900	77	5/15/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
901	958	5/15/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
902	76	5/15/2025	Routine	Yes	No maintenance is needed at this time.	No	No
903	320	5/16/2025	Routine	No	Maintenance is needed (County)	No	Yes
904	319	5/16/2025	Routine	No	Maintenance is needed (County)	No	Yes
905	351	5/16/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
906	350	5/16/2025	Routine	Yes	No maintenance is needed at this time.	No	No
907	48	5/20/2025	Routine	No	Maintenance is needed (County)	No	Yes
908	626	5/20/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
909	381	5/20/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
910	418	5/20/2025	Routine	Yes	No maintenance is needed at this time.	No	No
911	417	5/20/2025	Routine	Yes	No maintenance is needed at this time.	No	No
912	413	5/20/2025	Routine	Yes	No maintenance is needed at this time.	No	No
913	475	5/20/2025	Routine	Yes	No maintenance is needed at this time.	No	No
914	1007	5/21/2025	Routine	Yes	No maintenance is needed at this time.	No	No
915	1035	5/21/2025	Routine	Yes	No maintenance is needed at this time.	No	No
916	172	5/21/2025	Routine	Yes	No maintenance is needed at this time.	No	No
917	279	5/21/2025	Routine	Yes	No maintenance is needed at this time.	No	No
918	280	5/21/2025	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
921	259	5/22/2025	Routine	No	Maintenance is needed (County)	No	Yes
922	109	5/22/2025	Routine	No	Maintenance is needed (County)	No	Yes
923	421	5/22/2025	Routine	No	Maintenance is needed (County)	No	Yes
919	168	5/22/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
920	79	5/22/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
924	656	5/22/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
925	257	5/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
926	264	5/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
927	261	5/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
928	260	5/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
929	268	5/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
930	267	5/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
931	265	5/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
932	592	5/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
933	932	5/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
934	931	5/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
935	634	5/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
936	635	5/22/2025	Routine	Yes	No maintenance is needed at this time.	No	No
940	193	5/27/2025	Routine	No	Maintenance is needed (County)	No	Yes
937	24	5/27/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
938	194	5/27/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
939	275	5/27/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
941	376	5/27/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
942	276	5/27/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
943	25	5/27/2025	Routine	Yes	No maintenance is needed at this time.	No	No
944	177	5/27/2025	Routine	Yes	No maintenance is needed at this time.	No	No
945	341	5/27/2025	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
946	342	5/27/2025	Routine	Yes	No maintenance is needed at this time.	No	No
947	347	5/27/2025	Routine	Yes	No maintenance is needed at this time.	No	No
948	274	5/27/2025	Routine	Yes	No maintenance is needed at this time.	No	No
949	110	5/29/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
950	153	5/29/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
951	111	5/29/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
952	184	5/29/2025	Routine	Yes	No maintenance is needed at this time.	No	No
953	230	5/29/2025	Routine	Yes	No maintenance is needed at this time.	No	No
954	419	5/29/2025	Routine	Yes	No maintenance is needed at this time.	No	No
955	262	5/29/2025	Routine	Yes	No maintenance is needed at this time.	No	No
956	263	5/29/2025	Routine	Yes	No maintenance is needed at this time.	No	No
957	266	5/29/2025	Routine	Yes	No maintenance is needed at this time.	No	No
958	42	6/2/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
959	175	6/2/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
960	273	6/2/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
961	304	6/2/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
962	173	6/2/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
963	356	6/2/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
964	502	6/2/2025	Routine	Yes	No maintenance is needed at this time.	No	No
965	100	6/2/2025	Routine	Yes	No maintenance is needed at this time.	No	No
967	36	6/3/2025	Routine	No	Maintenance is needed (County)	No	Yes
968	35	6/3/2025	Routine	No	Maintenance is needed (County)	No	Yes
969	38	6/3/2025	Routine	No	Maintenance is needed (County)	No	Yes
970	93	6/3/2025	Routine	No	Maintenance is needed (County)	No	Yes
966	301	6/3/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
971	302	6/3/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
972	647	6/3/2025	Routine	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
973	585	6/3/2025	Routine	Yes	No maintenance is needed at this time.	No	No
974	37	6/3/2025	Routine	Yes	No maintenance is needed at this time.	No	No
975	282	6/3/2025	Routine	Yes	No maintenance is needed at this time.	No	No
976	303	6/3/2025	Routine	Yes	No maintenance is needed at this time.	No	No
977	179	6/3/2025	Routine	Yes	No maintenance is needed at this time.	No	No
978	94	6/3/2025	Routine	Yes	No maintenance is needed at this time.	No	No
979	58	6/4/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
980	523	6/4/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
981	461	6/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
982	522	6/4/2025	Routine	Yes	No maintenance is needed at this time.	No	No
985	464	6/5/2025	Routine	No	Maintenance is needed (County)	No	Yes
983	537	6/5/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
984	466	6/5/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
986	663	6/5/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
987	527	6/5/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
988	463	6/5/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
989	960	6/5/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
990	802	6/5/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
991	801	6/5/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
992	87	6/5/2025	Routine	Yes	No maintenance is needed at this time.	No	No
993	621	6/5/2025	Routine	Yes	No maintenance is needed at this time.	No	No
994	15	6/6/2025	Routine	Yes	No maintenance is needed at this time.	No	No
996	687	6/9/2025	Routine	No	Maintenance is needed (County)	No	Yes
995	915	6/9/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
997	933	6/9/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
998	956	6/9/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
999	1026	6/9/2025	Routine	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
1000	923	6/9/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1001	308	6/9/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1002	914	6/9/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1003	913	6/10/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
1004	503	6/10/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1005	129	6/10/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1006	639	6/10/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1007	612	6/10/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1008	148	6/10/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1009	611	6/10/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1010	423	6/11/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1011	544	6/11/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1012	841	6/11/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1013	332	6/11/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1014	422	6/11/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1015	372	6/11/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1016	176	6/11/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1017	491	6/11/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1018	432	6/11/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1019	433	6/11/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1020	406	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1021	900	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1022	369	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1023	46	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1024	545	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1025	840	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1026	842	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
1027	159	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1028	370	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1029	375	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1030	373	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1031	374	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1032	371	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1033	1010	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1034	1011	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1035	322	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1036	52	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1037	474	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1038	476	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1039	309	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1040	310	6/11/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1043	10	6/12/2025	Routine	No	Maintenance is needed (County)	No	Yes
1044	484	6/12/2025	60-day reinspection	No	Maintenance is needed (County)	No	Yes
1041	807	6/12/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
1042	34	6/12/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
1045	8	6/12/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1046	7	6/12/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1047	12	6/12/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1048	32	6/12/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1049	9	6/12/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1050	645	6/12/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1051	60	6/12/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1052	480	6/12/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1053	860	6/12/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
1054	112	6/12/2025	60-day reinspection	No	Maintenance is needed (Owner)	Yes	No
1055	806	6/12/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1056	861	6/12/2025	60-day reinspection	Yes	No maintenance is needed at this time.	No	No
1057	33	6/12/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1058	31	6/12/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1059	43	6/12/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1060	188	6/13/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1061	126	6/13/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1062	940	6/13/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1063	253	6/13/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1065	659	6/16/2025	Routine	No	Maintenance is needed (County)	No	Yes
1066	658	6/16/2025	Routine	No	Maintenance is needed (County)	No	Yes
1064	65	6/16/2025	Routine	No	Maintenance is needed (County/Owner)	Yes	Yes
1067	203	6/16/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1068	429	6/16/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1069	428	6/16/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1070	62	6/16/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1071	696	6/16/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1072	180	6/16/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1073	401	6/16/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1074	943	6/17/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1075	947	6/17/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1076	944	6/17/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1077	949	6/17/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1078	942	6/17/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1079	941	6/17/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1080	946	6/17/2025	Routine	Yes	No maintenance is needed at this time.	No	No

County-Maintained SWM/BMP - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Minor Maintenance	Major Maintenance
1081	945	6/17/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1082	948	6/17/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1083	608	6/18/2025	Routine	No	Maintenance is needed (County)	No	Yes
1084	636	6/18/2025	Routine	No	Maintenance is needed (County)	No	Yes
1085	17	6/18/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1086	583	6/18/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1087	848	6/18/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1088	108	6/18/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1089	348	6/18/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1090	349	6/18/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1091	517	6/18/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1092	321	6/18/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1093	404	6/18/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1094	20	6/18/2025	Routine	No	Maintenance is needed (Owner)	Yes	No
1095	961	6/18/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1096	6	6/18/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1097	16	6/18/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1098	536	6/18/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1099	23	6/18/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1100	345	6/18/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1101	346	6/18/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1102	107	6/18/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1103	609	6/18/2025	Routine	Yes	No maintenance is needed at this time.	No	No
1104	56	6/24/2025	60-day reinspection	Yes	No maintenance is needed at this time.	No	No
1105	906	6/26/2025	60-day reinspection	No	Maintenance is needed (County/Owner)	Yes	Yes
1106	1063	6/27/2025	60-day reinspection	Yes	No maintenance is needed at this time.	No	No

Appendix I

Privately-Maintained SWM Facilities – Inspection Summary

Privately Maintained SWM/BMP Facilities - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Owner 60 Day Ltr (y/n)	CAO 30 Day Ltr	CAO 15 Day Ltr
1	5422	7/3/2024	Complaint Based	No	Maintenance is needed.	Yes	No	No
2	5988	7/24/2024	Other	No	Maintenance is needed.	Yes	No	No
3	5509	8/2/2024	Routine	No	Maintenance is needed.	Yes	No	No
4	5917	8/8/2024	Routine	No	Maintenance is needed.	Yes	No	No
5	6251	8/14/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
6	6252	8/14/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
7	6253	8/14/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
8	6254	8/14/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
9	6255	8/14/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
10	6256	8/14/2024	Routine	No	Maintenance is needed.	Yes	No	No
11	6259	8/14/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
12	6260	8/14/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
13	6261	8/14/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
14	6262	8/14/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
15	6243	8/19/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
16	6257	8/19/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
17	6230	8/20/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
18	5727	8/21/2024	Routine	No	Maintenance is needed.	Yes	No	No
19	5948	8/21/2024	Routine	No	Maintenance is needed.	Yes	No	No
20	5949	8/21/2024	Routine	No	Maintenance is needed.	Yes	No	No
21	6245	8/21/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
22	6246	8/21/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
23	6247	8/21/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
24	6248	8/21/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
25	6249	8/21/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
26	6244	8/22/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
27	6263	8/28/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
28	6250	9/3/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No

Privately Maintained SWM/BMP Facilities - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Owner 60 Day Ltr (y/n)	CAO 30 Day Ltr	CAO 15 Day Ltr
29	6258	9/3/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
30	5079	9/4/2024	Routine	No	Maintenance is needed.	Yes	No	No
31	5083	9/5/2024	Routine	No	Maintenance is needed.	Yes	No	No
32	5084	9/5/2024	Routine	No	Maintenance is needed.	Yes	No	No
33	6264	9/5/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
34	5215	9/19/2024	Routine	No	Maintenance is needed.	Yes	No	No
35	5609	9/19/2024	Complaint Based	No	Maintenance is needed.	Yes	No	No
36	5074	9/20/2024	Routine	No	Maintenance is needed.	Yes	No	No
37	6269	9/20/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
38	6270	9/20/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
39	6147	9/25/2024	60-day reinspection	Yes	No maintenance needed at this time.	Yes	No	No
40	6148	9/25/2024	60-day reinspection	Yes	No maintenance needed at this time.	Yes	No	No
41	6149	9/25/2024	60-day reinspection	Yes	No maintenance needed at this time.	Yes	No	No
42	6150	9/25/2024	60-day reinspection	Yes	No maintenance needed at this time.	Yes	No	No
43	6151	9/25/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
44	5290	9/26/2024	Routine	No	Maintenance is needed.	Yes	No	No
45	6265	9/26/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
46	6267	9/26/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
47	6266	9/27/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
48	5725	10/8/2024	Routine	No	Maintenance is needed.	Yes	No	No
49	6271	10/10/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
50	6272	10/10/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
51	5696	10/15/2024	Routine	No	Maintenance is needed.	Yes	No	No
52	5696	10/15/2024	Routine	No	Maintenance is needed.	Yes	No	No
53	5697	10/15/2024	Routine	No	Maintenance is needed.	Yes	No	No
54	5811	10/15/2024	Routine	No	Maintenance is needed.	Yes	No	No
55	5857	10/16/2024	Routine	No	Maintenance is needed.	Yes	No	No
56	6268	10/17/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No

Privately Maintained SWM/BMP Facilities - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Owner 60 Day Ltr (y/n)	CAO 30 Day Ltr	CAO 15 Day Ltr
57	5284	10/28/2024	Routine	No	Maintenance is needed.	Yes	No	No
58	5211	10/30/2024	Routine	No	Maintenance is needed.	Yes	No	No
59	5375	10/30/2024	Routine	No	Maintenance is needed.	Yes	No	No
60	6241	10/30/2024	60-day reinspection	Yes	No maintenance needed at this time.	Yes	No	No
61	6273	10/30/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
62	5691	10/31/2024	Routine	No	Maintenance is needed.	Yes	No	No
63	5692	10/31/2024	Routine	No	Maintenance is needed.	Yes	No	No
64	6274	10/31/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
65	6275	10/31/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
66	6276	10/31/2024	Routine	Yes	No maintenance needed at this time.	Yes	No	No
67	5811	11/7/2024	60-day reinspection	No	Maintenance is needed.	Yes	No	No
68	5006	1/30/2025	Routine	No	Maintenance is needed.	Yes	No	No
69	5125	1/30/2025	Routine	No	Maintenance is needed.	Yes	No	No
70	5348	1/30/2025	Routine	No	Maintenance is needed.	Yes	No	No
71	6266	1/30/2025	60-day reinspection	Yes	No maintenance needed at this time.	Yes	No	No
72	5709	2/5/2025	60-day reinspection	No	Maintenance is needed.	Yes	No	No
73	5263	2/6/2025	Routine	No	Maintenance is needed.	Yes	No	No
74	5098	2/19/2025	Routine	No	Maintenance is needed.	Yes	No	No
75	5546	2/19/2025	Routine	No	Maintenance is needed.	Yes	No	No
76	5712	2/19/2025	Complaint Based	No	Maintenance is needed.	Yes	No	No
77	5712	2/19/2025	Complaint Based	No	Maintenance is needed.	Yes	No	No
78	6192	2/19/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
79	5712	2/24/2025	60-day reinspection	No	Maintenance is needed.	Yes	No	No
80	5367	2/25/2025	Routine	No	Maintenance is needed.	Yes	No	No
81	5415	2/25/2025	Routine	No	Maintenance is needed.	Yes	No	No
82	5047	2/27/2025	Routine	No	Maintenance is needed.	Yes	No	No
83	5707	2/27/2025	Routine	No	Maintenance is needed.	Yes	No	No
84	5917	2/28/2025	60-day reinspection	No	Maintenance is needed.	Yes	No	No

Privately Maintained SWM/BMP Facilities - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Owner 60 Day Ltr (y/n)	CAO 30 Day Ltr	CAO 15 Day Ltr
85	5661	3/5/2025	Routine	No	Maintenance is needed.	Yes	No	No
86	5192	3/7/2025	Routine	No	Maintenance is needed.	Yes	No	No
87	5817	3/7/2025	Routine	No	Maintenance is needed.	Yes	No	No
88	5106	3/11/2025	Routine	No	Maintenance is needed.	Yes	No	No
89	5142	3/11/2025	Routine	No	Maintenance is needed.	Yes	No	No
90	5145	3/11/2025	Routine	No	Maintenance is needed.	Yes	No	No
91	5312	3/11/2025	Routine	No	Maintenance is needed.	Yes	No	No
92	5313	3/11/2025	Routine	No	Maintenance is needed.	Yes	No	No
93	5576	3/11/2025	Routine	No	Maintenance is needed.	Yes	No	No
94	5577	3/11/2025	Routine	No	Maintenance is needed.	Yes	No	No
95	5578	3/11/2025	Routine	No	Maintenance is needed.	Yes	No	No
96	5579	3/11/2025	Routine	No	Maintenance is needed.	Yes	No	No
97	5580	3/11/2025	Routine	No	Maintenance is needed.	Yes	No	No
98	5908	3/11/2025	Routine	No	Maintenance is needed.	Yes	No	No
99	6054	3/11/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
100	6055	3/11/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
101	6056	3/11/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
102	6057	3/11/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
103	6113	3/11/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
104	6114	3/11/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
105	5104	3/12/2025	Routine	No	Maintenance is needed.	Yes	No	No
106	5105	3/12/2025	Routine	No	Maintenance is needed.	Yes	No	No
107	5107	3/12/2025	Routine	No	Maintenance is needed.	Yes	No	No
108	5919	3/12/2025	Routine	No	Maintenance is needed.	Yes	No	No
109	6280	3/13/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
110	6278	3/14/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
111	6279	3/14/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
112	6281	3/14/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No

Privately Maintained SWM/BMP Facilities - Compliance Report FY25

No. Count	Facility ID	Inspection Date	Inspection Type	Facility In Compliance?	Notes	Owner 60 Day Ltr (y/n)	CAO 30 Day Ltr	CAO 15 Day Ltr
113	6282	3/14/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
114	6193	3/18/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
115	5249	3/20/2025	Routine	No	Maintenance is needed.	Yes	No	No
116	5324	3/20/2025	Routine	No	Maintenance is needed.	Yes	No	No
117	5709	3/20/2025	60-day reinspection	No	Maintenance is needed.	Yes	No	No
118	5350	3/25/2025	Routine	No	Maintenance is needed.	Yes	No	No
119	5593	4/2/2025	Routine	No	Maintenance is needed.	Yes	No	No
120	5594	4/2/2025	Routine	No	Maintenance is needed.	Yes	No	No
121	6283	4/15/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
122	6284	4/15/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
123	6285	4/15/2025	Routine	Yes	No maintenance needed at this time.	Yes	No	No
124	5542	6/4/2025	Routine	No	Maintenance is needed.	Yes	No	No
125	5951	6/13/2025	60-day reinspection	No	Maintenance is needed.	Yes	No	No
126	5952	6/13/2025	60-day reinspection	No	Maintenance is needed.	Yes	No	No
127	5953	6/13/2025	60-day reinspection	No	Maintenance is needed.	Yes	No	No
128	5954	6/13/2025	60-day reinspection	No	Maintenance is needed.	Yes	No	No
129	5395	6/17/2025	Routine	No	Maintenance is needed.	Yes	No	No
130	5885	6/17/2025	Routine	No	Maintenance is needed.	Yes	No	No
131	5018	6/25/2025	Routine	No	Maintenance is needed.	Yes	No	No
132	5239	6/25/2025	Routine	No	Maintenance is needed.	Yes	No	No
133	5361	6/25/2025	Routine	No	Maintenance is needed.	Yes	No	No
134	5428	6/25/2025	Routine	No	Maintenance is needed.	Yes	No	No
135	5892	6/25/2025	Routine	No	Maintenance is needed.	Yes	No	No
136	5897	6/25/2025	Routine	No	Maintenance is needed.	Yes	No	No
137	5937	6/25/2025	Routine	No	Maintenance is needed.	Yes	No	No
138	6047	6/25/2025	Routine	No	Maintenance is needed.	Yes	No	No
139	6049	6/25/2025	Routine	No	Maintenance is needed.	Yes	No	No
140	5632	6/30/2025	Routine	No	Maintenance is needed.	Yes	No	No

Appendix J

Summary of SWM Facilities Added to Inventory

Facilities added to County Inventory in FY2025

Facility ID	Facility Type	Facility Description	Inventory Date	Maintenance	Comments	Swm Agreement	VAHUC 6	VAHUC12 Name	Plan Name	Status	Drainage Area	Latitude	Longitude
1072	SWMP/BMP	D	7/30/2024	P	4'x4' RISER, 1" BMP ORIFICE AT RISER	N	PL41	Occoquan River-Lake Jackson	COLES DISTRICT FIRE STATION #6	NR	3.20	38.6565	-77.4430
1073	SWMP/BMP	W	8/6/2024	P	PWSE=298.00', 6" DIP DRAWDOWN PIPE	N	PL34	Broad Run-Rocky Branch	BLACKBURN LANDBAY 2B	R	8.50	38.7882	-77.5323
1074	SWMP/BMP	D	9/17/2024	P	1" BMP ORIFICE AT RISER, NO ESMT, B&G MAINT	N	PL51	Powells Creek	MONTCLAIR COMMUNITY LIBRARY	NR	1.47	38.6107	-77.3573
1075	SWMP/BMP	U	9/17/2024	P	72" RCP CHAMBER, NO ESMT, B&G MAINT	N	PL51	Powells Creek	MONTCLAIR COMMUNITY LIBRARY	NR	0.77	38.6097	-77.3566
1076	BMP	B	9/17/2024	P	BIORETENTION AREA, NO ESMT, B&G MAINT	N	PL51	Powells Creek	MONTCLAIR COMMUNITY LIBRARY	NR	0.21	38.6097	-77.3568
1077	BMP	U	9/17/2024	P	8'x4' FILTERRA, NO ESMT, B&G MAINT	N	PL51	Powells Creek	MONTCLAIR COMMUNITY LIBRARY	NR	0.20	38.6096	-77.3565
1079	SWMP/BMP	W	12/2/2024	P	PWSE=339.46', 4" BMP ORIFICE AT RISER	N	PL32	Broad Run-Catletts Branch	WOODBORNE PRESERVE	R	23.12	38.7946	-77.6555
1080	SWMP/BMP	W	12/2/2024	P	PWSE=342.32', 2.5" BMP ORIFICE AT RISER	N	PL32	Broad Run-Catletts Branch	WOODBORNE PRESERVE	R	8.02	38.7974	-77.6555
1081	SWMP/BMP	W	12/11/2024	P	PWSE=261.89', 15" DRAWDOWN PIPE	N	PL47	Occoquan River-Occoquan Reservoir	MAYS QUARTER PHASE 4	R	14.15	38.6824	-77.3420
1082	SWMP/BMP	W	12/11/2024	P	PWSE=255.18', 15" DRAWDOWN PIPE	N	PL47	Occoquan River-Occoquan Reservoir	MAYS QUARTER PHASE 1	R	26.25	38.6848	-77.3420
1083	SWMP/BMP	W	12/11/2024	P	PWSE=275.65', 15" DRAWDOWN PIPE	N	PL47	Occoquan River-Occoquan Reservoir	MAYS QUARTER PHASE 1	R	5.75	38.6874	-77.3443
1084	SWMP/BMP	W	12/11/2024	P	PWSE=276.96', 15" DRAWDOWN PIPE	N	PL47	Occoquan River-Occoquan Reservoir	MAYS QUARTER PHASE 2	R	9.32	38.6876	-77.3452
1085	SWMP/BMP	W	12/11/2024	P	PWSE=295.30', 15" DRAWDOWN PIPE	N	PL47	Occoquan River-Occoquan Reservoir	MAYS QUARTER PHASE 1	R	5.75	38.6858	-77.3446
1086	SWMP	D	2/24/2025	P	WEIR SERVES AS CONTROL STRUCTURE	N	PL33	Kettle Run	COLVIN FARM E&S PLAN	R	58.65	38.6928	-77.5437
1087	SWMP/BMP	D	3/4/2025	P	6'x6' RISER, 3" BMP ORIFICE AT EW	N	PL52	Quantico Creek	HARBOR STATION NORTH PIP	NR	30.94	38.5689	-77.2918
1088	SWMP/BMP	D	3/4/2025	P	5'x5' RISER, TWO (2) 2.75" BMP ORIFICES AT EW	N	PL52	Quantico Creek	HARBOR STATION NORTH PIP	NR	36.85	38.5743	-77.2943
1089	BMP	B	3/4/2025	P	BIORETENTION AREA, P&R MAINT	N	PL52	Quantico Creek	POTOMAC SHORES ATHLETIC FIELDS	NR	2.81	38.5650	-77.2854
1090	BMP	B	3/4/2025	P	BIORETENTION AREA, P&R MAINT	N	PL52	Quantico Creek	POTOMAC SHORES ATHLETIC FIELDS	NR	4.94	38.5646	-77.2867
1091	BMP	B	3/4/2025	P	BIORETENTION AREA, P&R MAINT	N	PL52	Quantico Creek	POTOMAC SHORES ATHLETIC FIELDS	NR	4.58	38.5645	-77.2861
1092	SWMP/BMP	W	4/28/2025	P	PWSE=273.13', 12'x2' RISER, 3" BMP ORIFICE	N	PL44	Middle Bull Run	BLACKBURN LANDBAY 1B	R	25.15	38.7956	-77.5330
1093	SWMP/BMP	D	4/28/2025	P	2" BMP ORIFICE AT RISER	N	PL44	Middle Bull Run	BLACKBURN LANDBAY 1B	R	9.30	38.7942	-77.5290
1094	SWMP/BMP	W	5/15/2025	P	PWSE=322.94', 8" BMP ORIFICE AT RISER	N	PL51	Powells Creek	CARTERS GROVE	R	19.07	38.6502	-77.3932
6251	CBMP	B	7/12/2024	C	BIORETENTION AREA	Y	PL32	Broad Run-Catletts Branch	LAKE MANASSAS TURTLE POINT	R	0.27	38.7860	-77.6427
6252	CBMP	B	7/12/2024	C	BIORETENTION AREA	Y	PL32	Broad Run-Catletts Branch	LAKE MANASSAS TURTLE POINT	R	0.61	38.7861	-77.6433
6253	CBMP	O	7/12/2024	C	GRASSED SWALE	Y	PL32	Broad Run-Catletts Branch	LAKE MANASSAS TURTLE POINT	R	0.81	38.7855	-77.6434
6254	CBMP	O	7/12/2024	C	PERMEABLE PAVERS	Y	PL32	Broad Run-Catletts Branch	LAKE MANASSAS TURTLE POINT	R	0.00	38.7851	-77.6416
6255	CBMP	O	7/12/2024	C	PERMEABLE PAVERS	Y	PL32	Broad Run-Catletts Branch	LAKE MANASSAS TURTLE POINT	R	0.00	38.7861	-77.6419
6256	CBMP	O	7/12/2024	C	GRASS PAVERS	Y	PL32	Broad Run-Catletts Branch	LAKE MANASSAS TURTLE POINT	R	0.00	38.7866	-77.6429
6257	CSWMP/BMP	U	7/22/2024	C	STORMTECH MC-4500 W/ ISOLATOR CHAMBER	Y	PL34	Broad Run-Rocky Branch	BROAD RUN INDUSTRIAL PARK LOT 2D	NR	4.76	38.7551	-77.5444
6258	CSWMP/BMP	W	7/26/2024	C	PWSE=258.03', 8.25" BMP ORIFICE AT RISER	Y	PL34	Broad Run-Rocky Branch	MANGO FARMS NOVEC/DOMINION SUBSTATION	NR	68.40	38.7765	-77.5789
6259	CBMP	U	7/31/2024	C	CONTECH CDS2025-5-C	Y	PL49	Neabsco Creek	DRIVETIME WOODBRIDGE	NR	1.08	38.6307	-77.2753
6260	CBMP	U	7/31/2024	C	CONTECH CDS2025-5-C	Y	PL49	Neabsco Creek	DRIVETIME WOODBRIDGE	NR	1.02	38.6310	-77.2756
6261	CSWMP/BMP	U	7/31/2024	C	6 HDP CHAMBERS W/ 2 MANIFOLDS	Y	PL49	Neabsco Creek	DRIVETIME WOODBRIDGE	NR	2.15	38.6308	-77.2755
6262	CSWMP/BMP	U	7/31/2024	C	PERFORATED 18" RCP DETENTION SYSTEM	Y	PL49	Neabsco Creek	DRIVETIME WOODBRIDGE	NR	2.15	38.6307	-77.2760
6263	CSWMP/BMP	U	8/9/2024	C	STORMTECH MC-3500 W/ 3 ISOLATOR CHAMBERS	Y	PL34	Broad Run-Rocky Branch	INNOVATION SUBSTATION EXPANSION	NR	6.79	38.7541	-77.5124
6264	CBMP	U	8/19/2024	C	CONTECH CDS2015-4-C	Y	PL49	Neabsco Creek	PMG - DALE BLVD	NR	0.21	38.6277	-77.3024
6265	CSWMP/BMP	U	8/27/2024	C	STORMTECH MC-3500 W/ ISOLATOR CHAMBER	Y	PL52	Quantico Creek	SPECTRUM AT QUANTICO CENTER	NR	1.55	38.5782	-77.3284
6266	CSWMP/BMP	W	8/28/2024	C	PWSE=97.88', 16'x6' RISER W/ SLUICE GATE	Y	PL49	Neabsco Creek	K-MART (DALE CITY) SWM/BMP RETROFIT PLAN	NR	141.46	38.6256	-77.2980
6267	CSWMP/BMP	D	9/6/2024	C	1.5" BMP ORIFICE AT RISER	Y	PL52	Quantico Creek	BRIARWOOD IIA	R	8.63	38.5782	-77.3173
6268	CSWMP/BMP	D	9/9/2024	C	4" BMP ORIFICE AT RISER	Y	PL34	Broad Run-Rocky Branch	HISH PROPERTY	NR	2.61	38.7367	-77.5307
6269	CSWMP/BMP	U	9/10/2024	C	STORMTECH DC-780 W/ 2 ISOLATOR CHAMBERS	Y	PL49	Neabsco Creek	WEBSTER'S LANDING DAYCARE	NR	0.96	38.6736	-77.3831
6270	CSWMP/BMP	U	9/10/2024	C	5 HDP CHAMBERS W/ 2 MANIFOLDS	Y	PL49	Neabsco Creek	WEBSTER'S LANDING DAYCARE	NR	0.39	38.6727	-77.3831
6271	CSWMP/BMP	U	9/19/2024	C	STORMTECH MC-4500 W/ 2 ISOLATOR CHAMBERS	Y	PL49	Neabsco Creek	MAPLEDALE SELF-STORAGE CENTER	NR	2.23	38.6583	-77.3706
6272	CSWMP/BMP	U	9/19/2024	C	STORMTECH MC-4500 W/ ISOLATOR CHAMBER	Y	PL49	Neabsco Creek	MAPLEDALE SELF-STORAGE CENTER	NR	0.83	38.6592	-77.3703
6273	CSWMP/BMP	U	10/18/2024	C	STORMTECH MC-4500 W/ 3 ISOLATOR CHAMBERS	Y	PL32	Broad Run-Catletts Branch	HARPER'S STATION (JAMES MADISON BUS PK L 10A)	R	5.26	38.7886	-77.6634
6274	CBMP	U	10/18/2024	C	BAYFILTER VAULT (522 BAYFILTER)	Y	PL32	Broad Run-Catletts Branch	HARPER'S STATION (JAMES MADISON BUS PK L 10A)	R	5.26	38.7885	-77.6625
6275	CSWMP/BMP	U	10/18/2024	C	STORMTECH MC-4500 W/ 2 ISOLATOR CHAMBERS	Y	PL32	Broad Run-Catletts Branch	HARPER'S STATION (JAMES MADISON BUS PK L 10A)	R	1.66	38.7882	-77.6619
6276	CBMP	U	10/18/2024	C	BAYFILTER VAULT (522 BAYFILTER)	Y	PL32	Broad Run-Catletts Branch	HARPER'S STATION (JAMES MADISON BUS PK L 10A)	R	1.66	38.7882	-77.6615
6277	CBMP	B	11/19/2024	C	BIORETENTION AREA	Y	PL41	Occoquan River-Lake Jackson	BRADLEY SQUARE SECTION 10	R	0.27	38.7281	-77.4589
6278	CBMP	B	2/11/2025	C	BIORETENTION AREA	Y	PL52	Quantico Creek	DUMFRIES FORTUNA GROCERY	NR	0.79	38.5945	-77.3327
6279	CSWMP/BMP	U	2/11/2025	C	STORMTECH SC-310 W/ 2 ISOLATOR CHAMBERS	Y	PL52	Quantico Creek	DUMFRIES FORTUNA GROCERY	NR	2.18	38.5947	-77.3328
6280	CBMP	B	2/11/2025	C	BIORETENTION AREA	Y	PL52	Quantico Creek	DUMFRIES FORTUNA GROCERY	NR	0.45	38.5939	-77.3335

6281	CSWMP/BMP	U	2/11/2025	C	STORMTECH MC-3500 W/ 3 ISOLATOR CHAMBERS	Y	PL52	Quantico Creek	DUMFRIES FORTUNA GROCERY	NR	1.68	38.5935	-77.3337
6282	CSWMP/BMP	U	2/11/2025	C	STORMTECH MC-3500 W/ 2 ISOLATOR CHAMBERS	Y	PL52	Quantico Creek	DUMFRIES FORTUNA GROCERY	NR	1.29	38.5930	-77.3329
6283	CSWMP/BMP	U	5/5/2025	C	STORMTECH SC-740 W/ ISOLATOR CHAMBER	Y	PL41	Occoquan River-Lake Jackson	BRADLEY SQUARE SECTION 11A	R	0.99	38.7256	-77.4676
6286	CBMP	O	4/3/2025	C	ADS FLEXSTORM INLET FILTER	Y	PL46	Lower Bull Run	LINDSAY MANASSAS VOLKSWAGON	NR	0.64	38.7777	-77.4524
6287	CSWMP/BMP	U	4/3/2025	C	STORMTECH SC-740 W/ ISOLATOR CHAMBER	Y	PL46	Lower Bull Run	LINDSAY MANASSAS VOLKSWAGON	NR	2.56	38.7781	-77.4515
6288	CSWMP/BMP	W	4/9/2025	C	PWSE=248.71'	Y	PL44	Middle Bull Run	FREEDOM I-66 BUSINESS CENTER SWM PLAN	NR	45.35	38.7990	-77.5414
6289	CBMP	U	4/14/2025	C	BAYFILTER VAULT (545 BAYFILTER)	Y	PL34	Broad Run-Rocky Branch	PAVILION DEV CO - 11013,-15,-17 NOKESVILLE RD	NR	0.17	38.7376	-77.5301
6290	CBMP	U	4/14/2025	C	BAYFILTER VAULT (545 BAYFILTER)	Y	PL34	Broad Run-Rocky Branch	PAVILION DEV CO - 11013,-15,-17 NOKESVILLE RD	NR	0.28	38.7378	-77.5298
6291	CBMP	U	4/14/2025	C	BAYFILTER VAULT (522 BAYFILTER)	Y	PL34	Broad Run-Rocky Branch	PAVILION DEV CO - 11013,-15,-17 NOKESVILLE RD	NR	0.15	38.7377	-77.5295
6292	CBMP	U	4/14/2025	C	BAYFILTER VAULT (545 BAYFILTER)	Y	PL34	Broad Run-Rocky Branch	PAVILION DEV CO - 11013,-15,-17 NOKESVILLE RD	NR	0.30	38.7382	-77.5293
6293	CSWMP/BMP	U	4/14/2025	C	STORMTECH DC-780 W/ 8 ISOLATOR CHAMBERS	Y	PL34	Broad Run-Rocky Branch	PAVILION DEV CO - 11013,-15,-17 NOKESVILLE RD	NR	2.25	38.7380	-77.5294

Appendix K

Outreach Partners' Annual Reports



Northern Virginia Clean Water Partners

Annual Summary of Results

July 1, 2024 - June 30, 2025

This summary was produced by the Northern Virginia Regional Commission on behalf of the 2025 Clean Water Partners.

nvrc
Northern Virginia Regional Commission

Virginia Coastal Zone
MANAGEMENT PROGRAM

Stormwater Pollution in Northern Virginia

Water bodies in Northern Virginia, including the region's numerous streams, lakes, and rivers, provide a range of environmental, social, and economic benefits to surrounding communities. However, when waterways are polluted and water quality becomes impaired, their key resources are reduced and result in negative impacts to both humans and the natural environment.

Polluted stormwater runoff is the number one cause of poor water quality in Northern Virginia's waterways. When it rains and snows, water runs off streets, driveways, yards and parking lots and mixes with pollutants, such as litter, fertilizer, pet waste, road salt, and auto fluids. These pollutants then flow into storm drains on the street and are discharged directly into nearby streams.

To reduce the impacts of pollution, the Northern Virginia Clean Water Partners joined together in 2003 to improve residents' stormwater-related knowledge and behaviors through an ongoing public education campaign for the region.

About the Partnership



The Northern Virginia Clean Water Partners (NVCWP) is composed of a group of over 20 local governments, public schools, drinking water and sanitation authorities, and businesses that share the common goals to keep Northern Virginia residents healthy and safe by reducing the amount of pollution from stormwater runoff that reaches local creeks and rivers, and empower individuals to take action to reduce pollution.

To meet these goals, the partners work together to:

- Identify high priority water quality issues for the region
- Identify the target audience(s) for outreach
- Educate the region's residents on simple ways to reduce pollution around their homes
- Monitor changes in behavior through surveys and other data collection techniques
- Pilot new cost-effective opportunities for public outreach and education

Membership is voluntary and each member makes an annual contribution to fund the program. By working together, the partners are able to leverage their funds to develop and implement a range of bilingual education and outreach strategies throughout Northern Virginia.

The 2025 campaign helped to satisfy MS4 (Municipal Separate Storm Sewer System) Phase I and Phase II permit requirements for stormwater education and documenting changes in behavior.

Learn more at Onlyrain.org

2025 Campaign Overview

The Northern Virginia Clean Water Partners identified the following water quality issues to highlight in their 2025 campaign:

- **Nutrients (Phosphorus and Nitrogen)**
- **Bacteria**
- **Salt**
- **Illicit Discharges (e.g., pesticides, motor oil, etc.)**

Target audiences for these issues include, but are not limited to, pet owners, winter salt applicators, home mechanics, and residents with a lawn or garden. To reach these audiences, the 2025 campaign used a combination of social media, television and other paid advertising, printed materials, and the Only Rain website to distribute messaging that could improve knowledge and behaviors around stormwater pollution. The partners also tabled at local events and led other in-person activities throughout the year to engage residents and raise campaign awareness.

The 2025 campaign also continued to update outreach and engagement programming through a number of new social marketing tools, including an updated quarterly e-newsletter, new forms of paid advertising, such as reddit and programmatic ads, as well as new infographics and website content.

Social Media Highlights

In 2025, the NVCWP continued to expand its social media presence and content with consistent growth on Instagram and Facebook platforms. Twitter/X and Threads showed reduced traction compared to previous years, which can be attributed to changes in platform use and available features.

Key Metrics	Facebook	Threads	X	Instagram
New Followers	109	3	3	103
Total Followers	721	69	196	312
Total Posts	264	223	221	263
Total Post Clicks	21,665	-	-	16,553
Total Post Engagements	2,194	170	97	602

Video Advertisements

The 2025 campaign engaged residents through two video advertisements focusing on residential stormwater management actions. The campaign aired the videos in English and Spanish on a combination of mobile, desktop, and standard TV platforms for a total of 12,798 ads aired and 1,281,822 impressions, or views.

2025 Campaign Metrics

Social Media Impressions*

3,101,179

Non-Social Media Impressions**

884,546

Post Clicks

38,218

Premium Digital TV Impressions*

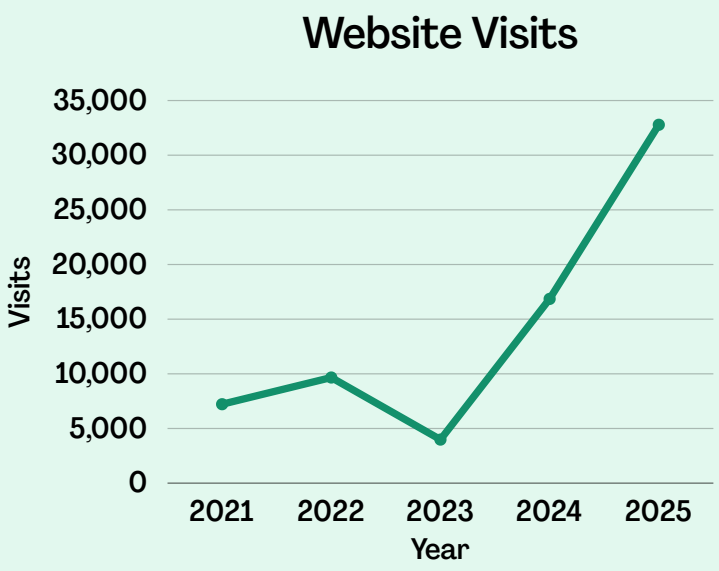
1,281,822

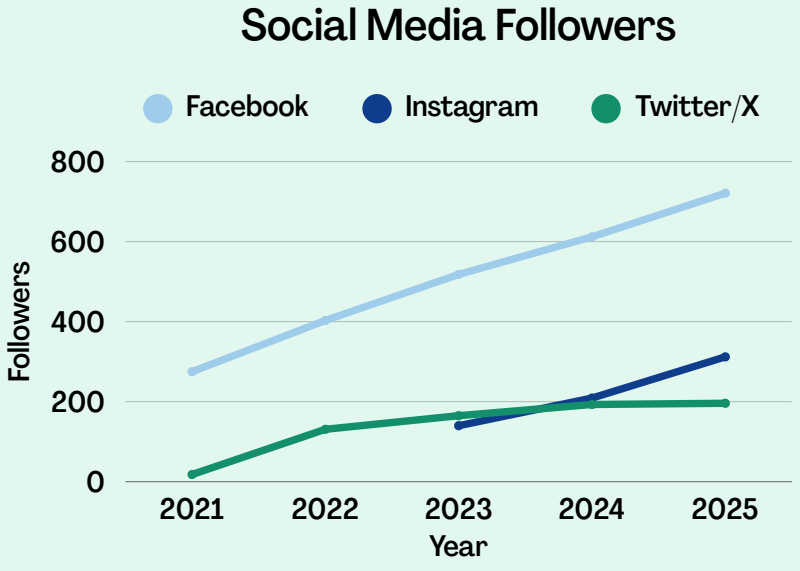
E-Newsletter Subscribers

2,689

Website Visits

32,783





**Impressions are the number of times an ad appeared on a TV, computer, or other electronic device.*
***Non-social media impressions include impressions on Google Search, Reddit, and other websites outside of Twitter/X and Meta platforms (Facebook, Instagram, and Threads).*

Annual Stormwater Survey

The Northern Virginia Clean Water Partners conduct an annual online survey of approximately 500 residents in the region to better understand their stormwater-related knowledge and behaviors over time. Survey results help the partners to assess their campaign's effectiveness and improve future education and outreach efforts.

Survey Findings

Stormwater and Watershed Knowledge

Similar to past years, 68% of Northern Virginia residents reported that they are familiar with the term "watershed". When asked which watershed they live in, 40% of residents selected that they live within the Potomac River watershed, while 24% selected that they live in the Chesapeake Bay watershed.

When asked where stormwater eventually ends up, 39% of residents responded that it only goes to the Potomac River or Chesapeake Bay, and 19% selected that it only goes to a wastewater treatment plant. In a slight decrease from 2024 (41%), 34% of residents reported that it ends up at both destinations.

Information and Advertising

29% of residents reported that they have seen or received at least some form of information about reducing water pollution in the past 12 months. Of those who were aware of an event for water quality improvement, such as stream clean ups and storm drain stenciling, 68% reported participating in the event. Participation in water quality activities has grown steadily in recent years, with responses in 2025 showing a significant rise compared to 2024 (54%) and an even greater increase from 2018 (26%).

37% of survey respondents selected that they were familiar with the NVCWP prior to the survey. When shown the "only rain down the storm drain" fish logo, 55% of residents reported having previously seen the logo. Both responses remain similar to 2023 and 2024 results.

In the next campaign year, social media and website content will focus more heavily on “only rain down the drain” branding, including a greater emphasis on the fish logo, #onlyrain hashtags, and other tools to more consistently promote awareness of the campaign and improve its recognition.



Campaign Impact

Residents who have viewed at least one NVCWP video ad were asked a series of questions about the impact of the ads, including ways that their attitudes and behaviors towards different forms of pollution have changed since then. Similar to previous years, over 85% of respondents reported that they now have a greater understanding of pet waste, fertilizer, and motor oil impacts on local water quality. Moreover, 76% stated that they now pick up more pet waste, 65% fertilize less frequently, and 79% now dispose of motor oil properly, while over 80% of respondents noted that they were already taking at least one of the actions to reduce pollution. With informative messaging around stormwater pollution and ways to reduce its impacts, the NVCWP will continue to utilize its video ads as a key form of engagement to reach audiences that do not use social media or other primary web platforms.

Resident Behaviors

The survey asked specific questions to understand changes in Northern Virginia residents' behaviors around relevant stormwater management and pollution issues, including pet waste, lawn and garden care, winter salt, car fluids, and household hazardous waste.

Dog Waste

About half (48%) of residents reported owning at least one dog. Of those that walk their dog, 89% stated that they always or usually pick up their dog's waste during walks. The majority also reported picking up after their pet in their own yard on a daily basis (61%), while 28% pick up on a weekly basis. Responses to these questions have not changed significantly from 2023 and 2024.

When asked why they pick up their dog's waste, respondents most frequently selected that they do so because pet waste causes water pollution (27%), followed by the selection that “it is gross” (21%). Only 12% of residents noted picking up their pet's waste due to a city or county ordinance, highlighting a continued decline in this selection over the past five years.



Pollution Reporting

When asked about reporting potential water pollution, 53% of residents stated that they know who to contact. The majority (69%) also selected that they would probably or definitely contact someone to report a potential source of water pollution, representing a gradual increase in this response since 2018 (42%).

Of those who were equally likely to call and not to call to report potential pollution, as well as those that would not call, over a quarter (29%) selected their reason being that they would prefer not to communicate with officials or authorities. In addition, 22% selected that it is “none of my business”, while 17% selected that they are “too busy”.

Hazardous Waste Drop-Offs

Consistent with the past several years, 61% of residents reported knowing if their locality has a specific drop-off location for household hazardous waste (HHW). While the majority of residents continue to know of drop-off sites, future education will focus on sharing the locations of HHW drop-off facilities, materials that are acceptable to bring, and other resources to highlight and clarify the drop-off process for the public.



Stormwater Management Features

Survey respondents were provided descriptions of a rain barrel, rain garden, and conservation landscaping and asked whether they have heard of these stormwater management features and would be interested in installing one on their property. As in prior years, residents were most familiar with rain barrels (73%) and noted the highest interest in obtaining one (35%).

Despite the highest familiarity with rain barrels, residents were more likely to already have conservation landscaping on their property than the other two stormwater management features. Similar to 2024, residents were least familiar with rain gardens, yet 31% selected that they were interested in having one in their yard.

Winter Salt

Respondents were asked questions to measure attitudes and behaviors related to snow and ice maintenance, including the use of deicers (e.g., road salt) and abrasives (e.g., sand). Rising from 2024 results, 42% of residents stated that they always or frequently apply deicers at their residence during snowy and icy conditions, and 25% always or frequently apply an abrasive. Of those that use a deicer, there were also slight increases from 2024 in those that apply before (34%) or during (27%) storm events, while fewer selected that they apply after (26%).

Respondents were also asked about their perceptions, positive and negative, of the impacts from road salt application. Similar to 2024, the majority of residents selected that salt has a positive impact on emergency vehicle safety (64%), motorist safety (66%), and pedestrian safety (69%), but only 40% noted that it has a negative impact on local waterways or on tap water (35%).

Winter salt related education and outreach will continue to emphasize its impacts on the environment and drinking water sources while sharing correct behaviors for effective salt management, including when to apply and how to sweep up excess salt.



Vehicle Maintenance

Of those that own or lease a car, 65% of residents reported taking their vehicle to a commercial car wash, while 37% wash their vehicle at home, representing nearly identical percentages as 2024. For those that wash their cars or trucks at home, residents also continue to most frequently clean their vehicle three to four times a year (25%), while 4% wash less than once a year and 20% wash more than 12 times a year. While frequency of washing has remained consistent, there was a rise in residents that use environmentally-friendly methods to clean their vehicle, including use of an environmentally-friendly detergent (62%), washing on pervious surfaces, including grass, gravel, and/or dirt (52%), or just using water (23%).

Motor oil related behaviors also largely remained the same as 2024 in which 64% of residents reported going to an auto center for an oil change, and 21% take their old motor oil to a gas station or hazmat facility for recycling. 14% of respondents noted that they store their used motor oil in their garage, place it in the trash, or dump it down the storm drain, sink or onto the ground.

Lawn and Garden Care

82% of residents with a lawn or garden stated that they use a lawn care service at least once a year, representing a significant increase from 2024 (66%). The majority of residents with a lawn or garden also reported using fertilizer at least once a year. Residents continue to most frequently fertilize twice a year (32%), while 18% never fertilize their lawn or garden.

When asked how they dispose of their grass clippings, nearly half (49%) of residents either bag their grass clippings for composting/recycling or put clippings in a compost bin.19% bag and place clippings in the trash, and 32% leave it on the lawn or garden. However, if grass clippings ended up in the street, 60% of residents reported sweeping or blowing them back into their lawn, while 22% leave them in the street and 18% sweep them into the storm drain.



2025 Campaign Goals

The Northern Virginia Clean Water Partners look forward to enhancing the annual campaign in 2025 through an updated social marketing strategy, including new social media and e-newsletter graphics and content, a revamped Clean Water Pledge, community outreach materials, and improvements to its social media platforms.

Notably, the campaign will phase out the use of Twitter/X due to reduced use and engagement from the campaign's target audiences while introducing LinkedIn to better reach Northern Virginia communities, including its residents, businesses, and other professional users of the platform.

Northern Virginia Clean Water Partners

2025 Stormwater Survey at a Glance

The Northern Virginia Clean Water Partners (NVCWP) conduct an annual survey to better understand Northern Virginia residents' stormwater knowledge and behaviors and help inform future education and outreach efforts.

Watershed Knowledge

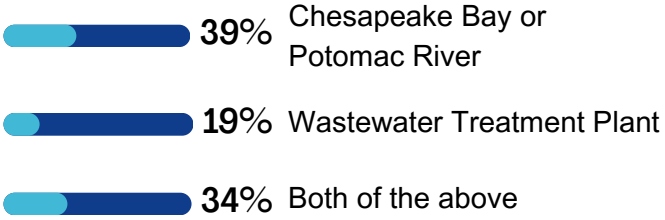


About 1/4 **(24%)** of residents believe they live in the Chesapeake Bay watershed.

68% of residents were familiar with the term "watershed" prior to the survey.

Stormwater Runoff

When asked where stormwater ends up, residents responded that it goes to....



Pollution Reporting

69% of residents would probably or definitely report potential pollution to their town or county.

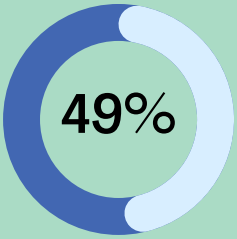


53% of residents definitely or think they know who to call to report stormwater pollution.

Lawn & Garden Care

75%

of residents fertilize their lawn or garden at least once a year. **25%** either never fertilize or only fertilize when a soil test recommends it.



Nearly half (**49%**) bag their grass clippings for composting/recycling or put clippings in a compost bin.

Ad Reach

55%

of residents recognize the “Only Rain” logo, while **37%** are familiar with the NVCWP.

Winter Salt Application

42% of residents always or frequently apply deicer (e.g., salt) at their residence during snowy or icy conditions.



About ⅓ apply deicers before winter storms, while **53%** apply during or after storms.

Additional Information

Contact: Rebecca Murphy
Coastal Program Manager
rmurphy@novaregion.org
703-642-4625
3040 Williams Drive, Suite #200
Fairfax, VA 22031

Website: www.onlyrain.org

Social Media:

- **Facebook:** facebook.com/NVCWP
- **LinkedIn:** linkedin.com/company/only-rain/
- **Instagram:** instagram.com/novacwp
- **Threads:** threads.net/@novacwp

2025 Clean Water Partners:

Fairfax County | Arlington County | Loudoun County | Loudoun Water | Fairfax Water | City of Alexandria | City of Fairfax | City of Falls Church | City of Manassas | City of Manassas Park | Stafford County | Town of Leesburg | Town of Dumfries | Town of Herndon | Town of Vienna | Prince William County | Prince William Water | Northern Virginia Regional Commission | George Mason University | Virginia Coastal Zone Management Program | Fairfax County Public Schools | Northern Virginia Soil and Water Conservation District | Prince William County Public Schools



INSPIRING PERSONAL RESPONSIBILITY FOR OUR ENVIRONMENT AND NATURAL RESOURCES

ANNUAL REPORT

July 1st 2024



June 30th 2025

Our Mission:

Our mission is to provide leadership in the conservation of soil, water, and related resources to all Prince William County citizens through technical assistance, information, and education. The District accomplishes this mission by administering the Virginia Agricultural Best Management Practice Cost-Share Program in the county and developing and administering educational programs to youth and adults. The District plays a role in the larger objective of improving water quality not only in local watersheds, but also in the Potomac and Chesapeake Bay Watersheds.

Presented By:

PRINCE WILLIAM SOIL AND WATER CONSERVATION DISTRICT

Table of Contents

About us and Support	01	Education	06
Directors and staff	02	VCAP	08
More on SWCD	03	District Events	09
Agriculture	04	PWEEF & Clean Water Farm Award	10
Water Quality	05	Outreach	11



About Us

The Prince William Soil and Water Conservation District (PWSWCD) encompasses all of Prince William County. Our mission is to provide leadership in the conservation of soil, water, and related resources to all Prince William County citizens through technical assistance, information, and education. The District accomplishes this mission by administering the Virginia Agricultural Best Management Practice Cost-Share Program in the county and developing and administering educational programs to youth and adults. The District plays a role in the larger objective of improving water quality not only in local watersheds, but also in the Potomac River and Chesapeake Bay Watersheds.

PWSWCD provides the following services to the residents of Prince William County:

- **Agriculture**—Conservation Plans, Virginia Agriculture Cost-Share program.
- **Youth Education**—Conservation Capsules (classroom education), Farm Field Days, Meaningful Watershed Educational Experiences (MWEEs), Environmental Education
- **Water Quality**—Adopt-a-Stream/Pond, Water Quality Monitoring, Chemical Monitoring, Floatables Monitoring, Plastic Pollution
- **Home Owners**—Virginia Conservation Assistance Program (VCAP).

Support

DCR

The Commonwealth of Virginia supports Prince William Soil & Water Conservation District through financial and administrative assistance provided by the Virginia Soil and Water Conservation Board and the Department of Conservation and Recreation (DCR).

The District receives funding via a Memorandum of Agreement with Prince William County to provide

- **Technical Assistance**
- **Compliance Programs that Solve and Prevent Natural Resource Problems for Landowners**
- **Encourage Good Stewardship of the Environment.**

Directors



John Price
Chairman



Jenny Reed
Vice Chairman



Nancy Vehrs
Secretary



Mansimran Kahlon
Treasurer



Thomas Bolles
Director



Will Lintner
Associate Director



Andrew Uglow
Associate Director



Sonnie Cuffey
Associate Director



Harry Glasgow
Associate Director



Jim Gehlsen
Associate Director

Staff



Jay Yankey
District Manager



Duane Mohr
District Manager



Linda Dunn
Office Manager



Veronica Tangiri
Water Quality
Manager



Kim Lowther
Education &
Outreach Specialist



Nicole Slazinski
Urban Conservation
Specialist



Alex Murphy
Urban Conservation
Specialist



Josie Anderson
Water Quality &
Outreach Specialist



Seth Hatfield
Conservation
Specialist



Jack Bourdon
Conservation
Specialist

About our county

According to the United States Department of Agriculture (USDA) 2022 Census of Agriculture for Prince William County, there are 20,388 acres of farmland in the county, approximately 11% of the total acres. This represents an 11% decrease in farmland over the 2017 census. The average size of farms is 65 acres in the county. The market value of products sold is $10,084,000. Farmland in Prince William County is mainly located in three magisterial districts: Brentsville, Gainesville, and Coles.

Virginia Association of Soil & Water Conservation Districts

Virginia's diverse terrain is covered by 47 soil and water conservation districts. Each district provides a variety of services, uniquely dependent on their locations and their goals and objectives. "The mission of the Virginia Association of Soil and Water Conservation Districts and its Foundation is to provide and promote leadership in the conservation of natural resources through stewardship and education programs."

National Association of Soil & Water Conservation Districts

Across the United States, there are 3,000 Conservation Districts that are helping local people to conserve land, water, forests, wildlife, and other related natural resources. More than 17,000 volunteers serve in elected or appointed positions on Conservation Districts' governing boards. They work directly with more than 2.3 million cooperating land managers nationwide, and their efforts touch more than 778 million acres of private land.

Water Quality

Adopt-A-Stream/ Pond Highlights (September 24' - June 25')

- 67 cleanups
- 64,987 lbs of trash removed from streams
- 6,650.5 hours of support and improvement of water quality
- 116.2 miles of streams cleaned
- 2,110 volunteers participating in the program

Water Quality Monitoring

PWSWCD continued to develop partnerships to help with water quality outreach. Data collected from our monitoring and outreach is shared with PWC, City of Manassas, and the Virginia Department of Environmental Quality (DEQ).

Here are this year's highlights from our Water Quality Monitoring program:

2,077
Adults educated about watersheds

5
Floatable monitoring sites

80
Chemical Monitoring Sites

12
Benthic monitoring sites








Agriculture



Prince William County Deliverables

The District wrote 44 conservation plans for over 961.3 acres that reduced the following nutrients from entering our waterways:

Nitrogen	Phosphorus	Sediment
1,583.22 lbs	238.51 lbs	211.71 Tons

DCR Cost-Share Best Management Practices (BMPs)

These numbers represent 465 head of livestock, eliminating approximately 1,253 tons of manure per year.

Nitrogen	Phosphorus	Sediment
894.86 lbs	23.33 lbs	21.38 tons

We partner with the Virginia Department of Conservation and Recreation (DCR) under grant agreements to provide technical assistance in designing and installing Best Management Practices (BMPs) for natural resources conservation. Through these agreements under the Nonpoint Source Pollution Cost-Share Program, we provided technical assistance to 81 citizens for the following: agricultural production, BMPs, drainage/stormwater management, urban erosion, agricultural erosion, land disturbance, partner agency assistance, pond management, trees, native plants, water quality, weeds, and wildlife management.



Education



Conservation Capsules

- 69 teachers reserved 14 different capsules for in-classroom presentations reaching approximately 1,589 students.
- Popular capsules this year include the four Watershed Enviroscape Models.



Farm Field Days

- Farm Field Days in PY2025 was held on October 9 - 10, 2024, with over 1,200 4th grade students, parents, and teachers attending.
- The event was run by staff and 76 volunteers. Topics for the event included: Farm Animals, Trees, Pollination, Water Quality, Soil Erosion, and Regions of VA.



Meaningful Watershed Education Experiences (MWEEs)

- We trained a total of 18 teachers on how to implement a MWEE in their classrooms. In addition, we trained 3 Master Naturalists and 1 Master Gardener how to assist the teachers with MWEEs.
- We assisted in leading 7 different MWEEs for 3rd, 5th, and 6th graders and reached over 1,600 students.



Preschool Programs

- This was a landmark year for our preschool programs, reaching 21 classes and over 300 students.

Science Nights

- We attended 5 Science Nights, serving over 500 students and their families. Ages ranged from pre-kindergarten to middle school.

Education

Youth Conservation Leadership Institute (YCLI)



Erin Jansen, second from left. Zainab Soofi, fifth from left.

- We had two Interns for YCLI this year:
  - Erin Jansen, Freshman at Patriot High School
  - Zainab Soofi, Senior at Patriot High School
- Erin completed and installed several bird houses, including wood duck, bluebird, and even a bat house, for a local wetland.
- Zainab chemically monitored a local stream's overall health throughout the school year.

Envirothon



- Battlefield High School in Haymarket, VA was our first team to compete in three years.
- We had a successful November Training for Area II and then an amazing Envirothon Competition in April for Area II.
- Our team: Isabelle Morisette, Gus Kemp, Joy Elabd, Ellie Hewa, and Alana Marcey.

Prince William Environmental Education Foundation (PWEEF) Scholarships



- We had three applications for scholarships this year for a chance at one of four $2,000 VASWCD Educational Foundation scholarship.
- We submitted one scholarship for the $2,000 VASWCD Educational Foundation Scholarship, but it was not selected.
- PWEEF stepped in and awarded 2 scholarships for $2,000 each.
- The recipients of our PWEEF $2,000 scholarships were Isabelle Morisette and Zainab Soofi.

VCAP

The Virginia Conservation Assistance Program (VCAP) is an urban cost-share program that provides financial incentives and technical and educational assistance to property owners installing eligible Best Management Practices (BMPs) in Virginia's Chesapeake Bay Watershed. These practices can be installed in areas where problems like erosion, poor drainage, or poor vegetation occur. Qualified sites can be used for residential, commercial, or recreational purposes. The Prince William Soil and Water Conservation District (PWSWCD) completed 9 projects in PY25. Conservation staff provided technical assistance and site visits to 22 people interested in the program.

Personal Testimony

"After moving to Woodbridge, I spent hours online searching for ways to transform my yard into a garden and nature haven. While following a lead from the Master Gardeners, I discovered the PWSWCD's website. My original idea for rainwater harvesting was to place a rain barrel at each corner of the house and water my plants with a watering can. But after Alex visited my property, he introduced me to new possibilities and helped me think bigger to choose better equipment and planning for longevity.

The process took longer than I imagined, but in the end, the result far exceeded my original vision. Alex was wonderful throughout—always ready to answer questions, sharing his knowledge, and providing the calm encouragement I needed. The benefits of the system go beyond cost savings. I love knowing my plants are getting pure rainwater instead of treated city water. As I expand my gardens with fruit trees, berry bushes, vines, and native plants for my bird sanctuary and wildflower area, I know they'll thrive on this natural resource. I would absolutely recommend Soil & Water to others. This type of project is hard to justify purely on financial terms, but the support I received made it possible. Without that funding, I never would have installed such an effective, long-lasting system."

-Marie Weathersby
VCAP Participant







District Events

During the first quarter, the District hosted a Small Farmer and Landowner Outreach event at Windy Knoll Farm in Nokesville. This event provided agricultural producers and landowners an opportunity to connect with the District, learn about conservation practices, and explore cost-share options. The goal of these practices is to offer financial benefits to participants, while simultaneously supporting the County's environmental health by safeguarding natural resources through the implementation of best management practices.

At the Farmer and Landowner Outreach event, each department within the district had a few minutes to highlight their programs and the services they offer to the community. In addition, nine District partners presented what they could offer the County residents.
These included:

- **PWC Public Works**
- **Virginia Department of Forestry**
- **Virginia Cooperative Extension**
- **Virginia State University**
- **Future Farmers of America**
- **National Resource Conservation Service**
- **Farm Bureau**
- **4-H**

In total, the event had 44 guests and was a very successful event.











Prince William Environmental Excellence Foundation

"Dedicated to Helping Provide Environmental, Agricultural, and Natural Resources Conservation Education Beyond the Walls of the Classroom."

PWEEF Board of Directors

Jim Gehlsen, Chairman, Treasurer
Will Lintner, Vice Chair
Linda Dunn, Secretary
Harry Glasgow, Director
Jenny Reed, Director
Nancy Vehrs, Director

The Prince William Environmental Excellence Foundation is a 501 (C) (3) nonprofit affiliated with the Prince William Soil and Water Conservation District. The foundation raises money to support PWSWCD educational and outreach activities. In FY25, the Foundation provided funding to:

- **Support the Prince William SWCD youth environmental education programs.**
- **Support Leesylvania State Parks water quality projects for the youth.**

Clean Water Farm Award Winner

Farm Name: Laz E Hill Farm, LLC
Farmers: Sean McStravick & Stacey Whitehead
Location: Haymarket, VA
Watershed: Potomac River Basin, PL44: Upper Bull Run
Farm summary:

Laz E Hill Farm has been working with the district since they started in 2018. While farmland in Prince William County is rapidly being converted into data centers, ten-acre lots, and solar farms, Laz E Hill Farm sets an example of the importance of agriculture, good stewardship practices, and providing food to the growing population of Prince William County.

Laz E Hill Farm has an active SL-6W: Stream Exclusion with Wide Width Buffer and Grazing Land Management contract where they installed fencing to keep their Highland cattle out of the waterways and a water system with a crossing to allow their cattle to rotationally graze five pastures. These practices prevent animal waste from reaching a tributary of Bull Run which is located at the northern area of the property.

Outreach







- **Farmers Markets**

  With the new relationship with the City of Manassas, Prince William Soil and Water has participated in local city farmers markets to meet the locals and show them our programs.

- **Seasonal Events**

  In the fall, our partners join us for Halloween-themed programs such as Trick or Treatment and Back-to-School events.







- **Festivals**

  PWSWCD supports and participates in environmental festivals such as Leopold's Preserve Fall Festival and Merrimac Farm Bluebell Festival, as well as cultural festivals such as those celebrating African Americans and Latinos.

- **Volunteer Appreciation Picnic**

  This event celebrates our wonderful Water Quality Monitoring Volunteers who clean, maintain, and report everything water quality around Prince William County.

2024 Annual Report

KPWB

KEEP PRINCE WILLIAM BEAUTIFUL

Our Impact in 2024

We are proud that our environmental programs have thrived within the community and we appreciate the continuous support we receive to make it all possible.

7,167
Pounds of Trash Collected

2,446
Total Volunteer Hours

59
Community and Adopt-A-Spot Cleanups

13
Beautification Projects

92
Adopt-A-Spots

1,200
Pounds of Plastic Bags Recycled

6
Storm Drains Labeled

20,744
Pounds of Food Waste Composted

FY24 Virginia Cooperative Extension Outreach and Education Summary



Key Measures	FY25	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	FY25 Actuals
Participants reporting that they adopted recommended water quality practices	85%	75%	78%	100%	83%	84%
BEST Lawn clients implementing practices that improve water quality as a result of their nutrient management plan	85%					100%
Percentage of participants reporting satisfaction with environmental education	90%	96%	99%	98%	96%	97%
Program Activities & Workload Measures	FY25 Target					FY25 Actuals
Environmental education participants	3000	415	950	559	1608	3532
Number of environmental education activities	no target	17	7	9	32	65
Site visits for stormwater management education, and community and school gardens	40	12	8	7	17	44
Calls received throught the Horticulture Help Desk	1250	365	95	177	238	875
Urban nutrient management plans written (Best Lawns)	200	53	50	5.00	37	145
Annual acres covered by Best Lawns	no target	18.34	18.89	0.44	14.59	52.26
Ask A Master Gardener Event Outreach contacts		2081				2081
Volunteer Hours	no target	3675	2610	1800	3772	11857
Environmental Education Volunteers	no target	183	179	172	146	
FTE value of volunteer hours	5	1.88	1.34	0.92	1.93	6.08
Number of citizen contacts						
% participants reporting instructor's courtesy and professionalism	no target					
# Respondents Reporting that participating in this program changed the way they think about agriculture/ envrionment/ natural resources	no target	77%	80%	88%	82%	82%
# Respondents Reporting that as a result of this class they feel more confident handling plant and pest issues	no target	94%	95%	88%	99%	94%

Appendix L

Summary of County Training Program

FY25 Training Summary

As part of Prince William County's Municipal Separate Storm Sewer System (MS4) Program, staff participated in a variety of training opportunities during Fiscal Year 2025 (July 1, 2024 – June 30, 2025). These trainings support compliance with MS4 permit requirements by ensuring employees are knowledgeable in spill prevention, illicit discharge detection and elimination, and environmental management practices. In total, 494 staff members participated in stormwater and environmental compliance trainings during FY25.

Table 1. FY25 Training Participation

Training Course	Delivery Method	Number of Participants
Chemical Response Training	In-Person	21
Environmental Management Systems (EMS) Refresher	In-Person	83
Fuel Tank Inspection Hands-On Training	In-Person	30
Introduction to PWC's Environmental Management System	Online	5
Spill Prevention, Control, and Countermeasure (SPCC) Training	Online	9
Spill Prevention, Control, and Countermeasure (SPCC) Training	In-Person	55
Virginia Department of Transportation (VDOT) Discharge Detection and Elimination Training	Online	3
Watershed Illicit Discharge Prevention Training	Online	8
Illicit Discharge Prevention Webinar	Online	95

Additional Training: Public Works Department MS4 Overview Training

Summary:

- MS4 Overview and how it's managed by EMD and expectations of all divisions of DPW.
- How and why the different kinds of inspections are conducted.
- Expectations of other County departments, businesses and citizens.
- DEQ role and relationship with DEQ including SW Permits.
- Importance of stopping, cleaning up and properly reporting spills to protect watershed.
- Winter salting procedures.
- Good things EMD has done to improve watershed, to include pictures/video.

DIVISION	DATE	# of EMPLOYEES	# ATTENDED	PERCENTAGE	RATING
COD	5/7/2025	48	45	93.75%	EXCEEDS
EMD	6/12/2025	45	40	88.89%	EXCEEDS
NS	5/7/2025	24	21	87.50%	EXCEEDS
SW	6/25&26/2025	76	63	82.89%	EXCEEDS
DIRECTORS	7/14/2025	6*	6	100%	EXCEEDS
TOTALS		**193**	**175**	**90.67%**	**EXCEEDS**

Appendix M

Dry Weather Screening – Inspection Summary

Landuse	Outfall Id	Last Inspection Date	Flow Present	Illicit Discharge	High Risk	Maintenance Required	Within PWC Service Area	VPDES Permitted
Open Space	6414	6/2/2025	Yes	Unlikely	N	False	Y	N
Hotel w/ Restaurant	29563	7/15/2024	No	Unlikely	N	False	N	N
Residential	38991	5/2/2025	Yes	Unlikely	N	False	N	N
Residential	6534	6/3/2025	No	Unlikely	N	False	N	N
Shopping Center	5178	7/23/2024	No	Unlikely	N	False	N	N
Residential	29116	7/31/2024	No	Unlikely	N	False	N	N
Residential	63694	7/23/2024	No	Unlikely	N	False	Y	N
Residential	22026	4/10/2025	Stagnant	Unlikely	N	False	Y	N
Residential	38037	6/13/2025	No	Unlikely	N	True	Y	N
Residential	9321	10/14/2024	No	Unlikely	N	True	N	N
Hospital	65493	5/2/2025	No	Unlikely	N	False	Y	N
Residential	31587	8/15/2024	No	Unlikely	Y	False	Y	N
Mobile Home Park	67009	7/8/2024	Yes	Unlikely	N	False	N	N
Residential	12908	3/24/2025	No	Unlikely	N	True	Y	N
Residential	45397	5/20/2025	No	Unlikely	N	False	Y	N
Residential	31576	8/15/2024	No	Unlikely	N	False	N	N
Residential	75985	10/29/2024	No	Unlikely	N	False	N	N
Other	35634	4/22/2025	No	Unlikely	N	False	N	N
Residential	44391	9/11/2024	No	Unlikely	N	False	Y	N
Hotel w/ Restaurant	12196	3/13/2025	No	Unlikely	N	False	N	N
Other	30178	4/28/2025	Yes	Unlikely	Y	True	N	N
Planned Industrial Park	52158	6/13/2025	No	Unlikely	N	True	Y	N
Planned Industrial Park	31947	6/5/2025	No	Unlikely	N	False	N	N
Residential	59183	9/12/2024	Yes	Unlikely	N	False	Y	N
Residential	63410	5/19/2025	No	Unlikely	N	False	N	N
Vehicle Sale/Repair/Miscellaneous Automotive	47754	8/5/2024	Stagnant	Unlikely	Y	False	N	N
Residential	4968	4/29/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	31945	6/5/2025	No	Unlikely	N	False	N	N
Shopping Center	43544	5/2/2025	No	Unlikely	N	False	N	N
Residential	44733	7/8/2024	Stagnant	Unlikely	N	False	N	N
Planned Industrial Park	55120	6/5/2025	No	Unlikely	N	True	Y	N
Other	65794	5/2/2025	No	Unlikely	N	False	N	N
Other	30506	3/13/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	64441	8/6/2024	No	Unlikely	Y	False	N	N
Residential	10171	2/25/2025	Yes	Unlikely	N	False	Y	N
Residential	5450	10/25/2024	No	Unlikely	N	False	N	N
Residential	8604	10/25/2024	No	Unlikely	N	False	Y	N
Residential	35315	10/8/2024	No	Unlikely	N	True	Y	N
Residential	63787	11/5/2024	No	Unlikely	N	False	N	N
Other	38996	5/2/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	31181	6/13/2025	No	Unlikely	N	False	N	N
Hospital	51901	5/2/2025	Stagnant	Unlikely	N	False	Y	N
Gas Station	59624	7/23/2024	No	Unlikely	Y	False	N	N
Residential	1371	4/29/2025	No	Unlikely	N	False	Y	N
Open Space	42563	10/8/2024	No	Unlikely	N	False	N	N
Regional Mall	6349	7/15/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	31941	6/5/2025	No	Unlikely	N	False	N	N
Residential	64668	5/7/2025	No	Unlikely	N	False	Y	N
Regional Mall	30556	3/11/2025	Stagnant	Unlikely	N	False	Y	N
Residential	788	6/13/2025	Yes	Unlikely	N	False	Y	N
Residential	76722	5/2/2025	No	Unlikely	N	False	N	N
Residential	6522	6/3/2025	No	Unlikely	N	False	Y	N
Institutional (schools/churches)	45756	3/7/2025	No	Unlikely	N	False	Y	N
Planned Industrial Park	51060	4/17/2025	No	Unlikely	Y	False	N	N
Planned Industrial Park	31195	6/13/2025	Yes	Unlikely	N	True	N	N
Other	4430	5/6/2025	Yes	Unlikely	N	False	Y	N
Residential	31599	8/15/2024	No	Unlikely	N	False	N	N
Residential	59054	8/20/2024	No	Unlikely	N	False	Y	N
Residential	27698	8/8/2024	Stagnant	Unlikely	N	False	N	N
Institutional (schools/churches)	31147	9/17/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	64173	4/17/2025	Yes	Unlikely	Y	False	N	N
Residential	19950	3/7/2025	No	Unlikely	Y	True	N	N
Residential	44079	8/2/2024	No	Unlikely	N	False	Y	N
Planned Industrial Park	64171	4/17/2025	Stagnant	Unlikely	Y	False	N	N
Other	52191	6/13/2025	No	Unlikely	Y	False	Y	N
Residential	9295	10/14/2024	No	Unlikely	N	False	N	N
Residential	63771	11/5/2024	No	Unlikely	N	False	N	N
Residential	29609	8/8/2024	No	Unlikely	N	False	Y	N
Residential	46069	4/22/2025	No	Unlikely	N	True	Y	N
Residential	58450	5/20/2025	Stagnant	Unlikely	N	False	Y	N
Other	38054	6/13/2025	No	Unlikely	N	False	Y	N
Residential	22554	8/22/2024	No	Unlikely	N	False	Y	N
Residential	51231	4/11/2025	No	Unlikely	N	False	N	N
Residential	42860	3/17/2025	No	Unlikely	N	False	N	N
Other	6545	6/3/2025	No	Unlikely	N	False	N	N
Residential	51625	8/1/2024	Stagnant	Unlikely	N	False	Y	N
Other	63698	3/7/2025	Stagnant	Unlikely	N	False	Y	N
Residential	61174	11/4/2024	No	Unlikely	N	False	Y	N
Residential	56770	7/16/2024	Stagnant	Unlikely	N	False	Y	N
Other	55797	7/3/2024	No	Unlikely	N	False	Y	N
Residential	59710	10/8/2024	No	Unlikely	N	False	N	N
Other	980	7/15/2024	No	Unlikely	N	False	N	N
Residential	28466	3/24/2025	No	Unlikely	N	False	Y	N
Residential	251	8/22/2024	No	Unlikely	N	False	Y	N
Residential	22784	4/22/2025	No	Unlikely	N	False	Y	N
Planned Industrial Park	60394	8/6/2024	No	Unlikely	N	False	N	N

Residential	58127	11/18/2024	No	Unlikely	N	False	Y	N
Residential	30784	4/11/2025	Yes	Unlikely	N	False	Y	N
Residential	14962	8/13/2024	No	Unlikely	N	True	N	N
Planned Industrial Park	31528	4/17/2025	Yes	Unlikely	Y	False	N	N
Residential	16589	8/23/2024	Yes	Unlikely	N	False	Y	N
Open Space	51965	8/21/2024	No	Unlikely	N	True	N	N
Institutional (schools/churches)	59778	10/30/2024	Yes	Unlikely	N	False	N	N
Other	46117	8/20/2024	Yes	Unlikely	N	True	N	N
Residential	52500	5/7/2025	No	Unlikely	N	False	Y	N
Residential	55163	3/13/2025	No	Unlikely	N	False	Y	N
Planned Industrial Park	55117	6/5/2025	No	Unlikely	N	False	Y	N
Residential	11812	3/7/2025	No	Unlikely	N	True	Y	N
Residential	929	6/13/2025	Stagnant	Unlikely	N	False	N	N
Other	1789	10/8/2024	No	Unlikely	N	False	N	N
Open Space	9444	7/23/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	30902	4/21/2025	Stagnant	Unlikely	Y	False	N	N
Planned Industrial Park	44899	4/17/2025	No	Unlikely	Y	False	N	N
Residential	33416	8/22/2024	No	Unlikely	N	False	Y	N
Residential	1364	4/29/2025	No	Unlikely	N	False	N	N
Residential	58499	5/20/2025	Stagnant	Unlikely	N	False	Y	N
Other	31263	9/9/2024	Yes	Unlikely	N	True	N	N
Residential	28363	3/31/2025	No	Unlikely	N	False	Y	N
Other	6550	6/3/2025	No	Unlikely	N	False	N	N
Residential	11654	3/17/2025	No	Unlikely	N	False	N	N
Open Space	55165	3/13/2025	No	Unlikely	N	False	Y	N
Residential	45938	4/24/2025	Yes	Unlikely	N	False	N	N
Other	29827	7/16/2024	Stagnant	Unlikely	N	False	N	N
Other	7335	7/15/2024	No	Unlikely	N	False	N	N
Wholesale Warehousing	21404	3/24/2025	Stagnant	Unlikely	N	False	Y	N
Other	62182	10/9/2024	Yes	Unlikely	N	False	Y	N
Residential	40167	9/17/2024	No	Unlikely	N	False	N	N
Residential	44098	8/2/2024	No	Unlikely	N	False	Y	N
Planned Industrial Park	11347	8/14/2024	No	Unlikely	Y	True	N	N
Other	11562	3/4/2025	Stagnant	Unlikely	N	False	N	N
Residential	9350	10/14/2024	No	Unlikely	N	False	N	N
Residential	19725	4/11/2025	No	Unlikely	N	False	Y	N
Other	19324	9/10/2024	Yes	Unlikely	N	False	N	N
Residential	51339	4/22/2025	Stagnant	Unlikely	N	False	N	N
Gas Station	3281	10/30/2024	No	Unlikely	Y	False	N	N
Residential	48606	7/8/2024	No	Unlikely	N	True	Y	N
Open Space	28274	11/22/2024	No	Unlikely	N	False	N	N
Other	64648	5/7/2025	No	Unlikely	Y	False	Y	N
Other	58433	5/20/2025	Yes	Unlikely	N	False	Y	N
Planned Industrial Park	31191	6/6/2025	No	Unlikely	N	True	N	N
Residential	59992	8/27/2024	No	Unlikely	N	False	N	N
Wholesale Warehousing	60563	5/7/2025	No	Unlikely	N	False	N	N
Other	22001	7/23/2024	Yes	Unlikely	N	False	N	N
Residential	38041	6/13/2025	No	Unlikely	N	False	Y	N
Residential	28301	3/31/2025	No	Unlikely	N	True	Y	N
Residential	38033	6/13/2025	No	Unlikely	N	True	Y	N
Other	53228	10/29/2024	No	Unlikely	N	True	Y	N
Regional Mall	24949	4/11/2025	No	Unlikely	Y	False	N	N
Hospital	39739	11/22/2024	No	Unlikely	N	False	N	N
Other	31730	6/13/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	75321	4/17/2025	Yes	Unlikely	Y	False	N	N
Residential	28317	3/31/2025	No	Unlikely	N	False	N	N
Regional Mall	19142	3/4/2025	Yes	Unlikely	N	False	N	N
Other	49112	5/2/2025	Yes	Unlikely	N	True	N	N
Residential	25941	4/22/2025	No	Unlikely	N	False	Y	N
Residential	58455	5/20/2025	No	Unlikely	N	False	Y	N
Residential	61346	4/29/2025	No	Unlikely	Y	False	Y	N
Residential	27268	4/29/2025	No	Unlikely	N	False	Y	N
Planned Industrial Park	31179	6/12/2025	No	Unlikely	N	True	N	N
Residential	3322	10/7/2024	No	Unlikely	N	False	N	N
Other	6798	4/28/2025	No	Unlikely	N	False	N	N
Other	1323	10/25/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	62254	5/7/2025	No	Unlikely	N	False	N	N
Residential	26750	3/11/2025	No	Unlikely	N	False	Y	N
Residential	48353	7/24/2024	Stagnant	Unlikely	N	False	N	N
Residential	2746	4/29/2025	No	Unlikely	N	False	N	N
Residential	16564	8/23/2024	Yes	Unlikely	Y	False	Y	N
Residential	53913	5/2/2025	No	Unlikely	N	False	Y	N
Residential	42862	3/17/2025	No	Unlikely	N	False	Y	N
Residential	45942	4/24/2025	No	Unlikely	N	False	Y	N
Planned Industrial Park	63690	5/7/2025	No	Unlikely	Y	False	N	N
Residential	6530	6/3/2025	No	Unlikely	N	True	Y	N
Residential	60997	9/11/2024	No	Unlikely	N	False	N	N
Residential	45969	4/24/2025	No	Unlikely	N	True	Y	N
Residential	20037	9/9/2024	Yes	Unlikely	N	False	Y	N
Residential	31084	4/29/2025	No	Unlikely	N	False	Y	N
Institutional (schools/churches)	51851	6/3/2025	Stagnant	Unlikely	N	False	Y	N
Institutional (schools/churches)	30337	3/4/2025	Stagnant	Unlikely	N	False	N	N
Other	50039	3/4/2025	No	Unlikely	N	False	Y	N
Residential	247	8/22/2024	No	Unlikely	N	False	Y	N
Residential	33423	8/22/2024	No	Unlikely	N	False	N	N
Residential	48346	7/24/2024	No	Unlikely	N	False	Y	N
Residential	51235	4/11/2025	No	Unlikely	N	False	N	N

Institutional (schools/churches)	45773	3/7/2025	No	Unlikely	N	False	Y	N
Wholesale Warehousing	60561	5/7/2025	No	Unlikely	N	False	N	N
Residential	61725	7/16/2024	No	Unlikely	N	False	N	N
Other	50239	4/21/2025	Yes	Unlikely	N	False	Y	N
Open Space	51311	4/22/2025	Stagnant	Unlikely	N	False	N	N
Other	33796	8/22/2024	No	Unlikely	N	False	N	N
Residential	42583	8/2/2024	No	Unlikely	N	False	N	N
Other	59190	9/13/2024	No	Unlikely	N	True	Y	N
Residential	54957	10/8/2024	No	Obvious	Y	True	Y	N
Other	20044	9/9/2024	No	Unlikely	N	False	Y	N
Hotel w/ Restaurant	38771	7/15/2024	No	Unlikely	N	False	N	N
Residential	28334	3/31/2025	No	Unlikely	N	False	Y	N
Open Space	19537	5/7/2025	No	Unlikely	N	False	N	N
Institutional (schools/churches)	25449	11/25/2024	Stagnant	Unlikely	N	False	N	N
Gas Station	40770	3/7/2025	No	Unlikely	Y	False	N	N
Residential	33193	8/8/2024	No	Unlikely	N	False	N	N
Residential	5991-001	7/16/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	31532	4/17/2025	No	Unlikely	Y	True	N	N
Residential	52156	5/7/2025	No	Unlikely	N	False	Y	N
Other	40762	3/7/2025	Yes	Unlikely	N	True	N	N
Residential	54227	8/22/2024	No	Unlikely	N	False	Y	N
Residential	5873-001	7/31/2024	No	Unlikely	N	False	N	N
Other	10727	3/13/2025	No	Unlikely	N	False	N	N
Gas Station	18904	3/24/2025	No	Unlikely	Y	False	Y	N
Shopping Center	51141	11/22/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	36110	6/13/2025	Stagnant	Unlikely	Y	False	Y	N
Residential	60042	8/27/2024	No	Unlikely	N	False	N	N
Residential	46629	8/15/2024	No	Unlikely	N	False	Y	N
Other	63714	11/4/2024	No	Unlikely	N	False	N	N
Shopping Center	46110	11/22/2024	No	Unlikely	N	False	N	N
Other	35956	3/13/2025	No	Unlikely	N	False	N	N
Residential	67816	2/26/2025	Yes	Unlikely	N	False	N	N
Other	31267	9/9/2024	Yes	Unlikely	N	True	N	N
Residential	26672	3/11/2025	No	Unlikely	N	False	Y	N
Residential	4856	4/29/2025	No	Unlikely	N	False	N	N
Other	59194	9/13/2024	Yes	Unlikely	N	False	Y	N
Other	32021	7/16/2024	Yes	Unlikely	N	False	N	N
Other	25951	8/23/2024	No	Unlikely	Y	True	Y	N
Planned Industrial Park	30908	4/21/2025	No	Unlikely	Y	False	N	N
Institutional (schools/churches)	31156	9/17/2024	No	Unlikely	N	False	N	N
Residential	3343	10/8/2024	Yes	Unlikely	N	False	N	N
Residential	57780	5/7/2025	No	Unlikely	N	False	Y	N
Regional Mall	25514	3/11/2025	No	Unlikely	N	False	Y	N
Residential	14843	8/13/2024	No	Unlikely	N	True	N	N
Gas Station	59620	7/23/2024	No	Unlikely	Y	False	N	N
Planned Industrial Park	44897	4/17/2025	No	Unlikely	Y	True	N	N
Residential	42841	3/17/2025	No	Unlikely	N	False	Y	N
Planned Industrial Park	46043	8/15/2024	Stagnant	Unlikely	Y	False	N	N
Residential	50284	7/8/2024	No	Unlikely	N	False	Y	N
Residential	1453	4/29/2025	No	Unlikely	N	False	Y	N
Residential	26715	10/8/2024	No	Unlikely	N	False	Y	N
Planned Industrial Park	5756-001	6/12/2025	Yes	Obvious	Y	True	N	Y
Residential	59639	7/24/2024	No	Unlikely	N	False	N	N
Residential	44085	8/2/2024	Yes	Unlikely	N	False	Y	N
Other	20064	9/9/2024	No	Unlikely	N	False	N	N
Other	22349	6/2/2025	Stagnant	Unlikely	Y	False	Y	N
Residential	36898	6/13/2025	No	Unlikely	N	False	Y	N
Other	30123	5/6/2025	Yes	Unlikely	N	False	Y	N
Residential	52981	9/11/2024	Stagnant	Unlikely	N	False	N	N
Regional Mall	34149	3/17/2025	No	Unlikely	N	False	Y	N
Residential	58125	11/18/2024	No	Unlikely	N	False	Y	N
Other	56582	7/16/2024	Stagnant	Unlikely	N	False	Y	N
Planned Industrial Park	77181	6/13/2025	No	Unlikely	Y	False	N	N
Residential	48524	5/6/2025	Stagnant	Unlikely	N	False	Y	N
Wholesale Warehousing	34365	5/7/2025	Stagnant	Unlikely	N	False	N	N
Residential	40348	8/2/2024	No	Unlikely	N	False	Y	N
Other	68657	4/21/2025	No	Unlikely	N	False	N	N
Residential	54103	5/2/2025	No	Unlikely	N	False	Y	N
Wholesale Warehousing	22930	3/7/2025	No	Unlikely	N	True	N	N
Residential	61352	4/29/2025	No	Unlikely	N	False	N	N
Residential	4493	11/18/2024	No	Unlikely	N	False	N	N
Residential	44393	9/11/2024	No	Unlikely	N	False	Y	N
Residential	49884	4/21/2025	No	Unlikely	N	False	Y	N
Other	64706	5/7/2025	No	Unlikely	N	False	Y	N
Hospital	65473	5/2/2025	No	Unlikely	Y	False	N	N
Residential	42755	8/20/2024	No	Unlikely	N	False	N	N
Residential	6539	6/3/2025	No	Unlikely	N	False	N	N
Residential	42834	3/17/2025	Yes	Unlikely	Y	False	Y	Y
Residential	4318	3/17/2025	No	Unlikely	N	False	Y	N
Shopping Center	28284	11/22/2024	Yes	Unlikely	N	False	N	N
Other	22331	6/3/2025	No	Unlikely	N	False	Y	N
Other	5199	4/21/2025	No	Unlikely	N	True	N	N
Planned Industrial Park	51063	4/17/2025	Yes	Unlikely	Y	False	N	N
Planned Industrial Park	77142	6/13/2025	No	Unlikely	N	False	N	N
Institutional (schools/churches)	10145	2/26/2025	Yes	Unlikely	N	False	Y	N
Residential	14846	8/13/2024	No	Unlikely	N	False	N	N
Residential	39830	2/26/2025	No	Unlikely	Y	False	N	N

Residential	44794	9/17/2024	No	Unlikely	N	False	N	N
Other	6797	4/24/2025	No	Unlikely	N	True	N	N
Residential	9341	10/14/2024	No	Unlikely	N	True	N	N
Residential	48103	11/18/2024	No	Unlikely	N	False	N	N
Residential	30024	3/13/2025	Stagnant	Unlikely	N	False	N	N
Residential	8376	2/25/2025	Yes	Unlikely	N	False	Y	N
Residential	10152	2/26/2025	No	Unlikely	N	False	Y	N
Residential	51938	8/22/2024	No	Unlikely	N	False	N	N
Residential	43974	7/3/2024	No	Unlikely	N	False	N	N
Residential	54108	5/2/2025	No	Unlikely	N	False	N	N
Residential	10125	2/26/2025	No	Unlikely	N	True	Y	N
Residential	45946	4/24/2025	No	Unlikely	N	False	Y	N
Residential	42869	3/17/2025	No	Unlikely	N	False	Y	N
Residential	14977	8/14/2024	No	Unlikely	N	True	N	N
Open Space	25949	8/23/2024	No	Unlikely	N	False	Y	N
Residential	1630	4/29/2025	Stagnant	Unlikely	N	False	N	N
Shopping Center	51841	6/3/2025	Stagnant	Unlikely	Y	False	Y	N
Open Space	52289	10/14/2024	No	Unlikely	N	False	N	N
Other	19217	3/17/2025	No	Unlikely	N	True	Y	N
Other	19333	9/9/2024	No	Unlikely	N	False	Y	N
Residential	48362	7/24/2024	No	Unlikely	N	False	Y	N
Residential	15480	7/16/2024	No	Unlikely	N	True	N	N
Institutional (schools/churches)	25438	11/25/2024	No	Unlikely	N	False	N	N
Residential	2232	7/8/2024	No	Unlikely	N	True	Y	N
Residential	58489	5/20/2025	Stagnant	Unlikely	N	True	Y	N
Residential	53033	9/11/2024	Stagnant	Unlikely	N	False	Y	N
Residential	31459	8/27/2024	No	Unlikely	N	False	N	N
Residential	23443	3/7/2025	No	Unlikely	N	False	N	N
Residential	63740	11/5/2024	No	Unlikely	N	False	N	N
Other	35620	4/22/2025	No	Unlikely	N	False	Y	N
Residential	76761	5/2/2025	No	Unlikely	N	False	N	N
Residential	11656	3/17/2025	No	Unlikely	N	False	Y	N
Residential	55173	3/13/2025	No	Unlikely	N	False	N	N
Residential	243	8/22/2024	No	Unlikely	N	False	Y	N
Residential	19329	9/10/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	40801	4/21/2025	Stagnant	Unlikely	Y	False	N	N
Residential	35625	4/22/2025	No	Unlikely	N	True	Y	N
Institutional (schools/churches)	31158	9/17/2024	No	Unlikely	N	True	N	N
Gas Station	18898	3/24/2025	Stagnant	Unlikely	Y	False	Y	N
Residential	35629	4/22/2025	Stagnant	Unlikely	N	False	N	N
Wholesale Warehousing	60556	5/7/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	19322	6/13/2025	No	Unlikely	Y	False	Y	N
Other	51383	4/22/2025	Stagnant	Unlikely	N	False	N	N
Residential	20061	9/9/2024	No	Unlikely	N	False	N	N
Shopping Center	46501	11/25/2024	No	Unlikely	N	False	N	N
Open Space	35617	4/22/2025	No	Unlikely	N	False	Y	N
Residential	51686	8/20/2024	No	Unlikely	N	False	Y	N
Residential	40561	3/31/2025	No	Unlikely	N	False	Y	N
Residential	29122	7/31/2024	No	Unlikely	N	False	Y	N
Planned Industrial Park	12987	6/13/2025	No	Unlikely	Y	False	Y	N
Residential	17692	5/2/2025	No	Unlikely	N	False	N	N
Residential	19327	9/10/2024	No	Unlikely	N	False	Y	N
Planned Industrial Park	46039	8/15/2024	No	Unlikely	N	False	N	N
Other	35919	9/11/2024	No	Unlikely	N	True	N	N
Residential	33425	8/22/2024	No	Unlikely	N	False	Y	N
Planned Industrial Park	31943	6/5/2025	No	Unlikely	N	False	N	N
Other	31086	4/29/2025	No	Unlikely	N	True	Y	N
Residential	63742	11/5/2024	No	Unlikely	N	False	N	N
Institutional (schools/churches)	60458	10/30/2024	No	Unlikely	N	False	N	N
Gas Station	50768	5/20/2025	Stagnant	Unlikely	Y	False	N	N
Residential	924	6/13/2025	No	Unlikely	N	True	N	N
Residential	54110	5/2/2025	No	Unlikely	N	False	Y	N
Other	35196	5/2/2025	Yes	Unlikely	N	False	N	N
Other	62747	6/13/2025	No	Unlikely	Y	True	N	N
Residential	13627	3/24/2025	No	Unlikely	N	False	Y	N
Regional Mall	30532	3/11/2025	No	Unlikely	N	False	Y	N
Residential	75921	10/28/2024	No	Unlikely	N	False	N	N
Restaurant	12353	3/11/2025	No	Unlikely	N	False	Y	N
Planned Industrial Park	64433	8/6/2024	No	Unlikely	Y	False	N	N
Residential	51684	8/20/2024	No	Unlikely	N	False	Y	N
Other	38058	6/13/2025	No	Unlikely	N	True	Y	N
Residential	1380	4/29/2025	No	Unlikely	N	False	N	N
Institutional (schools/churches)	10686	7/15/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	30871	4/21/2025	No	Unlikely	N	True	N	N
Residential	20039	9/9/2024	No	Unlikely	N	True	Y	N
Residential	53862	5/2/2025	No	Unlikely	N	False	Y	N
Residential	52974	9/11/2024	Stagnant	Unlikely	N	False	N	N
Residential	24067	4/29/2025	No	Unlikely	N	False	Y	N
Planned Industrial Park	77140	6/13/2025	No	Unlikely	N	False	N	N
Residential	1474	4/29/2025	No	Unlikely	N	True	N	N
Other	1314	10/25/2024	No	Unlikely	N	False	N	N
Residential	58589	5/19/2025	No	Unlikely	N	False	Y	N
Shopping Center	46112	8/20/2024	No	Unlikely	Y	False	N	N
Planned Industrial Park	34289	8/6/2024	No	Unlikely	N	False	N	N
Residential	1806	3/5/2025	No	Unlikely	N	False	Y	N
Open Space	14979	8/13/2024	No	Unlikely	N	True	Y	N
Residential	245	8/22/2024	No	Unlikely	N	False	Y	N

Residential	3205	6/2/2025	Yes	Unlikely	N	False	N	N
Hospital	45267	5/2/2025	No	Unlikely	N	False	N	N
Residential	56560	7/17/2024	No	Unlikely	N	False	N	N
Residential	59185	9/13/2024	No	Unlikely	N	False	Y	N
Residential	58129	11/18/2024	No	Unlikely	N	False	N	N
Residential	9300	8/8/2024	No	Unlikely	N	False	N	N
Residential	25327	4/11/2025	No	Unlikely	N	True	Y	N
Residential	25945	4/22/2025	No	Unlikely	N	False	Y	N
Residential	42493	3/17/2025	No	Unlikely	N	False	Y	N
Residential	35308	10/8/2024	No	Unlikely	N	False	Y	N
Residential	42061	8/2/2024	No	Unlikely	N	False	Y	N
Institutional (schools/churches)	38353	6/13/2025	No	Unlikely	N	True	Y	N
Residential	37097	7/3/2024	No	Unlikely	N	False	Y	N
Residential	46653	8/15/2024	Stagnant	Unlikely	N	False	Y	N
Residential	60461	10/30/2024	No	Unlikely	N	False	N	N
Vehicle Sale/Repair/Miscellaneous Automotive	24017	6/13/2025	No	Unlikely	Y	True	Y	N
Other	51903	5/2/2025	Yes	Unlikely	N	False	N	N
Residential	19722	4/11/2025	Stagnant	Unlikely	N	False	Y	N
Planned Industrial Park	31185	6/13/2025	No	Unlikely	Y	True	N	N
Residential	21994	7/23/2024	Stagnant	Unlikely	N	False	N	N
Planned Industrial Park	30921	4/21/2025	Stagnant	Unlikely	Y	False	N	N
Restaurant	11218	7/15/2024	No	Unlikely	N	False	N	N
Residential	48641	7/8/2024	No	Unlikely	N	False	Y	N
Residential	41445	10/24/2024	No	Unlikely	N	False	Y	N
Residential	75993	10/29/2024	No	Unlikely	N	False	N	N
Residential	35627	4/22/2025	No	Unlikely	N	False	N	Y
Other	27078	3/4/2025	No	Unlikely	N	False	N	N
Other	56586	7/16/2024	Stagnant	Unlikely	N	False	Y	N
Other	58052	7/17/2024	Stagnant	Unlikely	N	False	N	N
Residential	22056	4/11/2025	No	Unlikely	N	True	Y	N
Other	29141	8/1/2024	No	Unlikely	N	False	N	N
Other	53905	5/2/2025	No	Unlikely	N	False	Y	N
Residential	59703	7/24/2024	Stagnant	Unlikely	N	False	Y	N
Other	40118	9/11/2024	No	Unlikely	N	False	N	N
Other	7599	11/22/2024	Stagnant	Unlikely	N	False	N	N
Residential	42856	3/17/2025	Stagnant	Unlikely	N	False	Y	N
Open Space	62006	10/14/2024	Yes	Unlikely	N	False	N	N
Residential	53428	5/2/2025	No	Unlikely	N	True	Y	N
Residential	59985	8/27/2024	Yes	Unlikely	N	False	N	N
Residential	1424	4/29/2025	No	Unlikely	N	False	N	N
Other	62184	10/14/2024	No	Unlikely	N	False	N	N
Institutional (schools/churches)	1409	4/29/2025	Stagnant	Unlikely	N	False	Y	N
Hotel w/ Restaurant	19173	3/13/2025	No	Unlikely	N	True	N	N
Residential	6196	3/18/2025	Yes	Unlikely	Y	False	Y	N
Vehicle Sale/Repair/Miscellaneous Automotive	5190	8/15/2024	No	Unlikely	Y	True	N	N
Residential	63755	11/5/2024	No	Unlikely	N	False	N	N
Other	32009	7/17/2024	No	Unlikely	N	False	N	N
Residential	2426	3/4/2025	No	Unlikely	N	False	Y	N
Other	63416	5/20/2025	Yes	Unlikely	N	False	N	N
Planned Industrial Park	40783	4/21/2025	No	Unlikely	Y	True	N	N
Residential	56778	7/16/2024	Stagnant	Unlikely	N	False	Y	N
Residential	31009	5/20/2025	No	Unlikely	N	False	Y	N
Other	28019	7/15/2024	No	Unlikely	N	False	N	N
Residential	56717	7/16/2024	No	Unlikely	N	False	Y	N
Residential	44058	8/2/2024	No	Unlikely	N	False	Y	N
Residential	1468	4/29/2025	No	Unlikely	N	False	N	N
Residential	6795	4/24/2025	No	Unlikely	N	False	N	N
Residential	3302	10/30/2024	Yes	Unlikely	N	False	N	N
Planned Industrial Park	62255	5/7/2025	No	Unlikely	N	True	N	N
Planned Industrial Park	39466	5/7/2025	No	Unlikely	N	True	N	N
Residential	31584	8/15/2024	No	Unlikely	N	False	N	N
Other	40135	9/11/2024	No	Unlikely	N	False	Y	N
Other	51906	5/2/2025	No	Unlikely	N	False	Y	N
Gas Station	34191	8/6/2024	No	Unlikely	Y	True	N	N
Residential	51926	8/21/2024	No	Unlikely	N	False	Y	N
Planned Industrial Park	55113	6/5/2025	No	Unlikely	N	True	Y	N
Residential	60402	9/13/2024	No	Unlikely	N	False	N	N
Residential	58480	5/20/2025	Stagnant	Unlikely	N	False	Y	N
Residential	4493	11/18/2024	No	Unlikely	N	False	N	N
Residential	3952	7/23/2024	No	Unlikely	N	False	Y	N
Other	62994	10/14/2024	No	Unlikely	N	True	N	N
Residential	1785	10/8/2024	No	Unlikely	N	False	Y	N
Other	47761	8/6/2024	Stagnant	Unlikely	N	False	N	N
Residential	56701	7/24/2024	No	Unlikely	N	False	N	N
Residential	30030	3/13/2025	No	Unlikely	N	False	N	N
Residential	35872	3/31/2025	No	Unlikely	N	False	Y	N
Residential	51378	4/22/2025	No	Unlikely	N	False	N	N
Residential	6612	3/24/2025	No	Unlikely	N	True	Y	N
Residential	38006	6/13/2025	No	Unlikely	N	False	Y	N
Residential	59059	8/20/2024	No	Unlikely	N	False	N	N
Residential	42466	3/17/2025	No	Unlikely	N	False	Y	N
Residential	50036	3/5/2025	No	Unlikely	N	False	Y	N
Residential	937	3/4/2025	No	Unlikely	N	False	Y	N
Gas Station	31357	11/27/2024	No	Unlikely	N	False	Y	N
Residential	1479	4/29/2025	No	Unlikely	N	False	N	N
Other	31265	9/9/2024	Yes	Unlikely	N	False	Y	N
Planned Industrial Park	39498	5/7/2025	No	Unlikely	Y	True	N	N

Residential	37767	7/3/2024	No	Unlikely	N	False	Y	N
Residential	44935	3/31/2025	No	Unlikely	N	False	Y	N
Other	14512	10/25/2024	No	Unlikely	N	False	N	N
Residential	53910	5/2/2025	No	Unlikely	N	False	Y	N
Residential	60535	7/16/2024	Yes	Unlikely	N	True	Y	N
Shopping Center	32972	5/20/2025	Stagnant	Unlikely	N	False	N	N
Other Industrial	20086	3/7/2025	No	Unlikely	N	True	N	N
Residential	57385	5/7/2025	No	Unlikely	N	False	Y	N
Planned Industrial Park	55109	6/4/2025	Yes	Unlikely	N	False	Y	N
Shopping Center	42751	8/20/2024	Yes	Unlikely	Y	True	Y	N
Planned Industrial Park	1118	6/5/2025	No	Unlikely	N	False	N	N
Other	9442	7/23/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	24489	5/7/2025	No	Unlikely	N	True	N	N
Shopping Center	40991	3/5/2025	No	Unlikely	Y	False	Y	N
Other	41740	7/3/2024	No	Unlikely	N	False	Y	N
Residential	50236	4/21/2025	No	Unlikely	N	False	Y	N
Regional Mall	65020	4/11/2025	No	Unlikely	N	False	Y	N
Residential	44810	9/17/2024	No	Unlikely	N	False	Y	N
Other	59188	9/13/2024	No	Unlikely	N	True	Y	N
Other	29664	8/1/2024	No	Unlikely	N	False	N	N
Restaurant	11210	7/15/2024	No	Unlikely	N	False	N	N
Residential	43619	6/13/2025	No	Unlikely	N	True	Y	N
Residential	51380	4/22/2025	No	Unlikely	N	True	N	N
Other	21418	3/24/2025	No	Unlikely	N	True	Y	N
Shopping Center	976	7/15/2024	No	Unlikely	N	False	N	N
Shopping Center	11574	3/4/2025	Yes	Unlikely	Y	False	Y	N
Open Space	51863	5/2/2025	No	Unlikely	N	False	Y	N
Planned Industrial Park	31727	6/12/2025	No	Unlikely	N	False	N	N
Residential	54093	5/2/2025	No	Unlikely	N	False	Y	N
Residential	54231	8/22/2024	No	Unlikely	N	False	Y	N
Residential	22019	4/11/2025	Yes	Unlikely	N	False	Y	N
Residential	40169	9/17/2024	No	Unlikely	N	False	Y	N
Residential	48534	5/7/2025	No	Unlikely	N	False	Y	N
Other	19211	3/17/2025	No	Unlikely	N	False	Y	N
Residential	56794	7/16/2024	No	Unlikely	N	False	Y	N
Residential	16557	8/23/2024	No	Unlikely	Y	False	Y	N
Residential	5678	7/23/2024	Stagnant	Unlikely	N	False	Y	N
Residential	35311	10/8/2024	No	Unlikely	N	True	Y	N
Residential	63406	5/19/2025	No	Unlikely	N	False	N	N
Other	51859	5/2/2025	Intermittent	Unlikely	N	False	Y	N
Residential	8606	10/25/2024	No	Unlikely	N	False	Y	N
Residential	42618	8/2/2024	No	Unlikely	N	False	N	N
Residential	42579	8/2/2024	No	Unlikely	N	False	N	N
Residential	1431	4/29/2025	No	Unlikely	N	False	N	N
Other	52261	9/11/2024	No	Unlikely	N	False	N	N
Other	63773	11/5/2024	No	Unlikely	N	False	N	N
Residential	777	6/13/2025	Yes	Unlikely	N	False	Y	N
Planned Industrial Park	64160	4/17/2025	Yes	Unlikely	Y	False	N	N
Residential	57436	9/12/2024	No	Unlikely	N	False	Y	N
Residential	55141	3/13/2025	No	Unlikely	N	True	Y	N
Institutional (schools/churches)	45783	3/7/2025	Stagnant	Unlikely	N	False	N	N
Residential	19946	3/7/2025	Stagnant	Unlikely	N	False	N	N
Residential	55129	3/13/2025	No	Unlikely	N	False	Y	N
Other	11552	3/4/2025	No	Unlikely	N	False	Y	N
Planned Industrial Park	24485	5/7/2025	No	Unlikely	N	False	N	N
Residential	48494	5/7/2025	No	Unlikely	N	False	Y	N
Other	6619	3/18/2025	Yes	Unlikely	N	False	Y	N
Residential	42866	3/17/2025	No	Unlikely	N	False	Y	N
Other	61179	11/5/2024	No	Unlikely	N	False	N	N
Residential	40171	9/17/2024	No	Unlikely	N	False	Y	N
Residential	26667	3/11/2025	No	Unlikely	N	False	Y	N
Residential	51682	8/20/2024	No	Unlikely	N	True	Y	N
Open Space	55147	3/13/2025	No	Unlikely	N	False	Y	N
Planned Industrial Park	5992-002	3/4/2025	No	Unlikely	N	False	N	N
Open Space	34299	8/6/2024	Yes	Unlikely	N	False	N	N
Residential	46535	8/15/2024	No	Unlikely	N	False	Y	N
Hospital	6584	10/14/2024	No	Unlikely	N	False	N	N
Open Space	56671	7/24/2024	No	Unlikely	N	False	Y	N
Residential	14840	8/13/2024	Stagnant	Unlikely	N	False	Y	N
Residential	3333	10/7/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	31189	6/6/2025	No	Unlikely	Y	False	N	N
Residential	54099	5/2/2025	No	Unlikely	N	True	Y	N
Residential	75977	10/29/2024	No	Unlikely	N	False	N	N
Residential	34810	3/31/2025	No	Unlikely	N	False	Y	N
Vehicle Sale/Repair/Miscellaneous Automotive	34292	8/6/2024	Stagnant	Unlikely	Y	False	N	N
Open Space	55145	3/13/2025	No	Unlikely	N	False	Y	N
Shopping Center	35386	5/2/2025	No	Unlikely	N	False	N	N
Other	58054	7/17/2024	No	Unlikely	N	False	N	N
Other	11572	3/4/2025	Stagnant	Unlikely	N	False	N	N
Residential	58576	5/19/2025	Stagnant	Unlikely	N	False	Y	N
Residential	31076	4/29/2025	No	Unlikely	N	False	Y	N
Institutional (schools/churches)	8041	10/14/2024	No	Unlikely	N	True	N	N
Open Space	12415	7/15/2024	Stagnant	Unlikely	N	False	N	N
Residential	22327	6/2/2025	Stagnant	Unlikely	N	False	Y	N
Residential	3957	7/23/2024	No	Unlikely	N	False	N	N
Hotel w/ Restaurant	12214	3/13/2025	No	Unlikely	N	False	N	N
Institutional (schools/churches)	10681	7/15/2024	No	Unlikely	N	False	N	N

Other	30553	3/11/2025	No	Unlikely	N	False	Y	N
Open Space	31360	11/27/2024	No	Unlikely	N	False	N	N
Research and Testing	35222	5/2/2025	No	Unlikely	N	False	N	N
Residential	61171	11/5/2024	No	Unlikely	N	False	N	N
Open Space	20042	9/9/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	44483	6/5/2025	No	Unlikely	N	False	N	N
Wholesale Warehousing	21471	5/7/2025	No	Unlikely	N	False	N	N
Residential	75928	10/29/2024	No	Unlikely	N	False	N	N
Residential	34818	3/31/2025	No	Unlikely	N	False	Y	N
Residential	75935	10/29/2024	No	Unlikely	N	False	N	N
Residential	5872-002	10/28/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	34301	8/6/2024	No	Unlikely	N	False	N	N
Institutional (schools/churches)	55806	11/25/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	36535	6/13/2025	No	Unlikely	Y	False	Y	N
Residential	64704	5/7/2025	No	Unlikely	N	False	Y	N
Residential	40371	8/2/2024	No	Unlikely	N	False	Y	N
Residential	51932	8/21/2024	No	Unlikely	N	False	Y	N
Residential	58522	5/20/2025	Stagnant	Unlikely	N	False	Y	N
Residential	35857	5/20/2025	Yes	Unlikely	N	False	Y	N
Residential	16591	8/23/2024	No	Obvious	N	False	N	N
Residential	29108	7/31/2024	No	Unlikely	N	False	N	N
Other	21491	5/2/2025	Stagnant	Unlikely	Y	False	N	N
Residential	51707	8/20/2024	Stagnant	Unlikely	N	False	Y	N
Residential	44961	3/31/2025	No	Unlikely	N	False	Y	N
Residential	48628	7/8/2024	No	Unlikely	N	False	Y	N
Regional Mall	25516	3/11/2025	No	Unlikely	N	False	Y	N
Other	4527	11/18/2024	Stagnant	Unlikely	N	False	Y	N
Residential	3960	7/23/2024	No	Unlikely	N	False	N	N
Other Industrial	12730	6/2/2025	No	Unlikely	N	True	N	N
Residential	48403	7/23/2024	Stagnant	Unlikely	N	False	Y	N
Residential	51653	7/31/2024	No	Unlikely	N	False	Y	N
Residential	50260	7/8/2024	Yes	Unlikely	N	True	Y	N
Shopping Center	55776	7/3/2024	No	Unlikely	N	False	N	N
Shopping Center	63185	9/11/2024	No	Unlikely	N	False	Y	N
Planned Industrial Park	24899	4/21/2025	Stagnant	Unlikely	Y	True	N	N
Other	59192	9/13/2024	No	Unlikely	N	False	Y	N
Vehicle Sale/Repair/Miscellaneous Automotive	34295	8/6/2024	Stagnant	Unlikely	N	False	N	N
Residential	6617	3/24/2025	No	Unlikely	N	False	Y	N
Residential	1794	10/8/2024	No	Unlikely	N	False	N	N
Residential	53903	5/2/2025	No	Unlikely	N	False	Y	N
Residential	3304	10/30/2024	No	Unlikely	N	False	N	N
Institutional (schools/churches)	26121	2/26/2025	Stagnant	Unlikely	N	False	N	N
Residential	53232	10/29/2024	No	Unlikely	N	False	Y	N
Open Space	58583	5/20/2025	Stagnant	Unlikely	N	False	N	N
Residential	58663	5/19/2025	No	Unlikely	N	False	N	N
Residential	60009	8/27/2024	Yes	Unlikely	N	False	N	N
Hospital	59301	5/1/2025	No	Unlikely	N	False	Y	N
Residential	5064	7/23/2024	No	Unlikely	N	False	N	N
Other	64286	8/23/2024	Yes	Unlikely	N	False	Y	N
Wholesale Warehousing	19533	5/7/2025	Yes	Unlikely	N	False	N	N
Planned Industrial Park	21510	6/12/2025	No	Unlikely	N	False	N	N
Residential	4863	4/29/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	31187	6/13/2025	Stagnant	Unlikely	Y	True	N	N
Institutional (schools/churches)	38348	6/13/2025	No	Unlikely	N	True	Y	N
Residential	51011	9/17/2024	No	Unlikely	N	False	Y	N
Residential	4860	4/29/2025	No	Unlikely	N	False	N	N
Residential	4485	11/18/2024	No	Unlikely	N	False	Y	N
Residential	33427	8/22/2024	No	Unlikely	N	False	Y	N
Other	29667	7/31/2024	No	Unlikely	N	False	N	N
Residential	61160	11/5/2024	No	Unlikely	N	False	Y	N
Residential	59125	9/12/2024	No	Unlikely	N	False	Y	N
Residential	33195	8/8/2024	No	Unlikely	N	False	N	N
Other	1551	4/29/2025	Yes	Unlikely	N	False	N	N
Residential	22546	8/21/2024	No	Unlikely	N	False	Y	N
Residential	1377	4/29/2025	No	Unlikely	N	False	Y	N
Residential	22004	7/22/2024	No	Unlikely	N	False	N	N
Other	40105	9/10/2024	Yes	Unlikely	N	False	N	N
Residential	26678	3/11/2025	No	Unlikely	N	False	Y	N
Gas Station	34203	8/6/2024	No	Unlikely	N	False	N	N
Open Space	37972	7/24/2024	No	Unlikely	N	False	N	N
Residential	5224	4/29/2025	No	Unlikely	N	False	N	N
Residential	9266	4/28/2025	No	Unlikely	N	True	N	N
Residential	7210	4/29/2025	No	Unlikely	N	False	Y	N
Residential	37056	7/3/2024	No	Unlikely	N	False	Y	N
Residential	27680	7/23/2024	No	Unlikely	N	False	Y	N
Residential	17389	4/29/2025	No	Unlikely	N	False	Y	N
Open Space	63700	3/7/2025	No	Obvious	N	True	Y	N
Planned Industrial Park	55102	6/5/2025	Stagnant	Unlikely	N	True	Y	N
Residential	29608	8/8/2024	No	Unlikely	N	True	N	N
Residential	49581	7/8/2024	No	Unlikely	N	False	Y	N
Other	1554	4/29/2025	No	Unlikely	N	False	N	N
Residential	54818	7/8/2024	No	Unlikely	N	False	Y	N
Residential	49894	4/21/2025	No	Unlikely	N	False	Y	N
Residential	29601	8/8/2024	No	Unlikely	N	False	Y	N
Residential	8653	11/18/2024	No	Unlikely	N	False	Y	N
Restaurant	983	7/15/2024	Yes	Unlikely	Y	False	N	N
Residential	54220	8/21/2024	Yes	Unlikely	N	False	Y	N

Residential	7693	8/8/2024	No	Unlikely	N	False	N	N
Shopping Center	11547	3/4/2025	No	Unlikely	Y	False	N	N
Residential	58654	5/20/2025	Stagnant	Unlikely	N	False	N	N
Residential	59126	9/13/2024	No	Unlikely	N	False	N	N
Institutional (schools/churches)	25443	11/25/2024	No	Unlikely	N	False	N	N
Residential	38011	6/13/2025	No	Unlikely	N	False	Y	N
Residential	28459	3/24/2025	No	Unlikely	N	False	Y	N
Residential	77127	11/22/2024	No	Unlikely	N	False	N	N
Institutional (schools/churches)	23688	3/17/2025	No	Unlikely	N	False	Y	N
Wholesale Warehousing	62253	5/7/2025	Stagnant	Unlikely	N	False	N	N
Residential	56678	7/24/2024	No	Unlikely	N	False	Y	N
Residential	1368	4/29/2025	No	Unlikely	N	False	N	N
Shopping Center	55778	7/3/2024	No	Unlikely	N	False	N	N
Open Space	42561	10/8/2024	No	Unlikely	N	False	N	N
Residential	15029	8/8/2024	No	Unlikely	N	False	N	N
Shopping Center	53535	2/26/2025	No	Unlikely	Y	True	Y	N
Residential	63696	7/23/2024	No	Unlikely	N	False	Y	N
Residential	2743	4/29/2025	No	Unlikely	N	False	Y	N
Residential	61167	11/4/2024	No	Unlikely	N	False	Y	N
Residential	54082	5/2/2025	No	Unlikely	N	False	Y	N
Residential	48527	5/7/2025	No	Unlikely	N	False	Y	N
Residential	12385	6/3/2025	No	Unlikely	N	False	Y	N
Other	61773	9/13/2024	Yes	Unlikely	N	False	N	N
Residential	5465	10/24/2024	No	Unlikely	N	False	Y	N
Residential	58121	11/18/2024	No	Unlikely	N	False	Y	N
Planned Industrial Park	35304	6/4/2025	No	Unlikely	Y	True	N	N
Shopping Center	63203	9/11/2024	No	Unlikely	N	True	Y	N
Other	11667	3/17/2025	Stagnant	Unlikely	N	False	Y	N
Other	56580	7/16/2024	Stagnant	Unlikely	N	False	Y	N
Other	22826	7/23/2024	Yes	Unlikely	N	False	N	N
Residential	10178	2/26/2025	Stagnant	Unlikely	N	False	Y	N
Planned Industrial Park	64437	8/6/2024	No	Unlikely	Y	False	N	N
Hospital	65500	5/1/2025	No	Unlikely	N	False	Y	N
Residential	20035	9/9/2024	No	Unlikely	N	False	Y	N
Residential	40304	3/31/2025	No	Unlikely	N	False	Y	N
Other	51385	4/22/2025	No	Unlikely	N	False	N	N
Other	35954	3/13/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	21512	6/13/2025	No	Unlikely	Y	False	N	N
Residential	22780	4/22/2025	No	Unlikely	N	False	Y	N
Residential	2750	4/29/2025	No	Unlikely	N	False	N	N
Residential	14975	8/13/2024	Stagnant	Unlikely	N	False	Y	N
Other Industrial	12724	6/3/2025	No	Unlikely	Y	False	N	N
Gas Station	55774	7/3/2024	No	Unlikely	Y	False	N	N
Planned Industrial Park	31183	6/13/2025	No	Unlikely	N	False	N	N
Residential	16643	8/23/2024	No	Unlikely	N	False	Y	N
Residential	7689	8/8/2024	No	Unlikely	N	True	N	N
Other	35313	10/8/2024	Stagnant	Unlikely	N	False	Y	N
Shopping Center	43541	5/2/2025	No	Unlikely	N	False	N	N
Regional Mall	42107	4/22/2025	No	Unlikely	Y	False	N	N
Residential	9365	10/14/2024	No	Unlikely	N	True	N	N
Residential	36793	11/22/2024	No	Unlikely	N	True	N	N
Residential	31088	4/29/2025	No	Unlikely	N	True	Y	N
Planned Industrial Park	40780	4/21/2025	No	Unlikely	Y	False	N	N
Open Space	32014	7/17/2024	Stagnant	Unlikely	N	False	N	N
Residential	1375	4/29/2025	No	Unlikely	N	False	Y	N
Hospital	30650	11/22/2024	No	Unlikely	N	False	Y	N
Residential	16575	8/23/2024	No	Unlikely	N	True	Y	N
Institutional (schools/churches)	6421	10/30/2024	No	Unlikely	N	True	N	N
Planned Industrial Park	64155	8/15/2024	No	Unlikely	Y	False	N	N
Other Industrial	51058	4/17/2025	Stagnant	Unlikely	Y	True	N	Y
Other	47150	10/8/2024	No	Unlikely	N	False	N	N
Residential	22013	4/11/2025	Yes	Unlikely	N	False	Y	N
Residential	42596	8/2/2024	No	Unlikely	N	False	N	N
Residential	33208	8/8/2024	No	Unlikely	N	False	Y	N
Residential	50033	3/5/2025	No	Unlikely	N	False	Y	N
Residential	75906	10/28/2024	No	Unlikely	N	False	N	N
Other	25131	7/8/2024	Yes	Unlikely	N	False	N	N
Residential	1428	4/29/2025	No	Unlikely	N	False	N	N
Shopping Center	43518	5/2/2025	Stagnant	Unlikely	Y	False	N	N
Residential	33429	8/22/2024	No	Unlikely	N	False	Y	N
Residential	28365	3/31/2025	No	Unlikely	N	True	Y	N
Planned Industrial Park	34739	6/13/2025	Stagnant	Unlikely	Y	False	Y	N
Other	31090	4/29/2025	Yes	Unlikely	N	False	Y	N
Other	38013	6/13/2025	No	Unlikely	N	True	Y	N
Residential	50738	5/20/2025	No	Unlikely	N	False	Y	N
Planned Industrial Park	62257	5/7/2025	No	Unlikely	N	False	N	N
Other	52506	5/7/2025	No	Unlikely	N	False	Y	N
Residential	42416	11/27/2024	No	Unlikely	N	False	Y	N
Wholesale Warehousing	21416	3/24/2025	Stagnant	Unlikely	N	True	Y	N
Planned Industrial Park	77146	6/13/2025	No	Unlikely	Y	False	N	N
Residential	48554	5/7/2025	No	Unlikely	N	False	Y	N
Restaurant	7337	7/15/2024	No	Unlikely	N	False	N	N
Residential	5219	4/29/2025	No	Unlikely	N	False	N	N
Other	56578	7/16/2024	Stagnant	Unlikely	N	False	Y	N
Residential	48631	7/8/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	36531	6/13/2025	No	Unlikely	Y	False	Y	N
Other	30787	4/10/2025	Yes	Unlikely	N	False	Y	N

Residential	24060	4/29/2025	Yes	Unlikely	N	False	Y	N
Institutional (schools/churches)	60467	10/30/2024	No	Unlikely	N	False	N	N
Residential	1443	4/29/2025	No	Unlikely	N	False	Y	N
Residential	75995	10/29/2024	No	Unlikely	N	False	N	N
Residential	29590	8/8/2024	No	Unlikely	N	False	N	N
Shopping Center	33614	5/2/2025	No	Unlikely	Y	False	N	N
Residential	5680	7/23/2024	No	Unlikely	N	False	N	N
Residential	249	8/22/2024	No	Unlikely	N	False	Y	N
Residential	50473	4/21/2025	Stagnant	Unlikely	N	False	Y	N
Institutional (schools/churches)	26131	2/26/2025	No	Unlikely	N	False	N	N
Residential	28312	3/31/2025	No	Unlikely	N	False	Y	N
Wholesale Warehousing	60559	5/7/2025	No	Unlikely	N	False	N	N
Planned Industrial Park	28930	5/7/2025	Yes	Unlikely	Y	True	N	N
Residential	59734	7/24/2024	No	Unlikely	N	False	Y	N
Residential	30777	4/11/2025	Stagnant	Unlikely	N	True	Y	N
Residential	44754	7/8/2024	No	Unlikely	N	False	N	N
Residential	7204	4/29/2025	No	Unlikely	N	False	Y	N
Residential	5458	10/24/2024	No	Unlikely	N	False	Y	N
Planned Industrial Park	63692	5/7/2025	No	Unlikely	N	False	N	N
Hospital	19519	10/14/2024	Stagnant	Unlikely	N	False	N	N
Residential	17399	4/28/2025	Yes	Unlikely	N	False	Y	N
Residential	16580	8/23/2024	No	Unlikely	Y	True	Y	N
Other	50385	10/14/2024	No	Unlikely	N	False	Y	N
Planned Industrial Park	5872-001	6/5/2025	Yes	Unlikely	Y	False	N	N
Shopping Center	51105	8/19/2024	Stagnant	Unlikely	Y	False	N	N
Residential	33191	8/8/2024	No	Unlikely	N	False	N	N
Residential	52264	9/17/2024	No	Unlikely	N	False	N	N
Institutional (schools/churches)	11806	3/7/2025	Yes	Unlikely	N	False	Y	N
Other	45971	4/28/2025	Yes	Unlikely	N	False	Y	N
Residential	1812	3/4/2025	No	Unlikely	N	False	Y	N
Shopping Center	32959	5/20/2025	No	Unlikely	N	True	N	N
Residential	52510	5/7/2025	No	Unlikely	N	False	Y	N
Residential	6629	3/24/2025	No	Unlikely	N	False	Y	N
Residential	48406	7/23/2024	Stagnant	Unlikely	N	False	Y	N
Other	40997	3/5/2025	No	Unlikely	N	True	N	N
Other	68655	4/22/2025	No	Unlikely	N	False	N	N
Other	25332	4/11/2025	No	Unlikely	Y	False	N	N
Other	36049	7/3/2024	No	Unlikely	N	False	N	N
Residential	56791	7/16/2024	Stagnant	Unlikely	N	False	Y	N
Residential	51698	8/19/2024	No	Unlikely	N	True	Y	N
Other	21430	3/24/2025	Stagnant	Unlikely	N	False	Y	N
Residential	37763	7/3/2024	No	Unlikely	N	False	Y	N
Residential	42489	3/17/2025	Stagnant	Unlikely	N	False	Y	N
Residential	31100	4/29/2025	Stagnant	Unlikely	N	True	Y	N
Residential	41443	10/24/2024	No	Unlikely	N	False	Y	N
Shopping Center	51422	11/25/2024	No	Unlikely	N	False	N	N
Planned Industrial Park	44481	6/5/2025	No	Unlikely	N	True	Y	N
Residential	43826	4/24/2025	No	Unlikely	N	False	Y	N
Shopping Center	5181	7/23/2024	No	Unlikely	Y	False	N	N
Institutional (schools/churches)	59781	10/30/2024	No	Unlikely	N	False	N	N
Residential	3969	7/23/2024	No	Unlikely	N	False	N	N
Other	7595	11/22/2024	No	Unlikely	N	False	N	N
Residential	25316	4/11/2025	No	Unlikely	N	True	Y	N
Residential	2573	10/30/2024	Yes	Unlikely	N	False	N	N

Appendix N

Wet Weather Screening Reports

Wet Weather Monitoring Report

Third Quarter 2024 (July 1 – September 30)
Event Date: September 17-18, 2024

Prepared for:

Prince William County Department of Public Works
5 County Complex Court, Suite 170
Prince William, Virginia 22192

Prepared by:
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January 21, 2025
Project No. 151280003

1.0 INTRODUCTION

WSP USA Environment & Infrastructure Solutions, Inc. (WSP) conducts quarterly wet weather monitoring at two outfall sites to support Prince William County in compliance with the requirements of the Virginia Stormwater Management Program (VSMP) Municipal Separate Storm Sewer System (MS4) Permit (Number VA0088595), issued by the Virginia Department of Environmental Quality (VDEQ) to Prince William County, Virginia. This report discusses the results of the Q3 sampling event that occurred from September 17, 2024 to September 18, 2024 as well as the findings from the water quality analysis results of the sampling event.

2.0 METHODS

Flow rate data were collected at the outfalls by an ISCO 6712 automated sampler coupled with an ISCO 730 bubbler flow module, installed with a Scissors Ring. Flow rate over the course of the sampling events were electronically calculated using ISCO Flowlink 5.1 software, which utilizes the Manning Equation to convert flow level and velocity to flow rate. Replacement ISCO 730 bubble flow modules have been installed at both sites beginning in Q1 of 2023.

SITE #941; MANASSAS, VA

Site #941 is located near 11850 Livingston Road. The site receives a total of 52 acres of upstream drainage area from a land surface that is 34% impervious. County data documents that the pipe is 54 inches in diameter with a slope of 0.03437. This site is subject to backwater conditions as water levels within the downstream pond have risen over the previous two years. Maintenance is recommended to ensure the continued efficacy of the monitoring program at this site. Backwater at the site extends too far upstream into the pipe and would require confined space entry to install equipment. Accommodations are made in the sampling program, as described in further detail in the following section.

SITE #4684; DALE CITY, VA

Site #4684 is located near the corner of Potomac Center Blvd. and Sheffield Hill Way, north of Eastbourne Drive. It drains into a regional detention pond for the Potomac Club residential development. Upstream drainage totals 51 acres, 21% of which is from impervious surfaces. The pipe is 54 inches in diameter with a slope of 0.002593. Storm events at this site are flashy in nature, which is accounted for by programming shorter sample intervals, if necessary, based upon forecast conditions.

The automated samplers were deployed when a qualifying storm event (>0.3 inches precipitation) was forecast for the two monitoring sites. WSP staff deployed the samplers at both sites on September 16th, programmed the samplers' automated, discrete sampling sequence to initiate upon flow levels exceeding current water levels in each pipe.

Rain gage data were compiled from monitoring stations in the Weather Underground monitoring network. The data are accessible online and provided hourly precipitation totals over the monitoring period. Gages are prioritized based on the makeup of the data record (reporting interval) and proximity to monitoring locations.

Following the storm event, staff retrieved the samples and prepared them for shipment to Pace Analytical for water quality analysis. To compile the complete set of discrete samples into a single flow-weighted composite, Flowlink software calculated the storm event discharge using the Manning Equation:

Equation 1: Manning Equation used to calculate flow rate.

$$Q = VA = \left(\frac{1.49}{n}\right) A R^{\frac{2}{3}} \sqrt{S} \text{ [US]}$$

Q = Flow rate
A = Flow area
V = Avg. velocity
S = Water surface slope
R = Hydraulic Radius
n = Roughness coefficient
1.49 = English units conversion factor

Channel slopes were determined using invert elevations reported in the stormwater infrastructure geospatial data provided by Prince William County. Using flow levels reported by the ISCO samplers, the area and hydraulic radius inside the sampled outfalls could be computed for a given time interval. A Manning's *n* value of 0.013 was assumed for the concrete pipes[1]. Two sampling programs were implemented to accommodate for different conditions between the sites.

Manassas Sampling Program
Although a replacement bubbler module has been installed, the ponded site conditions continue to provide inaccurate water level readings at the Manassas site and fluctuates during static water conditions. To accommodate the unreliable equipment readings due to the site conditions, the ISCO sampler at the Manassas site was programed to collect on a time-paced program. Samples were collected at a pre-set time interval over the course of the storm.

During the event, the sampling was set as a time-paced program to collect discrete samples every hour, then composited into a single container.

Dale City Sampling Program
During the event, the sampler at Dale City was programed to collect on a time-paced program. The sampler collected discrete samples every 40 minutes, then composited into a single container.

[1] Chow, V.T. (1959) Open Channel Hydraulics. McGraw-Hill, New York.

3.0 RESULTS

SITE #941; MANASSAS, VA

Sampling occurred from 17:10 on September 17, 2024 to 16:10 on September 18, 2024. Weather Underground Station KVAMANAS225 in Manassas, VA recorded 1.72 inches of precipitation over this same period. The previous storm event was recorded on September 1, 2024, producing 0.02 inches of precipitation.

SITE #4684; DALE CITY, VA

Sampling occurred from 14:40 on September 17, 2024 to 08:00 on September 18, 2024. Weather Underground Station KVAWOODB86 in Woodbridge, VA recorded 0.35 inches of precipitation over this same period. The previous storm event was recorded on September 7, 2024, producing 0.01 inches of precipitation.

Samples from both sites were retained under refrigeration until they were composited and shipped overnight to Pace Analytical Services in Asheville, NC.

3.1 FLOW DATA

SITE #941; MANASSAS, VA

Flow rate reached 16.99 cfs. The storm event hydrograph compared with cumulative volume can be seen in Figure 1. Table 1 lists the proportion of each sample mixed with the flow-weighted composite. The flow-weighted composite volume was adjusted to incorporate representative volumes from the collected samples.

Flow rate and volume are calculated by measuring changes in water level over time. Backwater effects are impacting flow meter readings at the outfall point of discharge. Backwater conditions cause elevated readings for flow volume and flow rate.

Figure 1: Flow data over time for the storm event at Site #941 on September 17 - 18

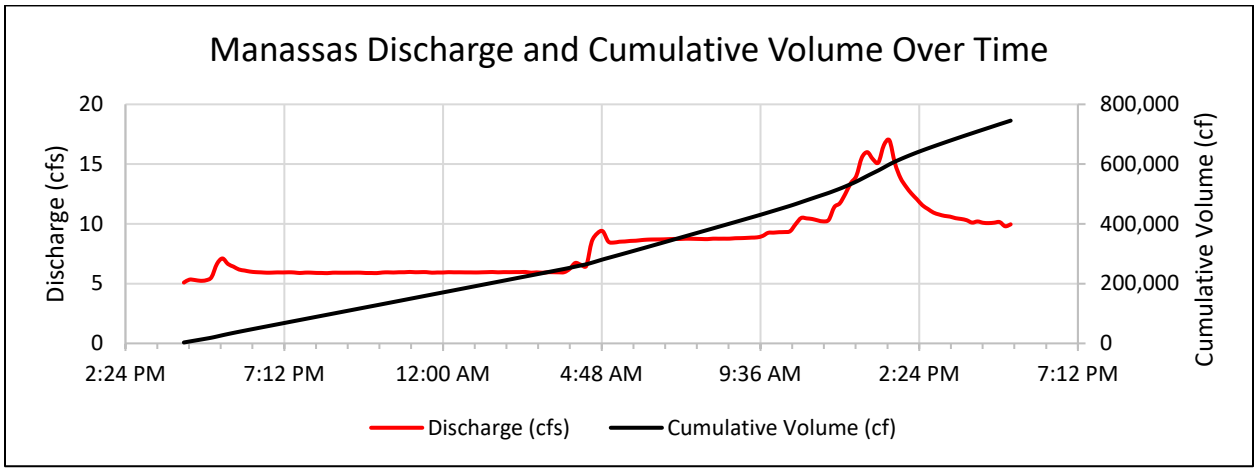


Table 1: Summary of Flow Weighted Composite – Site #941

Bottle #	Time of Sample	Volume (cf)	% of Flow	Flow Weighted Volume (mL)*
1	9/17/2024 17:10	3,988.85	3.38%	168.8
2	9/17/2024 18:10	3,605.05	3.05%	152.6
3	9/17/2024 19:10	3,560.10	3.01%	150.7
4	9/17/2024 20:10	3,537.71	2.99%	149.7
5	9/17/2024 21:10	3,548.90	3.00%	150.2
6	9/17/2024 22:10	3,558.23	3.01%	150.6
7	9/17/2024 23:10	3,571.31	3.02%	151.2
8	9/18/2024 0:10	3,575.05	3.03%	151.3
9	9/18/2024 1:10	3,567.57	3.02%	151.0
10	9/18/2024 2:10	3,578.80	3.03%	151.5
11	9/18/2024 3:10	3,573.18	3.02%	151.2
12	9/18/2024 4:10	3,949.74	3.34%	167.2
13	9/18/2024 5:10	5,061.69	4.28%	214.2
14	9/18/2024 6:10	5,206.88	4.41%	220.4
15	9/18/2024 7:10	5,241.78	4.44%	221.9
16	9/18/2024 8:10	5,257.07	4.45%	222.5
17	9/18/2024 9:10	5,294.30	4.48%	224.1
18	9/18/2024 10:10	5,582.17	4.73%	236.3
19	9/18/2024 11:10	6,244.22	5.29%	264.3
20	9/18/2024 12:10	7,503.60	6.35%	317.6
21	9/18/2024 13:10	9,081.58	7.69%	384.4
22	9/18/2024 14:10	7,520.92	6.37%	318.3
23	9/18/2024 15:10	6,400.90	5.42%	270.9
24	9/18/2024 16:10	6,121.25	5.18%	259.1

*5.0 L sample

SITE #4684; DALE CITY, VA

Flow rate reached 7.68 cfs with one predominate peak near the end of the sampling event. The storm event hydrograph compared with cumulative volume can be seen in Figure 2. Table 2 lists the proportion of each sample mixed with the flow-weighted composite. The flow-weighted composite volume was adjusted to incorporate representative volumes from the collected samples.

Figure 2: Flow data over time for the storm event at Site #4684 on September 17 – 18

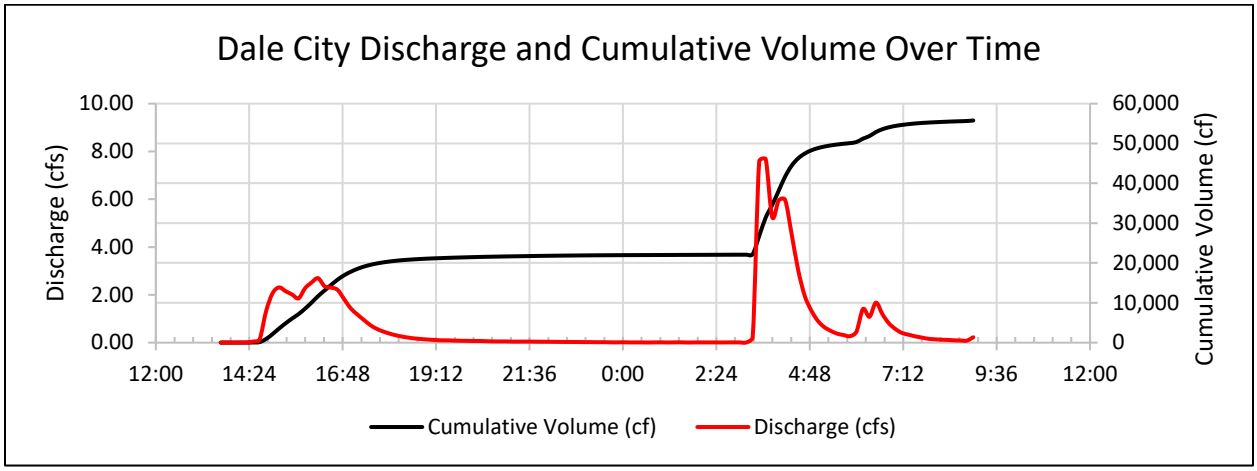


Table 2: Summary of Flow Weighted Composite – Site #4684

Bottle #	Time of Sample	Volume (cf)	% of Flow	Flow Weighted Volume (mL)*
1	9/17/2024 14:40	86.05	0.59%	14.6
2	9/17/2024 15:30	1,208.74	8.22%	205.5
3	9/17/2024 16:10	1,619.09	11.01%	275.2
4	9/17/2024 17:00	868.82	5.91%	147.7
5	9/17/2024 17:40	350.72	2.38%	59.6
6	9/17/2024 18:30	124.88	0.85%	21.2
7	9/17/2024 19:10	66.98	0.46%	11.4
8	9/17/2024 20:00	46.26	0.31%	7.9
9	9/17/2024 20:40	31.44	0.21%	5.3
10	9/17/2024 21:30	26.88	0.18%	4.6
11	9/17/2024 22:10	21.52	0.15%	3.7
12	9/17/2024 23:00	13.89	0.09%	2.4
13	9/17/2024 23:40	9.20	0.06%	1.6
14	9/18/2024 0:30	6.10	0.04%	1.0
15	9/18/2024 1:10	4.81	0.03%	0.8
16	9/18/2024 2:00	6.30	0.04%	1.1
17	9/18/2024 2:40	6.30	0.04%	1.1
18	9/18/2024 3:30	4,547.15	30.92%	772.9
19	9/18/2024 4:10	3,581.17	24.35%	608.7
20	9/18/2024 5:00	556.01	3.78%	94.5
21	9/18/2024 5:40	192.09	1.31%	32.7
22	9/18/2024 6:30	1,004.32	6.83%	170.7
23	9/18/2024 7:10	244.09	1.66%	41.5
24	9/18/2024 8:00	85.24	0.58%	14.5

*2.5 L sample

3.2 LABORATORY ANALYTICAL RESULTS

Samples were sent to Pace Analytical Services, Inc. lab in Asheville, NC for analysis, with Analytical Parameters tested listed in **Table 3**.

Table 3: Analytical Parameters

Analyte	Analysis Method
Copper	EPA 200.7
Lead	EPA 200.7
Nickel	EPA 200.7
Zinc	EPA 200.7
Total Suspended Solids	SM 2540D
pH	EPA 9040
Ammonia	EPA 350.1 1993 Rev 2.0
Total Kjeldahl Nitrogen	EPA 351.2
Nitrate + Nitrite Nitrogen	EPA 353.2
Total Phosphorus	EPA 365.1
Chemical Oxygen Demand	SM 5220D

Table 4: Results of Water Quality Analysis

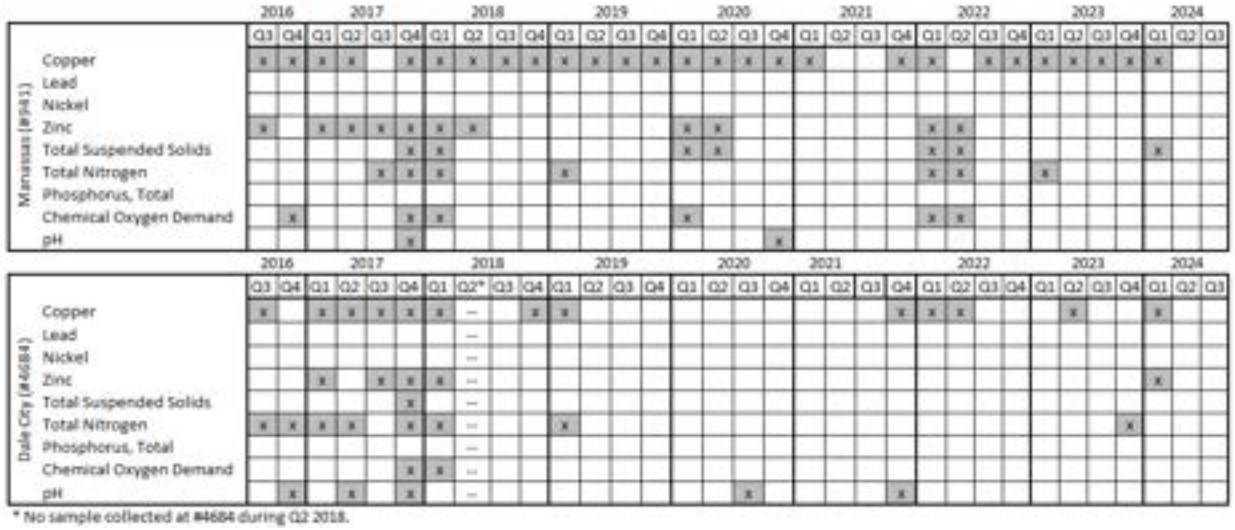
	Analyte	Analyte Value*	Analyte Unit	Reporting Limit	Exceedance Criterion	Criterion Basis
Manassas (#941)	Copper	9.3	µg/L	5.0	13	a
	Lead	ND	µg/L	5.0	120	a
	Nickel	ND	µg/L	5.0	180	a
	Zinc	34.6	µg/L	10.0	120	a
	Total Suspended Solids	6.3	mg/L	4.9	100	b
	Nitrogen, Ammonia	ND	mg/L	0.10	-	-
	Nitrogen, Kjeldahl, Total	475	µg/L	0.50	-	-
	Nitrogen, NO_2 plus NO_3	0.56	mg/L	0.040	-	-
	Total Nitrogen	1.0	mg/L	0.040	2.2	c
	Phosphorus, Total	0.076	mg/L	0.050	2	b
	Chemical Oxygen Demand	ND	mg/L	25	120	b
	pH	7.7	Std. Units	0.10	6.0-9.0	d
Dale City (#4684)	Copper	7.1	µg/L	5.0	13	a
	Lead	ND	µg/L	5.0	120	a
	Nickel	ND	µg/L	5.0	180	a
	Zinc	52.1	µg/L	10.0	120	a
	Total Suspended Solids	12.4	mg/L	2.5	100	b
	Nitrogen, Ammonia	ND	mg/L	0.10	-	-
	Nitrogen, Kjeldahl, Total	862	µg/L	250	-	-
	Nitrogen, NO_2 plus NO_3	0.32	mg/L	0.040	-	-
	Total Nitrogen	1.2	mg/L	0.040	2.2	c
	Phosphorus, Total	0.056	mg/L	0.050	2	b
	Chemical Oxygen Demand	38.2	mg/L	25.0	120	b
	pH	6.8	Std. Units	0.10	6.0-9.0	d

[a] State Water Quality Control Board Acute Standards for Surface Water Quality. Value is based on an assumed hardness of 100 mg/L.
[b] Based on benchmark criteria for the VPDES Industrial Stormwater General Permit.
[c] The sum of Nitrogen as Ammonia, NO_2, NO_3, and Total Kjeldahl Nitrogen.
[d] Based on numeric effluent limitations noted in the VPDES Permit for Discharge of Stormwater Associated with Industrial Activity.
* Values highlighted in red were found to be in exceedance of their respective criterion.
ND = The analyte was not detected above specified reporting limit.

4.0 SUMMARY

There were no exceedances during the 2024 Q3 sampling event. Exceedance tracking for parameters of concern are illustrated in **Figure 3** below.

Figure 3: Exceedance Tracking for the Wet Weather Monitoring Program



APPENDIX A

PHOTO LOG OF SITE CONDITIONS

Wet Weather Monitoring Q3 Report
Prince William County, VA
Photographic Log

	**Site:** Dale City Station **Photo: 1** **Date: 9/16/2024** **Description:** Dale City sampler set up overview.
	**Site:** Dale City Station **Photo: 2** **Date: 9/16/2024** **Description:** Dale City outfall, downstream. Note Iron-oxidizing bacteria growth staining rip rap downstream.



Site: Manassas Station

Photo: 3

Date: 9/16/2024

Description: Manassas sampler set up overview.

APPENDIX B

WATER QUALITY LABORATORY RESULTS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

November 08, 2024

Lynne Mowery
WSP
13530 Dulles Technology Dr
#300
Herndon, VA 20171

RE: Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

Dear Lynne Mowery:

Enclosed are the analytical results for sample(s) received by the laboratory on September 25, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace National - Mt. Juliet
- Pace Analytical Services - Asheville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Taylor M Cannon
taylor.cannon@pacelabs.com
704-977-0943
Project Manager

Enclosures

cc: Ilana Ton, WSP USA

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

Pace Analytical Services National

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612
Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Mold Certification #: LAB0152
Texas Certification #: T 104704245-17-14
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 998093910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92755454001	**MAN**	Water	09/19/24 14:00	09/25/24 10:38
92755454002	**DAL**	Water	09/19/24 14:30	09/25/24 10:38

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(704)875-9092

SAMPLE ANALYTE COUNT

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92755454001	**MAN**	EPA 200.7 Rev 4.4 1994	DBB1	4	PASI-A
		EPA 351.2	LDT	1	PAN
		SM 2540D-2011	CDM	1	PASI-A
		SM 4500-H+B-2011	SMS	1	PASI-A
		TKN+NO3+NO2 Calculation	MDW	1	PASI-A
		EPA 350.1 Rev 2.0 1993	NCF	1	PASI-A
		EPA 353.2 Rev 2.0 1993	CEM	1	PASI-A
		EPA 365.1 Rev 2.0 1993	ZJP	1	PASI-A
92755454002	**DAL**	EPA 200.7 Rev 4.4 1994	DBB1	4	PASI-A
		EPA 351.2	LDT	1	PAN
		SM 2540D-2011	CDM	1	PASI-A
		SM 4500-H+B-2011	SMS	1	PASI-A
		TKN+NO3+NO2 Calculation	MDW	1	PASI-A
		EPA 350.1 Rev 2.0 1993	NCF	1	PASI-A
		EPA 353.2 Rev 2.0 1993	CEM	1	PASI-A
		EPA 365.1 Rev 2.0 1993	ZJP	1	PASI-A
		SM 5220D-2011	JP1	1	PASI-A

PAN = Pace National - Mt. Juliet
PASI-A = Pace Analytical Services - Asheville

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ANALYTICAL RESULTS

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

Sample: MAN **Lab ID: 92755454001** Collected: 09/19/24 14:00 Received: 09/25/24 10:38 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Rev 4.4 1994 Preparation Method: EPA 200.7 Rev 4.4 1994 Pace Analytical Services - Asheville							
Copper	**9.3**	ug/L	5.0	1	10/08/24 11:45	10/18/24 14:39	7440-50-8	
Lead	ND	ug/L	5.0	1	10/08/24 11:45	10/18/24 14:39	7439-92-1	
Nickel	ND	ug/L	5.0	1	10/08/24 11:45	10/18/24 14:39	7440-02-0	
Zinc	**34.6**	ug/L	10.0	1	10/08/24 11:45	10/18/24 14:39	7440-66-6	
Wet Chemistry 351.2	Analytical Method: EPA 351.2 Preparation Method: 351.2/365.4 Pace National - Mt. Juliet							
Nitrogen, Kjeldahl, Total	**475**	ug/L	250	1	10/10/24 10:40	10/15/24 19:12	7727-37-9	
2540D TSS, Low-Level	Analytical Method: SM 2540D-2011 Pace Analytical Services - Asheville							
Total Suspended Solids	**6.3**	mg/L	1.0	1		09/26/24 13:38		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B-2011 Pace Analytical Services - Asheville							
pH at 25 Degrees C	**7.7**	Std. Units	0.10	1		10/09/24 17:48		H3
Total Nitrogen Calculation	Analytical Method: TKN+NO3+NO2 Calculation Pace Analytical Services - Asheville							
Total Nitrogen	**1.0**	mg/L	0.040	1		11/06/24 12:51		
350.1 Ammonia	Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	ND	mg/L	0.10	1		09/26/24 17:38	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	**0.56**	mg/L	0.040	1		10/09/24 01:22		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1 Rev 2.0 1993 Preparation Method: EPA 365.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Phosphorus	**0.076**	mg/L	0.050	1	10/08/24 11:39	10/08/24 14:39	7723-14-0	

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

Sample: DAL **Lab ID: 92755454002** Collected: 09/19/24 14:30 Received: 09/25/24 10:38 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Rev 4.4 1994 Preparation Method: EPA 200.7 Rev 4.4 1994 Pace Analytical Services - Asheville							
Copper	**7.1**	ug/L	5.0	1	10/08/24 11:45	10/18/24 14:42	7440-50-8	
Lead	ND	ug/L	5.0	1	10/08/24 11:45	10/18/24 14:42	7439-92-1	
Nickel	ND	ug/L	5.0	1	10/08/24 11:45	10/18/24 14:42	7440-02-0	
Zinc	**52.1**	ug/L	10.0	1	10/08/24 11:45	10/18/24 14:42	7440-66-6	
Wet Chemistry 351.2	Analytical Method: EPA 351.2 Preparation Method: 351.2/365.4 Pace National - Mt. Juliet							
Nitrogen, Kjeldahl, Total	**862**	ug/L	250	1	10/10/24 10:40	10/15/24 19:13	7727-37-9	
2540D TSS, Low-Level	Analytical Method: SM 2540D-2011 Pace Analytical Services - Asheville							
Total Suspended Solids	**12.4**	mg/L	2.0	1		09/26/24 13:38		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B-2011 Pace Analytical Services - Asheville							
pH at 25 Degrees C	**6.8**	Std. Units	0.10	1		10/09/24 17:55		H3
Total Nitrogen Calculation	Analytical Method: TKN+NO3+NO2 Calculation Pace Analytical Services - Asheville							
Total Nitrogen	**1.2**	mg/L	0.040	1		11/06/24 12:51		
350.1 Ammonia	Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	ND	mg/L	0.10	1		09/26/24 17:39	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	**0.32**	mg/L	0.040	1		10/09/24 01:23		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1 Rev 2.0 1993 Preparation Method: EPA 365.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Phosphorus	**0.056**	mg/L	0.050	1	10/08/24 11:39	10/08/24 14:43	7723-14-0	
5220D COD	Analytical Method: SM 5220D-2011 Preparation Method: SM 5220D-2011 Pace Analytical Services - Asheville							
Chemical Oxygen Demand	**38.2**	mg/L	25.0	1	10/15/24 03:05	10/15/24 06:06		

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QUALITY CONTROL DATA

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

QC Batch: 887301
QC Batch Method: EPA 200.7 Rev 4.4 1994
Analysis Method: EPA 200.7 Rev 4.4 1994
Analysis Description: 200.7 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92755454001, 92755454002

METHOD BLANK: 4569339 Matrix: Water
Associated Lab Samples: 92755454001, 92755454002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	ug/L	ND	5.0	10/18/24 14:28	
Lead	ug/L	ND	5.0	10/18/24 14:28	
Nickel	ug/L	ND	5.0	10/18/24 14:28	
Zinc	ug/L	ND	10.0	10/18/24 14:28	

LABORATORY CONTROL SAMPLE: 4569340

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	ug/L	500	480	96	85-115	
Lead	ug/L	500	467	93	85-115	
Nickel	ug/L	500	473	95	85-115	
Zinc	ug/L	500	468	94	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4569341 4569342

Parameter	Units	92755943001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	ug/L	ND	500	500	491	491	98	98	70-130	0	20	
Lead	ug/L	ND	500	500	478	479	96	96	70-130	0	20	
Nickel	ug/L	ND	500	500	487	487	97	97	70-130	0	20	
Zinc	ug/L	320	500	500	795	800	95	96	70-130	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4569343 4569344

Parameter	Units	92755815001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	ug/L	ND	500	500	531	531	106	106	70-130	0	20	
Lead	ug/L	ND	500	500	479	478	96	96	70-130	0	20	
Nickel	ug/L	ND	500	500	487	487	97	97	70-130	0	20	
Zinc	ug/L	18.2	500	500	497	495	96	95	70-130	0	20	

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REPORT OF LABORATORY ANALYSIS

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

QC Batch: 2379420
QC Batch Method: 351.2/365.4
Analysis Method: EPA 351.2
Analysis Description: Wet Chemistry 351.2
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 92755454001, 92755454002

METHOD BLANK: R4133151-1 Matrix: Water
Associated Lab Samples: 92755454001, 92755454002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	ug/L	ND	250	10/15/24 18:56	

LABORATORY CONTROL SAMPLE: R4133151-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	ug/L	12300	12900	105	90.0-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R4133151-4 R4133151-5

Parameter	Units	L1786884-01 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total	ug/L	28800	5000	5000	34400	33600	112	96.0	90.0-110	2.35	20	E,P6

SAMPLE DUPLICATE: R4133151-3

Parameter	Units	L1786884-01 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	ug/L	28800	28600	0.697	20	

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QUALITY CONTROL DATA

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

QC Batch: 885435
QC Batch Method: SM 2540D-2011
Analysis Method: SM 2540D-2011
Analysis Description: 2540D Total Suspended Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92755454001, 92755454002

METHOD BLANK: 4559784 Matrix: Water
Associated Lab Samples: 92755454001, 92755454002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	1.0	09/26/24 13:37	

LABORATORY CONTROL SAMPLE: 4559785

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	250	246	98	90-110	

SAMPLE DUPLICATE: 4560660

Parameter	Units	92755454002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	12.4	13.6	9	10	

SAMPLE DUPLICATE: 4560661

Parameter	Units	92755220001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	75.0	87.0	15	10	D6

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QUALITY CONTROL DATA

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

QC Batch: 887550
QC Batch Method: SM 4500-H+B-2011
Analysis Method: SM 4500-H+B-2011
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92755454001, 92755454002

SAMPLE DUPLICATE: 4570734

Parameter	Units	92755454001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.7	7.7	0	10	H3

SAMPLE DUPLICATE: 4570735

Parameter	Units	92755454002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.8	6.7	0	10	H3

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QUALITY CONTROL DATA

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

QC Batch: 885517
QC Batch Method: EPA 350.1 Rev 2.0 1993
Analysis Method: EPA 350.1 Rev 2.0 1993
Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92755454001, 92755454002

METHOD BLANK: 4560043 Matrix: Water
Associated Lab Samples: 92755454001, 92755454002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	09/26/24 17:14	

LABORATORY CONTROL SAMPLE: 4560044

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	4.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4560317 4560318

Parameter	Units	92755678001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	0.49	5	5	5.6	5.6	103	103	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4560319 4560320

Parameter	Units	92755678002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	1.2	5	5	6.4	6.5	105	105	90-110	0	10	

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QUALITY CONTROL DATA

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

QC Batch: 887235
QC Batch Method: EPA 353.2 Rev 2.0 1993
Analysis Method: EPA 353.2 Rev 2.0 1993
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92755454001, 92755454002

METHOD BLANK: 4569201 Matrix: Water
Associated Lab Samples: 92755454001, 92755454002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	10/09/24 01:09	

LABORATORY CONTROL SAMPLE: 4569202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4569203 4569204

Parameter	Units	92755444001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	1.6	2.5	2.5	4.5	4.5	113	113	90-110	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4569205 4569206

Parameter	Units	92755444002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.13	2.5	2.5	2.9	2.8	109	108	90-110	1	10	

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QUALITY CONTROL DATA

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

QC Batch: 887147
QC Batch Method: EPA 365.1 Rev 2.0 1993
Analysis Method: EPA 365.1 Rev 2.0 1993
Analysis Description: 365.1 Phosphorus, Total
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92755454001, 92755454002

METHOD BLANK: 4568885 Matrix: Water
Associated Lab Samples: 92755454001, 92755454002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	10/08/24 14:08	

LABORATORY CONTROL SAMPLE: 4568886

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.5	2.6	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4568887 4568888

Parameter	Units	92755444001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	0.20	2.5	2.5	2.6	2.6	98	96	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4568889 4568890

Parameter	Units	92755444002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	0.12	2.5	2.5	2.5	2.6	97	97	90-110	0	10	

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QUALITY CONTROL DATA

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

QC Batch: 888791
QC Batch Method: SM 5220D-2011
Analysis Method: SM 5220D-2011
Analysis Description: 5220D COD
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92755454002

METHOD BLANK: 4576724 Matrix: Water
Associated Lab Samples: 92755454002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	10/15/24 05:49	

LABORATORY CONTROL SAMPLE: 4576725

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	753	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4576726 4576727

Parameter	Units	92755194001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	29.3	100	100	136	129	106	100	90-110	5	3	R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4576728 4576729

Parameter	Units	92755194002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	31.5	100	100	138	133	106	102	90-110	3	3	

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QUALIFIERS

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PRINCE WILLIAM COUNTY
Pace Project No.: 92755454

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92755454001	**MAN**	EPA 200.7 Rev 4.4 1994	887301	EPA 200.7 Rev 4.4 1994	887403
92755454002	**DAL**	EPA 200.7 Rev 4.4 1994	887301	EPA 200.7 Rev 4.4 1994	887403
92755454001	**MAN**	351.2/365.4	2379420	EPA 351.2	2379420
92755454002	**DAL**	351.2/365.4	2379420	EPA 351.2	2379420
92755454001	**MAN**	SM 2540D-2011	885435		
92755454002	**DAL**	SM 2540D-2011	885435		
92755454001	**MAN**	SM 4500-H+B-2011	887550		
92755454002	**DAL**	SM 4500-H+B-2011	887550		
92755454001	**MAN**	TKN+NO3+NO2 Calculation	894026		
92755454002	**DAL**	TKN+NO3+NO2 Calculation	894026		
92755454001	**MAN**	EPA 350.1 Rev 2.0 1993	885517		
92755454002	**DAL**	EPA 350.1 Rev 2.0 1993	885517		
92755454001	**MAN**	EPA 353.2 Rev 2.0 1993	887235		
92755454002	**DAL**	EPA 353.2 Rev 2.0 1993	887235		
92755454001	**MAN**	EPA 365.1 Rev 2.0 1993	887147	EPA 365.1 Rev 2.0 1993	887349
92755454002	**DAL**	EPA 365.1 Rev 2.0 1993	887147	EPA 365.1 Rev 2.0 1993	887349
92755454002	**DAL**	SM 5220D-2011	888791	SM 5220D-2011	888801

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WO# : 92755454

92755454

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Number or

ONLY

Company: Wood/WSP	Billing Information: Attn: lynne.mowery@wsp.com
Address: 13530 Dulles Technology Dr #300, Herndon, VA 20171	
Report To: Ilana Ton	Email To: ilana.ton@wsp.com
Copy To:	Site Collection Info/Address: Prince William County / Manassas, VA and Woodbridge, VA
Customer Project Name/Number: Prince William County/ 151280003.0002.****, ORG 7526, GL Code 5730-00	State: VA; County/City: ; Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 703 488 3778 Email: ilana.ton@wsp.com	Site/Facility ID #:
Collected By (print):	Purchase Order #: Quote #:
Collected By (signature):	Turnaround Date Required:
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [X] 5 Day

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #:

DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: U | 1 | 2 | 2 | U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager:

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Cnts	Container Type: Plastic (P) or Glass (G)	SM 2540D-2015 TSS	200.7 Metals	EPA 351.2 TKN/ EPA 353.2 NO2 + NO3	EPA 350.1 Ammonia/EPA 365.1 Phosphorus/ SM 5220D-2011 COD	SM 4500-H+B-2011 pH
MAN	OT-Water	Comp			9/19/2024	14:00		5	P	X	X	x	x	x
DAL	OT-Water	Comp			9/19/2024	14:30		5	P	X	X	x	x	x

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N (NA)
Custody Signatures Present Y N (NA)
Collector Signature Present Y N (NA)
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N (NA)
USDA Regulated Soils Y N (NA)
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: 4214A
Sample pH Acceptable Y N NA
pH Strips: 234722V
Sulfide Present Y N (NA)
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:
Prince William County/
151280003.0002.****, ORG 7526, GL Code 5730-00
Pace PM Taylor Cannon
200.7: Cu, Pb, Ni, Zn

Type of Ice Used: (Wet) Blue Dry None

Packing Material Used: Bubble Wrap

Radchem sample(s) screened (<500 cpm): Y N (NA)

SHORT HOLDS PRESENT (<72 hours): Y N (N/A)

Lab Tracking #:

Samples received via: (FEDEX) UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N (NA)
Therm ID#: 92077
Cooler 1 Temp Upon Receipt: 4.0 oC
Cooler 1 Therm Corr. Factor: 0 oC
Cooler 1 Corrected Temp: 4.0 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Ilana Ton/WSP	9/24/24/1700	Alexis Perkins AM	9/25/24 1038
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MT/L LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N (NA)
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of 1

DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg
**Bottom half of box is to list number of bottles
***Check all unpreserved Nitrates for chlorine

Project # WO#: 92755454

PM: TMC Due Date: 10/02/24

CLIENT: 92-Amec VA

Laboratory Receiving Location: Asheville [X] Eden [ ] Greenwood [ ] Huntersville [ ] Raleigh [ ] Mechanicsville [ ] Atlanta [ ]

Client WSP - VA Profile/EZ (Circle one) 8125 - 1 Notes

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)		BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG8M-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG4T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG8V-40 mL VOA H3PO4 (N/A)	KP7U-60 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		BP3R-250 mL Plastic (NH4)2SO4 (5.8-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
CC	AS			AS		AS	AS																							
1	1			1		3	1																							
2	1			1		3	1																							
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Report of Analysis

Pace Analytical Services, LLC
9800 Kincey Avenue
Suite 100
Huntersville, NC 28078
Attention: Taylor Cannon

Project Name: Prince William County

Project Number: 92755454

Lot Number:**ZJ10017**

Date Completed:11/08/2024
Revision Date: 11/08/2024



11/08/2024 11:48 AM
Approved and released by:
Project Coordinator 1: **Brooke Speers**

The electronic signature above is the equivalent of a handwritten signature.
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Case Narrative
Pace Analytical Services, LLC
Lot Number: ZJ10017

Report revision

This report supersedes all other versions.
Report revision: 11/08/2024.
Per client request, the data for sample ZJ10017-002 has been removed from this report. All other data remains the same.

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report. Where sampling is conducted by the client, results relate to the accuracy of the information provided, and as the samples are received.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Pace is a TNI accredited laboratory; however, the following analyses are currently not listed on our TNI scope of accreditation: E. coli and Total coliforms SM 9223 B-2004, Solid Chemical Material: TOC Walkley-Black, Biological Tissue: All, Non-Potable Water: SGT-HEM EPA 1664B, Silica EPA 200.7, Boron, Calcium, Silicon, Strontium EPA 200.8, Bicarbonate, Carbonate, and Hydroxide Alkalinity SM 2320 B-2011, SM 9221 C E-2006 & SM 9222D-2006, Strontium SW-846 6010D, VOC SM 6200 B-2011, Fecal Coliform Colilert-18. If you have any questions regarding this report, please contact the Pace Project Manager listed on the cover page.

Manual integration summaries are provided at the end of this report when applicable.

Inorganic non-metals

Samples ZJ10017-001 and -002 were received with greater than 50% of holding time expired. The samples were collected on 9/19/2024 and received on 10/9/24. COD analysis was not added for these samples until 10/11/24, and they expired 10/17/24 As such, the laboratory had insufficient time remaining to perform the analysis within holding time.

The matrix spike/matrix spike duplicate (MS/MSD) associated with batch 19819 recovered outside of acceptance criteria for COD. All other QC passed, therefore the data has been reported.

Sample Summary
Pace Analytical Services, LLC
Lot Number: ZJ10017

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MAN	Aqueous	09/19/2024 1400	10/09/2024
002	DAL	Aqueous	09/19/2024 1430	10/09/2024

(2 samples)

Detection Summary

Pace Analytical Services, LLC

Lot Number: ZJ10017

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page

(0 detections)

Inorganic non-metals

Client: **Pace Analytical Services, LLC** Laboratory ID: **ZJ10017-001**

Description: **MAN** Matrix: **Aqueous**

Date Sampled: **09/19/2024 1400**

Date Received: **10/09/2024**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(COD) SM 5220D-2011	1	10/30/2024 1100	CLL2		19819

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
COD		SM 5220D-2011	ND	HS	20	mg/L	2

LOQ = Limit of Quantitation
ND = Not detected at or above the LOQ
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
Q = Surrogate failure
L = LCS/LCSD failure
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Summary

Inorganic non-metals - MB

Sample ID: ZQ19819-001
Batch: 19819
Analytical Method: SM 5220D-2011
Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
COD	ND		1	20	mg/L	10/30/2024 1055

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: ZQ19819-002 **Matrix:** Aqueous

Batch: 19819

Analytical Method: SM 5220D-2011

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
COD	40	41		1	103	95-105	10/30/2024 1056

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MS

Sample ID: ZJ10017-001MS
Batch: 19819
Analytical Method: SM 5220D-2011
Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
COD	ND	40	59	N	1	148	90-110	10/30/2024 1100

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MSD

Sample ID: ZJ10017-001MD
Batch: 19819
Analytical Method: SM 5220D-2011

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	%Rec Limit	% RPD Limit	Analysis Date	
COD	ND	40	61	N	1	152	2.5	90-110	20	10/30/2024	1100

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

Internal Transfer Chain of Custody

Pace

☐ Rush Multiplier____X
☐ Samples Pre-Logged into eCOC

State Of Origin: VA
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 9/25/2024 Results Requested By: 10/18/2024

Workorder: 92755454 Workorder Name: PRINCE WILLIAM COUNTY

ZJ10017

BR62

Report To	Subcontract To
Taylor M Cannon Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone 704-977-0943	Pace Analytical West Columbia 108 Vantage Point Drive West Columbia, SC 29172 Phone (803)791-9700

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: 1250ml	Requested Analysis: 2540 D&S	LAB USE ONLY
1	MAN	PS	9/19/2024 14:00	92755454001	Water	1	X	
2	DAL	PS	9/19/2024 14:30	92755454002	Water	1	X	
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	Michael Martin AVL	10/8/24 1700		
2				
3	Fedex	10/9/24 1000	Lauren Jones	10/9/24 1000

Cooler Temperature on Receipt 1.1 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

Comments

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
108 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

DC#_Title: ENV-FRM-WCOL-0286 v02_Samples Receipt Checklist (SRC)
Effective Date: 8/2/2022

Sample Receipt Checklist (SRC)

Client: PACE Cooler Inspected by/date: KDW / 10.9.2024 Lot #: 25100

Means of receipt: ☐ Pace ☐ Client ☐ UPS ☑ FedEx ☐ Other: ____

☑ Yes	☐ No		1. Were custody seals present on the cooler?
☑ Yes	☐ No	☐ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: 29-1050 Chlorine Strip ID: NA Tested by: KDW
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA
1.1 / 1.1 °C NA / NA °C NA / NA °C NA / NA °C
Method: ☐ Temperature Blank ☑ Against Bottles IR Gun ID: 8 IR Gun Correction Factor: 0 °C
Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☑ Yes	☐ No	☐ NA	3. Were all coolers received at or below 6.0°C? If no, was Project Manager notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC and all sample containers?
☑ Yes	☐ No		7. Was collection date & time listed on the COC and all sample containers?
☑ Yes	☐ No		8. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		9. Were tests to be performed listed on the COC?
☑ Yes	☐ No		10. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)? ____
☑ Yes	☐ No		11. Was adequate sample volume available?
☑ Yes	☐ No		12. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☑ Yes	☐ No		13. Were all samples containers accounted for? (No missing/excess)
☐ Yes	☐ No	☑ NA	14. Were VOA, 8015C and RSK-175 samples free of bubbles >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?
☑ Yes	☐ No	☐ NA	15. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	16. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	17. Were all applicable NH3/TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☑ No	☐ NA	18. Was the quote number listed on the container label? If yes, Quote # ____

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA. ☐
Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Unique ID: NA.

Comments:

Qualtrax ID: 56360 Pace® Analytical Services, LLC Page 1 of 1

Wet Weather Monitoring Report

Fourth Quarter 2024 (October 1 – December 31)

Event Date: November 14 - 15, 2024

Prepared for:

Prince William County Department of Public Works
5 County Complex Court, Suite 170
Prince William, Virginia 22192

Prepared by:
WSP USA Environment & Infrastructure, Inc.
13530 Dulles Technology Drive, Suite 300
Herndon, VA 20171
(703) 742-5700

January 21, 2025
Project No. US0039765.6753

1.0 INTRODUCTION

WSP USA Environment & Infrastructure Solutions, Inc. (WSP) conducts quarterly wet weather monitoring at two outfall sites to support Prince William County in compliance with the requirements of the Virginia Stormwater Management Program (VSMP) Municipal Separate Storm Sewer System (MS4) Permit (Number VA0088595), issued by the Virginia Department of Environmental Quality (VDEQ) to Prince William County, Virginia. This report discusses the results of the Q4 sampling event that occurred from November 14, 2024 to November 15, 2024 as well as the findings from the water quality analysis results of the sampling event.

2.0 METHODS

Flow rate data were collected at the outfalls by an ISCO 6712 automated sampler coupled with an ISCO 730 bubbler flow module, installed with a Scissors Ring. Flow rate over the course of the sampling events were electronically calculated using ISCO Flowlink 5.1 software, which utilizes the Manning Equation to convert flow level and velocity to flow rate. Replacement ISCO 730 bubble flow modules have been installed at both sites beginning in Q1 of 2023.

SITE #941; MANASSAS, VA

Site #941 is located near 11850 Livingston Road. The site receives a total of 52 acres of upstream drainage area from a land surface that is 34% impervious. County data documents that the pipe is 54 inches in diameter with a slope of 0.03437. This site is subject to backwater conditions as water levels within the downstream pond have risen over the previous two years. Maintenance is recommended to ensure the continued efficacy of the monitoring program at this site. Backwater at the site extends too far upstream into the pipe and would require confined space entry to install equipment. Accommodations are made in the sampling program, as described in further detail in the following section.

SITE #4684; DALE CITY, VA

Site #4684 is located near the corner of Potomac Center Blvd. and Sheffield Hill Way, north of Eastbourne Drive. It drains into a regional detention pond for the Potomac Club residential development. Upstream drainage totals 51 acres, 21% of which is from impervious surfaces. The pipe is 54 inches in diameter with a slope of 0.002593. Storm events at this site are flashy in nature, which is accounted for by programming shorter sample intervals, if necessary, based upon forecast conditions.

The automated samplers were deployed when a qualifying storm event (>0.3 inches precipitation) was forecast for the two monitoring sites. WSP staff deployed the samplers at both sites on September 16th, programmed the samplers' automated, discrete sampling sequence to initiate upon flow levels exceeding current water levels in each pipe.

Rain gage data were compiled from monitoring stations in the Weather Underground monitoring network. The data are accessible online and provided hourly precipitation totals over the monitoring period. Gages are prioritized based on the makeup of the data record (reporting interval) and proximity to monitoring locations.

Following the storm event, staff retrieved the samples and prepared them for shipment to Pace Analytical for water quality analysis. To compile the complete set of discrete samples into a single flow-weighted composite, Flowlink software calculated the storm event discharge using the Manning Equation:

Equation 1: Manning Equation used to calculate flow rate.

$$Q = VA = \left(\frac{1.49}{n}\right) A R^{\frac{2}{3}} \sqrt{S} \text{ [US]}$$

Q = Flow rate
A = Flow area
V = Avg. velocity
S = Water surface slope
R = Hydraulic Radius
n = Roughness coefficient
1.49 = English units conversion factor

Channel slopes were determined using invert elevations reported in the stormwater infrastructure geospatial data provided by Prince William County. Using flow levels reported by the ISCO samplers, the area and hydraulic radius inside the sampled outfalls could be computed for a given time interval. A Manning's *n* value of 0.013 was assumed for the concrete pipes[1]. Two sampling programs were implemented to accommodate for different conditions between the sites.

Manassas Sampling Program
Although a replacement bubbler module has been installed, the ponded site conditions continue to provide inaccurate water level readings at the Manassas site and fluctuates during static water conditions. To accommodate the unreliable equipment readings due to the site conditions, the ISCO sampler at the Manassas site was programed to collect on a time-paced program. Samples were collected at a pre-set time interval over the course of the storm.

During the event, the sampling was set as a time-paced program to collect discrete samples every half hour, then composited into a single container.

Dale City Sampling Program
During the event, the sampler at Dale City was programed to collect on a time-paced program. The sampler collected discrete samples every half hour, then composited into a single container.

[1] Chow, V.T. (1959) Open Channel Hydraulics. McGraw-Hill, New York.

3.0 RESULTS

SITE #941; MANASSAS, VA

Sampling occurred from 15:20 on November 14, 2024 to 02:50 on November 15, 2024. Weather Underground Station KVAMANAS225 in Manassas, VA recorded 1.72 inches of precipitation over this same period. The previous storm event was recorded on November 10, 2024, producing 0.24 inches of precipitation.

SITE #4684; DALE CITY, VA

Sampling occurred from 16:00 on November 14, 2024 to 03:30 on November 15, 2024. Weather Underground Station KVAWOODB86 in Woodbridge, VA recorded 0.43 inches of precipitation over this same period. The previous storm event was recorded on November 10, 2024, producing 0.10 inches of precipitation.

Samples from both sites were retained under refrigeration until they were composited and shipped overnight to Pace Analytical Services in Asheville, NC.

3.1 FLOW DATA

SITE #941; MANASSAS, VA

Flow rate reached 8.915 cfs. The storm event hydrograph compared with cumulative volume can be seen in Figure 1. Table 1 lists the proportion of each sample mixed with the flow-weighted composite. The flow-weighted composite volume was adjusted to incorporate representative volumes from the collected samples.

Flow rate and volume are calculated by measuring changes in water level over time. Backwater effects are impacting flow meter readings at the outfall point of discharge. Backwater conditions cause elevated readings for flow volume and flow rate.

Figure 1: Flow data over time for the storm event at Site #941 on November 14 - 15, 2024

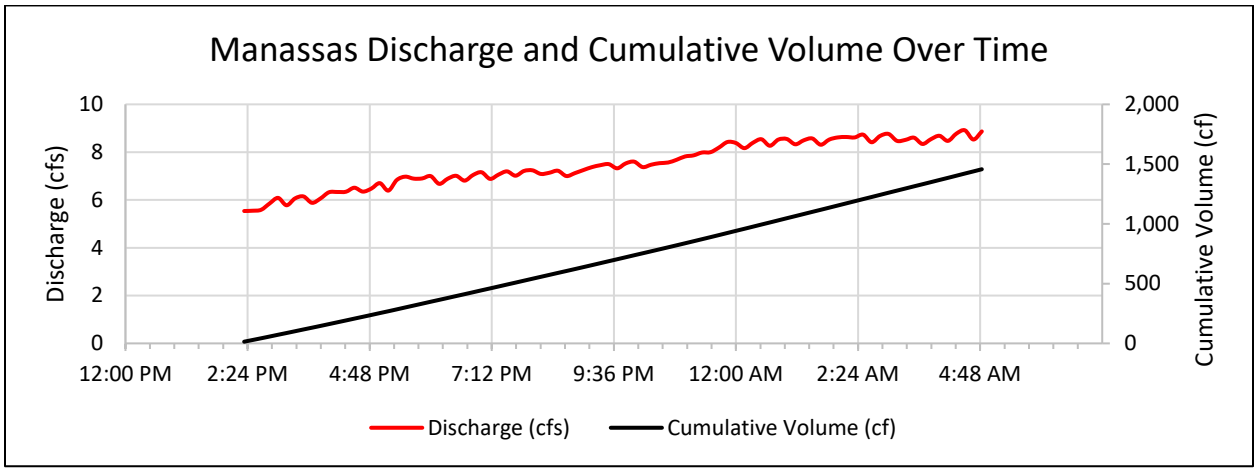


Table 1: Summary of Flow Weighted Composite – Site #941

Bottle #	Time of Sample	Volume (cf)	% of Flow	Flow Weighted Volume (mL)*
1	11/14/2024 15:20	3,638.92	3.39%	169.5
2	11/14/2024 15:50	3,637.04	3.39%	169.4
3	11/14/2024 16:20	3,806.44	3.55%	177.3
4	11/14/2024 16:50	3,885.56	3.62%	181.0
5	11/14/2024 17:20	4,101.17	3.82%	191.0
6	11/14/2024 17:50	4,140.89	3.86%	192.8
7	11/14/2024 18:20	4,132.94	3.85%	192.5
8	11/14/2024 18:50	4,226.81	3.94%	196.8
9	11/14/2024 19:20	4,236.85	3.95%	197.3
10	11/14/2024 19:50	4,327.62	4.03%	201.5
11	11/14/2024 20:20	4,283.15	3.99%	199.5
12	11/14/2024 20:50	4,273.06	3.98%	199.0
13	11/14/2024 21:20	4,472.41	4.17%	208.3
14	11/14/2024 21:50	4,517.67	4.21%	210.4
15	11/14/2024 22:20	4,484.74	4.18%	208.9
16	11/14/2024 22:50	4,608.72	4.29%	214.6
17	11/14/2024 23:20	4,790.87	4.46%	223.1
18	11/14/2024 23:50	5,055.23	4.71%	235.4
19	11/15/2024 0:20	5,035.86	4.69%	234.5
20	11/15/2024 0:50	5,115.68	4.76%	238.2
21	11/15/2024 1:20	5,098.38	4.75%	237.4
22	11/15/2024 1:50	5,115.68	4.76%	238.2
23	11/15/2024 2:20	5,169.89	4.82%	240.8
24	11/15/2024 2:50	5,206.88	4.85%	242.5

*5.0 L sample

SITE #4684; DALE CITY, VA

Flow rate reached 6.212 cfs with one predominate peak near the beginning of the sampling event. The storm event hydrograph compared with cumulative volume can be seen in Figure 2. Table 2 lists the proportion of each sample mixed with the flow-weighted composite. The flow-weighted composite volume was adjusted to incorporate representative volumes from the collected samples.

Figure 2: Flow data over time for the storm event at Site #4684 on November 14 - 15, 2024

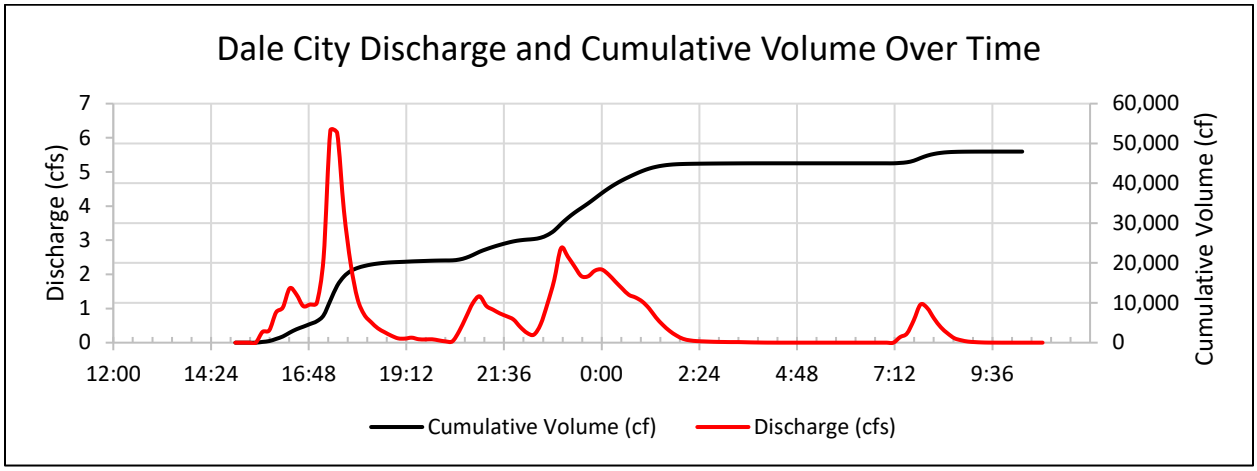


Table 2: Summary of Flow Weighted Composite – Site #4684

Bottle #	Time of Sample	Volume (cf)	% of Flow	Flow Weighted Volume (mL)*
1	11/14/2024 16:00	532.162	3.48%	86.94
2	11/14/2024 16:30	846.773	5.53%	138.34
3	11/14/2024 17:00	698.311	4.56%	114.08
4	11/14/2024 17:30	3685.97	24.09%	602.19
5	11/14/2024 18:00	771.966	5.04%	126.12
6	11/14/2024 18:30	252.675	1.65%	41.28
7	11/14/2024 19:00	75.058	0.49%	12.26
8	11/14/2024 19:30	60.739	0.40%	9.92
9	11/14/2024 20:00	40.07	0.26%	6.55
10	11/14/2024 20:30	203.502	1.33%	33.25
11	11/14/2024 21:00	814.268	5.32%	133.03
12	11/14/2024 21:30	513.059	3.35%	83.82
13	11/14/2024 22:00	274.838	1.80%	44.90
14	11/14/2024 22:30	322.141	2.11%	52.63
15	11/14/2024 23:00	1657.72	10.83%	270.83
16	11/14/2024 23:30	1169.51	7.64%	191.07
17	11/15/2024 0:00	1285.82	8.40%	210.07
18	11/15/2024 0:30	954.122	6.24%	155.88
19	11/15/2024 1:00	720.754	4.71%	117.75
20	11/15/2024 1:30	313.98	2.05%	51.30
21	11/15/2024 2:00	66.982	0.44%	10.94
22	11/15/2024 2:30	21.912	0.14%	3.58
23	11/15/2024 3:00	12.118	0.08%	1.98
24	11/15/2024 3:30	8.016	0.05%	1.31

*2.5 L sample

3.2 LABORATORY ANALYTICAL RESULTS

Samples were sent to Pace Analytical Services, Inc. lab in Asheville, NC for analysis, with Analytical Parameters tested listed in **Table 3**.

Table 3: Analytical Parameters

Analyte	Analysis Method
Copper	EPA 200.7
Lead	EPA 200.7
Nickel	EPA 200.7
Zinc	EPA 200.7
Total Suspended Solids	SM 2540D
pH	EPA 9040
Ammonia	EPA 350.1 1993 Rev 2.0
Total Kjeldahl Nitrogen	EPA 351.2
Nitrate + Nitrite Nitrogen	EPA 353.2
Total Phosphorus	EPA 365.1
Chemical Oxygen Demand	SM 5220D

Table 4: Results of Water Quality Analysis

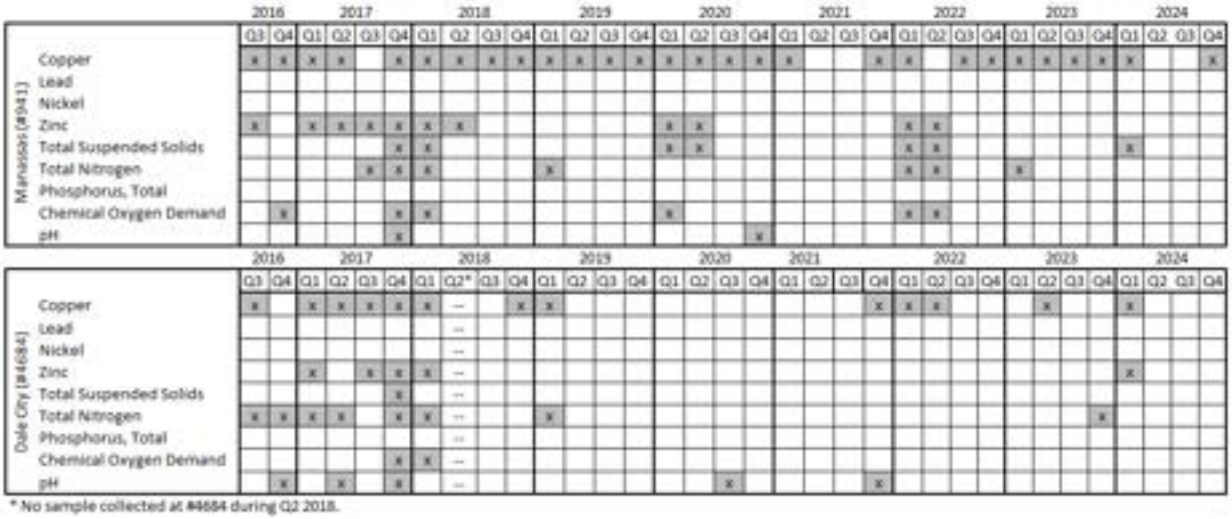
	Analyte	Analyte Value*	Analyte Unit	Reporting Limit	Exceedance Criterion	Criterion Basis
Manassas (#941)	Copper	42.9	µg/L	5.0	13	a
	Lead	6.7	µg/L	5.0	120	a
	Nickel	ND	µg/L	5.0	180	a
	Zinc	109	µg/L	10.0	120	a
	Total Suspended Solids	25.0	mg/L	4.9	100	b
	Nitrogen, Ammonia	0.16	mg/L	0.10	-	-
	Nitrogen, Kjeldahl, Total	1.1	µg/L	0.50	-	-
	Nitrogen, NO_2 plus NO_3	1.1	mg/L	0.040	-	-
	Total Nitrogen	2.2	mg/L	0.040	2.2	c
	Phosphorus, Total	0.12	mg/L	0.050	2	b
	Chemical Oxygen Demand	58.4	mg/L	25	120	b
	pH	7.1	Std. Units	0.10	6.0-9.0	d
Dale City (#4684)	Copper	9.0	µg/L	5.0	13	a
	Lead	ND	µg/L	5.0	120	a
	Nickel	ND	µg/L	5.0	180	a
	Zinc	72.4	µg/L	10.0	120	a
	Total Suspended Solids	17.8	mg/L	2.5	100	b
	Nitrogen, Ammonia	0.28	mg/L	0.10	-	-
	Nitrogen, Kjeldahl, Total	0.78	µg/L	0.50	-	-
	Nitrogen, NO_2 plus NO_3	0.51	mg/L	0.040	-	-
	Total Nitrogen	1.3	mg/L	0.040	2.2	c
	Phosphorus, Total	0.11	mg/L	0.050	2	b
	Chemical Oxygen Demand	44.8	mg/L	25.0	120	b
	pH	6.8	Std. Units	0.10	6.0-9.0	d

[a] State Water Quality Control Board Acute Standards for Surface Water Quality. Value is based on an assumed hardness of 100 mg/L.
[b] Based on benchmark criteria for the VPDES Industrial Stormwater General Permit.
[c] The sum of Nitrogen as Ammonia, NO_2, NO_3, and Total Kjeldahl Nitrogen.
[d] Based on numeric effluent limitations noted in the VPDES Permit for Discharge of Stormwater Associated with Industrial Activity.
* Values highlighted in red were found to be in exceedance of their respective criterion.
ND = The analyte was not detected above specified reporting limit.

4.0 SUMMARY

There was an exceedance for copper at the Manassas (#941) site during the 2024 Q4 sampling event. Exceedance tracking for parameters of concern are illustrated in **Figure 3** below.

Figure 3: Exceedance Tracking for the Wet Weather Monitoring Program



* No sample collected at #46684 during Q2 2018.

APPENDIX A

PHOTO LOG OF SITE CONDITIONS

Wet Weather Monitoring Q4 Report
Prince William County, VA
Photographic Log

	**Site:** Dale City Station **Photo: 1** **Date: 11/14/2024** **Description:** Dale City sampler set up overview.
	**Site:** Dale City Station **Photo: 2** **Date: 11/14/2024** **Description:** Dale City outfall, downstream.

Prince William County Wet Weather Monitoring Q4 January 21, 2025
Project No. US0039765.6753 Prince William County, VA



Site: Manassas Station

Photo: 3

Date: 11/14/2024

Description: Manassas sampler set up overview.

APPENDIX B

WATER QUALITY LABORATORY RESULTS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

December 05, 2024

Lynne Mowery
WSP
13530 Dulles Technology Dr
#300
Herndon, VA 20171

RE: Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

Dear Lynne Mowery:

Enclosed are the analytical results for sample(s) received by the laboratory on November 26, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Taylor M Cannon
taylor.cannon@pacelabs.com
704-977-0943
Project Manager

Enclosures

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CERTIFICATIONS

Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92766064001	**MAN**	EPA 200.7 Rev 4.4 1994	DBB1	4	PASI-A
		SM 2540D-2011	CDM	1	PASI-A
		EPA 9040C	SMS	1	PASI-A
		TKN+NO3+NO2 Calculation	MDW	1	PASI-A
		EPA 350.1 Rev 2.0 1993	NCF	1	PASI-A
		EPA 351.2 Rev 2.0 1993	MFO	1	PASI-A
		EPA 353.2 Rev 2.0 1993	CEM	1	PASI-A
		EPA 365.1 Rev 2.0 1993	NCF	1	PASI-A
		SM 5220D-2011	MDW	1	PASI-A
92766064002	**DAL**	EPA 200.7 Rev 4.4 1994	DBB1	4	PASI-A
		SM 2540D-2011	CDM	1	PASI-A
		EPA 9040C	SMS	1	PASI-A
		TKN+NO3+NO2 Calculation	MDW	1	PASI-A
		EPA 350.1 Rev 2.0 1993	NCF	1	PASI-A
		EPA 351.2 Rev 2.0 1993	MFO	1	PASI-A
		EPA 353.2 Rev 2.0 1993	CEM	1	PASI-A
		EPA 365.1 Rev 2.0 1993	NCF	1	PASI-A
		SM 5220D-2011	MDW	1	PASI-A

PASI-A = Pace Analytical Services - Asheville

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ANALYTICAL RESULTS

Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

Sample: MAN **Lab ID: 92766064001** Collected: 11/25/24 16:00 Received: 11/26/24 11:03 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Rev 4.4 1994 Preparation Method: EPA 200.7 Rev 4.4 1994 Pace Analytical Services - Asheville							
Copper	**42.9**	ug/L	5.0	1	11/27/24 13:05	12/02/24 16:59	7440-50-8	
Lead	**6.7**	ug/L	5.0	1	11/27/24 13:05	12/02/24 16:59	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/27/24 13:05	12/02/24 16:59	7440-02-0	
Zinc	**109**	ug/L	10.0	1	11/27/24 13:05	12/02/24 16:59	7440-66-6	
2540D TSS, Low-Level	Analytical Method: SM 2540D-2011 Pace Analytical Services - Asheville							
Total Suspended Solids	**25.0**	mg/L	3.3	1		12/02/24 13:12		
9040 pH	Analytical Method: EPA 9040C Pace Analytical Services - Asheville							
pH at 25 Degrees C	**7.1**	Std. Units	0.10	1		12/04/24 16:40		H3
Total Nitrogen Calculation	Analytical Method: TKN+NO3+NO2 Calculation Pace Analytical Services - Asheville							
Total Nitrogen	**2.2**	mg/L	0.040	1		12/05/24 14:30		
350.1 Ammonia	Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	**0.16**	mg/L	0.10	1		12/02/24 17:46	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Rev 2.0 1993 Preparation Method: EPA 351.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Kjeldahl, Total	**1.1**	mg/L	0.50	1	12/03/24 21:51	12/04/24 06:54	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	**1.1**	mg/L	0.040	1		12/03/24 05:09		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1 Rev 2.0 1993 Preparation Method: EPA 365.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Phosphorus	**0.12**	mg/L	0.050	1	12/03/24 20:11	12/04/24 17:08	7723-14-0	
5220D COD	Analytical Method: SM 5220D-2011 Preparation Method: SM 5220D-2011 Pace Analytical Services - Asheville							
Chemical Oxygen Demand	**58.4**	mg/L	25.0	1	12/04/24 22:03	12/05/24 13:21		

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ANALYTICAL RESULTS

Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

Sample: DAL **Lab ID: 92766064002** Collected: 11/25/24 16:30 Received: 11/26/24 11:03 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Rev 4.4 1994 Preparation Method: EPA 200.7 Rev 4.4 1994 Pace Analytical Services - Asheville							
Copper	**9.0**	ug/L	5.0	1	11/27/24 13:05	12/02/24 17:02	7440-50-8	
Lead	ND	ug/L	5.0	1	11/27/24 13:05	12/02/24 17:02	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/27/24 13:05	12/02/24 17:02	7440-02-0	
Zinc	**72.4**	ug/L	10.0	1	11/27/24 13:05	12/02/24 17:02	7440-66-6	
2540D TSS, Low-Level	Analytical Method: SM 2540D-2011 Pace Analytical Services - Asheville							
Total Suspended Solids	**17.8**	mg/L	1.0	1		12/02/24 13:13		
9040 pH	Analytical Method: EPA 9040C Pace Analytical Services - Asheville							
pH at 25 Degrees C	**6.8**	Std. Units	0.10	1		12/04/24 16:43		H3
Total Nitrogen Calculation	Analytical Method: TKN+NO3+NO2 Calculation Pace Analytical Services - Asheville							
Total Nitrogen	**1.3**	mg/L	0.040	1		12/05/24 14:30		
350.1 Ammonia	Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	**0.28**	mg/L	0.10	1		12/02/24 17:48	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Rev 2.0 1993 Preparation Method: EPA 351.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Kjeldahl, Total	**0.78**	mg/L	0.50	1	12/03/24 21:51	12/04/24 06:57	7727-37-9	M1
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	**0.51**	mg/L	0.040	1		12/03/24 05:11		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1 Rev 2.0 1993 Preparation Method: EPA 365.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Phosphorus	**0.11**	mg/L	0.050	1	12/03/24 20:11	12/04/24 17:09	7723-14-0	
5220D COD	Analytical Method: SM 5220D-2011 Preparation Method: SM 5220D-2011 Pace Analytical Services - Asheville							
Chemical Oxygen Demand	**44.8**	mg/L	25.0	1	12/04/24 22:03	12/05/24 13:21		

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QUALITY CONTROL DATA

Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

QC Batch: 899073
QC Batch Method: EPA 200.7 Rev 4.4 1994
Analysis Method: EPA 200.7 Rev 4.4 1994
Analysis Description: 200.7 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92766064001, 92766064002

METHOD BLANK: 4628566 Matrix: Water
Associated Lab Samples: 92766064001, 92766064002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	ug/L	ND	5.0	12/02/24 16:42	
Lead	ug/L	ND	5.0	12/02/24 16:42	
Nickel	ug/L	ND	5.0	12/02/24 16:42	
Zinc	ug/L	ND	10.0	12/02/24 16:42	

LABORATORY CONTROL SAMPLE: 4628567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	ug/L	500	520	104	85-115	
Lead	ug/L	500	501	100	85-115	
Nickel	ug/L	500	496	99	85-115	
Zinc	ug/L	500	490	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4628570 4628571

Parameter	Units	92766137003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Copper	ug/L	ND	500	500	524	527	104	105	70-130	0	
Lead	ug/L	ND	500	500	507	510	101	102	70-130	0	
Nickel	ug/L	ND	500	500	508	511	102	102	70-130	0	
Zinc	ug/L	ND	500	500	507	509	101	101	70-130	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4628680 4628681

Parameter	Units	92765785001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Copper	ug/L	151	500	500	731	695	116	109	70-130	5	
Lead	ug/L	31.1	500	500	540	512	102	96	70-130	5	
Nickel	ug/L	1340	500	500	1850	1780	102	87	70-130	4	
Zinc	ug/L	826	500	500	1320	1270	100	88	70-130	4	

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QUALITY CONTROL DATA

Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

QC Batch: 899475
QC Batch Method: SM 2540D-2011
Analysis Method: SM 2540D-2011
Analysis Description: 2540D Total Suspended Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92766064001, 92766064002

METHOD BLANK: 4630434 Matrix: Water
Associated Lab Samples: 92766064001, 92766064002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	1.0	12/02/24 13:11	

LABORATORY CONTROL SAMPLE: 4630435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	250	244	97	90-110	

SAMPLE DUPLICATE: 4630518

Parameter	Units	92766064001 Result	Dup Result	RPD	Qualifiers
Total Suspended Solids	mg/L	25.0	24.7	1	

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QUALITY CONTROL DATA

Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

QC Batch: 899883
QC Batch Method: EPA 9040C
Analysis Method: EPA 9040C
Analysis Description: 9040 pH
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92766064001, 92766064002

SAMPLE DUPLICATE: 4632231

Parameter	Units	92764747002 Result	Dup Result	RPD	Qualifiers
pH at 25 Degrees C	Std. Units	12.4	12.4	0	E,H3

SAMPLE DUPLICATE: 4632232

Parameter	Units	92764747003 Result	Dup Result	RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.4	7.6	3	D6,H3

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QUALITY CONTROL DATA

Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

QC Batch: 899510
QC Batch Method: EPA 350.1 Rev 2.0 1993
Analysis Method: EPA 350.1 Rev 2.0 1993
Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92766064001, 92766064002

METHOD BLANK: 4630549 Matrix: Water
Associated Lab Samples: 92766064001, 92766064002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	12/02/24 17:22	

LABORATORY CONTROL SAMPLE: 4630550

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	5.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4630551 4630552

Parameter	Units	92764839001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Ammonia	mg/L	0.11	5	5	5.5	5.5	108	108	90-110	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4630553 4630554

Parameter	Units	92766433001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Ammonia	mg/L	0.66	5	5	5.7	5.8	102	102	90-110	0	

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QUALITY CONTROL DATA

Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

QC Batch: 899861
QC Batch Method: EPA 351.2 Rev 2.0 1993
Analysis Method: EPA 351.2 Rev 2.0 1993
Analysis Description: 351.2 TKN
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92766064001, 92766064002

METHOD BLANK: 4632063 Matrix: Water
Associated Lab Samples: 92766064001, 92766064002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.50	12/04/24 06:31	

LABORATORY CONTROL SAMPLE: 4632064

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	10	10.5	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4632065 4632066

Parameter	Units	92766064001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	1.1	10	10	11.9	11.9	108	108	90-110	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4632067 4632068

Parameter	Units	92766064002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	0.78	10	10	11.6	12.0	108	112	90-110	4	M1

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QUALITY CONTROL DATA

Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

QC Batch: 899006
QC Batch Method: EPA 353.2 Rev 2.0 1993
Analysis Method: EPA 353.2 Rev 2.0 1993
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92766064001, 92766064002

METHOD BLANK: 4628353 Matrix: Water
Associated Lab Samples: 92766064001, 92766064002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	12/03/24 04:57	

LABORATORY CONTROL SAMPLE: 4628354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4628355 4628356

Parameter	Units	92765799001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	2.1	2.5	2.5	4.6	4.5	100	97	90-110	2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4628357 4628358

Parameter	Units	92763324001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.084	2.5	2.5	2.1	2.1	82	81	90-110	1	M1

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QUALITY CONTROL DATA

Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

QC Batch: 899787
QC Batch Method: EPA 365.1 Rev 2.0 1993
Analysis Method: EPA 365.1 Rev 2.0 1993
Analysis Description: 365.1 Phosphorus, Total
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92766064001, 92766064002

METHOD BLANK: 4631637 Matrix: Water
Associated Lab Samples: 92766064001, 92766064002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	12/04/24 16:30	

LABORATORY CONTROL SAMPLE: 4631638

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.5	2.7	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4631644 4631645

Parameter	Units	92764661001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Phosphorus	mg/L	ND	2.5	2.5	2.5	2.5	100	99	90-110	1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4631646 4631647

Parameter	Units	92765506001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Phosphorus	mg/L	0.21	2.5	2.5	2.6	2.6	97	97	90-110	0	

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QUALITY CONTROL DATA

Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

QC Batch: 900205
QC Batch Method: SM 5220D-2011
Analysis Method: SM 5220D-2011
Analysis Description: 5220D COD
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92766064001, 92766064002

METHOD BLANK: 4633631 Matrix: Water
Associated Lab Samples: 92766064001, 92766064002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	12/05/24 13:15	

LABORATORY CONTROL SAMPLE: 4633632

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	763	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4633633 4633634

Parameter	Units	92764681001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chemical Oxygen Demand	mg/L	1040	100	100	1220	1210	182	170	90-110	1	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4633635 4633636

Parameter	Units	92764733001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chemical Oxygen Demand	mg/L	2140	100	100	2280	2170	136	23	90-110	5	M1,R1

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QUALIFIERS

Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

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Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: US0039765.6753, ORG 7526, GL
Pace Project No.: 92766064

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92766064001	**MAN**	EPA 200.7 Rev 4.4 1994	899073	EPA 200.7 Rev 4.4 1994	899225
92766064002	**DAL**	EPA 200.7 Rev 4.4 1994	899073	EPA 200.7 Rev 4.4 1994	899225
92766064001	**MAN**	SM 2540D-2011	899475		
92766064002	**DAL**	SM 2540D-2011	899475		
92766064001	**MAN**	EPA 9040C	899883		
92766064002	**DAL**	EPA 9040C	899883		
92766064001	**MAN**	TKN+NO3+NO2 Calculation	900556		
92766064002	**DAL**	TKN+NO3+NO2 Calculation	900556		
92766064001	**MAN**	EPA 350.1 Rev 2.0 1993	899510		
92766064002	**DAL**	EPA 350.1 Rev 2.0 1993	899510		
92766064001	**MAN**	EPA 351.2 Rev 2.0 1993	899861	EPA 351.2 Rev 2.0 1993	899989
92766064002	**DAL**	EPA 351.2 Rev 2.0 1993	899861	EPA 351.2 Rev 2.0 1993	899989
92766064001	**MAN**	EPA 353.2 Rev 2.0 1993	899006		
92766064002	**DAL**	EPA 353.2 Rev 2.0 1993	899006		
92766064001	**MAN**	EPA 365.1 Rev 2.0 1993	899787	EPA 365.1 Rev 2.0 1993	899959
92766064002	**DAL**	EPA 365.1 Rev 2.0 1993	899787	EPA 365.1 Rev 2.0 1993	899959
92766064001	**MAN**	SM 5220D-2011	900205	SM 5220D-2011	900372
92766064002	**DAL**	SM 5220D-2011	900205	SM 5220D-2011	900372

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WO# : 92766064

92766064

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Wood/WSP	Billing Information: Attn: lynne.mowery@wsp.com
Address: 13530 Dulles Technology Dr #300, Herndon, VA 20171	
Report To: Ilana Ton	Email To: ilana.ton@wsp.com
Copy To:	Site Collection Info/Address: Prince William County / Manassas, VA and Woodbridge, VA
Customer Project Name/Number: US0039765.6753, ORG 7526, GL Code 5730-00	State: VA; County/City: ; Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 703 488 3778 Email: ilana.ton@wsp.com	Site/Facility ID #:
Collected By (print):	Purchase Order # : Quote #:
Collected By (signature):	Turnaround Date Required:
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [X] 5 Day

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #: DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Cons	Container Type: Plastic (P) or Glass (G)	SM 2540D-2015 TSS	200.7 Metals	EPA 351.2 TKN/ EPA 353.2 NO2 + NO3	EPA 350.1 Ammonia/EPA 365.1 Phosphorus/ SM 5220D-2011 COD	SM 4500-H+B-2011 pH					
MAN	OT-Water	Comp			11/25/24	1600		5	P	X	X	x	x	x					
DAL	OT-Water	Comp			11/25/24	1630		5	P	X	X	x	x	x					

Container Preservative Type **

U	1	2	2	U					

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager:

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact: Y N (NA)
Custody Signatures Present: Y N (NA)
Collector Signature Present: Y N (NA)
Bottles Intact: Y N NA
Correct Bottles: Y N NA
Sufficient Volume: Y N NA
Samples Received on Ice: Y N NA
VOA - Headspace Acceptable: Y N (NA)
USDA Regulated Soils: Y N (NA)
Samples in Holding Time: Y N NA
Residual Chlorine Present: Y N (NA)
Cl Strips: 42144
Sample pH Acceptable: Y N NA
pH Strips: 25H722V
Sulfide Present: Y N (NA)
Lead Acetate Strips:

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:
Prince William County/
US0039765.6753, ORG 7526, GL Code 5730-00
Pace PM: Taylor Cannon
200.7: Cu, Pb, Ni, Zn

Type of Ice Used: (Wet) Blue Dry None

Packing Material Used: none

Radchem sample(s) screened (<500 cpm): Y N (NA)

SHORT HOLDS PRESENT (<72 hours): Y N (N/A)

Lab Tracking #:

Samples received via: (FEDEX) UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N (D)
Therm ID#: 92T077
Cooler 1 Temp Upon Receipt: 2.3 °C
Cooler 1 Therm Corr. Factor: 0 °C
Cooler 1 Corrected Temp: 2.3 °C
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Ilana Ton/WSP	11/25/24 1730	Alexis Panther AR	11/26/24 1103
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N (NA)
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 1

DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

WO# : 92766064

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg
**Bottom half of box is to list number of bottles
***Check all unpreserved Nitrates for chlorine

Project #

PM: TMC Due Date: 12/05/24
CLIENT: 92-Amec VA

Laboratory Receiving Location: Asheville [X] Eden [ ] Greenwood [ ] Huntersville [ ] Raleigh [ ] Mechanicsville [ ] Atlanta [ ] Kernersville [ ]

Client WSP-VA Profile/EZ (Circle one) 18501-1 Notes

Item #	BP4U-125 mL Plastic Unpreserved (N/A) (CL)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	Impact / Freight	BP4S-125 mL Plastic H2SO4 (pH < 2) (CL)	BP4N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (CL)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (CL)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (CL)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG84-40 mL Amber NH4Cl (N/A)(CL)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		BP3B-250 mL Plastic (NaH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (CL)	VSGU-20 mL Scintillation Vials (N/A)	DG8U-40 mL Amber Unpreserved vials (N/A)
CC	AS			AS	OK	AS	AS																								
1	1			1	1	2	1																								
2	1			1		2	1																								
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Wet Weather Monitoring Report

First Quarter 2025 (January 1 – March 31)
Event Date: January 30 – February 1, 2025

Prepared for:

Prince William County Department of Public Works
5 County Complex Court, Suite 170
Prince William, Virginia 22192

Prepared by:
WSP USA Environment & Infrastructure, Inc.
13530 Dulles Technology Drive, Suite 300
Herndon, VA 20171
(703) 742-5700

March 6, 2025
Project No. US0039765.6753

1.0 INTRODUCTION

WSP USA Environment & Infrastructure Solutions, Inc. (WSP) conducts quarterly wet weather monitoring at two outfall sites to support Prince William County in compliance with the requirements of the Virginia Stormwater Management Program (VSMP) Municipal Separate Storm Sewer System (MS4) Permit (Number VA0088595), issued by the Virginia Department of Environmental Quality (VDEQ) to Prince William County, Virginia. This report discusses the results of the Q1 sampling event that occurred from January 30, 2025 to February 1, 2025 as well as the findings from the water quality analysis results of the sampling event.

2.0 METHODS

Flow rate data were collected at the outfalls by an ISCO 6712 automated sampler coupled with an ISCO 730 bubbler flow module, installed with a Scissors Ring. Flow rate over the course of the sampling events were electronically calculated using ISCO Flowlink 5.1 software, which utilizes the Manning Equation to convert flow level and velocity to flow rate. Replacement ISCO 730 bubble flow modules have been installed at both sites beginning in Q1 of 2023.

SITE #941; MANASSAS, VA

Site #941 is located near 11850 Livingston Road. The site receives a total of 52 acres of upstream drainage area from a land surface that is 34% impervious. County data documents that the pipe is 54 inches in diameter with a slope of 0.03437. This site is subject to backwater conditions as water levels within the downstream pond have risen over the previous two years. Maintenance is recommended to ensure the continued efficacy of the monitoring program at this site. Backwater at the site extends too far upstream into the pipe and would require confined space entry to install equipment. Accommodations are made in the sampling program, as described in further detail in the following section.

SITE #4684; DALE CITY, VA

Site #4684 is located near the corner of Potomac Center Blvd. and Sheffield Hill Way, north of Eastbourne Drive. It drains into a regional detention pond for the Potomac Club residential development. Upstream drainage totals 51 acres, 21% of which is from impervious surfaces. The pipe is 54 inches in diameter with a slope of 0.002593. Storm events at this site are flashy in nature, which is accounted for by programming shorter sample intervals, if necessary, based upon forecast conditions.

The automated samplers were deployed when a qualifying storm event (>0.3 inches precipitation) was forecast for the two monitoring sites. WSP staff deployed the samplers at both sites on January 30th, programmed the samplers' automated, discrete sampling sequence to initiate upon flow levels exceeding current water levels in each pipe.

Rain gage data were compiled from monitoring stations in the Weather Underground monitoring network. The data are accessible online and provided hourly precipitation totals over the monitoring period. Gages are prioritized based on the makeup of the data record (reporting interval) and proximity to monitoring locations.

Following the storm event, staff retrieved the samples and prepared them for shipment to Pace Analytical for water quality analysis. To compile the complete set of discrete samples into a single flow-weighted composite, Flowlink software calculated the storm event discharge using the Manning Equation:

Equation 1: Manning Equation used to calculate flow rate.

$$Q = VA = \left(\frac{1.49}{n}\right) A R^{\frac{2}{3}} \sqrt{S} \text{ [US]}$$

Q = Flow rate
A = Flow area
V = Avg. velocity
S = Water surface slope
R = Hydraulic Radius
n = Roughness coefficient
1.49 = English units conversion factor

Channel slopes were determined using invert elevations reported in the stormwater infrastructure geospatial data provided by Prince William County. Using flow levels reported by the ISCO samplers, the area and hydraulic radius inside the sampled outfalls could be computed for a given time interval. A Manning's *n* value of 0.013 was assumed for the concrete pipes[1]. Two sampling programs were implemented to accommodate for different conditions between the sites.

Manassas Sampling Program
Although a replacement bubbler module has been installed, the ponded site conditions continue to provide inaccurate water level readings at the Manassas site and fluctuates during static water conditions. To accommodate the unreliable equipment readings due to the site conditions, the ISCO sampler at the Manassas site was programed to collect on a time-paced program. Samples were collected at a pre-set time interval over the course of the storm.

During the event, the sampling was set as a time-paced program to collect discrete samples every 60 minutes, then composited into a single container.

Dale City Sampling Program
During the event, the sampler at Dale City was programed to collect on a time-paced program. The sampler collected discrete samples every 60 minutes, then composited into a single container.

[1] Chow, V.T. (1959) Open Channel Hydraulics. McGraw-Hill, New York.

3.0 RESULTS

SITE #941; MANASSAS, VA

Sampling occurred from 3:10 on January 31, 2025 to 02:10 on February 1, 2025. Weather Underground Station KVAMANAS225 in Manassas, VA recorded 0.77 inches of precipitation over this same period. The previous storm event was recorded on January 26, 2025, producing 0.01 inches of precipitation.

SITE #4684; DALE CITY, VA

Sampling occurred from 0:30 on January 31, 2025 to 23:30 on January 31, 2025. Weather Underground Station KVAWOODB86 in Woodbridge, VA recorded 0.86 inches of precipitation over this same period. The previous storm event was recorded on January 25, 2025, producing 0.01 inches of precipitation.

Samples from both sites were retained under refrigeration until they were composited and shipped overnight to Pace Analytical Services in Asheville, NC.

3.1 FLOW DATA

SITE #941; MANASSAS, VA

Flow rate reached 11.848 cfs. The storm event hydrograph compared with cumulative volume can be seen in Figure 1. Table 1 lists the proportion of each sample mixed with the flow-weighted composite. The flow-weighted composite volume was adjusted to incorporate representative volumes from the collected samples.

Flow rate and volume are calculated by measuring changes in water level over time. Backwater effects are impacting flow meter readings at the outfall point of discharge. Backwater conditions cause elevated readings for flow volume and flow rate.

Figure 1: Flow data over time for the storm event at Site #941 on January 30 – February 1, 2025

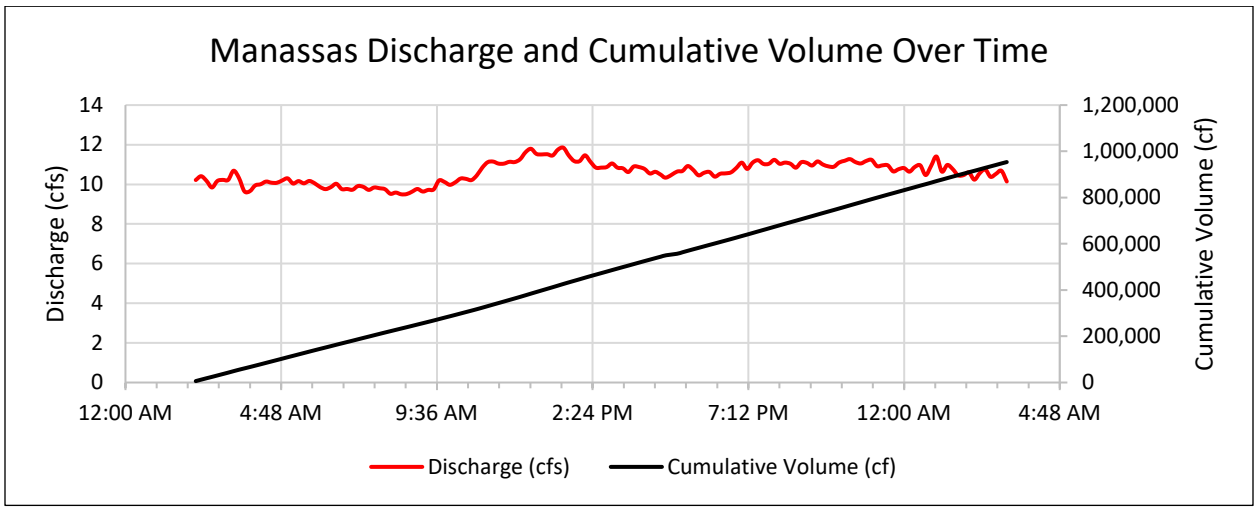


Table 1: Summary of Flow Weighted Composite – Site #941

Bottle #	Time of Sample	Volume (cf)	% of Flow	Flow Weighted Volume (mL)*
1	1/31/2025 3:10	6,135.13	4.0%	201.79
2	1/31/2025 4:10	6,003.74	3.9%	197.47
3	1/31/2025 5:10	6,024.74	4.0%	198.15
4	1/31/2025 6:10	5,855.15	3.9%	192.58
5	1/31/2025 7:10	5,948.72	3.9%	195.66
6	1/31/2025 8:10	5,714.68	3.8%	187.96
7	1/31/2025 9:10	5,782.5	3.8%	190.19
8	1/31/2025 10:10	6,061.24	4.0%	199.36
9	1/31/2025 11:10	6,670.53	4.4%	219.40
10	1/31/2025 12:10	6,761.24	4.4%	222.39
11	1/31/2025 13:10	6,873.99	4.5%	226.10
12	1/31/2025 14:10	6,878.8	4.5%	226.25
13	1/31/2025 15:10	6,504.51	4.3%	213.94
14	1/31/2025 16:10	6,328.24	4.2%	208.14
15	1/31/2025 17:10	6,403.25	4.2%	210.61
16	1/31/2025 18:10	6,232.59	4.1%	205.00
17	1/31/2025 19:10	6,466.77	4.3%	212.70
18	1/31/2025 20:10	6,622.95	4.4%	217.84
19	1/31/2025 21:10	6,570.75	4.3%	216.12
20	1/31/2025 22:10	6,713.44	4.4%	220.81
21	1/31/2025 23:10	6,551.8	4.3%	215.50
22	2/1/2025 0:10	6,384.46	4.2%	209.99
23	2/1/2025 1:10	6,384.46	4.2%	209.99
24	2/1/2025 2:10	6,142.07	4.0%	202.02

*5.0 L sample

SITE #4684; DALE CITY, VA

Flow rate reached 5.93 cfs with one predominate peak near the middle of the sampling event. The storm event hydrograph compared with cumulative volume can be seen in Figure 2. Table 2 lists the proportion of each sample mixed with the flow-weighted composite. The flow-weighted composite volume was adjusted to incorporate representative volumes from the collected samples.

Figure 2: Flow data over time for the storm event at Site #4684 on January 31, 2025

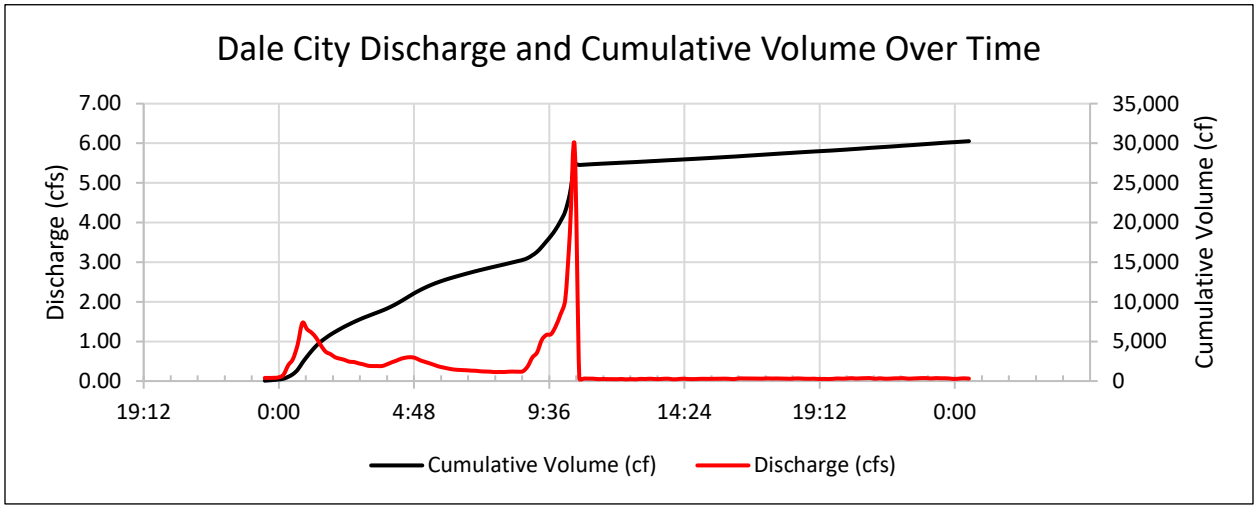


Table 2: Summary of Flow Weighted Composite – Site #4684

Bottle #	Time of Sample	Volume (cf)	% of Flow	Flow Weighted Volume (mL)*
1	1/31/2025 0:30	333.75	4.7%	93.24
2	1/31/2025 1:30	534.31	7.5%	149.27
3	1/31/2025 2:30	293.28	4.1%	81.93
4	1/31/2025 3:30	227.38	3.2%	63.52
5	1/31/2025 4:30	354.17	4.9%	98.94
6	1/31/2025 5:30	246.93	3.4%	68.99
7	1/31/2025 6:30	166.82	2.3%	46.60
8	1/31/2025 7:30	142.37	2.0%	39.77
9	1/31/2025 8:30	141.30	2.0%	39.48
10	1/31/2025 9:30	698,31	9.8%	195.09
11	1/31/2025 10:30	3,558.09	49.7%	994.02
12	1/31/2025 11:30	31.44	0.4%	8.78
13	1/31/2025 12:30	30.03	0.4%	8.39
14	1/31/2025 13:30	30.03	0.4%	8.39
15	1/31/2025 14:30	31.92	0.4%	8.92
16	1/31/2025 15:30	34.86	0.5%	9.74
17	1/31/2025 16:30	39.53	0.6%	11.04
18	1/31/2025 17:30	38.47	0.5%	10.75
19	1/31/2025 18:30	39.00	0.5%	10.89
20	1/31/2025 19:30	31.44	0.4%	8.78
21	1/31/2025 20:30	38.47	0.5%	10.75
22	1/31/2025 21:30	35.87	0.5%	10.02
23	1/31/2025 22:30	39.00	0.5%	10.89
24	1/31/2025 23:30	42.26	0.6%	11.81

*2.0 L sample

3.2 LABORATORY ANALYTICAL RESULTS

Samples were sent to Pace Analytical Services, Inc. lab in Asheville, NC for analysis, with Analytical Parameters tested listed in **Table 3**.

Table 3: Analytical Parameters

Analyte	Analysis Method
Copper	EPA 200.7
Lead	EPA 200.7
Nickel	EPA 200.7
Zinc	EPA 200.7
Total Suspended Solids	SM 2540D
pH	EPA 9040
Ammonia	EPA 350.1 1993 Rev 2.0
Total Kjeldahl Nitrogen	EPA 351.2
Nitrate + Nitrite Nitrogen	EPA 353.2
Total Phosphorus	EPA 365.1
Chemical Oxygen Demand	SM 5220D

Table 4: Results of Water Quality Analysis

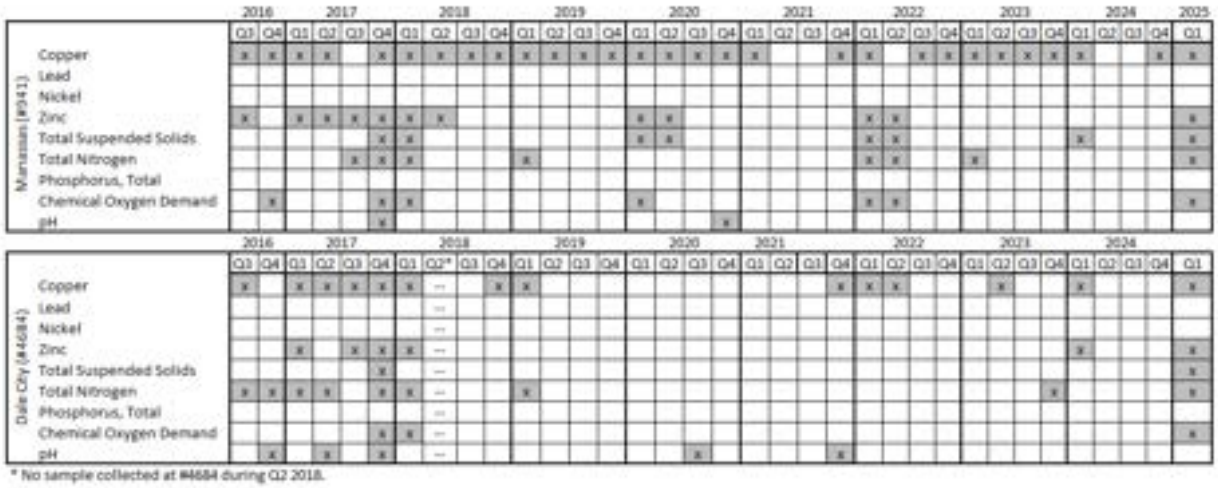
	Analyte	Analyte Value*	Analyte Unit	Reporting Limit	Exceedance Criterion	Criterion Basis
Manassas (#941)	Copper	112	µg/L	5.0	13	a
	Lead	12.3	µg/L	5.0	120	a
	Nickel	16.1	µg/L	5.0	180	a
	Zinc	168	µg/L	10.0	120	a
	Total Suspended Solids	118	mg/L	5.0	100	b
	Nitrogen, Ammonia	0.59	mg/L	0.10	-	-
	Nitrogen, Kjeldahl, Total	2.7	mg/L	0.50	-	-
	Nitrogen, NO_2 plus NO_3	1.1	mg/L	0.040	-	-
	Total Nitrogen	3.8	mg/L	0.040	2.2	c
	Phosphorus, Total	0.25	mg/L	0.050	2	b
	Chemical Oxygen Demand	361	mg/L	25	120	b
	pH	7.2	Std. Units	0.10	6.0-9.0	d
Dale City (#4684)	Copper	45.9	µg/L	5.0	13	a
	Lead	6.9	µg/L	5.0	120	a
	Nickel	14.3	µg/L	5.0	180	a
	Zinc	424	µg/L	10.0	120	a
	Total Suspended Solids	192	mg/L	10	100	b
	Nitrogen, Ammonia	0.64	mg/L	0.10	-	-
	Nitrogen, Kjeldahl, Total	3.0	mg/L	0.50	-	-
	Nitrogen, NO_2 plus NO_3	0.45	mg/L	0.040	-	-
	Total Nitrogen	3.5	mg/L	0.040	2.2	c
	Phosphorus, Total	0.30	mg/L	0.050	2	b
	Chemical Oxygen Demand	215	mg/L	25.0	120	b
	pH	6.8	Std. Units	0.10	6.0-9.0	d

[a] State Water Quality Control Board Acute Standards for Surface Water Quality. Value is based on an assumed hardness of 100 mg/L.
[b] Based on benchmark criteria for the VPDES Industrial Stormwater General Permit.
[c] The sum of Nitrogen as Ammonia, NO_2, NO_3, and Total Kjeldahl Nitrogen.
[d] Based on numeric effluent limitations noted in the VPDES Permit for Discharge of Stormwater Associated with Industrial Activity.
* Values highlighted in red were found to be in exceedance of their respective criterion.
ND = The analyte was not detected above specified reporting limit.

4.0 SUMMARY

There was an exceedance for copper, zinc, total suspended solids, total nitrogen, and chemical oxygen demand at both the Manassas (#941) and Dale City (#4684) sites during the 2025 Q1 sampling event. Exceedance tracking for parameters of concern are illustrated in **Figure 3** below.

Figure 3: Exceedance Tracking for the Wet Weather Monitoring Program



APPENDIX A

PHOTO LOG OF SITE CONDITIONS

Wet Weather Monitoring Q1 Report
Prince William County, VA
Photographic Log

	**Site:** Dale City Station **Photo: 1** **Date: 1/30/2025** **Description:** Dale City sampler set up overview.
	**Site:** Dale City Station **Photo: 2** **Date: 1/30/2025** **Description:** Dale City outfall, downstream.

Prince William County Wet Weather Monitoring Q1 March 6, 2025
Project No. US0039765.6753 Prince William County, VA



Site: Manassas Station

Photo: 3

Date: 1/30/2025

Description: Manassas sampler set up overview.

APPENDIX B

WATER QUALITY LABORATORY RESULTS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

February 10, 2025

Lynne Mowery
WSP
13530 Dulles Technology Dr
#300
Herndon, VA 20171

RE: Project: US0039765.6753
Pace Project No.: 92777313

Dear Lynne Mowery:

Enclosed are the analytical results for sample(s) received by the laboratory on February 04, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Taylor M Cannon
taylor.cannon@pacelabs.com
704-977-0943
Project Manager

Enclosures

cc: Ilana Ton, WSP USA

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CERTIFICATIONS

Project: US0039765.6753
Pace Project No.: 92777313

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: US0039765.6753
Pace Project No.: 92777313

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92777313001	**MAN**	EPA 200.7 Rev 4.4 1994	DBB1	4	PASI-A
		SM 2540D-2011	CMW1	1	PASI-A
		SM 4500-H+B-2011	SMS	1	PASI-A
		TKN+NO3+NO2 Calculation	KDF1	1	PASI-A
		EPA 350.1 Rev 2.0 1993	NCF	1	PASI-A
		EPA 351.2 Rev 2.0 1993	MFO	1	PASI-A
		EPA 353.2 Rev 2.0 1993	EGC	1	PASI-A
		EPA 365.1 Rev 2.0 1993	ZJP	1	PASI-A
		SM 5220D-2011	JP1	1	PASI-A
92777313002	**DAL**	EPA 200.7 Rev 4.4 1994	DBB1	4	PASI-A
		SM 2540D-2011	CMW1	1	PASI-A
		SM 4500-H+B-2011	SMS	1	PASI-A
		TKN+NO3+NO2 Calculation	KDF1	1	PASI-A
		EPA 350.1 Rev 2.0 1993	NCF	1	PASI-A
		EPA 351.2 Rev 2.0 1993	MFO	1	PASI-A
		EPA 353.2 Rev 2.0 1993	EGC	1	PASI-A
		EPA 365.1 Rev 2.0 1993	ZJP	1	PASI-A
		SM 5220D-2011	JP1	1	PASI-A

PASI-A = Pace Analytical Services - Asheville

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ANALYTICAL RESULTS

Project: US0039765.6753
Pace Project No.: 92777313

Sample: MAN **Lab ID: 92777313001** Collected: 02/01/25 15:30 Received: 02/04/25 11:09 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Rev 4.4 1994 Preparation Method: EPA 200.7 Rev 4.4 1994 Pace Analytical Services - Asheville							
Copper	**112**	ug/L	5.0	1	02/04/25 16:47	02/05/25 21:25	7440-50-8	M1
Lead	**12.3**	ug/L	5.0	1	02/04/25 16:47	02/05/25 21:25	7439-92-1	
Nickel	**16.1**	ug/L	5.0	1	02/04/25 16:47	02/05/25 21:25	7440-02-0	
Zinc	**168**	ug/L	10.0	1	02/04/25 16:47	02/05/25 21:25	7440-66-6	
2540D TSS, Low-Level	Analytical Method: SM 2540D-2011 Pace Analytical Services - Asheville							
Total Suspended Solids	**118**	mg/L	5.0	1		02/05/25 00:32		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B-2011 Pace Analytical Services - Asheville							
pH at 25 Degrees C	**7.2**	Std. Units	0.10	1		02/07/25 14:36		H3
Total Nitrogen Calculation	Analytical Method: TKN+NO3+NO2 Calculation Pace Analytical Services - Asheville							
Total Nitrogen	**3.8**	mg/L	0.040	1		02/10/25 11:47		
350.1 Ammonia	Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	**0.59**	mg/L	0.10	1		02/05/25 19:46	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Rev 2.0 1993 Preparation Method: EPA 351.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Kjeldahl, Total	**2.7**	mg/L	0.50	1	02/07/25 20:58	02/08/25 05:33	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	**1.1**	mg/L	0.040	1		02/06/25 13:48		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1 Rev 2.0 1993 Preparation Method: EPA 365.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Phosphorus	**0.25**	mg/L	0.050	1	02/05/25 14:51	02/06/25 11:47	7723-14-0	
5220D COD	Analytical Method: SM 5220D-2011 Preparation Method: SM 5220D-2011 Pace Analytical Services - Asheville							
Chemical Oxygen Demand	**361**	mg/L	25.0	1	02/07/25 01:56	02/07/25 06:21		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: US0039765.6753
Pace Project No.: 92777313

Sample: DAL **Lab ID: 92777313002** Collected: 02/01/25 15:00 Received: 02/04/25 11:09 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Rev 4.4 1994 Preparation Method: EPA 200.7 Rev 4.4 1994 Pace Analytical Services - Asheville							
Copper	**45.9**	ug/L	5.0	1	02/04/25 16:47	02/05/25 21:34	7440-50-8	
Lead	**6.9**	ug/L	5.0	1	02/04/25 16:47	02/05/25 21:34	7439-92-1	
Nickel	**14.3**	ug/L	5.0	1	02/04/25 16:47	02/05/25 21:34	7440-02-0	
Zinc	**424**	ug/L	10.0	1	02/04/25 16:47	02/05/25 21:34	7440-66-6	
2540D TSS, Low-Level	Analytical Method: SM 2540D-2011 Pace Analytical Services - Asheville							
Total Suspended Solids	**192**	mg/L	10.0	1		02/05/25 00:32		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B-2011 Pace Analytical Services - Asheville							
pH at 25 Degrees C	**6.8**	Std. Units	0.10	1		02/07/25 14:40		H3
Total Nitrogen Calculation	Analytical Method: TKN+NO3+NO2 Calculation Pace Analytical Services - Asheville							
Total Nitrogen	**3.5**	mg/L	0.040	1		02/10/25 11:47		
350.1 Ammonia	Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	**0.64**	mg/L	0.10	1		02/05/25 19:47	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Rev 2.0 1993 Preparation Method: EPA 351.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Kjeldahl, Total	**3.0**	mg/L	0.50	1	02/07/25 20:58	02/08/25 05:36	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	**0.45**	mg/L	0.040	1		02/06/25 13:51		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1 Rev 2.0 1993 Preparation Method: EPA 365.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Phosphorus	**0.30**	mg/L	0.050	1	02/05/25 14:51	02/06/25 11:48	7723-14-0	
5220D COD	Analytical Method: SM 5220D-2011 Preparation Method: SM 5220D-2011 Pace Analytical Services - Asheville							
Chemical Oxygen Demand	**215**	mg/L	25.0	1	02/07/25 01:56	02/07/25 06:21		

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QUALITY CONTROL DATA

Project: US0039765.6753
Pace Project No.: 92777313

QC Batch: 913648
QC Batch Method: EPA 200.7 Rev 4.4 1994
Analysis Method: EPA 200.7 Rev 4.4 1994
Analysis Description: 200.7 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92777313001, 92777313002

METHOD BLANK: 4696256 Matrix: Water
Associated Lab Samples: 92777313001, 92777313002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	ug/L	ND	5.0	02/05/25 21:12	
Lead	ug/L	ND	5.0	02/05/25 21:12	
Nickel	ug/L	ND	5.0	02/05/25 21:12	
Zinc	ug/L	ND	10.0	02/05/25 21:12	

LABORATORY CONTROL SAMPLE: 4696257

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	ug/L	500	504	101	85-115	
Lead	ug/L	500	504	101	85-115	
Nickel	ug/L	500	511	102	85-115	
Zinc	ug/L	500	513	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4696258 4696259

Parameter	Units	92777313001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Copper	ug/L	112	500	500	728	791	123	136	70-130	8	M1
Lead	ug/L	12.3	500	500	519	565	101	111	70-130	9	
Nickel	ug/L	16.1	500	500	515	560	100	109	70-130	8	
Zinc	ug/L	168	500	500	652	697	97	106	70-130	7	

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QUALITY CONTROL DATA

Project: US0039765.6753
Pace Project No.: 92777313

QC Batch: 913681
QC Batch Method: SM 2540D-2011
Analysis Method: SM 2540D-2011
Analysis Description: 2540D Total Suspended Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92777313001, 92777313002

METHOD BLANK: 4696480 Matrix: Water
Associated Lab Samples: 92777313001, 92777313002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	1.0	02/05/25 00:27	

LABORATORY CONTROL SAMPLE: 4696481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	250	250	100	90-110	

SAMPLE DUPLICATE: 4696644

Parameter	Units	92777055001 Result	Dup Result	RPD	Qualifiers
Total Suspended Solids	mg/L	136	133	2	

SAMPLE DUPLICATE: 4696645

Parameter	Units	92777055002 Result	Dup Result	RPD	Qualifiers
Total Suspended Solids	mg/L	263	274	4	

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QUALITY CONTROL DATA

Project: US0039765.6753
Pace Project No.: 92777313

QC Batch: 914380
QC Batch Method: SM 4500-H+B-2011
Analysis Method: SM 4500-H+B-2011
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92777313001, 92777313002

SAMPLE DUPLICATE: 4700190

Parameter	Units	92776550001 Result	Dup Result	RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.3	7.3	0	H3

SAMPLE DUPLICATE: 4700191

Parameter	Units	92776294001 Result	Dup Result	RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.8	6.8	0	H3

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QUALITY CONTROL DATA

Project: US0039765.6753
Pace Project No.: 92777313

QC Batch: 913910
QC Batch Method: EPA 350.1 Rev 2.0 1993
Analysis Method: EPA 350.1 Rev 2.0 1993
Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92777313001, 92777313002

METHOD BLANK: 4697414 Matrix: Water
Associated Lab Samples: 92777313001, 92777313002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	02/05/25 19:18	

LABORATORY CONTROL SAMPLE: 4697415

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	4.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4697416 4697417

Parameter	Units	92777235001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Ammonia	mg/L	ND	5	5	5.2	5.2	103	102	90-110	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4697418 4697419

Parameter	Units	92777235002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Ammonia	mg/L	ND	5	5	5.0	5.0	100	100	90-110	0	

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QUALITY CONTROL DATA

Project: US0039765.6753
Pace Project No.: 92777313

QC Batch: 914636
QC Batch Method: EPA 351.2 Rev 2.0 1993
Analysis Method: EPA 351.2 Rev 2.0 1993
Analysis Description: 351.2 TKN
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92777313001, 92777313002

METHOD BLANK: 4701370 Matrix: Water
Associated Lab Samples: 92777313001, 92777313002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.50	02/08/25 06:01	

LABORATORY CONTROL SAMPLE: 4701371

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	10	11.0	110	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4701372 4701373

Parameter	Units	92777313001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	2.7	10	10	13.3	13.1	106	104	90-110	1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4701374 4701375

Parameter	Units	92777313002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	3.0	10	10	12.9	12.9	99	99	90-110	0	

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QUALITY CONTROL DATA

Project: US0039765.6753
Pace Project No.: 92777313

QC Batch: 914155
QC Batch Method: EPA 353.2 Rev 2.0 1993
Analysis Method: EPA 353.2 Rev 2.0 1993
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92777313001, 92777313002

METHOD BLANK: 4698649 Matrix: Water
Associated Lab Samples: 92777313001, 92777313002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	02/06/25 13:32	

LABORATORY CONTROL SAMPLE: 4698650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4698651 4698652

Parameter	Units	92777112001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	2.5	5.0	4.9	100	96	90-110	2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4698653 4698654

Parameter	Units	92777235001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.17	2.5	2.5	2.4	2.7	90	99	90-110	9	

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QUALITY CONTROL DATA

Project: US0039765.6753
Pace Project No.: 92777313

QC Batch: 913651
QC Batch Method: EPA 365.1 Rev 2.0 1993
Analysis Method: EPA 365.1 Rev 2.0 1993
Analysis Description: 365.1 Phosphorus, Total
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92777313001, 92777313002

METHOD BLANK: 4696307 Matrix: Water
Associated Lab Samples: 92777313001, 92777313002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	02/06/25 11:06	

LABORATORY CONTROL SAMPLE: 4696308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.5	2.6	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4696309 4696310

Parameter	Units	92777061001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Phosphorus	mg/L	0.91	2.5	2.5	3.5	3.4	104	100	90-110	3	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4696311 4696312

Parameter	Units	92777061002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Phosphorus	mg/L	0.86	2.5	2.5	3.3	3.3	97	97	90-110	1	

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QUALITY CONTROL DATA

Project: US0039765.6753
Pace Project No.: 92777313

QC Batch: 914456
QC Batch Method: SM 5220D-2011
Analysis Method: SM 5220D-2011
Analysis Description: 5220D COD
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92777313001, 92777313002

METHOD BLANK: 4700502 Matrix: Water
Associated Lab Samples: 92777313001, 92777313002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	02/07/25 06:17	

LABORATORY CONTROL SAMPLE: 4700503

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	774	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4700504 4700505

Parameter	Units	92777066001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chemical Oxygen Demand	mg/L	125	100	100	280	285	155	160	90-110	2	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4700506 4700507

Parameter	Units	92777336003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chemical Oxygen Demand	mg/L	45.7	100	100	157	152	111	107	90-110	3	M1

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QUALIFIERS

Project: US0039765.6753
Pace Project No.: 92777313

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

H3	Sample was received or analysis requested beyond the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: US0039765.6753
Pace Project No.: 92777313

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92777313001	**MAN**	EPA 200.7 Rev 4.4 1994	913648	EPA 200.7 Rev 4.4 1994	913703
92777313002	**DAL**	EPA 200.7 Rev 4.4 1994	913648	EPA 200.7 Rev 4.4 1994	913703
92777313001	**MAN**	SM 2540D-2011	913681		
92777313002	**DAL**	SM 2540D-2011	913681		
92777313001	**MAN**	SM 4500-H+B-2011	914380		
92777313002	**DAL**	SM 4500-H+B-2011	914380		
92777313001	**MAN**	TKN+NO3+NO2 Calculation	914994		
92777313002	**DAL**	TKN+NO3+NO2 Calculation	914994		
92777313001	**MAN**	EPA 350.1 Rev 2.0 1993	913910		
92777313002	**DAL**	EPA 350.1 Rev 2.0 1993	913910		
92777313001	**MAN**	EPA 351.2 Rev 2.0 1993	914636	EPA 351.2 Rev 2.0 1993	914770
92777313002	**DAL**	EPA 351.2 Rev 2.0 1993	914636	EPA 351.2 Rev 2.0 1993	914770
92777313001	**MAN**	EPA 353.2 Rev 2.0 1993	914155		
92777313002	**DAL**	EPA 353.2 Rev 2.0 1993	914155		
92777313001	**MAN**	EPA 365.1 Rev 2.0 1993	913651	EPA 365.1 Rev 2.0 1993	914151
92777313002	**DAL**	EPA 365.1 Rev 2.0 1993	913651	EPA 365.1 Rev 2.0 1993	914151
92777313001	**MAN**	SM 5220D-2011	914456	SM 5220D-2011	914469
92777313002	**DAL**	SM 5220D-2011	914456	SM 5220D-2011	914469

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WO#: 92777313

92777313

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

lumber or

NLY

Company: Wood/WSP	Billing Information: Attn: lynne.mowery@wsp.com
Address: 13530 Dulles Technology Dr #300, Herndon, VA 20171	
Report To: Ilana Ton	Email To: ilana.ton@wsp.com
Copy To:	Site Collection Info/Address: Prince William County / Manassas, VA and Woodbridge, VA
Customer Project Name/Number: US0039765.6753, ORG 7526, GL Code 5730-00	State: VA; County/City: ; Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 703 488 3778 Email: ilana.ton@wsp.com	Site/Facility ID #:
Collected By (print): RS	Purchase Order #: Quote #:
Collected By (signature):	Turnaround Date Required:
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [X] 5 Day

Compliance Monitoring?	[ ] Yes [ ] No
DW PWS ID #:	
DW Location Code:	
Immediately Packed on Ice:	[X] Yes [ ] No
Field Filtered (if applicable):	[ ] Yes [ ] No
Analysis:	_____

* Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: U | 1 | 2 | 2 | U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Lab Project Manager:

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	SM 2540D-2015 TSS	200.7 Metals	EPA 351.2 TKN/ EPA 353.2 NO2 + NO3	EPA 350.1 Ammonia/EPA 365.1 Phosphorus/ SM 5220D-2011 COD	SM 4500-H+B-2011 pH
MAN	OT-Water	Comp	2/1/25	1530				5	P	X	X	x	x	x
DAL	OT-Water	Comp	2/1/25	1500				5	P	X	X	x	x	x

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: 4229A
Sample pH Acceptable Y N NA
pH Strips: 239722AV
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:
Prince William County/
US0039765.6753, ORG 7526, GL Code 5730-00
Pace PM Taylor Cannon
200.7: Cu, Pb, Ni, Zn

Type of Ice Used: (Wet) Blue Dry None

Packing Material Used: None

Radchem sample(s) screened (<500 cpm): Y N (NA)

SHORT HOLDS PRESENT (<72 hours): Y (N) N/A

Lab Tracking #:

Samples received via: (FEDEX) UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N (NA)
Therm ID#: 937090
Cooler 1 Temp Upon Receipt: 4.5 oC
Cooler 1 Therm Corr. Factor: 0.2 oC
Cooler 1 Corrected Temp: 4.7 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Ilana Ton/WSP	2/3/25/1710	A.Rucker/PACE/AVL	2-4-25 1109
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N (NA)
HCL MeOH TSP Other

Non Conformance(s): YES / (NO)

Page: 1 of: 1

DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg
**Bottom half of box is to list number of bottles
***Check all unpreserved Nitrates for chlorine

Project #

WO#: 92777313

PM: TMC Due Date: 02/11/25
CLIENT: 92-Amec VA

Laboratory Receiving Location: Asheville [X] Eden [ ] Greenwood [ ] Huntersville [ ] Raleigh [ ] Mechanicsville [ ] Atlanta [ ] Kernersville [ ]

Client Wood / WSP (Profile) EZ (Circle one) 18501 Notes Line - 1 Title - US00039765.6753

Items	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)		BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9H-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		BP3R-250 mL Plastic (NH4)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG8U-40 mL Amber Unpreserved vials (N/A)
CC	AS			AS		AS	AS																							
1	1			1		2	1																							
2	1			1		2	1																							
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Wet Weather Monitoring Report

Second Quarter 2025 (April 1 – June 30)

Event Date: April 10 – April 12, 2025

Prepared for:

Prince William County Department of Public Works
5 County Complex Court, Suite 170
Prince William, Virginia 22192

Prepared by:

WSP USA Environment & Infrastructure, Inc.
13530 Dulles Technology Drive, Suite 300
Herndon, VA 20171
(703) 742-5700

July 15, 2025
Project No. US0039765.6753

1.0 INTRODUCTION

WSP USA Environment & Infrastructure Solutions, Inc. (WSP) conducts quarterly wet weather monitoring at two outfall sites to support Prince William County in compliance with the requirements of the Virginia Stormwater Management Program (VSMP) Municipal Separate Storm Sewer System (MS4) Permit (Number VA0088595), issued by the Virginia Department of Environmental Quality (VDEQ) to Prince William County, Virginia. This report discusses the results of the Q2 sampling event that occurred from April 10, 2025, to April 12, 2025. as well as the findings from the water quality analysis results of the sampling event.

2.0 METHODS

Flow rate data were collected at the outfalls by an ISCO 6712 automated sampler coupled with an ISCO 730 bubbler flow module, installed with a Scissors Ring. Flow rate over the course of the sampling events were electronically calculated using ISCO Flowlink 5.1 software, which utilizes the Manning Equation to convert flow level and velocity to flow rate. Replacement ISCO 730 bubble flow modules have been installed at both sites beginning in Q1 of 2023.

SITE #941; MANASSAS, VA

Site #941 is located near 11850 Livingston Road. The site receives a total of 52 acres of upstream drainage area from a land surface that is 34% impervious. County data documents that the pipe is 54 inches in diameter with a slope of 0.03437. This site is subject to backwater conditions as water levels within the downstream pond have risen over the previous two years. Maintenance is recommended to ensure the continued efficacy of the monitoring program at this site. Backwater at the site extends too far upstream into the pipe and would require confined space entry to install equipment. Accommodations are made in the sampling program, as described in further detail in the following section.

SITE #4684; DALE CITY, VA

Site #4684 is located near the corner of Potomac Center Blvd. and Sheffield Hill Way, north of Eastbourne Drive. It drains into a regional detention pond for the Potomac Club residential development. Upstream drainage totals 51 acres, 21% of which is from impervious surfaces. The pipe is 54 inches in diameter with a slope of 0.002593. Storm events at this site are flashy in nature, which is accounted for by programming shorter sample intervals, if necessary, based upon forecast conditions.

The automated samplers were deployed when a qualifying storm event (>0.3 inches precipitation) was forecast for the two monitoring sites. WSP staff deployed the samplers at both sites on April 10, programmed the samplers' automated, discrete sampling sequence to initiate upon flow levels exceeding current water levels in each pipe.

Rain gage data were compiled from monitoring stations in the Weather Underground monitoring network. The data are accessible online and provided hourly precipitation totals over the monitoring period. Gages are prioritized based on the makeup of the data record (reporting interval) and proximity to monitoring locations.

Following the storm event, staff retrieved the samples and prepared them for shipment to Pace Analytical for water quality analysis. To compile the complete set of discrete samples into a single flow-weighted composite, Flowlink software calculated the storm event discharge using the Manning Equation:

Equation 1: Manning Equation used to calculate flow rate.

$$Q = VA = \left(\frac{1.49}{n}\right) A R^{\frac{2}{3}} \sqrt{S} \text{ [US]}$$

Q = Flow rate
A = Flow area
V = Avg. velocity
S = Water surface slope
R = Hydraulic Radius
n = Roughness coefficient
1.49 = English units conversion factor

Channel slopes were determined using invert elevations reported in the stormwater infrastructure geospatial data provided by Prince William County. Using flow levels reported by the ISCO samplers, the area and hydraulic radius inside the sampled outfalls could be computed for a given time interval. A Manning's *n* value of 0.013 was assumed for the concrete pipes[1]. Two sampling programs were implemented to accommodate for different conditions between the sites.

Manassas Sampling Program

Although a replacement bubbler module has been installed, the ponded site conditions continue to provide inaccurate water level readings at the Manassas site and fluctuates during static water conditions. To accommodate the unreliable equipment readings due to the site conditions, the ISCO sampler at the Manassas site was programed to collect on a time-paced program. Samples were collected at a pre-set time interval over the course of the storm.

During the event, the sampling was set as a time-paced program to collect discrete samples every 30 minutes, then composited into a single container.

Dale City Sampling Program

During the event, the sampler at Dale City was programed to collect on a time-paced program. The sampler collected discrete samples every 30 minutes, then composited into a single container.

[1] Chow, V.T. (1959) Open Channel Hydraulics. McGraw-Hill, New York.

3.0 RESULTS

SITE #941; MANASSAS, VA

Sampling occurred from 15:50 on April 11, 2025 to 3:20 on April 12, 2025. Weather Underground Station KVAMANAS225 in Manassas, VA recorded 1.19 inches of precipitation over this same period. The previous storm event was recorded on April 7, 2025, producing 0.82 inches of precipitation.

SITE #4684; DALE CITY, VA

Sampling occurred from 8:40 on April 11, 2025 to 20:10 on April 11, 2025. Weather Underground Station KVAWOODB86 in Woodbridge, VA recorded 1.74 inches of precipitation over this same period. The previous storm event was recorded on April 7, 2025, producing 1.35 inches of precipitation.

Samples from both sites were retained under refrigeration until they were composited and shipped overnight to Pace Analytical Services in Asheville, NC.

3.1 FLOW DATA

SITE #941; MANASSAS, VA

Flow rate reached 15.906 cfs. The storm event hydrograph compared with cumulative volume can be seen in Figure 1. Table 1 lists the proportion of each sample mixed with the flow-weighted composite. The flow-weighted composite volume was adjusted to incorporate representative volumes from the collected samples.

Flow rate and volume are calculated by measuring changes in water level over time. Backwater effects are impacting flow meter readings at the outfall point of discharge. Backwater conditions cause elevated readings for flow volume and flow rate.

Figure 1: Flow data over time for the storm event at Site #941 on April 11 – April 12, 2025

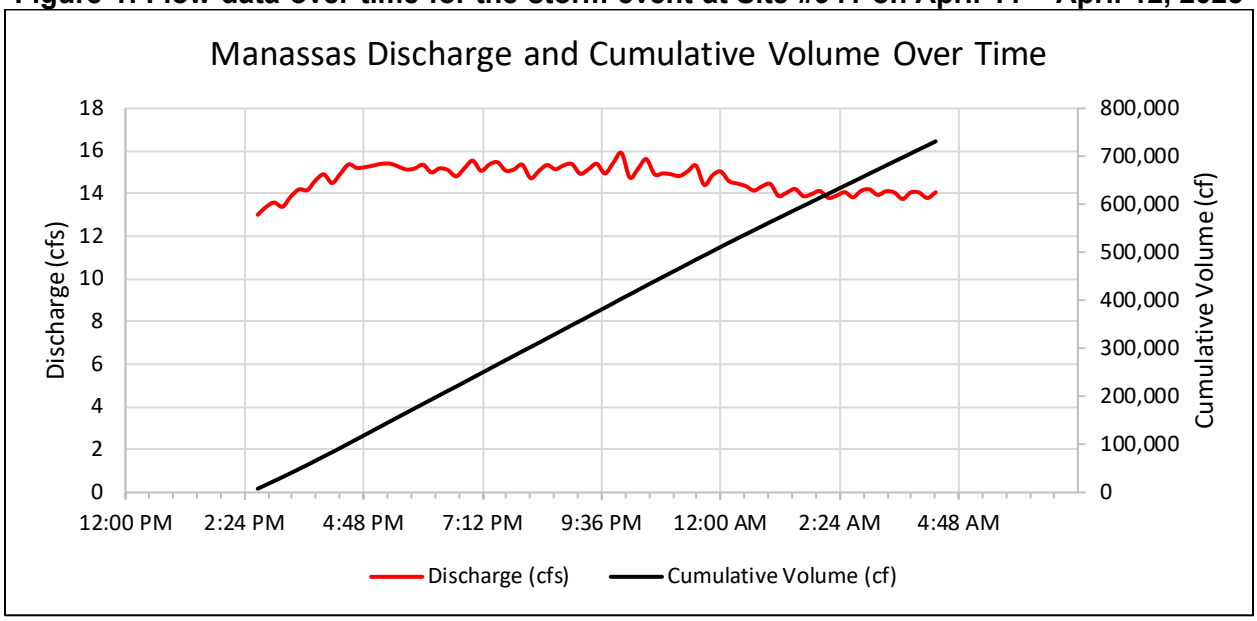


Table 1: Summary of Flow Weighted Composite – Site #941

Bottle #	Time of Sample	Volume (cf)	% of Flow	Flow Weighted Volume (mL)*
1	4/11/2025 15:50	8777.56	4.11%	205.3
2	4/11/2025 16:20	8961.74	4.19%	209.6
3	4/11/2025 16:50	9146.87	4.28%	213.9
4	4/11/2025 17:20	9243.72	4.32%	216.2
5	4/11/2025 17:50	9110.29	4.26%	213.1
6	4/11/2025 18:20	9112.9	4.26%	213.1
7	4/11/2025 18:50	9115.52	4.26%	213.2
8	4/11/2025 19:20	9217.52	4.31%	215.6
9	4/11/2025 19:50	9084.19	4.25%	212.5
10	4/11/2025 20:20	9037.24	4.23%	211.4
11	4/11/2025 20:50	9196.57	4.30%	215.1
12	4/11/2025 21:20	9086.8	4.25%	212.5
13	4/11/2025 21:50	9267.32	4.33%	216.7
14	4/11/2025 22:20	9102.46	4.26%	212.9
15	4/11/2025 22:50	8972.14	4.20%	209.8
16	4/11/2025 23:20	9026.82	4.22%	211.1
17	4/11/2025 23:50	8917.55	4.17%	208.6
18	4/12/2025 0:20	8684.55	4.06%	203.1
19	4/12/2025 0:50	8607.25	4.03%	201.3
20	4/12/2025 1:20	8432.71	3.94%	197.2
21	4/12/2025 1:50	8389.23	3.92%	196.2
22	4/12/2025 2:20	8343.26	3.90%	195.1
23	4/12/2025 2:50	8483.94	3.97%	198.4
24	4/12/2025 3:20	8468.57	3.96%	198.1

*5.0 L sample

SITE #4684; DALE CITY, VA

Flow rate reached 8.589 cfs. The storm event hydrograph compared with cumulative volume can be seen in Figure 2. Table 2 lists the proportion of each sample mixed with the flow-weighted composite. The flow-weighted composite volume was adjusted to incorporate representative volumes from the collected samples.

Figure 2: Flow data over time for the storm event at Site #4684 on April 11, 2025

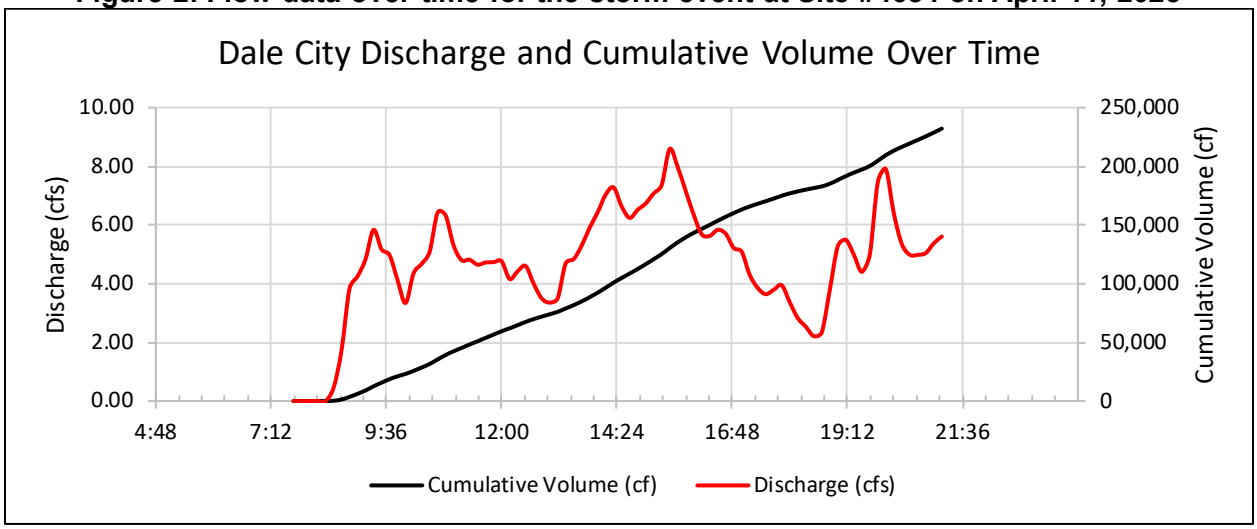


Table 2: Summary of Flow Weighted Composite – Site #4684

Bottle #	Time of Sample	Volume (cf)	% of Flow	Flow Weighted Volume (mL)*
1	4/11/2025 8:40	1034.49	1.5%	72.7
2	4/11/2025 9:10	2901.06	4.1%	203.7
3	4/11/2025 9:40	2984.7	4.2%	209.6
4	4/11/2025 10:10	2612.99	3.7%	183.5
5	4/11/2025 10:40	3852.07	5.4%	270.5
6	4/11/2025 11:10	2880.34	4.0%	202.3
7	4/11/2025 11:40	2834	4.0%	199.0
8	4/11/2025 12:10	2496.32	3.5%	175.3
9	4/11/2025 12:40	2401.2	3.4%	168.6
10	4/11/2025 13:10	2100.78	3.0%	147.5
11	4/11/2025 13:40	3177.35	4.5%	223.2
12	4/11/2025 14:10	4220.53	5.9%	296.4
13	4/11/2025 14:40	3744.87	5.3%	263.0
14	4/11/2025 15:10	4245.7	6.0%	298.2
15	4/11/2025 15:40	4785.12	6.7%	336.1
16	4/11/2025 16:10	3409.91	4.8%	239.5
17	4/11/2025 16:40	3421.2	4.8%	240.3
18	4/11/2025 17:10	2578.68	3.6%	181.1
19	4/11/2025 17:40	2275.8	3.2%	159.8
20	4/11/2025 18:10	1696.83	2.4%	119.2
21	4/11/2025 18:40	1404.33	2.0%	98.6
22	4/11/2025 19:10	3298.12	4.6%	231.6
23	4/11/2025 19:40	2995.24	4.2%	210.4
24	4/11/2025 20:10	3840.08	5.4%	269.7

*5.0 L sample

3.2 LABORATORY ANALYTICAL RESULTS

Samples were sent to Pace Analytical Services, Inc. lab in Asheville, NC for analysis, with Analytical Parameters tested listed in **Table 3**.

Table 3: Analytical Parameters

Analyte	Analysis Method
Copper	EPA 200.7
Lead	EPA 200.7
Nickel	EPA 200.7
Zinc	EPA 200.7
Total Suspended Solids	SM 2540D
pH	EPA 9040
Ammonia	EPA 350.1 1993 Rev 2.0
Total Kjeldahl Nitrogen	EPA 351.2
Nitrate + Nitrite Nitrogen	EPA 353.2
Total Phosphorus	EPA 365.1
Chemical Oxygen Demand	SM 5220D

Table 4: Results of Water Quality Analysis

	Analyte	Analyte Value*	Analyte Unit	Reporting Limit	Exceedance Criterion	Criterion Basis
Manassas (#941)	Copper	15.4	µg/L	6.0	13	a
	Lead	ND	µg/L	10.0	120	a
	Nickel	ND	µg/L	5.0	180	a
	Zinc	63.7	µg/L	20.0	120	a
	Total Suspended Solids	49.2	mg/L	4.0	100	b
	Nitrogen, Ammonia	0.34	mg/L	0.10	-	-
	Nitrogen, Kjeldahl, Total	1.1	mg/L	0.50	-	-
	Nitrogen, NO_2 plus NO_3	0.82	mg/L	0.040	-	-
	Total Nitrogen	1.9	mg/L	0.040	2.2	c
	Phosphorus, Total	0.14	mg/L	0.050	2	b
	Chemical Oxygen Demand	46.2	mg/L	25	120	b
	pH	7.4	Std. Units	0.10	6.0-9.0	d
Dale City (#4684)	Copper	ND	µg/L	6.0	13	a
	Lead	ND	µg/L	10.0	120	a
	Nickel	ND	µg/L	5.0	180	a
	Zinc	42.3	µg/L	20.0	120	a
	Total Suspended Solids	22.8	mg/L	2.0	100	b
	Nitrogen, Ammonia	0.10	mg/L	0.10	-	-
	Nitrogen, Kjeldahl, Total	ND	mg/L	0.50	-	-
	Nitrogen, NO_2 plus NO_3	0.20	mg/L	0.040	-	-
	Total Nitrogen	0.61	mg/L	0.040	2.2	c
	Phosphorus, Total	0.078	mg/L	0.050	2	b
	Chemical Oxygen Demand	30.1	mg/L	25.0	120	b
	pH	6.8	Std. Units	0.10	6.0-9.0	d

[a] State Water Quality Control Board Acute Standards for Surface Water Quality. Value is based on an assumed hardness of 100 mg/L.
[b] Based on benchmark criteria for the VPDES Industrial Stormwater General Permit.
[c] The sum of Nitrogen as Ammonia, NO_2, NO_3, and Total Kjeldahl Nitrogen.
[d] Based on numeric effluent limitations noted in the VPDES Permit for Discharge of Stormwater Associated with Industrial Activity.
* Values highlighted in red were found to be in exceedance of their respective criterion.
ND = The analyte was not detected above specified reporting limit.

4.0 SUMMARY

There was an exceedance for copper at the Manassas (#941) site during the 2025 Q2 sampling event. Exceedance tracking for parameters of concern are illustrated in **Figure 3** below.

Figure 3: Exceedance Tracking for the Wet Weather Monitoring Program

Manassas (#941)

	2016		2017				2018				2019				2020				2021				2022				2023				2024				2025	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Copper	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x		x	x	x	x	x	x			x	x	x
Lead																																				
Nickel																																				
Zinc	x		x	x	x	x	x	x							x	x							x	x											x	
Total Suspended Solids						x	x								x	x							x	x						x					x	
Total Nitrogen					x	x	x				x												x	x			x								x	
Phosphorus, Total																																				
Chemical Oxygen Demand		x				x	x								x								x	x											x	
pH						x												x																		

Dale City (#4684)

	2016		2017				2018				2019				2020				2021				2022				2023				2024				2025	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2*	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Copper	x		x	x	x	x	x	--		x	x											x	x	x				x			x				x	
Lead								--																												
Nickel								--																												
Zinc			x		x	x	x	--																							x				x	
Total Suspended Solids						x		--																											x	
Total Nitrogen	x	x	x	x		x	x	--			x																			x					x	
Phosphorus, Total								--																												
Chemical Oxygen Demand						x	x	--																											x	
pH		x		x		x		--									x					x														

APPENDIX A

PHOTO LOG OF SITE CONDITIONS

Wet Weather Monitoring Q2 Report
Prince William County, VA
Photographic Log

	**Site:** Dale City Station **Photo: 1** **Date: 4/10/2025** **Description:** Dale City sampler set up overview.
	**Site:** Dale City Station **Photo: 2** **Date: 4/10/2025** **Description:** Dale City outfall, downstream.

	**Site:** Manassas Station **Photo: 3** **Date: 4/10/2025** **Description:** Manassas sampler set up overview.
	**Site: Manassas Station** **Photo: 4** **Date: 4/10/2025** **Description:** Manassas outfall. Note ponded water and graffiti on headwall.

APPENDIX B

WATER QUALITY LABORATORY RESULTS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

April 24, 2025

Ilana Ton
WSP USA
13530 Dulles Technology Drive
Suite 300
Herndon, VA 20171

RE: Project: Prince William County
Pace Project No.: 92791001

Dear Ilana Ton:

Enclosed are the analytical results for sample(s) received by the laboratory on April 15, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Beaver

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Taylor M Cannon
taylor.cannon@pacelabs.com
704-977-0943
Project Manager

Enclosures

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: Prince William County
Pace Project No.: 92791001

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Beaver
225 Industrial Park Road, Beaver, WV 25813
New York DOH Lab ID12167 SN69208
Virginia VELAP 460148
West Virginia DEP 060
West Virginia DHHR 00412CM
North Carolina DEQ 466
Kentucky Wastewater Certification KY90039
Pennsylvania DEP 68-00839

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SAMPLE SUMMARY

Project: Prince William County
Pace Project No.: 92791001

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92791001001	**DAL**	Water	04/13/25 13:50	04/15/25 11:10
92791001002	**MAN**	Water	04/13/25 13:10	04/15/25 11:10

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SAMPLE ANALYTE COUNT

Project: Prince William County
Pace Project No.: 92791001

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92791001001	**DAL**	EPA 200.7	AGB	4	PASI-BV
		SM 2540D-2011	CDM	1	PASI-A
		EPA 9040C	SMS	1	PASI-A
		TKN+NO3+NO2 Calculation	KDF1	1	PASI-A
		EPA 350.1 Rev 2.0 1993	NCF	1	PASI-A
		EPA 351.2 Rev 2.0 1993	MFO	1	PASI-A
		EPA 353.2 Rev 2.0 1993	EGC	1	PASI-A
		EPA 365.1 Rev 2.0 1993	ZJP	1	PASI-A
		SM 5220D-2011	YEG	1	PASI-A
92791001002	**MAN**	EPA 200.7	AGB	4	PASI-BV
		SM 2540D-2011	CDM	1	PASI-A
		EPA 9040C	SMS	1	PASI-A
		TKN+NO3+NO2 Calculation	KDF1	1	PASI-A
		EPA 350.1 Rev 2.0 1993	NCF	1	PASI-A
		EPA 351.2 Rev 2.0 1993	MFO	1	PASI-A
		EPA 353.2 Rev 2.0 1993	EGC	1	PASI-A
		EPA 365.1 Rev 2.0 1993	ZJP	1	PASI-A
		SM 5220D-2011	YEG	1	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-BV = Pace Analytical Services - Beaver

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ANALYTICAL RESULTS

Project: Prince William County
Pace Project No.: 92791001

Sample: DAL **Lab ID: 92791001001** Collected: 04/13/25 13:50 Received: 04/15/25 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
BVR 200.7 Metals Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.2 Pace Analytical Services - Beaver							
Copper	ND	ug/L	6.0	1	04/22/25 01:12	04/22/25 14:50	7440-50-8	
Lead	ND	ug/L	10.0	1	04/22/25 01:12	04/22/25 14:50	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/22/25 01:12	04/22/25 14:50	7440-02-0	
Zinc	**42.3**	ug/L	20.0	1	04/22/25 01:12	04/22/25 14:50	7440-66-6	
2540D TSS, Low-Level	Analytical Method: SM 2540D-2011 Pace Analytical Services - Asheville							
Total Suspended Solids	**22.8**	mg/L	2.0	1		04/18/25 13:07		
9040 pH	Analytical Method: EPA 9040C Pace Analytical Services - Asheville							
pH at 25 Degrees C	**6.8**	Std. Units	0.10	1		04/24/25 10:24		H3
Total Nitrogen Calculation	Analytical Method: TKN+NO3+NO2 Calculation Pace Analytical Services - Asheville							
Total Nitrogen	**0.61**	mg/L	0.040	1		04/23/25 12:22		
350.1 Ammonia	Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	**0.10**	mg/L	0.10	1		04/21/25 20:31	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Rev 2.0 1993 Preparation Method: EPA 351.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Kjeldahl, Total	ND	mg/L	0.50	1	04/22/25 16:16	04/23/25 08:37	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	**0.20**	mg/L	0.040	1		04/16/25 10:33		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1 Rev 2.0 1993 Preparation Method: EPA 365.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Phosphorus	**0.078**	mg/L	0.050	1	04/22/25 12:33	04/23/25 09:36	7723-14-0	
5220D COD	Analytical Method: SM 5220D-2011 Preparation Method: SM 5220D-2011 Pace Analytical Services - Asheville							
Chemical Oxygen Demand	**30.1**	mg/L	25.0	1	04/22/25 14:16	04/22/25 17:31		

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ANALYTICAL RESULTS

Project: Prince William County
Pace Project No.: 92791001

Sample: MAN **Lab ID: 92791001002** Collected: 04/13/25 13:10 Received: 04/15/25 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
BVR 200.7 Metals Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.2 Pace Analytical Services - Beaver							
Copper	**15.4**	ug/L	6.0	1	04/22/25 01:12	04/22/25 14:52	7440-50-8	
Lead	ND	ug/L	10.0	1	04/22/25 01:12	04/22/25 14:52	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/22/25 01:12	04/22/25 14:52	7440-02-0	
Zinc	**63.7**	ug/L	20.0	1	04/22/25 01:12	04/22/25 14:52	7440-66-6	
2540D TSS, Low-Level	Analytical Method: SM 2540D-2011 Pace Analytical Services - Asheville							
Total Suspended Solids	**49.2**	mg/L	4.0	1		04/18/25 13:07		
9040 pH	Analytical Method: EPA 9040C Pace Analytical Services - Asheville							
pH at 25 Degrees C	**7.4**	Std. Units	0.10	1		04/24/25 10:28		H3
Total Nitrogen Calculation	Analytical Method: TKN+NO3+NO2 Calculation Pace Analytical Services - Asheville							
Total Nitrogen	**1.9**	mg/L	0.040	1		04/23/25 12:22		
350.1 Ammonia	Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	**0.34**	mg/L	0.10	1		04/21/25 20:32	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Rev 2.0 1993 Preparation Method: EPA 351.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Kjeldahl, Total	**1.1**	mg/L	0.50	1	04/22/25 16:16	04/23/25 08:38	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	**0.82**	mg/L	0.040	1		04/16/25 10:37		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1 Rev 2.0 1993 Preparation Method: EPA 365.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Phosphorus	**0.14**	mg/L	0.050	1	04/22/25 12:33	04/23/25 09:37	7723-14-0	
5220D COD	Analytical Method: SM 5220D-2011 Preparation Method: SM 5220D-2011 Pace Analytical Services - Asheville							
Chemical Oxygen Demand	**46.2**	mg/L	25.0	1	04/22/25 14:16	04/22/25 17:31		

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QUALITY CONTROL DATA

Project: Prince William County
Pace Project No.: 92791001

QC Batch: 740960
QC Batch Method: EPA 200.2
Analysis Method: EPA 200.7
Analysis Description: BVR 200.7 Metals, Total
Laboratory: Pace Analytical Services - Beaver
Associated Lab Samples: 92791001001, 92791001002

METHOD BLANK: 3606096 Matrix: Water
Associated Lab Samples: 92791001001, 92791001002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	ug/L	ND	6.0	04/22/25 14:33	
Lead	ug/L	ND	10.0	04/22/25 14:33	
Nickel	ug/L	ND	5.0	04/22/25 14:33	
Zinc	ug/L	ND	20.0	04/22/25 14:33	

LABORATORY CONTROL SAMPLE: 3606097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	ug/L	2000	1980	99	85-115	
Lead	ug/L	2000	1930	97	85-115	
Nickel	ug/L	2000	2020	101	85-115	
Zinc	ug/L	2000	1970	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606098 3606099

Parameter	Units	92791350001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	ug/L	ND	2000	2000	2020	2040	101	102	70-130	1	20	
Lead	ug/L	ND	2000	2000	1920	1930	96	97	70-130	1	20	
Nickel	ug/L	ND	2000	2000	2010	2030	101	101	70-130	1	20	
Zinc	ug/L	80.5	2000	2000	2040	2060	98	99	70-130	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606112 3606113

Parameter	Units	30772762002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	ug/L	<0.0056 mg/L	2000	2000	2000	2000	100	100	70-130	0	20	
Lead	ug/L	<0.0048 mg/L	2000	2000	1940	1940	97	97	70-130	0	20	
Nickel	ug/L	<0.0026 mg/L	2000	2000	2010	2020	100	101	70-130	0	20	
Zinc	ug/L	<0.011 mg/L	2000	2000	1960	1970	98	98	70-130	0	20	

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QUALITY CONTROL DATA

Project: Prince William County
Pace Project No.: 92791001

QC Batch: 930155
QC Batch Method: SM 2540D-2011
Analysis Method: SM 2540D-2011
Analysis Description: 2540D Total Suspended Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92791001001, 92791001002

METHOD BLANK: 4778801 Matrix: Water
Associated Lab Samples: 92791001001, 92791001002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	1.0	04/18/25 13:06	

LABORATORY CONTROL SAMPLE: 4778802

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	250	250	100	90-110	

SAMPLE DUPLICATE: 4779530

Parameter	Units	92791001002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	49.2	50.8	3	10	

SAMPLE DUPLICATE: 4779531

Parameter	Units	92791271001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	580	580	0	10	

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QUALITY CONTROL DATA

Project: Prince William County
Pace Project No.: 92791001

QC Batch: 931330
QC Batch Method: EPA 9040C
Analysis Method: EPA 9040C
Analysis Description: 9040 pH
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92791001001, 92791001002

SAMPLE DUPLICATE: 4784649

Parameter	Units	92790635001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.6	6.6	0	10	H3

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QUALITY CONTROL DATA

Project: Prince William County
Pace Project No.: 92791001

QC Batch: 930592
QC Batch Method: EPA 350.1 Rev 2.0 1993
Analysis Method: EPA 350.1 Rev 2.0 1993
Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92791001001, 92791001002

METHOD BLANK: 4780986 Matrix: Water
Associated Lab Samples: 92791001001, 92791001002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	04/21/25 20:03	

LABORATORY CONTROL SAMPLE: 4780987

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4780988 4780989

Parameter	Units	92790441001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	29.5	5	5	32.5	36.2	59	134	90-110	11	10	M1,R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4780990 4780991

Parameter	Units	92790808002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	0.36	5	5	5.2	5.2	97	98	90-110	0	10	

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QUALITY CONTROL DATA

Project: Prince William County
Pace Project No.: 92791001

QC Batch: 930777
QC Batch Method: EPA 351.2 Rev 2.0 1993
Analysis Method: EPA 351.2 Rev 2.0 1993
Analysis Description: 351.2 TKN
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92791001001, 92791001002

METHOD BLANK: 4781598 Matrix: Water
Associated Lab Samples: 92791001001, 92791001002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.50	04/23/25 08:34	

LABORATORY CONTROL SAMPLE: 4781599

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	10	9.3	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4781600 4781601

Parameter	Units	92791052001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	49.0	10	10	54.0	58.5	50	96	90-110	8	10	M1

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QUALITY CONTROL DATA

Project: Prince William County
Pace Project No.: 92791001

QC Batch: 929455
QC Batch Method: EPA 353.2 Rev 2.0 1993
Analysis Method: EPA 353.2 Rev 2.0 1993
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92791001001, 92791001002

METHOD BLANK: 4774819 Matrix: Water
Associated Lab Samples: 92791001001, 92791001002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	04/16/25 10:54	

LABORATORY CONTROL SAMPLE: 4774820

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.6	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4774821 4774822

Parameter	Units	92791001001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.20	2.5	2.5	2.9	2.9	107	108	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4774823 4774824

Parameter	Units	92791001002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.82	2.5	2.5	3.5	3.5	109	109	90-110	0	10	

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QUALITY CONTROL DATA

Project: Prince William County
Pace Project No.: 92791001

QC Batch: 930573
QC Batch Method: EPA 365.1 Rev 2.0 1993
Analysis Method: EPA 365.1 Rev 2.0 1993
Analysis Description: 365.1 Phosphorus, Total
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92791001001, 92791001002

METHOD BLANK: 4780854 Matrix: Water
Associated Lab Samples: 92791001001, 92791001002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	04/23/25 09:17	

LABORATORY CONTROL SAMPLE: 4780855

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.5	2.6	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4780856 4780857

Parameter	Units	92791062001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	ND	2.5	2.5	2.6	2.6	103	103	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4780858 4780859

Parameter	Units	92791062002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	ND	2.5	2.5	2.6	2.6	104	104	90-110	0	10	

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QUALITY CONTROL DATA

Project: Prince William County
Pace Project No.: 92791001

QC Batch: 930812
QC Batch Method: SM 5220D-2011
Analysis Method: SM 5220D-2011
Analysis Description: 5220D COD
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92791001001, 92791001002

METHOD BLANK: 4781797 Matrix: Water
Associated Lab Samples: 92791001001, 92791001002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	04/22/25 17:25	

LABORATORY CONTROL SAMPLE: 4781798

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	759	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4781799 4781800

Parameter	Units	92790434001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	239	100	100	336	345	97	106	90-110	3	3	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4781801 4781802

Parameter	Units	92790437001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	32.4	100	100	140	159	108	126	90-110	12	3	M1,R1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: Prince William County
Pace Project No.: 92791001

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

H3	Sample was received or analysis requested beyond the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Prince William County
Pace Project No.: 92791001

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92791001001	**DAL**	EPA 200.2	740960	EPA 200.7	741139
92791001002	**MAN**	EPA 200.2	740960	EPA 200.7	741139
92791001001	**DAL**	SM 2540D-2011	930155		
92791001002	**MAN**	SM 2540D-2011	930155		
92791001001	**DAL**	EPA 9040C	931330		
92791001002	**MAN**	EPA 9040C	931330		
92791001001	**DAL**	TKN+NO3+NO2 Calculation	931136		
92791001002	**MAN**	TKN+NO3+NO2 Calculation	931136		
92791001001	**DAL**	EPA 350.1 Rev 2.0 1993	930592		
92791001002	**MAN**	EPA 350.1 Rev 2.0 1993	930592		
92791001001	**DAL**	EPA 351.2 Rev 2.0 1993	930777	EPA 351.2 Rev 2.0 1993	931015
92791001002	**MAN**	EPA 351.2 Rev 2.0 1993	930777	EPA 351.2 Rev 2.0 1993	931015
92791001001	**DAL**	EPA 353.2 Rev 2.0 1993	929455		
92791001002	**MAN**	EPA 353.2 Rev 2.0 1993	929455		
92791001001	**DAL**	EPA 365.1 Rev 2.0 1993	930573	EPA 365.1 Rev 2.0 1993	930846
92791001002	**MAN**	EPA 365.1 Rev 2.0 1993	930573	EPA 365.1 Rev 2.0 1993	930846
92791001001	**DAL**	SM 5220D-2011	930812	SM 5220D-2011	930921
92791001002	**MAN**	SM 5220D-2011	930812	SM 5220D-2011	930921

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WO# : 92791001

92791001

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB # (Pace Lab Number or Quote Number): LY

Company: Wood/WSP	Billing Information: Attn: lynne.mowery@wsp.com
Address: 13530 Dulles Technology Dr #800, Herndon, VA 20171	
Report To: Ilana Ton	Email To: ilana.ton@wsp.com
Copy To:	Site Collection Info/Address: Prince William County / Manassas, VA and Woodbridge, VA
Customer Project Name/Number: US0039765.6753, ORG 7526, GL Code 5730-00	State: VA; County/City: ; Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 703 488 3778 Email: ilana.ton@wsp.com	Site/Facility ID #:
Collected By (print): IT	Purchase Order #: Quote #:
Collected By (signature):	Turnaround Date Required:
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [X] 5 Day

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #:

DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: U | 1 | 2 | 2 | U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager:

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	SM 2540D-2015 TSS	200.7 Metals	EPA 351.2 TKN/ EPA 353.2 NO2 + NO3	EPA 350.1 Ammonia/EPA 365.1 Phosphorus/ SM 5220D-2011 COD	SM 4500-H+B-2011 pH
MAN	OT-Water	Comp			4/13/2025	13:50		5	P	X	X	x	x	x
DAL	OT-Water	Comp			4/13/2025	13:10		5	P	X	X	x	x	x

Lab Profile/Line:

Lab Sample Receipt Checklist:		
Custody Seals Present/Intact	Y	N NA
Custody Signatures Present	Y	N NA
Collector Signature Present	Y	N NA
Bottles Intact	Y	N NA
Correct Bottles	Y	N NA
Sufficient Volume	Y	N NA
Samples Received on Ice	Y	N NA
VOA - Headspace Acceptable	Y	N NA
USDA Regulated Soils	Y	N NA
Samples in Holding Time	Y	N NA
Residual Chlorine Present	Y	N NA
Cl Strips: 5061A		
Sample pH Acceptable	Y	N NA
pH Strips: 234722A		
Sulfide Present	Y	N NA
Lead Acetate Strips:		

LAB USE ONLY:
Lab Sample # / Comments:
92791001
001
002

Customer Remarks / Special Conditions / Possible Hazards:
Prince William County/
US0039765.6753, ORG 7526, GL Code 5730-00
Pace PM Taylor Cannon
200.7: Cu, Pb, Ni, Zn

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: 43050
Cooler 1 Temp Upon Receipt: 1.7 °C
Cooler 1 Therm Corr. Factor: 0.1 °C
Cooler 1 Corrected Temp: 1.8 °C
Comments:

Relinquished by/Company: (Signature) Ilana Ton/WSP	Date/Time: 1730	Received by/Company: (Signature)	Date/Time: 4/15/25 0:12
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 1

DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

WO#: 92791001

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg
**Bottom half of box is to list number of bottles
***Check all unpreserved Nitrates for chlorine

Project #

PM: TMC Due Date: 04/22/25
CLIENT: 92-Amec VA

Laboratory Receiving Location: Asheville ☑ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client Wood/WSP Profile (EZ) (Circle one) 32499173 Notes

Item	BP4U-125 mL Plastic Unpreserved (N/A) (CI-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)		BP4S-125 mL Plastic H2SO4 (pH < 2) (CI-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (CI-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (CI-)	AG1H-1 liter Amber HCl (pH < 2)	AG1U-250 mL Amber Unpreserved (N/A) (CI-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9H-40 mL Amber NH4Cl (N/A)(CI-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7J-90 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3N-250 mL Plastic (NH4)2SO4 (8.3-8.7)	AG0U-100 mL Amber Unpreserved (N/A) (CI-)	VSGU-20 mL Scintillation vials (N/A)	DG3U-40 mL Amber Unpreserved vials (N/A)
CC				AS		AS	SL																						
1				2		2	1																						
2				2		2	1																						
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Appendix O

Annual VDOT Coordination Meeting – Participant List

VDOT- Nova MS4 Phase I Annual Coordination Meeting

Agenda

- Mapping (MS4 Service Areas)
    - VDOT is working on updating the MS4 service area. Now includes census urban areas for 2000, 2010 and 2020. Currently working on the right of way for VDOT roads. There is a pilot feedback program app for localities that may have differences in who has right of way. Currently working with Manassas and anyone else interested can reach out to review.
    - Arlington got their MS4 much earlier than most, wrapping up permit year 4. The service area has been accepted by DEQ. Meeting with DEQ next month to discuss the next permit cycle.
    - Fairfax updates service area every year, most recent service area was used to develop Chesapeake Bay TMDL action plan. Increased service area substantially and refined mapping information. Reach out if you would like us to share.
    - Prince William had no mapping updates.

- Chesapeake Bay TMDL Action Plan updates
    - VDOT has completed all their construction and is now going through an assessment of credit vulnerability. Shared the dashboard showing 100% reductions achieved. With the action plan, updated some references, shoreline discussion, land use change crediting, dropped out the street sweeping discussion, and some changes in service area. Follow up on VDOT pilot study for storm drain cleaning credit, the juice was not worth the squeeze but can share the results with anyone interested.
    - Arlington submitted the action plan in 2022 and have not heard much from DEQ. Assuming they are good with it and continuing to move forward on projects. Limited space in Arlington leads to a lot of green street projects and some stream resiliency projects. Finished the Ballston Pond and large detention vault projects.
    - Fairfax put out TMDL action plan was submitted to DEQ Jan 1, currently sitting with DEQ but have not heard back with comments. It is tough to develop plans when it takes 6-12 months into implementation of the plan to provide comments. Shared charts and graphs to show the decrease in unaccounted areas that are now under Fairfax County ownership.
    - Prince William is working on updating map to include calculations submitted in January. Finished Powells Creek project in early 2025 which is largest stream restoration to date. Still have sediment needs for the TMDL that we will potentially work with VDOT and Fairfax in the Bull Run area.

- Other TMDL Action Plans
    - VDOT is tracking local TMDLs Keeping track of local TMDLs around the state, including Broad Run in Northern VA. Would like to be involved with Bull Run as well.
    - Arlington submitted updated plans for bacteria and PCBs to the county. Still waiting to hear back from DEQ while implementing the plans and meeting milestones.
    - Fairfax has local TMDL action plans available for public comment starting May 1 and responses to DEQ are due July 1. The Chloride TMDL action plan is due next year and working on benthic and bacteria TMDLs. Discussion with DEQ to do bacteria sampling

and source tracking to see if any can be delisted for bacteria. Participating in the Broad Run TMDL TAC to develop the TMDL with DEQ and ICPRB.
    - Prince William is working on finishing the rest of their TMDLs. We have the same as others except for the Fairfax chloride TMDL. Currently working the most on sediment.

- Credit for TMDL Implementation
    - No additional updates from VDOT, Arlington, and Prince William.
    - Fairfax would like to encourage more on site BMP implementation for water quality benefits instead of purchasing credits.

- Illicit Discharge Detection & Elimination
    - VDOT is working on updating the outfall mapping, which was last updated in 2016. Dry weather screening incorporated into new permit. There were 23 reports and 14 confirmed illicit discharges in Northern VA and updating the IDD program manual this year.
    - Arlington is continuing to do dry weather outfall screenings as part of industrial high-risk assessment and inspections. The reporting tool has been successful. Question about who to contact for auto accidents and releases, notify the fire department and VDOT even though auto accidents are not considered illicit discharge, there is an incident response coordinator for Northern VA.
    - Fairfax is continuing to implement illicit discharge and proper disposal protocols; we review them annually. Some new language in the permit that previously automatically authorized discharges be handled differently. Fairfax Water potable water was allowable and now they have added a qualifier to that, so we are working with Fairfax Water on potential BMPs to help control that.
    - Prince William is on track to meet 25% inspections for the year and developing a new program for tracking IDDE. Interest in more outreach and education regarding salt, VDOT has been great with that.

- Water Quality Monitoring
    - VDOT mentioned a 5 year monitoring study on post construction stormwater BMPs and land development with UVA. Renewed interest in construction activities, turbidity and dewatering with the new CGP last year.
    - Arlington is doing wet weather screening and has run into an issue with very high e-coli loading from thousands of crows along Four Mile Run. Working with animal control, but curious about if anyone else has run into an issue with murders of crows.
    - Fairfax mentioned the latest USGS publication looking at trends in the monitoring network and watershed management plan implementation. We collect data in different areas of the county for MS4 monitoring if anyone in the group has needs or requests for monitoring data, we also share with DEQ for TMDL development.
    - Prince William is continuing with water quality monitoring, and is considering changing some future monitoring sites.

- Other Issues
    - Interest in developing some material about how to select a salt smart contractor from Prince William, VDOT and Fairfax. NVRC develops regional messaging through Clean Water Partners and Virginia Salt Management Strategy (SaMS) and can help coordinate materials.

- VDOT is working on updating and combining various manuals, guidance, and standards books to include changes in the new permit. This will include the BMP inspection and maintenance manual and updates to the inspection GIS application.
- Fairfax mentioned a new permit requirement about interconnected systems and infrastructure that crosses political boundaries into City of Fairfax, Falls Church, and Arlington and gathering GIS data. A shared GIS layer could be helpful to make sure our teams are on the same page. VDOT offered to assist with this GIS effort.
- VDOT brought up the new stormwater handbook and consolidated erosion and sediment control manuals, and about 20 new practices that are now included. We thought this was not to revise standards, but just consolidate existing guidance materials.

1. Summary

Meeting title	Annual VDOT-NOVA MS4 Phase 1 Coordination Mtg	
Attended participants		17
Start time	4/24/25, 12:46:32 PM	
End time	4/24/25, 2:33:36 PM	
Meeting duration	1h 47m 4s	
Average attendance time	1h 31m 41s	

2. Participants

Name	First Join	Last Leave	In-Meeting Duration	Email	Participant ID (UPN)	Role
Allie Wagner	4/24/25, 12:46:34 PM	4/24/25, 2:33:34 PM	1h 47m	awagner@novaregion.org	awagner@novaregion.org	Presenter
Parfitt, Joe (VDOT)	4/24/25, 12:57:01 PM	4/24/25, 2:33:30 PM	1h 36m 29s	Joseph.Parfitt@vdot.virginia.gov	Joseph.Parfitt@vdot.virginia.gov	Presenter
Wilson, Glenn2 (VDOT)	4/24/25, 12:57:01 PM	4/24/25, 2:33:36 PM	1h 36m 35s	Glenn2.Wilson@vdot.virginia.gov	Glenn2.Wilson@vdot.virginia.gov	Presenter
Lightfoot, Jennifer "J.J." (VDOT)	4/24/25, 12:57:01 PM	4/24/25, 2:33:32 PM	1h 36m 30s	Jennifer.Lightfoot@vdot.virginia.gov	Jennifer.Lightfoot@vdot.virginia.gov	Presenter
Fults, Michelle (VDOT)	4/24/25, 12:57:10 PM	4/24/25, 2:33:32 PM	1h 36m 22s	Michelle.Fults@vdot.virginia.gov	Michelle.Fults@vdot.virginia.gov	Presenter
Grandfield, Nancy (VDOT)	4/24/25, 12:58:22 PM	4/24/25, 2:33:36 PM	1h 35m 13s	Nancy.Grandfield@vdot.virginia.gov	Nancy.Grandfield@vdot.virginia.gov	Presenter
Hurd, Martin	4/24/25, 12:59:08 PM	4/24/25, 2:33:32 PM	1h 34m 24s	Martin.Hurd@fairfaxcounty.gov	martin.hurd@fairfaxcounty.gov	Presenter
Ries, Austyn B	4/24/25, 12:59:30 PM	4/24/25, 2:33:30 PM	1h 34m	Austyn.Ries@fairfaxcounty.gov	austyn.ries@fairfaxcounty.gov	Presenter
Ambrose, Heather	4/24/25, 12:59:36 PM	4/24/25, 2:28:27 PM	1h 28m 51s	Heather.Ambrose@fairfaxcounty.gov	Heather.Ambrose@fairfaxcounty.gov	Presenter
Cannon, Takisha	4/24/25, 12:59:46 PM	4/24/25, 2:33:30 PM	1h 33m 44s	Takisha.Cannon@fairfaxcounty.gov	Takisha.Cannon@fairfaxcounty.gov	Presenter
Diana Handy	4/24/25, 1:00:09 PM	4/24/25, 2:33:32 PM	1h 33m 23s	Dhandy@arlingtonva.us	Dhandy@arlingtonva.us	Presenter
Foraste, Alex (VDOT)	4/24/25, 1:00:56 PM	4/24/25, 2:33:30 PM	1h 32m 33s	Alex.Foraste@vdot.virginia.gov	Alex.Foraste@vdot.virginia.gov	Presenter
Burton, Emily	4/24/25, 1:01:05 PM	4/24/25, 2:33:29 PM	1h 32m 23s	Emily.Burton2@fairfaxcounty.gov	emily.burton2@fairfaxcounty.gov	Presenter
Uglow, Andrew (External)	4/24/25, 1:01:17 PM	4/24/25, 2:33:31 PM	1h 32m 13s	AUglow@pwcgov.org	AUglow@pwcgov.org	Presenter
Felton, Joe (VDOT)	4/24/25, 1:02:07 PM	4/24/25, 2:31:35 PM	1h 29m 28s	Joe.Felton@vdot.virginia.gov	Joe.Felton@vdot.virginia.gov	Presenter
Crafton, Scott (VDOT)	4/24/25, 1:03:16 PM	4/24/25, 2:33:32 PM	1h 30m 15s	Scott.Crafton@vdot.virginia.gov	Scott.Crafton@vdot.virginia.gov	Presenter
Meritt, Jack K.	4/24/25, 1:43:56 PM	4/24/25, 2:33:16 PM	49m 20s	Jack.Meritt@fairfaxcounty.gov	Jack.Meritt@fairfaxcounty.gov	Presenter

3. In-Meeting Activities

Name	Join Time	Leave Time	Duration	Email	Role
Allie Wagner	4/24/25, 12:46:34 PM	4/24/25, 2:33:34 PM	1h 47m	awagner@novaregion.org	Presenter
Parfitt, Joe (VDOT)	4/24/25, 12:57:01 PM	4/24/25, 2:33:30 PM	1h 36m 29s	Joseph.Parfitt@vdot.virginia.gov	Presenter
Wilson, Glenn2 (VDOT)	4/24/25, 12:57:01 PM	4/24/25, 2:33:36 PM	1h 36m 35s	Glenn2.Wilson@vdot.virginia.gov	Presenter
Lightfoot, Jennifer "J.J." (VDOT)	4/24/25, 12:57:01 PM	4/24/25, 2:33:32 PM	1h 36m 30s	Jennifer.Lightfoot@vdot.virginia.gov	Presenter
Fults, Michelle (VDOT)	4/24/25, 12:57:10 PM	4/24/25, 2:33:32 PM	1h 36m 22s	Michelle.Fults@vdot.virginia.gov	Presenter
Grandfield, Nancy (VDOT)	4/24/25, 12:58:22 PM	4/24/25, 2:33:36 PM	1h 35m 13s	Nancy.Grandfield@vdot.virginia.gov	Presenter
Hurd, Martin	4/24/25, 12:59:08 PM	4/24/25, 2:33:32 PM	1h 34m 24s	Martin.Hurd@fairfaxcounty.gov	Presenter
Ries, Austyn B	4/24/25, 12:59:30 PM	4/24/25, 2:33:30 PM	1h 34m	Austyn.Ries@fairfaxcounty.gov	Presenter
Ambrose, Heather	4/24/25, 12:59:36 PM	4/24/25, 2:28:27 PM	1h 28m 51s	Heather.Ambrose@fairfaxcounty.gov	Presenter
Cannon, Takisha	4/24/25, 12:59:46 PM	4/24/25, 2:33:30 PM	1h 33m 44s	Takisha.Cannon@fairfaxcounty.gov	Presenter
Diana Handy	4/24/25, 1:00:09 PM	4/24/25, 2:33:32 PM	1h 33m 23s	Dhandy@arlingtonva.us	Presenter
Foraste, Alex (VDOT)	4/24/25, 1:00:56 PM	4/24/25, 2:33:30 PM	1h 32m 33s	Alex.Foraste@vdot.virginia.gov	Presenter
Burton, Emily	4/24/25, 1:01:05 PM	4/24/25, 2:33:29 PM	1h 32m 23s	Emily.Burton2@fairfaxcounty.gov	Presenter
Uglow, Andrew (External)	4/24/25, 1:01:17 PM	4/24/25, 2:33:31 PM	1h 32m 13s	AUglow@pwcgov.org	Presenter
Felton, Joe (VDOT)	4/24/25, 1:02:07 PM	4/24/25, 2:31:35 PM	1h 29m 28s	Joe.Felton@vdot.virginia.gov	Presenter
Crafton, Scott (VDOT)	4/24/25, 1:03:16 PM	4/24/25, 2:33:32 PM	1h 30m 15s	Scott.Crafton@vdot.virginia.gov	Presenter
Meritt, Jack K.	4/24/25, 1:43:56 PM	4/24/25, 2:33:16 PM	49m 20s	Jack.Meritt@fairfaxcounty.gov	Presenter

Appendix P

Biological Monitoring Report

Benthic Macroinvertebrate Population and Water Quality Monitoring Report

Fall 2024 and Spring 2025

Prepared for:

Prince William County Department of Public Works
5 County Complex Court, Suite 170
Prince William, Virginia 22192

Prepared by:
WSP Environment & Infrastructure Solutions, Inc.
13530 Dulles Technology Dr Suite 300
Herndon, VA 20171
(703) 742-5700

September 9, 2025
Project No. US0039765.6753

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 BACKGROUND 1
1.2 PURPOSE 1
2.0 METHODS 2
3.0 RESULTS 3
3.1 FIELD CONDITION AND PARAMETER RESULTS 3
3.1.1 Fall 2024 4
3.1.2 Spring 2025 5
3.2 WATER QUALITY LABORATORY RESULTS 5
3.2.1 Fall 2024 6
3.2.2 Spring 2025 6
3.3 BENTHIC MACROINVERTEBRATE RESULTS 7
3.3.1 Fall 2024 8
3.3.2 Spring 2025 8
3.4 COMPARISON TO BASELINE RESULTS 9
4.0 SUMMARY AND CONCLUSIONS 13
4.1 SUMMARY 13
4.1.1 Fall 2024 13
4.1.2 Spring 2025 13
4.2 CONCLUSIONS 13
5.0 REFERENCES 14

TABLES

Table 1 - Fall 2024 Field Condition and Parameter Results 4
Table 2 - Spring 2025 Field Condition and Parameter Results. 5
Table 3 - Fall 2024 Water Quality Results. 6
Table 4 - Spring 2025 Water Quality Results. 7
Table 5 - Fall 2024 Benthic Macroinvertebrate Results. 8
Table 6 - Spring 2025 Benthic Macroinvertebrate Results. 9
Table 7 - Habitat and Benthic Community Comparison Summary 10

FIGURES

Figure 1 - Site Locations Map
Figure 2 - Cow Branch Sampling Location Map
Figure 3 - Dawkins Branch Sampling Location Map
Figure 4 - Little Bull Run Sampling Location Map
Figure 5 - Neabsco Creek Sampling Location Map
Figure 6 - Purcell Branch Sampling Location Map

APPENDICES

Appendix A - Site Data Sheets
Appendix B - Water Quality Laboratory Results
Appendix C - Benthic Macroinvertebrate Laboratory Results

LIST OF ACRONYMS

BI	Biotic Index
°C	Degrees Celsius
CWA	Clean Water Act
DO	Dissolved Oxygen
E. coli	*Escherichia coli*
EPT	Ephemeroptera/Plecoptera/Trichoptera
m	Meter
mg/L	Milligrams per Liter
µS/cm	Microsiemens per Centimeter
MPN/100mL	Most Probable Number of Coliform per 100 Milliliters
m/s	Meters per Second
MS4	Municipal Separate Storm Sewer System
NTU	Nephelometric Turbidity Units
PMA	Percent Model Affinity
RBP	USEPA Rapid Bioassessment Protocol
SU	Standard Units
TKN	Total Kjeldahl Nitrogen
TSS	Total Suspended Solids
USEPA	United States Environmental Protection Agency
VDEQ	Virginia Department of Environmental Quality
VSCI	Virginia Stream Condition Index
VSMP	Virginia Stormwater Management Program

1.0 Introduction

WSP Environment & Infrastructure Solutions, Inc. (WSP) has prepared this report for ongoing benthic macroinvertebrate sampling for compliance with the requirements of the Virginia Stormwater Management Program (VSMP) Permit, Municipal Separate Storm Sewer System (MS4) Permit Number VA0088595, issued by the Virginia Department of Environmental Quality (VDEQ) to Prince William County, Virginia. This report presents the results of the 2024 Fall and 2025 Spring sampling events, which were conducted in accordance with the *Sampling Plan for Benthic Macroinvertebrate Population and Water Quality Monitoring* (Sampling Plan) (Amec Foster Wheeler 2015). This report provides detailed descriptions of the sampling and analysis activities conducted, as well as the water quality analytical results and benthic macroinvertebrate results. In addition, this report provides a comparison summary with the baseline results from the 2016 Spring and Fall sampling events (spring and fall baselines).

1.1 Background

The U.S. Environmental Protection Agency (USEPA) delegated the authority to implement Section 402 of the Clean Water Act (CWA) to the Commonwealth of Virginia on March 31, 1975. Subsequently, Section 62.1-44.15:25 of the Virginia Stormwater Management Act authorizes VDEQ to issue, deny, amend, revoke, terminate, and enforce permits for the control of stormwater discharges from MS4s. The VSMP Permit Number VA0088595 authorizes point source discharges of stormwater runoff and certain non-stormwater discharges from the MS4 operated or owned by Prince William County. Part I.C of the VSMP permit outlines the monitoring requirements guided by Section 9VAC25-870-380 C.2.c.(4) of the VSMP regulations. As stipulated in the permit, benthic macroinvertebrate and surface water monitoring is conducted at five locations in Prince William County: Cow Branch (PC 20), Dawkins Branch (PC 30), Little Bull Run (PC 90), Neabsco Creek (PC 60), and Purcell Branch (PC 10). A site locations map and site sampling location maps can be found in Figures 1 through 6.

1.2 Purpose

The purpose of this sampling report is to provide data that will be used to comply with the biological stream (Part I.C.1) and in-stream monitoring (Part I.C.2) requirements outlined in Prince William County's permit. The specific objectives are to gather sufficient data to evaluate, and subsequently demonstrate, the effectiveness of upstream best management practices. The results presented in this report will be compared to baseline conditions to evaluate trends in benthic health and stream ecosystem conditions at each site.

2.0 Methods

Sample collection occurred on October 10th, 14th and 16th, 2024 and from April 15 to 17, 2025, in accordance with the Sampling Plan. Benthic macroinvertebrate and surface water samples were collected by WSP personnel from five locations in Prince William County: Cow Branch, Dawkins Branch, Little Bull Run, Neabsco Creek, and Purcell Branch (Figures 1 through 6). The field team prepared Physical Characterization/Water Quality Field Data Sheets and Habitat Assessment Field Data Sheets for High Gradient Streams, as specified in USEPA Rapid Bioassessment Protocol (RBP) (Barbour et al. 1999; Appendix A). In-situ water quality data were collected using a YSI water quality meter for dissolved oxygen (DO), pH, conductivity, and temperature. Turbidity was measured using a HACH Turbidimeter 2100Q in Nephelometric Turbidity Units (NTU).

Approximate stream width, water depth, and transparency (as measured with a Secchi disk) were measured in meters (m). Water velocity was measured with a HACH flow meter in meters per second (m/s). Upstream and downstream photographs were also taken for each site (Appendix A). Grab water samples were analyzed for ammonia, *Escherichia coli* (*E. coli*), nitrate/nitrite, orthophosphate, total Kjeldahl nitrogen (TKN), total nitrogen, total phosphorus, and total suspended solids (TSS).

Benthic macroinvertebrate sampling was conducted in accordance with the Sampling Plan. The multiple habitat sampling method was used for each of the sites. This method consists of a total of 20 jabs or kicks, taken from each major habitat type in the reach. Benthic macroinvertebrate samples were placed on ice in coolers and shipped overnight to WSP's benthic macroinvertebrate laboratory in Gainesville, Florida. The laboratory sorted, mounted, identified, enumerated, evaluated, and classified benthic macroinvertebrates according to Section 7.2 of the RBP (Barbour et al. 1999). Eight metrics were calculated including the Hilsenhoff Biotic Index (HBI) (1987); the Percent Model Affinity (PMA) from Novak and Bode (1992); and the Virginia Stream Condition Index (VSCI) using guidance from TetraTech (2003) and VDEQ (2008).

It should be noted that HBI, PMA, and VSCI represent various ways to assess stream condition; as a result, score categories will not always agree among assessments. HBI estimates the overall tolerance of the community in a sampled area, weighted by the relative abundance of each taxonomic group (e.g., family), and the group's predetermined tolerance level. PMA is an index of percentage similarity, used to measure the affinity of various metrics (e.g., species richness) from the sample reach to that of the expected model community. VSCI is an index designed specifically for streams and small rivers in Virginia. The index utilizes eight scoring metrics, comparing monitored site metrics to the metrics of a designated reference condition.

3.0 Results

Sample collection occurred from October 10th, 14th and 16th, 2024 and from April 15 to 17, 2025, in accordance with the Sampling Plan and is summarized in the following sections.

3.1 Field Condition and Parameter Results

Assessing physical habitat quality is an integral component of the final evaluation of impairment. The RBP matrix used to assess habitat quality is based on 10 visual physical characteristics of the waterbody and surrounding land, particularly the catchment of the site under investigation. The habitat parameters evaluated are related to overall aquatic life use and are a potential source of limitation to the aquatic biota; the scoring of each of these characteristics is included as page 4 of the site datasheets for each site in Appendix A, while score totals and the resulting condition categories are summarized in Table 1 for the Fall 2024 event and Table 2 for Spring 2025 event. The RBP defines the following condition categories based on the physical habitat characterization scores, to determine the ability of the habitat to support an optimal biological community:

151-200	**Optimal**	The physical habitat present meets natural expectations and can support optimal benthic community.
101-150	**Suboptimal**	Physical habitat is less than desirable but satisfies expectations under most circumstances to support a benthic community.
51-100	**Marginal**	Physical habitat has moderate levels of degradation, with a severity at frequent intervals throughout the reach, which limit the capability of supporting a benthic community.
0-50	**Poor**	Physical habitat has been substantially altered with severe degradation to characteristics that would support a benthic community.

Water quality is also an integral component of stream evaluation and the ability of a stream to support biological communities. Surface waters should meet Virginia's Water Quality Standards, as outlined in Section 9VAC25-260. However, these standards represent limits not to be exceeded. For a general comparison, the following bullets summarize typical conditions for piedmont streams.

- A pH range of 6.5 to 8.0 standard units (SU) is optimal for most organisms, as a pH outside this range reduces the diversity in the stream because it stresses the physiological systems of most organisms and can reduce reproduction.
- Distilled water has conductivity in the range of 0.5 to 3 microsiemens per centimeter (µS/cm). The conductivity of streams generally range from 0 to 1500 µS/cm, while studies of inland fresh waters indicate that streams supporting mixed fisheries have a range between 50 and 500 µS/cm.
- Temperature affects feeding, reproduction, and metabolism of aquatic animals. A week or two of high temperatures may make a stream unsuitable for sensitive aquatic

organisms; the maximum temperature of nontidal (piedmont) streams should not exceed 32 degrees Celsius (°C).

- DO is an important measure of stream water quality, as aquatic organisms need DO to live. DO in the water varies greatly with stream characteristics, temperature, and time, but a minimal DO level of 5 milligrams per liter (mg/L) is usually required to maintain healthy growth and activity.
- Turbidity is a measure of water clarity, and though Virginia water quality standards do not include guidelines for turbidity. Generally, water begins to appear cloudy when the turbidity is greater than 5 NTU.

3.1.1 Fall 2024

RBP physical habitat assessment scores ranged from 121 (Little Bull Run) to 175 (Dawkins Branch). The scores indicated that two sites exhibited suboptimal habitat, and three sites exhibited optimal habitat for supporting benthic communities.

As shown in Table 1, the physical water quality characteristics of the five sites meet the typical water quality conditions described above.

Table 1 - Fall 2024 Field Condition and Parameter Results

Parameter	Units	Cow Branch	Dawkins Branch	Little Bull Run	Neabsco Creek	Purcell Branch
RBP Habitat Assessment/ Characterization Score	--	166	175	121	172	143
RBP Habitat Condition Category	--	Optimal	Optimal	Suboptimal	Optimal	Suboptimal
pH	SU	6.45	7.23	6.94	6.83	7.21
Specific Conductance	µS/cm	387	424	501	192	196
Temperature	°C	14.9	15.97	13.95	15.71	10.35
DO	mg/L	11.15	10.21	11.86	11.91	13.32
Turbidity	NTU	NM	0.42	1.9	NM	0.96
Water Depth	m	0.122	0.137	0.107	0.122	0.091
Secchi Depth	m	0.122	0.137	0.107	0.122	0.091
Reach Length	m	100	100	100	100	100
Reach Width	m	4.267	5.182	6.706	7.010	7.315
Surface Velocity	m/s	0.320	0.232	0.396	0.366	0.198

Abbreviations:
SU = Standard Unit
µS/cm = Microsiemens per Centimeter
°C = degrees Celsius
mg/L = milligrams per liter
NTU = Nephelometric Turbidity Units
m = meters
m/s = meters per second
NM = not measured

Prepared by: INT
Checked by: PKG

3.1.2 Spring 2025

RBP physical habitat assessment scores ranged from 142 (**Purcell Branch**) to 180 (**Neabsco Creek**). The scores indicated that all sites exhibited optimal or suboptimal habitat for supporting benthic communities.

As shown in Table 2, most of the physical water quality characteristics of the five sites meet the typical water quality conditions described above. The specific conductance at **Dawkins Branch** was slightly above the range for inland fresh waters supporting mixed fisheries, but well within the broader range of typical conductivity for streams.

Table 2 - Spring 2025 Field Condition and Parameter Results

Parameter	Units	Cow Branch	Dawkins Branch	Little Bull Run	Neabsco Creek	Purcell Branch
RBP Habitat Assessment/ Characterization Score	--	178	146	155	180	142
RBP Habitat Condition Category	--	Optimal	Suboptimal	Optimal	Optimal	Suboptimal
pH	SU	6.8	7.78	7.59	8.0	7.79
Specific Conductance	µS/cm	492.8	1042	692	240	233.8
Temperature	°C	13.9	17.9	15.8	14.5	11.1
DO	mg/L	9.71	6.16	6.38	10.58	11.85
Turbidity	NTU	4.9	6.70	4.37	5.87	NM
Water Depth	m	0.366	0.152	0.396	0.305	0.183
Secchi Depth	m	0.366	0.152	0.396	0.305	0.183
Reach Length	m	100	100	100	100	100
Reach Width	m	4.877	7.163	7.315	6.706	7.010
Surface Velocity	m/s	0.442	0.098	0.052	0.549	0.335

Abbreviations:
NR = Not Reported
°C = degrees Celsius
mg/L = milligrams per liter
NM = not measured

Prepared by: INT
Checked by: PKG

3.2 Water Quality Laboratory Results

The laboratory analytical reports are provided in Appendix B. As mentioned in the previous section, the following bullets represent typical conditions and provide a general indication of stream health.

- Ammonia is toxic to fish and other types of aquatic life. Ammonia's toxicity depends on both the temperature and pH of the water, but chronic levels above 3.0 mg/L exceed water quality standards.
- *E. coli* can be used as an indicator of stream impairment from sewage and animal waste. The Virginia Water Quality Standard is 126 most probable number of coliform per 100 milliliters (MPN/100mL).
- Nitrate stimulates plant growth, and excessive plant growth can impact DO levels. Streams in areas with little human impact have less than 0.6 mg/L nitrate.

- Phosphates act as a nutrient for plant growth similar to nitrate. Streams in areas with little human impact have less than 0.1 mg/L. There is no Virginia Water Quality Standard for phosphate. Orthophosphate serves as an indicator of biologically available Phosphorus within streams.
- TKN is the sum of organic nitrogen, ammonia, and ammonium. Though there is no Virginia Water Quality Standard for TKN, it can be used as an indicator for stream impairment.
- There are no Virginia Water Quality standards for total phosphorus or nitrogen. However, total phosphorus levels higher than 0.1 mg/L may stimulate plant growth sufficiently to surpass natural growth rates. Levels in excess of 0.1 mg/L indicate a potential human source such as industrial soaps, sewage, fertilizers, disturbance of soil, animal waste, or industrial effluent.
- TSS, similar to turbidity, is a quantitative measurement of sediment and other particles found in surface water. Though there is no Virginia Water Quality Standard for TSS, it can be used as an indicator for erosion and sedimentation.

3.2.1 Fall 2024

As shown in Table 3, the water quality results for the five sites meet the typical water quality conditions described above, with the exception of elevated *E. coli* levels recorded at Dawkins Branch and Cow Branch. Samples at this site exceed the Virginia Water Quality Standard of 126 MPN/100mL. Elevated *E. coli* levels are typically associated with sewage and animal waste.

Table 3 - Fall 2024 Water Quality Results

Parameter	Units	Cow Branch	Dawkins Branch	Little Bull Run	Neabsco Creek	Purcell Branch
Ammonia as N	mg/L	<0.01	0.02	0.01	<0.01	<0.01
E. coli	MPN/100mL	**184**	**488**	31.8	47.3	57.3
Nitrate+Nitrite	mg/L	<0.01	0.02	1.22	0.23	0.01
Orthophosphate as P	mg/L	<0.01	<0.01	0.02	<0.01	<0.01
TKN	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Total Phosphorus	mg/L	<0.01	< 0.01	0.02	<0.01	<0.01
TSS	mg/L	2.0	< 1.0	1.5	<1.0	<1.0

Abbreviations: *Prepared by: INT*
< = not detected at the associated reporting limit *Checked by: PKG*
mg/L = milligrams per liter
***bold** indicates a result exceeding the VA water quality standards*

The laboratory analytical report for the Fall 2024 sampling is provided in Appendix B.

3.2.2 Spring 2025

As shown in Table 4, the water quality results for the five sites meet the typical water quality conditions described above, with the exception of elevated *E. coli* levels recorded at **Little Bull Run.**

Table 4 - Spring 2025 Water Quality Results

Parameter	Units	Cow Branch	Dawkins Branch	Little Bull Run	Neabsco Creek	Purcell Branch
Ammonia as N	mg/L	0.03	0.03	0.02	0.03	0.02
E. coli	MPN/100mL	18.7	50.4	**210**	24.3	46.5
Nitrate+Nitrite	mg/L	0.32	0.11	0.34	0.14	0.25
Orthophosphate as P	mg/L	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
TKN	mg/L	< 0.50	0.54	< 0.50	< 0.5	< 0.5
Total Phosphorus	mg/L	0.01	0.02	0.04	0.03	0.01
TSS	mg/L	1.2	3.5	2.4	1.1	< 1.0

Abbreviations: *Prepared by: INT*
< = not detected at the associated reporting limit *Checked by: PKG*
mg/L = milligrams per liter
***bold** indicates a result exceeding the VA water quality standards*

The laboratory analytical report for the Spring 2025 sampling is provided in Appendix B.

3.3 Benthic Macroinvertebrate Results

Terms such as “tolerant” and “intolerant” taxa are used to describe benthic communities in this document without the negative or positive lay connotations of such language. Tolerant taxa are benthic species adapted to survive in a broad range of environmental conditions, whereas intolerant taxa are adapted to more limited range of environmental conditions. The term “impairment” has a negative connotation with its lay usage; in this document, the term is used to describe the nature and composition of a benthic community. The scientific “impairment” conditions are classified into four categories:

No Impairment	Similar to the reference conditions; the benthic community is of excellent quality.
Slight Impairment	Sustaining a diverse and abundant benthic community with some intolerant taxa; the benthic community is of good quality.
Moderate Impairment	Not having a highly diverse and abundant community, but having taxa present in several major groups, generally a few intolerant taxa and one taxon being dominant; the community has been impacted.
Severe Impairment	Few, if any, benthic invertebrate taxa are present, all tolerant taxa, low diversity, and often one taxon is very abundant; the benthic community has been severely impacted.

WSP’s laboratory sorted and identified the organisms in the benthic macroinvertebrate samples and provided reports dated January 16, 2025 for the Fall 2024 sampling event, and June 20, 2025 for the Spring 2025 sampling event (Appendix C).

3.3.1 Fall 2024

A total of 85 taxa were identified from the fall samples. Among the five sites, taxa richness ranged from 30 to 39, while abundance ranged from 195 to 225. EPT index ranged from 0 to 10 among the sites.

The percentage of the dominant taxon ranged from 27.18 to 37.20%. Percentage of the top two taxa combined, which is a VSCI metric, ranged from 36.92 to 54.19%.

The HBI ranged from 5.42 to 6.65 for the sites, with a corresponding HBI Category score of "Fairly Poor" and "Good". The PMA ranged from 37.39 to 76.41 for the sites, indicating levels of impactedness ranging from "Moderately Impacted" at Cow Branch, Dawkins Branch, Neabsco Creek, and Purcell Branch, to "Non-Impacted" at Little Bull Run.

Results from the calculation of the VSCI for the individual sample sites ranged from 43.70 (Dawkins Branch) to 61.18 (Purcell Branch).

Table 5 - Fall 2024 Benthic Macroinvertebrate Results

Metric	Cow Branch	Dawkins Branch	Little Bull Run	Neabsco Creek	Purcell Branch
Taxa Richness	30	31	39	32	34
Abundance	225	203	195	202	207
EPT Index	9	0	8	7	10
EPT/EPT+ Chironomidae	0.84	0.00	0.61	0.87	0.89
Percent Dominant Taxon	28.89	31.53	27.18	34.65	37.20
Percent Chironomidae	14.22	20.20	21.03	8.42	8.70
BI	5.42	6.65	6.46	6.00	5.59
BI Category	Good	Fairly Poor	Fair	Fair	Fair
PMA	40.00	43.94	76.41	39.80	37.39
PMA Category	Moderately impacted	Moderately impacted	Non-impacted	Moderately impacted	Moderately Impacted
VSCI	59.83	43.70	60.16	57.37	61.18
VSCI Category	Stress	Stress	Good	Stress	Good

Abbreviations:
BI = Biotic Index
EPT = Ephemeroptera, Plecoptera, and Trichoptera
PMA = percent model affinity
VSCI = Virginia Stream Condition Index

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Checked by: PKG

3.3.2 Spring 2025

A total of 81 taxa were identified from the spring samples. Among the five sites, taxa richness ranged from 25 to 40, while abundance ranged from 165 to 214. EPT taxa ranged from 1 to 11 among the sites.

The percentage of the top taxa ranged from 16.76 to 50.72%. Percentage of the top two taxa combined, which is a VSCI metric, ranged from 41.35 to 50.52%.

The HBI ranged from 5.59 to 6.72 for the sites, with corresponding HBI Category scores of "Fairly Poor" and "Fair". The PMA ranged from 37.08 to 55.81 for the sites, indicating levels of impactedness ranging from "Moderately Impacted" at **Dawkins Branch**, to "Slightly Impacted" at **Little Bull Run.**

Results from the calculation of the VSCI for the individual sample sites ranged from 41.35 (**Little Bull Run**) to 50.52 (**Purcell Branch**).

Table 6 - Spring 2025 Benthic Macroinvertebrate Results

Metric	Cow Branch	Dawkins Branch	Little Bull Run	Neabsco Creek	Purcell Branch
Taxa Richness	32	25	33	31	40
Abundance	165	207	185	214	184
EPT Index	5	2	1	4	11
EPT/EPT+ Chironomidae	0.15	0.12	0.21	0.13	0.11
Percent Dominant Taxon	17.58	50.72	16.76	21.50	21.74
Percent Chironomidae	63.03	10.63	63.24	66.82	76.09
BI	5.60	6.58	6.72	6.06	5.59
BI Category	Fair	Fairly Poor	Fairly poor	Fair	Fair
PMA	47.12	37.08	55.81	39.49	40.22
PMA Category	Moderately impacted	Moderately impacted	Slightly impacted	Moderately impacted	Moderately Impacted
VSCI	44.13	41.51	41.35	41.78	50.52
VSCI Category	Stress	Severe Stress	Severe Stress	Severe Stress	Stress

Abbreviations:
BI = Biotic Index
EPT = Ephemeroptera, Plecoptera, and Trichoptera
PMA = percent model affinity
VSCI = Virginia Stream Condition Index

Prepared by: INT
Checked by: PKG

3.4 Comparison to Baseline Results

In the assessment of measured field and laboratory water quality parameters, the Fall 2024 and Spring 2025 sampling results have shown slight improvements compared to the Fall and Spring baseline sampling results from 2016, are within or slightly above the normal ranges, and are below Virginia's Water Quality Standards, except for *E. coli at* **Dawkins Branch and Cow Branch during** Fall 2024 and **Little Bull Run** Spring 2025*.*

The habitat and benthic community results among the events are summarized below in Table 7. Steady increases in metrics assessing the health of the benthos at each site appear to remain constant or improve though out the years except for HBI and PMA metrics. In Table 9 improvements from baseline are shown in green, no change from baseline are shown in blue, and regression from baseline are shown in red.

Table 7 - Habitat and Benthic Community Comparison Summary

Parameter	Event	Cow Branch	Dawkins Branch	Little Bull Run	Neabsco Creek	Purcell Branch
RBP Habitat Score	Baseline (Spring)	94	126	120	134	103
	Baseline (Fall)	104	147	110	136	87
	2017 (Spring)	98	134	94	123	108
	2017 (Fall)	101	116	98	114	80
	2018 (Spring)	93	126	103	113	106
	2018 (Fall)*	106	114	126	129	105
	2019 (Spring)*	113	99	124	117	103
	2019 (Fall)	132	134	120	136	117
	2020 (Spring)	107	106	102	127	89
	2020 (Fall)	109	120	142	121	114
	2021 (Spring)	122	103	138	114	117
	2021 (Fall)	129	117	128	149	106
	2022 (Spring)	167	163	145	174	147
	2022 (Fall)	144	144	122	153	101
	2023 (Spring)	152	136	137	169	123
	2023 (Fall)	158	157	147	158	131
	2024 (Spring)	138	137	117	153	132
	2024 (Fall)	166	175	121	172	143
	2025 (Spring)	178	146	155	180	142
RBP Habitat Category	Baseline (Spring)	Marginal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
	Baseline (Fall)	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Marginal
	2017 (Spring)	Marginal	Suboptimal	Marginal	Suboptimal	Suboptimal
	2017 (Fall)	Suboptimal	Suboptimal	Marginal	Suboptimal	Marginal
	2018 (Spring)	Marginal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
	2018 (Fall)	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
	2019 (Spring)	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal
	2019 (Fall)	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
	2020 (Spring)	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Marginal
	2020 (Fall)	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
	2021 (Spring)	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
	2021 (Fall)	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
	2022 (Spring)	Optimal	Optimal	Suboptimal	Optimal	Suboptimal
	2022 (Fall)	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal
	2023 (Spring)	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal
	2023 (Fall)	Optimal	Optimal	Suboptimal	Optimal	Suboptimal
	2024 (Spring)	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal
	2024 (Fall)	Optimal	Optimal	Suboptimal	Optimal	Suboptimal
	2025 (Spring)	Optimal	Suboptimal	Optimal	Optimal	Suboptimal
BI Category	Baseline (Spring)	Fair	Fair	Good	Good	Good
	Baseline (Fall)	Good	Fair	Fair	Fair	Fair
	2017 (Spring)	Fairly Poor	Good	Fair	Fair	Good
	2017 (Fall)	Fair	Fair	Fair	Fair	Good
	2018 (Spring)	Fair	Fairly Poor	Fair	Fairly Poor	Good
	2018 (Fall)*	Fair	Good	Good	Good	Good
	2019 (Spring)*	Fair	Good	Fair	Fair	Good
	2019 (Fall)	Fairly Poor	Fairly Poor	Fair	Fair	Fair
	2020 (Spring)	Fairly Poor	Good	Good	Fair	Good
	2020 (Fall)	Fairly Poor	Fair	Fair	Fair	Fair
	2021 (Spring)	Good	Fair	Fair	Fair	Good
	2021 (Fall)	Fair	Fairly Poor	Fair	Good	Fair
	2022 (Spring)**	Good	Fairly Poor	Fairly Poor	Good	Good
	2022 (Fall)**	Fair	Fairly Poor	Fair	Fair	Good
	2023 (Spring)	Fair	Fairly Poor	Fair	Fair	Fair
	2023 (Fall)	Fairly Poor	Fair	Good	Fair	Good
	2024 (Spring)	Fair	Fairly Poor	Fair	Fair	Fair
	2024 (Fall)	Good	Fairly Poor	Fair	Fair	Fair

Parameter	Event	Cow Branch	Dawkins Branch	Little Bull Run	Neabsco Creek	Purcell Branch
	2025 (Spring)	Fair	Fairly Poor	Fairly poor	Fair	Fair
PMA Category	Baseline (Spring)	Severely Impacted	Moderately Impacted	Moderately Impacted	Severely Impacted	Moderately Impacted
	Baseline (Fall)	Slightly Impacted	Moderately Impacted	Moderately Impacted	Slightly Impacted	Slightly Impacted
	2017 (Spring)	Moderately Impacted	Slightly Impacted	Moderately Impacted	Moderately Impacted	Moderately Impacted
	2017 (Fall)	Moderately Impacted	Slightly Impacted	Non-Impacted	Slightly Impacted	Slightly Impacted
	2018 (Spring)	Moderately Impacted	Moderately Impacted	Slightly Impacted	Moderately Impacted	Moderately Impacted
	2018 (Fall)*	Moderately Impacted	Moderately Impacted	Slightly Impacted	Moderately Impacted	Slightly Impacted
	2019 (Spring)*	Moderately Impacted	Moderately Impacted	Moderately Impacted	Slightly Impacted	Non-impacted
	2019 (Fall)	Moderately Impacted	Slightly Impacted	Non-impacted	Slightly Impacted	Slightly Impacted
	2020 (Spring)	Moderately Impacted	Moderately Impacted	Slightly Impacted	Slightly Impacted	Slightly Impacted
	2020 (Fall)	Severely Impacted	Slightly Impacted	Non-impacted	Slightly Impacted	Slightly Impacted
	2021 (Spring)	Severely Impacted	Moderately Impacted	Moderately Impacted	Moderately Impacted	Moderately Impacted
	2021 (Fall)	Severely Impacted	Non-Impacted	Non-Impacted	Moderately Impacted	Moderately Impacted
	2022 (Spring)	Severely Impacted	Moderately Impacted	Non-Impacted	Slightly Impacted	Moderately Impacted
	2022 (Fall)	Severely Impacted	Severely Impacted	Slightly Impacted	Severely Impacted	Moderately Impacted
	2023 (Spring)	Moderately Impacted	Moderately Impacted	Non-impacted	Moderately Impacted	Moderately Impacted
	2023 (Fall)	Moderately Impacted	Moderately Impacted	Slightly Impacted	Slightly Impacted	Slightly Impacted
	2024 (Spring)	Severely impacted	Severely Impacted	Moderately Impacted	Severely Impacted	Moderately Impacted
	2024 (Fall)	Moderately impacted	Moderately impacted	Non-impacted	Moderately impacted	Moderately Impacted
	2025 (Spring)	Moderately impacted	Moderately impacted	Slightly impacted	Moderately impacted	Moderately Impacted
VSCI Score	Baseline (Spring)	27.85	35.67	39.29	32.96	46.40
	Baseline (Fall)	36.54	49.42	56.59	39.44	57.34
	2017 (Spring)	37.17	39.85	38.66	47.03	41.71
	2017 (Fall)	41.78	49.71	61.83	58.67	63.60
	2018 (Spring)	40.61	48.25	52.47	42.94	48.40
	2018 (Fall)*	49.91	52.64	74.17	60.74	64.67
	2019 (Spring)*	37.33	45.35	49.27	44.68	47.14
	2019 (Fall)	42.95	62.99	67.99	56.10	60.76
	2020 (Spring)	34.52	41.42	42.77	47.03	47.53
	2020 (Fall)	35.57	48.77	62.62	57.12	55.25
	2021 (Spring)	34.71	45.91	45.24	38.48	41.08
	2021 (Fall)	51.26	54.70	70.52	61.30	60.12
	2022 (Spring)**	30.27	44.88	53.96	50.11	48.13
	2022 (Fall)**	57.02	49.64	68.71	54.11	64.54
	2023 (Spring)	44.23	40.19	50.65	43.19	44.81
	2023 (Fall)	48.40	51.11	57.51	56.82	70.21
	2024 (Spring)	29.88	37.14	46.93	42.49	51.25
	2024 (Fall)	59.83	43.70	60.16	57.37	61.18
	2025 (Spring)	44.13	41.51	41.35	41.78	50.52

Parameter	Event	Cow Branch	Dawkins Branch	Little Bull Run	Neabsco Creek	Purcell Branch
VSCI Category	Baseline (Spring)	Severe Stress	Severe Stress	Severe Stress	Severe Stress	Stress
	Baseline (Fall)	Severe Stress	Stress	Stress	Severe Stress	Stress
	2017 (Spring)	Severe Stress	Severe Stress	Severe Stress	Stress	Severe Stress
	2017 (Fall)	Severe Stress	Stress	Good	Stress	Good
	2018 (Spring)	Severe Stress	Stress	Stress	Stress	Stress
	2018 (Fall)*	Stress	Stress	Excellent	Good	Good
	2019 (Spring)*	Severe Stress	Stress	Stress	Stress	Stress
	2019 (Fall)	Stress	Good	Good	Stress	Good
	2020 (Spring)	Severe Stress	Severe Stress	Stress	Stress	Stress
	2020 (Fall)	Severe Stress	Stress	Good	Stress	Stress
	2021 (Spring)	Severe Stress	Stress	Stress	Severe Stress	Stress
	2021 (Fall)	Stress	Stress	Good	Good	Good
	2022 (Spring)**	Severe Stress	Stress	Stress	Stress	Stress
	2022 (Fall)**	Stress	Stress	Good	Stress	Good
	2023 (Spring)	Stress	Severe Stress	Stress	Stress	Stress
	2023 (Fall)	Stress	Stress	Stress	Stress	Good
	2024 (Spring)	Severe Stress	Severe Stress	Stress	Severe Stress	Stress
	2024 (Fall)	Stress	Stress	Good	Stress	Good
	2025 (Spring)	Stress	Severe Stress	Severe Stress	Severe Stress	Stress

*Previously reported VSCI Scores for Fall 2018 and Spring 2019 have shifted slightly due to a calculation error.
**Previously reported HBI and VSCI Scores for Spring 2022 and Fall 2022 have been revised due to a calculation error.

Prepared by: INT
Checked by: PKG

Note: Beginning in 2022, the HBI calculation has been revised to the new method (Method 2) that divides (Individual Abundance * Tolerance Value) by Total Abundance of taxa within the sample that have a Tolerance Value, *i.e.*, excludes abundances of those taxa without a Tolerance Value.

Improvements from baseline are shown in green, no change from baseline are shown in blue, and regression from baseline are shown in red.

4.0 Summary and Conclusions

The following sections present a summary of the Fall 2024 and Spring 2025 sampling events and compare the results with the previous sampling events conducted in 2016 through 2024. This section also provides conclusions for the current report period. It should be noted that there are biological changes associated with seasonality, with taxa emerging in the spring, and transitional life stages (e.g., metamorphosis) during and between events that may account for benthic community dynamics.

4.1 Summary

4.1.1 Fall 2024

Measured field and laboratory water quality parameters are generally within the normal ranges for shallow, cool, turbulent, piedmont Virginia streams, and generally meet Virginia's Water Quality Standards, as outlined in Section 3, except for *E. coli* at Cow Branch and Dawkins Branch. RBP physical habitat assessment scores indicated that Little Bull Run and Purcell Branch exhibited suboptimal habitat, and Cow Branch, Dawkins Branch, and Neabsco Creek exhibited optimal habitat for supporting benthic communities.

4.1.2 Spring 2025

Measured field and laboratory water quality parameters are generally within the normal ranges for shallow, cool, turbulent, piedmont Virginia streams, and generally meet Virginia's Water Quality Standards, as outlined in Section 3, except for *E. coli* at Little Bull Run. RBP physical habitat assessment scores indicated that Dawkins Branch and Purcell Branch exhibited suboptimal habitat, and Cow Branch, Neabsco Creek, and Little Bull Run exhibited optimal habitat for supporting benthic communities.

4.2 Conclusions

The measured field and laboratory water quality parameters from the Fall 2024 and Spring 2025 sampling results are generally comparable to the baseline sampling results, are within the normal ranges, and are below Virginia's Water Quality Standards except for elevated *E. coli* during Fall 2024 and Spring 2025 for Cow Branch, Dawkins Branch, and Little Bull Run. Monitoring efforts will be targeted to avoid collection periods following storm events to characterize the benthos and ambient water quality conditions.

Biological metrics, habitat assessments, and evaluations of the benthic macroinvertebrate communities at each site have indicated a marginal level of improvement compared to baseline conditions, though a regression from improvement in recent years at several sites, Seasonal fluctuation in benthic macroinvertebrate assessments has still shown an upward trend for most sites.

This seasonal trend allows for clear distinctions from baseline levels in Fall and Spring sampling. Based on the Fall 2024 and Spring 2025 sampling results, stream conditions have shown slight improvement from baseline conditions, except for BI and PMA which shows regression from baseline. The results of this report indicate that the health of these representative monitoring sites from across Prince William County are remaining stable.

5.0 References

Amec Foster Wheeler, 2015. Sampling Plan for Benthic Macroinvertebrate and Water Quality Monitoring, Prince William County, Virginia. December 29, 2015.

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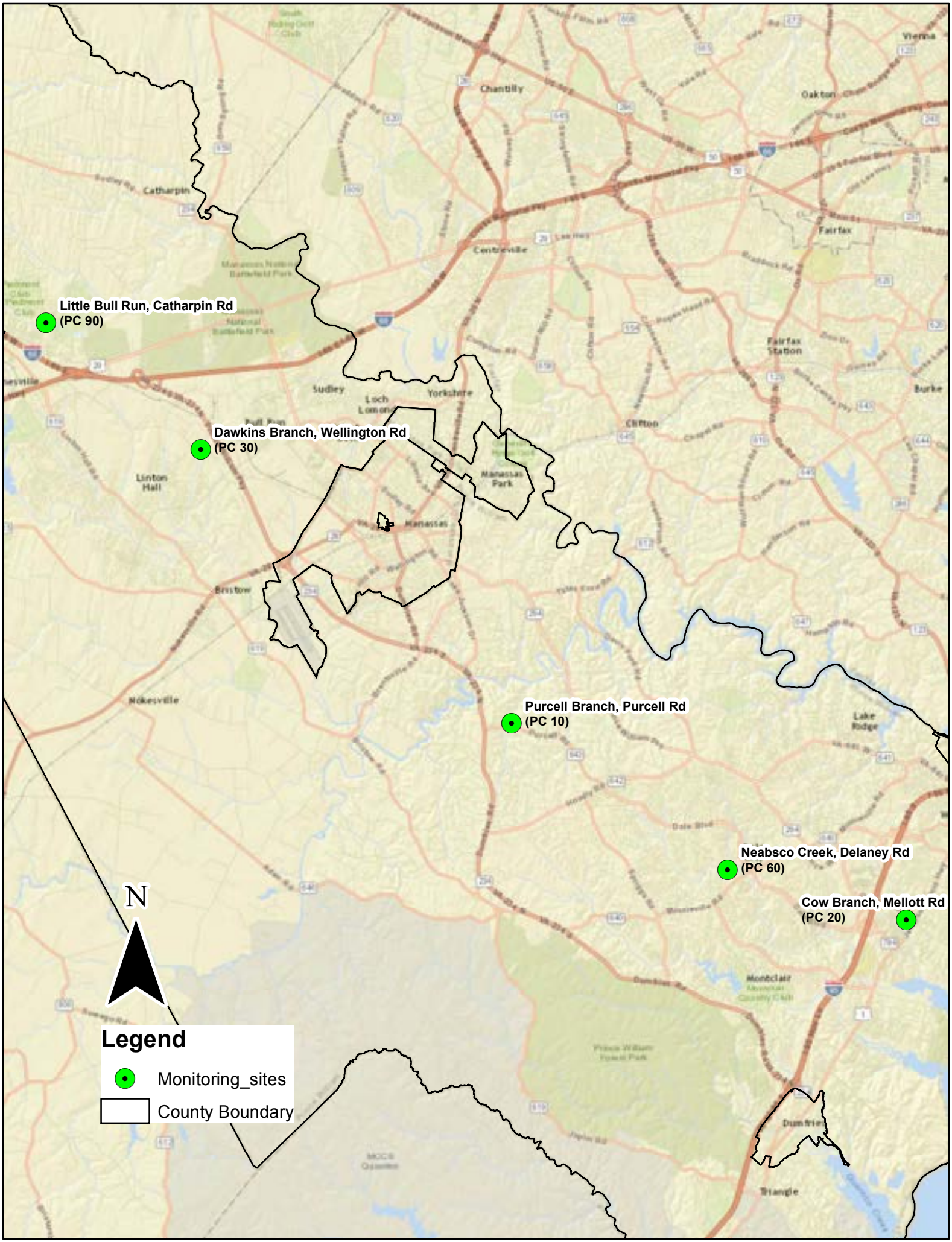
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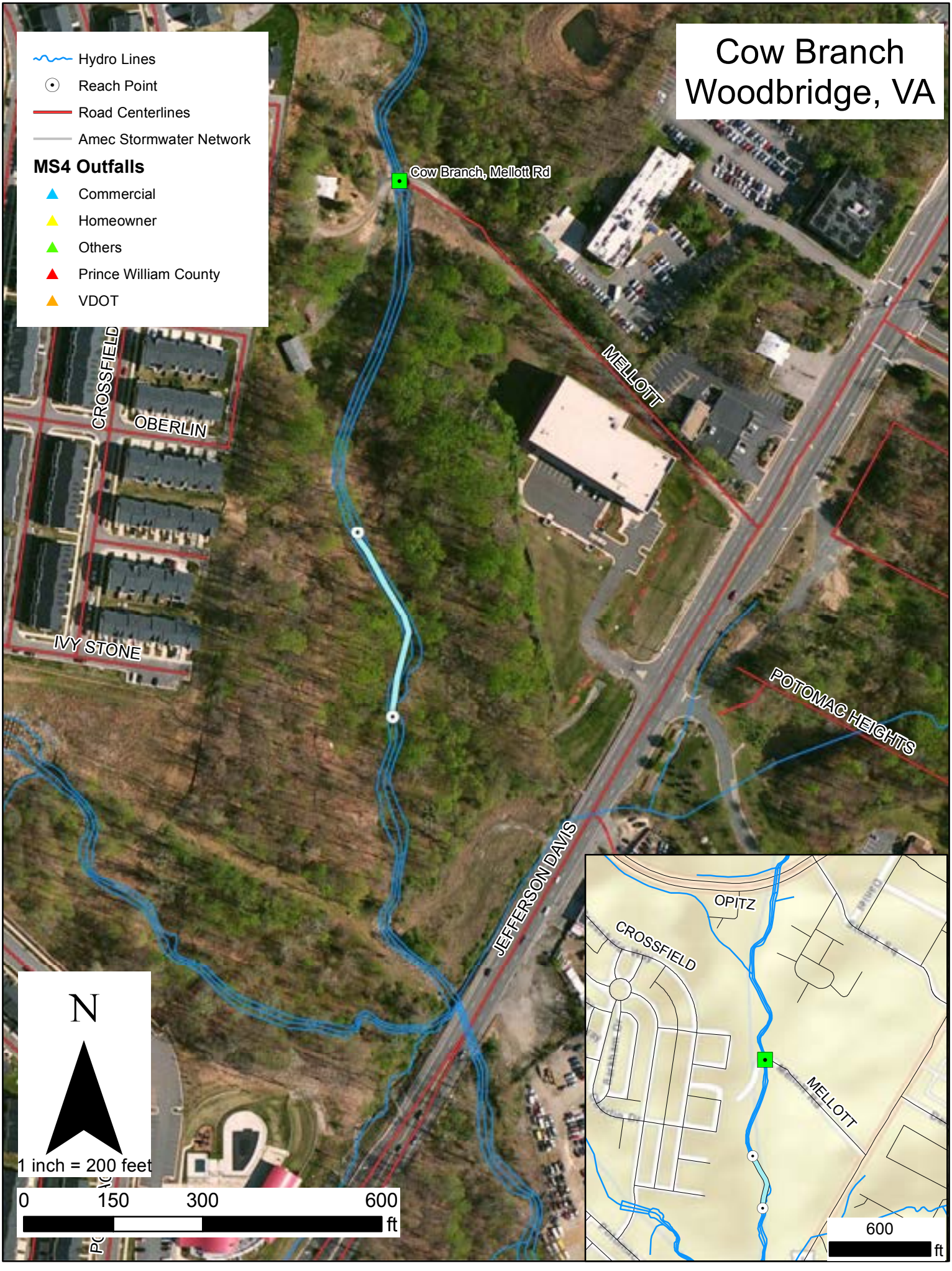
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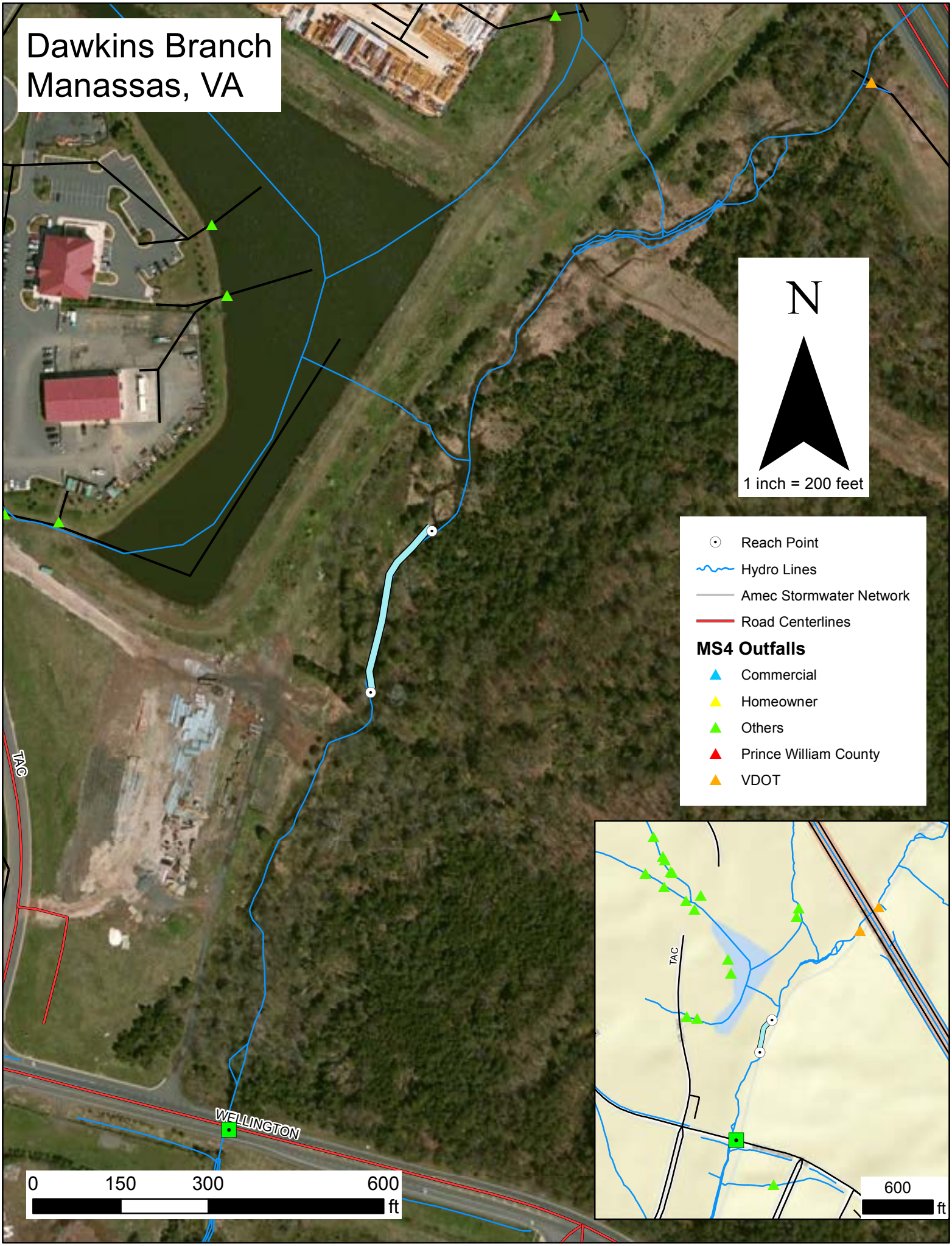
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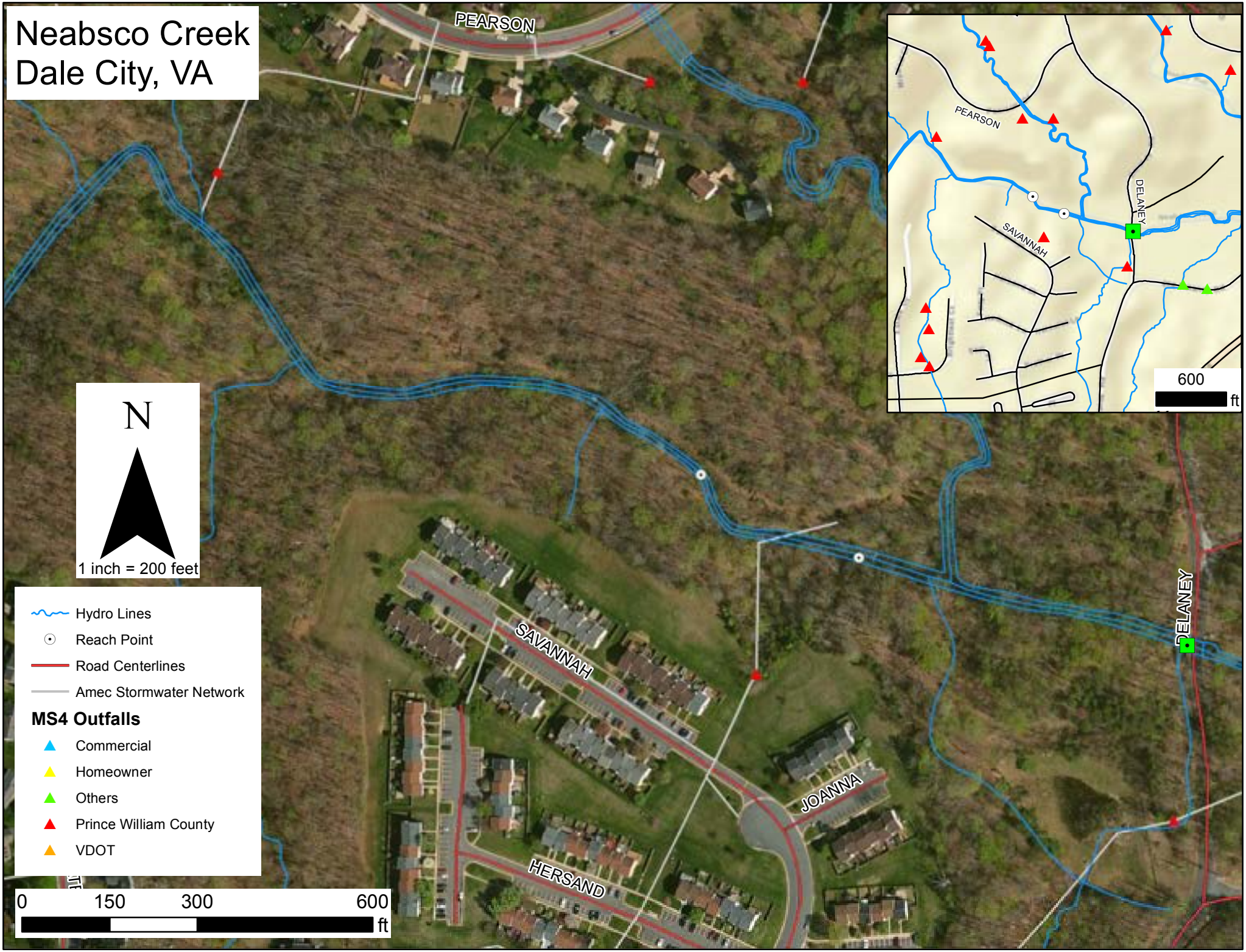
FIGURES

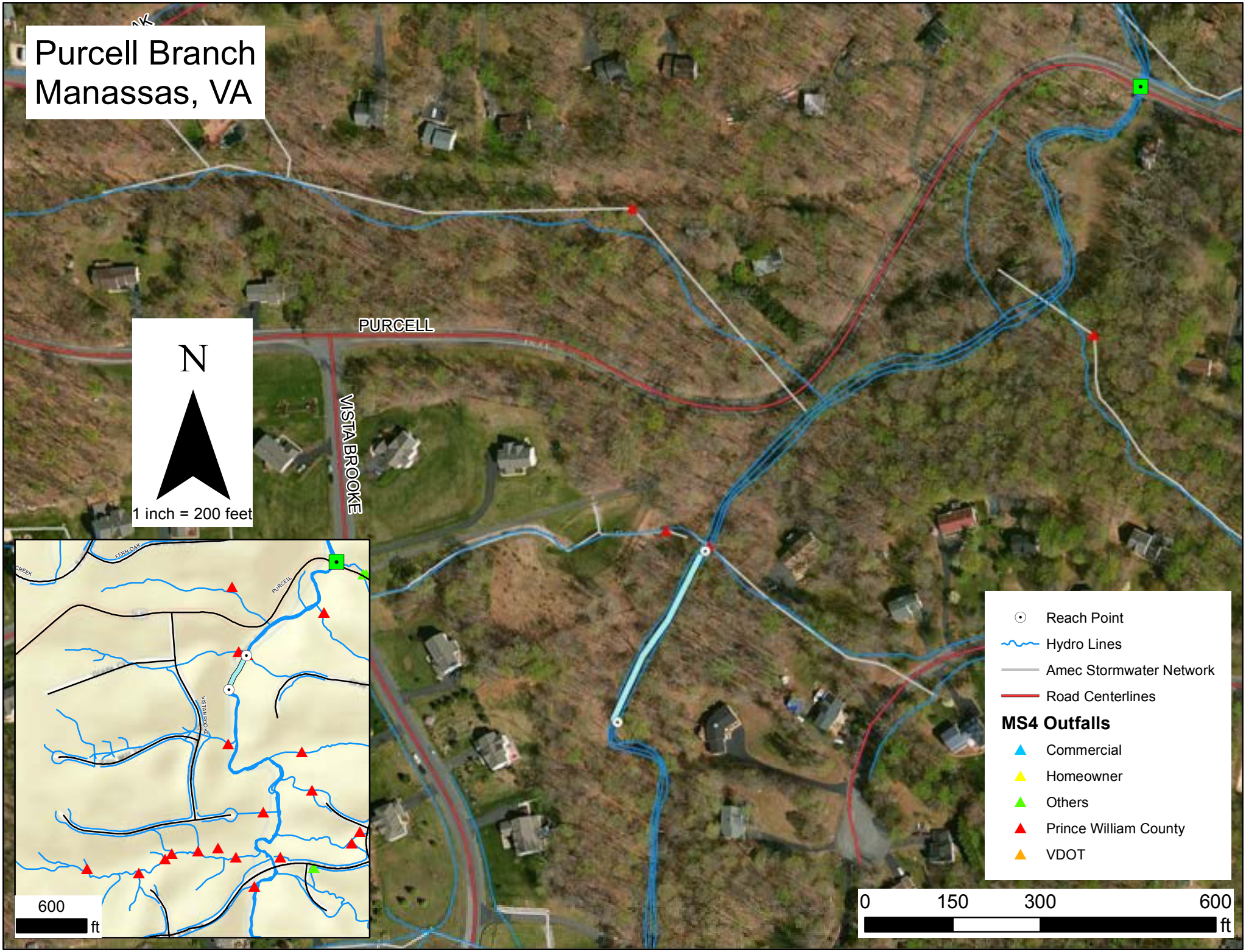

Little Bull Run, Catharpin Rd
(PC 90)
Dawkins Branch, Wellington Rd
(PC 30)
Purcell Branch, Purcell Rd
(PC 10)
Neabsco Creek, Delaney Rd
(PC 60)
Cow Branch, Mellott Rd
(PC 20)
N
Legend
Monitoring_sites
County Boundary
Catharpin
Centreville
Chantilly
Oakton
Vienna
Fairfax
Fairfax Station
Burke
Clifton
Sudley
Loch Lomond
Yorkshire
Linton Hall
Manassas
Manassas Park
Bristow
Nokesville
Lake Ridge
Montclair
Dumfries
Triangle


Cow Branch
Woodbridge, VA
Hydro Lines
Reach Point
Road Centerlines
Amec Stormwater Network
MS4 Outfalls
Commercial
Homeowner
Others
Prince William County
VDOT
Cow Branch, Mellott Rd
MELLOTT
CROSSFIELD
OBERLIN
IVY STONE
POTOMAC HEIGHTS
JEFFERSON DAVIS
OPITZ
CROSSFIELD
MELLOTT
N
1 inch = 200 feet
0
150
300
600
ft
600
ft


Dawkins Branch
Manassas, VA
N
1 inch = 200 feet
Reach Point
Hydro Lines
Amec Stormwater Network
Road Centerlines
MS4 Outfalls
Commercial
Homeowner
Others
Prince William County
VDOT
TAC
WELLINGTON
0
150
300
600
ft
TAC
600
ft


Little Bull Run
Gainesville, VA
PIEDMONT VISTA
SNICKERSVILLE
HUNTERS RUN
600
ft
N
1 inch = 200 feet
Reach Point
Hydro Lines
Amec Stormwater Network
Road Centerlines
MS4 Outfalls
Commercial
Homeowner
Others
Prince William County
VDOT
EMMANUEL
HUNTERS RUN
FALLSMERE
0
150
300
600
ft


Neabsco Creek
Dale City, VA
PEARSON
SAVANNAH
JOANNA
HERSAND
DELANEY
N
1 inch = 200 feet
Hydro Lines
Reach Point
Road Centerlines
Amec Stormwater Network
MS4 Outfalls
Commercial
Homeowner
Others
Prince William County
VDOT
0
150
300
600
ft
600
ft


Purcell Branch
Manassas, VA
PURCELL
VISTA BROOKE
N
1 inch = 200 feet
600
ft
Reach Point
Hydro Lines
Amec Stormwater Network
Road Centerlines
MS4 Outfalls
Commercial
Homeowner
Others
Prince William County
VDOT
0
150
300
600
ft

APPENDIX A

SITE DATA SHEETS

Fall 2024

Biological Monitoring Form

Project Name	PWC Biomonitoring
Project Number	US0039765.6753
Site Name	Cow Branch
Site ID	PC 20
Site Address	
Date	10/14/24
Time	10:00
Technician(s) List name or names of all relevant technicians/samplers or other personnel	A Allie, D Robinson

Stream Name	Cow Branch
Location	Woodbridge
River Basin	Potomac
Investigators	A Allie, D Robinson
Reason for Survey	Monitoring
Weather Conditions	Clear / Sunny

GPS location



RIPARIAN VEGETATION (18 meter buffer)	
Dominant Type	Shrubs

INSTREAM FEATURES	
Est. Stream Width (ft)	14.0
Est. Stream Depth (ft)	0.4
Surface Velocity (ft/sec at thalweg)	1.05
Canopy Cover	Partly shaded
High Water Mark (ft)	2.0
Channelized	○ Yes ◉ No
Dam Present	○ Yes ◉ No
Proporation of Reach by Stream Morphology Types	
Riffle (%)	60
Run (%)	10
Pool (%)	30

AQUATIC VEGETATION	
Dominant Type	Attached Algae
Portion of reach with aquatic veg	90

WATER QUALITY	
Temperature °C	14.9
Specific Conductance µS/cm	387
Dissolved Oxygen mg/L	11.15
pH	6.45
Turbidity NTU	NM
WQ Instrument Used	YSI 556
Water Odors	☑ Normal / None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other
Water Surface Oils	☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other

Inorganic Substrate Components (should add up to 100%)

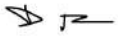
Substrate Type	Diameter	% Composition in sampling reach
Bedrock	**NA**	0.0
Boulder	**>256 mm** (10")	10.0
Cobble	**64 - 256 mm** (2.5" - 10")	50.0
Gravel	**2 - 64 mm** (0.1" - 2.5")	20.0
Sand	**0.06 - 2 mm** (gritty)	10.0
Silt	**0.004 - 0.06 mm**	10.0
Clay	**< 0.004 mm** (slick)	0.0

Parameters to be evaluated in sampling reach	
Habitat Parameter	**Condition Category**
Epifaunal Substrate / Available Cover	17
Embeddedness	19
Velocity / Depth Regime	10
Sediment Deposition	17
Channel Flow Status	18

Parameters to be evaluated broader than sampling reach	
Habitat Parameter	**Condition Category**
Channel Alteration	19
Frequency of Riffles (or Bends)	13
Bank Stability (LEFT BANK)	9
Bank Stability (RIGHT BANK)	9
Vegetative Protection (LEFT BANK)	8
Vegetative Protection (RIGHT BANK)	8
Riparian Vegetative Zone Width (LEFT BANK)	9
Riparian Vegetative Zone Width (RIGHT BANK)	10

Submit

Tablet Form Completed By:

Name	D Robinson
Initials	
Signature	
Date/Time	10/10/2025 12:18

Email
ilana.ton@wsp.com

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Biological Monitoring Form

Project Name	PWC Biomonitoring
Project Number	US0039765.6753
Site Name	Dawkins Branch
Site ID	PC 30
Site Address	
Date	10/10/24
Time	13:10
Technician(s) List name or names of all relevant technicians/samplers or other personnel	I Ton, A Allie

Stream Name	Dawkins Branch
Location	Manassas
River Basin	Potomac
Investigators	I Ton, A Allie
Reason for Survey	Monitoring
Weather Conditions	Clear / Sunny

GPS location



RIPARIAN VEGETATION (18 meter buffer)	
Dominant Type	Trees

INSTREAM FEATURES	
Est. Stream Width (ft)	17.0
Est. Stream Depth (ft)	0.45
Surface Velocity (ft/sec at thalweg)	0.76
Canopy Cover	Partly shaded
High Water Mark (ft)	1.5
Channelized	○ Yes ◉ No
Dam Present	○ Yes ◉ No
Proporation of Reach by Stream Morphology Types	
Riffle (%)	60
Run (%)	10
Pool (%)	30

AQUATIC VEGETATION	
Dominant Type	Attached Algae
Portion of reach with aquatic veg	80

WATER QUALITY	
Temperature °C	15.97
Specific Conductance µS/cm	424
Dissolved Oxygen mg/L	10.21
pH	7.23
Turbidity NTU	0.42
WQ Instrument Used	YSI 556
Water Odors	☑ Normal / None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other
Water Surface Oils	☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other

Inorganic Substrate Components (should add up to 100%)

Substrate Type	Diameter	% Composition in sampling reach
Bedrock	**NA**	5.0
Boulder	**>256 mm** (10")	15.0
Cobble	**64 - 256 mm** (2.5" - 10")	15.0
Gravel	**2 - 64 mm** (0.1" - 2.5")	40.0
Sand	**0.06 - 2 mm** (gritty)	0.0
Silt	**0.004 - 0.06 mm**	20.0
Clay	**< 0.004 mm** (slick)	5.0

Parameters to be evaluated in sampling reach	
Habitat Parameter	**Condition Category**
Epifaunal Substrate / Available Cover	18
Embeddedness	18
Velocity / Depth Regime	20
Sediment Deposition	16
Channel Flow Status	20

Parameters to be evaluated broader than sampling reach	
Habitat Parameter	**Condition Category**
Channel Alteration	18
Frequency of Riffles (or Bends)	12
Bank Stability (LEFT BANK)	8
Bank Stability (RIGHT BANK)	8
Vegetative Protection (LEFT BANK)	9
Vegetative Protection (RIGHT BANK)	10
Riparian Vegetative Zone Width (LEFT BANK)	10
Riparian Vegetative Zone Width (RIGHT BANK)	8

Field Photography

Image 1



Caption for Image 1

Downstream site looking upstream

Image 2



Caption for Image 2

Upstream site looking upstream

Image 3



Caption for Image 3

Upstream site looking upstream

Submit

Tablet Form Completed By:

Name	Ilana Ton
Initials	
Signature	
Date/Time	10/10/2024 15:42

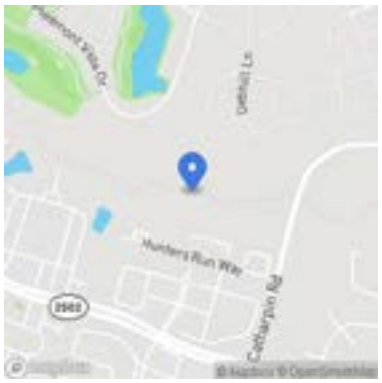
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Biological Monitoring Form

Project Name	PWC Biomonitoring
Project Number	US0039765.6753
Site Name	Little Bull Run
Site ID	PC 90
Site Address	
Date	10/10/24
Time	09:41
Technician(s) List name or names of all relevant technicians/samplers or other personnel	I Ton, A Allie

Stream Name	Little Bull Run
Location	Gainesville
River Basin	Potomac
Investigators	I Ton, A Allie
Reason for Survey	Monitoring
Weather Conditions	Sunny

GPS location



RIPARIAN VEGETATION (18 meter buffer)	
Dominant Type	Trees

INSTREAM FEATURES	
Est. Stream Width (ft)	22.0
Est. Stream Depth (ft)	0.35
Surface Velocity (ft/sec at thalweg)	1.3
Canopy Cover	Partly open
High Water Mark (ft)	1.6
Channelized	○ Yes ◉ No
Dam Present	○ Yes ◉ No
Proporation of Reach by Stream Morphology Types	
Riffle (%)	20
Run (%)	50
Pool (%)	30

AQUATIC VEGETATION	
Dominant Type	Attached Algae
Portion of reach with aquatic veg	90

WATER QUALITY	
Temperature °C	13.95
Specific Conductance µS/cm	501
Dissolved Oxygen mg/L	11.86
pH	6.94
Turbidity NTU	1.9
WQ Instrument Used	YSI 556
Water Odors	☑ Normal / None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other
Water Surface Oils	☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other

Inorganic Substrate Components (should add up to 100%)

Substrate Type	Diameter	% Composition in sampling reach
Bedrock	**NA**	5.0
Boulder	**>256 mm** (10")	0.0
Cobble	**64 - 256 mm** (2.5" - 10")	20.0
Gravel	**2 - 64 mm** (0.1" - 2.5")	50.0
Sand	**0.06 - 2 mm** (gritty)	0.0
Silt	**0.004 - 0.06 mm**	15.0
Clay	**< 0.004 mm** (slick)	10.0

Parameters to be evaluated in sampling reach	
Habitat Parameter	**Condition Category**
Epifaunal Substrate / Available Cover	12
Embeddedness	16
Velocity / Depth Regime	10
Sediment Deposition	13
Channel Flow Status	17

Parameters to be evaluated broader than sampling reach	
Habitat Parameter	**Condition Category**
Channel Alteration	16
Frequency of Riffles (or Bends)	5
Bank Stability (LEFT BANK)	5
Bank Stability (RIGHT BANK)	4
Vegetative Protection (LEFT BANK)	3
Vegetative Protection (RIGHT BANK)	4
Riparian Vegetative Zone Width (LEFT BANK)	7
Riparian Vegetative Zone Width (RIGHT BANK)	9

Field Photography

Image 1



Caption for Image 1

Downstream site looking downstream

Image 2



Caption for Image 2

Downstream site looking upstream

Image 3



Caption for Image 3

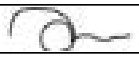
Upstream site looking upstream

Image 4

Caption for Image 4
Upstream site looking downstream

Submit

Tablet Form Completed By:

Name	Ilana Ton
Initials	
Signature	
Date/Time	10/10/2024 11:14

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Biological Monitoring Form

Project Name	PWC Biomonitoring
Project Number	US0039765.6753
Site Name	Neabsco Creek
Site ID	PC 60
Site Address	
Date	10/14/24
Time	14:30
Technician(s) List name or names of all relevant technicians/samplers or other personnel	A Allie, D Robinson

Stream Name	Neabsco Creek
Location	Dale City
River Basin	Potomac
Investigators	A Allie, D Robinson
Reason for Survey	Monitoring
Weather Conditions	Clear / Sunny

GPS location



RIPARIAN VEGETATION (18 meter buffer)	
Dominant Type	Trees

INSTREAM FEATURES	
Est. Stream Width (ft)	23.0
Est. Stream Depth (ft)	0.4
Surface Velocity (ft/sec at thalweg)	1.2
Canopy Cover	Partly shaded
High Water Mark (ft)	2.0
Channelized	○ Yes ◉ No
Dam Present	○ Yes ◉ No
Proporation of Reach by Stream Morphology Types	
Riffle (%)	75
Run (%)	0
Pool (%)	25

AQUATIC VEGETATION	
Dominant Type	Attached Algae
Portion of reach with aquatic veg	10

WATER QUALITY	
Temperature °C	15.71
Specific Conductance µS/cm	192
Dissolved Oxygen mg/L	11.91
pH	6.83
Turbidity NTU	NM
WQ Instrument Used	YSI 556
Water Odors	☑ Normal / None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other
Water Surface Oils	☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other

Inorganic Substrate Components (should add up to 100%)

Substrate Type	Diameter	% Composition in sampling reach
Bedrock	**NA**	20.0
Boulder	**>256 mm** (10")	30.0
Cobble	**64 - 256 mm** (2.5" - 10")	20.0
Gravel	**2 - 64 mm** (0.1" - 2.5")	10.0
Sand	**0.06 - 2 mm** (gritty)	15.0
Silt	**0.004 - 0.06 mm**	5.0
Clay	**< 0.004 mm** (slick)	0.0

Parameters to be evaluated in sampling reach	
Habitat Parameter	**Condition Category**
Epifaunal Substrate / Available Cover	18
Embeddedness	17
Velocity / Depth Regime	10
Sediment Deposition	18
Channel Flow Status	20

Parameters to be evaluated broader than sampling reach	
Habitat Parameter	**Condition Category**
Channel Alteration	19
Frequency of Riffles (or Bends)	15
Bank Stability (LEFT BANK)	9
Bank Stability (RIGHT BANK)	9
Vegetative Protection (LEFT BANK)	9
Vegetative Protection (RIGHT BANK)	9
Riparian Vegetative Zone Width (LEFT BANK)	9
Riparian Vegetative Zone Width (RIGHT BANK)	10

Field Photography

Image 1



Caption for Image 1

Downstream point looking upstream

Submit

Tablet Form Completed By:

Name	D Robinson
Initials	
Signature	
Date/Time	10/10/2024 16:32

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Biological Monitoring Form

Project Name	PWC Biomonitoring
Project Number	US0039765.6753
Site Name	Purcell Branch
Site ID	PC 10
Site Address	
Date	10/16/24
Time	10:09
Technician(s) List name or names of all relevant technicians/samplers or other personnel	A Allie, R Smith

Stream Name	Purcell Branch
Location	Manassas
River Basin	Potomac
Investigators	A Allie, R Smith
Reason for Survey	Monitoring
Weather Conditions	Clear / Sunny

GPS location



RIPARIAN VEGETATION
(18 meter buffer)

INSTREAM FEATURES

Est. Stream Width (ft)	24.0
Est. Stream Depth (ft)	0.3
Surface Velocity (ft/sec at thalweg)	0.65
Canopy Cover	Partly shaded
High Water Mark (ft)	1.7
Channelized	○ Yes ◉ No
Dam Present	○ Yes ◉ No

Proporation of Reach by Stream Morphology Types

Riffle (%)	50
Run (%)	15
Pool (%)	35

AQUATIC VEGETATION

Dominant Type	Attached Algae
Portion of reach with aquatic veg	5

WATER QUALITY

Temperature °C	10.35
Specific Conductance µS/cm	196
Dissolved Oxygen mg/L	13.32
pH	7.21
Turbidity NTU	0.96
WQ Instrument Used	YSI 556
Water Odors	☑ Normal / None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other
Water Surface Oils	☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other

Inorganic Substrate Components
(should add up to 100%)

Substrate Type	Diameter	% Composition in sampling reach
Bedrock	**NA**	20.0
Boulder	**>256 mm** (10")	20.0
Cobble	**64 - 256 mm** (2.5" - 10")	10.0
Gravel	**2 - 64 mm** (0.1" - 2.5")	25.0
Sand	**0.06 - 2 mm** (gritty)	20.0
Silt	**0.004 - 0.06 mm**	5.0
Clay	**< 0.004 mm** (slick)	0.0

Parameters to be evaluated in sampling reach	
Habitat Parameter	**Condition Category**
Epifaunal Substrate / Available Cover	16
Embeddedness	15
Velocity / Depth Regime	10
Sediment Deposition	15
Channel Flow Status	11

Parameters to be evaluated broader than sampling reach	
Habitat Parameter	**Condition Category**
Channel Alteration	20
Frequency of Riffles (or Bends)	11
Bank Stability (LEFT BANK)	6
Bank Stability (RIGHT BANK)	6
Vegetative Protection (LEFT BANK)	7
Vegetative Protection (RIGHT BANK)	7
Riparian Vegetative Zone Width (LEFT BANK)	10
Riparian Vegetative Zone Width (RIGHT BANK)	9

Field Photography

Image 1



Caption for Image 1

Upstream site looking downstream

Image 2



Caption for Image 2

Upstream site looking upstream

Submit

Tablet Form Completed By:

Name	A Allie
Initials	
Signature	
Date/Time	03/14/2025 17:22

Email
ilana.ton@wsp.com

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Spring 2025

Biological Monitoring Form

Project Name	PWC Biomonitoring
Project Number	US0039765.6753
Site Name	Cow Branch
Site ID	PC 20
Site Address	
Date	04/16/25
Time	11:28
Technician(s) List name or names of all relevant technicians/samplers or other personnel	RS/AA

Stream Name	Cow Branch
Location	Woodbridge
River Basin	Potomac
Investigators	RS/AA
Reason for Survey	Monitoring
Weather Conditions	Clear / Sunny

GPS location



RIPARIAN VEGETATION (18 meter buffer)	
Dominant Type	Shrubs

INSTREAM FEATURES	
Est. Stream Width (ft)	16.0
Est. Stream Depth (ft)	1.2
Surface Velocity (ft/sec at thalweg)	1.45
Canopy Cover	Partly open
High Water Mark (ft)	1.0
Channelized	○ Yes ◉ No
Dam Present	○ Yes ◉ No
Proporation of Reach by Stream Morphology Types	
Riffle (%)	50
Run (%)	20
Pool (%)	30

AQUATIC VEGETATION	
Dominant Type	Attached Algae
Portion of reach with aquatic veg	25

WATER QUALITY	
Temperature °C	13.9
Specific Conductance µS/cm	492.8
Dissolved Oxygen mg/L	9.71
pH	6.8
Turbidity NTU	4.9
WQ Instrument Used	YSI
Water Odors	☑ Normal / None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other
Water Surface Oils	☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other

Inorganic Substrate Components (should add up to 100%)

Substrate Type	Diameter	% Composition in sampling reach
Bedrock	**NA**	0.0
Boulder	**>256 mm** (10")	5.0
Cobble	**64 - 256 mm** (2.5" - 10")	40.0
Gravel	**2 - 64 mm** (0.1" - 2.5")	25.0
Sand	**0.06 - 2 mm** (gritty)	20.0
Silt	**0.004 - 0.06 mm**	8.0
Clay	**< 0.004 mm** (slick)	2.0

Parameters to be evaluated in sampling reach	
Habitat Parameter	**Condition Category**
Epifaunal Substrate / Available Cover	17
Embeddedness	18
Velocity / Depth Regime	15
Sediment Deposition	15
Channel Flow Status	19

Parameters to be evaluated broader than sampling reach	
Habitat Parameter	**Condition Category**
Channel Alteration	20
Frequency of Riffles (or Bends)	18
Bank Stability (LEFT BANK)	10
Bank Stability (RIGHT BANK)	9
Vegetative Protection (LEFT BANK)	9
Vegetative Protection (RIGHT BANK)	9
Riparian Vegetative Zone Width (LEFT BANK)	9
Riparian Vegetative Zone Width (RIGHT BANK)	10

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Tablet Form Completed By:

Name	Rob Smith
Initials	RS
Signature	RS
Date/Time	04/16/25 13:41

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Biological Monitoring Form	
Project Name	PWC Biomonitoring
Project Number	US0039765.6753
Site Name	Dawkins Branch
Site ID	PC 30
Site Address	
Date	04/15/25
Time	14:34
Technician(s) List name or names of all relevant technicians/samplers or other personnel	I Ton, M Gordon

Stream Name	Dawkins Branch
Location	Manassas
River Basin	Potomac
Investigators	I Ton, M Gordon
Reason for Survey	Monitoring
Weather Conditions	Clear / Sunny

RIPARIAN VEGETATION (18 meter buffer)	
Dominant Type	Trees

INSTREAM FEATURES	
Est. Stream Width (ft)	23.5
Est. Stream Depth (ft)	0.5
Surface Velocity (ft/sec at thalweg)	0.32
Canopy Cover	Partly shaded
High Water Mark (ft)	1.0
Channelized	○ Yes ◉ No
Dam Present	○ Yes ◉ No
Proporation of Reach by Stream Morphology Types	
Riffle (%)	50
Run (%)	45
Pool (%)	5

AQUATIC VEGETATION	
Dominant Type	Attached Algae
Portion of reach with aquatic veg	70

WATER QUALITY	
Temperature °C	17.9
Specific Conductance µS/cm	1042
Dissolved Oxygen mg/L	6.16
pH	7.78
Turbidity NTU	6.70
WQ Instrument Used	YSI
Water Odors	☑ Normal / None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other
Water Surface Oils	☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other

Inorganic Substrate Components (should add up to 100%)

Substrate Type	Diameter	% Composition in sampling reach
Bedrock	**NA**	0.0
Boulder	**>256 mm** (10")	35.0
Cobble	**64 - 256 mm** (2.5" - 10")	5.0
Gravel	**2 - 64 mm** (0.1" - 2.5")	10.0
Sand	**0.06 - 2 mm** (gritty)	10.0
Silt	**0.004 - 0.06 mm**	20.0
Clay	**< 0.004 mm** (slick)	20.0

Parameters to be evaluated in sampling reach	
Habitat Parameter	**Condition Category**
Epifaunal Substrate / Available Cover	18
Embeddedness	10
Velocity / Depth Regime	10
Sediment Deposition	11
Channel Flow Status	18

Parameters to be evaluated broader than sampling reach	
Habitat Parameter	**Condition Category**
Channel Alteration	18
Frequency of Riffles (or Bends)	10
Bank Stability (LEFT BANK)	8
Bank Stability (RIGHT BANK)	7
Vegetative Protection (LEFT BANK)	8
Vegetative Protection (RIGHT BANK)	8
Riparian Vegetative Zone Width (LEFT BANK)	10
Riparian Vegetative Zone Width (RIGHT BANK)	10

Submit

Tablet Form Completed By:

Name	Max Gordon
Initials	MJG
Signature	
Date/Time	04/15/2025 14:38

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Biological Monitoring Form	
Project Name	PWC Biomonitoring
Project Number	US0039765.6753
Site Name	Little Bull Run
Site ID	PC90
Site Address	
Date	04/15/25
Time	10:19
Technician(s) List name or names of all relevant technicians/samplers or other personnel	I Ton, M Gordon

Stream Name	Little Bull Run
Location	Gainesville
River Basin	Potomac
Investigators	I Ton, M Gordon
Reason for Survey	Monitoring
Weather Conditions	Sunny

RIPARIAN VEGETATION (18 meter buffer)	
Dominant Type	Trees

INSTREAM FEATURES	
Est. Stream Width (ft)	24.0
Est. Stream Depth (ft)	1.3
Surface Velocity (ft/sec at thalweg)	0.17
Canopy Cover	Partly shaded
High Water Mark (ft)	2.0
Channelized	○ Yes ◉ No
Dam Present	○ Yes ◉ No
Proporation of Reach by Stream Morphology Types	
Riffle (%)	35
Run (%)	50
Pool (%)	15

AQUATIC VEGETATION	
Dominant Type	Attached Algae
Portion of reach with aquatic veg	90

WATER QUALITY	
Temperature °C	15.8
Specific Conductance µS/cm	692
Dissolved Oxygen mg/L	6.38
pH	7.59
Turbidity NTU	4.37
WQ Instrument Used	YSI
Water Odors	☑ Normal / None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other
Water Surface Oils	☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other

Inorganic Substrate Components (should add up to 100%)

Substrate Type	Diameter	% Composition in sampling reach
Bedrock	**NA**	10.0
Boulder	**>256 mm** (10")	10.0
Cobble	**64 - 256 mm** (2.5" - 10")	15.0
Gravel	**2 - 64 mm** (0.1" - 2.5")	50.0
Sand	**0.06 - 2 mm** (gritty)	15.0
Silt	**0.004 - 0.06 mm**	0.0
Clay	**< 0.004 mm** (slick)	0.0

Parameters to be evaluated in sampling reach	
Habitat Parameter	**Condition Category**
Epifaunal Substrate / Available Cover	18
Embeddedness	15
Velocity / Depth Regime	10
Sediment Deposition	20
Channel Flow Status	18

Parameters to be evaluated broader than sampling reach	
Habitat Parameter	**Condition Category**
Channel Alteration	20
Frequency of Riffles (or Bends)	7
Bank Stability (LEFT BANK)	7
Bank Stability (RIGHT BANK)	6
Vegetative Protection (LEFT BANK)	7
Vegetative Protection (RIGHT BANK)	7
Riparian Vegetative Zone Width (LEFT BANK)	10
Riparian Vegetative Zone Width (RIGHT BANK)	10

Field Photography

Image 1



Caption for Image 1

Upstream portion of site looking downstream

Image 2



Caption for Image 2

Upstream portion of site looking upstream

Image 3



Caption for Image 3

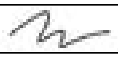
Downstream portion of site looking downstream

Image 4

Caption for Image 4
Downstream portion of site looking upstream

Submit

Tablet Form Completed By:

Name	Max Gordon
Initials	MJG
Signature	
Date/Time	04/15/2025 12:38

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Biological Monitoring Form

Project Name	PWC Biomonitoring
Project Number	US0039765.6753
Site Name	Neabsco Creek
Site ID	PC60
Site Address	
Date	04/16/25
Time	14:00
Technician(s) List name or names of all relevant technicians/samplers or other personnel	RS/AA

Stream Name	Neabsco Creek
Location	Dale City
River Basin	Potomac
Investigators	RS/AA
Reason for Survey	Monitoring
Weather Conditions	Clear / Sunny

GPS location



RIPARIAN VEGETATION (18 meter buffer)	
Dominant Type	Trees

INSTREAM FEATURES	
Est. Stream Width (ft)	22.0
Est. Stream Depth (ft)	1.0
Surface Velocity (ft/sec at thalweg)	1.8
Canopy Cover	Partly open
High Water Mark (ft)	0.66
Channelized	○ Yes ◉ No
Dam Present	○ Yes ◉ No
Proporation of Reach by Stream Morphology Types	
Riffle (%)	80
Run (%)	8
Pool (%)	12

AQUATIC VEGETATION	
Dominant Type	Attached Algae
Portion of reach with aquatic veg	100

WATER QUALITY	
Temperature °C	14.5
Specific Conductance µS/cm	240
Dissolved Oxygen mg/L	10.58
pH	8.0
Turbidity NTU	5.87
WQ Instrument Used	YSI
Water Odors	☑ Normal / None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other
Water Surface Oils	☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other

Inorganic Substrate Components (should add up to 100%)

Substrate Type	Diameter	% Composition in sampling reach
Bedrock	**NA**	20.0
Boulder	**>256 mm** (10")	25.0
Cobble	**64 - 256 mm** (2.5" - 10")	20.0
Gravel	**2 - 64 mm** (0.1" - 2.5")	15.0
Sand	**0.06 - 2 mm** (gritty)	15.0
Silt	**0.004 - 0.06 mm**	4.0
Clay	**< 0.004 mm** (slick)	1.0

Parameters to be evaluated in sampling reach	
Habitat Parameter	**Condition Category**
Epifaunal Substrate / Available Cover	19
Embeddedness	20
Velocity / Depth Regime	15
Sediment Deposition	17
Channel Flow Status	19

Parameters to be evaluated broader than sampling reach	
Habitat Parameter	**Condition Category**
Channel Alteration	20
Frequency of Riffles (or Bends)	16
Bank Stability (LEFT BANK)	8
Bank Stability (RIGHT BANK)	9
Vegetative Protection (LEFT BANK)	9
Vegetative Protection (RIGHT BANK)	9
Riparian Vegetative Zone Width (LEFT BANK)	9
Riparian Vegetative Zone Width (RIGHT BANK)	10

Submit

Tablet Form Completed By:

Name	Rob Smith
Initials	RS
Signature	RS
Date/Time	04/16/2025 15:58

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Biological Monitoring Form

Project Name	PWC Biomonitoring
Project Number	US0039765.6753
Site Name	Purcell Branch
Site ID	PC10
Site Address	
Date	04/17/25
Time	11:30
Technician(s) List name or names of all relevant technicians/samplers or other personnel	AEA/RWS

Stream Name	Purcell Branch
Location	Manassas
River Basin	Potomac
Investigators	AEA/RWS
Reason for Survey	Monitoring
Weather Conditions	Clear / Sunny

GPS location



RIPARIAN VEGETATION (18 meter buffer)	
Dominant Type	Trees

INSTREAM FEATURES	
Est. Stream Width (ft)	23.0
Est. Stream Depth (ft)	0.6
Surface Velocity (ft/sec at thalweg)	1.1
Canopy Cover	Partly open
High Water Mark (ft)	1.2
Channelized	○ Yes ◉ No
Dam Present	○ Yes ◉ No
Proporation of Reach by Stream Morphology Types	
Riffle (%)	45
Run (%)	35
Pool (%)	20

AQUATIC VEGETATION	
Dominant Type	Attached Algae
Portion of reach with aquatic veg	90

WATER QUALITY	
Temperature °C	11.1
Specific Conductance µS/cm	233.8
Dissolved Oxygen mg/L	11.85
pH	7.79
Turbidity NTU	NM
WQ Instrument Used	YSI
Water Odors	☑ Normal / None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other
Water Surface Oils	☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other

Inorganic Substrate Components (should add up to 100%)

Substrate Type	Diameter	% Composition in sampling reach
Bedrock	**NA**	20.0
Boulder	**>256 mm** (10")	15.0
Cobble	**64 - 256 mm** (2.5" - 10")	15.0
Gravel	**2 - 64 mm** (0.1" - 2.5")	25.0
Sand	**0.06 - 2 mm** (gritty)	23.0
Silt	**0.004 - 0.06 mm**	2.0
Clay	**< 0.004 mm** (slick)	0.0

Parameters to be evaluated in sampling reach	
Habitat Parameter	**Condition Category**
Epifaunal Substrate / Available Cover	17
Embeddedness	15
Velocity / Depth Regime	14
Sediment Deposition	15
Channel Flow Status	14

Parameters to be evaluated broader than sampling reach	
Habitat Parameter	**Condition Category**
Channel Alteration	20
Frequency of Riffles (or Bends)	10
Bank Stability (LEFT BANK)	5
Bank Stability (RIGHT BANK)	6
Vegetative Protection (LEFT BANK)	2
Vegetative Protection (RIGHT BANK)	5
Riparian Vegetative Zone Width (LEFT BANK)	10
Riparian Vegetative Zone Width (RIGHT BANK)	9

Submit

Tablet Form Completed By:

Name	Anna Allie
Initials	AA
Signature	AA
Date/Time	04/17/2025 13:04

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APPENDIX B

WATER QUALITY LABORATORY RESULTS

Occoquan Watershed Monitoring Laboratory

9408 Prince William St.

Manassas, VA 20110

Tel: (703) 361-5606

Virginia Laboratory ID: 460026

Att: Ms. Ilana Ton

WSP

13530 Dulles Technology Dr #300
Herndon, VA 20151

Analysis Report

Report #20230601

Description	Sample Date	Sample ID	Result	Unit	Reporting Limit	Method	Analysis Date
Ammonia as N	4/15/2025	24-0929 PC30	0.03	mg/L	0.01	SM4500-NH3 G	5/13/2025
E. coli	4/15/2025	24-0929 PC30	50.4	MPN/100mL	1.80	SM9221 B(LT)E(EC)C MPN	4/16/2025
Nitrate+nitrite as N	4/15/2025	24-0929 PC30	0.11	mg/L	0.01	SM4500-NO3-F	5/6/2025
Orthophosphate as P	4/15/2025	24-0929 PC30	< 0.01	mg/L	0.01	SM4500-P F	5/6/2025
Total Kjeldahl Nitrogen	4/15/2025	24-0929 PC30	0.54	mg/L	0.50	Lachat 10-107-06-2D	5/2/2025
Total Phosphorus	4/15/2025	24-0929 PC30	0.02	mg/L	0.01	SM4500-P F, 4500-P J	5/9/2025
Total Suspended Solids	4/15/2025	24-0929 PC30	3.5	mg/L	1.0	SM2540D	4/28/2025
Ammonia as N	4/15/2025	24-0930 PC90	0.02	mg/L	0.01	SM4500-NH3 G	5/13/2025
E. coli	4/15/2025	24-0930 PC90	210	MPN/100mL	1.80	SM9221 B(LT)E(EC)C MPN	4/16/2025
Nitrate+nitrite as N	4/15/2025	24-0930 PC90	0.34	mg/L	0.01	SM4500-NO3-F	5/6/2025
Orthophosphate as P	4/15/2025	24-0930 PC90	< 0.01	mg/L	0.01	SM4500-P F	5/6/2025
Total Kjeldahl Nitrogen	4/15/2025	24-0930 PC90	< 0.50	mg/L	0.50	Lachat 10-107-06-2D	5/2/2025
Total Phosphorus	4/15/2025	24-0930 PC90	0.04	mg/L	0.01	SM4500-P F, 4500-P J	5/9/2025
Total Suspended Solids	4/15/2025	24-0930 PC90	2.4	mg/L	1.0	SM2540D	4/28/2025
Ammonia as N	4/16/2025	24-0948 PC20	0.03	mg/L	0.01	SM4500-NH3 G	5/13/2025
E. coli	4/16/2025	24-0948 PC20	18.7	MPN/100mL	1.80	SM9221 B(LT)E(EC)C MPN	4/17/2025
Nitrate+nitrite as N	4/16/2025	24-0948 PC20	0.32	mg/L	0.01	SM4500-NO3-F	5/6/2025
Orthophosphate as P	4/16/2025	24-0948 PC20	< 0.01	mg/L	0.01	SM4500-P F	5/6/2025
Total Kjeldahl Nitrogen	4/16/2025	24-0948 PC20	< 0.50	mg/L	0.50	Lachat 10-107-06-2D	5/2/2025
Total Phosphorus	4/16/2025	24-0948 PC20	0.01	mg/L	0.01	SM4500-P F, 4500-P J	5/9/2025
Total Suspended Solids	4/16/2025	24-0948 PC20	1.2	mg/L	1.0	SM2540D	4/28/2025
Ammonia as N	4/16/2025	24-0949 PC60	0.03	mg/L	0.01	SM4500-NH3 G	5/13/2025
E. coli	4/16/2025	24-0949 PC60	24.3	MPN/100mL	1.80	SM9221 B(LT)E(EC)C MPN	4/17/2025
Nitrate+nitrite as N	4/16/2025	24-0949 PC60	0.14	mg/L	0.01	SM4500-NO3-F	5/6/2025
Orthophosphate as P	4/16/2025	24-0949 PC60	< 0.01	mg/L	0.01	SM4500-P F	5/6/2025
Total Kjeldahl Nitrogen	4/16/2025	24-0949 PC60	< 0.5	mg/L	0.50	Lachat 10-107-06-2D	5/2/2025
Total Phosphorus	4/16/2025	24-0949 PC60	0.03	mg/L	0.01	SM4500-P F, 4500-P J	5/9/2025
Total Suspended Solids	4/16/2025	24-0949 PC60	1.1	mg/L	1.0	SM2540D	4/28/2025
Ammonia as N	4/17/2025	23-0957 PC10	0.02	mg/L	0.01	SM4500-NH3 G	5/13/2025
E. coli	4/17/2025	23-0957 PC10	46.5	MPN/100mL	1.80	SM9221 B(LT)E(EC)C MPN	4/18/2025
Nitrate+nitrite as N	4/17/2025	23-0957 PC10	0.25	mg/L	0.01	SM4500-NO3-F	5/6/2025
Orthophosphate as P	4/17/2025	23-0957 PC10	< 0.01	mg/L	0.01	SM4500-P F	5/6/2025
Total Kjeldahl Nitrogen	4/17/2025	23-0957 PC10	< 0.5	mg/L	0.50	Lachat 10-107-06-2D	5/2/2025
Total Phosphorus	4/17/2025	23-0957 PC10	0.01	mg/L	0.01	SM4500-P F, 4500-P J	5/9/2025
Total Suspended Solids	4/17/2025	23-0957 PC10	< 1.0	mg/L	1.0	SM2540D	4/28/2025

Note: TKN samples were contracted to NELAC certified lab at Prince William County Service Authority

Prepared by:

Dongmei Alvi (Wang)

Laboratory Supervisor

Occoquan Watershed Monitoring Laboratory

9408 Prince William St.

Manassas, VA 20110

Tel: (703) 361-5606

Virginia Laboratory ID: 460026

Att: Ms. Ilana Ton

WSP

13530 Dulles Technology Dr #300
Herndon, VA 20151

Analysis Report

Report #20230601

Description	Blank	LCS, %R	Duplicate, RPD	Spike, %R	Matrix Spike, %R	Method	Analysis Date
Ammonia as N	0.000	101	n.a.	108	105	SM4500-NH3 G	5/13/2025
Accepted Range	-0.01~0.01	100±10		100±10	100±10		
E. coli	n.a.	n.a.	18.0	n.a.	n.a.	SM9221 B(LT)E(EC)C MPN	4/18/2025
Accepted Range							
Nitrate+nitrite as N	0.007	100	n.a.	101	99	SM4500-NO3-F	5/6/2025
Accepted Range	-0.01~0.01	100±10		100±10	100±10		
Orthophosphate as P	0.004	96	n.a.	91	93	SM4500-P F	5/6/2025
Accepted Range	-0.01~0.01	100±10		100±10	100±10		
Total Kjeldahl Nitrogen	n.a.	n.a.	n.a.	n.a.	n.a.	Lachat 10-107-06-2D	5/2/2025
Accepted Range							
Total Phosphorus	0.005	108	6.1	97	n.a.	SM4500-P F, 4500-P J	5/9/2025
Accepted Range	-0.01~0.01	100±10	±10	100±10	100±10		
Total Suspended Solids	0.00	98	0	n.a.	n.a.	SM2540D	4/28/2025
Accepted Range	-1.0~1.0		n.a.				

n.a.= not applicable

Note: TKN samples were contracted to NELAC certified lab at Prince William County Service Authority

Prepared by:

Dongmei Alvi (Wang)

Laboratory Supervisor

APPENDIX C

BENTHIC MACROINVERTEBRATE LABORATORY RESULTS

3701 NW 98th Street
Gainesville, FL 32606

wsp.com

January 16, 2025

Ms. Lynne Mowery

WSP

14424 Albemarle Point Place, Suite 115

Chantilly, VA 20151

Re: Prince William County Multiple Habitat Sampling Method Report

Dear Ms. Mowery:

WSP (Gainesville office) completed benthic macroinvertebrate determinations for samples collected by WSP (Chantilly office), in October 2024. WSP (Gainesville office) received a total of five samples, one from each of the following locations: Cow Branch, Dawkins Branch, Little Bull Run, Neabsco Creek, and Purcell Branch. The results of the taxonomic analyses are presented in this report.

1 Multiple Habitat Sampling Method

Methods and Procedures

All samples collected by WSP, Chantilly office, in October 2024, were received by WSP's taxonomy laboratory at Gainesville, Florida, where they were logged in and processed. The samples were sorted (i.e. organisms removed from debris) and organisms were identified and enumerated by a qualified taxonomist according to Section 7.2 of the U.S. Environmental Protection Agency's (USEPA) "Rapid Bioassessment Protocol for Use in Wadeable Streams and Rivers" (RBP) (Barbour et al., 1999). Eight metrics were calculated including the Biotic Index, using guidance from Hilsenhoff (1987); the Percent Model Affinity (PMA), using guidance from Novak and Bode (1992); and the Virginia Stream Condition Index, using guidance from Virginia Department of Environmental Quality (2008). The scraper taxa and tolerance values were identified according to life history information from RBP (Barbour et al., 1999); "An Introduction to the Aquatic Insects of North America" (Merritt et al., 2008); "Quality System Standard Operating Procedure for Macroinvertebrate Stream Surveys" (Tennessee Department of Environment and Conservation, 2011); and "Standard Operating Procedures for the Collection and Analysis of Benthic Macroinvertebrates" (North Carolina Department of Environmental Quality, 2016). Quality assurance and quality control checks were conducted according to the EPA RBP on Laboratory Quality Control for Macroinvertebrate Taxonomic Identification (Barbour et al., 1999). Quality assurance/quality control requirements for sample picking and taxonomic identification were conducted by a WSP Senior Taxonomist.

2 Benthic Macroinvertebrate Results

The benthic macroinvertebrate community data were used to generate metrics outlined in the WSP Sampling Plan (2015). The Multiple Habitat Sampling assessments conducted for the five samples are summarized below in Table 1. Taxonomic identifications and abundances of the benthic macroinvertebrates and metric calculations for each sample are included in Attachment 1. References are listed in Attachment 2.

Table 1: Summary of Results of Multiple Habitat Samples – Fall 2024

Metric	Site Locations				
	Cow Branch	Dawkins Branch	Little Bull Run	Neabsco Creek	Purcell Branch
Taxa Richness	30	31	39	32	34
Abundance	225	203	195	202	207
EPT Index	9	0	8	7	10
EPT/EPT + Chironomidae Ratio	0.84	0.00	0.61	0.87	0.89
Percent Dominant Taxon	28.89	31.53	27.18	34.65	37.20
Percent Chironomidae	14.22	20.20	21.03	8.42	8.70
Biotic Index	5.42	6.65	6.46	6.00	5.59
BI Category	Good	Fairly Poor	Fair	Fair	Fair
Percent Modal Affinity (PMA)	40.00	43.94	76.41	39.80	37.39
PMA Category	Moderately impacted	Moderately impacted	Non-impacted	Moderately impacted	Moderately impacted
VSCI	59.83	43.70	60.16	57.37	61.18

Source: WSP, 2025 Created By: JSD Checked By: SEM

Closing

We appreciate the opportunity to provide ecological services to you. Please do not hesitate to contact me if you have questions or need to request further information. You can reach me by phone at (352) 284-7094, or via email at shannon.mcmorrow@wsp.com.

Sincerely,

Jennifer S. Davenport, M.Sc.
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Attachments:
1 – Tabulated Data for Fall 2024
2 – References

ATTACHMENT 1

TABULATED DATA

Multiple Habitat Sampling
Samples Collected: October 2024
Project #: US0039765.6753

Metrics	Site Locations				
	Cow Branch	Dawkins Branch	Little Bull Run	Neabsco Creek	Purcell Branch
Taxa Richness	30	31	39	32	34
Abundance	225	203	195	202	207
EPT Index	9	0	8	7	10
EPT/EPT + Chironomidae Ratio	0.84	0.00	0.61	0.87	0.89
Percent Dominant Taxon	28.89	31.53	27.18	34.65	37.20
Percent Chironomidae	14.22	20.20	21.03	8.42	8.70
Biotic Index (BI)	5.42	6.65	6.46	6.00	5.59
Biotic Index (BI) Category	Good	Fairly Poor	Fair	Fair	Fair
Percent Model Affinity (PMA)	40.00	43.94	76.41	39.80	37.39
Percent Model Affinity (PMA) Category	Moderately impacted	Moderately impacted	Non-impacted	Moderately impacted	Moderately Impacted
VSCI	59.83	43.70	60.16	57.37	61.18

Created By: JSD/RH
Checked By: SEM
Source: WSP, 2025

Cow Branch
Multiple Habitat Sampling
Sample Collected: 14-Oct-2024
Project #: US0039765.6753

Results for Cow Branch

Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Raw Abundance	Ephemeroptera	Plecoptera	Trichoptera	Chironomidae	Dominant Taxon	Tolerance Values	Tolerance Values * Individual Abundance/Total Abundance	Coleoptera	Oligochaeta	Other	Plecoptera & Trichoptera (less Hydropsychidae)	Scrapers	Top 2 Dominant Taxa
Nemertea		Hoplonemertea		Monostilifera	Prostomatidae	*Prostoma* spp.	2	0	0	0	0		6.1	0.05	0	0	2	0	0	
Annelida		Clitellata	Oligochaeta			Oligochaeta spp.	4	0	0	0	0		5	0.09	0	4	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Nais variabilis*	2	0	0	0	0		8.7	0.08	0	2	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Slavina appendiculata*	1	0	0	0	0		8.4	0.04	0	1	0	0	0	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Physidae	*Physa acuta*	2	0	0	0	0		8.84	0.08	0	0	2	0	2	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Planorbidae	Ancylinae spp.	1	0	0	0	0		7	0.03	0	0	1	0	1	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Planorbidae	*Menetus dilatatus*	2	0	0	0	0		7.6	0.07	0	0	2	0	2	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetidae spp.	1	1	0	0	0		6.1	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	*Baetis* spp.	5	5	0	0	0		4.51	0.10	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	*Argia* spp.	1	0	0	0	0		8.3	0.04	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Calopterygidae	*Calopteryx* spp.	1	0	0	0	0		7.5	0.03	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Polycentropodidae	*Nyctiophylax* spp.	1	0	0	1	0		0.8	0.00	0	0	0	1	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsychidae spp.	33	0	0	33	0		4	0.59	0	0	0	0	0	33
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Cheumatopsyche* spp.	65	0	0	65	0	65	6.6	1.91	0	0	0	0	0	65
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Hydropsyche* spp.	15	0	0	15	0		5	0.33	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Hydropsyche betteni/depravata/potomacensis*	6	0	0	6	0		7.9	0.21	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	*Hydroptila* spp.	7	0	0	7	0		6.5	0.20	0	0	0	7	7	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Philopotamidae	*Chimarra* spp.	30	0	0	30	0		3.3	0.44	0	0	0	30	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	5	0	0	0	5		6.2	0.14	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum flavum*	1	0	0	0	1		5.7	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum illinoense* group	1	0	0	0	1		8.7	0.04	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Rheotanytarsus* spp.	4	0	0	0	4		6.5	0.12	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Corynoneura* spp.	2	0	0	0	2		5.7	0.05	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Orthocladius* spp.	15	0	0	0	15		4.4	0.29	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Thienemanniella xena*	3	0	0	0	3		8	0.11	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Rheocricotopus* spp.	1	0	0	0	1		4.7	0.02	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Simuliidae	*Simulium* spp.	1	0	0	0	0		4.9	0.02	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Limoniidae	*Antocha* spp.	8	0	0	0	0		4.4	0.16	0	0	8	0	0	
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Sperchontidae	*Sperchon* spp.	2	0	0	0	0		8	0.07	0	0	2	0	0	
Nematoda						Nematoda spp.	3	0	0	0	0		5	0.07	0	0	3	0	0	

Percent Model Affinity		Difference from Model %
Model % Ephemeroptera	40	37.33
Model % Plecoptera	5	5.00
Model % Trichoptera	10	59.78
Model % Chironomidae	20	5.78
Model % Coleoptera	10	10.00
Model % Oligochaeta	5	1.89
Model % Other	10	0.22
Sum of Difference		120.00
Sum of Difference * 0.5		60.00
Percent Model Affinity		40.00
Percent Model Affinity Category		Moderately impacted

Metric	Value	VSCI metrics	Adjusted VSCI metrics
Species Richness	30	136.36	100.00
Total Abundance	225		
% Ephemeroptera	2.67	4.35	4.35
% Plecoptera	0.00		
% Trichoptera	69.78		
% Chironomidae	14.22	85.78	85.78
% Dominant Taxon	28.89		
Biotic Index	5.42	67.34	67.34
% Coleoptera	0.00		
% Oligochaeta	3.11		
% Other	10.22		
% Plecoptera + Trichoptera (less Hydropsychidae)	16.89	47.44	47.44
% Scrapers	5.33	10.34	10.34
% Top 2 Dominant Taxa	43.56	81.57	81.57
EPT Index	9	81.82	81.82
EPT/EPT + Chironomidae Ratio	0.84		

Hilsenhoff Biotic Index Category	Good

Final VSCI score	59.83

Created By: JSD/RH
Checked By: SEM
Source: WSP, 2025

Dawkins Branch
Multiple Habitat Sampling
Sample Collected: 10-Oct-2024
Project #: US0039765.6753

Results for Dawkins Branch

Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Raw Abundance	Ephemeroptera	Plecoptera	Trichoptera	Chironomidae	Dominant Taxon	Tolerance Values	Tolerance Values * Individual Abundance/Total Abundance	Coleoptera	Oligochaeta	Other	Plecoptera & Trichoptera (less Hydropsychidae)	Scrapers	Top 2 Dominant Taxa
Platyhelminthes						Platyhelminthes spp.	1	0	0	0	0				0	0	1	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	5	0	0	0	0		9.5	0.24	0	5	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Aulodrilus limnobius*	2	0	0	0	0		5.2	0.05	0	2	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Slavina appendiculata*	1	0	0	0	0		8.4	0.04	0	1	0	0	0	
Annelida		Clitellata	Hirudinea	Hirudinida	Glossiphoniidae	*Helobdella elongata*	1	0	0	0	0		9.1	0.05	0	0	1	0	0	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Planorbidae	*Planorbella scalaris*	2	0	0	0	0		6.82	0.07	0	0	2	0	2	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Planorbidae	*Ferrissia* spp.	7	0	0	0	0		6.6	0.23	0	0	7	0	7	
Mollusca		Bivalvia	Autobranchia	Venerida	Cyrenidae	*Corbicula* spp.	8	0	0	0	0		6.12	0.24	0	0	8	0	0	
Mollusca		Bivalvia	Autobranchia	Sphaeriida	Sphaeriidae	Sphaeriidae spp.	3	0	0	0	0		6.6	0.10	0	0	3	0	0	
Mollusca		Bivalvia	Autobranchia	Sphaeriida	Sphaeriidae	*Musculium* spp.	4	0	0	0	0		5	0.10	0	0	4	0	0	
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Senticaudata spp.	2	0	0	0	0		7.4	0.07	0	0	2	0	0	
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	*Gammarus* spp.	64	0	0	0	0	64	7.1	2.26	0	0	64	0	0	64
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Cambaridae	Cambarinae spp.	1	0	0	0	0		7.5	0.04	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Gomphidae	Gomphidae spp.	1	0	0	0	0		5	0.02	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	*Argia* spp.	1	0	0	0	0		8.3	0.04	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	*Enallagma* spp.	4	0	0	0	0		8.5	0.17	0	0	4	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Stenelmis* spp.	46	0	0	0	0		5.6	1.28	46	0	0	0	46	46
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Macronychus glabratus*	1	0	0	0	0		4.7	0.02	1	0	0	0	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Psephenidae	*Ectopria* spp.	1	0	0	0	0		4.3	0.02	1	0	0	0	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	2	0	0	0	2		6.2	0.06	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Tanytarsus* spp.	3	0	0	0	3		6.6	0.10	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum flavum*	1	0	0	0	1		5.7	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum illinoense* group	16	0	0	0	16		8.7	0.69	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Dicrotendipes* spp.	1	0	0	0	1		7.2	0.04	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Corynoneura* spp.	9	0	0	0	9		5.7	0.26	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Orthocladius* spp.	5	0	0	0	5		4.4	0.11	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Thienemanniella xena*	4	0	0	0	4		8	0.16	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Simuliidae	*Simulium* spp.	4	0	0	0	0		4.9	0.10	0	0	4	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Empididae	*Hemerodromia* spp.	1	0	0	0	0		7.57	0.04	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	*Atrichopogon* spp.	1	0	0	0	0		6.1	0.03	0	0	1	0	0	
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Unionicolidae	*Neumania* spp.	1	0	0	0	0				0	0	1	0	0	

Percent Model Affinity		Difference from Model %
Model % Ephemeroptera	40	40.00
Model % Plecoptera	5	5.00
Model % Trichoptera	10	10.00
Model % Chironomidae	20	0.20
Model % Coleoptera	10	13.65
Model % Oligochaeta	5	1.06
Model % Other	10	42.22
Sum of Difference		112.12
Sum of Difference * 0.5		56.06
Percent Model Affinity		43.94
Percent Model Affinity Category		Moderately impacted

Metric	Value	VSCI metrics	Adjusted VSCI metrics
Species Richness	31	140.91	100.00
Total Abundance	203		
% Ephemeroptera	0.00	0.00	0.00
% Plecoptera	0.00		
% Trichoptera	0.00		
% Chironomidae	20.20	79.80	79.80
% Dominant Taxon	31.53		
Biotic Index	6.65	49.20	49.20
% Coleoptera	23.65		
% Oligochaeta	3.94		
% Other	52.22		
% Plecoptera + Trichoptera (less Hydropsychidae)	0.00	0.00	0.00
% Scrapers	28.08	54.42	54.42
% Top 2 Dominant Taxa	54.19	66.20	66.20
EPT Index	0	0.00	0.00
EPT/EPT + Chironomidae Ratio	0.00		

Hilsenhoff Biotic Index Category	Fairly Poor

Final VSCI score	43.70

Created By: JSD/RH
Checked By: SEM
Source: WSP, 2025

Little Bull Run
Multiple Habitat Sampling
Sample Collected: 10-Oct-2024
Project #: US0039765.6753

Results for Little Bull Run

Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Raw Abundance	Ephemeroptera	Plecoptera	Trichoptera	Chironomidae	Dominant Taxon	Tolerance Values	Tolerance Values * Individual Abundance/Total Abundance	Coleoptera	Oligochaeta	Other	Plecoptera & Trichoptera (less Hydropsychidae)	Scrapers	Top 2 Dominant Taxa
Platyhelminthes						Platyhelminthes spp.	4	0	0	0	0				0	0	4	0	0	
Annelida		Clitellata	Oligochaeta			Oligochaeta spp.	2	0	0	0	0		5	0.05	0	2	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	6	0	0	0	0		9.5	0.30	0	6	0	0	0	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Physidae	*Physa* spp.	2	0	0	0	0		8.84	0.09	0	0	2	0	2	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Planorbidae	Planorbidae spp.	2	0	0	0	0		6.3	0.07	0	0	2	0	2	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Planorbidae	*Helisoma anceps*	1	0	0	0	0		6.6	0.03	0	0	1	0	1	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Planorbidae	*Ferrissia* spp.	1	0	0	0	0		6.6	0.03	0	0	1	0	1	
Mollusca		Bivalvia	Autobranchia	Venerida	Cyrenidae	*Corbicula* spp.	13	0	0	0	0		6.12	0.42	0	0	13	0	0	
Mollusca		Bivalvia	Autobranchia	Sphaeriida	Sphaeriidae	Sphaeriidae spp.	19	0	0	0	0		6.6	0.66	0	0	19	0	0	19
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Cambaridae	Cambarinae spp.	1	0	0	0	0		7.5	0.04	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Caenidae	*Caenis* spp.	2	2	0	0	0		6.8	0.07	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Caenidae	*Caenis latipennis*	53	53	0	0	0	53	6.8	1.89	0	0	0	0	0	53
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	*Procloeon* spp.	1	1	0	0	0		1.9	0.01	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Heptageniidae	Heptageniidae spp.	1	1	0	0	0		4	0.02	0	0	0	0	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	*Argia* spp.	2	0	0	0	0		8.3	0.09	0	0	2	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Polycentropodidae	*Cernotina* spp.	1	0	0	1	0		4	0.02	0	0	0	1	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Leptoceridae	*Oecetis* sp. A	1	0	0	1	0		5.1	0.03	0	0	0	1	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsychidae spp.	1	0	0	1	0		4	0.02	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Cheumatopsyche* spp.	3	0	0	3	0		6.6	0.10	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Dubiraphia* spp.	12	0	0	0	0		5.5	0.35	12	0	0	0	12	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Stenelmis* spp.	17	0	0	0	0		5.6	0.50	17	0	0	0	17	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Curculionidae	Curculionidae spp.	1	0	0	0	0		4	0.02	1	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Psephenidae	*Ectopria* spp.	2	0	0	0	0		4.3	0.05	2	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Psephenidae	*Psephenus herricki*	3	0	0	0	0		2.3	0.04	3	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	1	0	0	0	1		6.2	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Ablabesmyia mallochi*	1	0	0	0	1		7.4	0.04	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Labrundinia* spp.	1	0	0	0	1		6.2	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Tanytarsus* spp.	2	0	0	0	2		6.6	0.07	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum illinoense* group	9	0	0	0	9		8.7	0.41	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum fallax* group	7	0	0	0	7		6.5	0.24	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Rheotanytarsus* spp.	5	0	0	0	5		6.5	0.17	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Tribelos fuscicorne*	2	0	0	0	2		5.1	0.05	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Dicrotendipes* spp.	1	0	0	0	1		7.2	0.04	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Orthocladiinae spp.	1	0	0	0	1		5	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Corynoneura* spp.	9	0	0	0	9		5.7	0.27	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Orthocladius* spp.	1	0	0	0	1		4.4	0.02	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Thienemanniella xena*	1	0	0	0	1		8	0.04	0	0	0	0	0	
Arthropoda	Hexapoda	Collembola		Entomobryomorpha	Isotomidae	Isotomidae spp.	2	0	0	0	0		10	0.10	0	0	2	0	0	
Nematoda						Nematoda spp.	1	0	0	0	0		5	0.03	0	0	1	0	0	

Percent Model Affinity		Difference from Model %
Model % Ephemeroptera	40	10.77
Model % Plecoptera	5	5.00
Model % Trichoptera	10	6.92
Model % Chironomidae	20	1.03
Model % Coleoptera	10	7.95
Model % Oligochaeta	5	0.90
Model % Other	10	14.62
Sum of Difference		47.18
Sum of Difference * 0.5		23.59
Percent Model Affinity		76.41
Percent Model Affinity Category		Non-impacted

Metric	Value	VSCI metrics	Adjusted VSCI metrics
Species Richness	39	177.27	100.00
Total Abundance	195		
% Ephemeroptera	29.23	47.68	47.68
% Plecoptera	0.00		
% Trichoptera	3.08		
% Chironomidae	21.03	78.97	78.97
% Dominant Taxon	27.18		
Biotic Index	6.46	52.09	52.09
% Coleoptera	17.95		
% Oligochaeta	4.10		
% Other	24.62		
% Plecoptera + Trichoptera (less Hydropsychidae)	1.03	2.88	2.88
% Scrapers	18.46	35.78	35.78
% Top 2 Dominant Taxa	36.92	91.15	91.15
EPT Index	8	72.73	72.73
EPT/EPT + Chironomidae Ratio	0.61		

Hilsenhoff Biotic Index Category	Fair

Final VSCI score	60.16

Created By: JSD/RH
Checked By: SEM
Source: WSP, 2025

Neabsco Creek
Multiple Habitat Sampling
Sample Collected: 14-Oct-2024
Project #: US0039765.6753

Results for Neabsco Creek

Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Raw Abundance	Ephemeroptera	Plecoptera	Trichoptera	Chironomidae	Dominant Taxon	Tolerance Values	Tolerance Values * Individual Abundance/Total Abundance	Coleoptera	Oligochaeta	Other	Plecoptera & Trichoptera (less Hydropsychidae)	Scrapers	Top 2 Dominant Taxa
Nemertea		Hoplonemertea		Monostilifera	Prostomatidae	*Prostoma* spp.	1	0	0	0	0		6.1	0.03	0	0	1	0	0	
Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Amnicolidae	*Amnicola limosus*	5	0	0	0	0		8	0.20	0	0	5	0	5	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Physidae	*Physa* spp.	5	0	0	0	0		8.84	0.22	0	0	5	0	5	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Planorbidae	*Menetus dilatatus*	3	0	0	0	0		7.6	0.11	0	0	3	0	3	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Planorbidae	*Ferrissia* spp.	5	0	0	0	0		6.6	0.16	0	0	5	0	5	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	*Baetis* spp.	9	9	0	0	0		4.51	0.20	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Corduliidae	*Somatochlora linearis*	1	0	0	0	0		8.9	0.04	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	*Argia* spp.	3	0	0	0	0		8.3	0.12	0	0	3	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsychidae spp.	7	0	0	7	0		4	0.14	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Cheumatopsyche* spp.	70	0	0	70	0	70	6.6	2.29	0	0	0	0	0	70
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Hydropsyche rossi*	6	0	0	6	0		4.8	0.14	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Hydropsyche betteni/depravata/potomacensis*	8	0	0	8	0		7.9	0.31	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptilidae spp.	1	0	0	1	0		4	0.02	0	0	0	1	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Philopotamidae	*Chimarra* spp.	15	0	0	15	0		3.3	0.25	0	0	0	15	0	15
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Stenelmis* spp.	2	0	0	0	0		5.6	0.06	2	0	0	0	2	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Ancyronyx variegatus*	12	0	0	0	0		6.8	0.40	12	0	0	0	12	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera		Tipuloidea spp.	2	0	0	0	0		4.9	0.05	0	0	2	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	2	0	0	0	2		6.2	0.06	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Ablabesmyia mallochi*	2	0	0	0	2		7.4	0.07	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Labrundinia* spp.	1	0	0	0	1		6.2	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum flavum*	2	0	0	0	2		5.7	0.06	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum illinoense* group	1	0	0	0	1		8.7	0.04	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Rheotanytarsus* spp.	2	0	0	0	2		6.5	0.06	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Apedilum* spp.	1	0	0	0	1		5.69	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Corynoneura* spp.	1	0	0	0	1		5.7	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Orthocladius* spp.	3	0	0	0	3		4.4	0.07	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Thienemanniella xena*	2	0	0	0	2		8	0.08	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Simuliidae	*Simulium* spp.	14	0	0	0	0		4.9	0.34	0	0	14	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Limoniidae	*Antocha* spp.	10	0	0	0	0		4.4	0.22	0	0	10	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Megaloptera	Corydalidae	*Corydalus cornutus*	3	0	0	0	0		5.2	0.08	0	0	3	0	0	
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Lebertiidae	*Lebertia* spp.	1	0	0	0	0		8	0.04	0	0	1	0	0	
Nematoda						Nematoda spp.	2	0	0	0	0		5	0.05	0	0	2	0	0	

Percent Model Affinity		Difference from Model %
Model % Ephemeroptera	40	35.54
Model % Plecoptera	5	5.00
Model % Trichoptera	10	42.97
Model % Chironomidae	20	11.58
Model % Coleoptera	10	3.07
Model % Oligochaeta	5	5.00
Model % Other	10	17.23
Sum of Difference		120.40
Sum of Difference * 0.5		60.20
Percent Model Affinity		39.80
Percent Model Affinity Category		Moderately impacted

Metric	Value	VSCI metrics	Adjusted VSCI metrics
Species Richness	32	145.45	100.00
Total Abundance	202		
% Ephemeroptera	4.46	7.27	7.27
% Plecoptera	0.00		
% Trichoptera	52.97		
% Chironomidae	8.42	91.58	91.58
% Dominant Taxon	34.65		
Biotic Index	6.00	58.83	58.83
% Coleoptera	6.93		
% Oligochaeta	0.00		
% Other	27.23		
% Plecoptera + Trichoptera (less Hydropsychidae)	7.92	22.25	22.25
% Scrapers	16.34	31.66	31.66
% Top 2 Dominant Taxa	42.08	83.70	83.70
EPT Index	7	63.64	63.64
EPT/EPT + Chironomidae Ratio	0.87		

Hilsenhoff Biotic Index Category	Fair

Final VSCI score	57.37

Created By: JSD/RH
Checked By: SEM
Source: WSP, 2025

Purcell Branch
Multiple Habitat Sampling
Sample Collected: 16-Oct-2024
Project #: US0039765.6753

Results for Purcell Branch

Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Raw Abundance	Ephemeroptera	Plecoptera	Trichoptera	Chironomidae	Dominant Taxon	Tolerance Values	Tolerance Values * Individual Abundance/Total Abundance	Coleoptera	Oligochaeta	Other	Plecoptera & Trichoptera (less Hydropsychidae)	Scrapers	Top 2 Dominant Taxa
Annelida		Clitellata	Oligochaeta			Oligochaeta spp.	1	0	0	0	0		5	0.02	0	1	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Nais variabilis*	1	0	0	0	0		8.7	0.04	0	1	0	0	0	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Planorbidae	*Menetus dilatatus*	3	0	0	0	0		7.6	0.11	0	0	3	0	3	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Planorbidae	*Ferrissia* spp.	3	0	0	0	0		6.6	0.10	0	0	3	0	3	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Lymnaeidae	*Lymnaea* spp.	1	0	0	0	0		6.9	0.03	0	0	1	0	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Heptageniidae	Heptageniidae spp.	8	8	0	0	0		4	0.15	0	0	0	0	8	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Heptageniidae	*Stenonema* spp.	5	5	0	0	0		3.15	0.08	0	0	0	0	5	
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	*Argia* spp.	1	0	0	0	0		8.3	0.04	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Calopterygidae	*Calopteryx* spp.	2	0	0	0	0		7.5	0.07	0	0	2	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Polycentropodidae	*Nyctiophylax* spp.	1	0	0	1	0		0.8	0.00	0	0	0	1	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsychidae spp.	17	0	0	17	0		4	0.33	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Cheumatopsyche* spp.	77	0	0	77	0	77	6.6	2.46	0	0	0	0	0	77
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Hydropsyche* spp.	6	0	0	6	0		5	0.14	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Hydropsyche rossi*	2	0	0	2	0		4.8	0.05	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Hydropsyche betteni/depravata/potomacensis*	4	0	0	4	0		7.9	0.15	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Diplectrona modesta*	1	0	0	1	0		2.3	0.01	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Philopotamidae	*Chimarra* spp.	28	0	0	28	0		3.3	0.45	0	0	0	28	0	28
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Stenelmis* spp.	2	0	0	0	0		5.6	0.05	2	0	0	0	2	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Ancyronyx variegatus*	1	0	0	0	0		6.8	0.03	1	0	0	0	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera		Diptera spp.	2	0	0	0	0		7	0.07	0	0	2	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera		Tipuloidea spp.	2	0	0	0	0		4.9	0.05	0	0	2	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	1	0	0	0	1		6.2	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Ablabesmyia mallochi*	1	0	0	0	1		7.4	0.04	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Rheotanytarsus* spp.	1	0	0	0	1		6.5	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Corynoneura* spp.	8	0	0	0	8		5.7	0.22	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Orthocladius* spp.	5	0	0	0	5		4.4	0.11	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Thienemanniella xena*	2	0	0	0	2		8	0.08	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Simuliidae	*Simulium* spp.	8	0	0	0	0		4.9	0.19	0	0	8	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Limoniidae	*Antocha* spp.	3	0	0	0	0		4.4	0.06	0	0	3	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Heteroptera	Veliidae	*Rhagovelia obesa*	1	0	0	0	0		6	0.03	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Heteroptera	Veliidae	*Microvelia* spp.	2	0	0	0	0		6	0.06	0	0	2	0	0	
Arthropoda	Hexapoda	Collembola		Entomobryomorpha	Isotomidae	Isotomidae spp.	4	0	0	0	0		10	0.19	0	0	4	0	0	
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Sperchontidae	*Sperchon* spp.	1	0	0	0	0		8	0.04	0	0	1	0	0	
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Lebertiidae	*Lebertia* spp.	2	0	0	0	0		8	0.08	0	0	2	0	0	

Percent Model Affinity		Difference from Model %
Model % Ephemeroptera	40	33.72
Model % Plecoptera	5	5.00
Model % Trichoptera	10	55.70
Model % Chironomidae	20	11.30
Model % Coleoptera	10	8.55
Model % Oligochaeta	5	4.03
Model % Other	10	6.91
Sum of Difference		125.22
Sum of Difference * 0.5		62.61
Percent Model Affinity		37.39
Percent Model Affinity Category		Moderately Impacted

Metric	Value	VSCI metrics	Adjusted VSCI metrics
Species Richness	34	154.55	100.00
Total Abundance	207		
% Ephemeroptera	6.28	10.25	10.25
% Plecoptera	0.00		
% Trichoptera	65.70		
% Chironomidae	8.70	91.30	91.30
% Dominant Taxon	37.20		
Biotic Index	5.59	64.86	64.86
% Coleoptera	1.45		
% Oligochaeta	0.97		
% Other	16.91		
% Plecoptera + Trichoptera (less Hydropsychidae)	14.01	39.35	39.35
% Scrapers	11.11	21.53	21.53
% Top 2 Dominant Taxa	50.72	71.21	71.21
EPT Index	10	90.91	90.91
EPT/EPT + Chironomidae Ratio	0.89		

Hilsenhoff Biotic Index Category	Fair

Final VSCI score	61.18

Created By: JSD/RH
Checked By: SEM
Source: WSP, 2025

WSP

QA Form Number: 063M
Page 1 of 1

WSP USA E&I
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| | | |

ATTACHMENT 2

REFERENCES

Attachment 2 - References

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June 20, 2025

Ms. Lynne Mowery

WSP

14424 Albemarle Point Place, Suite 115

Chantilly, VA 20151

Re: Prince William County Multiple Habitat Sampling Method Report

Dear Ms. Mowery:

WSP (Gainesville office) completed benthic macroinvertebrate determinations for samples collected by WSP (Chantilly office), in April 2025. WSP (Gainesville office) received a total of five samples, one from each of the following locations: Cow Branch, Dawkins Branch, Little Bull Run, Neabsco Creek, and Purcell Branch. The results of the taxonomic analyses are presented in this report.

1 Multiple Habitat Sampling Method

Methods and Procedures

All samples collected by WSP, Chantilly office, in April 2025, were received by WSP's taxonomy laboratory at Gainesville, Florida, where they were logged in and processed. The samples were sorted (i.e. organisms removed from debris) and organisms were identified and enumerated by a qualified taxonomist according to Section 7.2 of the U.S. Environmental Protection Agency's (USEPA) "Rapid Bioassessment Protocol for Use in Wadeable Streams and Rivers" (RBP) (Barbour et al., 1999). Eight metrics were calculated including the Biotic Index, using guidance from Hilsenhoff (1987); the Percent Model Affinity (PMA), using guidance from Novak and Bode (1992); and the Virginia Stream Condition Index, using guidance from Virginia Department of Environmental Quality (2008). The scraper taxa and tolerance values were identified according to life history information from RBP (Barbour et al., 1999); "An Introduction to the Aquatic Insects of North America" (Merritt et al., 2008); "Quality System Standard Operating Procedure for Macroinvertebrate Stream Surveys" (Tennessee Department of Environment and Conservation, 2011); and "Standard Operating Procedures for the Collection and Analysis of Benthic Macroinvertebrates" (North Carolina Department of Environmental Quality, 2016). Quality assurance and quality control checks were conducted according to the EPA RBP on Laboratory Quality Control for Macroinvertebrate Taxonomic Identification (Barbour et al., 1999). Quality assurance/quality control requirements for sample picking and taxonomic identification were conducted by a WSP Senior Taxonomist.

2 Benthic Macroinvertebrate Results

The benthic macroinvertebrate community data were used to generate metrics outlined in the WSP Sampling Plan (2015). The Multiple Habitat Sampling assessments conducted for the five samples are summarized below in Table 1. Taxonomic identifications and abundances of the benthic macroinvertebrates and metric calculations for each sample are included in Attachment 1. References are listed in Attachment 2.

Table 1: Summary of Results of Multiple Habitat Samples – Spring 2025

Metric	Site Locations				
	Cow Branch	Dawkins Branch	Little Bull Run	Neabsco Creek	Purcell Branch
Taxa Richness	32	25	33	31	40
Abundance	165	207	185	214	184
EPT Index	5	2	1	4	11
EPT/EPT + Chironomidae Ratio	0.15	0.12	0.21	0.13	0.11
Percent Dominant Taxon	17.58	50.72	16.76	21.50	21.74
Percent Chironomidae	63.03	10.63	63.24	66.82	76.09
Biotic Index	5.60	6.58	6.72	6.06	5.59
BI Category	Fair	Fairly Poor	Fairly poor	Fair	Fair
Percent Modal Affinity (PMA)	47.12	37.08	55.81	39.49	40.22
PMA Category	Moderately impacted	Moderately impacted	Slightly impacted	Moderately impacted	Moderately Impacted
VSCI	44.13	41.51	41.35	41.78	50.52

Source: WSP, 2025 Created By: JSD Checked By: SEM

Closing

We appreciate the opportunity to provide ecological services to you. Please do not hesitate to contact me if you have questions or need to request further information. You can reach me by phone at (352) 284-7094, or via email at shannon.mcmorrow@wsp.com.

Sincerely,

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Attachments:
1 – Tabulated Data for Spring 2025
2 – References

Multiple Habitat Sampling
Samples Collected: April 2025
Project #: US0039765.6753

Metrics	Site Locations				
	Cow Branch	Dawkins Branch	Little Bull Run	Neabsco Creek	Purcell Branch
Taxa Richness	32	25	33	31	40
Abundance	165	207	185	214	184
EPT Index	5	2	1	4	11
EPT/EPT + Chironomidae Ratio	0.15	0.12	0.21	0.13	0.11
Percent Dominant Taxon	17.58	50.72	16.76	21.50	21.74
Percent Chironomidae	63.03	10.63	63.24	66.82	76.09
Biotic Index (BI)	5.60	6.58	6.72	6.06	5.59
Biotic Index (BI) Category	Fair	Fairly Poor	Fairly poor	Fair	Fair
Percent Model Affinity (PMA)	47.12	37.08	55.81	39.49	40.22
Percent Model Affinity (PMA) Category	Moderately impacted	Moderately impacted	Slightly impacted	Moderately impacted	Moderately Impacted
VSCI	44.13	41.51	41.35	41.78	50.52

Created By: JSD/LG
Checked By: SEM
Source: WSP, 2025

ATTACHMENT 1

TABULATED DATA

Cow Branch
Multiple Habitat Sampling
Sample Collected: 16-Apr-2025
Project #: US0039765.6753

Results for Cow Branch

Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Raw Abundance	Ephemeroptera	Plecoptera	Trichoptera	Chironomidae	Dominant Taxon	Tolerance Values	Tolerance Values * Individual Abundance/Total Abundance	Coleoptera	Oligochaeta	Other	Plecoptera & Trichoptera (less Hydropsychidae)	Scrapers	Top 2 Dominant Taxa
Annelida		Clitellata	Oligochaeta			Oligochaeta spp.	14	0	0	0	0		5	0.42	0	14	0	0	0	14
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	1	0	0	0	0		9.5	0.06	0	1	0	0	0	
Annelida		Clitellata	Oligochaeta	Lumbriculida	Lumbriculidae	*Lumbriculus* cf. *variegatus*	2	0	0	0	0		7.03	0.09	0	2	0	0	0	
Mollusca		Bivalvia	Autobranchia	Venerida	Cyrenidae	*Corbicula* spp.	4	0	0	0	0		6.12	0.15	0	0	4	0	0	
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Senticaudata spp.	2	0	0	0	0		7.4	0.09	0	0	2	0	0	
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	*Gammarus* spp.	1	0	0	0	0		7.1	0.04	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetidae spp.	2	2	0	0	0		6.1	0.07	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	*Baetis flavistriga*	1	1	0	0	0		6.8	0.04	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	*Argia* spp.	1	0	0	0	0		8.3	0.05	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Cheumatopsyche* spp.	5	0	0	5	0		6.6	0.20	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Hydropsyche* spp.	10	0	0	10	0		5	0.30	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	*Hydroptila* spp.	1	0	0	1	0		6.5	0.04	0	0	0	1	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Dytiscidae	*Neoporus* spp.	1	0	0	0	0		5	0.03	1	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	12	0	0	0	12		6.2	0.45	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Ablabesmyia mallochi*	4	0	0	0	4		7.4	0.18	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Pentaneura inconspicua*	2	0	0	0	2		5	0.06	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Labrundinia* spp.	2	0	0	0	2		6.2	0.08	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum flavum*	12	0	0	0	12		5.7	0.41	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum illinoense* group	4	0	0	0	4		8.7	0.21	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Paratanytarsus dissimilis*	2	0	0	0	2		8.45	0.10	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Orthocladiinae spp.	6	0	0	0	6		5	0.18	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Cricotopus* spp.	11	0	0	0	11		5.78	0.39	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Orthocladius* spp.	29	0	0	0	29	29	4.4	0.77	0	0	0	0	0	29
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Thienemanniella xena*	2	0	0	0	2		8	0.10	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Parametriocnemus* spp.	5	0	0	0	5		3.9	0.12	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Cricotopus* or *Orthocladius*	13	0	0	0	13		4.86	0.38	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Simuliidae	*Simulium* spp.	2	0	0	0	0		4.9	0.06	0	0	2	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Tipulidae	Tipulidae spp.	7	0	0	0	0		4.9	0.21	0	0	7	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Lepidoptera		Lepidoptera spp.	1	0	0	0	0		6	0.04	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Megaloptera	Corydalidae	*Corydalus cornutus*	1	0	0	0	0		5.2	0.03	0	0	1	0	0	
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Sperchontidae	*Sperchon* spp.	3	0	0	0	0		8	0.15	0	0	3	0	0	
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Lebertiidae	*Lebertia* spp.	2	0	0	0	0		8	0.10	0	0	2	0	0	

Percent Model Affinity		Difference from Model %
Model % Ephemeroptera	40	38.18
Model % Plecoptera	5	5.00
Model % Trichoptera	10	0.30
Model % Chironomidae	20	43.03
Model % Coleoptera	10	9.39
Model % Oligochaeta	5	5.30
Model % Other	10	4.55
Sum of Difference		105.76
Sum of Difference * 0.5		52.88
Percent Model Affinity		47.12
Percent Model Affinity Category		Moderately impacted

Metric	Value	VSCI metrics	Adjusted VSCI metrics
Species Richness	32	145.45	100.00
Total Abundance	165		
% Ephemeroptera	1.82	2.97	2.97
% Plecoptera	0.00		
% Trichoptera	9.70		
% Chironomidae	63.03	36.97	36.97
% Dominant Taxon	17.58		
Biotic Index	5.60	64.76	64.76
% Coleoptera	0.61		
% Oligochaeta	10.30		
% Other	14.55		
% Plecoptera + Trichoptera (less Hydropsychidae)	0.61	1.70	1.70
% Scrapers	0.61	1.17	1.17
% Top 2 Dominant Taxa	26.06	106.85	100.00
EPT Index	5	45.45	45.45
EPT/EPT + Chironomidae Ratio	0.15		

Hilsenhoff Biotic Index Category	Fair

Final VSCI score	44.13

Created By: JSD/LG
Checked By: SEM
Source: WSP, 2025

Dawkins Branch
Multiple Habitat Sampling
Sample Collected: 15-Apr-2025
Project #: US0039765.6753

Results for Dawkins Branch

Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Raw Abundance	Ephemeroptera	Plecoptera	Trichoptera	Chironomidae	Dominant Taxon	Tolerance Values	Tolerance Values * Individual Abundance/Total Abundance	Coleoptera	Oligochaeta	Other	Plecoptera & Trichoptera (less Hydropsychidae)	Scrapers	Top 2 Dominant Taxa
Platyhelminthes						Platyhelminthes spp.	2	0	0	0	0				0	0	2	0	0	
Annelida		Clitellata	Oligochaeta			Oligochaeta spp.	2	0	0	0	0		5	0.05	0	2	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	5	0	0	0	0		9.5	0.23	0	5	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Aulodrilus limnobius*	2	0	0	0	0		5.2	0.05	0	2	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Nais communis*	1	0	0	0	0		8.7	0.04	0	1	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Nais pardalis*	1	0	0	0	0		8.7	0.04	0	1	0	0	0	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Planorbidae	Planorbidae spp.	2	0	0	0	0		6.3	0.06	0	0	2	0	2	
Mollusca		Bivalvia	Autobranchia	Venerida	Cyrenidae	*Corbicula* spp.	3	0	0	0	0		6.12	0.09	0	0	3	0	0	
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Senticaudata spp.	32	0	0	0	0		7.4	1.16	0	0	32	0	0	32
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	*Gammarus* spp.	105	0	0	0	0	105	7.1	3.64	0	0	105	0	0	105
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Caenidae	*Caenis* spp.	2	2	0	0	0		6.8	0.07	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	*Argia* spp.	2	0	0	0	0		8.3	0.08	0	0	2	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptilidae spp.	1	0	0	1	0		4	0.02	0	0	0	1	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Stenelmis* spp.	12	0	0	0	0		5.6	0.33	12	0	0	0	12	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Microcylloepus* spp.	9	0	0	0	0		2.11	0.09	9	0	0	0	9	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	1	0	0	0	1		6.2	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum flavum*	3	0	0	0	3		5.7	0.08	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum illinoense* group	1	0	0	0	1		8.7	0.04	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Orthocladius* spp.	4	0	0	0	4		4.4	0.09	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Parametriocnemus* spp.	5	0	0	0	5		3.9	0.10	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Rheocricotopus* spp.	2	0	0	0	2		4.7	0.05	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Cricotopus* or *Orthocladius*	6	0	0	0	6		4.86	0.14	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Simuliidae	*Simulium* spp.	1	0	0	0	0		4.9	0.02	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	*Atrichopogon* spp.	1	0	0	0	0		6.1	0.03	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Heteroptera	Veliidae	Veliidae spp.	2	0	0	0	0		6	0.06	0	0	2	0	0	

Percent Model Affinity		Difference from Model %
Model % Ephemeroptera	40	39.03
Model % Plecoptera	5	5.00
Model % Trichoptera	10	9.52
Model % Chironomidae	20	9.37
Model % Coleoptera	10	0.14
Model % Oligochaeta	5	0.31
Model % Other	10	62.46
Sum of Difference		125.85
Sum of Difference * 0.5		62.92
Percent Model Affinity		37.08
Percent Model Affinity Category		Moderately impacted

Metric	Value	VSCI metrics	Adjusted VSCI metrics
Species Richness	25	113.64	100.00
Total Abundance	207		
% Ephemeroptera	0.97	1.58	1.58
% Plecoptera	0.00		
% Trichoptera	0.48		
% Chironomidae	10.63	89.37	89.37
% Dominant Taxon	50.72		
Biotic Index	6.58	50.24	50.24
% Coleoptera	10.14		
% Oligochaeta	5.31		
% Other	72.46		
% Plecoptera + Trichoptera (less Hydropsychidae)	0.48	1.36	1.36
% Scrapers	11.59	22.47	22.47
% Top 2 Dominant Taxa	66.18	48.87	48.87
EPT Index	2	18.18	18.18
EPT/EPT + Chironomidae Ratio	0.12		

Hilsenhoff Biotic Index Category	Fairly Poor

Final VSCI score	41.51

Created By: JSD/LG
Checked By: SEM
Source: WSP, 2025

Little Bull Run
Multiple Habitat Sampling
Sample Collected: 15-Apr-2025
Project #: US0039765.6753

Results for Little Bull Run

Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Raw Abundance	Ephemeroptera	Plecoptera	Trichoptera	Chironomidae	Dominant Taxon	Tolerance Values	Tolerance Values * Individual Abundance/Total Abundance	Coleoptera	Oligochaeta	Other	Plecoptera & Trichoptera (less Hydropsychidae)	Scrapers	Top 2 Dominant Taxa
Platyhelminthes						Platyhelminthes spp.	6	0	0	0	0				0	0	6	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	5	0	0	0	0		9.5	0.27	0	5	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Limnodrilus hoffmeisteri*	1	0	0	0	0		9.4	0.05	0	1	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Nais communis*	2	0	0	0	0		8.7	0.10	0	2	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Nais pardalis*	2	0	0	0	0		8.7	0.10	0	2	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Slavina appendiculata*	1	0	0	0	0		8.4	0.05	0	1	0	0	0	
Mollusca		Bivalvia	Autobranchia	Sphaeriida	Sphaeriidae	Sphaeriidae spp.	1	0	0	0	0		6.6	0.04	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Caenidae	*Caenis* spp.	31	31	0	0	0	31	6.8	1.18	0	0	0	0	0	31
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Dubiraphia* spp.	2	0	0	0	0		5.5	0.06	2	0	0	0	2	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Stenelmis* spp.	7	0	0	0	0		5.6	0.22	7	0	0	0	7	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Dytiscidae	*Neoporus* spp.	2	0	0	0	0		5	0.06	2	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	3	0	0	0	3		6.2	0.10	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Ablabesmyia mallochi*	2	0	0	0	2		7.4	0.08	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Pentaneura inconspicua*	3	0	0	0	3		5	0.08	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsini spp.	1	0	0	0	1		6	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Chironomus* spp.	10	0	0	0	10		9.3	0.52	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Tanytarsus* spp.	19	0	0	0	19		6.6	0.70	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum illinoense* group	7	0	0	0	7		8.7	0.34	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Dicrotendipes* spp.	10	0	0	0	10		7.2	0.40	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Microtendipes pedellus* group	1	0	0	0	1		3.9	0.02	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Endochironomus* spp.	3	0	0	0	3		7.79	0.13	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Stictochironomus* spp.	1	0	0	0	1		5.4	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Paratanytarsus dissimilis*	21	0	0	0	21		8.45	1.00	0	0	0	0	0	21
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Orthocladiinae spp.	8	0	0	0	8		5	0.22	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Cricotopus trifascia*	2	0	0	0	2		5.78	0.06	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Orthocladius* spp.	4	0	0	0	4		4.4	0.10	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Thienemanniella xena*	2	0	0	0	2		8	0.09	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Parametriocnemus* spp.	15	0	0	0	15		3.9	0.33	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Cricotopus* or *Orthocladius*	5	0	0	0	5		4.86	0.14	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Simuliidae	*Simulium* spp.	4	0	0	0	0		4.9	0.11	0	0	4	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogoninae spp.	1	0	0	0	0		5.9	0.03	0	0	1	0	0	
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Pionidae	Pionidae spp.	1	0	0	0	0				0	0	1	0	0	
Nematoda						Nematoda spp.	2	0	0	0	0		5	0.06	0	0	2	0	0	

Percent Model Affinity		Difference from Model %
Model % Ephemeroptera	40	23.24
Model % Plecoptera	5	5.00
Model % Trichoptera	10	10.00
Model % Chironomidae	20	43.24
Model % Coleoptera	10	4.05
Model % Oligochaeta	5	0.95
Model % Other	10	1.89
Sum of Difference		88.38
Sum of Difference * 0.5		44.19
Percent Model Affinity		55.81
Percent Model Affinity Category		Slightly impacted

Metric	Value	VSCI metrics	Adjusted VSCI metrics
Species Richness	33	150.00	100.00
Total Abundance	185		
% Ephemeroptera	16.76	27.34	27.34
% Plecoptera	0.00		
% Trichoptera	0.00		
% Chironomidae	63.24	36.76	36.76
% Dominant Taxon	16.76		
Biotic Index	6.72	48.17	48.17
% Coleoptera	5.95		
% Oligochaeta	5.95		
% Other	8.11		
% Plecoptera + Trichoptera (less Hydropsychidae)	0.00	0.00	0.00
% Scrapers	4.86	9.43	9.43
% Top 2 Dominant Taxa	28.11	103.89	100.00
EPT Index	1	9.09	9.09
EPT/EPT + Chironomidae Ratio	0.21		

Hilsenhoff Biotic Index Category	Fairly poor

Final VSCI score	41.35

Created By: JSD/LG
Checked By: SEM
Source: WSP, 2025

Neabsco Creek
Multiple Habitat Sampling
Sample Collected: 16-Apr-2025
Project #: US0039765.6753

Results for Neabsco Creek

Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Raw Abundance	Ephemeroptera	Plecoptera	Trichoptera	Chironomidae	Dominant Taxon	Tolerance Values	Tolerance Values * Individual Abundance/Total Abundance	Coleoptera	Oligochaeta	Other	Plecoptera & Trichoptera (less Hydropsychidae)	Scrapers	Top 2 Dominant Taxa
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Nais communis*	40	0	0	0	0		8.7	1.63	0	40	0	0	0	40
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Physidae	*Physa acuta*	1	0	0	0	0		8.84	0.04	0	0	1	0	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetidae spp.	10	10	0	0	0		6.1	0.29	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	*Baetis flavistriga*	9	9	0	0	0		6.8	0.29	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Cheumatopsyche* spp.	1	0	0	1	0		6.6	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	*Hydroptila* spp.	1	0	0	1	0		6.5	0.03	0	0	0	1	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Dubiraphia* spp.	1	0	0	0	0		5.5	0.03	1	0	0	0	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Microcylloepus* spp.	1	0	0	0	0		2.11	0.01	1	0	0	0	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	*Ancyronyx variegatus*	1	0	0	0	0		6.8	0.03	1	0	0	0	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera		Diptera spp.	1	0	0	0	0		7	0.03	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	10	0	0	0	10		6.2	0.29	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Cladotanytarsus* spp.	1	0	0	0	1		4	0.02	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Tanytarsus* spp.	2	0	0	0	2		6.6	0.06	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum flavum*	6	0	0	0	6		5.7	0.16	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum illinoense* group	4	0	0	0	4		8.7	0.16	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Dicrotendipes* spp.	2	0	0	0	2		7.2	0.07	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Microtendipes pedellus* group	1	0	0	0	1		3.9	0.02	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Paratanytarsus dissimilis*	6	0	0	0	6		8.45	0.24	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Orthocladiinae spp.	12	0	0	0	12		5	0.28	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Cricotopus* spp.	13	0	0	0	13		5.78	0.35	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Corynoneura* spp.	4	0	0	0	4		5.7	0.11	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Orthocladius* spp.	46	0	0	0	46	46	4.4	0.95	0	0	0	0	0	46
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Thienemanniella xena*	5	0	0	0	5		8	0.19	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Tvetenia* spp.	11	0	0	0	11		3.65	0.19	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Parametriocnemus* spp.	4	0	0	0	4		3.9	0.07	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Cricotopus* or *Orthocladius*	14	0	0	0	14		4.86	0.32	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Potthastia* spp.	2	0	0	0	2		6.4	0.06	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Simuliidae	*Simulium* spp.	1	0	0	0	0		4.9	0.02	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Tipulidae	Tipulidae spp.	2	0	0	0	0		4.9	0.05	0	0	2	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Heteroptera	Veliidae	Veliidae spp.	1	0	0	0	0		6	0.03	0	0	1	0	0	
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Lebertiidae	*Lebertia* spp.	1	0	0	0	0		8	0.04	0	0	1	0	0	

Percent Model Affinity		Difference from Model %
Model % Ephemeroptera	40	31.12
Model % Plecoptera	5	5.00
Model % Trichoptera	10	9.07
Model % Chironomidae	20	46.82
Model % Coleoptera	10	8.60
Model % Oligochaeta	5	13.69
Model % Other	10	6.73
Sum of Difference		121.03
Sum of Difference * 0.5		60.51
Percent Model Affinity		39.49
Percent Model Affinity Category		Moderately impacted

Metric	Value	VSCI metrics	Adjusted VSCI metrics
Species Richness	31	140.91	100.00
Total Abundance	214		
% Ephemeroptera	8.88	14.48	14.48
% Plecoptera	0.00		
% Trichoptera	0.93		
% Chironomidae	66.82	33.18	33.18
% Dominant Taxon	21.50		
Biotic Index	6.06	57.97	57.97
% Coleoptera	1.40		
% Oligochaeta	18.69		
% Other	3.27		
% Plecoptera + Trichoptera (less Hydropsychidae)	0.47	1.31	1.31
% Scrapers	2.34	4.53	4.53
% Top 2 Dominant Taxa	40.19	86.44	86.44
EPT Index	4	36.36	36.36
EPT/EPT + Chironomidae Ratio	0.13		

Hilsenhoff Biotic Index Category	Fair

Final VSCI score	41.78

Created By: JSD/LG
Checked By: SEM
Source: WSP, 2025

Purcell Branch
Multiple Habitat Sampling
Sample Collected: 17-Apr-2025
Project #: US0039765.6753

Results for Purcell Branch

Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Raw Abundance	Ephemeroptera	Plecoptera	Trichoptera	Chironomidae	Dominant Taxon	Tolerance Values	Tolerance Values * Individual Abundance/Total Abundance	Coleoptera	Oligochaeta	Other	Plecoptera & Trichoptera (less Hydropsychidae)	Scrapers	Top 2 Dominant Taxa
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	1	0	0	0	0		9.5	0.05	0	1	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Pristina aequiseta*	1	0	0	0	0		7.7	0.04	0	1	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Nais communis*	6	0	0	0	0		8.7	0.29	0	6	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Nais pseudobtusa*	6	0	0	0	0		8.7	0.29	0	6	0	0	0	
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	*Slavina appendiculata*	1	0	0	0	0		8.4	0.05	0	1	0	0	0	
Annelida		Clitellata	Oligochaeta	Lumbriculida	Lumbriculidae	Lumbriculidae spp.	1	0	0	0	0		7.03	0.04	0	1	0	0	0	
Mollusca		Gastropoda				Gastropoda spp.	1	0	0	0	0		7	0.04	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Caenidae	*Caenis* spp.	3	3	0	0	0		6.8	0.11	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetidae spp.	1	1	0	0	0		6.1	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	*Baetis flavistriga*	3	3	0	0	0		6.8	0.11	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Heptageniidae	Heptageniidae spp.	3	3	0	0	0		4	0.07	0	0	0	0	3	
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Heptageniidae	*Stenonema* spp.	1	1	0	0	0		3.15	0.02	0	0	0	0	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Leptoceridae	*Triaenodes* spp.	1	0	0	1	0		4.1	0.02	0	0	0	1	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Hydropsyche* spp.	1	0	0	1	0		5	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	*Hydropsyche betteni/depravata/potomacensis*	1	0	0	1	0		7.9	0.04	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	*Hydroptila* spp.	1	0	0	1	0		6.5	0.04	0	0	0	1	1	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Philopotamidae	*Chimarra* spp.	1	0	0	1	0		3.3	0.02	0	0	0	1	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Thremmatidae	*Neophylax acutus*	1	0	0	1	0		1.6	0.01	0	0	0	1	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera		Diptera spp.	1	0	0	0	0		7	0.04	0	0	1	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	5	0	0	0	5		6.2	0.17	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Ablabesmyia mallochi*	1	0	0	0	1		7.4	0.04	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Tanytarsus* spp.	2	0	0	0	2		6.6	0.07	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Polypedilum* spp.	3	0	0	0	3		5.69	0.09	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Paratanytarsus dissimilis*	3	0	0	0	3		8.45	0.14	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Orthocladiinae spp.	9	0	0	0	9		5	0.25	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Cricotopus* spp.	2	0	0	0	2		5.78	0.06	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Corynoneura* spp.	24	0	0	0	24		5.7	0.75	0	0	0	0	0	24
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Orthocladius* spp.	11	0	0	0	11		4.4	0.26	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Thienemanniella xena*	9	0	0	0	9		8	0.39	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Tvetenia* spp.	10	0	0	0	10		3.65	0.20	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Parametriocnemus* spp.	40	0	0	0	40	40	3.9	0.85	0	0	0	0	0	40
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Rheocricotopus* spp.	7	0	0	0	7		4.7	0.18	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Cricotopus* or *Orthocladius*	4	0	0	0	4		4.86	0.11	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Diplocladius cultriger*	3	0	0	0	3		8	0.13	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Eukiefferiella claripennis* group	1	0	0	0	1		6.2	0.03	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	*Potthastia* spp.	6	0	0	0	6		6.4	0.21	0	0	0	0	0	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Simuliidae	*Simulium* spp.	3	0	0	0	0		4.9	0.08	0	0	3	0	0	
Arthropoda	Hexapoda	Collembola				Collembola spp.	4	0	0	0	0		10	0.22	0	0	4	0	0	
Arthropoda	Chelicerata	Arachnida	Acari	Sarcoptiformes		Oribatida spp.	1	0	0	0	0				0	0	1	0	0	
Nematoda						Nematoda spp.	1	0	0	0	0		5	0.03	0	0	1	0	0	

Percent Model Affinity		Difference from Model %
Model % Ephemeroptera	40	34.02
Model % Plecoptera	5	5.00
Model % Trichoptera	10	6.74
Model % Chironomidae	20	56.09
Model % Coleoptera	10	10.00
Model % Oligochaeta	5	3.70
Model % Other	10	4.02
Sum of Difference		119.57
Sum of Difference * 0.5		59.78
Percent Model Affinity		40.22
Percent Model Affinity Category		Moderately Impacted

Metric	Value	VSCI metrics	Adjusted VSCI metrics
Species Richness	40	181.82	100.00
Total Abundance	184		
% Ephemeroptera	5.98	9.75	9.75
% Plecoptera	0.00		
% Trichoptera	3.26		
% Chironomidae	76.09	23.91	23.91
% Dominant Taxon	21.74		
Biotic Index	5.59	64.90	64.90
% Coleoptera	0.00		
% Oligochaeta	8.70		
% Other	5.98		
% Plecoptera + Trichoptera (less Hydropsychidae)	2.17	6.11	6.11
% Scrapers	2.72	5.27	5.27
% Top 2 Dominant Taxa	34.78	94.24	94.24
EPT Index	11	100.00	100.00
EPT/EPT + Chironomidae Ratio	0.11		

Hilsenhoff Biotic Index Category	Fair

Final VSCI score	50.52

Created By: JSD/LG
Checked By: SEM
Source: WSP, 2025

ATTACHMENT 2

REFERENCES

Attachment 2 - References

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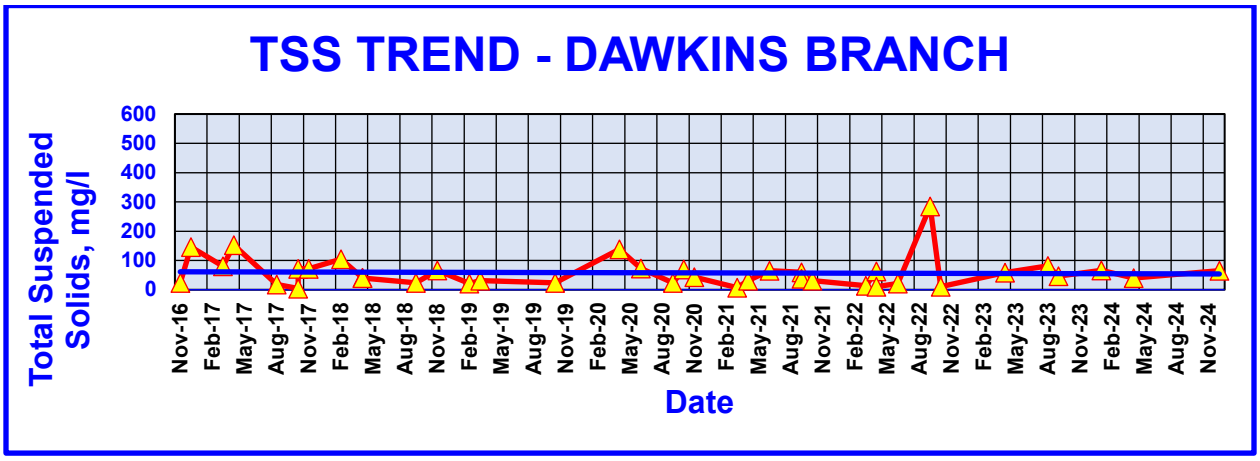
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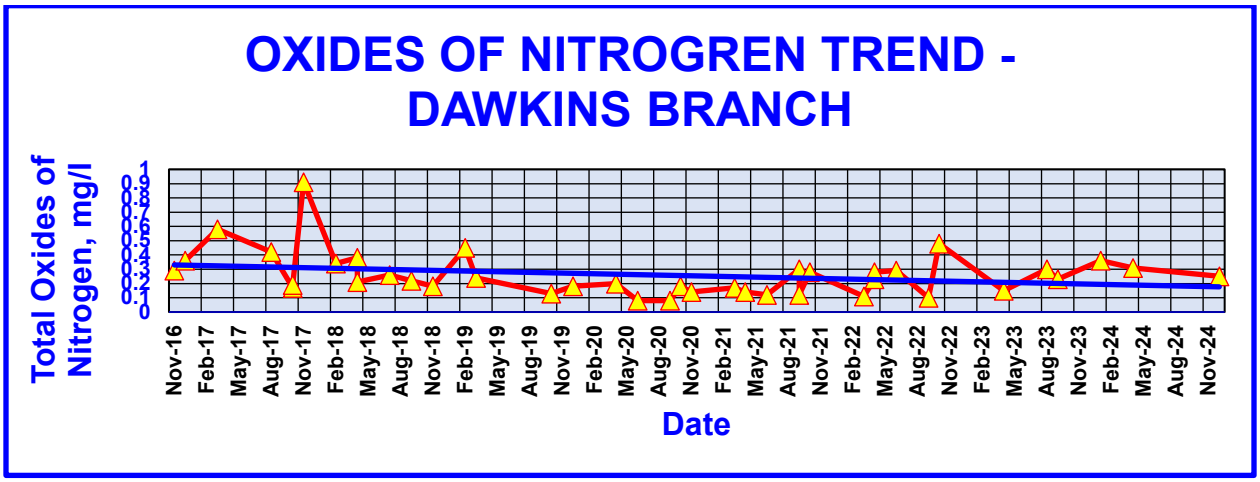
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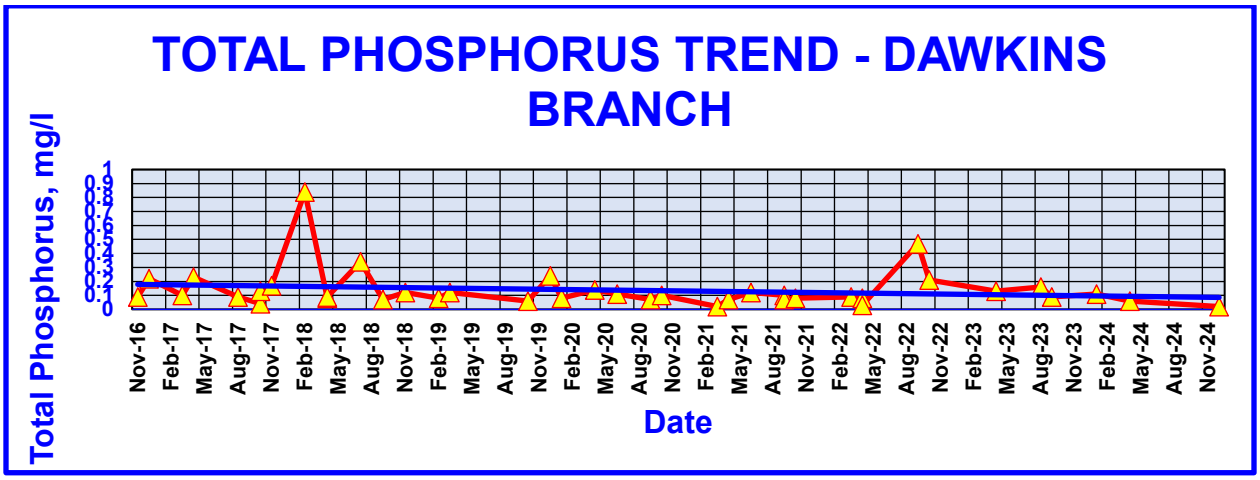
Appendix Q

In-Stream Monitoring Summary

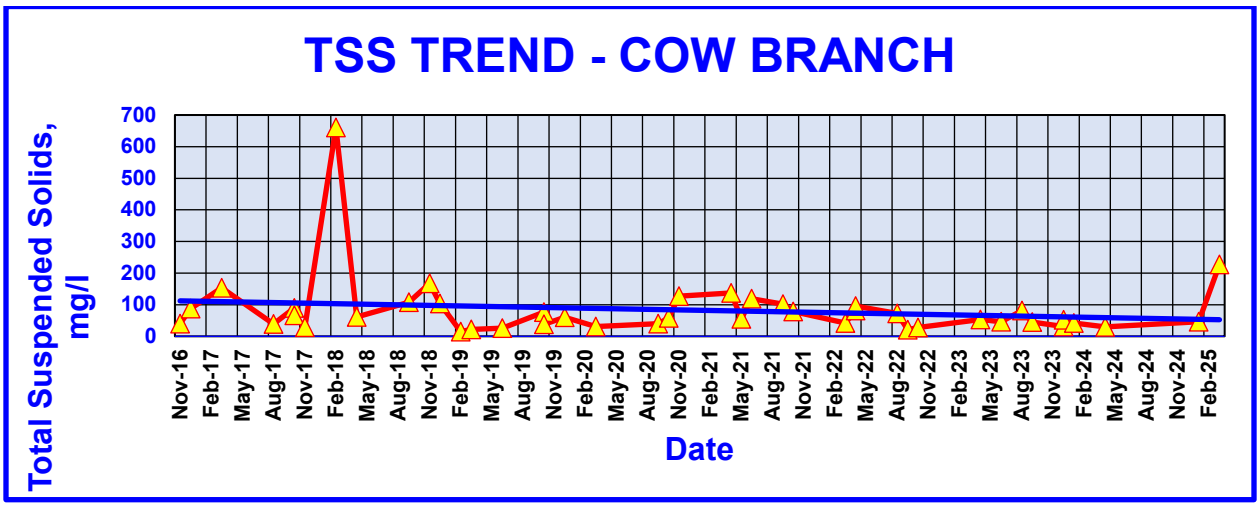
Dawkins Branch

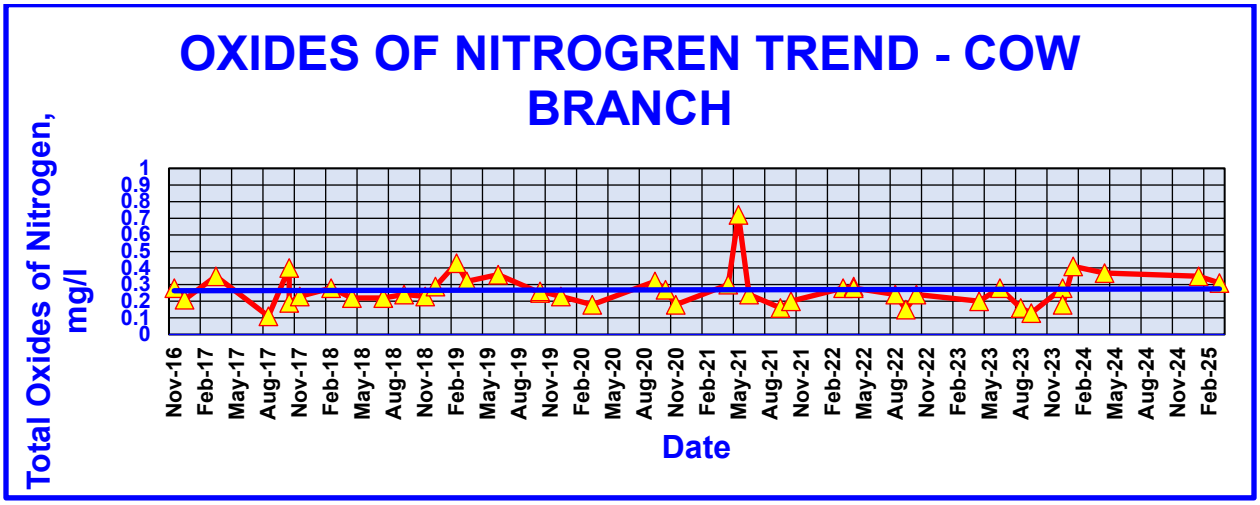


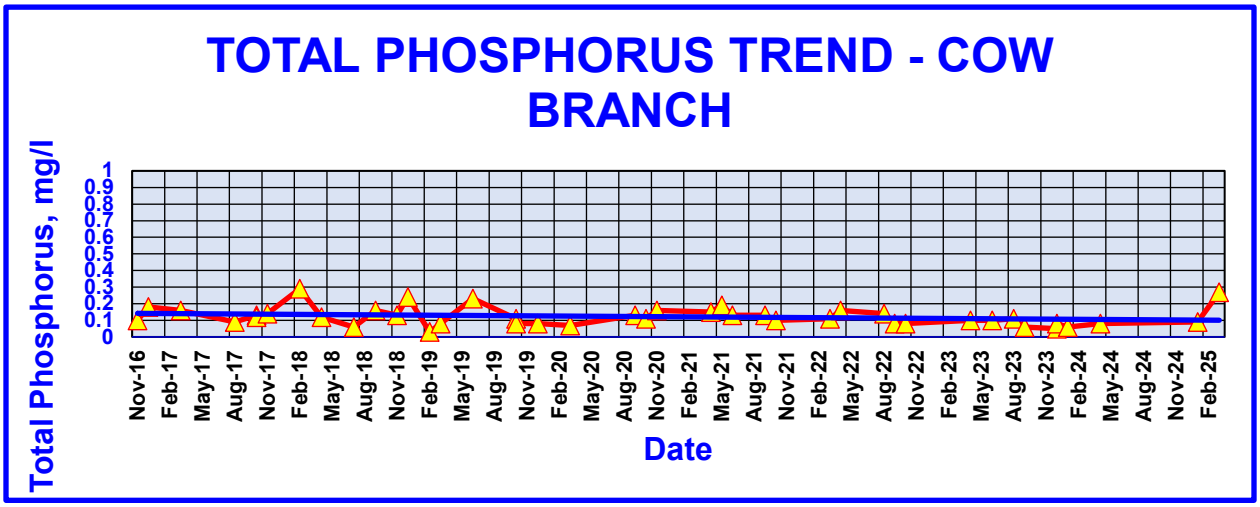




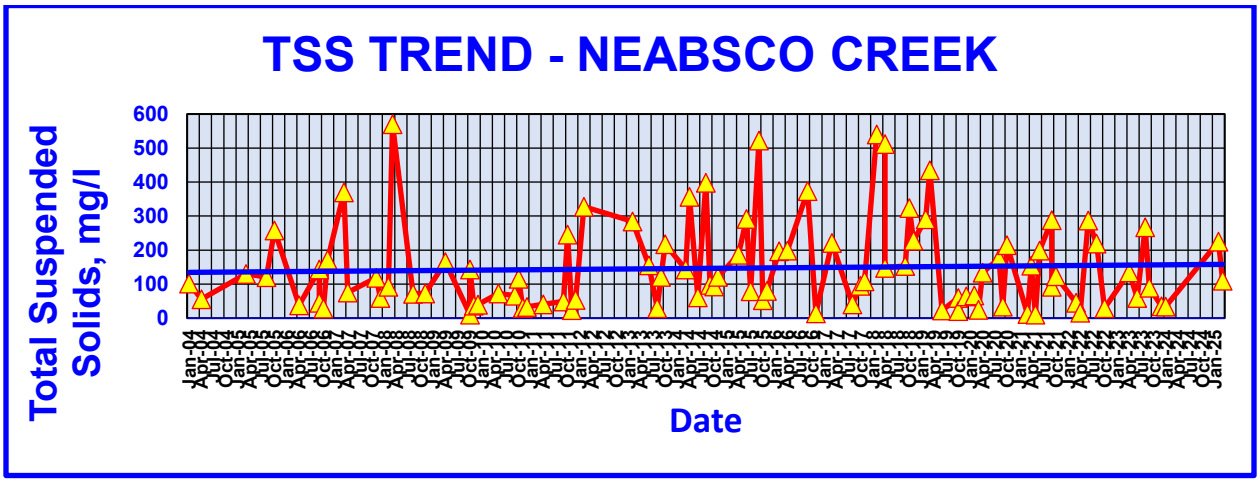
Cow Branch

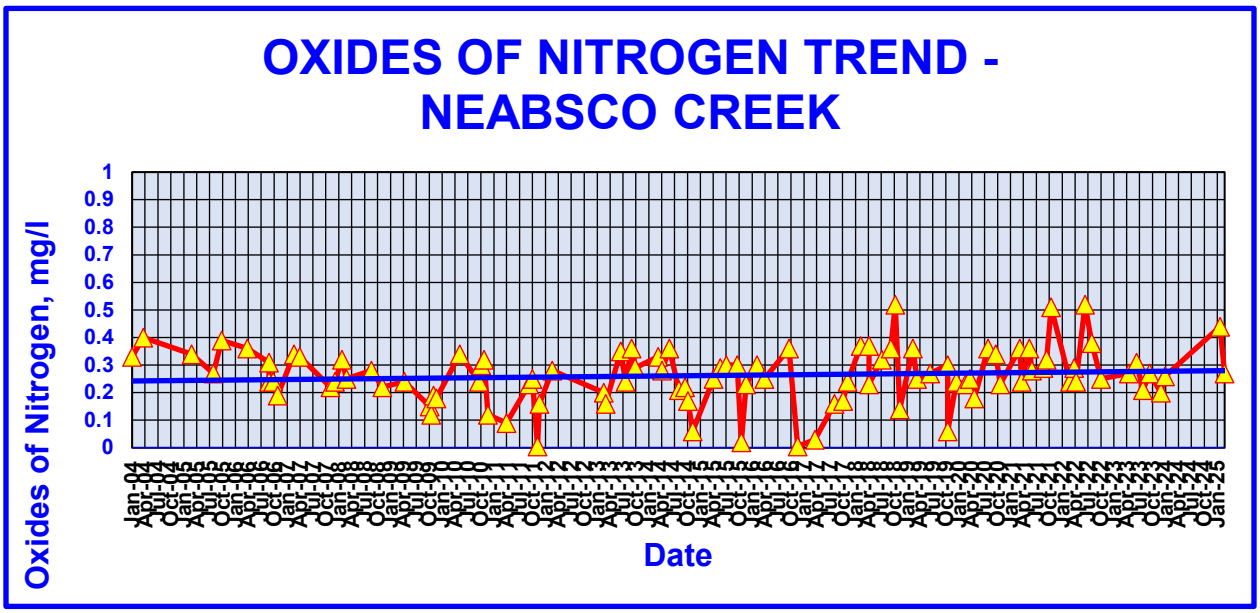

TSS TREND - COW BRANCH
Total Suspended Solids, mg/l
700
600
500
400
300
200
100
0
Nov-16 Feb-17 May-17 Aug-17 Nov-17 Feb-18 May-18 Aug-18 Nov-18 Feb-19 May-19 Aug-19 Nov-19 Feb-20 May-20 Aug-20 Nov-20 Feb-21 May-21 Aug-21 Nov-21 Feb-22 May-22 Aug-22 Nov-22 Feb-23 May-23 Aug-23 Nov-23 Feb-24 May-24 Aug-24 Nov-24 Feb-25
Date

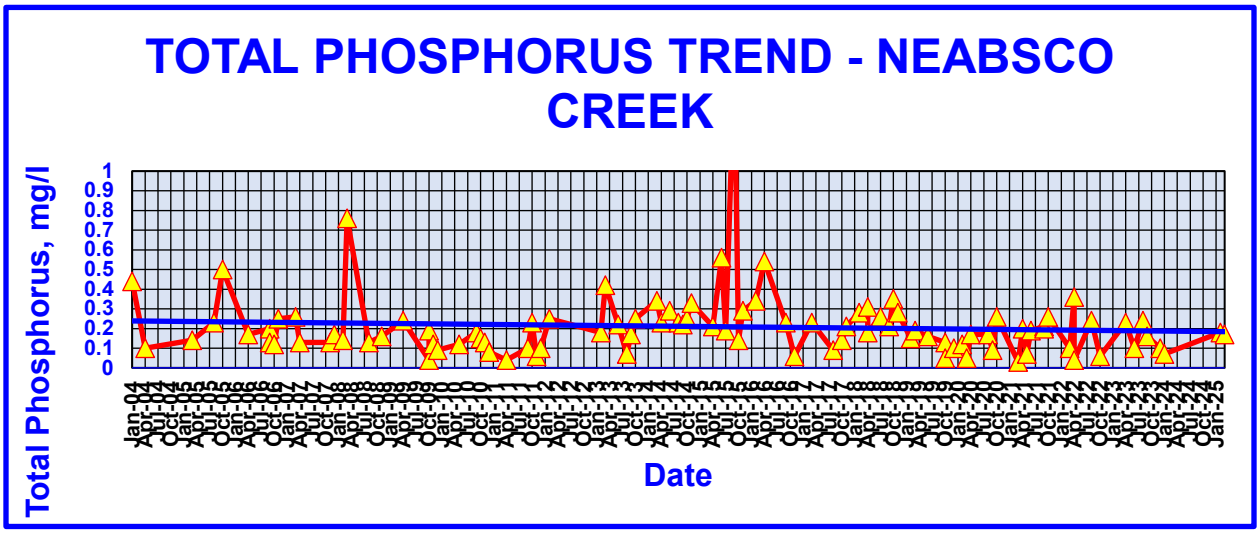

OXIDES OF NITROGREN TREND - COW BRANCH
Total Oxides of Nitrogen, mg/l
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Nov-16 Feb-17 May-17 Aug-17 Nov-17 Feb-18 May-18 Aug-18 Nov-18 Feb-19 May-19 Aug-19 Nov-19 Feb-20 May-20 Aug-20 Nov-20 Feb-21 May-21 Aug-21 Nov-21 Feb-22 May-22 Aug-22 Nov-22 Feb-23 May-23 Aug-23 Nov-23 Feb-24 May-24 Aug-24 Nov-24 Feb-25
Date


TOTAL PHOSPHORUS TREND - COW BRANCH
Total Phosphorus, mg/l
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Nov-16 Feb-17 May-17 Aug-17 Nov-17 Feb-18 May-18 Aug-18 Nov-18 Feb-19 May-19 Aug-19 Nov-19 Feb-20 May-20 Aug-20 Nov-20 Feb-21 May-21 Aug-21 Nov-21 Feb-22 May-22 Aug-22 Nov-22 Feb-23 May-23 Aug-23 Nov-23 Feb-24 May-24 Aug-24 Nov-24 Feb-25
Date

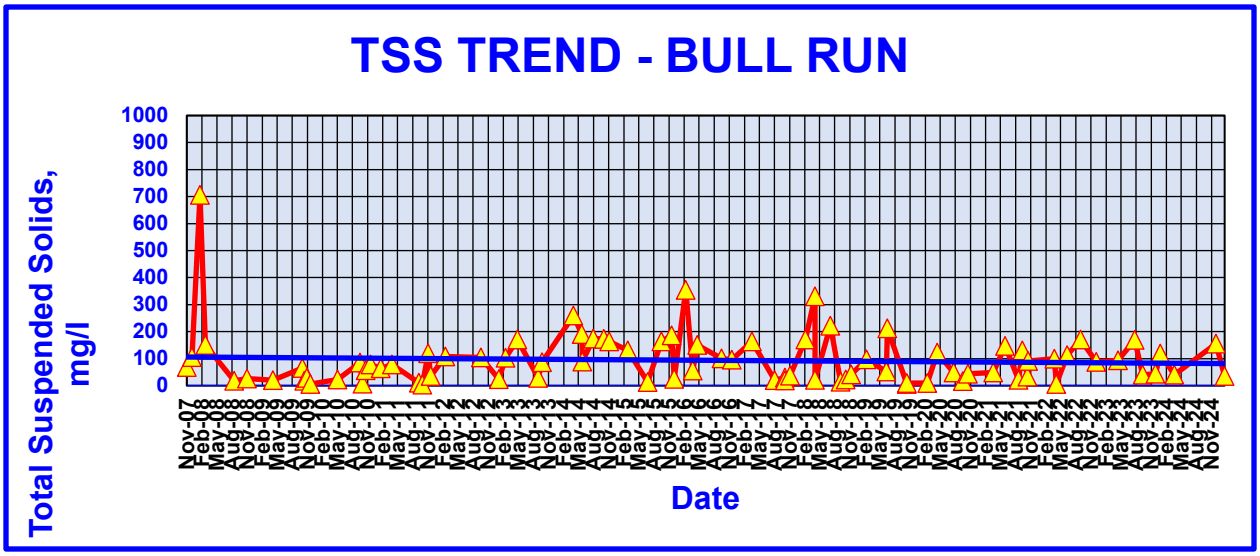
Neabsco Creek

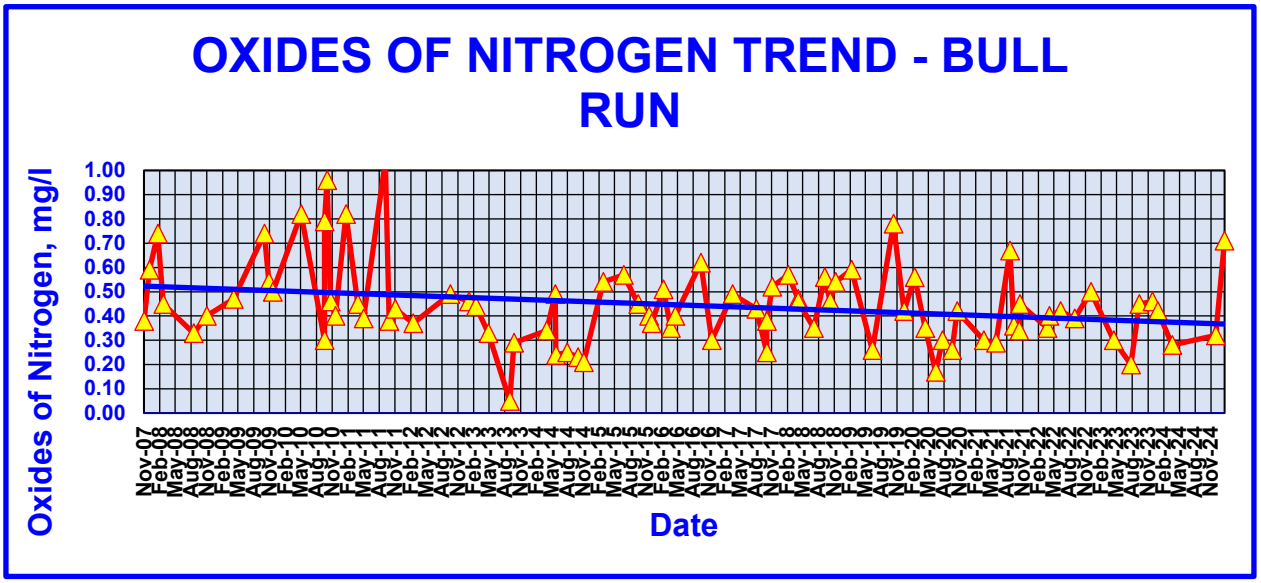


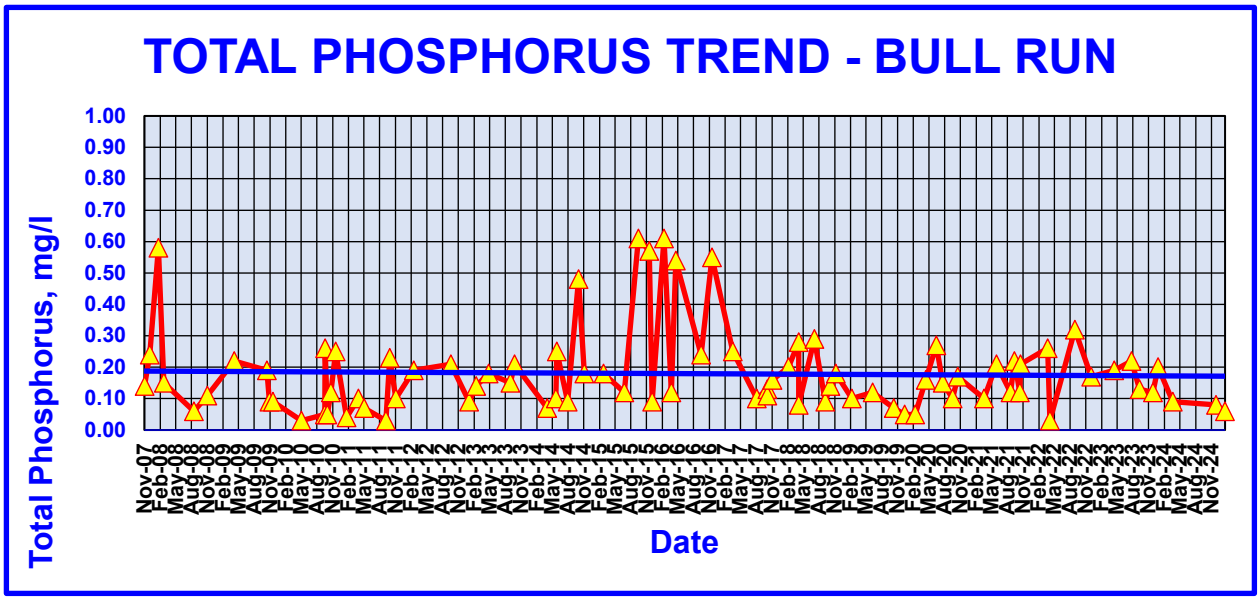




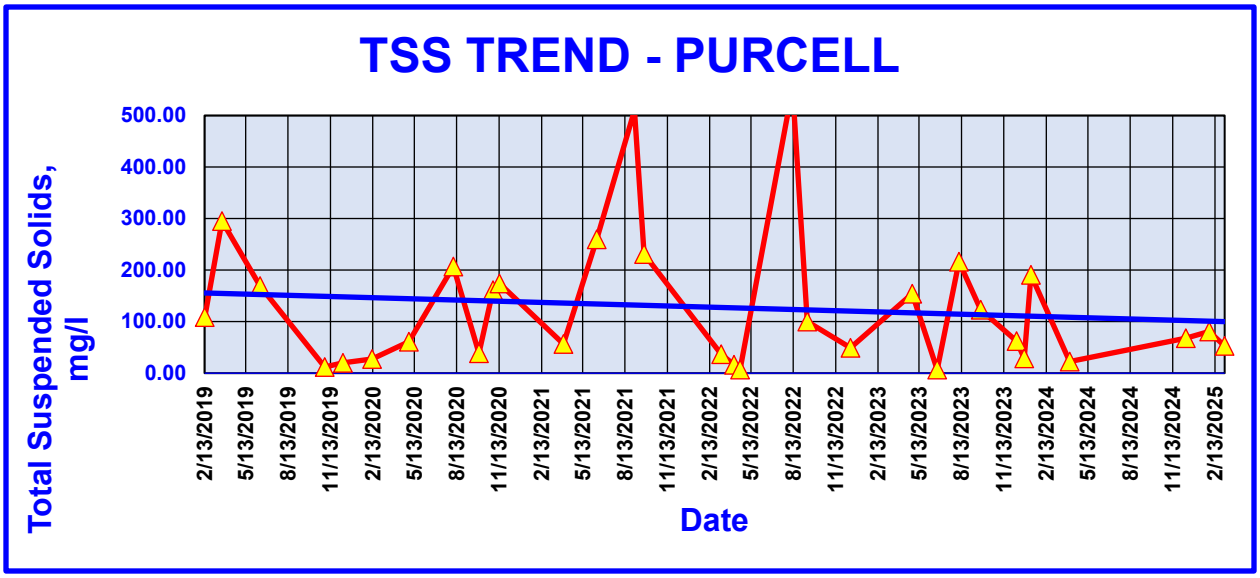
Bull Run

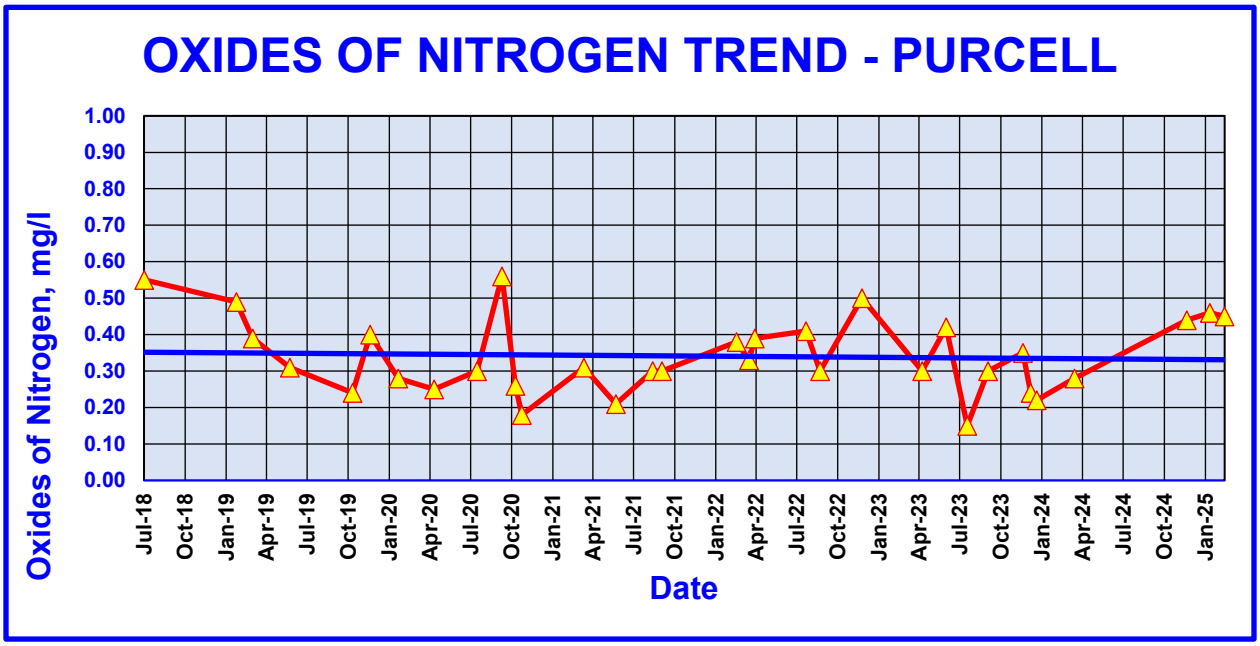

TSS TREND - BULL RUN
Total Suspended Solids, mg/l
1000
900
800
700
600
500
400
300
200
100
0
Date

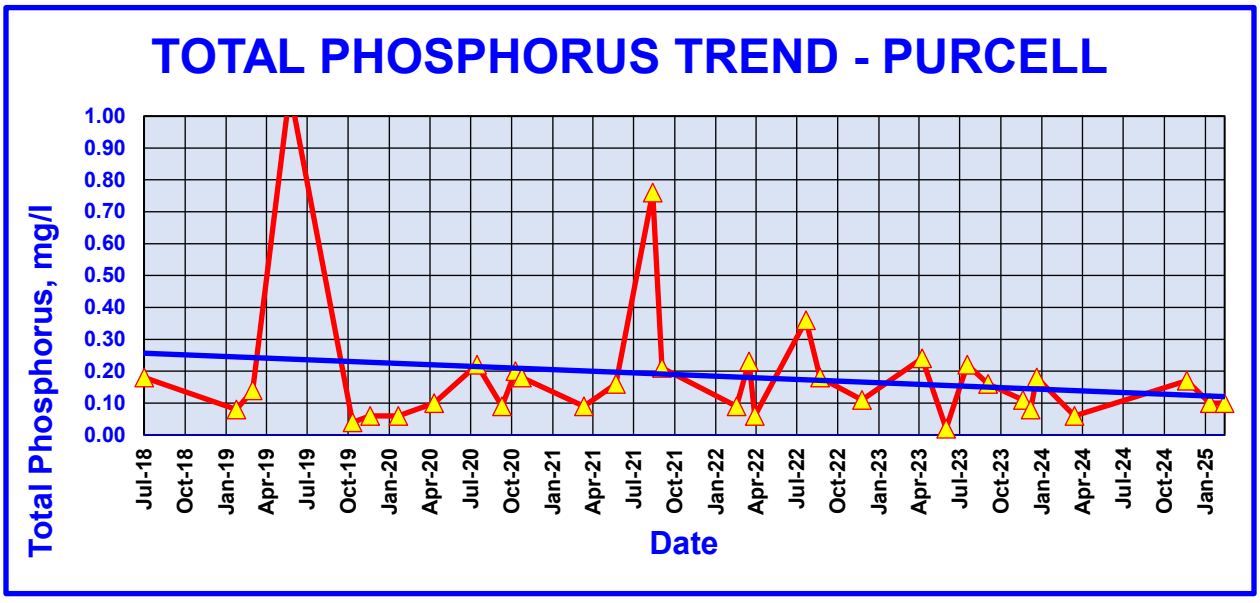

OXIDES OF NITROGEN TREND - BULL RUN
Oxides of Nitrogen, mg/l
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
Date


TOTAL PHOSPHORUS TREND - BULL RUN
Total Phosphorus, mg/l
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
Date

Purcell


TSS TREND - PURCELL
Total Suspended Solids, mg/l
500.00
400.00
300.00
200.00
100.00
0.00
2/13/2019
5/13/2019
8/13/2019
11/13/2019
2/13/2020
5/13/2020
8/13/2020
11/13/2020
2/13/2021
5/13/2021
8/13/2021
11/13/2021
2/13/2022
5/13/2022
8/13/2022
11/13/2022
2/13/2023
5/13/2023
8/13/2023
11/13/2023
2/13/2024
5/13/2024
8/13/2024
11/13/2024
2/13/2025
Date


OXIDES OF NITROGEN TREND - PURCELL
Oxides of Nitrogen, mg/l
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
Jul-18
Oct-18
Jan-19
Apr-19
Jul-19
Oct-19
Jan-20
Apr-20
Jul-20
Oct-20
Jan-21
Apr-21
Jul-21
Oct-21
Jan-22
Apr-22
Jul-22
Oct-22
Jan-23
Apr-23
Jul-23
Oct-23
Jan-24
Apr-24
Jul-24
Oct-24
Jan-25
Date


TOTAL PHOSPHORUS TREND - PURCELL
Total Phosphorus, mg/l
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
Jul-18
Oct-18
Jan-19
Apr-19
Jul-19
Oct-19
Jan-20
Apr-20
Jul-20
Oct-20
Jan-21
Apr-21
Jul-21
Oct-21
Jan-22
Apr-22
Jul-22
Oct-22
Jan-23
Apr-23
Jul-23
Oct-23
Jan-24
Apr-24
Jul-24
Oct-24
Jan-25
Date

Appendix R

Floatables Monitoring Report

8850 Rixlew Lane, Manassas, VA 20109 Tel. 571.379.7514 Fax. 571.379.8305 www.pwswcd.org

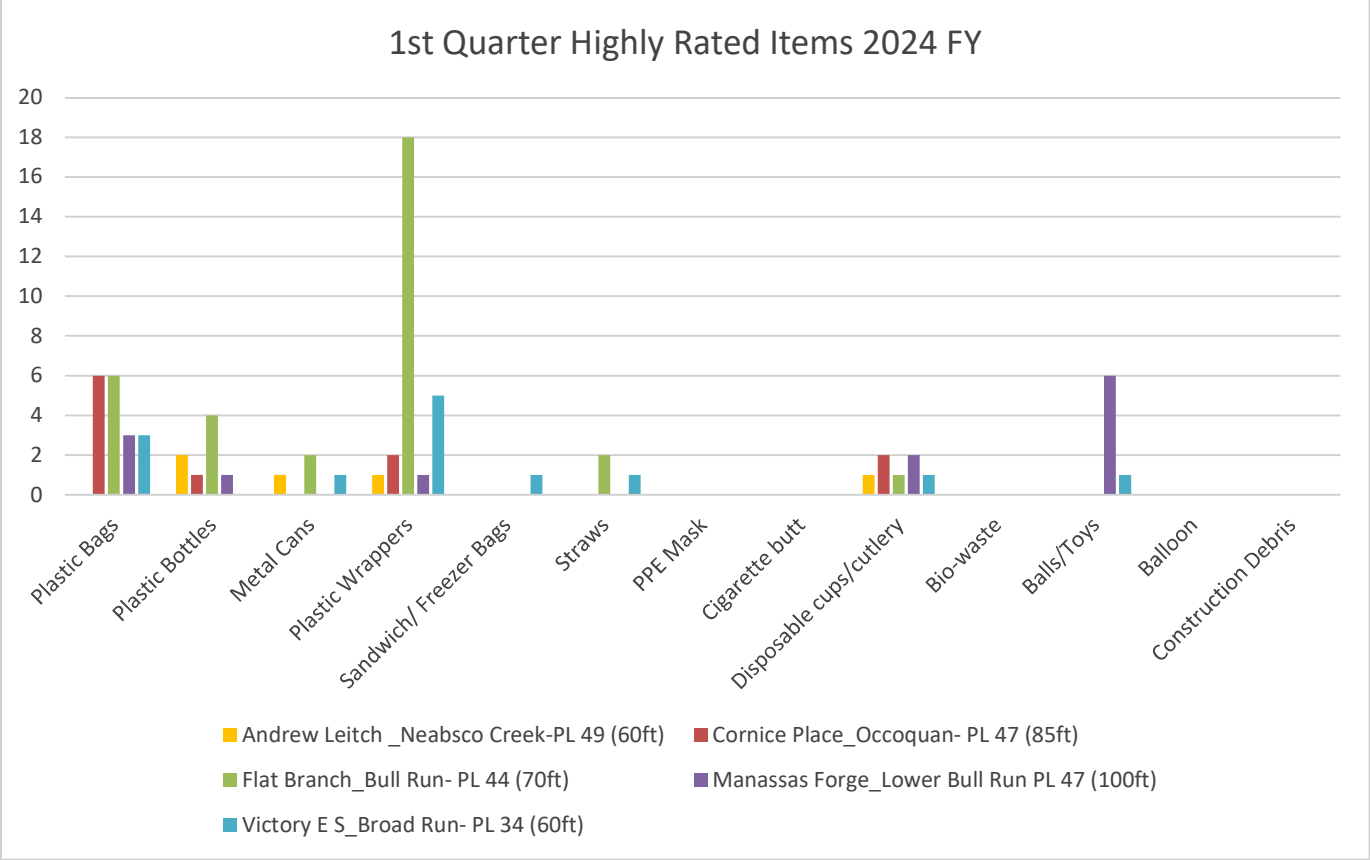
Prince William County Floatable Survey

2024 - 2025 Fiscal Year Report

A Report put together by the Prince William Soil Water Conservation District

Phase I.

Figure 1. At the top of the list of floatable Items collected during the 1st Quarter – Plastic bags and Plastic Wrappers



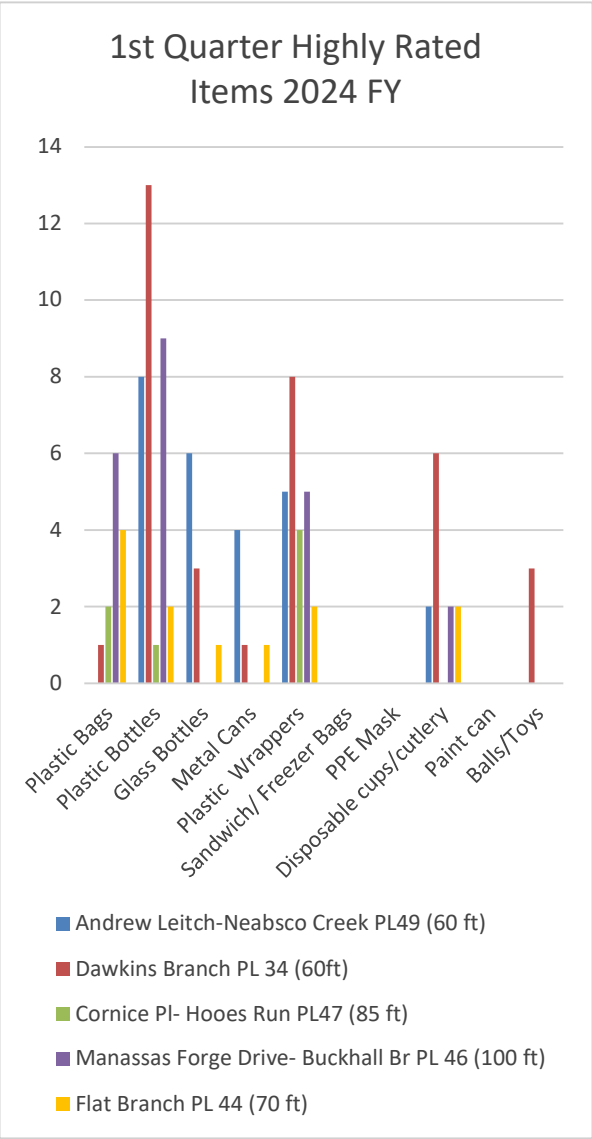
In the First Quarter of floatable monitoring, plastic bags, plastic bottles, plastic wrappers, disposable cups/cutlery, and toys were significantly observed.

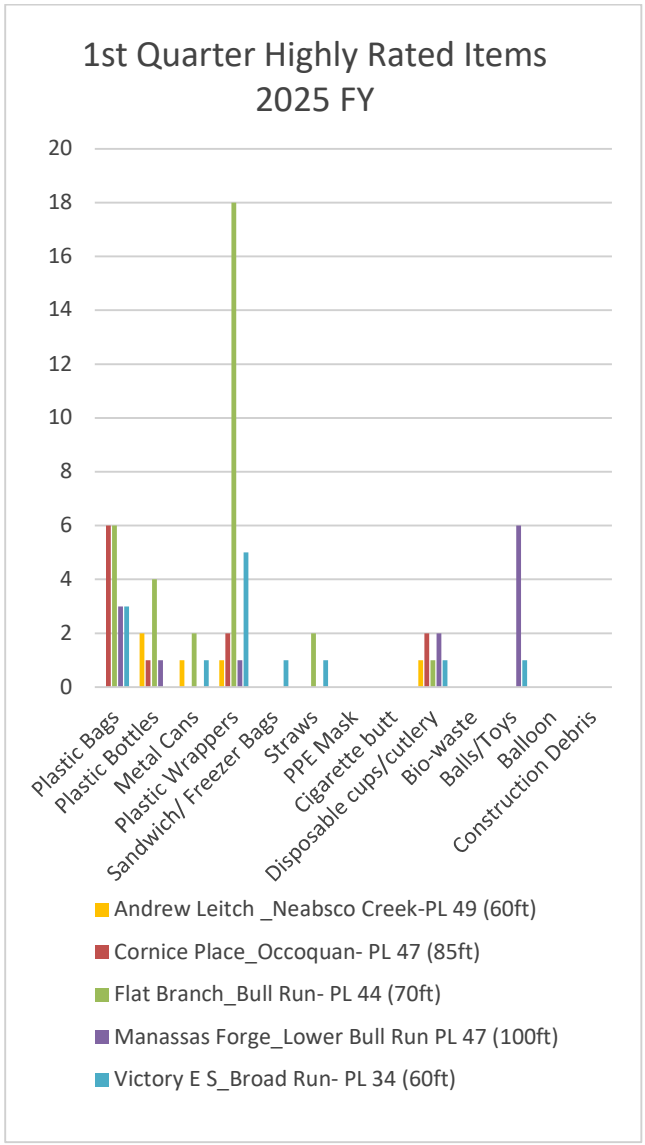
The Flat Branch and Dawkin's Branch sites showed significant floatable debris, while the Manassas Forge site showed many toys.

Comparing the 1st Quarter of 2024 and 2025 Fiscal Year

Comparing this 2024 report to 2025, there is a shift from plastic bottles to plastic wrappers as the most dominant items in the streams. However, there is a general drop in the number of debris collected.

Figure 1a. Comparing 2024 and 2025





Phase II.

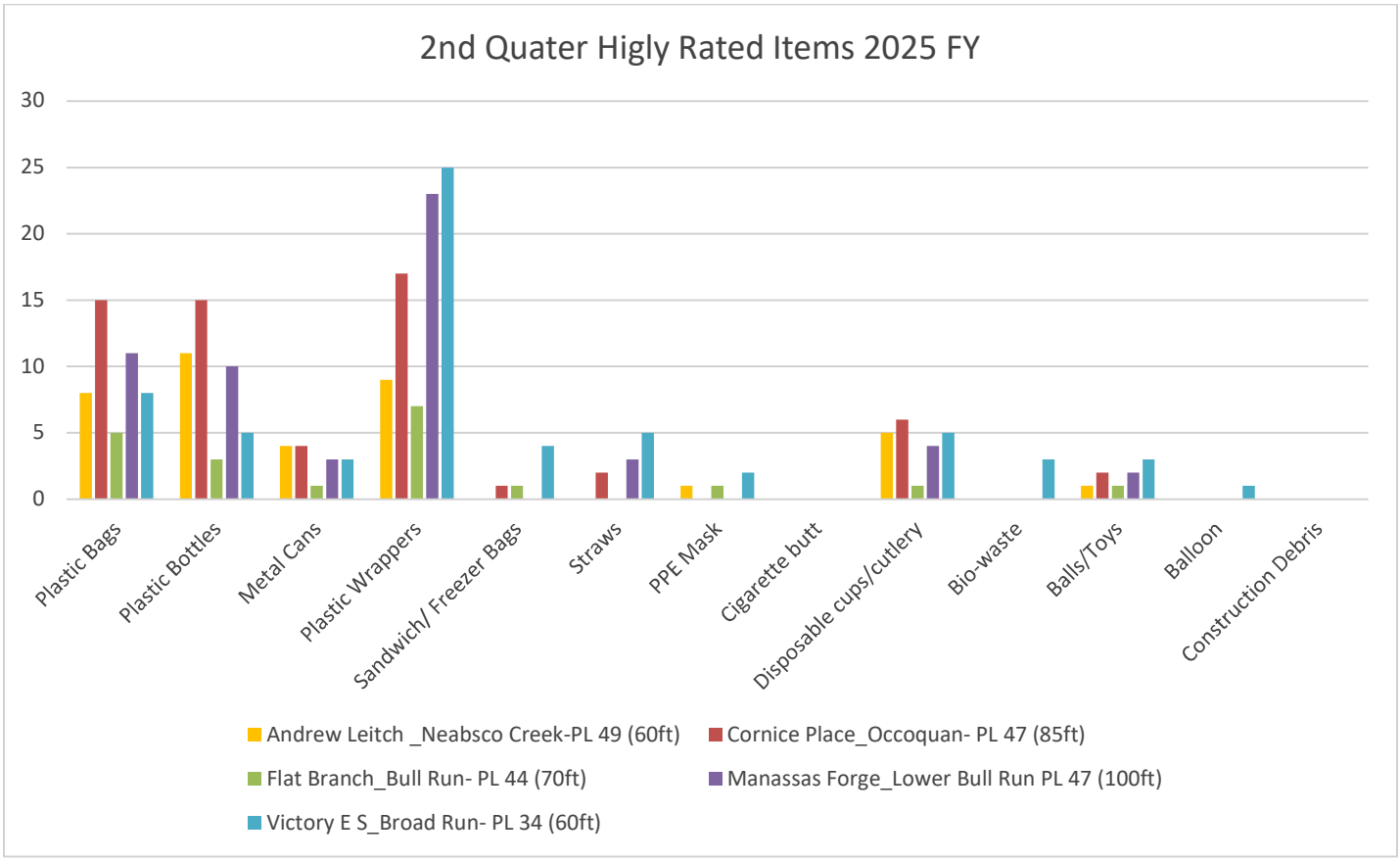


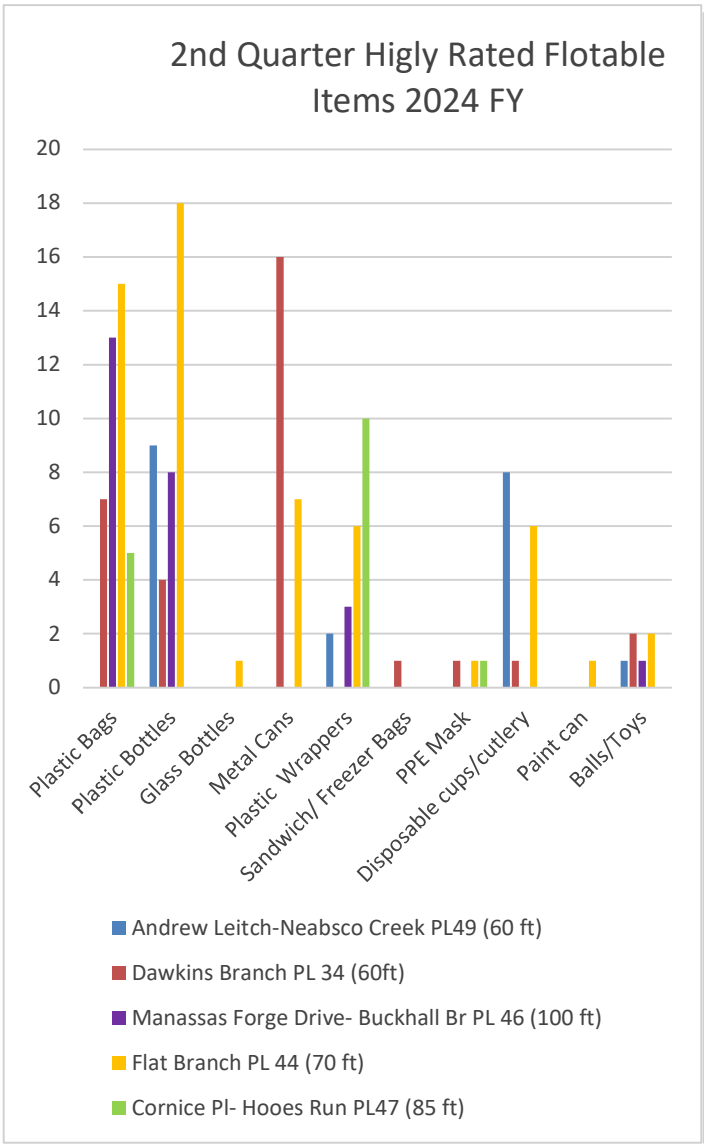
Figure 2. Top of the Floatable Items collected during the 2nd Quarter: Plastic Wrappers.

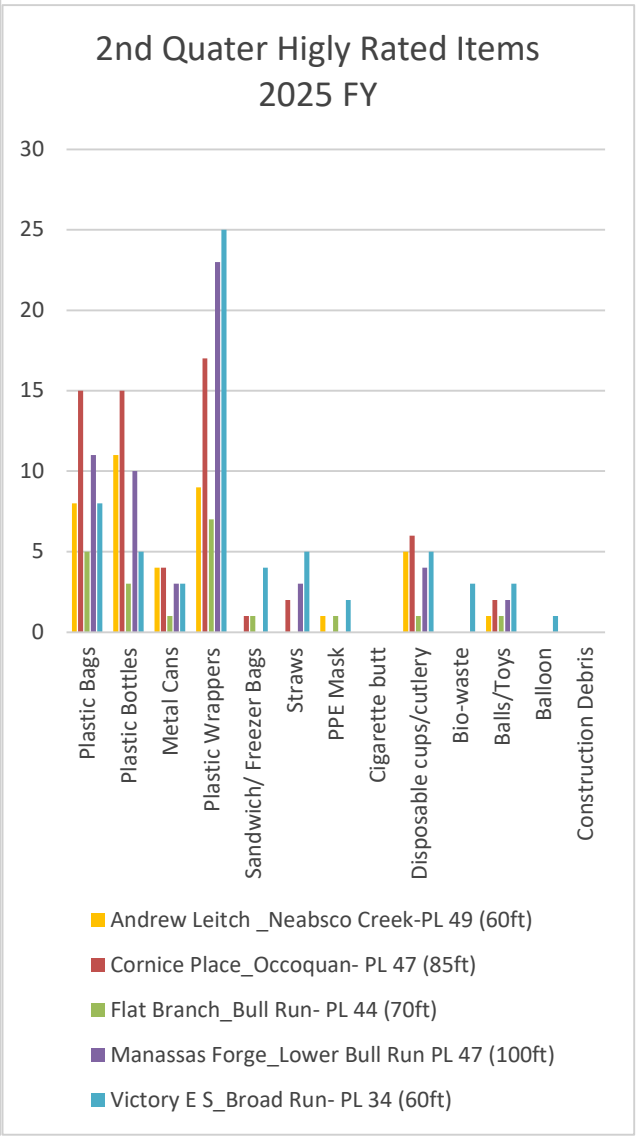
The second quarter of 2025 also showed an increase in plastic wrappers, followed by plastic bottles, plastic bags, and Restaurant disposables.

Comparing the 2nd Quarter of 2024 and 2025 Fiscal Year

In 2024, plastic bags and bottles were the most identified items. In 2025, plastic wrappers were the most significant item identified, followed by plastic bags, plastic bottles, and disposable food items from restaurants and fast food businesses. The Broad Run site showed diversity in all the items collected.

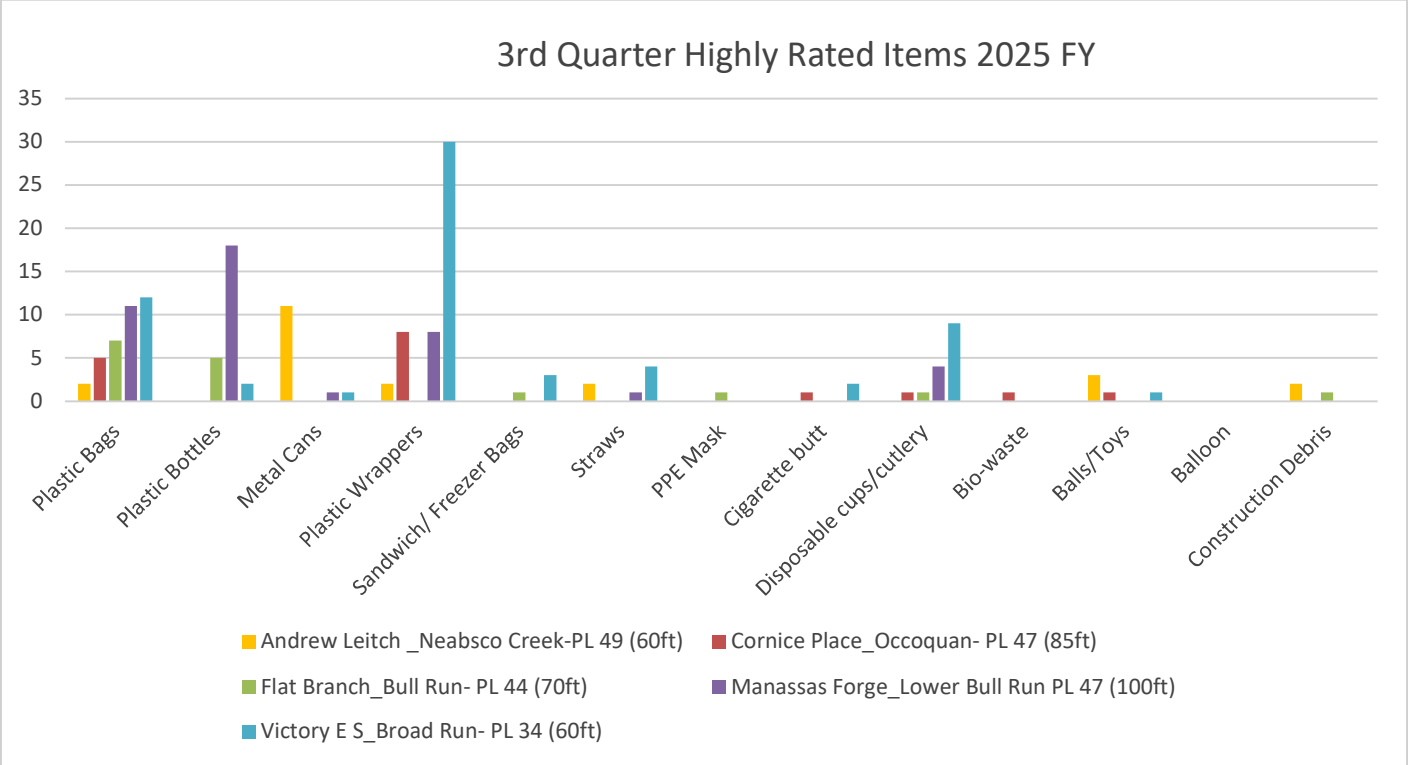
Figure 2a. Comparing 2024 and 2025





Phase III

Figure 3. At the top of the list of floatable Items collected during the 3rd Quarter are plastic wrappers, Plastic bottles, and Plastic bags.



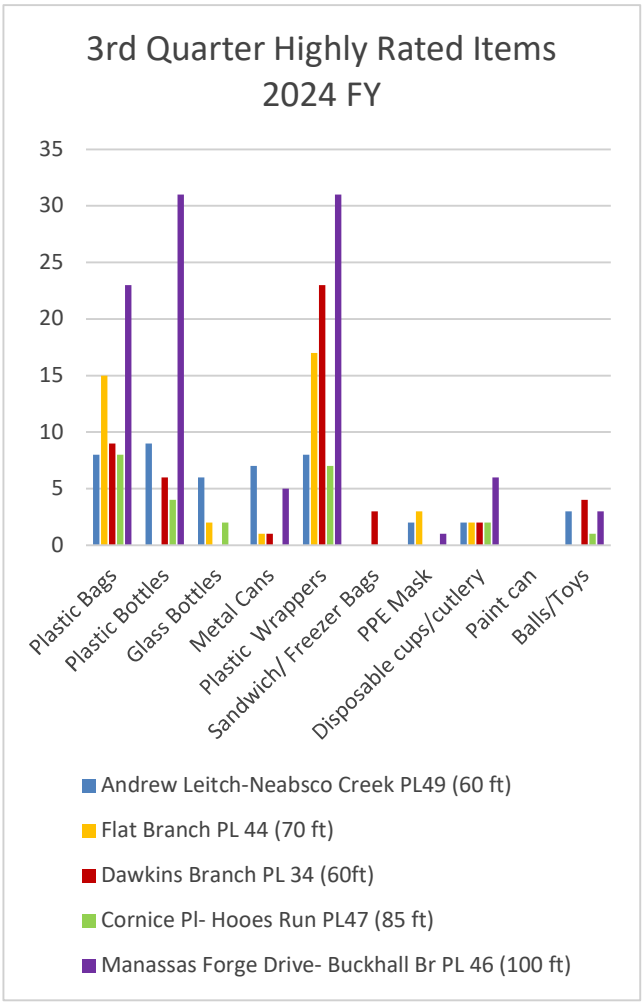
In the third Quarter of 2024, the Manassas Forge site registered the highest number of plastic bottles, and the Broad Run site recorded the highest number of plastic bags, plastic wrappers, and disposable plastic food-related items.

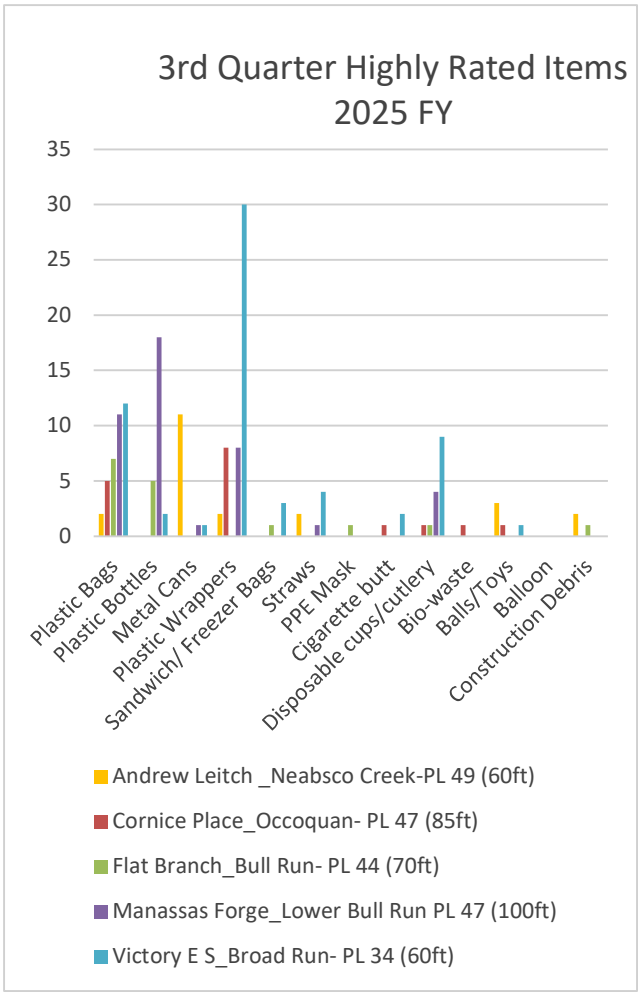
Comparing the 3rd Quarter of 2024 and 2025 Fiscal Year

Comparing the third Quarter of 2024 to 2025, plastic wrappers, bottles, and bags were significantly higher at all five sites in both years, but in a lower count compared to 2024. This shows an overall decrease in floatable items at the sites.

However, construction items have been identified as new emerging debris, whereas PPE that came in previous years due to the COVID-19 pandemic has decreased.

Figure 3a. Comparing 2024 and 2025

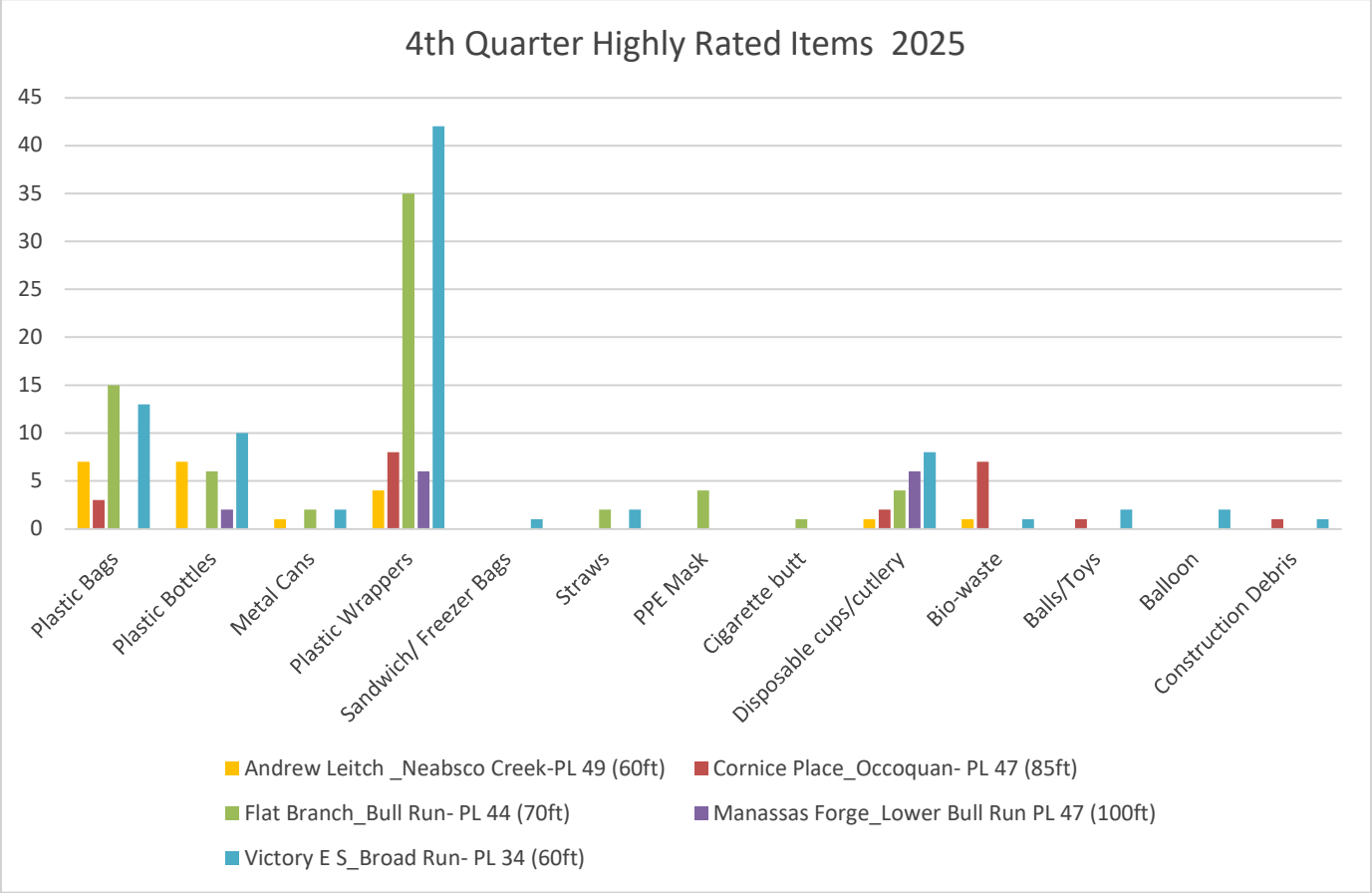




PHASE IV

In the fourth Quarter of 2025, plastic wrappers, plastic bottles, plastic bags, and disposable food-related items were the most dominant floatable items at all the monitoring sites. Although plastic bags, plastic bottles, and plastic wrappers were the dominant items, the number of plastic bags registered at all the sites showed a significant decrease in 2025 compared to 2024. Bio-waste in the form of dog poop bags was also noticed.

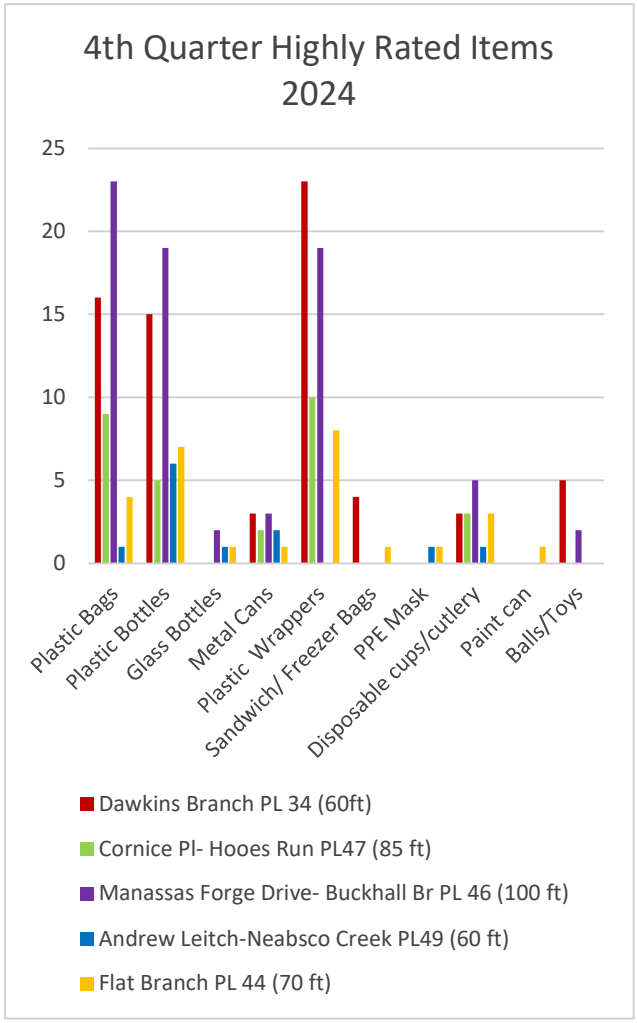
Figure 4. The top items on the list of Floatable Items collected during the 4th Quarter are plastic wrappers, Plastic bottles, Plastic bags, and food disposable debris.

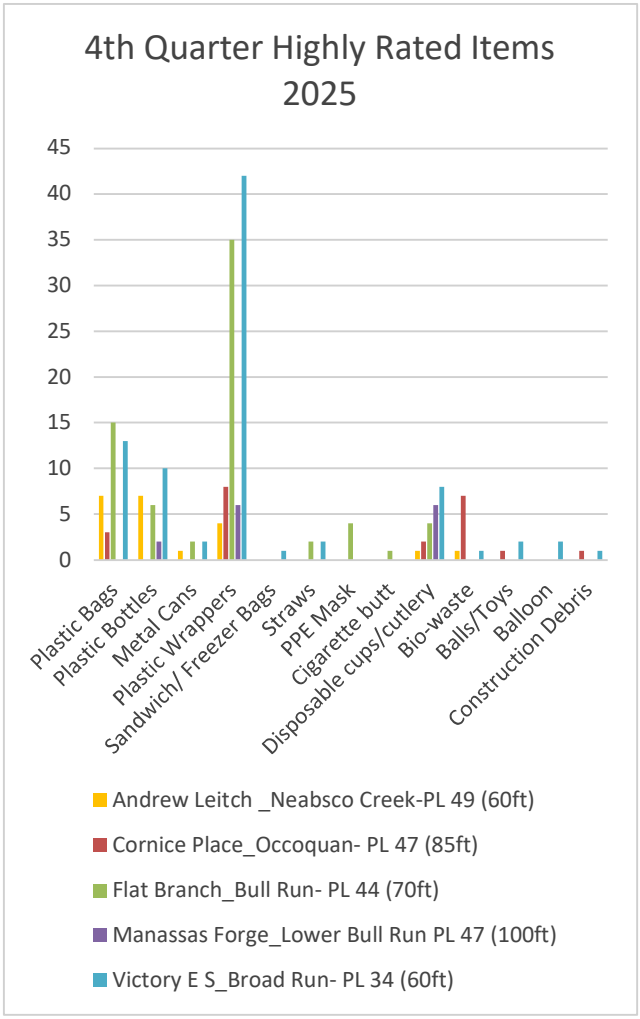


Comparing the 4th Quarter of 2024 and 2025 Fiscal Year.

Comparing 2024 data to 2025 data, plastic wrappers were the most common item registered at all the sites. Plastic bottles and bags were also significant, but the amount was reduced compared to the previous years.

Figure 4a. ***Comparing the 4th Quarter of 2024 and 2025 Fiscal Year***





General Analysis of Floatable Items Collected in 2025

PHASES

This report covers five sites that are monitored quarterly for plastic floatable items: Phase I (July 2024 to September 2024), Phase II (October 2024 to December 2024), Phase III (January 2025 to March 2025), and Phase IV (April 2025 to June 2025).

The data for 2025, unlike the previous years, presented plastic wrappers as significant floatable items that are dominant in local waterways in Prince William County. This contrasts with the 2024 data, where plastic

bags maintained the first position. While plastic bottles dominated in the third position in 2024, 2025 saw the introduction of disposable plastic food items, competing with plastic bottles for the third position.

In 2024, many toys and Personal Protective Equipment (PPE) were used during the COVID-19 pandemic. While toys were significant at some sites, PPE dropped significantly in 2025. Instead, Construction debris is surfacing, probably because of increased construction activities. Overall, the 2025 monitored items under the Prince William County Floatable Monitoring can be rated, as shown by the table below.

Items	***Rating (Top 10 items)***	***Comments/Field Observation***
Plastic Wrappers	*1st Position*	*Most dominant of all types. Snack wrappers are significant overall.*
Plastic bags	*2nd position*	*Very high, especially the T-shirt bags from different businesses*
Plastic Bottles	*3rd Position*	*Dominated by plastic water bottles, followed by beverage bottles.*
Disposable food items	*4th Position*	*Significantly high and branded*
Toys	*5th Position*	*A very significant observation*
Straws	*6th Position*	
Metal Cans	*7th Position*	*Significant; mostly beverage cans*
Sandwich/Freezer bags	*8th Position*	*Significant*
Personal Protective Equipment (PPE)	*9th Position*	*An observation, although, with a decrease in the COVID-19 Pandemic*
Construction Debris	*10th Position*	*Increasing Construction Activities*

Table 1. The trend of floatable items in Prince William County's Waterways.

Conclusion

This data shows that plastic wrappers, plastic bags, plastic bottles, and food disposables are the most collected items in PWC local waterways. Although their positions may change in the assessment table, they remain dominant. However, there has been a significant decrease in floating debris compared to the past years. This may result from increased awareness of the impact of pollution on water quality or increased volume flow of stormwater due to increasing impervious surfaces in PWC, which causes debris to be carried more easily directly into the Potomac River and the Chesapeake Bay. This, therefore, calls for more support in the efforts to help address the issue of littering and the adverse effects plastic has on humans, aquatic life, and the environment. This also calls for more awareness of reducing the volume of stormwater flow in local waterways with ecological retrofits, as presented by the conservation district's Virginia Conservation Assistance Program (VCAP).

Monitoring floatable plastic items helps present meaningful results to help address water quality and pollution challenges in Prince William County and the Potomac Watershed.

The overall number of floatable items collected from waterways during the 2025 Fiscal Year shows a decline compared to previous years. This general trend has also been noted in different cleanup locations under the Adopt-A-Stream/Pond Program. This shows Prince William County is making significant progress in promoting clean water awareness in the community and for future generations. This can be seen in the number of people and groups participating in the Adopt-A-Stream/Pond/ River program under the Prince William Soil and Water Conservation District.

More community engagement is needed to promote clean water awareness and help promote Prince William County's Green Community goals. This will help change societal behavior regarding littering. Efforts to tackle plastic pollution will also help reduce marine debris, promote clean water awareness, and uphold human health. Above all, these efforts will also promote and protect biodiversity in Chesapeake Bay and its watersheds.

Some recommendations:

- Schools and the community need more education on the harmful effects of plastic items on water quality in waterways. This will help create more awareness and prevent littering, a big problem in suburban communities like Prince William County. For example, the Broad Run monitoring site is very close to the Victory Elementary School, where items like pencils, toys, and other school items have been identified. This shows that the Prince William County School system needs to do more to help promote clean water and waterways through education and implementation
- Construction sites should be closely monitored with the current identification of construction materials.
- Fines should be enforced for littering, especially by cars and highway users. This will help change social behavior on littering.
- Stronger glows or alternatives should be used on the tinny signs on parking lots that say, "All goes to the Bay." Several signs were picked up during monitoring, as is the case at the Broad Run site.

Appendix S

Chesapeake Bay TMDL Reductions Summary

FY25 Chesapeake Bay Watershed TMDL Action Plan Implementation

Prince William County submitted the required Phase I Chesapeake Bay TMDL Action Plan (TMDL Action Plan) on December 16, 2016, which was subsequently approved on June 28, 2017. The County also submitted Phase II of the plan on January 10, 2025. The TMDL Action Plan documents how the County intends to meet the requirements of the Chesapeake Bay Special Condition included in the MS4 Permit.

In Section I.D.1, Chesapeake Bay Special Condition, the County is required to document the means and methods that will be utilized to meet the required reductions of specific Pollutants of Concern (POCs) allocated in the Special Condition of the Commonwealth of Virginia's Phase I and II Chesapeake Bay Total Maximum Daily Load (TMDL) Watershed Implementation Plans (WIPs). These reductions are based on the Level 2 (L2) scoping run of the Chesapeake Bay Watershed Model for existing developed lands (pervious and impervious regulated urban lands developed prior to July 1, 2009). Level 2 implementation equates to an average reduction of 9% of nitrogen loads and 16% of phosphorous loads from impervious regulated areas and 6% of nitrogen loads and 7.25% of phosphorous loads from pervious regulated acres beyond the 2009 progress run loadings.

As part of this effort, Virginia Department of Environmental Quality (VADEQ) has committed to a phased approach for MS4 permittees to implement necessary reductions. Permittees will have up to three, five-year permit cycles to achieve the required reductions. Prince William County's first permit cycle (December 17, 2014 – December 16, 2019) represents implementation of 5% of the L2 as specified in the 2010 Phase I WIP. The second permit cycle will require an additional 35% of total L2 reductions (40% cumulative), while the implementation of the remaining 60% of reductions (100% cumulative) will be required by 2028.

The total reductions achieved during the first permit cycle, as identified in the approved Action Plan, are listed in Table 1. The table also identifies the percentage of the L2 scoping run reductions that have been achieved after implementation of the Action Plan.

Table 1 – First Permit Cycle Achieved Reductions

Pollutant of Concern	1st Permit Cycle Load Reductions (lbs/yr)	Percentage of L2 Reduction Achieved After Implementation
Total Nitrogen (TN)	6,706.58	33.5%
Total Phosphorus (TP)	1,370.40	62.0%

Prince William County has a comprehensive watershed improvement program, which aims to improve water quality through the implementation of water quality improvement projects such as stormwater facility retrofits, stream restorations, and reforestation projects.

One project was implemented during the FY25 reporting period to meet the Chesapeake Bay TMDL requirements. Please refer to Table 2 for information on this project.

Table 2 – Projects Implemented in FY25 Reporting Period

Project Name	Reduction TN	Reduction TP	Project Type	Implementation FY
Powells Creek Phase 2	600	246	Stream	2025

Based on the reductions achieved through implementation of the water quality improvement projects identified in the approved TMDL Action Plan, Table 3 summarizes the cumulative progress toward meeting compliance targets. The permit requires that 5% of the L2 reductions be achieved during the first permit cycle, and that 40% be achieved by the end of the second permit cycle. As shown in the table below, this requirement has been exceeded, and additional reductions will be applied toward the next permit cycle required reductions.

Table 3 – Cumulative Progress Toward Meeting Compliance Targets

Pollutant of Concern	FY25 Reductions (lbs/yr)	Total Reductions to Date (lbs/yr)	Percent of L2 Reduction Achieved to Date
Total Nitrogen (TN)	599.27	10,447.45	52%
Total Phosphorus (TP)	246.14	3,030.11	137%

All projects that have been implemented to-date have been reported to the DEQ BMP Warehouse.

During the next reporting period, five projects are planned for implementation. Please refer to Table 4 for the planned pollutant reductions associated with these projects.

Table 4 - Planned Projects for FY26 Implementation

Project Name	Project Type	TN Reduction (lbs/yr)	TP Reductions (lbs/yr)
Chinn Park – SWM Facility #5749 Retrofit	Retrofit	88.16	11.07
Chinn Park Stream Restoration	Stream Restoration	264.62	68.82
SWM Facility #416 Retrofit	Retrofit	295.37	39.74
Middle Dewey's Phase 1	Stream Restoration	746.40	276.33
SWM Facility #132 Retrofit	Retrofit	25.01	0.82
	Total	**1,419.56**	**396.78**

The following table shows a comprehensive list of completed projects organized by implementation year. These projects have been successfully implemented and used to calculate the pollutant load reductions achieved to date.

Project Name	BMP Type	Date	TN	TP
SWM/BMP Facilities Historic	SWM/BMP	2009	4,231.83	393.69
SWM Facility #257	SWM Retrofit	2010	6.80	0.29
Innovation - Area 1D	Land Use Change	2011	1.58	0.08
Cow Branch Phase I	Stream Restoration	2011	77.38	70.16
Pond 51 - Hammill Mill Park SWMF	SWM Retrofit	2011	12.20	0.60
SWM Facility #154 - Dawson Ridge	SWM Retrofit	2011	11.99	0.61
SWM Facility #157 - Dawson Ridge	SWM Retrofit	2011	8.03	0.39
Ben Lomond Park Area A	Land Use Change	2012	1.07	0.06
Cow Branch Phase II	Stream Restoration	2012	51.44	46.64
Lower Cabin Run	Stream Restoration	2012	78.40	72.39
Ben Lomond Park Area B	Land Use Change	2013	27.28	1.45
Ben Lomond Park Area C	Land Use Change	2013	1.65	0.09
Northgate	Stream Restoration	2013	18.31	16.60
Deerfield Estates	Stream Restoration	2013	16.10	15.05
SWM Facility #363	SWM Retrofit	2013	58.35	2.75
SWM Facility #318	SWM Retrofit	2013	28.95	1.27
SWM Facility #494	SWM Retrofit	2013	97.00	13.72
Sudley Place Reforestation	Land Use Change	2014	22.70	1.20
SWM Facility #77	SWM Retrofit	2014	71.26	2.42
SWM Facility #505	SWM Retrofit	2014	28.14	1.36
SWM/BMP Facilities New Sources	SWM/BMP	2014	363.30	36.46
Ben Lomond Park Area D	Land Use Change	2015	0.86	0.05
Hope Hill Crossing	Land Use Change	2015	36.44	1.93
Cow Branch III	Stream Restoration	2015	45.88	41.60
Oak Street	Stream Restoration	2015	3.02	2.74
SWM Facility #99	SWM Retrofit	2015	32.31	3.74
SWM Facility #98	SWM Retrofit	2015	13.83	0.74
Garner Drive	Land Use Change	2016	2.86	0.15
Hunter Ridge Estates Area A	Land Use Change	2016	40.45	2.15
Hylbrook Park	Stream Restoration	2016	68.99	78.16
Leesylvania Living Shoreline 1	Stream Restoration	2016	55.31	5.25
Hunter Ridge Estates Area B	Land Use Change	2017	34.01	1.81
Bristoe Station Battlefield Phase 1	Land Use Change	2017	100.17	5.32
East Longview - Route 1 Restoration	Stream Restoration	2017	22.52	50.96
Dewey's Creek Reach 4	Stream Restoration	2017	21.20	19.22
Reach 5	Stream Restoration	2017	147.26	141.55
SWM Facility #28	SWM Retrofit	2017	61.65	5.13
Bristoe Station Battlefield Phase 2	Land Use Change	2018	32.22	1.71
Dewey's Creek Reach 1	Stream Restoration	2018	389.00	229.00
SWM Facility #147	SWM Retrofit	2018	64.01	6.14
SWM Facility #489	SWM Retrofit	2018	151.57	7.72
SWM Facility #109	SWM Retrofit	2018	160.29	11.97
Lake Drive Reforestation	Land Use Change	2019	7.16	0.38
Dewey's Creek Reach 2	Stream Restoration	2020	2,298.00	1,235.00
SWM Facility #424	SWM Retrofit	2020	217.71	31.22
Bristoe Station Battlefield Phase 3	Land Use Change	2021	73.03	3.88

SWM Facility #232	SWM Retrofit	2021	47.59	4.22
Powells Creek Phase 1	Stream Restoration	2022	444.00	205.00
SWM Facility #386	SWM Retrofit	2022	63.10	9.97
Powells Creek Phase 2	Stream Restoration	2025	599.27	246.14
		Totals	**10,447.47**	**3,030.13**

Appendix T

Local TMDL Action Plan Implementation

Benthic TMDL Action Plan

The Benthic TMDL Action Plan includes stream restoration projects, reforestations (LUC), and stormwater retrofit projects completed in the Bull Run Watershed. The following table summarizes the projects that have been completed as well as planned projects.

Project Name	Project Type	Status	TSS Reduction (lbs/yr)
Ben Lomond Park Area A	Reforestation	Completed	19.94
Ben Lomond Park Area C	Reforestation	Completed	30.58
Ben Lomond Park Area B	Reforestation	Completed	506.58
Sudley Place Reforestation	Reforestation	Completed	421.48
Ben Lomond Park Area D	Reforestation	Completed	15.96
Garner Drive	Reforestation	Completed	53.18
Lake Drive Reforestation	Reforestation	Completed	132.96
SWM Facility #99	Retrofit	Completed	3,364.40
Oak Street	Stream Restoration	Completed	1,806.18
SWM Facility #77	Retrofit	Completed	1,323.13
SWM Facility #386	Retrofit	Completed	8,314.92
		Total Completed	**15,989.30**
SWM Facility #416	Retrofit	Implementation	31,741
Mayhew Park Stream Restoration	Stream Restoration	Implementation	926,400
		Total Planned	**958,141**

The status of other implementation items from the Benthic TMDL Action Plan are summarized below:

Implementation Item	Description	Implementation Status
MS4 Program Plan	The County will continue to implement the MS4 Program Plan, including elements related to sediment, in accordance with the schedule provided for in the MS4 Program Plan.	The County continues to implement its MS4 Program Plan.
Chesapeake Bay TMDL Action Plan	The County will continue to leverage the projects selected to meet the Chesapeake Bay TMDL Action Plan to reduce sediment in the Bull Run watershed. The County will include whether a project will help meet Bull Run sediment load reductions in its project selection prioritization process.	The County continues to implement the Chesapeake Bay TMDL Action Plan. A summary of this can be found in Appendix S of the MS4 Annual Report.
County Owned or Operated Property	The County will consider potential retrofits of property assessed in Appendix A of the Benthic TMDL Action Plan for inclusion in lists of projects to meet the Chesapeake Bay TMDL. The County will address minor erosion issues identified during the assessment of properties as described in Appendix A.	Projects currently planned for implementation: • Water quality retrofit of SWM Facility #416 • Mayhew Park Stream Restoration
Redevelopment	The County will continue to enforce provisions that require redevelopment to reduce phosphorus from existing conditions (20% one acre and greater; 20% less than one acre). Reductions in phosphorus also result in reductions in sediment.	The county continues to implement and enforce Prince William County's Design and Construction Standards Manual (DCSM).
Enhanced Education, Outreach, and Training	The County will continue to implement enhanced education, outreach, and training for sediment in accordance with the MS4 permit and the MS4 Program Plan.	The County is implementing its enhanced education, outreach and training for sediment in accordance with the MS4 Program Plan.

Bacteria TMDL Action Plan

The status of implementation items from the Bacteria TMDL Action Plan are summarized below:

Source	Strategies (BMP's)	Implementation Status
Illicit Discharges to the MS4	The permit requires that discharges to the MS4 not authorized by the permit shall be effectively prohibited.	The County will continue to implement and enforce relevant parts of the Prince William County Code, including Fire Protection, Zoning, Building Development, and Stormwater Management.
Illicit Connections	The permit requires the County to continue implementing a program to minimize the exfiltration from the sanitary system to the MS4.	Prince William County will continue to work with PWW personnel to identify and mitigate sanitary sewer issues. PWW provides applicable reporting measures to the County.
Illicit Discharges to the MS4	The permit requires the County to locate and eliminate illicit discharges through periodic inspection programs, public outreach initiatives, and staff training.	The County implements a program to locate and eliminate illicit discharges. A summary of dry weather outfall inspections can be found in Appendix M of the MS4 Annual Report.
Illicit Discharges to the MS4	The permit requires the County to promote the reporting and identification of illicit discharges and enhance public education on pollutants of concern.	The County's Clean Water Program is a public outreach initiative with the goal of improving water quality within Prince William County through public outreach initiatives encouraging public awareness of water quality and environmental issues. The Clean Water Program Annual Report can be found in Appendix K of the MS4 Annual Report. The Public Outreach Summary can be found in Appendix X of the same report.

All Sources	The permit requires the County to increase public participation in local water quality improvement projects.	The County works with volunteer organizations to promote public involvement in water quality improvement projects as detailed in the Clean Water Program in Appendix 12 of the County's MS4 Program Plan. Through this program, Public Works provides funding to the Occoquan Watershed Monitoring Lab for water monitoring programs. The annual reports for the County's outreach partners can be found in Appendix K of the MS4 Annual Report.
Domestic Pets	The permit requires the County to promote and publicize the proper disposal of pet waste.	The County implements education on proper disposal of pet waste throughout the permit cycle through our partnership with Northern Virginia Regional Commission (NVRC) Clean Water Partners. A summary of The Clean Water Partner's campaigns can be found in Appendix K of the MS4 Annual Report.
Illicit Discharge to the MS4	The permit requires that the County, on a biennial basis, train all applicable staff in the identification and reporting of illicit discharges, good housekeeping practices, and spill prevention and response.	The County implements a training program in good housekeeping and pollution prevention practices, as well as illicit discharge recognition and reporting. A summary of County training program can be found in Appendix L of the MS4 Annual Report.

Dry Weather Urban Flows	The permit requires the County to inspect 25% of all outfalls discharging to the County's MS4 within the permit cycle.	The County currently implements a Dry Weather Monitoring program designed to detect the presence of illicit connections and unauthorized discharges. A summary of these activities can be found in Appendices G and M.
Illicit Discharge to the MS4	The permit requires the County to investigate areas that may be contributing excessive levels of pollutants to the MS4 during rain events through a Wet Weather Screening Program.	The County is implementing a Wet Weather Screening program as required in the permit. A summary of these activities can be found in Appendix N.
All Sources	The permit requires the County to develop an in-stream monitoring program.	The County will continue to monitor in-stream water quality at representative sites throughout the County. This monitoring includes testing for *E. coli*. A summary of these activities can be found in Appendix Q.

Septic Systems	The Prince William Health District regulates the requirements for the construction and maintenance of septic systems.	The Health District evaluates compliance with this section and with related state and County codes. When indicated by the facts, a violation of this may be charged. Prince William County continues to work with the Health District to mitigate septic discharges.

PCB TMDL Action Plan

The status of implementation items from the PCB TMDL Action Plan are summarized below:

Implementation Item	Description	Implementation Status
Enhanced training on good housekeeping and pollution prevention practices	Training materials were revised in PY3 of the last permit cycle to include information relevant to potential PCB sources and steps to take if a source of PCBs is discovered at a County-owned property. Implementation of this training began in PY4 of the last permit cycle as part of the ongoing biennial training program.	The online PWC University training materials were revised in FY22 to include information related to sources of PCB discharges. The County continues to implement the biennial training.
Enhanced training on recognition and reporting of illicit discharges by field personnel	The County's Illicit Discharge Identification and Elimination Program Manual was updated in PY3 of the last permit cycle to include information on potential sources of PCBs, safety precautions and notifications.	The Illicit Discharge Identification and Elimination (IDDE) Program Manual was revised in FY22 to include information related to sources of PCB discharges. The County has continued implementing the requirements of the updated IDDE Manual.

Appendix U

Roles and Responsibilities

Prince William County FY24 Annual Report
Roles and Responsibilities (I.A.2)

Agency	Permit Section	Responsibilities
Department of Facilities & Fleet Management (DFFM)	I.B.2.c	Roadways
	I.B.2.d	Pesticide, Herbicide, and Fertilizer Application
	I.B.2.i	County Facilities
	I.B.2.k.2	Training: good housekeeping during road, street and parking lot maintenance
	I.B.2.k.3	Training: good housekeeping at maintenance and public works facilities
	I.B.2.k.4	Training: tracking of pesticides, herbicides and fertilizer certifications
Department of Public Works (DPW), Solid Waste Division (SWD)	I.B.2.j.1.d	Public Education: used oil and household hazardous waste
Department of Fire and Rescue (DFR)	I.B.2.f	Spill Prevention and Response
	I.B.2.k.9	Training: spill response for emergency response employees
Department of Parks, Recreation & Toursim (DPRT)	I.B.2.d	Pesticide, Herbicide, and Fertilizer Application
	I.B.2.i	County Facilities
	I.B.2.j.1.c	Public Education: golf courses
	I.B.2.k.2	Training: good housekeeping during road, street and parking lot maintenance
	I.B.2.k.5	Training: tracking of pesticides, herbicides and fertilizer certifications
	I.B.2.k.8	Training: good housekeeping at county recreation facilities
Department of Public Works (DPW), Environmental Management Division (EMD) & Construction and Operations Division (COD)	I.A.	MS4 Program Coordination
	I.B.1.	Planning
	I.B.2.a	Construction Site Runoff and Post Construction Runoff from Areas of New Development and Development on Prior Developed Lands
	I.B.2.b	Retrofitting on Prior Developed Lands
	I.B.2.e	Illicit Discharges and Improper Disposal
	I.B.2.g	Industrial & High Risk Runoff
	I.B.2.h	Stormwater Infrastructure Management
	I.B.2.j	Public Education/Participation

Prince William County FY24 Annual Report
Roles and Responsibilities (I.A.2)

Agency	Permit Section	Responsibilities
	I.B.2.j.1.a	Public Education: illicit discharges
Department of Public Works (DPW), Environmental Management Division (EMD) & Construction and Operations Division (COD)	I.B.2.j.1.b	Public Education: individual and group involvement in local water quality improvement initiatives
	I.B.2.j.1.e	Public Education: household yard waste and pet waste
	I.B.2.j.1.f	Public Education: litter prevention program
	I.B.2.j.1.g	Public Education: residential car washing
	I.B.2.j.1.h	Public Education: pesticides, herbicides, and fertilizers
	I.B.2.j.1.i	Public Education: voluntary stormwater management techniques
	I.B.2.j.1.j	Public Education: commercial, industrial, and institutional entities
	I.B.2.k.1	Training: illicit discharges
	I.B.2.k.6	Training and certifications per Virginia Erosion and Sediment Control Law
	I.B.2.k.7	Training and certifications per Virginia Stormwater Management Act
	I.B.2.l	Water Quality Screening Programs
	I.B.2.m	Infrastructure Coordination
	I.C.1.	Biological Stream Monitoring
	I.C.2.	In-Stream Monitoring
	I.C.3.	Floatables Monitoring
	I.D.1.	Chesapeake Bay Special Condition
	I.D.2.	TMDL Action Plans other than the Chesapeake Bay TMDL
Department of Finance (DF), Risk Management Division (RMD)	I.B.2.i	County Facilities
	I.B.2.k.10	Training: coordination of training documentation
	I.B.2.k.2	Training: good housekeeping during road, street and parking lot maintenance

Agency	Permit Section	Responsibilities
	I.B.2.k.3	Training: good housekeeping at maintenance and public works facilities

Appendix V

Annual Program Budget



PRINCE WILLIAM COUNTY

FY2025 BUDGET

Prince William County

BOARD OF COUNTY SUPERVISORS

DESHUNDRA JEFFERSON – *Chair-At-Large*

KENNY A. BODDYE – *Occoquan District*
Vice Chair

VICTOR S. ANGRY – *Neabsco District*

ANDREA O. BAILEY – *Potomac District*

MARGARET A. FRANKLIN – *Woodbridge District*

TOM GORDY – *Brentsville District*

YESLI I. VEGA – *Coles District*

ROBERT B. WEIR – *Gainesville District*

Christopher J. Shorter
County Executive

FY2025 BUDGET

Information about the FY2025 Budget is available online at
https://www.pwcva.gov/budget.

In addition, for information about the budget you may contact the Office of Management & Budget at
(703) 792-6720 from 8:00 a.m. to 5:00 p.m. Monday - Friday or visit the office at
James J. McCoart Building, 1 County Complex Court, Suite 225, Prince William, Virginia 22192.

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DEPUTY COUNTY EXECUTIVE

Daniel Alexander

Quintin Haynes

Wade Hugh

Elijah Johnson

BUDGET DIRECTOR

David Sinclair

ASSISTANT FISCAL SERVICES DIRECTOR

Michael Hurlocker

MANAGEMENT & BUDGET STAFF

Matthew Corneliussen

Nicole Dickens

Kimberly Downen

Valerie Grayson

Jalen Holeman

Nasir Khogiani

Sherman Manley

Shafali Nagpal

Catherine Phillips

Carletta Sims

Jeffery Stamp

Brianna Swann

Kaye Wallace-Sharp

GOVERNMENT FINANCE OFFICERS ASSOCIATION

Distinguished Budget Presentation Award

PRESENTED TO

Prince William County
Virginia

For the Fiscal Year Beginning

July 01, 2023



Executive Director

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to Prince William County Virginia for its annual budget for the fiscal year beginning July 1, 2023. To receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as a financial plan, as an operations guide, and as a communications device.

This award is valid for a period of one year only. We believe our current budget continues to conform to program requirements, and we are submitting it to GFOA to determine its eligibility for another award.

Public Works

Mission Statement

The goal of the Prince William County Department of Public Works is to improve the wellbeing of our community by creating and sustaining the best environment in which to live, work, and play. We protect and improve our natural resources, educate, monitor, and enforce codes and regulations for compliance, and build and maintain environmental infrastructure in our community.



Mobility, Economic Growth & Resiliency

Expenditure Budget: $110,469,233

Expenditure Budget: $63,384,522

57.4% of Mobility, Economic Growth & Resiliency

Programs:

- Director's Office: $1,467,340
- Stormwater Infrastructure Management: $1,695,677
- Site Development: $4,952,449
- Watershed Improvement: $7,608,551
- Sign Shop: $322,789
- Small Project Construction & Drainage Maintenance: $6,970,076
- Mosquito & Forest Pest Management: $2,227,304
- Solid Waste: $33,539,330
- Neighborhood Services: $4,215,718
- Service Districts: $385,287

Mandates

Public Works provides mandated services for solid waste management and recycling and maintains existing street name signs. Public Works is liaison to the state-mandated Chesapeake Bay Preservation Area Review and Wetlands Boards. The Board of County Supervisors has enacted additional local mandates for which Public Works has responsibility.

Federal Code: 33 U. S. C. Section 1251 (Clean Water Act)

State Code: 9VAC20-81 (Solid Waste Management Regulations), 9VAC20 (Virginia Waste Management Board), 9VAC5-80 (Air Permits for Stationary sources), 9VAC25-31 (VPDES Permit Regulation), 33.2-328 (Street Name Signs), 28.2-1303 (Local Wetlands Board), 62.1-44.15:74 (Chesapeake Bay Preservation Areas), Chapter 870 (Virginia Stormwater Management Regulation), Chapter 3.1 (State Water Control Law)

County Code: Chapter 2 Article VII (Wetlands Areas), Chapter 3 (Amusements), Chapter 5 Article VI (Building Maintenance Code), Chapter 12 (Massage Establishments), Chapter 13-320.1 (Designation of watercraft, boat trailer, motor home, and camping trailer "restricted parking" zones), Chapter 14 (Noise), Chapter 16-56 (Graffiti Prevention and Removal), Chapter 22 (Refuse), Chapter 23 Article II (Public Sanitary Sewers), Chapter 23.2 (Stormwater Management), Chapter 25 Article II (Subdivisions - Minimum Requirements), Chapter 29 Article II (Weeds & Grass), Chapter 32 (Zoning), Chapter 33 (Expedited Land Development Plan Review)

Expenditure and Revenue Summary

Expenditure by Program	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted	% Change Budget FY24/ Budget FY25
Director's Office	$1,083,575	$1,390,619	$1,541,019	$1,092,625	$1,467,340	34.29%
Historic Preservation	$0	$1,835	$0	$0	$0	-
Stormwater Infrastructure Management	$3,796,641	$4,213,178	$4,128,495	$1,472,061	$1,695,677	15.19%
Site Development	$3,877,265	$3,661,793	$4,406,177	$4,774,759	$4,952,449	3.72%
Watershed Improvement	$4,824,029	$4,781,380	$5,174,668	$6,442,602	$7,608,551	18.10%
Fleet Management	$170,417	$6,807	$0	$0	$0	-
Sign Shop	$304,018	$262,469	$243,347	$355,141	$322,789	(9.11%)
Small Project Construction & Drainage Maintenance	$3,121,571	$2,411,914	$3,534,940	$6,118,774	$6,970,076	13.91%
Mosquito & Forest Pest Mgmt	$1,503,837	$1,464,932	$1,549,638	$2,045,540	$2,227,304	8.89%
Solid Waste	$25,994,524	$28,154,779	$25,934,027	$36,939,216	$33,539,330	(9.20%)
Buildings & Grounds	($44,730)	$7,261	$0	$0	$0	-
Neighborhood Services	$3,887,213	$3,587,271	$3,801,444	$4,019,454	$4,215,718	4.88%
Service Districts	$379,414	$256,572	$432,843	$385,287	$385,287	0.00%
Total Expenditures	**$48,897,773**	**$50,200,809**	**$50,746,599**	**$63,645,459**	**$63,384,522**	**(0.41%)**

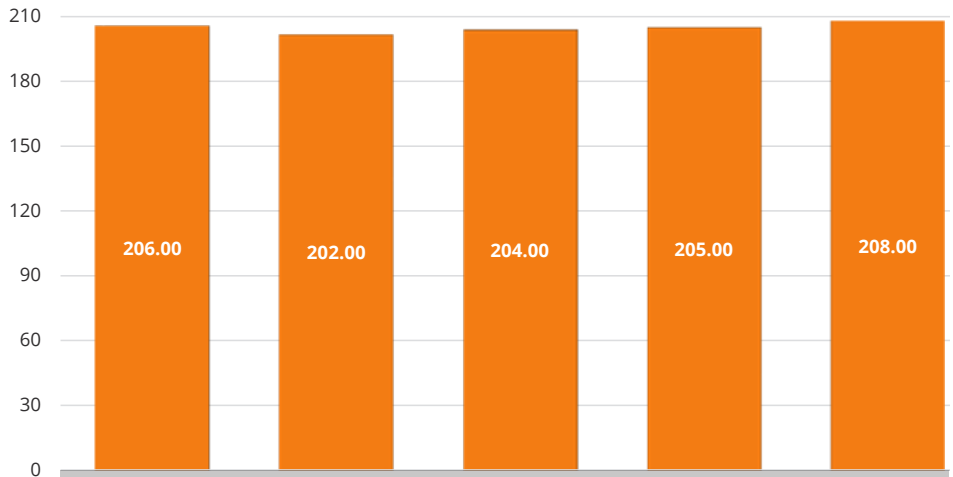
Expenditure by Classification

Salaries & Benefits	$17,439,217	$16,567,277	$17,302,128	$22,044,702	$23,589,234	7.01%
Contractual Services	$6,995,363	$7,425,695	$8,950,125	$8,538,005	$11,161,705	30.73%
Internal Services	$2,877,104	$3,382,355	$4,001,434	$3,607,259	$3,639,265	0.89%
Purchase of Goods & Services	$3,889,936	$4,140,844	$3,751,661	$4,821,440	$4,736,796	(1.76%)
Capital Outlay	$138,953	$258,156	$742,479	$1,794,861	$2,786,821	55.27%
Leases & Rentals	$191,296	$126,006	$122,086	$184,897	$106,977	(42.14%)
Reserves & Contingencies	($130,574)	($174,917)	($219,462)	($178,606)	($218,606)	22.40%
Amortization	$2,602,689	$4,961,586	$6,450,589	$2,085,793	$0	(100.00%)
Depreciation Expense	$1,520,050	$1,229,030	$1,283,184	$2,158,713	$2,158,713	0.00%
Transfers Out	$13,373,739	$12,284,776	$8,362,375	$18,588,395	$15,423,616	(17.03%)
Total Expenditures	**$48,897,773**	**$50,200,809**	**$50,746,599**	**$63,645,459**	**$63,384,522**	**(0.41%)**

Funding Sources

Revenue from Federal Government	$9,707	$23,171	$24,713	$0	$0	-
Permits & Fees	$2,932,953	$3,047,869	$3,491,819	$3,673,092	$4,216,895	14.81%
Fines & Forfeitures	$2,146	$11,806	$14,650	$0	$0	-
Use of Money & Property	$747,705	$1,072,694	$749,291	$1,526,000	$1,526,000	0.00%
Miscellaneous Revenue	$219,909	$457,541	$231,695	$170,000	$570,000	235.29%
Non-Revenue Receipts	134,603	159,697	($23,102)	$0	$0	-
General Property Taxes	$2,041,726	$2,469,387	$2,397,549	$2,010,287	$2,460,287	22.38%
Charges for Services	$32,619,568	$31,371,726	$35,615,191	$40,305,725	$47,267,290	17.27%
Revenue from Commonwealth	$66,668	$68,050	$108,653	$140,000	$140,000	0.00%
Transfers In	$3,060,020	$2,220,383	$2,742,689	$4,956,903	$6,884,661	38.89%
Total Designated Funding Sources	**$41,835,004**	**$40,902,325**	**$45,353,146**	**$52,782,007**	**$63,065,133**	**19.48%**
Use/(Contribution) of Fund Balance	**$2,757,318**	**$4,899,306**	**$370,037**	**$5,143,449**	**($6,068,266)**	**(217.98%)**
Net General Tax Support	**$4,305,452**	**$4,399,179**	**$5,023,415**	**$5,720,003**	**$6,387,655**	**11.67%**
Net General Tax Support	**8.81%**	**8.76%**	**9.90%**	**8.99%**	**10.08%**	

Staff History by Program



	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Director's Office	6.37	3.27	5.15	6.00	8.00
Stormwater Infrastructure Management	23.58	24.18	25.01	6.40	5.65
Site Development	28.74	27.95	29.08	29.21	29.06
Watershed Improvement	10.98	11.27	10.30	10.81	11.29
Sign Shop	4.06	4.06	4.12	4.12	3.47
Small Project Construction & Drainage Maintenance	16.42	16.42	14.23	32.78	33.37
Mosquito & Forest Pest Management	14.02	14.02	13.73	13.68	13.16
Solid Waste	65.72	65.72	67.38	77.00	79.00
Neighborhood Services	36.11	35.11	35.00	25.00	25.00
Full-Time Equivalent (FTE) Total	206.00	202.00	204.00	205.00	208.00

Future Outlook

Talent Development – The growing demand from the community for Public Works services and current business needs require a skilled, educated, motivated, and often technical and scientific workforce. The demand to compete with the private sector and market trends for qualified talent will continue to increase. Public Works' targeted focus is centered on recruiting, retaining, training, and motivating members to the Department of Public Works who will carry the work forward for years to come. Feedback from current employee surveys has guided efforts to increase diversity, equity, and inclusion opportunities across all divisions, starting with the proper education of senior leadership. Recruitment efforts have taught that additional focus needs to be placed on talent development through initiatives such as high school and collegiate level apprenticeships and auto-progression programs. Regular compensation reviews for these skilled positions and continuous professional development opportunities should be considered to support ongoing successful recruitment and retention of top talent.

Community Resiliency – Maintaining and improving public and community infrastructure and programs continues to be a major challenge for the future. A new Municipal Separate Stormwater Sewer Systems MS4 Permit will be issued in 2024. The MS4 Permit is for controlling the quality of stormwater discharges, reducing stormwater pollutant loads, and cleaning up local streams, rivers, and the Chesapeake Bay. The new permit will require additional resources to meet new requirements for accelerated reduction of targeted pollutants. In addition, the amended Virginia Chesapeake Bay Preservation Area Regulations will increase development requirements for preserving mature trees and protecting natural streams. A new future ordinance will need to be adopted by the County to meet these requirements.

Climate adaptation and increased flood resiliency is needed to prepare for future impacts due to climate change. Predicted increases in rainfall intensity will increase flooding potential in the community. Many of the areas in high-risk flood areas are in lower-income and minority communities. Also, to meet future climate change goals, reducing the use of fossil fuels, and transitioning to alternative clean fuels for heavy equipment and trucks will become a priority.

General Overview

A. Increase Indirect Cost Transfer to the General Fund – Indirect costs are expenditures charged by one part of the County government for services rendered by another part of the County government, for example, the cost of office space, utilities, and other basic agency support.

- The indirect cost transfer amount reimbursing the general fund for Solid Waste increases by $232,353 from $1,261,178 in FY24 to $1,493,531 in FY25.
- The indirect cost transfer amount reimbursing the general fund for Mosquito & Forest Pest Management increases by $21,988 from $339,934 in FY24 to $361,922 in FY25.
- The indirect cost transfer amount reimbursing the general fund for Stormwater Infrastructure Management increases by $8,872 from $1,216,924 in FY24 to $1,225,796 in FY25.

B. Adjustments to Land Fee Schedules – The FY2025 Budget includes a 5.0% across-the-board fee increase to the Land Development fee schedule. Land Development revenue supports expenditures in each of the four land development agencies: Development Services, Planning, Public Works, and Transportation. Of the total $614,408 increase, the net revenue budget increase to Public Works is $315,968. This addition adjusts the Land and Building Development fee schedules to align development fees with activity costs and current revenue projections.

C. Base Budget Revenue Adjustments – The FY2025 Budget includes the following base budget revenue adjustments:

- **Solid Waste Landfill Tipping Fees** – The FY2025 Budget includes a $5.7 million increase to the Solid Waste landfill tipping fees revenue budget to accurately reflect a full fiscal year of revenue. A landfill tipping fee for commercial refuse changed from $0 to $40 per ton beginning January 1, 2024. This will generate an estimated $5.7 million of revenue during the second half of FY24. The full year estimate of landfill tipping fee revenue in FY25 is $11.4 million which is a $5.7 million increase over the half-year estimate in FY24. There is no impact to the general fund. The FY2025 Budget does not include any further increases to the Solid Waste or landfill tipping fees.
- **Solid Waste Composting Tipping Fees** – The FY2025 Budget includes a $450,000 increase to the Solid Waste composting revenue budget to accurately reflect historical revenue trends with no change to the solid waste fees. The compost tipping fee revenues increased starting in July 2022 because the amount of material coming into the Prince William County (PWC) compost facility more than doubled when the only other major composting facility in Northern Virginia closed. PWC charges a tipping fee for material brought to the compost facility from other jurisdictions, which is roughly 75% of all incoming tons. There is no impact to the general fund.
- **Mosquito & Forest Pest Management** – Increase the Mosquito & Forest Pest revenue budget by $450,000 to accurately reflect historical revenue trends with no change to the Mosquito & Forest Pest levy.

D. Removal of One-Time Costs in Solid Waste –

- A total of $6,500,000 in expenditures has been removed from the Public Works Solid Waste Program for FY24 one-time costs associated with the Phase III Part B cell construction and liner installation capital project in the FY2024-2029 Capital Improvement Program (CIP).
- A total of $890,000 in expenditures has been removed from the Public Works Solid Waste Program for FY24 one-time costs associated with the Phase II Sequence 5 Landfill Cap design, bidding, and construction of the capital project in the FY2024-2029 CIP.
- A total of $770,000 in expenditures has been removed from the Public Works Solid Waste Program for FY24 one-time costs associated with the replacement of equipment and vehicles. In FY24, Solid Waste replaced a 2003 CAT D6 Dozer ($500,000), and a 2016 Kenworth roll-off truck ($270,000).
- A total of $750,000 in expenditures has been removed from the Solid Waste Program for FY24 one-time costs associated with a transfer to the capital improvement project related to the Landfill Phase IV Design & Permitting.

E. Removal of One-Time Costs in Watershed Improvement – A total of $500,000 in expenditures has been removed from the Watershed Improvement Program for FY24 one-time costs associated with a transfer to the CIP. This one-time transfer was the result of inflation and the rising cost of time and materials.

F. Removal of One-Time Costs in Small Project Construction & Drainage Maintenance – A total of $250,000 in expenditures has been removed from the Small Project Construction & Drainage Maintenance Program for FY24 one-time costs associated with the replacement and purchase of a tandem dump truck.

G. Removal of One-Time Costs in Stormwater Infrastructure Management – A total of $150,000 in expenditures has been removed from the Stormwater Infrastructure Management Program for FY24 one-time costs associated with the stormwater infrastructure budget to perform a risk assessment of the existing stormwater system.

H. Transfer to Closure and Post-Closure Reserve Accounts in Solid Waste – Increase the transfer from the Solid Waste operating account to the Solid Waste Closure account by $2,009,762 from $3,334,511 to $5,344,273. Decrease the transfer from the Solid Waste operating account to the Solid Waste Post Closure account by $400,256 from $1,482,392 to $1,082,136. This results in a $1,609,506 net transfer increase from the Solid Waste operating account. These amounts are updated annually as required by the Virginia Department of Environmental Quality (DEQ). The County's consultant follows DEQ methodology in deriving these calculations for the future needs in the Closure and Post-Closure accounts, and contributions to these sinking funds (closure and post-closure) are made to ensure sufficient funding is available when closure and post-closure activities must be conducted in accordance with mandated environmental regulations.

I. Position Shift and Reclassification of Public Works (Small Project Construction & Drainage Maintenance) Maintenance & Operations Worker to Planning (Current Planning) Development Services Technician – During FY24, 1.00 FTE was shifted from the Public Works Small Project Construction & Drainage Maintenance division to Planning's Current Planning division. The total salary & benefits cost for the Maintenance & Operations Worker in FY24 was $65,580. The vacant FTE was reclassified from a Maintenance & Operations Worker to a Development Services Technician. This transfer occurred to address the current case workload in Planning.

J. Position Shifts Within Public Works –

- **Position Shift from Solid Waste to Director's Office** – During FY24, 1.00 FTE was shifted out of the Solid Waste division and into the Director's Office and was reclassified from a Maintenance and Operations Supervisor position to a Senior Communications Analyst. The Senior Communications Analyst communicates with the public to meet environmental regulatory requirements and provides the needed additional and improved communication and overall external and internal outreach to over 200 Department employees. Funding of $131,276, equal to the position's total salary and benefits, was transferred from the solid waste fund to the general fund. There was no general fund impact.
- **Position Shift from Small Project Construction & Drainage Maintenance to Director's Office** – During FY24, 1.00 FTE, a vacant Senior Engineering Manager in Small Project Construction & Drainage Maintenance, was reclassified to a Senior Business Services Administrator and shifted to the Director's Office. The position was needed to manage the business processes of the Department, including the overall functions of Human Resources (including employee recruitment and retention), Strategic Planning, budget and fiscal oversight, and outreach and communication. The position will also manage the equity and inclusion programs in the Department. Funding of $169,603, equal to the position's total salary and benefits, was transferred from the construction crew fund and the stormwater management fund to the general fund. There was no general fund impact.
- **Position Shift from Solid Waste to Small Project Construction & Drainage Maintenance** – During FY24, 1.00 FTE was shifted out of Solid Waste and into the Small Project Construction & Drainage Maintenance division. This shift was to fill the position that was transferred to the Planning Department.

Budget Initiatives

A. Budget Initiatives

1. Landfill Liner Phase 3 Cell B Capital Project – Solid Waste

Expenditure	$1,320,000
Use of Fund Balance	$1,320,000
General Fund Impact	$0
FTE Positions	0.00

a. Description – This initiative funds the cost escalation for the Phase 3 Part B cell construction and liner installation capital project in the FY2025-2030 CIP. The original estimated cost of $6,500,000 was included in the FY2024-2029 CIP. The construction of the landfill liner is mandated by DEQ, and installation of mandated landfill liners and associated environmental systems is part of the required disposal cell construction at the PWC Landfill. Landfill liners and associated environmental systems protect public health and the environment by reducing impacts to air, soil, and groundwater. The life of Phase 3 (a future Part C liner will be constructed in FY26/27) is estimated to last until 2030. The Solid Waste Enterprise Fund balance funds this one-time expenditure. There is no general fund impact.

b. Service Level Impacts – The Part B liner will add an estimated 1.66 million cubic yards of disposal capacity with a lifespan of 2.3 years.

2. Landfill Phase 4 Part B Permitting & Wetlands Permitting – Solid Waste

Expenditure	$1,000,000
Use of Fund Balance	$1,000,000
General Fund Impact	$0
FTE Positions	0.00

a. Description – This initiative provides one-time funding for the Phase 4 Part B Permitting & Wetlands Permitting. Virginia regulations require the County to obtain solid waste, wetlands, and other permits and approvals for additional landfill disposal space (Phase 4). This additional space must be planned, designed, and permitted prior to construction and in order to maintain continuity of landfill operations. The Solid Waste Enterprise Fund balance supports this one-time expenditure. There is no general fund impact.

b. Service Level Impacts –

- **Period of time landfill can be used for disposal (landfill life)**
  FY25 w/o Addition | Approximately 7 years
  FY25 w/ Addition | Estimated additional 35 or more years depending on permitted design

3. Replace Solid Waste Heavy Equipment and Vehicle – Solid Waste

Expenditure	$1,034,000
Use of Fund Balance	$1,034,000
General Fund Impact	$0
FTE Positions	0.00

a. Description – This initiative provides one-time funding for the replacement of Solid Waste heavy equipment and vehicles. The Solid Waste Enterprise fund balance supports these one-time expenditures. There is no general fund impact. The equipment includes:

- $620,000 to replace a 2019 CAT 973 Loader (SW4543). The loader is near the end-of-service life and is incurring excessive repair costs. It is used to push and place waste and place cover soil or other alternative daily cover at the working face. It is also used to support landfill projects around the facility.
- $265,000 to replace a 2015 Kenworth roll-off truck (SW3923). The truck has reached the end of life with increasing excessive repair costs. It is used throughout the day to transport roll-off containers from the collection area at the landfill and the Compost Facility to the working face of the landfill. Solid Waste is still experiencing significantly longer lead times for heavy equipment and truck orders. Deliveries take one year or longer to reach the purchaser.
- $85,000 to replace a 2012 Chevy 3500 (SW3435). The truck is near the end-of-service life. It is used by the Assistant Superintendent to transport tools and other equipment needed to help support the operation of the facility at the landfill and the Compost Facility.
- $64,000 to purchase five 50 yard open-top roll-off containers. These new containers will replace five containers that are at end-of-service life. They are used at the landfill resident pad/drop-off area to collect waste that is transported to the working face of the landfill.

b. Service Level Impacts – Existing service levels are maintained.

4. Solid Waste Contract Costs – Organics Processing and Household Hazardous Waste (HHW) – Solid Waste

Expenditure	$950,000
Revenue	$950,000
General Fund Impact	$0
FTE Positions	0.00

a. Description – This initiative funds the increase in contract costs for organics processing ($600,000) and the contract increase for HHW ($350,000). Organics processing and HHW dropped off by customers at the County Landfill and Compost Facility are processed and managed by vendors under contract to the County. The County must continue to maintain diversion programs in order to meet regulatory requirements and preserve landfill space. These increases are a result of significant increases in the amount of material received and an automatic annual inflation escalator. The Solid Waste Enterprise Fund balance funds this ongoing expenditure. There is no general fund impact.

b. Service Level Impacts – These diversion programs support the 2021-2024 Strategic Plan Sustainable Growth goal objective SG-5 by increasing recycling. HHW costs increased due to a new contract award in FY23, which increased the service price substantially.

- **Tons of organics material received and processed by the contractor**
  FY25 w/o Addition | 45,000 tons
  FY25 w/ Addition | 60,000 tons

- **HHW received and processed**
  FY25 w/o Addition | 1 day per week service
  FY25 w/ Addition | 2 days per week service

5. Litter Control Crew – Solid Waste

Expenditure	$417,632
Revenue	$0
General Fund Impact	$417,632
FTE Positions	4.00

a. Description – This initiative funds one additional Litter Control Crew including 1.00 Maintenance and Operations Specialist and 3.00 Maintenance and Operations Workers. The total salary and benefits is $311,837. Other costs include internal service costs of $29,315, employee related equipment and supplies of $6,480, and a one-time $70,000 expense for the purchase of a large work truck. This additional litter crew will provide more frequent patrols of litter hot spots and improve efforts for maintaining and improving roadway aesthetics. This litter crew will be funded by the general fund.

b. Service Level Impacts –

- **Increase in lane miles cleaned**
  FY25 w/o Addition | 400 miles
  FY25 w/ Addition | 700 miles

6. Household Hazardous Waste Special Collection Events – Solid Waste

Expenditure	$460,000
Revenue	$400,000
General Fund Impact	$0
FTE Positions	0.00

a. Description – This initiative funds Household Hazardous Waste (HHW) Special Collection events to occur once a month, servicing the residents on the County's western end. The HHW dropped off at the event by residents will be processed and managed by a vendor under contract to the County. In addition to providing HHW management services and disposal to vendor owned and operated facilities, the vendor offers a broad range of environmental services including: waste transportation and disposal, laboratory chemical packing, field services, 24-hour environmental emergency response, industrial services, and on-site services. Beginning in FY25, guaranteed energy royalty payments will increase, resulting from a renewable landfill natural gas (RNG) facility coming online. Once the RNG facility is operational, the payment structure under the Gas Use Agreement calls for quarterly payments to the County based on a percentage of RNG sales to third parties. Depending on prices for RNG at the time of sale, the County's revenue share is estimated to be between $700,000 and $1.5 million annually with the minimum payment to the County not less than $400,000 annually (BOCS Resolution 24-232). This initiative is funded by these additional royalty payments. There is no general fund impact.

b. Service Level Impacts –

- **HHW Special Collection Event**
  FY25 w/o Addition | 0 events
  FY25 w/ Addition | 1 event per month / 12 per fiscal year

7. New Recycling Processing Contract Costs – Solid Waste

Expenditure	$190,000
Revenue	$190,000
General Fund Impact	$0
FTE Positions	0.00

a. Description – This initiative funds the increase in new contract costs for organics processing. The recycling processing is now done by a third party vendor. Processing of recyclable materials by a third party incurs a per ton cost. The recycling processing facility is no longer accepting the County's recyclables at no charge. Costs for recycling processing in the region range from about $100 to $120 per ton. The estimated amount of recyclable materials collected at the County's facilities that must be processed in FY25 is approximately 1,600 tons. Recyclable materials dropped off by customers at the County Landfill, Compost Facility, and the drop-off centers must be transported to a specialized facility for processing and marketing. The Solid Waste Enterprise Fund balance funds this ongoing expenditure. There is no general fund impact.

b. Service Level Impacts – The County must continue to maintain diversion programs in order to meet regulatory requirements and preserve landfill space. These diversion programs support the 2021-2024 Strategic Plan Sustainable Growth goal objective SG-5 by increasing recycling.

8. Solid Waste Facility Condition Assessment and Phase 4 Facility Master Plan – Solid Waste

Expenditure	$150,000
Use of Fund Balance	$150,000
General Fund Impact	$0
FTE Positions	0.00

a. Description – This initiative funds the assessment of existing buildings, scales, and other infrastructures at the solid waste facilities that have exceeded or are near the end of their useful lives. An engineering assessment is required to determine the appropriate schedule and costs for replacement, repair, and new construction. The County must construct additional landfill space and adequate supporting infrastructure to meet current and future demand. Phase 3 is nearing completion. Comprehensive evaluation and planning is required for future infrastructure needs to support landfill Phase 4 most efficiently and effectively. The Solid Waste Enterprise Fund balance funds this one-time expenditure. There is no general fund impact.

b. Service Level Impacts – The facility condition assessment will guide future infrastructure needs at the landfill.

9. Stormwater Management Fee Increase and Investment in Watershed Improvements – Watershed Improvement

Expenditure	$1,200,000
Revenue	$1,039,400
General Fund Impact	$0
FTE Positions	0.00

a. Description – This initiative increases the Stormwater Management fee 10% generating $1,039,400 in additional revenue and addressing Municipal Separate Storm Sewer System (MS4) Permit requirements for permit cycle deadlines in 2028. The deadline to comply with required reductions in nitrogen, phosphorous, and sediments has accelerated eighteen months from December 30, 2029 to June 30, 2028. This additional revenue will fund the majority of the $1,200,000 FY25 County's CIP watershed investment increase. Of the $1,200,000 increase in transfer to CIP, $933,440 is a one-time expense in FY25. The FY25 expenditure portion above the revenue increase, $160,600, will rely upon Stormwater Management fee fund balance.

This initiative transfers funding to the County's CIP for the FY25 investment in watershed improvements. County watershed capital projects include stream restorations, best management practices, Stormwater Management facility retrofits, culvert modifications, channel improvements, and drainage improvements to reduce flooding and erosion problems and/or improve water quality within countywide watersheds. Design and construction for watershed improvement projects occur on a phased basis as specific projects are identified in watershed studies, and through the inspection process or based on complaints received. Planned and ongoing projects for FY25 through FY30 are located in the Bull Run Watershed, Broad Run Watershed, Neabsco Creek Watershed, Occoquan River Watershed, Powells Creek Watershed, and Quantico Creek Watershed. Additionally, the MS4 compliance for permit renewal is due in 2028. There is no general fund impact.

- **Fee Scheduled** – The following table shows the FY25 Stormwater Management fee changes:

	FY2024 Adopted	FY2025 Adopted	Change
Single Family Detached Residential Property (per year)	$47.50	$52.26	$4.76
Townhouses, Apartments, and Condominiums (per year)	$35.63	$39.20	$3.57
Developed Non-Residential (per 2,059 square feet of impervious area)	$47.50	$52.26	$4.76

b. **Service Level Impacts** – The fee increase will be used to meet MS4 permit requirements which supports the County's Environmental Conservation strategic goal by improving protections for streams, other water bodies, and drinking water quality.

- **Pounds of Phosphorous reduction achieved**
  FY25 w/o Addition | 180
  FY25 w/ Addition | 200 (meet MS4 permit requirements)
- **County-maintained Stormwater Management facilities inspected**
  FY25 w/o Addition | 90%
  FY25 w/ Addition | 100%
- **MS4 Permit, Virginia Stormwater Management Program requirements**
  FY25 w/o Addition | Fail to meet
  FY25 w/ Addition | Meet
- **MS4 and Total Maximum Daily Load requirement**
  FY25 w/o Addition | Unable to meet
  FY25 w/ Addition | Able to meet
- **Number of FY25 CIP Projects started or completed**
  FY25 w/o Addition | 3
  FY25 w/ Addition | 5

10. Flood Resiliency Assessment (Phase 2) – Stormwater Infrastructure Management

Expenditure	$450,000
Use of Fund Balance	$450,000
General Fund Impact	$0
FTE Positions	0.00

a. **Description** – This initiative provides one-time funding in the stormwater infrastructure budget to implement the findings and start detailed analysis and studies of areas needing action and further development as identified in the FY24 initial risk assessment of the existing stormwater system. This initiative is funded from the Stormwater Management fee fund balance. There is no general fund impact.

b. **Service Level Impacts** – Ensure the resiliency of the stormwater system.

11. Replace Watershed Management Vehicles – Watershed Improvement

Expenditure	$93,960
Use of Fund Balance	$93,960
General Fund Impact	$0
FTE Positions	0.00

a. **Description** – This initiative provides one-time funding for the replacement of four Environmental Management vehicles. All four vehicles will be over 18 years old, and the cost of maintenance and repairs will be offset by a new vehicle with better gas mileage and lower maintenance costs. The vehicles include a 2004 Chevrolet Blazer (EM2493), a 2005 Chevrolet Trailblazer (EM2607), a 2006 Chevrolet Trailblazer (EM2675), and a 2007 Chevrolet Trailblazer (EM2802). The Stormwater Management Fee fund balance supports these one-time expenditures. There is no general fund impact.

b. **Service Level Impacts** – Existing service levels are maintained.

12. Soil and Water Conservation District – Watershed Improvement

Expenditure	$55,000
Revenue	$55,000
General Fund Impact	$0
FTE Positions	0.00

a. Description – This initiative funds an increase of $55,000, from $284,745 to $339,745, for the Soil and Water Conservation District Interjurisdictional Agreement. The contribution to this interjurisdictional agreement is based on the population Census completed in FY22 and strives to increase the service level for MS4 compliance and credit towards the MS4 permit. This relationship also supports education and outreach goals. This increase is funded by the Stormwater Management Fee. There is no general fund impact.

b. Service Level Impacts – This initiative supports the 2021-2024 Strategic Plan areas including objective EC-2 to improve protections of streams and other bodies of water, objective EC-3 to ensure equitable access to environmental resources and protections for all County residents, and objective EC-4 to reinforce and expand the plan to acquire green space and parkland.

13. Occoquan Monitoring Lab Membership Dues – Watershed Improvement

Expenditure	$35,000
Use of Fund Balance	$35,000
General Fund Impact	$0
FTE Positions	0.00

a. Description – This initiative funds an increase of $35,000, from $303,930 to $338,930, for Occoquan Monitoring Lab membership dues. The Occoquan Reservoir is a drinking water supply for the County, and DEQ mandates the continued annual support to the Occoquan Watershed Monitoring program to ensure the integrity of the reservoir as a drinking water supply. All member jurisdictions using or discharging effluent to the reservoir are required to pay a set percentage of the annual budgeted amount to run and operate the Occoquan Watershed Monitoring Program. This increase is funded by the Stormwater Management Fee. There is no general fund impact.

b. Service Level Impacts – Existing service levels are maintained.

14. Increase Stormwater Fee Transfer to Virginia Cooperative Extension (VCE) – Watershed Improvement

Expenditure	$34,701
Use of Fund Balance	$34,701
General Fund Impact	$0
FTE Positions	0.00

a. Description – This initiative funds an increase of $34,701 in the transfer from the Watershed Improvement division to VCE. VCE performs education and outreach services with support staff and program costs by engaging with volunteers and other non-profits to supplement MS4 Permit Continuing Education Units. VCE was impacted by a change of services provided during COVID, including additional workload and staff time and an increase in online and electronic correspondence, education, and outreach. The last increase in this transfer was in FY21. This increase is funded by the Stormwater Management Fee. There is no general fund impact.

b. Service Level Impacts – This initiative supports the 2021-2024 Strategic Plan areas including objective EC-3, Ensure equitable access to environmental resources and environmental protections for all Prince William County residents, Action Strategy C and Key Performance Indicator 8.

- **Site visits for stormwater management education & community & school gardens**
  FY25 w/o Addition | 40
  FY25 w/ Addition | 45

15. Increase Keep Prince William Beautiful (KPWB) Services – Watershed Improvement

Expenditure	$25,000
Revenue	$25,000
General Fund Impact	$0
FTE Positions	0.00

a. Description – This initiative funds an increase of $25,000 to maintain a partnership with KPWB and increase services KPWB provides as a vendor to the County. The additional support and services provide stormwater management outreach and education efforts, storm drain labeling, performance metrics, and tracking dashboards/software. These services support the Comprehensive Plan DES-POLICY 7: Encourage the development of well-functioning residential and commercial areas, and the improvement and enhancement of existing residential and commercial areas. This increase is funded by the Stormwater Management Fee. There is no general fund impact.

b. Service Level Impacts –

- **MS4 permit requirements to label storm drains**
  FY25 w/o Addition | Unable to meet
  FY25 w/o Addition | Able to meet

16. Replace Construction Crew Equipment and Vehicles – Small Project Construction & Drainage Maintenance

Expenditure	$480,000
Use of Fund Balance	$480,000
General Fund Impact	$0
FTE Positions	0.00

a. Description – This initiative provides one-time funding for the replacement of Construction Crew equipment and vehicles. The Construction Crew fund balance supports these one-time expenditures. There is no general fund impact. The equipment and vehicles include:

- $380,000 to replace two vehicles, one 18 years old and the other 20 years old. Each vehicle is estimated to have over 180,000 miles by the end of fiscal year 2024. Tandem dump trucks are utilized on a regular basis in the Construction Branch to complete various projects.
- $100,000 to replace two chippers, one 8 years old and the other 21 years old. The chippers are used frequently, Not replacing them would mean hiring a contractor and costing more than replacement, negatively affecting current service levels.

b. Service Level Impacts – Existing service levels are maintained.

17. Replace Drainage Maintenance Vehicles – Small Project Construction & Drainage Maintenance

Expenditure	$300,000
Use of Fund Balance	$300,000
General Fund Impact	$0
FTE Positions	0.00

a. Description – This initiative provides one-time funding for the replacement of Drainage Maintenance vehicles. The Stormwater Management Fee fund balance supports these one-time expenditures. There is no general fund impact. The vehicles include:

- $40,000 to replace one vehicle. This 2006 Chevrolet is 17 years old, has over 150,000 miles logged, and has reached the end of life.
- $130,000 to replace one vehicle. This 2012 Chevrolet is 11 years old, has 150,000 miles logged, and has reached the end of life.
- $130,000 to replace one vehicle. This 2005 Chevrolet is over 18 years old. It has had three engine replacements and currently has a loud whistle coming from its turbo.

b. Service Level Impacts – Existing service levels are maintained.

18. Sign Shop Supplies – Sign Shop

Expenditure	$40,000
Cost Recovery	($40,000)
Total Expenditure (Net)	$0
Revenue	$0
General Fund Impact	$0
FTE Positions	0.00

a. **Description** – Increase the sign supplies budget for the Sign Shop. The service requests from Fleet Management have increased. Fleet Management uses the Sign Shop for wrapping vehicles, which increases the Sign Shop expenditures. These costs are cost recovered. There is no general fund impact.

b. **Service Level Impacts** – Existing service levels are maintained.

19. Replace Two Truck-Mounted Sprayers – Mosquito & Forest Pest Management

Expenditure	$34,000
Use of Fund Balance	$34,000
General Fund Impact	$0
FTE Positions	0.00

a. **Description** – This initiative provides one-time funding for the replacement of two truck-mounted sprayers. The current sprayers are 15 years old and obsolete. Mosquito sprayers are critical for the suppression program, and service interruption would occur without their replacement. The Mosquito & Forest Pest fund balance supports these one-time expenditures. There is no general fund impact.

b. **Service Level Impacts** – Existing service levels are maintained.

Program Summary

Director's Office

Set department vision and expectations through regular strategic planning. Provide overall leadership and management oversight for all Public Works activities. Review department-related complex issues, assess community impact, and implement necessary process improvements.

Key Measures	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Key department program measures met	82%	53%	59%	67%	65%
Public Works Days Away Restricted or Transferred	5.25	5.02	2.10	4.53	4.00

Program Activities & Workload Measures *(Dollar amounts expressed in thousands)*	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Leadership & Management	**$1,084**	**$1,391**	**$1,541**	**$1,093**	**$1,467**
Financial Transactions (Purchase Orders, Payments)	-	5,034	4,368	5,100	4,700
Average Monthly Department Vacancies	24	29	36	26	30
BOCS agenda items	34	21	28	26	28

Stormwater Infrastructure Management

Ensure that the County's stormwater infrastructure complies with state and federal environmental regulations, standards, and policies, including County standards, the Chesapeake Bay TMDL, and the County's MS4 permit regulations, along with VSMP regulations. The program consists of the inspection of existing infrastructure, such as storm drain inlets, storm sewers, and stormwater management facilities within County easements, as well as major maintenance of County-maintained facilities to prevent flooding and protect local water quality and the Chesapeake Bay.

Key Measures	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
County-maintained facilities inspected*	100%	100%	100%	97%	97%
Drainage assistance requests responded to within five business days	99%	100%	92%	99%	-

Program Activities & Workload Measures *(Dollar amounts expressed in thousands)*	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Stormwater Infrastructure Management**	**$3,797**	**$4,213**	**$4,128**	**$1,472**	**$1,696**
County-maintained facilities in inventory	1,023	1,034	1,038	1,055	1,055
Privately-maintained facilities in inventory	1,149	1,174	1,177	1,225	1,225
Major maintenance cases completed/closed	447	450	580	450	-

*In FY25, "County-maintained facilities inspected" moved from a Workload Measure to a Key Measure.
**In FY25, the Stormwater Management Infrastructure Inspection and Stormwater Management Infrastructure Maintenance activities, and their corresponding workload measures, were consolidated to form the Stormwater Infrastructure Management activity.

Site Development

Review all site and subdivision land development plans and document inspection of active construction sites to ensure compliance with environmental regulations, standards, and policies related to stormwater management, best management practices, erosion and sediment control, resource protection areas, floodplains, and geotechnical engineering.

Key Measures	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Site development plan submissions reviewed within County standards	100%	99%	96%	100%	98%
Lot grading plan submissions reviewed within 10 business days	100%	100%	95%	100%	95%

Program Activities & Workload Measures *(Dollar amounts expressed in thousands)*	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Plan Review	**$2,057**	**$1,970**	**$2,070**	**$2,382**	**$2,366**
Site development plan submissions reviewed	472	435	552	400	450
Lot grading lots reviewed	1,151	973	887	1,000	1,000
Site Inspections	**$1,821**	**$1,692**	**$2,336**	**$2,393**	**$2,586**
VSMP & erosion & sediment control inspections	25,736	21,041	19,567	22,000	22,000

Watershed Improvement

Ensure that the water quality of local streams within each of the County's watersheds follows environmental regulations, standards, and policies, including the Chesapeake Bay TMDL and the County's MS4 permit. The program focus is to prevent downstream and localized flooding impacts, protect water quality from illicit pollution discharges into the storm drainage system, prevent discharge of pollutants from industrial activities, and prevent sediment release associated with stream erosion, as well as the reduction of nitrogen, phosphorous, and sediment loads from stormwater runoff. The program includes the assessment of streams and other natural resources within each watershed, identification of problem areas, and implementation of water quality improvements. In addition, environmental education, outreach, and technical assistance to residents, both in urban areas as well as within the agricultural community, are components of this program.

Key Measures	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Linear feet of stream restorations completed	1,552	2,710	1,000	2,750	2,750

Program Activities & Workload Measures *(Dollar amounts expressed in thousands)*	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Watershed Management*	**$4,824**	**$4,782**	**$5,175**	**$6,443**	**$7,609**
County outfalls monitored and inspected	805	877	711	700	700
Pounds of nitrogen reduction achieved	116	203	76	200	200
Tons of sediment reduction achieved	24	61	23	30	30
Pounds of phosphorus reduction achieved	109	194	69	180	180

*In FY25, the Watershed Monitoring and Watershed Improvements activities, and their corresponding workload measures, were consolidated to form the Watershed Management activity.

Sign Shop

Inspect, fabricate, install, and maintain all street name signs as mandated by the Code of Virginia. In addition, the program produces high quality graphics for County vehicles and creates custom-designed original graphic designs for interior and exterior signs, banners, posters, and displays for County agencies, outside jurisdictions, and developers.

Key Measures	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Street signs completed within 10 days of request	100%	98%	99%	95%	97%

Program Activities & Workload Measures *(Dollar amounts expressed in thousands)*	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Street Name Signs	**$247**	**$234**	**$260**	**$299**	**$299**
Intersections requiring street name signs	9,797	7,435	9,129	7,500	7,500
Street name signs fabricated for maintenance	1,133	1,007	882	1,000	1,000
Signs and Graphics	**$57**	**$28**	**($16)**	**$56**	**$24**
Signs and graphics fabricated for revenue	9,251	12,015	8,987	15,000	10,000

Small Project Construction & Drainage Maintenance

Provide support for a variety of County projects, including Stormwater Management infrastructure maintenance and inspections, stream restorations, drainage improvements, and parks and transportation improvements. Provide support for Quantico per Intergovernmental Service Agreement, as well as Lake Jackson and Bull Run Mountain per Service District Roads Agreements.

Key Measures	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Community improvement projects completed within 10% of estimated cost	100%	100%	96%	97%	97%

Program Activities & Workload Measures *(Dollar amounts expressed in thousands)*	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Small Community Improvement Construction	**$3,122**	**$2,412**	**$3,535**	**$6,119**	**$6,970**
Drainage infrastructure inspected (% of easement miles)	56%	92%	79%	75%	75%
Drainage infrastructure projects completed/closed	447	450	580	450	450
Responsive to project estimate requests within 30 days	100%	100%	93%	100%	100%

Mosquito & Forest Pest Management

Survey, reduce, and manage mosquitoes and certain forest pest populations. Program objectives include minimizing mosquito-transmitted disease such as West Nile Virus and Zika Virus by reducing mosquito populations and breeding sites, minimizing tree defoliation and mortality caused by forest pests, and minimizing adverse environmental and human health impacts resulting from the treatment of these pests.

Key Measures	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Mosquito traps processed within 48 hrs to detect West Nile & Zika virus	100%	100%	100%	100%	100%
High priority mosquito habitat applications	86%	83%	93%	90%	90%
Citizen site visit requests responded to within 24 hours	96%	96%	97%	95%	95%
Spongy moth surveys conducted to determine if spraying is needed	1,050	1,073	1,050	750	750

Program Activities & Workload Measures *(Dollar amounts expressed in thousands)*	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Mosquito/Forest Pest Surveillance	**$873**	**$856**	**$1,034**	**$1,358**	**$1,498**
Larval mosquito habitat inspections	5,468	5,024	5,349	5,500	5,500
Pest Suppression	**$631**	**$609**	**$515**	**$688**	**$730**
Mosquito larvicide applications	1,184	817	1,033	1,000	1,000
Community engagement and outreach	41	42	50	50	50
Mosquito breeding and habitat sources reduced	71	90	106	100	100

Solid Waste

Provide integrated, efficient, and regulatory compliant solid waste management services to residents, institutions, and businesses in Prince William County and the Towns of Dumfries, Haymarket, Occoquan, and Quantico. Promote waste reduction, reuse, and recycling programs designed to extend the useful life of the landfill. Develop long-term plans for management of solid waste that maintain or improve service levels and ensure adequate infrastructure to accommodate future residential and commercial growth.

Key Measures	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
County-wide recycling rate	34%	38%	38%	36%	36%
Tons of waste buried at the landfill	402,790	371,494	341,183	380,000	370,000

Program Activities & Workload Measures *(Dollar amounts expressed in thousands)*	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Administration & Fiscal Management	**$9,003**	**$3,296**	**$3,454**	**$5,285**	**$6,793**
Residential and non-residential real estate accounts processed	151,493	152,415	153,213	-	154,000
Commercial billing accounts processed	103	108	97	-	110
Non-residential accounts processed	4,182	4,221	4,283	4,240	4,300
Yard & Food Waste Composting	**$2,835**	**$4,419**	**$3,497**	**$2,905**	**$3,105**
Tons of yard & food waste managed at Compost facility	28,256	38,336	64,403	45,000	60,000
Solid Waste Facilities Operation	**$13,556**	**$14,834**	**$18,403**	**$23,114**	**$20,381**
Tons rec'd from special Saturday collections for residential trash and recycling	903	861	819	-	840
Tons of household hazardous waste and e-waste collected	-	-	-	-	490
Customer transactions processed at Solid Waste facilities	673,726	658,512	596,561	650,000	640,000
Inspections of refuse truck loads	4,094	4,624	2,982	2,000	-
Pounds of Household Hazardous Waste and eWaste collected	1.3M	0.9M	0.7M	1.0M	-
Recyclable Materials Collection	**$600**	**$504**	**$557**	**$1,174**	**$1,090**
Tons of recyclables collected at customer convenience centers*	2,266	2,183	1,949	2,100	1,200
Revenue generated from sale of scrap metal	$739,214	$1,061,016	$738,923	$700,000	$725,000
Litter Control**	**$0**	**$0**	**$0**	**$1,485**	**$2,171**
Illegal signs removed from State right-of-way by Litter Crew	-	-	1,058	1,000	1,030
Lane miles cleaned	1,478	918	583	450	700
Landfill Closure	**$0**	**$5,101**	**$24**	**$2,976**	**$0**

*In FY25, "Tons of recyclables collected at customer convenience centers" no longer includes tons from special Saturday collections for residential trash and recycling.
**In FY24, the Litter Control activity and corresponding workload measures shifted from the Neighborhood Services Program to the Solid Waste Program.

Neighborhood Services

Promote a safe, clean, and healthy Community of Choice through education, community support, and Property Code Enforcement (PCE). Provide programs that encourage and empower residents and business owners to remain compliant with Property Code standards that result in a high quality of life within the County.

Key Measures	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Founded PCE cases resolved or moved to court action within 100 calendar days	97%	91%	96%	95%	95%
First inspection of complaint within five business days	98%	95%	95%	97%	95%
Average time to resolve cases (business days)	38	-	44	38	40

Program Activities & Workload Measures *(Dollar amounts expressed in thousands)*	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Litter Control*	**$834**	**$668**	**$645**	**$0**	**$0**
Landscaping	**$548**	**$552**	**$458**	**$1,083**	**$1,083**
Landscaping areas maintained	51	48	44	51	58
Acres of medians and rights-of-way maintained	234	234	234	234	250
Property Code Enforcement	**$2,505**	**$2,369**	**$2,699**	**$2,936**	**$3,133**
Illegal signs removed from State right-of-way by PCE	-	-	11,581	5,000	6,000
Total cases resolved	3,183	3,117	3,000	3,500	3,300
Total inspections conducted	9,673	8,783	8,558	9,500	9,400

*In FY24, the Litter Control activity and corresponding workload measures shifted from the Neighborhood Services Program to the Solid Waste Program.

Service Districts

Bull Run Roads Service District

The Bull Run Roads Service District supports via levy the maintenance of roads on Bull Run Mountain which do not meet State standards for acceptance in the State Maintenance System.

Lake Jackson Roads Service District

The Lake Jackson Roads Service District supports via levy the maintenance of roads in Lake Jackson which do not meet State standards for acceptance in the State Maintenance System.

Program Activities *(Dollar amounts expressed in thousands)*	FY21 Actuals	FY22 Actuals	FY23 Actuals	FY24 Adopted	FY25 Adopted
Bull Run Roads Service District	**$215**	**$53**	**$190**	**$200**	**$200**
Lake Jackson Roads Service District	**$165**	**$204**	**$243**	**$185**	**$185**

Appendix W

Summary of Storm Water and Erosion & Sediment Control Programs

FY25 Stormwater Management and Erosion & Sediment Control Program Summary

Executive Summary

Prince William County continues to implement comprehensive Erosion & Sediment Control (E&S) and Stormwater Management (SWM) programs in accordance with state and federal regulations. These efforts support sustainable development while protecting water quality, minimizing flood risks, and ensuring compliance with state and federal environmental standards.

Regulatory Compliance

Erosion & Sediment Control Program

The County's E&S Program is administered in accordance with:
- Virginia Erosion and Sediment Control Law (§62.1-44.15:51, Code of Virginia)
- Virginia Erosion and Sediment Control Regulations (9VAC25-840 et seq.)

E&S permits are required for land-disturbing activities exceeding 2,500 square feet. Prince William County's program has been audited and found compliant by:
- DEQ (November 2017)
- EPA (August 2019)

Stormwater Management Program

The SWM Program complies with:
- Virginia Stormwater Management Act (§62.1-44.15:24)
- VSMP Regulations (9VAC25-870 et seq.)
- County Code Chapter 23.2, Article IV
- Design & Construction Standards Manual (DCSM), Section 700

The County's requirements align with state criteria for prior developed lands and include more stringent flood control standards in critical watersheds, based on regulatory exemptions and watershed studies.

Enhanced Local Requirements

Prince William County has retained and enforces stricter stormwater controls in designated areas:
- 25-Year Storm Control: Required in critical watersheds to prevent localized flooding.
- 100-Year Storm Control: Required upstream of residential developments with lot sizes under one acre and adjacent to flood hazard areas.

These requirements are in addition to state-mandated 2- and 10-year storm controls.

Staffing and Certification

- Site Inspectors: 11 full-time certified inspectors
- Plan Review Engineers: 5 full-time certified engineers
- Program Manager: Oversees E&S implementation

All required staff are certified in E&S and SWM and expected to maintain certification as a condition of employment. Ongoing training and professional development are prioritized. See Appendix A for detailed certification records.

Program Administration

The Environmental Management Division of the Department of Public Works administers E&S and SWM programs.

- Land Disturbance Permits: Issued only to Responsible Land Disturbers (RLD-certified)
- Internal Coordination: Regular joint meetings are held between plan reviewers and inspectors to improve processes and ensure consistent application of regulations.

Compliance Tracking Methods

The County has developed and deployed a mobile application for E&S and VSMP inspections. Key features include:

- On-site inspection checklists
- Violation tracking
- Follow-up documentation

This technology, used via tablet devices issued to inspectors, increases efficiency and ensures uniformity across inspections.

Post-Construction Stormwater Management

Prince William County maintains a post-construction program focused on the long-term operation and maintenance of stormwater controls:

- County-owned Facilities: Inspected annually
- Privately-maintained Facilities: Inspected at least once every 5-year MS4 permit cycle
- Enforcement: Inspection reports detail deficiencies and required corrective actions; enforcement includes follow-up inspections and, when necessary, legal action.

Conclusion

Prince William County is committed to protecting water quality and reducing flood risks through the effective and compliant implementation of its Stormwater Management and Erosion & Sediment Control Programs. With well-trained staff, enhanced regulations, and the integration of innovative tools, the County ensures consistent, efficient, and responsible land development oversight.

Appendix X

Public Outreach Summary

FY25 Prince William County Public Outreach Strategy and Summary

Summary

This document outlines Prince William County's comprehensive public outreach strategy to meet the public education and involvement requirements of the County's MS4 permit. It aims to improve local water quality, increase community awareness, and foster public engagement.

1. Overview

Prince William County Public Works executes a multi-faceted outreach program that promotes environmental protection and stormwater management compliance through resident, business, and County employee engagement. Outreach initiatives align with MS4 permit requirements and incorporate best practices to prevent illicit discharges, promote pollution prevention, and encourage voluntary stewardship.

2. Purpose

To establish and maintain consistent procedures for:

- Promoting awareness of stormwater pollution issues.
- Providing clear reporting channels for illicit discharges.
- Encouraging public participation in water quality initiatives.
- Educating target audiences on pollution prevention techniques.
- Supporting voluntary implementation of BMPs.

3. Roles and Responsibilities

- **Environmental Management Division (EMD):** Oversees implementation, tracking, and annual reporting.
- **Communications Office:** Assists with distribution of outreach materials.
- **County Departments:** Collaborate on internal training and operational improvements.
- **Outreach Partners:** Support outreach through programs and funding partnerships.

4. Communication Methods

- County Website (including MS4 and Environmental Management pages)
- Email and Hotline Reporting Tools
- Educational Flyers, Brochures, and Door Hangers
- Social Media and Newsletter Distribution
- Signage and Drain Markers
- Public Events and Volunteer Opportunities
- Online Training Platforms

5. Outreach Activities by Category

5.1 Promote Public Reporting and Recognition of Illicit Discharges

Residents:

- Maintain informational website pages on illicit discharges and pollution prevention.

- Distribute brochures/flyers explaining stormwater impacts.

- Provide hotline and email for incident reporting.

Businesses/Industries:

- Share educational material during field inspections.

- Distribute warning and violation letters with pollution prevention guidance.

County Government:

- Offer online training to staff about illicit discharge and pollution prevention.

- Implement and maintain SWPPPs at high-risk facilities.

FY25 Activities Summary:

1. *Distribution of educational illicit discharge pamphlets to residents and businesses*
2. *Riverfest Event at Town of Occoquan*
3. *Trick or Treatment Event in collaboration with Prince William Water*
4. *Meaningful Watershed Educational Experiences at Prince William County Schools*
5. *PWC Pride Festival Booth*

5.2 Promote Involvement in Local Water Quality Improvement Projects

Residents:

- Maintain educational web content on home-based BMPs.

- Promote recycling and hazardous waste drop-off events.

- Partner with community groups (e.g., Adopt-a-Stream, floatable and water quality monitoring).

Businesses/Industries:

- Collaborate on cleanup efforts.

- Recognize volunteer efforts with Green Community Award.

County Government:

- Fund and coordinate volunteer events and educational initiatives.

FY25 Activities Summary:

1. *Hosted walkthroughs of Powells Creek Stream Restoration Project*
2. *Bandalong cleanouts once a month with volunteer residents*
3. *Volunteer planting at Bristoe Station*
4. *Central Library stormwater garden and tree planting project*
5. *Volunteer stream cleanups hosted throughout the County*
6. *Boy Scout Project – removal of tree tubes and trash from reforestation project at East Longview*
7. *Girl Scout Project – reforestation planting at County Complex*
8. *Volunteer planting at Veterans Park*
9. *Volunteer invasive plant clearing at Patriot High School*
10. *Volunteer invasive plant removal at PWC Animal Shelter*
11. *Prince William County Schools Science Fair*
12. *Student Environmental Action Showcase*

5.3 Promote Integrated Management Practices for Golf Courses

Businesses/Industries:

- Provide technical support and maintain relationships with golf course managers.

County Government:

- Require nutrient management plans for all courses discharging to the MS4.

Ensure staff are trained in IPM techniques and proper application methods.

FY25 Activities Summary:

1. *Solheim Cup Staff Volunteering*

5.4 Promote Good Housekeeping Practices

Residents:

- Provide resources on pet waste, composting, and yard waste disposal.

- Promote good housekeeping tip sheets online and at community events.

Businesses/Industries:

- Distribute flyers to landscapers and shopping centers on best practices.

County Government:

- Enforce protocols for vehicle washing and materials handling.

- Conduct inspections and maintain spill prevention measures at high-risk sites.

- Provide staff training and enforce safety protocols.

- Continuously evaluate and improve BMP implementation.

FY25 Activities Summary:

1. *Implementation of updated SOP on MS4 Compliance and Good Housekeeping (Appendix 10 of MS4 Program Plan)*
2. *Native Plant Symposium*
3. *Distribution of flyers and letters to businesses/shopping centers regarding winter salt usage*
4. *Farm Field Day Events*
5. *Dumpster Day Events*
6. *Neighborhood Services HOA Conferences*

7. *Compost Day Event at PWC Compost Facility*
8. *PWC Pride Festival Booth*

5.5 Encourage Voluntary Stormwater Management Techniques on Private Property

Residents:

- Promote VCAP participation via brochures, conferences, and outreach.

- Educate on native planting and lawn conversion.

Businesses/Industries:

- Encourage conversion to native vegetation and reforestation.

- Promote BMPs through technical assistance and funding opportunities.

County Government:

- Implement stream restoration and stormwater retrofits.

- Incorporate reforestation into construction practices.

FY25 Activities Summary:

1. *Native Plant Symposium*
2. *Stormwater Garden at County Complex*
3. *Central Library Project*
4. *Farm Field Day Events*
5. *Earth Day Event – Tree Sapling Giveaway*
6. *Central Library Spring Festival*

5.6 Internal County Government Training and Compliance

County Government:

- Biannual Training on Illicit Discharge

- Maintain SWPPPs and ensure facility compliance.

- Conduct regular site inspections and housekeeping reviews.

- Provide spill kits and annual spill response training.

- Host annual Earth Day event for County employees.

FY25 Activities Summary:

1. *County personnel training on winter salting*
2. *Illicit discharge and MS4 compliance training*
3. *Good housekeeping inspections – salt piles, fuel tanks, stockpiles, etc.*

6. Procedures and Frequency for Public Engagement Updates

- Update website content semi-annually.
- Publish newsletters at least quarterly.
- Track hotline and email reports monthly.
- Conduct annual review of outreach strategies.
- Submit outreach summary annually as part of MS4 report.

7. Summary and Value

Prince William County's outreach strategy is comprehensive, inclusive, and continuously evolving. Through targeted messaging, strong partnerships, and frequent public engagement, the County fosters a well-informed community and supports long-term water quality improvement. These outreach efforts are a critical component of MS4 compliance and demonstrate Prince William County's leadership in environmental stewardship.

Appendix Y

Nutrient Management Plan Summary

FY25 Nutrient Management Plan Summary

Name	Acres	Longitude (W)	Latitude (N)	Plan acreage	Effective date	Expiration	Planner
H.L. Mooney Plant	4.98			4.98	11/20/2024	11/20/2027	Willie Woode
Spittle Building	2.48			2.48	11/20/2024	11/20/2027	Willie Woode
Anne Wall	2.25	77*20'39"	38*36'14"	2.25	10/1/2024	9/30/2027	Flickinger
Ben Lomond	24.04	77*29'37"	38*47'51"	24.04	12/1/2024	11/30/2027	Flickinger
Ben Lomond Community	1.86	77*30'22"	38*47'22"	1.86	7/1/2017	6/30/2026	Flickinger
Braemar	2.46	77*34'9"	38*44'2"	2.46	9/1/2017	8/31/2026	Flickinger
Catharpin	9.03	77*33'56"	38*51'16"	9.03	4/1/2017	3/31/2026	Flickinger
Chinn	11.52	77*19'49"	38*40'14"	11.52	12/1/2024	11/30/2027	Flickinger
Cloverdale	8.66	77*19'10"	38*37'20"	8.66	12/1/2018	11/30/2024	Flickinger
Dale City Rec	3.16	77*20'42"	38*38'35"	3.16	12/1/2018	11/30/2024	Flickinger
Fairmont	4.01	77*29'27"	38*46'54"	4.01	10/1/2024	9/30/2027	Flickinger
Fuller Heights Park	5.39	77*19'48"	38*32'33"	5.39	12/1/2024	11/30/2027	Flickinger
Forest Greens Golf	105.42	77*21'14"	38*32'35"	105.42	11/26/2014	10/16/2024	Jeff Michel
Hellwig	36.84	77*27'0"	38*38'20"	36.84	4/1/2017	3/31/2026	Flickinger
Howison	9.82	77*22'57"	38*38'2"	9.82	4/1/2017	3/31/2026	Flickinger
Independent Hill Park	3.81	77*25'43"	38*38'10"	3.81	7/1/2017	6/30/2026	Flickinger
James Long	17.87	77*38'5"	38*51'13"	17.87	4/1/2017	3/31/2026	Flickinger
Lake Ridge Golf	21.29	77*19'15"	38*41'31"	21.29	5/4/2016	5/26/2026	Mark Murphy
Leitch	9.24	77*22'16"	38*39'26"	9.24	12/1/2024	11/30/2027	Flickinger
Locust Shade	6.52	77*21'4"	38*32'0"	6.52	12/1/2024	11/30/2027	Flickinger
Mayhew	6.95	77*29'29"	38*48'24"	6.95	10/1/2017	8/31/2026	Flickinger
Nokesville	21.85	77*34'39"	38*41'8"	21.85	11/1/2024	10/31/2027	Flickinger
Prince William Golf	114.33	77*37'50"	38*44'51"	114.33	9/18/2024	9/18/2029	Jeff Michel
Stadium	14.60	77*21'5"	38*41'1"	14.60	10/1/2024	9/30/2027	Flickinger
Turley	1.23	77*18'34"	38*37'40"	1.23	12/1/2024	11/30/2027	Flickinger
Valley View	34.50	77*32'22"	38*42'4"	34.50	11/1/2024	10/31/2027	Flickinger
VEPCO	4.47	77*21'49"	38*38'53"	4.47	10/1/2024	9/30/2027	Flickinger
Veterans	35.41	77*14'59"	38*38'32"	35.41	11/1/2024	10/31/2027	Flickinger
Barg Homeless	5.07	77*16'32"	38*37'36"	5.07	10/10/2024	10/10/2027	Bolles
Human Services/ Boys Home	1.92	77*17'43"	38*37'50"	1.92	10/23/2024	10/23/2027	Bolles
Bull Run Library	1.56	77*31'14"	38*47'12"	1.56	10/24/2024	10/24/2027	Bolles
Central Library	0.38	77*27'19"	38*46'7"	0.38	7/25/2025	7/24/2028	Bolles
Dawson Beach	4.08	77*14'42"	38*38'53"	4.08	8/1/2019	11/28/2025	Bolles
Fire 20	1.59	77*18'23"	38*38'51"	1.59	5/12/2023	5/11/2026	Bolles
Fire 4	1.53	77*37'10"	38*48'14"	1.53	10/30/2016	13/21/2026	Bolles
Garfield Ferlazzo	5.90	77*17'40"	38*36'29"	5.90	5/16/2017	5/11/2026	Bolles
Manassas Court	7.21	77*28'44"	38*45'9"	7.21	9/1/2024	9/1/2027	Bolles
Government Center	12.32	77*21'8"	38*40'49"	12.32	2/20/2025	2/20/2028	Bolles
PWC Safety Training Center	4.95	77*35'7"	38*39'52"	4.95	9/1/2024	9/1/2027	Bolles
Orchard Bridge Park	7.38	77*26'43"	38*48'5"	7.38	11/1/2024	10/31/2027	Flickinger
Linden Park	0.84	77*29'57"	38*48'02"	0.84	9/1/2025	8/31/2028	Flickinger
Western PD	7.27	77*31'2"	38*45'45"	7.27	2/20/2025	2/20/2028	Bolles
Reading Park	2.12	77*27'11"	38*46'48"	2.12	9/1/2025	8/31/2028	Flickinger
Neabsco Eagles Park	1.60	77*17'03"	38*36'24"	1.60	9/1/2025	8/31/2028	Flickinger
American Legion Field	0.96	77*18'12"	38*39'56"	0.96	9/1/2025	8/31/2028	Flickinger
Hylbrook Park	1.50	77*15'51"	38*39'04"	1.50	9/1/2025	8/31/2028	Flickinger
Total	**592.17**		**Total to Date**	**592.17**	**100%**		

Appendix Z

Summary of Program Plan Updates

FY25 MS4 Program Plan Updates

1. Expanded Use of Technology and Data Systems

FY25 Execution Change:

The FY25 Plan emphasizes enhanced use of EnerGov mobile inspection software for land disturbance, construction permits, and enforcement. Inspections are now tracked in real time with features for automated checklists, violation notices, and follow-ups, increasing consistency and accountability.

Difference from FY19:

While some mobile functionality existed in FY19, the tools were supplementary. In FY25, technology is fully integrated as a core compliance management system.

2. New Appendices and SOPs for Implementation

FY25 Execution Change:

The updated Plan includes detailed implementation appendices such as:

- Good Housekeeping SOPs
- Illicit Discharge Detection and Elimination Manual
- Local TMDL Implementation Plan

These define step-by-step procedures that staff must follow.

Difference from FY19:

FY19 appendices primarily served as reference documents. FY25 formalizes them into enforceable guidance tools, ensuring standardized execution across teams.

3. More Frequent and Structured Program Plan Updates

FY25 Execution Change:

The Plan requires annual review and categorization of updates:

- Additions or removals
- Routine changes
- Replacement of ineffective BMPs

Difference from FY19:

FY19 allowed informal updates. FY25 introduces a tiered, transparent update process that increases accountability and ongoing plan refinement.

4. Expanded Responsibilities with Third-Party Partnerships

FY25 Execution Change:

FY25 explicitly defines roles for Keep Prince William Beautiful, NVRC Clean Water Partners, PW Soil and Water Conservation District, and UOSA, among others. These partners assist in public education, outreach, and credit exchanges, but the County retains full compliance responsibility.

Difference from FY19:

FY19 acknowledged partnerships in general terms. FY25 codifies them in the plan, requiring more coordination, documentation, and oversight of partner-contributed efforts.

5. Clarified Monitoring Program Inclusion

FY25 Execution Change:

Floatables Monitoring and Biological Monitoring are now formally included in the Program Plan to improve clarity and consistency. These efforts are not new activities. They have been conducted in previous permit cycles but are now explicitly documented in the Plan.

Difference from FY19:

Previously unlisted in the official plan, these monitoring efforts are now standardized components of program execution, helping align field practice with plan documentation.

6. More Granular Control of Individual Lot BMPs

FY25 Execution Change:

The County must track, inspect, and maintain documentation for BMPs that serve only individual residential lots. A maintenance strategy and tracking methodology must be reported annually.

Difference from FY19:

FY19 addressed these broadly. FY25 establishes specific operational responsibilities for lot-level BMP oversight, increasing post-construction compliance work.

Appendix AA

Chesapeake Bay TMDL BMP Project Calculations

1st Permit Cycle
Bay TMDL Reduction Calculation Worksheet

Powells Creek Phase 2 **Stream Restoration** **Status:** **Completed**

4,785 Includes Main Stem, Lacrosse Tributary, & 300 ft extension

1 Calculate POC Reductions

	Nitrogen (lbs/yr)	Phosphorous (lbs/yr)	TSS (lbs/yr) - Coastal
100% Load Reduction Estimates (lbs/yr)	858.7	352.7	746,800.0
Percent Efficiency		0.85	
Initial POC Reductions	**729.90**	**299.80**	**634,780.00**

2 Characterize the Drainage Area

	Urban Impervious Acres	Urban Pervious Acres	Forested Acres	Total Urban Acres	Total Acres
PW Regulated Land	556.80	1,234.69	742.49	1,791.49	2,533.98
Other Regulated Land	459.98	680.22	899.71	1,140.20	2,039.91
Total Regulated Land	1,016.78	1,914.91	1,642.20	2,931.69	4,573.89
Total Unregulated Land	268.39	1,205.36	2,187.36	1,473.75	3,661.11
	1,285.17	**3,120.27**	**3,829.56**	**4,405.44**	**8,235.00**

3 Compute Ratios and Calculate Proportional Reductions by Land Use

	Regulated Area	Unregulated Area	Forested Acres	Total Credit
Ratio	**35.60%**	**17.90%**	**46.50%**	
TN (lbs) Reduction	259.85	130.62	339.43	**729.90**
TP (lbs) Reduction	106.73	53.65	139.42	**299.80**
TSS (lbs) Reduction	225,983.99	113,601.34	295,194.67	**634,780.00**

Total Check
100.00%

4 Account for Total Baseline Reductions on Unregulated Land

Urban Land Use	POC	Required 5% Load Reductions (lbs/acre/yr)	Baseline Loading Rate (*20)	Acres	Baseline Reduction (lbs/yr)
Impervious	TN	0.07587000	1.51740000	268.39	407.25
Pervious	TN	0.03021000	0.60420000	1,205.36	728.28
Impervious	TP	0.01296000	0.25920000	268.39	69.57
Pervious	TP	0.00148625	0.02972500	1,205.36	35.83
Impervious	TSS	11.71320000	234.26400000	268.39	62,874.11
Pervious	TSS	0.76912500	15.38250000	1,205.36	18,541.45

5 Calculate Total Reductions Minus Required Baseline

	Nitrogen (lbs/yr)	Phosphorous (lbs/yr)	TSS (lbs/yr) - Coastal
Credit for Unregulated Areas	130.62	53.65	113,601.34
Minus Unregulated Impervious Baseline	407.25	69.57	62,874.11
Minus Unregulated Pervious Baseline	728.28	35.83	18,541.45
Credit for Unregulated Areas	0.00	0.00	32,185.77
Credit for Regulated Areas	259.85	106.73	225,983.99
Credit for Forested Areas	339.43	139.42	295,194.67
Total Reductions Claimed	**599.27**	**246.14**	**553,364.43**

6 Reduction Summary Table

Project Name	BMP Type	Lat	Long	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)
Powells Creek Phase 2	Stream Restoration	38.60268	-77.32370	599.27	246.14	553,364.43

MEMO

TO: Tom Dombrowski (Prince William County)

FROM: Justin Lennon / Michael Coco (WSP)

SUBJECT: Powells Creek Stream Restoration Phase 2 – TMDL Crediting

DATE: September 26, 2022

The purpose of this memorandum is to provide information on the TMDL crediting which may be claimed from the Powells Creek Phase 2 main stem and Lacrosse Court Tributary stream restorations. This memorandum utilizes methods described in the "Consensus Recommendations for Improving the Application of the Prevented Sediment Protocol for Urban Stream Restoration Projects Built for Pollutant Removal Credit" (CPB, 2020), hereafter referred to as the "Updated Protocol 1". The methodology described in Updated Protocol 1 advances the original Protocol 1 (CBP, 2014) by clarifying the crediting of bank armoring, and replacing default sediment and nutrient reduction rates with individual site-level data collection.

Table 1 presents the sediment and nutrient reduction credits which may be claimed from the proposed Powells Creek Phase 2 main stem and Lacrosse Court tributary stream restoration projects. These values are based on site specific data for bulk density, total nitrogen, total phosphorus, and do not incorporate sediment and nutrient delivery factors. Protocol 1 recommends using a 50% pollution efficiency factor. For comparison, load reductions with different efficiency factors are also calculated. As outlined in the Updated Protocol 1, efficiencies greater than 50% should be allowed for projects that have shown through monitoring that the higher rates can be justified, subject to approval by the state.

TABLE 1: FULL RANGE OF LOAD REDUCTION RESULTS

Project Reach	***Pollutant***	***Load Reductions with Efficiency Factors***					
		100% Efficiency	***90% Efficiency***	***80% Efficiency***	***70% Efficiency***	***60% Efficiency***	***50% Efficiency***
Phase 2 Main Stem	TSS (tons/yr)	243.1	218.8	194.5	170.2	145.9	121.6
	TN (lbs/yr)	519.3	467.4	415.5	363.5	311.6	259.7
	TP (lbs/yr)	216.4	194.8	173.1	151.5	129.8	108.2
Lacrosse Court Tributary	TSS (tons/yr)	73.6	66.2	58.8	51.5	44.1	36.8
	TN (lbs/yr)	218.2	196.3	174.5	152.7	130.9	109.1
	TP (lbs/yr)	85.8	77.3	68.7	60.1	51.5	42.9
Combined Project Totals	**TSS (tons/yr)**	**316.7**	**285**	**253.3**	**221.7**	**190**	**158.4**
	TN (lbs/yr)	**737.5**	**663.7**	**590**	**516.2**	**442.5**	**368.8**
	TP (lbs/yr)	**302.2**	**272.1**	**241.8**	**211.6**	**181.3**	**151.1**
Phase 2 End Pipe Exposure*	TSS (tons/yr)	56.7	51.0	45.4	39.7	34.02	28.35
	TN (lbs/yr)	121.2	109.1	97.0	84.8	72.7	60.6
	TP (lbs/yr)	50.5	45.5	40.4	35.4	30.3	25.3
Amended Project Totals*	**TSS (tons/yr)**	**373.4**	**336**	**298.7**	**261.4**	**224.0**	**186.7**
	TN (lbs/yr)	**858.7**	**772.8**	**687.0**	**601.1**	**515.2**	**429.4**
	TP (lbs/yr)	**352.7**	**317.4**	**282.2**	**246.9**	**211.6**	**176.4**

***Calculated by PWC using the same methodology. See Appendix A**

1.0 INTRODUCTION

The Prince William County Department of Public Works is proposing the restoration of Powells Creek below Lake Montclair to address stream erosion, improve aquatic habitat, protect infrastructure, protect private property, and improve overall water quality. The project is located in the towns of Montclair and Woodbridge, Virginia and is proposed to ultimately encompass Powell's Creek from Northgate Drive down to State Route 1 (Jefferson Davis Hwy).

The restoration design for Powell's Creek is proposed to occur over four (4) phases of design along the main stem. WSP has developed the design for Phase 2 of the project which encompasses approximately 3,605 linear feet of channel along the mainstem, and approximately 720 linear feet of channel along the Lacrosse Court Tributary. An additional 300 linear feet has been added to the project following a pipe exposure at the end of Phase 2.
Refer to Figure 1 for the site location map.

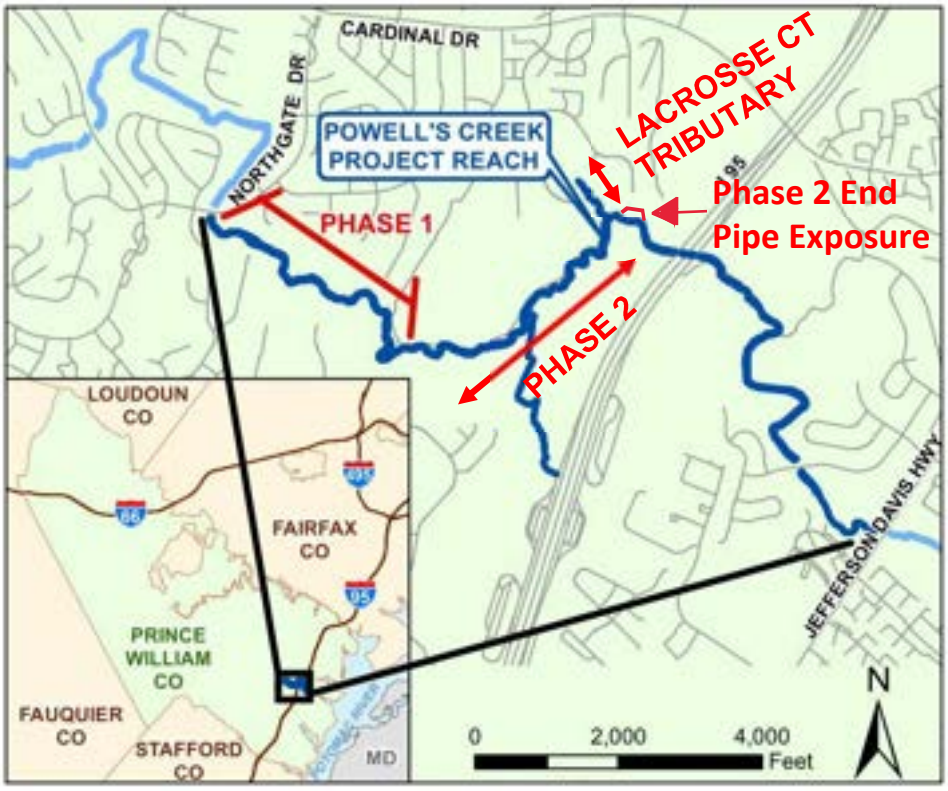


FIGURE 1: LOCATION MAP

2.0 PROTOCOL 1 CREDITING

Protocol 1, "Prevented Sediment Credit", calculates an annual mass nutrient and sediment reduction credit for qualifying stream restoration practices that prevent channel or bank erosion that would otherwise be delivered downstream from an actively enlarging or incising urban stream. To account for this approach, the original Expert Panel developed the Prevented Sediment Protocol to estimate the annual erosion rates from actively degrading or incised stream channels and calculate the prevented sediment loss due to restoration. Protocol 1 crediting includes the following three steps as described in the original Protocol 1 (CBP, 2014):

- Step 1: Estimate stream sediment erosion rates
- Step 2: Convert erosion rates to nitrogen and phosphorus loadings
- Step 3: Estimate restoration reduction efficiency

The Updated Protocol 1 (CPB, 2020) advances the original protocol by replacing default planning rates with site-specific data collection, and adjusting project lengths to account for hard armoring practices.

STEP 1. ESTIMATE THE STREAM SEDIMENT EROSION RATE

The most common technique to estimate bank erosion rate is the BANCS Method (Rosgen, 2001), where field surveys are used to calculate BEHI and NBS scores, which in turn, are entered into regional bank erosion curves to determine the annual rate of streambank retreat. The North Carolina erosion rate curves were utilized for the Powells Creek Phase 2 main stem and Lacrosse Court tributary restorations. Refer to Attachment A for the BEHI/NBS analysis information.

The pre-restoration erosion rate for the project reach is then entered into the following equation to determine its potential prevented sediment load:

$$S = \Sigma(cAR) / 2{,}000 \qquad \text{(Eq. 1)}$$

where:

- S = sediment load (ton/year) for reach or stream
- c = bulk density of soil (lbs/ft^3)
- R = bank erosion rate (ft/year)
- A = eroding bank area (ft^2)
- 2,000 = conversion from pounds to tons

PREDICTED VOLUME OF EROSION:

Based on the BEHI/NBS analysis, the predicted annual volume of erosion is 14,282.9 ft^3/year (594.5 tons/year) the Phase 2 main stem stream reach and 5,286.0 ft^3/year (195.8 tons/year) for the Lacrosse Court tributary,. The BEHI/NBS analysis using the spreadsheet tool for erosion rate estimates can be found in Attachment A and the results are summarized in Table 2 and Table 3 below.

TABLE 2: POWELLS PHASE 2 MAIN STEM BEHI/NBS ASSESSMENT RESULTS AND PREDICTED VOLUME OF EROSION

BEHI Number	BEHI Rating	NBS Rating	Study Bank Height (ft)	Study Bank Length (ft)	Predicted Volume of Erosion (ft^3/yr)
1	Low	Low	3	117	10.5
2	High	Moderate	5	130	416.0
3	Moderate	Moderate	3	132	118.8
4	Very Low	Low	5	220	11.0
5	Low	High	3	95	42.8
6	Low	High	3	179	80.6
7	Low	Low	3	44	4.0
8	Moderate	Moderate	5	182	273.0
9	Low	Moderate	5	42	14.7
10	Low	High	5	131	98.3
11	High	Low	5	127	254.0
12	High	Low	5	153	306.0
13	High	High	5.5	36	198.0
14	High	Low	5.5	182	400.4
15	Moderate	High	5.5	185	814.0
16	High	High	5.5	167	918.5
17	Moderate	Moderate	6	87	156.6
18	Low	High	6	159	143.1
19	Low	Low	6	269	48.4

BEHI Number	BEHI Rating	NBS Rating	Study Bank Height (ft)	Study Bank Length (ft)	Predicted Volume of Erosion (ft^3/yr)
20	Low	Low	3	201	18.1
21	Very High	High	5.5	140	770.0
22	Moderate	High	6.5	219	1138.8
23	Moderate	Moderate	6.5	126	245.7
24	Moderate	Moderate	5	74	111.0
25	Moderate	High	6.5	99	514.8
26	Moderate	Moderate	4	228	273.6
27	Low	Moderate	3	173	36.3
28	Moderate	Moderate	5	208	312.0
29	Very Low	Low	4	77	3.1
30	Very High	High	6	256	1536.0
31	High	Moderate	6	131	503.0
32	High	Low	6	221	530.4
33	High	Low	6	183	439.2
34	High	Low	6	169	405.6
35	Moderate	Low	6	191	143.3
36	Very Low	Very High	6	110	42.9
37	High	Very High	6	281	2950.5
Total Phase 2 Mainstem				**5724**	**14282.9**

TABLE 3: LACROSSE COURT TRIBUTARY BEHI/NBS ASSESSMENT RESULTS AND PREDICTED VOLUME OF EROSION

BEHI Number	BEHI Rating	NBS Rating	Study Bank Height (ft)	Study Bank Length (ft)	Predicted Volume of Erosion (ft^3/yr)
1	Low	Low	5.5	42.00	1.64
2	Low	Low	3.7	42.00	3.53
3	Moderate	Extreme	3	17.00	89.76
4	Low	Very Low	5.5	17.00	0.36
5	Moderate	Extreme	1.5	19.00	159.60
6	High	Low	6.7	26.00	52.00
7	Moderate	Low	6.7	26.00	17.88
8	High	Extreme	3.6	24.00	222.00
9	High	Low	4.8	8.00	9.60
10	Moderate	Very High	4.9	26.00	143.00
11	Moderate	Low	6.6	26.00	4.88
12	High	High	3.8	10.00	67.00
13	High	Low	3.8	10.00	26.80
14	High	Moderate	3.3	45.00	103.68
15	Very High	Low	6.8	25.00	30.00

BEHI Number	BEHI Rating	NBS Rating	Study Bank Height (ft)	Study Bank Length (ft)	Predicted Volume of Erosion (ft^3/yr)
16	High	Moderate	4	20.00	62.72
17	High	High	4.1	25.00	165.00
18	High	Low	4.4	25.00	38.00
19	High	Moderate	6.6	37.00	89.98
20	High	Moderate	4.1	37.00	78.14
21	Very High	High	4.3	33.00	224.40
22	Very High	Moderate	3.6	33.00	84.48
23	High	Moderate	5.4	63.00	165.31
24	Very High	Moderate	4.4	63.00	177.41
25	High	High	4	28.00	184.80
26	High	Low	5.9	28.00	45.92
27	Very High	Moderate	4.4	45.00	123.84
28	Very High	High	3.9	24.00	86.40
29	High	High	3.7	22.00	118.80
30	High	Extreme	3.9	53.00	583.00
31	High	Very High	3.6	27.00	189.00
32	Very High	Very High	4.2	38.00	392.35
33	Very High	High	4.1	30.00	132.00
34	High	Extreme	4.1	24.00	234.00
35	Very High	High	4.5	15.00	55.50
36	Very High	Moderate	1	32.00	79.87
37	Moderate	Moderate	2.3	32.00	34.56
38	Very High	Extreme	2.7	15.00	157.50
39	High	Moderate	2.5	36.00	94.46
40	Very High	Moderate	4.5	36.00	94.46
41	Very High	High	5.3	8.00	36.00
42	Moderate	Low	4.3	22.00	2.75
43	Moderate	Low	4	14.00	4.03
44	High	Low	4	24.00	25.92
45	High	Low	3.8	24.00	24.00
46	High	Very High	1.5	17.00	133.88
47	Very High	Very High	4	14.00	129.85
48	High	Very High	5.5	19.00	142.98
49	Moderate	Low	3.7	19.00	9.50
50	High	Low	3	40.00	64.00
51	High	Low	5.5	40.00	60.80
52	Moderate	Low	1.5	12.00	2.25
53	Moderate	Moderate	6.7	22.00	26.40
Total Lacrosse Court Tributary				**1459**	**5286**

BULK DENSITY:

Bulk density is the mass of soil for a given volume. It is used to measure compaction. Sampling for bulk density and total nitrogen and total phosphorus concentration were collected throughout the project area with six sampling locations along the mainstem and two along the Lacrosse Court Tributary. A map of these sampling locations, along with laboratory results is included in Attachment B.

Site specific average bulk density along the Powells Creek Phase 2 main stem were found to be 83.24 lbs/ft^{3}while the average bulk density along the Lacrosse Court tributary were found to be 68.05 lbs/ft^3.

PREDICTED SEDIMENT LOAD

The predicted annual erosion volumes were converted to an annual sediment load in tons by multiplying by these site specific bulk density values and dividing by 2,000 as shown in Table 4.

TABLE 4: ANNUAL SEDIMENT LOADS

Project Reach	Total Volume of Erosion	Bulk Density (lbs/ft^3)	Total Sediment Load (TSS)	
	(ft^3/yr)		(lbs/yr)	(tons/yr)
Phase 2 Main Stem	14282.9	83.24	11,188,908.6	594.5
Lacrosse Court Tributary	5286.0	68.05	359,712.3	179.9

ADJUST PROJECT LENGTH TO ACCOUNT FOR HARD ARMORING PRACTICES

In the proposed Phase 2 main stem stream restoration design, riprap bank armoring is planned for meander bends subjected to high shear stress conditions, primarily in the upstream extents of the project. The total length requiring riprap bank armoring is approximately 555 feet or 7% of the total restored main stem bank length (3,605 linear feet of channel multiplied by 2 equals 7,210 total feet of restored banks). Because this falls below the 30% threshold for a practice under the "creditable with limits" category (described in the Updated Protocol 1), no adjustment is required.

No hard armoring practices are utilized in the Lacrosse Court Tributary stream restoration.

STEP 2. CONVERT STREAM BANK EROSION TO NUTRIENT LOADING

To estimate nutrient loading rates, the prevented sediment loading rates are multiplied by the average TP and TN concentrations in stream bank sediments. Nutrient concentrations are highly variable from site to site as indicated in the Updated Protocol 1. Because of the high variability, samples from each project reach were collected and analyzed for TN and TP concentrations. Samples were taken from the same locations as the bulk density samples and analyzed using the following methods:

The TN and TP concentrations were tested by University of Delaware (UD). The testing results provided by UD includes Total Phosphorus in each sample in mg/kg, and the percentage Total Nitrogen in each sample. The TN and TP values have been converted to lbs/ton. Testing results from UD and conversion calculations are included in Attachment B. The results are summarized in Table 5.

TABLE 5: AVERAGE NUTRIENT CONTENT LAB RESULTS

Project Reach	TN (lbs/ton)	TP (lbs/ton)
Phase 2 Main Stem	1.21	0.45
Lacrosse Court Tributary	1.68	0.59

Estimated annual nutrient loads for each project reach can be found by multiplying the annual sediment loads by the average nutrient content lab results, as shown in Table 6.

TABLE 6: SEDIMENT AND NUTRIENT LOAD REDUCTION

Project Reach	TSS (tons/yr)	TN (lbs/yr)	TP (lbs/yr)
Phase 2 Main Stem	594.5	719.3	267.5
Lacrosse Court Tributary	179.9	302.2	106.1

STEP 3. ESTIMATE STREAM RESTORATION EFFICIENCY

An efficiency factor should be applied to account for the fact that a project will not be 100% effective in preventing streambank erosion and that some sediment transport occurs naturally in a stable stream channel. The Updated Protocol 1 recommends using a 50% pollution efficiency factor. For comparison, load reductions with different efficiency factors are also calculated. The results are summarized in Table 7 below.

TABLE 7: SEDIMENT AND NUTRIENT LOAD REDUCTION WITH EFFICIENCY FACTORS

Project Reach	***Pollutant***	***Load Reductions with Efficiency Factors***					
		100% Efficiency	***90% Efficiency***	***80% Efficiency***	***70% Efficiency***	***60% Efficiency***	***50% Efficiency***
Phase 2 Main Stem	TSS (tons/yr)	594.5	535.0	475.6	416.1	356.7	**297.2**
	TN (lbs/yr)	719.3	647.4	575.4	503.5	431.6	**359.6**
	TP (lbs/yr)	267.5	240.8	214.0	187.3	160.5	**133.8**
Lacrosse Court Tributary	TSS (tons/yr)	179.86	161.87	143.88	125.90	107.91	**89.9**
	TN (lbs/yr)	302.16	271.94	241.73	211.51	181.29	**151.1**
	TP (lbs/yr)	106.11	95.50	84.89	74.28	63.67	**53.1**

3.0 DELIVERY FACTORS

In the new Phase 6 Chesapeake Bay Watershed Model, calculated nutrient and sediment reductions are reported to the state without applying a sediment delivery factor. However, some practitioners and localities may wish to know the sediment delivery rate for planning purposes. The Updated Protocol 1 provides some guidance on a step by step method to estimate the unique sediment delivery factor for the land-river segment in which a project resides (Appendix B of Updated Protocol 1). Following the steps, both project reaches are identified within Land River Segment "N51153PL0_5491_0000". The resulting Sediment and nutrient Delivery Factors are listed in Table 8. More information can be found in Attachment C.

TABLE 8: SEDIMENT AND NUTRIENT DELIVERY FACTORS

Pollutant	***Sediment and Delivery Factor***
TN	0.722
TP	0.809
TSS	0.409

As stated above, these delivery factors are not required per the Updated Protocol and the Phase 6 Model: They are presented for illustration purposes and project records only. The resulting sediment and nutrient reductions when applying these delivery factors are presented in Table 9.

TABLE 9: SEDIMENT AND NUTRIENT LOAD REDUCTION WITH EFFICIENCY FACTORS AND SDF APPLIED

Project Reach	***Pollutant***	***Load Reductions with Efficiency Factors and SDF Applied***					
		100% Efficiency	***90% Efficiency***	***80% Efficiency***	***70% Efficiency***	***60% Efficiency***	***50% Efficiency***
Phase 2 Main Stem	TSS (tons/yr)	243.1	218.8	194.5	170.2	145.9	121.6
	TN (lbs/yr)	519.3	467.4	415.5	363.5	311.6	259.7
	TP (lbs/yr)	216.4	194.8	173.1	151.5	129.8	108.2
Lacrosse Court Tributary	TSS (tons/yr)	73.6	66.2	58.8	51.5	44.1	36.8
	TN (lbs/yr)	218.2	196.3	174.5	152.7	130.9	109.1
	TP (lbs/yr)	85.8	77.3	68.7	60.1	51.5	42.9

4.0 DEFAULT REMOVAL RATES

The original expert panel provided default nutrient and sediment removal rates per linear foot of stream restoration as shown in Table 10. These removal rates were used by the project team and Prince William County during the planning phases of the Powells Creek stream restoration project.

TABLE 10: DEFAULT NUTRIENT AND SEDIMENT REDUCTIONS PER LINEAR FOOT OF QUALIFYING STREAM RESTORATION (LB/FT/YR)

	TN	TP	TSS
Reduction	0.075	0.068	248

Applying these default values to the total length of restoration results in the following default nutrient and sediment removal rates:

TABLE 11: APPLIED DEFAULT NUTRIENT AND SEDIMENT REDUCTIONS

Project Reach	***Linear Foot of Restoration***	***Pollutant***	***Default Load Reductions***
Phase 2 Main Stem	3,605	TSS (tons/yr)	447.0
		TN (lbs/yr)	270.4
		TP (lbs/yr)	245.1
Lacrosse Court Tributary	720	TSS (tons/yr)	89.3
		TN (lbs/yr)	54.0
		TP (lbs/yr)	49.0
Combined Project Totals	**4,325**	**TSS (tons/yr)**	**536.3**
		TN (lbs/yr)	**324.4**
		TP (lbs/yr)	**294.1**
Phase 2 End Pipe Exposure *	300	TSS (tons/yr)	37.2
		TN (lbs/yr)	22.5
		TP (lbs/yr)	20.4
Combined Project Totals *	**4625**	**TSS (tons/yr)**	**573.5**
		TN (lbs/yr)	**346.9**
		TP (lbs/yr)	**314.5**

***Calculated by PWC using the same methodology. See Appendix A**

5.0 CONCLUSION

Table 12 summarizes the TMDL credits which may be claimed from the proposed Powells Creek Phase 2 main stem and Lacrosse Court Tributary stream restoration projects. These values are based on site specific data for bulk density, total nitrogen, total phosphorus, and do not incorporate sediment and nutrient delivery factors.

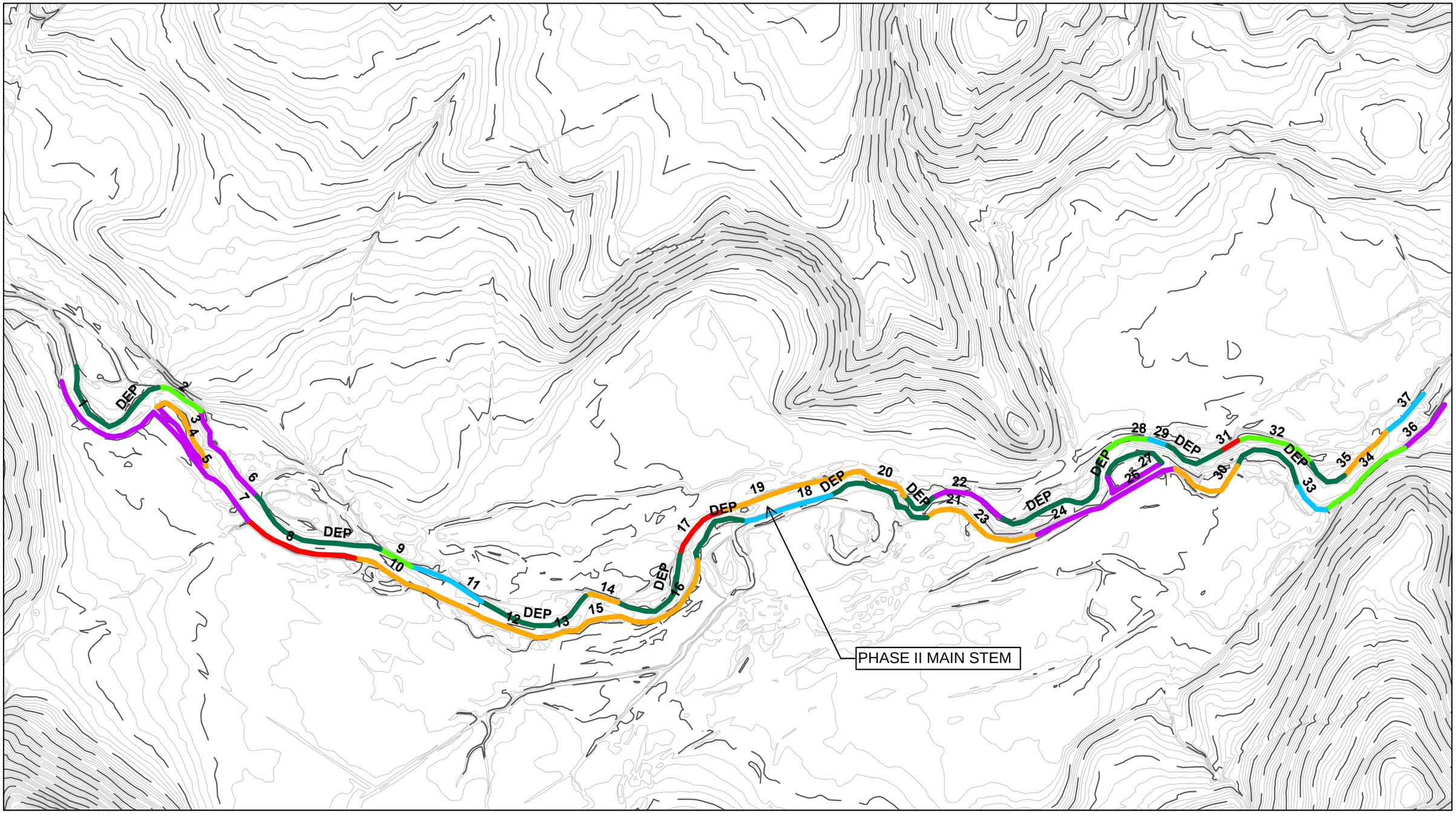
TABLE 12: SEDIMENT AND NUTRIENT LOAD REDUCTION

Project Reach	***Pollutant***	***Load Reductions with Efficiency Factors***					
		100% Efficiency	***90% Efficiency***	***80% Efficiency***	***70% Efficiency***	***60% Efficiency***	***50% Efficiency***
Phase 2 Main Stem	TSS (tons/yr)	243.1	218.8	194.5	170.2	145.9	121.6
	TN (lbs/yr)	519.3	467.4	415.5	363.5	311.6	259.7
	TP (lbs/yr)	216.4	194.8	173.1	151.5	129.8	108.2
Lacrosse Court Tributary	TSS (tons/yr)	73.6	66.2	58.8	51.5	44.1	36.8
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Combined Project Totals	**TSS (tons/yr)**	**316.7**	**285**	**253.3**	**221.7**	**190**	**158.4**
	TN (lbs/yr)	**737.5**	**663.7**	**590**	**516.2**	**442.5**	**368.8**
	TP (lbs/yr)	**302.2**	**272.1**	**241.8**	**6**	**181.3**	**151.1**
Phase 2 End Pipe Exposure *	TSS (tons/yr)	56.7	51.0	45.4	39.7	34.02	28.35
	TN (lbs/yr)	121.2	109.1	97.0	84.8	72.7	60.6
	TP (lbs/yr)	50.5	45.5	40.4	35.4	30.3	25.3
Amended Project Totals *	**TSS (tons/yr)**	**373.4**	**336**	**298.7**	**261.4**	**224.0**	**186.7**
	TN (lbs/yr)	**858.7**	**772.8**	**687.0**	**601.1**	**515.2**	**429.4**
	TP (lbs/yr)	**352.7**	**317.4**	**282.2**	**246.9**	**211.6**	**176.4**

***Calculated by PWC using the same methodology. See Appendix A**

ATTACHMENT A
BEHI/NBS DOCUMENTATION

MAIN STEM DATA



wsp
1 EAST PRATT STREET
SUITE 300
BALTIMORE, MD 21202
(410) 727-5050

Legend

- Depositional Area
- Very Low
- Low
- Moderate
- High
- Very High
- Major Contours
- Minor Contours

0 50 100 200 300 400 Feet

1 in = 200 ft

POWELLS CREEK PHASE II & LACROSSE TRIBUTARY

BANK EROSION HAZARD INDEX (BEHI) MAP

CONTRACT NO.	SHEET 1 OF 1



Figure 1: BEHI-1



Figure 2: BEHI-2



Figure 3: BEHI-3



Figure 4: BEHI-4



Figure 5: BEHI-5



Figure 6: BEHI-6



Figure 7: BEHI-7



Figure 8: BEHI-8



Figure 9: BEHI-9



Figure 10: BEHI-10



Figure 11: BEHI-11



Figure 12: BEHI-12



Figure 13: BEHI-13



Figure 14: BEHI-14



Figure 15: BEHI-15



Figure 16: BEHI-16



Figure 17: BEHI-17



Figure 18: BEHI-18



Figure 19: BEHI-19



Figure 20: BEHI-20



Figure 21: BEHI-21



Figure 22: BEHI-22



Figure 23: BEHI-23



Figure 24: BEHI-24



Figure 25: BEHI-25



Figure 26: BEHI-26



Figure 27: BEHI-27



Figure 28: BEHI-28



Figure 29: BEHI-29



Figure 30: BEHI-30



Figure 31: BEHI-31



Figure 32: BEHI-32



Figure 33: BEHI-33



Figure 34: BEHI-34



Figure 35: BEHI-35



Figure 36: BEHI-36

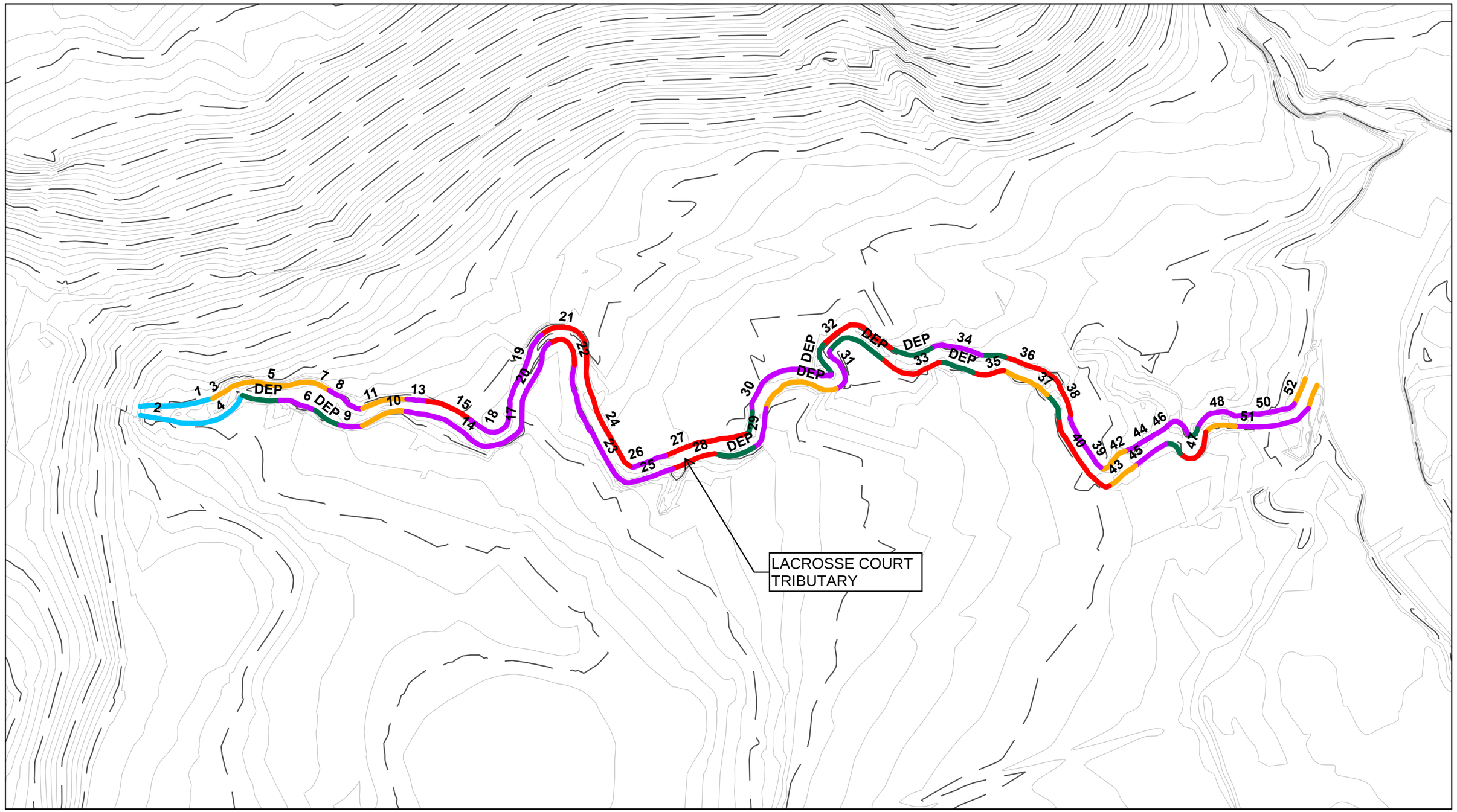


Figure 37: BEHI-37

BEHI_ID	L_R	Length	Study Bank Height A	Bankfull Height B	Study Bank Height to Bankfull Height A/B=C	BEHI INDEX	Root Depth D	Root Depth to Study Bank Height D/A=E	BEHI INDEX	Root Density (%) F	Weigthed Root Density F/E=G	BEHI INDEX	Bank Angle H	BEHI INDEX	Surface Protection I	BEHI INDEX	Bank Material Adjustment	Bank Material Adjustment Notes	Stratification Adjustment	Total Score	BEHI Category	Near-Bank Stress Method I (NBS)
1		117.0	3	2.5	1.2	4.00	2	0.7	3.1	80	53	4.05	45	3.17	75	2.32				17	Low	Low
2		130.0	5	2.5	2.0	7.90	1	0.2	7.22	50	10	8.44	80	5.90	10	9.00				38	High	Moderate
3		132.0	3	2.5	1.2	4.00	2	0.7	3.09	50	33	5.64	50	3.41	50	4.32				20	Moderate	Moderate
4		220.0	5	2.5	2.0	7.90	3	0.6	3.41	60	36	5.43	75	5.40	80	1.90	-15	Bedrock		9	Very Low	Low
5		95.0	3	2.5	1.2	4.00	2	0.7	3.09	60	40	5.11	45	3.17	50	4.32				20	Low	High
6		179.0	3	2.5	1.2	4.00	2	0.7	3.09	50	33	5.64	45	3.17	100	1.00	-5	Boulders		12	Low	High
7		44.0	3	2.5	1.2	4.00	2	0.7	3.09	60	40	5.11	45	3.17	50	4.32				20	Low	Low
8		182.0	5	2.5	2.0	7.90	3	0.6	3.41	50	30	5.90	80	5.90	50	4.32				27	Moderate	Moderate
9		42.0	5	2.5	2.0	7.90	3.5	0.7	2.93	75	53	4.12	45	3.17	100	1.00				19	Low	Moderate
10		131.0	5	2.5	2.0	7.90	3	0.6	3.41	75	45	4.71	45	3.17	90	1.45	-5	Concrete Debris		16	Low	High
11		127.0	5	2.5	2.0	7.90	2	0.4	4.90	20	8	8.67	80	5.90	20	7.22				35	High	Low
12		153.0	5	2.5	2.0	7.90	2	0.4	4.90	20	8	8.67	80	5.90	20	7.22				35	High	Low
13		36.0	5.5	2.5	2.2	8.14	2.5	0.5	4.35	75	34	5.58	90	7.90	40	5.11				31	High	High
14		182.0	5.5	2.5	2.2	8.14	2	0.4	5.26	75	27	6.23	90	7.90	40	5.11				33	High	Low
15		185.0	5.5	2.5	2.2	8.14	4	0.7	2.79	75	55	3.94	90	7.90	50	4.32				27	Moderate	High
16		167.0	5.5	2.5	2.2	8.14	3	0.5	3.68	25	14	8.04	90	7.90	20	7.22				35	High	High
17		87.0	6	2.5	2.4	8.43	6	1.0	1.00	50	50	4.32	70	4.90	60	3.50				22	Moderate	Moderate
18		159.0	6	2.5	2.4	8.43	6	1.0	1.00	75	75	2.32	70	4.90	75	2.32				19	Low	High
19		269.0	6	2.5	2.4	8.43	6	1.0	1.00	75	75	2.32	70	4.90	75	2.32				19	Low	Low
20		201.0	3	2.5	1.2	4.00	3	1.0	1.00	75	75	2.32	45	3.17	60	3.50				14	Low	Low
21		140.0	5.5	2.5	2.2	8.14	0.5	0.1	8.55	5	0	10.00	90	7.90	0	10.00				45	Very High	High
22		219.0	6.5	2.5	2.6	8.71	5	0.8	2.59	75	58	3.69	80	5.90	60	3.50				24	Moderate	High
23		126.0	6.5	2.5	2.6	8.71	5	0.8	2.59	75	58	3.69	80	5.90	60	3.50				24	Moderate	Moderate
24		74.0	5	2.5	2.0	7.90	4	0.8	2.44	80	64	3.19	80	5.90	80	1.90				21	Moderate	Moderate
25		99.0	6.5	2.5	2.6	8.71	5	0.8	2.59	75	58	3.69	80	5.90	60	3.50				24	Moderate	High
26		228.0	4	2.5	1.6	6.00	2	0.5	3.90	50	25	6.54	45	3.17	40	5.11				25	Moderate	Moderate
27		173.0	3	2.5	1.2	4.00	2	0.7	3.09	75	50	4.32	60	3.90	75	2.32				18	Low	Moderate
28		208.0	5	2.5	2.0	7.90	2	0.4	4.90	75	30	5.90	75	5.40	40	5.11				29	Moderate	Moderate
29		77.0	4	2.5	1.6	6.00	4	1.0	1.00	75	75	2.32	27	2.29	100	1.00	-5	Concrete Debris		8	Very Low	Low
30		256.0	6	2.5	2.4	8.43	1	0.2	7.67	20	3	10.00	80	5.90	10	9.00				41	Very High	High
31		131.0	6	2.5	2.4	8.43	2.5	0.4	4.73	75	31	5.80	70	4.90	20	7.22				31	High	Moderate
32		221.0	6	2.5	2.4	8.43	2	0.3	5.57	40	13	8.07	70	4.90	15	8.00				35	High	Low
33		183.0	6	2.5	2.4	8.43	3	0.5	3.90	30	15	7.90	70	4.90	20	7.22				32	High	Low
34		169.0	6	2.5	2.4	8.43	3	0.5	3.90	30	15	7.90	70	4.90	20	7.22				32	High	Low
35		191.0	6	2.5	2.4	8.43	4	0.7	3.09	40	27	6.32	60	3.90	50	4.32				26	Moderate	Low
36		110.0	6	2.5	2.4	8.43	1	0.2	7.67	20	3	10.00	90	7.90	100	1.00	-30	Bedrock		5	Very Low	Very High
37		281.0	6	2.5	2.4	8.43	1.5	0.3	6.54	20	5	9.00	80	5.90	15	8.00				38	High	Very High

Project Name	Powells Creek Phase 2 - Main Stem Channel											
Feature Feature I.D. (Bank., Headcut or Deposition I.D.)	Length, ft (Bank or deposition)	Height, ft (Bank or Headcut)	BEHI Rating	NBS Rating	Predicted Rate of Bank Erosion (ft/year)	Predicted Erosion Amount (ft^3/year)	Predicted Erosion Amount (tons/year)	Predicted Erosion Rate (tons/year/ft)	Estimated TN (lbs/yr) TMDL Reduction	Estimated TP (lbs/yr) TMDL Reduction	Estimated TSS (tons/yr) TMDL Reduction	Comments
1	117.00	3	Low	Low	0.03	10.53	0.44	0.00	0.27	0.10	0.22	
2	130.00	5	High	Moderate	0.64	416.00	17.31	0.13	10.47	3.90	8.66	
3	132.00	3	Moderate	Moderate	0.30	118.80	4.94	0.04	2.99	1.11	2.47	
4	220.00	5	Very Low	Low	0.01	11.00	0.46	0.00	0.28	0.10	0.23	
5	95.00	3	Low	High	0.15	42.75	1.78	0.02	1.08	0.40	0.89	
6	179.00	3	Low	High	0.15	80.55	3.35	0.02	2.03	0.75	1.68	
7	44.00	3	Low	Low	0.03	3.96	0.16	0.00	0.10	0.04	0.08	
8	182.00	5	Moderate	Moderate	0.30	273.00	11.36	0.06	6.87	2.56	5.68	
9	42.00	5	Low	Moderate	0.07	14.70	0.61	0.01	0.37	0.14	0.31	
10	131.00	5	Low	High	0.15	98.25	4.09	0.03	2.47	0.92	2.04	
11	127.00	5	High	Low	0.40	254.00	10.57	0.08	6.40	2.38	5.29	
12	153.00	5	High	Low	0.40	306.00	12.74	0.08	7.71	2.87	6.37	
13	36.00	5.5	High	High	1.00	198.00	8.24	0.23	4.99	1.85	4.12	
14	182.00	5.5	High	Low	0.40	400.40	16.66	0.09	10.08	3.75	8.33	
15	185.00	5.5	Moderate	High	0.80	814.00	33.88	0.18	20.50	7.62	16.94	
16	167.00	5.5	High	High	1.00	918.50	38.23	0.23	23.13	8.60	19.11	
17	87.00	6	Moderate	Moderate	0.30	156.60	6.52	0.07	3.94	1.47	3.26	
18	159.00	6	Low	High	0.15	143.10	5.96	0.04	3.60	1.34	2.98	
19	269.00	6	Low	Low	0.03	48.42	2.02	0.01	1.22	0.45	1.01	
20	201.00	3	Low	Low	0.03	18.09	0.75	0.00	0.46	0.17	0.38	
21	140.00	5.5	Very High	High	1.00	770.00	32.05	0.23	19.39	7.21	16.02	
22	219.00	6.5	Moderate	High	0.80	1138.80	47.40	0.22	28.68	10.66	23.70	
23	126.00	6.5	Moderate	Moderate	0.30	245.70	10.23	0.08	6.19	2.30	5.11	
24	74.00	5	Moderate	Moderate	0.30	111.00	4.62	0.06	2.79	1.04	2.31	
25	99.00	6.5	Moderate	High	0.80	514.80	21.43	0.22	12.96	4.82	10.71	
26	228.00	4	Moderate	Moderate	0.30	273.60	11.39	0.05	6.89	2.56	5.69	
27	173.00	3	Low	Moderate	0.07	36.33	1.51	0.01	0.91	0.34	0.76	
28	208.00	5	Moderate	Moderate	0.30	312.00	12.99	0.06	7.86	2.92	6.49	
29	77.00	4	Very Low	Low	0.01	3.08	0.13	0.00	0.08	0.03	0.06	
30	256.00	6	Very High	High	1.00	1536.00	63.93	0.25	38.68	14.38	31.96	
31	131.00	6	High	Moderate	0.64	503.04	20.94	0.16	12.67	4.71	10.47	
32	221.00	6	High	Low	0.40	530.40	22.08	0.10	13.36	4.97	11.04	
33	183.00	6	High	Low	0.40	439.20	18.28	0.10	11.06	4.11	9.14	
34	169.00	6	High	Low	0.40	405.60	16.88	0.10	10.21	3.80	8.44	
35	191.00	6	Moderate	Low	0.13	143.25	5.96	0.03	3.61	1.34	2.98	
36	110.00	6	Very Low	Very High	0.07	42.90	1.79	0.02	1.08	0.40	0.89	
37	281.00	6	High	Very High	1.75	2950.50	122.80	0.44	74.29	27.63	61.40	
TOTAL OF ALL GRIDS	**5724.0**	**N/A**	**N/A**	**N/A**	**N/A**	**14282.9**	**594.5**	**N/A**	**359.6**	**133.8**	**297.2**	

LACROSSE COURT TRIBUTARY DATA



1 EAST PRATT STREET
SUITE 300
BALTIMORE, MD 21202
(410) 727-5050

Legend

- Depositional Area
- Very Low
- Low
- Moderate
- High
- Very High
- Major Contours
- Minor Contours

0 12.5 25 50 75 100 Feet

1 in = 50 ft

POWELLS CREEK PHASE II & LACROSSE TRIBUTARY

BANK EROSION HAZARD INDEX (BEHI) MAP

CONTRACT NO.	SHEET 1 OF 1



Figure 1: BEHI-1



Figure 2: BEHI-2



Figure 3: BEHI-3



Figure 4: BEHI-4



Figure 5: BEHI-5



Figure 6: BEHI-6



Figure 7: BEHI-7



Figure 8: BEHI-8



Figure 9: BEHI-9



Figure 10: BEHI-10



Figure 11: BEHI-11



Figure 12: BEHI-12



Figure 13: BEHI-13



Figure 14: BEHI-14



Figure 15: BEHI-15



Figure 16: BEHI-16



Figure 17: BEHI-17



Figure 18: BEHI-18



Figure 19: BEHI-19



Figure 20: BEHI-20



Figure 21: BEHI-21



Figure 22: BEHI-22



Figure 23: BEHI-23



Figure 24: BEHI-24



Figure 25: BEHI-25



Figure 26: BEHI-26

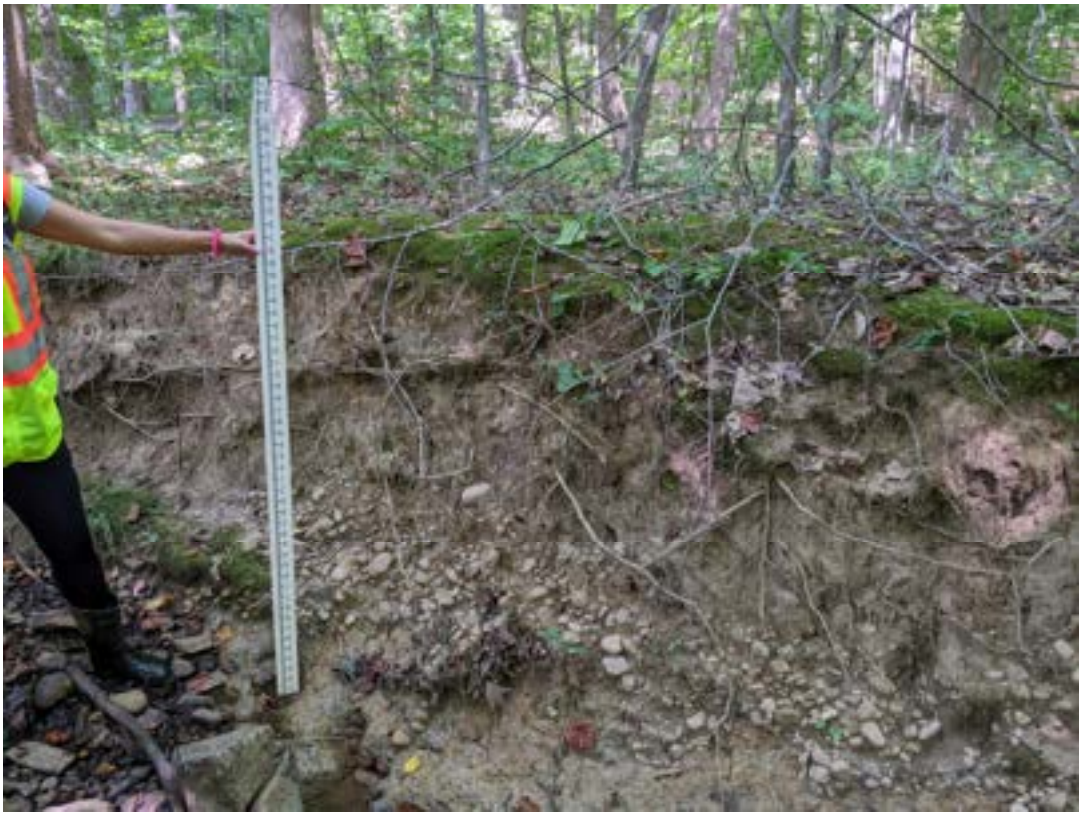


Figure 27: BEHI-27



Figure 28: BEHI-28



Figure 29: BEHI-29



Figure 30: BEHI-30



Figure 31: BEHI-31



Figure 32: BEHI-32



Figure 33: BEHI-33



Figure 34: BEHI-34



Figure 35: BEHI-35



Figure 36: BEHI-36



Figure 37: BEHI-37



Figure 38: BEHI-38



Figure 39: BEHI-39



Figure 40: BEHI-40



Figure 41: BEHI-41



Figure 42: BEHI-42



Figure 43: BEHI-43



Figure 44: BEHI-44



Figure 45: BEHI-45



Figure 46: BEHI-46



Figure 47: BEHI-47



Figure 48: BEHI-48



Figure 49: BEHI-49



Figure 50: BEHI-50



Figure 51: BEHI-51



Figure 52: BEHI-52



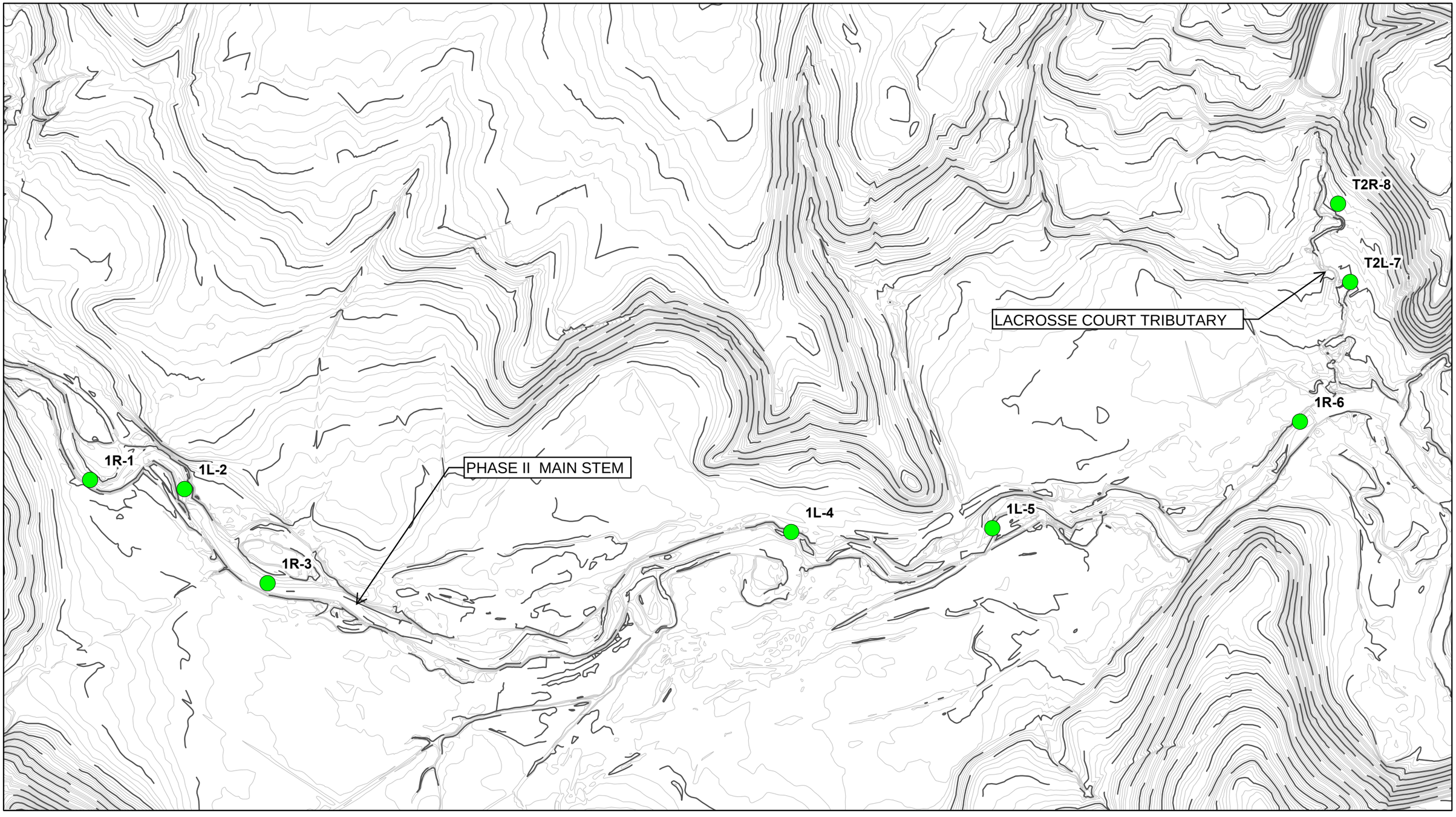
Figure 53: BEHI-53

BEHI_ID	L_R			Length	Study Bank Height A	Bankfull Height B	Study Bank Height to Bankfull Height A/B=C	BEHI INDEX	Root Depth D	Root Depth to Study Bank Height D/A=E	BEHI INDEX	Root Density (%) F	Weigthed Root Density F/E=G	BEHI INDEX	Bank Angle H	BEHI INDEX	Surface Protection I	BEHI INDEX	Bank Material Adjustment	Bank Material Adjustment Notes	Stratification Adjustment	Total Score	BEHI Category	Near-Bank Stress Method I (NBS)
1	L	0	42	42.0	1.3	1	1.3	4.63	1	0.8	2.6	25	19	7.33	27	2.29	100	1.00	-7	Boulders		11	Low	Low
2	R	0	42	42.0	2.8	1	2.8	9.00	1	0.4	5.33	50	18	7.51	45	3.17	100	1.00	-7	Boulders		19	Low	Low
3	R	42	59	17.0	4.4	1	4.4	10.00	3.5	0.8	2.46	75	60	3.53	60	3.90	25	6.54				26	Moderate	Extreme
4	L	42	59	17.0	1.4	1	1.4	5.27	1	0.7	2.86	25	18	7.51	27	2.29	75	2.32	-7	Boulders		13	Low	Very Low
5	L	59	78	19.0	7	1	7.0	10.00	6	0.9	2.16	75	64	3.16	75	5.40	25	6.54				27	Moderate	Extreme
6	R	78	104	26.0	5	1	5.0	10.00	2.5	0.5	3.90	50	25	6.54	65	4.40	10	9.00				34	High	Low
7	L	78	104	26.0	5.5	1	5.5	10.00	3	0.5	3.68	50	27	6.23	60	3.90	30	5.90				30	Moderate	Low
8	L	104	128	24.0	3.7	1	3.7	10.00	3	0.8	2.39	75	61	3.44	100	8.32	25	6.54				31	High	Extreme
9	R	120	128	8.0	3	1	3.0	10.00	1	0.3	5.57	25	8	8.63	20	1.90	25	6.54				33	High	Low
10	R	128	154	26.0	5.5	1	5.5	10.00	5	0.9	1.82	50	45	4.68	75	5.40	30	5.90				28	Moderate	Very High
11	L	128	154	26.0	1.5	1	1.5	5.90	1	0.7	3.09	25	17	7.67	18	1.81	50	4.32				23	Moderate	Low
12	R	154	164	10.0	6.7	1	6.7	10.00	4	0.6	3.43	75	45	4.73	120	10.00	50	4.32				32	High	High
13	L	154	164	10.0	6.7	1	6.7	10.00	2.5	0.4	5.17	50	19	7.40	100	8.32	40	5.11				36	High	Low
14	R	164	209	45.0	3.6	1	3.6	10.00	2	0.6	3.63	50	28	6.17	80	5.90	50	4.32				30	High	Moderate
15	L	164	189	25.0	4.8	1	4.8	10.00	2	0.4	4.73	25	10	8.40	100	8.32	10	9.00				40	Very High	Low
16	L	189	209	20.0	4.9	1	4.9	10.00	2	0.4	4.82	25	10	8.42	120	10.00	40	5.11				38	High	Moderate
17	R	209	234	25.0	6.6	1	6.6	10.00	5.5	0.8	2.28	50	42	4.98	90	7.90	30	5.90				31	High	High
18	L	209	234	25.0	3.8	1	3.8	10.00	1.5	0.4	4.95	25	10	8.46	33	2.58	25	6.54				33	High	Low
19	L	234	271	37.0	3.8	1	3.8	10.00	2	0.5	3.77	25	13	8.09	100	8.32	20	7.22				37	High	Moderate
20	R	234	271	37.0	3.3	1	3.3	10.00	1.5	0.5	4.35	25	11	8.29	90	7.90	20	7.22				38	High	Moderate
21	L	271	304	33.0	6.8	1	6.8	10.00	1.5	0.2	6.94	25	6	8.94	90	7.90	5	10.00				44	Very High	High
22	R	271	304	33.0	4	1	4.0	10.00	2	0.5	3.90	25	13	8.17	100	8.32	5	10.00				40	Very High	Moderate
23	R	304	367	63.0	4.1	1	4.1	10.00	2	0.5	4.02	50	24	6.63	100	8.32	5	10.00				39	High	Moderate
24	L	304	367	63.0	4.4	1	4.4	10.00	1	0.2	6.85	25	6	8.92	80	5.90	5	10.00				42	Very High	Moderate
25	R	367	395	28.0	6.6	1	6.6	10.00	4	0.6	3.38	50	30	5.88	80	5.90	5	10.00				35	High	High
26	L	367	395	28.0	4.1	1	4.1	10.00	1.5	0.4	5.24	25	9	8.54	80	5.90	5	10.00				40	High	Low
27	L	395	440	45.0	4.3	1	4.3	10.00	1	0.2	6.78	25	6	8.91	90	7.90	5	10.00				44	Very High	Moderate
28	R	395	419	24.0	3.6	1	3.6	10.00	1	0.3	6.17	25	7	8.78	120	10.00	5	10.00				45	Very High	High
29	R	440	462	22.0	5.4	1	5.4	10.00	3	0.6	3.63	50	28	6.17	110	8.68	25	6.54				35	High	High
30	L	462	515	53.0	4.4	1	4.4	10.00	3	0.7	3.01	75	51	4.23	120	10.00	5	10.00				37	High	Extreme
31	R	515	542	27.0	4	1	4.0	10.00	2	0.5	3.90	50	25	6.54	90	7.90	5	10.00				38	High	Very High
32	L	542	580	38.0	5.9	1	5.9	10.00	2	0.3	5.51	25	8	8.61	90	7.90	5	10.00				42	Very High	Very High
33	R	580	610	30.0	4.4	1	4.4	10.00	1.5	0.3	5.49	50	17	7.62	110	8.68	5	10.00				42	Very High	High
34	L	610	634	24.0	3.9	1	3.9	10.00	3	0.8	2.59	50	38	5.23	110	8.68	5	10.00				36	High	Extreme
35	R	634	649	15.0	3.7	1	3.7	10.00	2	0.5	3.70	25	14	8.05	110	8.68	5	10.00				40	Very High	High
36	L	649	681	32.0	3.9	1	3.9	10.00	1.5	0.4	5.05	25	10	8.49	100	8.32	10	9.00				41	Very High	Moderate
37	R	649	681	32.0	3.6	1	3.6	10.00	3	0.8	2.28	50	42	4.98	80	5.90	50	4.32				27	Moderate	Moderate
38	L	681	696	15.0	4.2	1	4.2	10.00	2	0.5	4.14	25	12	8.23	110	8.68	5	10.00				41	Very High	Extreme
39	L	696	732	36.0	4.1	1	4.1	10.00	2.5	0.6	3.37	50	30	5.86	80	5.90	20	7.22				32	High	Moderate
40	R	696	732	36.0	4.1	1	4.1	10.00	1.5	0.4	5.24	25	9	8.54	90	7.90	10	9.00				41	Very High	Moderate
41	R	732	740	8.0	4.5	1	4.5	10.00	1.5	0.3	5.57	25	8	8.63	110	8.68	10	9.00				42	Very High	High
42	L	732	754	22.0	1	1	1.0	1.00	0.1	0.1	8.44	1	0	10.00	14	1.63	0	0				21	Moderate	Low
43	R	740	754	14.0	2.3	1	2.3	8.29	0.1	0.0	10.00	1	0	10.00	14	1.63	0	0				30	Moderate	Low
44	L	754	778	24.0	2.7	1	2.7	8.86	1	0.4	5.20	25	9	8.53	27	2.29	10	9.00				34	High	Low
45	R	754	778	24.0	2.5	1	2.5	8.57	1	0.4	4.90	25	10	8.44	18	1.81	25	6.54				30	High	Low
46	L	778	795	17.0	4.5	1	4.5	10.00	1.5	0.3	5.57	25	8	8.63	45	3.17	10	9.00				36	High	Very High
47	R	795	809	14.0	5.3	1	5.3	10.00	2	0.4	5.13	25	9	8.51	100	8.32	5	10.00				42	Very High	Very High
48	L	809	828	19.0	4.3	1	4.3	10.00	2	0.5	4.25	25	12	8.26	80	5.90	5	10.00				38	High	Very High
49	R	809	828	19.0	4	1	4.0	10.00	1	0.3	6.54	25	6	8.86	18	1.81	70	2.71				30	Moderate	Low
50	L	828	868	40.0	4	1	4.0	10.00	1	0.3	6.54	25	6	8.86	75	5.40	50	4.32				35	High	Low
51	R	828	868	40.0	3.8	1	3.8	10.00	1	0.3	6.36	25	7	8.82	45	3.17	50	4.32				33	High	Low
52	L	868	880	12.0	1.5	1	1.5	5.90	1	0.7	3.09	25	17	7.67	18	1.81	30	5.90				24	Moderate	Low
53	R	858	880	22.0	4	1	4.0	10.00	4	1.0	1.00	75	75	2.32	90	7.90	90	1.45				23	Moderate	Moderate

Project Name	Powells Creek Phase 2 - Lacrosse Court Tributary											
Feature Feature I.D. (Bank., Headcut or Deposition I.D.)	Length, ft (Bank or deposition)	Height, ft (Bank or Headcut)	BEHI Rating	NBS Rating	Predicted Rate of Bank Erosion (ft/year)	Predicted Erosion Amount (ft^3/year)	Predicted Erosion Amount (tons/year)	Predicted Erosion Rate (tons/year/ft)	Estimated TN (lbs/yr) TMDL Reduction	Estimated TP (lbs/yr) TMDL Reduction	Estimated TSS (tons/yr) TMDL Reduction	Comments
1	42.00	1.3	Low	Low	0.03	1.64	0.06	0.00	0.05	0.02	0.03	
2	42.00	2.8	Low	Low	0.03	3.53	0.12	0.00	0.10	0.04	0.06	
3	17.00	4.4	Moderate	Extreme	1.20	89.76	3.05	0.18	2.57	0.90	1.53	
4	17.00	1.4	Low	Very Low	0.02	0.36	0.01	0.00	0.01	0.00	0.01	
5	19.00	7	Moderate	Extreme	1.20	159.60	5.43	0.29	4.56	1.60	2.72	
6	26.00	5	High	Low	0.40	52.00	1.77	0.07	1.49	0.52	0.88	
7	26.00	5.5	Moderate	Low	0.13	17.88	0.61	0.02	0.51	0.18	0.30	
8	24.00	3.7	High	Extreme	2.50	222.00	7.55	0.31	6.34	2.23	3.78	
9	8.00	3	High	Low	0.40	9.60	0.33	0.04	0.27	0.10	0.16	
10	26.00	5.5	Moderate	Very High	1.00	143.00	4.87	0.19	4.09	1.44	2.43	
11	26.00	1.5	Moderate	Low	0.13	4.88	0.17	0.01	0.14	0.05	0.08	
12	10.00	6.7	High	High	1.00	67.00	2.28	0.23	1.91	0.67	1.14	
13	10.00	6.7	High	Low	0.40	26.80	0.91	0.09	0.77	0.27	0.46	
14	45.00	3.6	High	Moderate	0.64	103.68	3.53	0.08	2.96	1.04	1.76	
15	25.00	4.8	Very High	Low	0.25	30.00	1.02	0.04	0.86	0.30	0.51	
16	20.00	4.9	High	Moderate	0.64	62.72	2.13	0.11	1.79	0.63	1.07	
17	25.00	6.6	High	High	1.00	165.00	5.61	0.22	4.72	1.66	2.81	
18	25.00	3.8	High	Low	0.40	38.00	1.29	0.05	1.09	0.38	0.65	
19	37.00	3.8	High	Moderate	0.64	89.98	3.06	0.08	2.57	0.90	1.53	
20	37.00	3.3	High	Moderate	0.64	78.14	2.66	0.07	2.23	0.78	1.33	
21	33.00	6.8	Very High	High	1.00	224.40	7.64	0.23	6.41	2.25	3.82	
22	33.00	4	Very High	Moderate	0.64	84.48	2.87	0.09	2.41	0.85	1.44	
23	63.00	4.1	High	Moderate	0.64	165.31	5.62	0.09	4.72	1.66	2.81	
24	63.00	4.4	Very High	Moderate	0.64	177.41	6.04	0.10	5.07	1.78	3.02	
25	28.00	6.6	High	High	1.00	184.80	6.29	0.22	5.28	1.85	3.14	
26	28.00	4.1	High	Low	0.40	45.92	1.56	0.06	1.31	0.46	0.78	
27	45.00	4.3	Very High	Moderate	0.64	123.84	4.21	0.09	3.54	1.24	2.11	
28	24.00	3.6	Very High	High	1.00	86.40	2.94	0.12	2.47	0.87	1.47	
29	22.00	5.4	High	High	1.00	118.80	4.04	0.18	3.40	1.19	2.02	
30	53.00	4.4	High	Extreme	2.50	583.00	19.84	0.37	16.66	5.85	9.92	
31	27.00	4	High	Very High	1.75	189.00	6.43	0.24	5.40	1.90	3.22	
32	38.00	5.9	Very High	Very High	1.75	392.35	13.35	0.35	11.21	3.94	6.67	
33	30.00	4.4	Very High	High	1.00	132.00	4.49	0.15	3.77	1.32	2.25	
34	24.00	3.9	High	Extreme	2.50	234.00	7.96	0.33	6.69	2.35	3.98	
35	15.00	3.7	Very High	High	1.00	55.50	1.89	0.13	1.59	0.56	0.94	
36	32.00	3.9	Very High	Moderate	0.64	79.87	2.72	0.08	2.28	0.80	1.36	
37	32.00	3.6	Moderate	Moderate	0.30	34.56	1.18	0.04	0.99	0.35	0.59	
38	15.00	4.2	Very High	Extreme	2.50	157.50	5.36	0.36	4.50	1.58	2.68	
39	36.00	4.1	High	Moderate	0.64	94.46	3.21	0.09	2.70	0.95	1.61	
40	36.00	4.1	Very High	Moderate	0.64	94.46	3.21	0.09	2.70	0.95	1.61	
41	8.00	4.5	Very High	High	1.00	36.00	1.22	0.15	1.03	0.36	0.61	
42	22.00	1	Moderate	Low	0.13	2.75	0.09	0.00	0.08	0.03	0.05	
43	14.00	2.3	Moderate	Low	0.13	4.03	0.14	0.01	0.12	0.04	0.07	
44	24.00	2.7	High	Low	0.40	25.92	0.88	0.04	0.74	0.26	0.44	
45	24.00	2.5	High	Low	0.40	24.00	0.82	0.03	0.69	0.24	0.41	
46	17.00	4.5	High	Very High	1.75	133.88	4.56	0.27	3.83	1.34	2.28	
47	14.00	5.3	Very High	Very High	1.75	129.85	4.42	0.32	3.71	1.30	2.21	
48	19.00	4.3	High	Very High	1.75	142.98	4.86	0.26	4.09	1.44	2.43	
49	19.00	4	Moderate	Low	0.13	9.50	0.32	0.02	0.27	0.10	0.16	
50	40.00	4	High	Low	0.40	64.00	2.18	0.05	1.83	0.64	1.09	
51	40.00	3.8	High	Low	0.40	60.80	2.07	0.05	1.74	0.61	1.03	
52	12.00	1.5	Moderate	Low	0.13	2.25	0.08	0.01	0.06	0.02	0.04	
53	22.00	4	Moderate	Moderate	0.30	26.40	0.90	0.04	0.75	0.26	0.45	
TOTAL OF ALL GRIDS	**1459.0**	**N/A**	**N/A**	**N/A**	**N/A**	**5286.0**	**179.9**	**N/A**	**151.1**	**53.1**	**89.9**	

ATTACHMENT B

BULK DENSITY AND SOIL NUTRIENT CONCENTRATION SAMPLING



1 EAST PRATT STREET
SUITE 300
BALTIMORE, MD 21202
(410) 727-5050

Legend

- Bank Sample Location
- Major Contours
- Minor Contours

0 60 120 240 360 480 Feet

1 in = 225 ft

POWELLS CREEK PHASE II & LACROSSE TRIBUTARY

BANK SAMPLE LOCATION MAP

CONTRACT NO.	SHEET 1 OF 1

University of Delaware Soil Testing Program **9/9/2022** **Client: Amanda Atwell**
Analysis Report for Data Set: 23WSP001 **WSP**

Project ID: Prince William County - Powells Creek

UDSTP Lab No.	Tin No.	Sample ID	Moisture Content (As Received) (%)	Solids (As Received) (%)	Bulk Density (As Received) (g/cm3)	Bulk Density (Dry Wgt Basis) (g/cm3)
21329	1	1L-2	12.2	87.8	1.19	1.05
21330	2	1L-4	11.9	88.1	1.72	1.52
21331	3	1L-5	11.8	88.2	1.61	1.42
21332	4	1R-1	5.0	95.0	1.39	1.32
21333	5	1R-3	10.0	90.0	1.52	1.37
21334	6	1R-6	19.5	80.5	1.64	1.32
21335	7	T2L-7	14.4	85.6	1.29	1.11
21336	8	T2R-8	11.9	88.1	1.21	1.07

University of Delaware Soil Testing Program **9/19/2022** **Client: Amanda Atwell**
Analysis Report for Data Set: 23WSP002 **WSP**

Project ID: Prince William County - Powells Creek

UDSTP Lab No.	Bag No.	Sample ID	Total P (mg/kg)	Total N (%)	Total C (%)
21329	891343	1L-2	338.0	0.150	1.730
21330	891344	1L-4	199.5	0.046	0.592
21331	891345	1L-5	205.2	0.047	0.542
21332	891346	1R-1	220.3	0.038	0.474
21333	891347	1R-3	201.5	0.041	0.466
21334	891348	1R-6	176.2	0.040	0.491
21335	891349	T2L-7	274.8	0.099	1.424
21336	891350	T2R-8	312.9	0.069	0.777

Conversion of Lab Results

Main Stem Channel

Converting N (%) to lbs/ton						
UDSTP Lab No.	Bag No.	Sample ID	Total N %	% --> Decimal	lbs to tons	lbs/ton
21329	891343	1L-2	0.150	0.010	2000	3.00
21330	891344	1L-4	0.046	0.010	2000	0.92
21331	891345	1L-5	0.047	0.010	2000	0.94
21332	891346	1R-1	0.038	0.010	2000	0.76
21333	891347	1R-3	0.041	0.010	2000	0.82
21334	891348	1R-6	0.040	0.010	2000	0.80

Average TN Concentration (lb/ton sediment) 1.21

Converting plant available P (mg/kg) to lbs/ton					
UDSTP Lab No.	Bag No.	Sample ID	Total P (mg/kg)	mg/kg to lbs/ton	lbs/ton
21329	891343	1L-2	338.00	0.002	0.676
21330	891344	1L-4	199.50	0.002	0.399
21331	891345	1L-5	205.20	0.002	0.410
21332	891346	1R-1	220.30	0.002	0.441
21333	891347	1R-3	201.50	0.002	0.403
21334	891348	1R-6	176.20	0.002	0.352

Average TP Concentration (lb/ton sediment) 0.45

Calculating Bulk Density					
UDSTP Lab No.	Tin No.	Sample ID	Bulk Density Dry Wgt Basis (g/cm^3)	(g/cm^3 to (lbs/ft^3)	Bulk Density Dry Wgt Basis (lbs/ft^3)
21329	1	1L-2	1.05	62.428	65.55
21330	2	1L-4	1.52	62.428	94.89
21331	3	1L-5	1.42	62.428	88.65
21332	4	1R-1	1.32	62.428	82.40
21333	5	1R-3	1.37	62.428	85.53
21334	6	1R-6	1.32	62.428	82.40

Average Bulk Density lb/ft^3 83.24

Lacrosse Court Tributary

Converting N (%) to lbs/ton						
UDSTP Lab No.	Bag No.	Sample ID	Total N %	% --> Decimal	lbs to tons	lbs/ton
21335	891349	T2L-7	0.099	0.010	2000	1.98
21336	891350	T2R-8	0.069	0.010	2000	1.38

Average TN Concentration (lb/ton sediment) 1.68

Converting plant available P (mg/kg) to lbs/ton					
UDSTP Lab No.	Bag No.	Sample ID	Total P (mg/kg)	mg/kg to lbs/ton	lbs/ton
21335	891349	T2L-7	274.80	0.002	0.5496
21336	891350	T2R-8	312.90	0.002	0.6258

Average TP Concentration (lb/ton sediment) 0.59

Calculating Bulk Density					
UDSTP Lab No.	Tin No.	Sample ID	Bulk Density Dry Wgt Basis (g/cm^3)	(g/cm^3 to (lbs/ft^3)	Bulk Density Dry Wgt Basis (lbs/ft^3)
21335	7	T2L-7	1.11	62.428	69.30
21336	8	T2R-8	1.07	62.428	66.80

Average Bulk Density lb/ft^3 68.05

ATTACHMENT C
SEDIMENT DELIVERY FACTORS

Site: Powells Creek Phase II
Computations: TMDL Crediting - Updated Protocol 1
Calculated By: H. Tan
Date: 2/28/2020
Checked by: M. Coco
Date: 9/20/2022

Sediment Delivery Factors

Site	LndRvrSeg	LoadSource	StreamToRiver_TN_Factor	StreamToRiver_TP_Factor	StreamToRiver_SED_Factor	RiverToBay_TN_Factor	RiverToBay_TP_Factor	RiverToBay_SED_Factor
Main Channel	N51153PL0_5491_0000	Stream bed and bank	0.7217932	0.8086755	0.4085816	1	1	1

Note:
-Land River Segement identified using https://gis.chesapeakebay.net/mpa/scenarioviewer/
-Factors from SourceData.xlsx (https://cast.chesapeakebay.net/Home/SourceData)

Appendix A

Powells Phase 2 End Pipe Exposure

The purpose of this addendum is to provide TMDL crediting information for an additional restoration area just downstream of the Powells Phase 2 Main Stem end. It follows a sewer pipe exposure for 300 linear feet. Figure 1.1 is a map of the additional stream length.

Table 9.1 shows the full range of load reduction results with efficiency factors and SDF applied. This is based on the same bulk density of 83.24 lbs/ft^3 (table 4) and nutrient content lab results (table 5) as the Phase 2 Main Stem . The same sediment and nutrient delivery factors are also used (table 8). Table 1.1 displays the full range of load reductions with efficiency factors only. The BEHI and NBS assessment results and erosional volume prediction are in table 2.1, the annual sediment loads in table 4.1, and the applied default nutrient and sediment reductions in table 11.1.



Figure 1.1: A map of the additional restoration area (orange).

TABLE 1.1: POWELLS PHASE 2 END PIPE EXPOSURE FULL RANDE OF LOAD REDUCTION RESULTS

Project Reach	*Pollutant*	*Load Reductions with Efficiency Factors*					
		100% Efficiency	*90% Efficiency*	*80% Efficiency*	*70% Efficiency*	*60% Efficiency*	*50% Efficiency*
Phase 2 End Pipe Exposure	TSS (tons/yr)	138.7	124.8	111.0	97.1	83.2	**69.4**
	TN (lbs/yr)	167.8	151.0	134.2	117.5	100.7	**83.9**
	TP (lbs/yr)	62.4	56.2	49.9	43.7	37.4	**31.2**

TABLE 2.1: POWELLS PHASE 2 END PIPE EXPOSURE BEHI/NBS ASSESSMENT RESULTS AND PREDICTED VOLUME OF EROSION

BEHI Number	BEHI Rating	NBS Rating	Study Bank Height (ft)	Study Bank Length (ft)	Predicted Volume of Erosion (ft^3/yr)
L1	Very High	High	2.5	61.8	154.48
L2	Very Low	High	1	131.3	2.63
L3	Very Low	Low	1	107.0	1.07
R1	Very Low	Low	1	43.3	.43
R2	High	Extreme	5.5	67.4	927.30
R3	Moderate	Extreme	5.5	49.8	328.48
R4	High	Extreme	5.5	139.5	1917.99
Total Phase 2 End Pipe Exposure				**600**	**3332**

TABLE 4.1: ANNUAL SEDIMENT LOADS

Project Reach	Total Volume of Erosion (ft^3/yr)	Bulk Density (lbs/ft^3)	Total Sediment Load (TSS)	
			(lbs/yr)	(tons/yr)
Phase 2 End Pipe Exposure	3332.3	83.24	277,378.4	138.7

TABLE 9.1: LOAD REDUCTIONS WITH EFFICIENCY FACTORS AND SDF APPLIED

Project Reach	*Pollutant*	*Load Reductions with Efficiency Factors and SDF Applied*					
		100% Efficiency	*90% Efficiency*	*80% Efficiency*	*70% Efficiency*	*60% Efficiency*	*50% Efficiency*
Phase 2 End Pipe Exposure	TSS (tons/yr)	56.7	51.0	45.4	39.7	34.0	28.4
	TN (lbs/yr)	121.2	109.1	97.0	84.8	72.7	60.6
	TP (lbs/yr)	50.5	45.5	40.4	35.4	30.3	25.3

TABLE 11.1: APPLIED DEFAULT NUTRIENT AND SEDIMENT REDUCTIONS

Project Reach	Linear Foot of Restoration	Pollutant	Default Load Reductions
Phase 2 End Pipe Exposure	300	TSS (tons/yr)	37.2
		TN (lbs/yr)	22.5
		TP (lbs/yr)	20.4
Combined Project Totals	**4625**	**TSS (tons/yr)**	**573.5**
		TN (lbs/yr)	**346.9**
		TP (lbs/yr)	**314.5**